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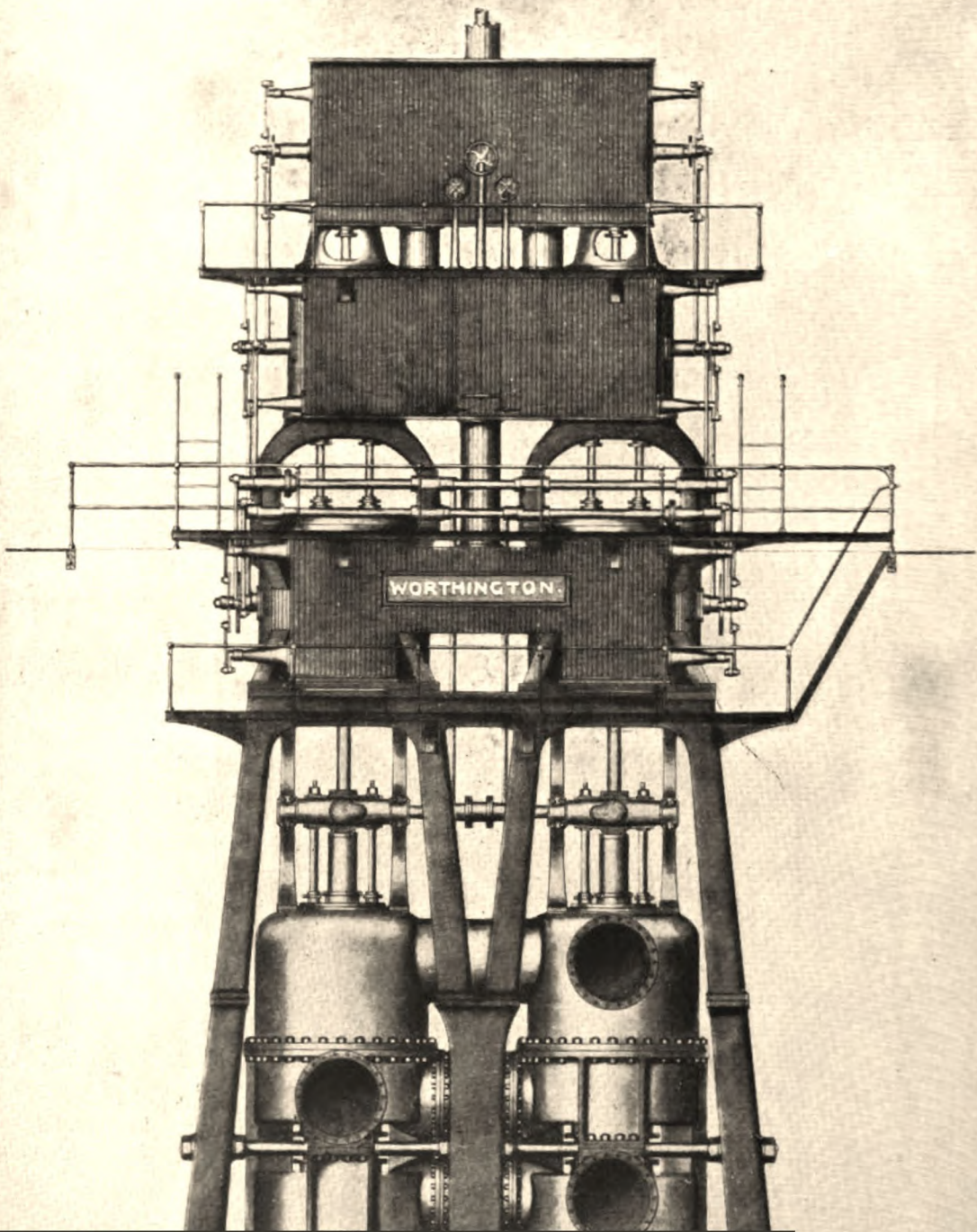
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Annual Report

Chicago (Ill.). Dept. of Public Works

Ill Doc 13.5, 15



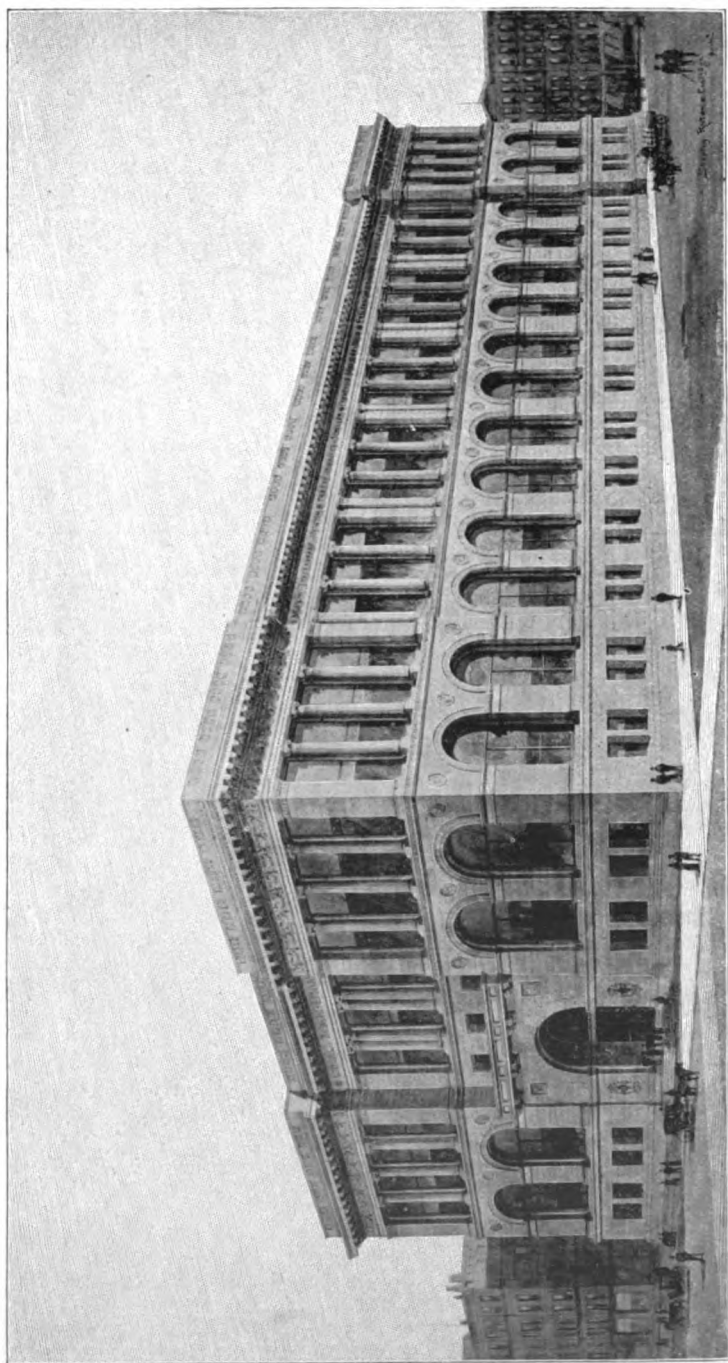
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FROM

The Commissioner
of Public Works

27 July, 1899

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Mayor's **A**nnual **M**essage
AND

TWENTY **F**IRST **A**NNUAL **R**EPORT

OF THE

DEPARTMENT OF



TO THE

City Council of the City of Chicago

for the

fiscal year ending Dec. 31st

1896

Old Dec 13. 1890
\$0.75
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MESSAGE OF
MAYOR SWIFT

MESSAGE OF MAYOR SWIFT.

*To the Honorable, the City Council of the
City of Chicago:*

GENTLEMEN—At this closing hour of my administration it is proper for me to render some account of my stewardship. A brief review of the past is sometimes advisable, as well as just, for it affords aid in preparing to meet the future. Before my election two years ago the people of this City were promised that so far as lay in my power they should have a business-like administration of their municipal affairs. It is now my firm conviction that every promise then made has been faithfully kept. Wherever there has been failure to accomplish entirely satisfactory results, the failure has been due to adverse conditions and not to lack of proper effort or intention. It surely can be asserted truthfully and without hesitation, that our municipal affairs are to-day upon a distinctly higher plane than they were two years ago when committed to my charge. There has been a long step forward. In every department there has been an honest and an earnest effort to manage the City's affairs economically and efficiently.

It is impossible, and it would be undesirable, to attempt here any detailed showing of the work done and the results accomplished in the last two years; but some general showing of what has been done will be found interesting, and it should be made in justice to myself, as well as to the heads of the

various departments. Special attention may properly be invited to the successful inauguration of the merit system in making appointments under the new civil service law ; to the complete divorce of the Police Department from active participation in politics ; to the final settlement of the lake front controversy ; to the material progress made in the important and perplexing problem of abolishing railway crossings upon the surface of our streets ; to the novel and highly satisfactory employment of the police force as an agency for distributing food and clothing to the suffering poor during an emergency which demanded immediate action ; to the very successful work of the Health Department in various directions, such as the securing of a pure supply of milk and of ice, and the establishment of a new isolation hospital worthy of our City ; to the different measures adopted for obtaining a larger and better water supply, including the partial construction of new water tunnels, the making of provisions for new pumping stations and additional machinery, and the adoption of a system of intercepting sewers for diverting our sewage from the lake and turning it into its proper receptacle, the new drainage canal ; to the correction of flagrant abuses in special assessments, both as affecting the property of our citizens and the revenues of our City ; to the reduction of expenditures in nearly all the departments, with an accompanying increase in their actual work ; to the lighting of our public streets at a lessened expenditure, and during the last year without incurring indebtedness therefor ; and generally to the successful management of our City finances whereby we have been enabled to keep within our income for the first time in many years, and at the same time improve the public service.

CIVIL SERVICE.

In response to a strong public sentiment the Legislature of this State passed an Act to regulate the civil service of municipalities adopting it, which Act was approved by the Governor March 20, 1895. At the following April election the people of this City by popular vote adopted the law and thus made it obligatory upon this administration to inaugurate the merit system ordained by it within ninety days. The system went into effect July 1, 1895, and in the main its workings have been satisfactory. While probably not free from defects it has yet accomplished so much, and is in every way so decided an improvement over the former method of making appointments through personal favoritism or political influence, that it is difficult to understand how any right thinking citizen should now desire to see it abolished. In the year 1896, which embraced the formative period of the Commission's labors, and which necessarily involved a vast amount of preliminary work, the total expenses of the Commission were only a trifle in excess of \$31,000. The system is now established on a solid working basis. The earnest and able Commissioners have labored with zeal and faithfulness in the discharge of their duties, and have succeeded in their task with perhaps less friction than was to be expected in the introduction of so radical a change over former methods of making appointments. During the year just closed a total of 24,500 persons have taken out applications for entrance to the various branches of the classified service, and over 7,000 of these have returned their applications properly filled out and been entered on the books of the Commission. Of this number over 4,000 were examined, and nearly 2,500 successfully passed the required averages and were placed upon the eligible list awaiting appointment. In the same period 1,396 persons have been certified for appointment, substantially all of whom are now in the service of the City on probation.

The effect of the civil service law has been especially noticeable in helping to divorce the police from politics, while it has relieved the Mayor and heads of departments from the pressure of applicants for office, and left the executive officers free to attend to their public duties. It has likewise abolished the evil of compulsory political assessments, a burden to which City employes had long been subjected and which had grown to such proportions that some action was deemed necessary by the State Legislature to suppress it. The system provided by this law for making appointments and promotions in the public service is based solely upon the merit and fitness of the applicant as demonstrated by the result of his examination papers, in which the applicant is given a certain credit for past experience and a good record. That this is a marked improvement over the old methods by which appointments were made, can not be questioned ; nor can it be doubted that the practical results of the system will be seen more and more, as time goes on, in the increased efficiency of the employes in all branches of the public service.

FINANCES.

The fundamental, ever-present, and ever-perplexing embarrassment of this administration has been the question of finances. How to manage *satisfactorily* the affairs of this great and rapidly growing city upon an income utterly inadequate to its needs has been a problem practically defying solution. We started with the proposition that we proposed to live within our income and we have done it, but, in so doing, much had to be left undone, and much more had to be done imperfectly. Careful and systematic economy has been practiced, and in my judgment the revenues of the City have been

disbursed with rare prudence and judgment. The result has been to draw the attention of our people in an increased degree to the fact that some steps must be taken for providing a larger revenue to meet our municipal requirements. It has come to be quite generally seen that under the conditions prevailing in Chicago, no administration, however honest and efficient, can with the means at its disposal fully perform the public work which ought to be performed. There has been an earnest effort under this administration to administer the City's affairs efficiently and economically, but you will doubtless remember that each year you are compelled to cut down the annual appropriation between two and three million dollars below the aggregate amount which the heads of departments estimate as necessary to be expended.

Citizens sometimes complain that their taxes are high and are increasing, and they express surprise and doubt at the cramped financial condition of the City. Let me here call attention to the fact that there has been no increase in taxation for municipal purposes in this City for at least half-a-dozen years, but rather the contrary. Apart from the levy for interest upon the public debt, which can not increase, and the levies for school and library purposes, which we do not disburse, the tax for City purposes is two per cent. upon the assessed valuation of property. In 1891, immediately after the enlargement of the City by annexation, the assessed valuation was, in round figures, \$256,000,000, and in 1896 it was \$244,000,000. Here is a decrease of the City's tax revenue of approximately \$240,000. In the intervening years the assessment has varied slightly, but it has never amounted to \$250,000,000 since 1891. Meantime the City has been constantly growing. The truth is that the City's income from taxes has for years past been practically a fixed income, and that it

amounts to only about 35 per cent. of the total taxes collected. To put the matter a little more plainly, out of every dollar which a citizen pays for taxes only 35 cents goes to the City of Chicago for municipal purposes, and is expended by us; the balance of 65 cents goes for State, county, township, park, drainage and school taxes, etc., and it is in this balance that the increase occurs and is felt. Another truth is that the entire amount received by the City from taxes is considerably less than sufficient to support the Police and Fire Departments alone. For other municipal expenditures we are compelled to look to miscellaneous receipts, derived largely from licenses.

For our financial ills the present assessment system is primarily at fault, but even under the present system it is my belief that a great deal of property is insufficiently taxed or escapes taxation altogether, while it is doubtless true that some property is over-taxed. Last year a commission of gentlemen, well equipped for the work, made a valuation of down-town property at my instance and compared it with the assessments. The results shown were startling in many instances. If all taxable property could be made to bear its fair share of the public burden, and only its fair share, there would probably be no occasion for any general increase in the rate of taxation, but merely a more equitable distribution of the amount raised, and a larger and sufficient revenue to the City. This tax question is one that must be constantly discussed and ultimately solved if the municipal government is to keep pace with the demands upon it. If this were a full grown and finished city, the financial problem and the tax problem could be very differently viewed. But at the present time the City resembles a poor parent who must provide for a large family of growing children.

In recent years, prior to my administration, the difficulty of managing the City's affairs to the satisfaction of the

community upon its limited income led to the loose and improper practice of running into debt. In the last two years this indebtedness has not only not been increased, but it has been sensibly reduced. Its mere existence was an embarrassment, and in the early part of this administration an attempt was made to secure legislation from the State which would enable the City to fund it by issuing bonds. Notwithstanding a well defined public sentiment in favor of such legislation none was enacted. Resort was then necessarily had to the issuance of time warrants in anticipation of the collection of taxes, and their issuance has made it possible to carry on our municipal government. The subsequent collection of taxes and the practice of close economy have put us in position to redeem such warrants at the close of each fiscal year, and to pay our own current indebtedness.

Tables are presented herewith, giving a detailed showing of our finances. The general result will be best understood by the summarized statement that we have expended for the year 1896 \$49,000 less than was appropriated. That the bonded debt of the City has been reduced during the last two years \$644,000, and the floating indebtedness has been reduced in the same time nearly \$623,000. At the same time there has been a reduction in the pay rolls of over \$1,800,000.

The strongest comment to be made upon this showing is the fact that two years ago the City's warrants and vouchers were selling at a discount of about 15 per cent., while to-day they command a premium.

Due acknowledgment should be here made to the present Comptroller for the able assistance he has rendered in bringing about this result; also to the efficient Chairman of the Finance Committee.

The cash shortage or floating debt of the City on January 1, 1895, amounted to \$5,148,462.08. On December 31, 1896, the floating debt of the City was as follows :

Interest.....	\$ 514,937 95	
Judgments (appropriated for).....	402,720 57	
Judgments (not appropriated for).....	1,167,940 72	
Pension Funds	192,248 07	
Sinking Funds.....	1,205,952 65	
Special Funds	914,387 74	
Special taxes for street intersections.....	999,000 00	
Accounts payable (miscellaneous).....	802,755 41	
Time or Revenue Warrants.....	2,470,287 85	
Total	\$ 8,670,230 96	
Less cash in treasury and bank.....	4,146,163 70	
Net floating debt		\$ 4,524,067 26
Add Water Certificates outstanding ...		1,500 00
Floating debt, December 31, 1896.....		<u>\$ 4,525,567 26</u>

This shows a decrease in the floating debt during the last two years of \$622,894.82.

The moneys appropriated for corporate purposes, for the year 1896, were as follows :

Equalized valuation of property.....	\$243,476,825 00	
Two per cent. on same.....		\$ 4,869,536 50
Income from miscellaneous sources, mainly saloon licenses.....		3,655,772 16
Department receipts, transfers and from special sources		1,194,601 47
Total		<u>\$ 9,719,910 13</u>

The expenditures for the same period were as follows :

City Cemetery	\$ 94 25
City Clerk, Expense	18,109 71
Civil Service Commission.....	31,399 84
Contingent Fund	4,396 84
Costs and loss in collecting City taxes.....	101,249 20
Department Public Works.....	1,926,979 64
Election Expense	222,627 33
Fire Department.....	1,548,486 76
Health Department	178,360 18
House of Correction	118,088 53
Judgment Account	428,823 88
Legal Expense	38,013 19
Police Courts.....	2,912 45

Police Fund	\$ 3,304,308 77
Printing and Stationery.....	7,422 43
Salaries	222,692 47
Sewerage Fund.....	338,970 18
Street Lamp Fund—gas, oil, electric light.....	1,062,545 11
Transfers.....	115,195 16
Total expenditures	\$ 9,670,675 92
Savings (unexpended balances of appropriations)...	49,234 21

ASSETS AND LIABILITIES OF THE CITY OF CHICAGO,

December 31, 1896.

ASSETS.

Buildings, real estate, water works, etc.....	\$56,849,412 41
Uncollected Taxes, 1896.....	12,290,145 21
Norwood Park Tax Certificates.....	596 78
Cash in bank	526,561 57
Cash in Treasury.....	3,619,102 13
Cash in paymaster's drawer	500 00
Uncollected Special Assessment Tax Warrants.....	1,218,300 00
Total	\$74,504,618 10

LIABILITIES.

Special Improvement Bonds.....	\$ 1,218,300 00
Bonded debt.....	17,078,950 00
Water Certificates, 5 per cent.....	1,500 00
Trust Funds.....	38,920 00
Sinking Funds	1,205,952 65
Special Funds	8,592,942 24
Insurance Tax.....	223 44
Interest.....	514,937 95
Judgments (appropriation).....	402,720 57
Suspense Account	17,331 03
Time or Revenue Warrants.....	2,470,287 85
Accounts Payable (miscellaneous).....	802,755 41
Stock Account (surplus value realty over bonded debt).....	39,730,042 41
*Surplus (general fund).....	2,429,754 55
Total	\$ 74,504,618 10

* There are other liabilities not on the books of the City, as follows:

Special taxes for street intersections	\$ 999,000 00
Judgments (unappropriated).....	1,167,940 72
Due Pension Funds.....	192,248 07
Total.....	\$ 2,359,188 79

If these liabilities are not provided for by future taxation the surplus or general fund will be reduced to \$70,565.76.

Leaving aside the permanent assets, such as buildings and realty, the bonded debt and Stock Account (*i. e.*, surplus value of realty, etc., over bonded debt) and including all other obligations, the condition of the City is as follows :

ASSETS.

Uncollected Taxes, 1896 (in collection)	\$12,290,145 21	
Norwood Park Tax Certificates	596 78	
Cash in bank	526,561 67	
Cash in Treasury	3,619,102 13	
Cash, petty, on hand.....	500 00	
	<hr/>	\$16,436,905 69

LIABILITIES.

Sinking Funds	\$ 1,205,952 65	
Special Funds	8,592,942 24	
Insurance Tax.....	223 44	
Interest.....	514,937 95	
Judgments (appropriated for).	402,720 57	
Suspense Account	17,331 03	
Time or Revenue Warrants.....	2,470,287 85	
Accounts Payable, miscellaneous.....	802,755 41	
Special Taxes for street intersections.....	999,000 00	
Judgments (not appropriated for).....	1,167,940 72	
Due Pension Funds.....	192,248 07	
Surplus.....	70,565 76	
	<hr/>	\$16,436,905 69

From the above statement it can be readily seen that the uncollected taxes of 1896 due the City and in course of collection, together with the cash on hand, are sufficient to pay the entire indebtedness of the City, other than the bonded debt, leaving a surplus of \$70,565.76. The general statement shows that the permanent assets, *i. e.*, buildings, realty, etc., at cost, have a surplus value over the bonded debt of \$39,730,042.41. It is evident, therefore, that the actual financial strength of the corporation is excellent and that its embarrassments are mainly due to a lack of income to properly maintain the City.

FUNDED DEBT.

City of Chicago 3½ per cent. bonds.....	\$ 135,000 00
City of Chicago 4 per cent. bonds.....	11,010,450 00
City of Chicago 4½ per cent. bonds.....	489,500 00
City of Chicago 7 per cent. bonds.....	1,242,000 00
Water Loan 3½ per cent. bonds.....	333,500 00
Water Loan 3.65 per cent. bonds.....	332,000 00
Water Loan 4 per cent. bonds.....	3,191,500 00
Water Loan 6 per cent. bonds.....	132,000 00
Town of Lake Water bonds.....	90,000 00
Hyde Park Water bonds.....	50,000 00
Lake View Water bonds.....	73,000 00
Total	\$ 17,078,950 00

SINKING FUNDS.

General Sinking Funds.....	\$ 617,886 94
River Improvement Sinking Fund.....	235,601 45
School Sinking Fund.....	153,672 25
Sewerage Sinking Fund.....	198,792 01
Payable from Water revenues.....	4,202,000 00
Total	\$ 5,407,952 65
Net Funded Debt	\$ 11,670,997 35
The Funded Debt, January 1, 1895, was.....	\$ 17,722,950 00
The Funded Debt, December 31, 1896, was.....	17,078,950 00
Showing a reduction during last two years of.....	\$ 644,000 00

All accounts of 1896 have been paid in full excepting vouchers amounting to \$20,212.14, for which special provision has been made.

The following figures are given showing the population of the City for the past eight years and the total assessment on property of all kinds, the income derived therefrom on the 2 per cent tax and also the rate per capita:

Year	Estimated Population	Total Assessment	2 per cent Yield	Per Capita
1889	1,000,000	\$201,104,019 00	\$4,022,080 38	\$4 02
1890	1,100,000	219,354,368 00	4,387,087 36	3 98
1891	1,200,000	256,599,574 00	5,131,991 48	4 27
1892	1,300,000	243,732,138 00	4,874,642 76	3 74
1893	1,400,000	245,790,359 00	4,915,807 18	3 51
1894	1,500,000	247,425,442 00	4,948,508 84	3 29
1895	1,600,000	243,476,825 00	4,869,536 50	3 04
1896	1,700,000	244,357,286 00	4,887,145 72	2 87

The foregoing figures show that during the eight years mentioned there has been a decrease in the general tax assessed for corporate purposes of \$57.37 (or 28 per cent) per capita. They also show that, estimating the present population of Chicago at 1,700,000, the tax for 1896 has yielded to the City for corporate expenses \$1.15 less per capita than the tax of 1889; and the (per capita) loss of annual income for corporate purposes, as compared with 1889, reaches now in round figures to \$1,950,000 per annum.

PUBLIC WORKS.

The affairs of this Department during the past two years have been carefully administered. In accordance with my general instructions, the Department has been conducted on strict business principles and all its employes have been required to perform a full day's labor in order to be entitled to a full day's pay. The results in this respect, as in the matter of materially reducing the expenses of the Department, have been highly satisfactory. It is not possible for me at this time to do more than direct your attention to the principal features of the year's work; but detailed facts and figures are given in the Commissioner's report, to which you are respectfully referred. Among other things, however, that report shows a reduction in the Department pay rolls for the twenty-four months of this administration of \$1,337,655.13. It will of course be understood that these figures, showing the saving effected in the Department of Public Works, are also found in the statement of "Pay Rolls" by Departments, given in another place in this communication. They are here set forth as indicating what has been accomplished along the lines of retrenchment in this important Department of the City government. In this connection and while commenting upon the work of this Department, it is a matter of congratulation to note the

progress made in the construction of the new northwest land tunnels which when completed will insure an abundant supply of water to the residents of the extreme northwest and southwest portions of our City. As your honorable body is well aware, the work of construction upon this new system of tunnels was begun in the latter part of 1895. On section one, beginning at the foot of Oak street on the lake shore and extending to the intersection of North Green street and Grand boulevard, and having a total length of 8,666 feet, 8,003 feet were completed on April 1st, leaving only 663 feet of unfinished work on this section. The total cost of this section will be about \$200,000. Section two, which is an extension of section one, runs southwesterly from Central Park avenue and Filmore street. Its total length is 19,830 feet, and of this, up to April 1st, 12,340 feet had been completed. The total cost of this section will be about \$470,000. Section three, which is the northwest branch of the system, begins at the Green street shaft and extends northwesterly to Springfield avenue and Bloomingdale road. Its total length is 22,300 feet, and of this 3,957 had been completed by April 1st. The total cost of this section will be about \$480,000.

The new lake tunnel, which is the lake extension of the land tunnels, runs from the Oak street shaft in a northeasterly direction to a crib which is to be located four miles from shore; of this 2,334 feet have been completed, leaving 18,786 uncompleted. The total cost of this will be about \$1,010,000.

In addition to the improvements above mentioned, lots have been purchased for two new pumping stations, one to be located at Springfield avenue and Bloomingdale road, the other at the corner of Central Park avenue and Filmore street. Three new pumping engines for each of these stations have been contracted for, the capacity of each engine to be 20,000,000 gallons every twenty-four hours, making a total capacity for each station of

60,000,000 gallons. Each station, however, is to be built to accommodate a fourth engine of like capacity, which will be added when needed, and which will bring the total ultimate capacity of each up to 80,000,000 gallons every twenty-four hours. The cost of machinery contracted for will approximate \$470,000 for each station, and the cost of the two buildings complete, exclusive of machinery, will be about \$300,000.

In view of the fact that for years past the water supply for those portions of the City affected by these improvements has been wholly inadequate to the needs of the people, and has operated to seriously retard the growth and development of the sections named, it is a matter of the utmost importance that their completion should be pushed forward as rapidly as possible.

BUREAU OF STREETS.

In this Bureau of the Department of Public Works a brief review of the work accomplished during the past year shows highly satisfactory results. Notwithstanding the engineering force of the Bureau was reduced one-fifth at the beginning of 1896 there has been an increase of nearly 75 per cent. in the amount of work done over that of 1895. A glance at the figures giving the work of street improvement for the year 1896 shows that new pavements of all kinds, including cedar block, asphalt, granite, macadam and brick in the various divisions of the City, were laid upon 81.74 miles of streets and 4.33 miles of alleys. Of this 53 per cent. was cedar block, 20.6 asphalt, 4.2 granite, 16.5 macadam, and 5.7 brick. In addition to the actual work of construction above mentioned, preliminary estimates of street and alley improvements were returned during the year to the Special Assessment Bureau, amounting to 156.42 miles, of which the estimated cost was \$5,153,190.74. For the year 1895 the same class of work amounted to 152.54 miles, and the

estimated cost \$5,491,765.12. Although estimates for an increased number of miles of improvements have been made during the year 1896, as compared with 1895, there is yet a reduction in the estimated cost amounting to \$338,554.38. During the year the Bureau has constructed 238.25 miles of sidewalks, including plank, concrete and stone. There were 4,863 miles of sidewalks under the control of the City and the various Park Boards at the close of 1896.

The report of the Bureau contains many interesting facts and figures, illustrating both the growth of the City and the work performed, which cannot be mentioned here. Suffice it to say that, taking into consideration the enforced reduction in its working force, and the inadequate amount of money appropriated for it, the showing made is in every way creditable to the Bureau and indicates that its affairs have been well and economically administered.

STREET CLEANING.

The affairs of this Bureau have been well conducted, many new reforms having been introduced and much needed and valuable work performed; but despite this excellent showing the result has fallen short of public expectations. That this should be true is no fault of the administration or of the Superintendent who has had immediate charge of the Bureau, but must be laid entirely to the fact that the appropriations for the past two years have been entirely inadequate to its needs. In view of the fact that the appropriation for 1896 was smaller than that for the preceding year, and that at the same time there was a large increase in the number of miles of streets to be cleaned, the amount of work performed certainly indicates careful and intelligent administration of its affairs and the best possible use of the funds available. It is, too, a fact deserving of comment that the appropriation for street cleaning purposes

per capita has shown a steady decrease since 1888, in which year it averaged \$2.42, to and including 1896, for which latter year it was \$1.01 per capita. In 1888 the population of the City was 802,651; at the present time its estimated population is 1,800,000. With these figures before us it is little wonder that the Bureau has been subjected to severe criticism, and that there is a general demand for cleaner streets from the public which does not understand, or if it does, refuses to recognize, the absolute inability of any administration to clean the streets of the City thoroughly without having more funds for the purpose. In the face of these unfavorable conditions, under this administration, more miles of streets have been cleaned than were cleaned during the preceding two years, while at the same time there was a decrease in the expenditures of the Bureau amounting to \$532,831.68. This is shown by the following statement of the expenses of the Bureau for the twenty-four months of the present administration, from April 1st, 1895, to March 31st, 1897, as compared with the previous twenty-four months from April 1st, 1893, to March 31st, 1895. The figures are as follows:

	24 Months 1893-4-5	24 Months 1895-6-7	Decrease
Removal of Garbage.	\$ 1,172,482 71	\$ 796,208 18	\$ 377,274 53
	13,731 miles	21,292 miles	Increase
Street cleaning by contract.....	\$ 234,144 34	\$ 289,955 67	\$ 55,791 33
			Decrease
Street cleaning by Bureau.....	\$ 362,679 70	\$ 151,331 22	\$ 211,348 48
	<u>\$ 1,770,306 75</u>	<u>\$ 1,532,475 07</u>	<u>.....</u>
Decrease.....			\$ 532,831 68

According to the reports of the Superintendent of the Bureau, it is shown that during the year 1896, 2,448.58 miles of streets were cleaned at a cost of \$8.40 per mile; 10,837.23 miles at \$12.50 per mile, and 2,360.83 at \$2.50 per mile (this latter being work done in the day time in the first district);

209.35 of alleys at \$16.80 per mile (first district), and 312.73 miles of bridges, viaducts and approaches at \$6.80 per mile, making a total cost of \$165,976.03 and the total number of miles of streets cleaned 16,167.

It will be seen from the above figures that a material reduction has been made in the cost per mile of street cleaning as compared with the prices paid under former administrations, which ranged from \$18.50 to \$28.00 per mile. This showing is all the more creditable when it is remembered that not only have more miles of streets been cleaned, but that the outlying portions of the City have been cleaned oftener than has been the custom heretofore. It is a fact easily demonstrated by figures that with the amount of money at its command, in order to clean the streets and keep them in the condition demanded by the public, it would be necessary for the City to be able to get the work done at about one-tenth of the rates it now pays, which is, of course, out of the question.

WATER OFFICE.

In the Water Department, as in other Departments, a most excellent showing has been made, both in the material reduction of expenses and in the largely increased receipts; and this despite the fact that the past year has been one of almost unparalleled business depression. The total increase in the collections for the years 1895 and 1896 over those of 1893-1894 is \$593,609.56. The entire expenses of operating the Department for the year 1896 were \$285,831.95 as against \$309,273.30 for 1895, a net saving of \$23,441.35. There has also been a gradual reduction of the percentage of expenditures during the past six years, ranging from 13 per cent. in 1891, in which year the total receipts were \$2,331,286.20 to 8.8 per cent., in 1896, when the receipts amounted to \$3,226,559.73. It will thus be seen that the year 1896 furnishes the largest receipts with the smallest expenses and the lowest percentage of cost of any

during the past six years. In this connection, too, public attention should be directed to the fact that the rates charged for water service in Chicago are lower than those of any of the other leading cities of the United States. Property owners sometimes grumble at what they claim are excessive rates charged for water service, and these complaints have naturally been more prevalent than usual during the past two years. An investigation of the subject, however, shows that in ten of the principal cities of the country the frontage rates in eight of them are much higher than those charged in Chicago. In one city alone, New York, the rate is the same as that charged in Chicago. In New York City, however, sprinkling and the use of hose is prohibited. Of these cities Cincinnati is the only one, besides Chicago, where a discount is allowed, while in most of them a penalty is added where the bills are not paid within a given period. In Chicago a discount of 15 per cent. is given when bills are paid promptly. Chicago's meter rates are also lower than those of any other large city, being ten cents per thousand gallons for the first 165,000 gallons, and eight cents beyond that quantity, as against rates ranging from 13 to 13½ cents in other cities.

SPECIAL ASSESSMENTS.

If any one branch of the Municipal Government has occupied a prominent place in the public mind and been the target of much unfavorable criticism during several years past, it has been the Bureau of Special Assessments. Complaints have frequently been made as to the workings of the special assessment system and, it must be admitted, with some cause. During my administration an earnest effort has been made to correct the abuses complained of in so far as such correction lay in my power. But radical differences of opinion prevail among the people respecting the entire system and respecting public improvements generally. The principle of special

assessments is sound, for it contemplates that property pecuniarily benefited by any proposed improvement shall bear a part of the cost commensurate with the benefit received. Unfortunately it is subject to more or less abuse when put into actual practice. In this, as in all other matters controlled by human agencies, the power to do the right thing as a rule carries with it the power to do the wrong thing. One of my first orders to the Department of Public Works was that estimates made by the City Engineers should be reduced as nearly to the actual cost of construction as could reasonably be ascertained, measuring such estimates by actual bids received at the time. Pursuant to that order estimates were so reduced for all kinds of work payable from special assessments; the average reduction for 1895 being 21.7 per cent., and for 1896 25 per cent. The volume of assessments has thereby been reduced about one million of dollars for each of the years mentioned, thus relieving property owners from paying this additional sum. The expenses of the Bureau have been materially decreased, as shown by the figures submitted for the years 1893 to 1896 inclusive. The items covered include salaries of clerks, engineers and rodmen, services of commissioners, and of clerks of the County, Superior and Circuit Courts, services of real estate experts, advertising, legal expenses, printing, stationery and car fare, cost of collecting assessments, and miscellaneous items. The detailed figures can be found in the report of the Commissioner of Public Works.

Another instruction given was that property owners, as far as possible, should be required to pay only the actual cost of the various improvements, and accordingly nearly 90 per cent. of the rebates for 1895 and 1896 were deducted before payment was required. By this means a large majority of property owners were relieved not only from paying the full amount of their assessments, but also from the trouble of

collecting their rebates. It should be noted, too, that during the past two years contracts for this class of work have been awarded at lower figures than at any time in the previous history of the City, and in no case have the estimates been made lower than the actual cost of the work. The report of the Commissioner of Public Works shows that the volume of business transacted by the Special Assessment Bureau exceeds that of last year; while at the same time there has been a corresponding decrease, in proportion to the volume of business, in the expenses of the Department. It is my judgment that there are few grounds for serious complaint as to the manner in which the special assessment system is administered at the present time, though the system now in vogue is faulty and should be subjected to radical changes.

One of the principal evils of the present system is the hasty and unmethodical manner in which improvements of this kind are all started—largely on account of that difference of opinion which seems to be always prevalent among the people as to the utility or desirability of any proposed improvement. On repeated occasions, where the improvement of a leading thoroughfare was involved, the differences of opinion among the interested property owners, both as to the desirability of the improvement and as to the manner in which it should be made, have been such as to delay or stop the work altogether; and in all such cases the City has been put to no little expense in the preliminary work attendant upon them.

In view of the objections to this branch of the municipal government we had prepared and submitted to the State Legislature a bill which was first approved by your honorable body and which it is believed will remedy the evils complained of. This measure, which has been freely discussed by the press, and with whose general provisions you are familiar, is still pending. Several other measures covering the same ground

have also been submitted to the Legislature, and it is to be hoped that that body, enlightened by the general discussion which has prevailed upon this subject for the past two years, will be enabled to pass such a law as will correct the defects of the statute under which we are now working.

PUBLIC LIGHTING.

In the administration of the financial affairs of the City no other subject has presented so many difficulties nor been the source of so much perplexity as that of street lighting. At the very outset of my administration there confronted me the fact that the appropriations for years past had fallen so far short of the amount needed to enable the City to pay its gas bills promptly that it was already greatly in debt to the different companies, the indebtedness being in the form of interest-bearing judgments. For the first year no other course was possible than to permit some further indebtedness to accrue, in the way of judgments, but during the last year a better result was obtained. As the gas companies were not inclined to accept further judgments in lieu of cash, and the City desired to avoid giving such judgments, it became a matter of necessity to reduce the expense of lighting the streets to the lowest practicable point and to find some available resources in addition to the inadequate amount appropriated from the tax levy. Receipts from various miscellaneous sources, such as payments exacted by me from street railway companies for new privileges, were applied to street lighting purposes, and ultimately sufficient moneys were obtained to light the City upon an economical basis. For this economy it became necessary to discontinue a large number of lights located mainly in the outlying portions of the City, and also to reduce by one-half the lights burning on many of the leading thoroughfares. The extent to which this policy of retrenchment was carried out may be shown from

the fact that on April 1, 1895, the City had 50,197 lamps in service, including gas and gasoline, while during the two years following, up to December 31, 1896, there were discontinued 3,985 gas lamps and 3,390 gasoline lamps, making a total of 7,375. During the same period, however, many of the discontinued lamps were restored to service in cases where it was plainly evident that the welfare of the public demanded it. It is not claimed that for all the lights discontinued the City had previously been incurring an unnecessary or unwarranted expense in their maintenance. It is a matter too well known to require comment here that dark or poorly lighted streets add largely to the criminal deeds of a great city. It was found, however, that without material danger the number of lights could be reduced, with a corresponding reduction in the amounts which the City would otherwise have had to pay for lighting. There were of course many complaints from property owners who claimed, and not without some show of justice, that they were not receiving the benefit for which they as taxpayers had already paid. Notwithstanding these complaints and any seeming injustice that may have been done to those who made them, the saving effected for the City has in my judgment fully warranted the action taken.

Another feature of the work of the Street Lighting Bureau deserving of special mention has been the preparation and compilation of a set of books containing charts, arranged by wards, showing the exact location of every gas, gasoline and electric lamp within the corporate limits of the City. The preparation of these books involved a vast amount of labor, but being so arranged that they can be used indefinitely for the purposes for which they were made, and facilitating, as they do, the transaction of the business of the office, the time employed and the expense incurred are but trifling compared with their value to the City.

HEALTH DEPARTMENT.

The affairs of the Health Department fully justify my action in selecting a business man as its head. It is fair to assert also that the people of Chicago, in general, will agree with me that during the past two years there has been an improved degree of efficiency in every branch of the health service, together with a more systematic and effective organization due to the separation of the executive and business work from the strictly professional duties of the Department. Its practical work in providing proper safeguards for the food supplies of the people, including milk, ice, water, etc., and its important service in promoting the general public health by requiring thorough vaccination, by the introduction of antitoxin treatment of diphtheria, and by measures tending to the prevention and suppression of contagious diseases, have been such as to occasion general commendation. Its record along these lines has already passed into history, and is too well known and too universally recognized to require detailed mention at this time. It is proper, however, that special reference should be made to its work in certain particulars.

Foremost among the subjects which have engaged its attention, and which is of paramount importance as affecting the public health, is that of the purity of the water supply. Credit must be given to the Assistant Commissioner for the suggestions which led to my appointment of a Commission of well known experts to ascertain and to recommend the best method of securing an ample supply of pure water. That Commission, as you are aware, has performed the work assigned to it, and its report presented to your body on March 1st of this year sets forth without question the only practicable solution of this all-important problem. If any one thing in connection with the procuring of a permanent and satisfactory supply of water for this great and growing city has been

made clear, it is that this desideratum can be obtained only by the construction of the system of intercepting sewers recommended by the Commission. The undertaking is one of great proportions, involving the outlay of a large sum of money; but the work to be done and the expense to be incurred dwindle into comparative insignificance when we consider the inestimable benefits that will follow its completion.

Another important problem concerning the public health to which attention has been given, is the question of the final disposal of garbage. The present method of dumping animal and vegetable matter into clay holes and other excavations within the City limits, often in populous neighborhoods and in close proximity to public schools, is intolerable—offensive to the senses and destructive of health and life. The Commissioner has visited many leading cities, including New York, Brooklyn, Philadelphia, Boston, Pittsburg, St. Louis and Milwaukee, and has studied their methods and examined their garbage disposal processes. The difficulty in the solution of the problem has been, not in the absence of known satisfactory methods, but in the charter provision which forbids the City to make contracts involving the payment of money for more than a single year. A plant adequate to the final and inoffensive disposal of the garbage output of Chicago will cost a large sum, and no one will invest the necessary amount without assurance that such plant will not be idle at the end of the first year. The State Legislature was applied to, and the passage of an Act was secured authorizing the City to make contracts for the collection and final disposal of garbage for periods not exceeding five years, and there is now good prospect that Chicago is on the eve of getting rid of a monstrous nuisance and menace to its health. This is the most important practical step that has yet been taken in dealing with a question to which successive City Councils and administrations have given unfruitful attention for a score or more of years.

A signal success in the administration of the Health Department is found in the fact that the medical profession admit that the decrease of nearly 2,600 deaths last year from the average annual number of the preceding five years is due directly to the work of the Department. This reduction of nearly ten per cent. in the average annual mortality is exclusively among children under five years of age; and physicians and sanitarians both agree that it is in the conditions affecting infant and child life that sanitary effort is most effective. It is this saving of the lives of nearly 2,600 infants and children that reduces our death rate below that of any city in the world of similar population. For 1896 the death rate of New York was 21, for Philadelphia 20.3 and for Brooklyn 20 per thousand of population.

In Chicago there were 23,257 deaths from all causes and at all ages last year, the least number recorded since the national census of 1890. On the basis of the minimum population of the school census of July, 1896, namely, 1,619,226, this makes Chicago's death rate only 14.4 per thousand of population, the lowest of any large city in the world.

As you are aware, the City has recently erected a new and commodious isolation hospital, which institution, however, owing to the immunity which the City has enjoyed from that dread disease smallpox, has not been used. It has, therefore, been decided to convert this smallpox hospital into a general isolation hospital for contagious diseases of all kinds. As there has long been an urgent need in this City for an institution of such character, this seems the best possible use to which it can be put.

POLICE DEPARTMENT.

In fulfilling the pledge made to the people prior to my election, to take the police force out of politics, a well known and reputable business man was placed at the head of the Police Department. My policy in selecting a General Superintendent not previously connected with the force excited at the time some unfavorable criticism. It can now be safely asserted that at no time in the history of the City has the Police Department been so absolutely free from political entanglements as during the past two years.

If any one thing has conspicuously emphasized the marked change in the *esprit de corps* of the force it has been the conduct of its members on the occasion of National, State and Municipal elections. Not a single instance can now be recalled where a complaint has been made as to the partisan conduct of the police at any election held in this City during my term of office. This fact speaks volumes and needs no further comment. Such changes and removals as have been made have been ordered only after a careful investigation by the trial board, and under circumstances which seemed to justify them for the good of the service. The result has been a steady improvement in the discipline and efficiency of the men employed, and a proper weeding out of that class whose membership in the Department was a constant menace to its usefulness in protecting the lives and property of our citizens. The conduct of the Department has been such as to challenge the commendation of all classes of citizens in that good order has prevailed throughout the City at all times, and that all practicable protection has been afforded to every citizen. By this it is not meant to say that some violence and crime in various forms have not been manifested as they will always be in a city of this size; but it is asserted that these inevitable evils of municipal life have been reduced to a

minimum, despite the fact that the past two years have seen unusual financial depression and business stagnation, with enforced idleness and want, and these are always attended by a corresponding increase in crime. Some things can not be done, and one of these is to set a police watch over the life and the property of each individual citizen. Desperate men will take desperate chances, and the police are no more to be held responsible for all violence and robbery than they would be if one member of the Council should suddenly rise in his place and shoot another, or than they were when a former honored Mayor was stricken down in his own home. Responsibility is far more to be found in a feeble judicial system for criminal offenses, and in the defective judicial administration of criminal justice.

USE OF THE POLICE IN RELIEVING DISTRESS.

While speaking of the Police Department, it is proper to call attention to the efficient services rendered by it in the early part of this year, in relieving want and suffering among the unemployed laboring classes throughout our City. There was then demonstrated in the most practical manner, and to the satisfaction of the public, the utility of the police force in a new and hitherto untried field. After many anxious hours spent in deliberating over the condition of the suffering and worthy poor of the City, and the best means of giving them prompt and immediate aid, the idea occurred to me to try the agency of the Police Department. The plan seemed feasible, and the Superintendent of Police was directed to issue at once the necessary orders to the various police stations, and at the same time through the public press an appeal was made to the public for popular subscriptions to a fund to be known as the "Mayor's Relief Fund," and to be distributed through the agency of the Police Department. In their usual prompt and

generous manner the people of the City responded, and it is a source of regret that mention cannot here be made by name of the noble-hearted and public-spirited who, appreciating the dire need of the hour, at once sent in their contributions. Due acknowledgment is, however, made to them in the report of the Superintendent of Police on this subject, where will also be found a detailed statement of the sums received and disbursed. It is gratifying to know that between January 25th and February 20th there was contributed to this relief fund the sum of \$64,906.80 in cash, besides which there were large donations, to the amount of thousands of dollars, in fuel, clothing and provisions, all of which were promptly distributed by the Police Department. Of the money thus received \$62,347.31 were expended in the purchase of 546,232 pounds of meat, 470,736 pounds of bread and over 6,000 tons of coal. The food and fuel were purchased from wholesale dealers in large quantities and at the lowest cash prices, and were distributed among 66,557 families, an average of 2,731 being cared for daily. In all 304,802 persons were aided. The members of the police force entered upon this charitable work with great zeal and alacrity, and so interested did they become in it, and so impressed were they with its practical character, and so strongly did it appeal to their sympathies, that out of their own salaries they contributed the sum of \$1,680 to the relief fund. The above expenditure was made and relief furnished without one cent of cost for time or services or for rent. Last, but by no means least, the police appeared in a new light to a large class of people who had hitherto looked upon them with suspicion and hostility, and a marked lessening of petty crimes was noticeable. In many localities where the patrol wagon had formerly been greeted with jeers and curses it now became a welcome sight, laden as it was with fuel and provisions for the cold and hungry, while the promptness with which this sorely-needed aid was supplied won the gratitude of the

recipients themselves and the hearty commendation of the public. There was furnished a striking object lesson, which it is hoped will not be forgotten, as to the efficiency of the Department in work of this kind. A similar use of the Department can wisely be made again should occasion arise in the future.

LAW DEPARTMENT AND LEGAL MATTERS.

The work of a considerable portion of the Law Department, and especially of its head, the Corporation Counsel, is largely advisory or supervisory. The Corporation Counsel's office comes in contact with all the other departments, and materially affects their work. It is consulted upon all kinds of questions in the preparation of ordinances, contracts and other papers. It ought to be consulted more than it is, particularly in connection with ordinances and contracts, for many awkward mistakes would thereby be avoided which are productive of embarrassment and expense. In the matter of litigation the various offices constituting the Department have accomplished very satisfactory results. No important legal defeat has been suffered by the City, and many cases of importance have been won. The County was defeated in its effort to oust the City from the City Hall, and the principles have been established that the issuance of a license for a saloon in a strictly residence district will not be compelled by *mandamus*, and that a neighborhood may be lawfully given some voice in determining whether it will have such things as a livery stable in its locality. The railway crossing cases, appealed by certain railroads to the Supreme Court of the United States, were dismissed from that court on the ground that they did not involve any Federal question, and it is now settled that the City may extend streets across railroad rights of way without paying damages.

At the present time there are pending in the Supreme Court several important cases in which the City is interested, including suits involving the relative rights of the City and of Park Commissioners at intersections of City streets and park boulevards; the right of Michigan avenue property owners to control the City's use and disposition of the lake front north of Monroe street; and the right of such property owners to control the action of the City or Park authorities in the improvement of the new Lake Front Park. In the lower courts there are pending a large number of cases against railroad companies to recover from them the aggregate amount of damages for which property owners have already obtained judgments, or are yet prosecuting suits against the City, and there are likewise pending many cases against the City brought by railroad companies to recover a still larger aggregate amount of alleged damages for property destroyed in the great strike of 1894. The claims of the City against the railroad companies are complicated, and are yet incomplete, because there are still many suits by property owners against the City undetermined. The legal position of the City is also somewhat embarrassed by a decision of the Supreme Court of this State in *Illinois Central Railroad Company v. the City of Bloomington*, 76 Ill. 447. As the final judicial determination of these viaduct damage cases will necessarily require many years of litigation, it was thought best early in my administration to attempt a settlement with the railroad companies, and this was undertaken as soon as the facts and the law had been sufficiently investigated. The negotiations, however, ultimately came to naught because of the complications involved and the apparent joint liability of different roads in many instances, and because the railroad companies, having so-called "riot claims," were unwilling to settle the viaduct cases unless they could at the same time settle the "riot cases." It then became

apparent that these two classes of cases must be fought out substantially together, and with the delays incident to the work of the courts, and the constant occupation of the regular staff of the Law Department, it has been impracticable to press the viaduct damage cases, while naturally we have not cared to hasten the "riot" cases. The City should ultimately employ special counsel in these cases. It is not possible for the regular Law Department to do justice to the interests of the City in this litigation, and at the same time carry on its other work. Moreover, the regular Law Department undergoes nearly a complete change every two years, and some changes occur in it even more frequently, so that one set of lawyers hardly become familiar with the litigation before they leave the City's service, and others come in who know nothing about it. The important "riot" cases have not yet been reached for trial, but they will presently be reached, and then counsel ought to be put into them who can remain with them until they are finally concluded.

The work of the present Law Department has been eminently satisfactory and particularly may this be said of the exacting and extended work of the Corporation Counsel's office, which has been managed purely as a law office, and has never been surpassed in efficiency.

FIRE DEPARTMENT.

The work of the Fire Department during the past two years calls for no special comment. We all know its condition under its present efficient Chief, and it is sufficient to say that it has maintained the high reputation it has for years enjoyed.

EXTENSION OF THE ELECTRIC LIGHT SYSTEM.

During the past two years there has been considerable agitation on the subject of municipal lighting of the public streets on the part of those who are strenuously advocating municipal control of street railways, gas plants and other public works. In this connection it may be stated that Chicago has already made a substantial beginning along these lines, and in my opinion the City's electric lighting system as it now exists is already furnishing a satisfactory demonstration of the entire feasibility of the City's operating its own lighting plants. Material additions to the system have been made during the past year, consisting of one 125-light dynamo, nearly 20,000 feet of steel wire, over 67,000 feet of single conductor light wire and cable and 152 2,000 candle-power street lamps. The lighting by electricity in the First Ward has also been completed, and all gas and gasoline lamps formerly in service in that ward have been discontinued. A number of arc lamps have also been placed in alleys where needed. The City is operating four plants which are now carrying a total of 1,254 arc lights. Believing that municipal lighting is entirely practicable, and believing, too, in the substitution of electricity for gas for street lighting purposes, I do not hesitate to recommend that a considerable increase should be made in the sums appropriated for the purpose of extending the Department as fast as the City's financial condition will permit. In my judgment it is imperative that this should be done, for the reason that a large number of additional lights could be operated by the plants that we now have without increasing the expense, but on the contrary materially reducing it.

SPECIAL PRIVILEGES.

At the present time the community is taking great interest in the subject of compensation for special privileges, particularly compensation from street railway companies for licenses,

commonly but erroneously called "franchises," to use the public streets. This topic was somewhat considered in my former message, and the view was expressed that reasonable and proper compensation should be exacted in all cases of special privileges granted; that it does not matter whether such compensation be made directly to the City Treasury, or indirectly in some other manner so that the public gets it; but that public sentiment seems to be in favor of the direct method. This view is still held by me, and in accordance therewith it would give me gratification to discuss at some length the granting of special privileges, the exaction of compensation therefor, and the related subject of frontage consents from private property owners. It is not practicable, however, for me to do more than outline certain considerations worthy of attention.

In this connection I submit the following statement showing the City's receipts from street railway companies from April 1, 1895, to December 31, 1896, and separately for the year 1896.

RECEIPTS FROM STREET RAILWAYS.

FROM APRIL 1, 1895, TO DECEMBER 1, 1896.

	License	Department of Public Works.	Street Lamps.	Special Department Fund.	Total.
Chicago City Railway	\$ 37,886 00	\$ 95,755 76	\$ 55,000 00	\$ 10,000 00	\$ 198,641 76
West Chicago Railway	33,948 97	4,500 00	50,000 00	.....	88,448 97
North Chicago Railway	25,089 86	32,000 00	25,000 00	25,000 00	107,089 86
North Chicago Electric Railway	1,237 67	.....	.....	.....	1,237 67
North Chicago North Shore Railway..	1,230 25	.....	.....	.....	1,230 25
North Chicago C. E. T. Railway	1,011 18	.....	.....	.....	1,011 18
Calumet Electric Railway	2,389 80	2,000 00	.....	.....	4,389 80
Chicago South Side Railway	9,500 00	.....	.....	.....	9,500 00
*Metropolitan Railway	10,958 33	6,460 98	.....	.....	17,419 31
Chicago, Jefferson & Urban	507 49	.....	.....	.....	507 49
South Chicago R. R.	1,455 00	.....	.....	.....	1,455 00
Cicero & Proviso	269 75	.....	.....	.....	269 75
Lake Street Elevated	3,200 00	6,800 00	.....	.....	10,000 00
Northwestern Elevated .....	.....	.....	20,000 00	.....	20,000 00
Chicago General Railway	473 40	.....	.....	.....	473 40
Totals	\$129,157 70	\$147,516 74	\$175,417 48	\$ 35,000 00	\$ 461,674 44

*General Fund, \$25,417.48.

RECEIPTS FROM STREET RAILWAYS—1896.

	Street Car Licenses.	Depart- ment of Public Works.	Street Lamp Fund.	Street De- partment Fund Elec- tric Light Maintenance and Construc- tion.	Total.
Chicago City Railway Company	\$ 22,024 75	\$ 46,678 84	\$ 55,000 00	\$ 10,000 00	\$ 133,703 59
West Chicago Street Railway	16,726 87	3,000 00	50,000 00		69,726 87
North Chicago Street Railway	15,739 86	14,000 00	25,000 00	15,000 00	69,739 86
North Chicago Electric Railroad	1,237 67				1,237 67
North Chicago North Shore R. R.	203 55				203 55
North Chicago C. E. T. Company	723 77				723 77
Calumet Electric Railway	1,302 30	2,000 00			3,302 30
Chicago South Side R. T. Co.	5,000 00				5,000 00
Metropolitan W. S. Elevated Ry	5,750 00				5,750 00
*Chicago, Jefferson & Urban	336 12				1,147 57
South Chicago Railroad	425 00				425 00
Cicero & Proviso	108 61				108 61
Lake Street Elevated Railway		6,000 00			6,000 00
Northwestern Elevated			20,000 00		20,000 00
Totals	\$ 69,578 50	\$ 71,678 84	\$ 150,000 00	\$ 25,000 00	\$ 317,068 79

* General Fund, \$811.45.

So far as street railways are concerned, there is no difficulty about the principles to be applied; the problem is to apply them in any given case. The privileges should not be granted to the detriment of the public welfare, and if practicable the people in the immediate locality should be consulted.

It is manifestly impossible to lay down any given rule for uniform compensation, as each case must be governed by its own circumstances. What would be a moderate compensation at one time, or from a certain line, would be oppressive or even prohibitive at another time, or from another line; and, on the contrary, a seemingly high or even excessive compensation from any line at a certain time would be altogether inadequate from another line, or from the same line after the greater development of its business. Clearly the street railway lines, as a whole, do not now return to the public a sufficient compensation for their privileges, and, on the other hand, it is my judgment that there is some disposition in the community to exact too high a compensation from them. It must be remembered

that the street railway licenses are of comparatively short duration, and that the companies are not guaranteed against competition. Long and exclusive licenses will, of course, yield a much larger return, but the public appears to prefer short and non-exclusive licenses rather than large compensation. Fairness on both sides is what is wanted. Compensation and protection must go hand in hand. My view is that the law ought to permit exclusive long-term grants, subject to just compensation and proper regulation, for a street railway is a natural monopoly in any territory where it has been constructed, and in the end the public is more likely to get satisfactory service from such a monopoly, closely regulated, than from rival and warring companies in their usually impecunious condition.

Whenever application is made for a street railway license it is accompanied by a petition of property owners, under the frontage consent law. The working of this law has come to be altogether different from what was intended, and it is a question in my mind whether it now serves any useful purpose although it enables property owners to obtain from a railway company compensation which ought to go to the City. Every grant to a street railway company for two tracks requires the company to pave the center sixteen feet of a street and to keep the pavement sprinkled and in repair, thereby relieving the property owners of considerable expense; but whenever such a grant is sought we are usually treated to a spectacle of the property owners indirectly selling their consents, and oftentimes selling out their neighbors', with the inevitable dispute as to whether certain individuals have signed, or have not signed, or have revoked. Some remedy for this condition of things is needed, but it is difficult to find just the right one.

The principles applicable to the grant of special privileges to street railway companies apply equally to all other corporations, and likewise to individuals, and the special privileges

allowed to individuals seem to be generally lost sight of. At the present time, for instance, every property owner is allowed to excavate for his own use the space in the street under the sidewalk, which belongs to the City. Why should not all these property owners be compelled to pay the City a fair compensation for the use of this space, or why should not the City make use of the space for its own purposes? At the present time a property owner may have an excavated space of much value under a broad sidewalk hundreds of feet long, and yet because the City technically owns the sidewalk, which is in law a part of the street, the property owner cannot even be compelled to keep the snow from the sidewalk in the winter time.

In granting special privileges the primary consideration is, of course, the benefit to the general public, directly or indirectly, immediately or remotely. Without such benefit there is no excuse for granting them at all. It is supposed, for example, that facilitating a man's business by allowing him to excavate an alley promotes the general business and prosperity of the community, and this is doubtless true. The difficulty is to determine separately in every case the relative benefits to the community and to the individual or corporation, and to make the compensation fair and reasonable to both sides under all the circumstances of the case.

PAY ROLLS.

Upon assuming the duties of this office an investigation was ordered as to the character and fitness of those holding positions under the City, their number, and the services they were rendering for the pay they received. The result of these investigations was that the pay rolls of the City were thoroughly purged of numerous employes whose only excuse for being upon them was that they had rendered valuable services to the political party to which they happened to belong.

As emphasizing the work accomplished in materially reducing the pay rolls of the City it may be stated that the total saving thus effected during the past twenty-four months amounts to \$1,822,391.81. For your information a statement is submitted showing the pay rolls of the present administration for the past twenty-four months, or from April 1, 1895, to March 1, 1897, as compared with the pay rolls of the previous twenty-four months, from April 1, 1893, to March 31, 1895.

	24 Months 1893-4-5	24 Months 1895-6-7	Decrease
Police Department.....	\$ 6,856,344 98	\$ 6,393,851 17	\$ 462,493 81
Water pipe extension.....	1,227,650 43	798,609 61	429,040 82
Bureau of Street Repairs, wages..	979,396 63	667,770 35	311,626 28
Sewerage Department.....	749,147 57	514,100 37	235,047 20
Street Cleaning Department.....	362,679 70	151,331 22	211,348 48
Health Department.....	307,954 66	248,771 36	59,183 30
Building Department.....	97,644 43	95,249 58	2,394 85
Comptroller's office.....	65,739 33	64,437 25	1,302 08
City Collector's office.....	66,147 39	53,506 76	12,640 63
Pumping stations	549,443 10	488,003 17	61,439 93
Bridge repairs.....	176,359 81	112,830 07	63,529 74
City pipe yard.....	152,248 25	127,591 23	24,657 02
Special Assessment office.....	113,616 59	97,685 48	15,931 11
Street lamp repairs.....	69,997 66	60,266 32	9,731 34
Map Department	35,538 80	30,644 62	4,894 18
City Engineer's office.....	53,065 73	47,432 76	5,632 97
Commissioner's office salaries...	55,899 21	53,674 43	2,224 78
Street Bureau, office salaries.....	32,254 02	31,349 27	904 75
Water Department, office salaries.	456,956 78	456,119 81	836 97
Totals.....	\$ 12,342,345 74	\$ 10,428,787 58	\$ 1,914,860 24
			Increase
Fire Department.....	\$ 2,537,971 13	\$ 2,613,899 69	\$ 75,928 56
Law Department	65,195 34	70,320 69	5,125 35
Gas Inspector's office.....	76,985 51	78,805 12	1,819 61
Mayor's office.....	27,854 86	28,049 23	194 37
Water Works shop.....	91,734 79	101,135 33	9,400 54
Totals.....	\$ 2,799,741 63	\$ 2,892,210 06	\$ 92,468 43
Total decrease.....			\$ 1,914,860 24
Total increase.....			92,468 43
Net decrease.....			\$ 1,822,391 81

HOUSE OF CORRECTION.

The Council is to be congratulated on having passed the appropriation of \$50,000 for the completion of the John Worthy Training School, which is now being conducted in connection with the House of Correction. As you are well aware, for many years past the House of Correction has been anything else but a reformatory school, at least so far as the juvenile offenders of the City are concerned; on the contrary it has been a school for crime. Statistics furnished me by the Superintendent of the institution show that during the past twenty-four years 24,600 boys, ranging in age from eight to sixteen years, have been committed to the Bridewell for all classes of offenses, from that of mere waywardness to that of felony. He also informs me that the records show that out of this army of boys only 738 had ever attended the public schools of this City. These boys, all of whom are in the formative period of life, have always been confined in the same cells and compelled to associate with old and hardened criminals, and owing to the impressions thus formed, in nine cases out of ten they have gone out into the world to lead lives of crime and wickedness. This is abundantly borne out by a statement made by the Chief Deputy of the House of Correction, who has been connected with the institution for the past twenty-one years, that among the convicts now confined in the Joliet penitentiary he has for years past been able to tell at a glance those who came from Chicago from the simple reason that he had become acquainted with them when boys as inmates of the Bridewell. It occurs to me that no more striking object lesson as to the effect of evil associations upon the minds of our youth could be furnished; and it certainly has not been to the credit of Chicago that for all these years it has been maintaining, under the guise of a reformatory institution, a mere prison from which is annually turned loose upon society a large number of recruits to the criminal classes of our City.

From the first it has been evident that in order to bring about any decided improvement in this deplorable condition of affairs, some means must be found by which juvenile offenders could be completely isolated from old and hardened criminals. At the same time, too, it was equally apparent that in removing youthful offenders from contact with the class already referred to, it would also be necessary to place them in surroundings of a directly opposite character. Naturally, then, the training school, with its happy combination of both mental and physical culture, was suggested as being the only practicable solution of the difficulty, and shortly afterwards the institution for which you have so recently made an appropriation was brought into existence. This school, although as yet in an incomplete state, has been in operation since the first of the year, and with the most satisfactory results; but the full measure of benefits cannot be expected from it so long as its pupils are not wholly isolated from the other inmates of the Bridewell. Under the present conditions, as they can only spend from five to six hours a day in the workshop, being confined for the remainder of their time with the older criminals, much of the good received must be counteracted by this association. It is therefore especially gratifying to know that the sum appropriated by your body will insure the completion of the building with accommodations providing for the perfect isolation of the boys from bad influences, and sufficient to place them amid clean, healthful and salutary surroundings. Inasmuch as your honorable body appropriates annually large sums of money for the detection and suppression of crime, it appears to me that you have shown wisdom in appropriating this comparatively small sum for its prevention. In so doing you are acting in the interests of common humanity, in the interests of our future population and in the interests of present good government; and it is hoped that the need of enlarging,

developing and maintaining this work, which has already become so apparent, will meet with the recognition and support of your honorable body in the future.

STREET CAR TRANSFERS.

Your honorable body is to be congratulated upon the legislation which it has enacted during the past two years, to secure for the people a more liberal system of street car transfers in the North and West Divisions of the City. While the exaction of unjust or unreasonable requirements from our street car corporations has never been approved by me, any legislation compelling them to give transfers for continuous rides on all connecting lines has always had my hearty endorsement. In view of their extended occupation of the streets of our City, it has seemed to me only a matter of common justice that these companies should deal liberally with the public to whom they are indebted for the privileges they enjoy.

PUBLIC BATHS.

Free baths have long been a recognized necessity in this City in order that the very poor may be able to realize the time honored precept "cleanliness is next to Godliness," and the general health of the community correspondingly promoted. The want has been emphasized by the fact we have a constantly filled bath-tub, 300 miles long by 150 miles wide, at our very doors, while this portion of our people have been compelled to go unclean and unrefreshed because open bathing in the lake is restricted or forbidden by our municipal ordinances. It is gratifying to know that in this laudable movement to establish free baths for the people, Chicago has led all other American cities. It is stated upon what appears to be reliable authority that the Carter H. Harrison bath, opened in this City in 1894,

was the first permanent, or all-the-year-round, shower-bath to be established in the United States. Since then other cities have followed our example, and have begun the work of providing for the poor this simple yet effective agency for enabling them to observe what is universally recognized as the simplest and yet most imperative rule of health. As my hearty support has always been given to this movement, the action of your honorable body in appropriating \$12,000 for the erection of a new South Side bath, which was only recently completed and thrown open to the public, met my unqualified approval. Money thus expended to promote the cleanliness and health of the people is wisely appropriated; and I do not hesitate to recommend to your honorable body the further extension of the work until the people of each of the three divisions of the City are well provided with institutions equal, if not superior, to the ones we have constructed.

LAKE FRONT.

It is proper to refer here briefly to the settlement of the Lake Front controversy which was made during 1895, and was mentioned in my annual message last year. Since that time the wisdom of the settlement has become more and more realized by the public as the physical work upon the Lake Front has progressed. The fine suburban railway station, constructed wholly below the surface of the ground, is a source of comfort and pleasure to the many thousands of people who use it, not less than a benefit to the railroad company. The noise and smoke from railway trains and locomotives have ceased to be of material consequence to people living along or using the adjacent boulevard, and when electricity shall have been adopted as a motive power for suburban train service, as it doubtless soon will be, all cause for complaint against a long standing nuisance will seemingly disappear. It will no

doubt be several years before the Lake Front reaches an ultimate stage of development where it will compare with the other parks of the City, but all of these parks have required time to place them in their present condition, and already enough progress has been made on the Lake Front to indicate in a forcible way what was accomplished for the City in the settlement of this long standing and vexatious controversy.

TRACK ELEVATION.

In the matter of track elevation a gratifying progress has been made during the last two years. Ordinances have been passed for the elevation of a large portion of the Chicago & North-Western Railway on both its Milwaukee and Wisconsin divisions; of the Rockwell street tracks belonging to the Chicago & North-Western, the Pittsburg, Cincinnati, Chicago & St. Louis, and the Chicago & Northern Pacific Railways; and of a large portion of the Pittsburg, Ft. Wayne & Chicago Railway; also for extending the elevation of the Lake Shore and Michigan Southern Railway beyond the point prescribed in the original elevation ordinance relating to that line. All these ordinances have been accepted by the companies interested. An ordinance was also recently passed for the elevation of the so-called St. Charles Air Line now crossing several streets, including Michigan avenue boulevard, near Sixteenth street, and for doing away with the dangerous crossing upon Clark street near Sixteenth by a combination of track elevation, track depression and street elevation. At this writing this last ordinance has not been accepted by all the railway companies concerned, but only one is making any objections to it. The objecting company may or may not accept its provisions. If it does not, some way will be found to deal with it, and if it does, a complicated and troublesome problem will be happily solved. Few of our people have realized the extent of this problem. It

has been receiving my earnest attention for nearly two years, and at times the outlook has been extremely discouraging. Important and diverse interests of fifteen railway companies were affected. The Chicago & Western Indiana with its five tenants and owners—the Chicago & Eastern Illinois, the Chicago & Grand Trunk—the Wabash, the Louisville, New Albany and Chicago and the Chicago & Erie,—the Atchison, Topeka & Santa Fé, the Lake Shore & Michigan Southern, the Chicago, Rock Island & Pacific, the Chicago & Alton, the Chicago, Madison & Northern, the Chicago & North-Western, the Chicago, Burlington & Quincy, the Illinois Central and the Michigan Central—the last four being the joint owners of the St. Charles Air Line. Added to these were the interests of adjacent property owners and of the public at large. The combination of railway and street crossing required to be treated has often been pronounced by railway men to be the most complicated and troublesome grade crossing in the world. That it seems now to be so near abolition is due to unremitting and persistent labor, to persuasion and threats, and to compromises and concessions. If the plans of this ordinance are carried out substantially as fixed, the change in grade of the railway tracks will cost the companies interested about \$1,600,000, the estimated cost per mile being \$260,000. This includes the cost of seven subways to the mile.

The track elevation work already accomplished, or provided for under ordinances now in force covers 41.7 miles of tracks and 165 subways. It is substantial track elevation and not mere street depression. The street grades have been preserved so far as possible, thus avoiding the payment of heavy damages to property owners and at the same time preserving the appearance and utility of our streets as public thoroughfares.

In connection with the prosecution of this work due acknowledgment should be made of the valuable services

rendered by the members of the special Council Committee on Track Elevation, who have labored with untiring zeal in the performance of their duties. Much credit should be given to the Committee, and especially to its Chairman, nearly all of whose time has been devoted to this important matter for several years past.

In these track elevation matters, as in all matters, my purpose has been to bring about tangible, substantial results, of benefit to the City, and as far as possible to avoid the litigation and delay so commonly produced by controversy and drastic measures. The railroads of this City are great factors in the City's material growth and prosperity, while at the same time the City is of great benefit to them. It is therefore necessary that mutual fairness and consideration should be exercised in the treatment of all these problems, and it is in this spirit that we have always tried to meet the railway companies. It gives me pleasure to say that nearly all the railroad managers have met us in the same spirit. In negotiations involving enterprises of great magnitude, both in the work to be performed and in its cost, differences of opinion usually arise calling for mutual concessions on some equitable basis in order that a desired result may be accomplished. My experience with these railway crossing problems is quite in line with this reflection: many concessions have had to be made on both sides; but this policy has been rigidly adhered to, with patience and persistency, and with the justice of the City's position kept constantly in view. That it has been a wise policy is evidenced by the results accomplished and the material progress made.

NEW CITY CHARTER.

To only one more subject will your attention be here invited, but that is an important one. Some substantial changes should be made in our City incorporation law, and made without delay. At the present time one scheme of municipal government is provided for this vast City, with its extended and complicated affairs, and for every little community in the State having not less than one thousand inhabitants and ambitious enough to be under city organization. The existing general incorporation law doubtless works well enough in small localities, but in this City its defects are many and obvious. More power should be given to a Mayor, and in him should be vested the appointment, subject to confirmation by the Council, of such officers as the City Clerk, the City Attorney, and the City Treasurer, who could thus be held to a better responsibility for the performance of their respective duties, while the people would have but one executive officer to hold responsible. In my judgment, too, this Council has become too large a body, and I believe the interests of the City of Chicago would be better guarded and promoted if there were only half as many aldermen as at present, and perhaps, also, if one-half of those were elected upon a general ticket. The constitutional and statutory restrictions upon indebtedness and taxation are well enough as they stand, for while embarrassing in many ways, they are at the same time great safeguards against undue extravagance. There are too many forms of government within the City, and it is no wonder that the people are confused and do not know where their money goes, nor what officers to hold responsible in public affairs. Happily, public interest is becoming aroused upon this subject, and before long we may look for some improvement. You will recall that shortly after my assumption of this office an attempt was made to secure legislation

which should make our charter straight-jacket better fit our conditions; but the attempt was abandoned when it was found that the State constitution stood in the way of the desired action. None know better than the members of this body the restrictions and limitations which fetter our municipal action at almost every turn, and this honorable body can not do a wiser thing for the community than to continue the agitation for a new or improved City charter. The tendency in local affairs is toward a fear of power, and yet it will be clearly seen that only good has come from giving vast power to the chief executive officer, as well as to the legislative assembly, of the nation; and if this is true of the country at large, why is it not true of the fraction of it called a city? It must always be kept in mind, as once before observed, that the power to do the right thing will always involve the power to do the wrong thing, and it may be added that if there is no power to do the wrong thing, there will be no power to do the right thing. There must necessarily be some trust and confidence reposed in public affairs as in private ones. The power once given, the citizens must themselves do their part by electing good men, by watching their action, by holding them strictly responsible, and by fully performing their own civic duties.

CONCLUSION.

In conclusion, let me say what I believe you all know, that I welcome this hour in which I lay down my burden of official cares and responsibilities, and transfer to another my official title and authority. To me the latter have long ceased to be of equal personal consequence with the former. Few people understand what is involved in an effort to direct an efficient, honest and economical administration of the affairs of this great City, constituting one of the largest business corporations in the world. No man who makes the attempt can succeed to his own complete satisfaction under existing conditions, and

still less can he hope to satisfy fully and in all things his vast and varied constituency.

In a community of this magnitude, embracing nearly two millions of people and including all races, creeds and conditions, there must necessarily be much diversity of interest and of opinion in nearly all matters of public import. It often happens that while the Mayor is conferring with a delegation of respectable citizens who have called upon him to ask—or more likely to demand—that he approve a certain measure, or adopt a certain course, a like delegation is waiting to remonstrate against the same measure, or to demand a different course. Frequently disinterested, well intentioned citizens are misled by the specious arguments of interest or of malice, and being without actual knowledge of the matters at issue, but believing the right to be wrong and the wrong to be right, they seek strenuously to guide the Mayor's judgment or attack it when it has been exercised. There is little peace and quiet for a Mayor even in his own home, where he is followed and harassed by all kinds of troubles and by all classes of people, generally well-meaning. These incidents are not cited in a spirit of complaint, but merely to illustrate the difficulties of this office and to point out how the community itself, thoughtlessly, and generally unprofitably, adds to the burdens and embarrassments of its chief executive officer. How much easier and how much better it would be if the people would more frequently indulge in some presumption that the Mayor understands, or will try to learn, something of his duty, and knowing, will perform it. In the main, however, there has been manifested towards me, a hearty spirit of co-operation and support which has been greatly appreciated.

The various officers and employes of this City are here given my earnest thanks for the aid they have rendered to me in my work. To all the heads of departments, particularly, my

warm acknowledgments are due. And in taking final leave of this body, I desire to express to each member of it my sincere gratitude for courtesy and kindness shown me, and for the assistance you have given me in the discharge of my duties as your presiding officer. It has been my aim at all times to be fair in my rulings and to preside over your proceedings in such manner as to facilitate the intelligent and speedy transaction of the public business. But my efforts would have been of little avail without your kindly consideration and support. Let me bespeak for my successor a manifestation of the same spirit and wish for him and for this body the greatest success in all things.

Respectfully submitted,

GEORGE B. SWIFT,

Mayor.

INAUGURAL ADDRESS
OF
MAYOR HARRISON

MAYOR HARRISON'S INAUGURAL ADDRESS.

Gentlemen of the Council:

Sustained by the confidence and good will of 148,000 citizens of the city of my birth, I assume to-night the duties of the office of Mayor. He would be a reckless man indeed who could face this representative gathering, standing as it does for the courage, the enthusiasm, the unconquerable energy of the second greatest city of the American continent, without feeling deeply impressed by the magnitude of the undertaking. Fully realizing the gravity of the obligations and with no desire to shirk a single responsibility, I wish to renew the pledge made the electorate of Chicago at different times during the campaign, to give for the next two years my time, my energy and my best endeavor to serve faithfully all interests of the great City that has honored me with its confidence.

This is no longer the time for words. It is by action, and by action alone, we can now show the good faith of the pledges upon which we have been chosen. The victory of this spring has been brought about by a campaign honestly and decently conducted along lines of municipal reforms. It is due to the support of citizens of all classes, of all nationalities. The population of our City is no more cosmopolitan in its character than the support which has placed power in our hands. And the more flattering this signal token of general confidence, the more earnest should be our endeavor to show a proper appreciation.

At this time no action is of greater or more far-reaching importance than such action as will restore the confidence of the outside world in the capacity of Chicago to furnish adequate security to all investors who may desire to bring here and to invest their means. Misrepresentations on the part of certain journals and a confessed inability of the authorities at times to cope successfully with the criminal classes has shaken the confidence of many who in the past have earnestly desired, and to-day are willing, to employ our labor and to assist in the development of local industries. Ample security must be provided every interest. Labor must be protected, the laws must be enforced and order must be maintained. The public offices must be filled with competent men and all City affairs must be administered economically, honestly and in a business-like manner. The burden of taxation, now pressing heavily upon our property owners, must be lessened. The expenses of administration, in all directions where the health and security of the citizens are not involved, must be curtailed. Competent men in office, not offensively partisan, should be retained. By the employment of these methods, and these methods alone, can better conditions be brought about, and a renewal of confidence in the integrity of Chicago be obtained.

To effect these results, one man, whatever his position, can do but little without the active and hearty assistance of not only the press, but the great mass of the people. And to-night, in assuming the cares and responsibilities of one of the greatest offices in the gift of the American people, I appeal to all patriotic citizens, regardless of party, to earnestly co-operate with me in the work of bringing about a renewal of confidence and the establishment of better times in the community. I make this appeal to the patriotism of Chicago, that patriotism which, in but little more than a half century, has metamorphosed a swamp into one of the world's greatest metropolitan centers,

which gave to civilization the greatest Fair in history, and which to-day, just beyond our borders, is completing an almost unparalleled engineering feat. I have every confidence that I will not make this appeal in vain.

In my efforts to give a careful, economical administration, it is necessary I should have the constant, active assistance of this honorable body. With your aid great results can be obtained, without it but little can be accomplished. From to-night we will be making history, and two years hence this administration will be known as honest and economical, or utterly profligate and wasteful, as this Council will to a great extent determine. For my part, you gentlemen of the Council can count upon an active, cordial co-operation in all things that will advance the best interests of the community. We have been chosen to administer a trust and our future will depend upon the report we shall make two years from to-night.

Very respectfully,

CARTER H. HARRISON,

Mayor.

Department of Public Works, City of Chicago.

JOSEPH DOWNEY,
Commissioner.

JOHN A. MOODY,
Deputy Commissioner.

J. J. GRAHAM,
Assistant Secretary.

Heads of Bureaus.

CITY ENGINEER,	. . . . .	L. B. JACKSON
SUPERINTENDENT OF SEWERS,	. . . . .	G. L. CLAUSEN
SUPERINTENDENT OF SPECIAL ASSESSMENTS,	. . . . .	H. J. JONES
SUPERINTENDENT OF WATER BUREAU,	. . . . .	J. C. CRAIG
SUPERINTENDENT OF STREET BUREAU,	. . . . .	R. J. MacDONALD
SUPERINTENDENT OF MAP BUREAU,	. . . . .	O. L. WULLWEBER
SUPERINTENDENT OF STREET AND ALLEY CLEANING,	. . . . .	J. C. W. RHODE
DEPARTMENT BOOK-KEEPER,	. . . . .	L. E. GOSSELIN

PAST COMMISSIONERS OF PUBLIC WORKS.

WATER BOARD.

1851-54—John B. Turner, Prest., Horatio G. Loomis, Alson S. Sherman.
1854-56—James H. Woodworth, Prest., John C. Haines, George W. Dole.
1856-58—George W. Dole, Prest., Orrington Lunt, John C. Haines.
1858-60—George W. Dole, Prest., Orrington Lunt, Noah Sturtevant.
1860-61—Orrington Lunt, Prest., Edward Hamilton, Benjamin Carpenter.

SEWERAGE BOARD.

1855-59—Wm. B. Ogden, Prest., James D. Webster, Sylvester Lind.
1859-61—James D. Webster, Prest., Sylvester Lind, Philip Conley.

Water and Sewerage Boards merged May 6, 1861, into

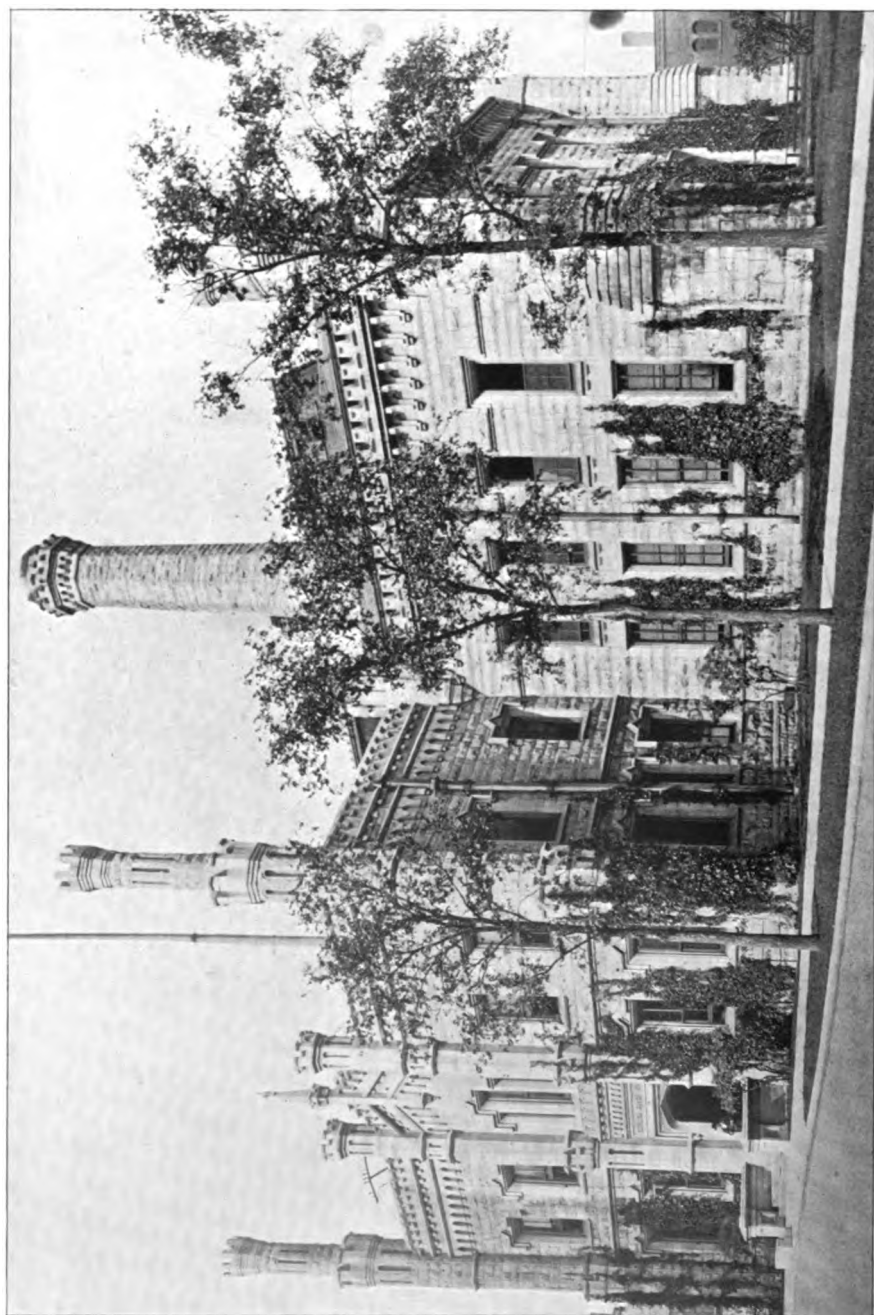
BOARD OF PUBLIC WORKS.

1861-63—Benjamin Carpenter, Prest., John G. Gindele, Frederick Letz.
1863-65—Francis C. Sherman, Mayor, *ex-officio* member of the Board.
1863-67—John G. Gindele, Prest., Frederick Letz, Orrin J. Rose.
1867-69—Aug. H. Burley, Prest., Wm. H. Carter, John McArthur.
1869-71—John McArthur, Prest., Wm. H. Carter, Redmond Prindiville.
1865-69—Wm. Gooding and Roswell B. Mason, members of the Board in matters pertaining to the cleansing of the river.
1869-71—Wm. Gooding and Edward B. Talcott, members of the Board in matters pertaining to the cleansing of the river.
1871-73—Wm. H. Carter, Prest., Jas. K. Thompson, Redmond Prindiville.
1873-76—Redmond Prindiville, Prest., Louis Wahl, Jas. K. Thompson.

Board of Public Works abolished September 18, 1876, and on the same date there was established by the City Council

THE DEPARTMENT OF PUBLIC WORKS.

1876-78—Monroe Heath, Mayor, Acting Commissioner.
January 7, to May 18, 1879—E. S. Chesbrough.
May 19, 1879, to October 18, 1881—Charles S. Waller.
October 19, 1881, to February 4, 1882—Carter H. Harrison, Mayor, Acting Commissioner.
February 4, 1882, to January 31, 1886—DeWitt C. Cregier.
February 1, 1886, to June 28, 1886—Carter H. Harrison, Mayor, Acting Commissioner.
June 28, 1886, to April 11, 1887—W. H. Purdy.
April 12, 1887, to April 15, 1889—George B. Swift.
April 16, 1889, to April 27, 1891—W. H. Purdy.
April 28, 1891, to December 24, 1892—J. Frank Aldrich.
December 24, 1892, to April 25, 1893—E. Louis Kuhns, Acting Commissioner.
April 25, 1893, to November 21, 1894—Hiram J. Jones.
November 21, 1894, to November 28, 1894—John A. Moody, Acting Commissioner.
November 28, 1894, to April 8, 1895—John McCarthy.
April 8, 1895, to July 20, 1896—William D. Kent.



NORTH PUMPING STATION

REPORT OF THE

Commissioner of Public Works

CITY OF CHICAGO

COMMISSIONER'S REPORT.

OFFICE OF THE COMMISSIONER OF PUBLIC WORKS, }
CITY HALL. }

*To the Honorable, the Mayor and the City Council
of the City of Chicago:*

GENTLEMEN:—In pursuance of the ordinances of the City, I present to you herewith this the Twenty-first Annual Report, which includes in detail the records of the construction and management of all public improvements coming under the jurisdiction of the Department of Public Works for the year ending December 31, 1896.

The year began with William D. Kent, Commissioner of Public Works, and upon his retirement the present incumbent was appointed, and entered upon the duties of the office July 20th, 1896, leaving about five months to close the business of the year. In consequence of the advanced stage of the season much of the work for constructing public improvements and for furnishing and delivering materials and supplies had been contracted for by the retiring Commissioner, leaving the details of completing such contracts to the supervision of the present Commissioner. An early experience and investigation into the duties of my office developed the necessity for a vigilant policy in all matters of public business coming under the jurisdiction of my Department, and also revealed a responsibility which is magnified by the ever-increasing demands of a great and growing city. With a population of nearly two million souls, and a superficial area of 188 square miles, we have 2,500 miles of streets to improve and repair, which, in addition to the extension and maintenance of the great water and drainage system of the City, may be rightly considered a matter of some magnitude. The demand of

enlarging these improvements is made necessary by the extension of street car lines in the outlying districts of the City, with other means of rapid transportation to the business centers, which have opened up new and heretofore unoccupied territory, where now large settlements are being established by those seeking inexpensive homes. These settlements draw largely upon the funds of the City for benefits and improvements each year, while the revenue derived from such thinly settled localities is insufficient to meet such demands. These, with other improvements of various grades of importance are forcing themselves constantly upon this Department, all requiring prompt attention and the expenditure of large sums of money, which would, if conceded, quickly absorb the funds of the Department. Being aware of the existence of needed improvements in all sections of the City, which cannot be reached in consequence of a limited appropriation, and desiring to meet the most urgent, keeping in view a just distribution of the funds in each district, it was deemed expedient to so adjust the expenditures of the various sub-departments as to meet, so far as possible, such demands as would contribute the greatest comfort and convenience to those most needy, while still keeping within the limits of the appropriation.

In view of the many obstacles to the desirable advancement of general public improvements, it is just to remember that Chicago, in comparison with the large cities of the East, is yet a young and unfinished metropolis, still laboring under the disadvantages of a defective City charter, and unwise State laws, which are depriving the City of the ability to provide an adequate revenue, and are perpetuating an irrational, cumbersome and expensive City, County and Town government, complicating and retarding public business at the expense of the tax-payers, and to the inconvenience of all citizens. These are and should be recognized as fatal evils to the prosperity of the City, which can never be remedied until a unanimous public sentiment shall demand a government worthy of the great City of Chicago. With all these disadvantages and adverse circumstances the wonderful growth of the City is the more marvelous, for even handicapped thus, her rapid march during the last half century has given her the proud position of second city in population in the United States, with a destiny which will place her at the head of the list of great cities of the continent at her century celebration.

With such a grand and magnificent outlook, there should be no delay in securing such legislation as would permit the City to abolish the present system of government, and in its stead establish under

one chief executive, and an administrative body of officers, a municipal government which should be a perfect model of its kind, and worthy of the present and future greatness and glory of the City.

The seeming large amount of funds placed at the disposal of this Department annually to meet the costs of construction, extension and maintenance of the public works of the City reaches approximately the sum of \$9,000,000, which is provided for by appropriation, special assessments, water collections, and minor sources of revenue. From this amount there has been expended for new water tunnels, water pipe extension, pumpage and other expenses, \$3,342,490.42; for sewerage extension and maintenance, \$338,973.18; for street and alley paving and sidewalk construction, \$3,357,759.80; for street and alley cleaning and for salaries and other expenses payable from such fund, aggregating \$2,250,458.97.

The record of the distribution of such funds appears in detail in the bookkeeper's statement of this report, and exhibits satisfactory evidence of a conservative and economical expenditure of the same. This, with an enforcement of a business principle exacting the best energy and skill of those having charge of the construction of public works, has made it possible for the Department to increase the magnitude of its work to a greater extent than could have been accomplished under a less vigorous and less economic policy.

The City has also been benefited by the establishment of a more thorough system of City inspection upon all classes of work, based upon the selection of persons whose intelligence, integrity and experience have fitted them for such work. With this system in successful operation, and a frequent personal examination of the most intricate and important lines of construction, the Department has secured for the City a superior class of workmanship and material, and has established a higher and more substantial grade of public improvements.

Notwithstanding the retrenchments thus made the City has suffered no loss in consequence of neglect or delay in the prosecution of the work of the Department; on the contrary, it has accomplished more satisfactory results in establishing a systematic organization and classification of City labor, with a material saving of funds under a judicious abandonment of all needless and unimportant public improvements.

STREETS.

The report of the Superintendent of Streets shows the number of miles paved with cedar blocks is nearly equal to the amount paved with all other classes of material. The use of sheet asphalt and vitrified brick for street paving is increasing in favor each year, and the three classes may be considered as standard in street paving in this City.

There is nothing of importance to add to the suggestions made in former reports concerning the merits of the various classes of street paving. The recommendations of scientific engineers, and the opinions of practical and experienced road builders have added nothing valuable of late to the science of road construction.

It is reasonable, however, to recommend and urge the construction of a substantial and permanent sub-structure or foundation, with such finish as will form a water-tight shed and will prevent the escaping of poisonous gases or offensive odors from all underground works. Such construction not only recommends itself as a perfect foundation for receiving the material for wearing surface, but it is indispensable as a sanitary measure, and should be regarded of paramount importance in all street improvements.

The prominence secured and other benefits coming to a city with well paved and well kept streets can never be overestimated. Such a condition increases values and gives comfort and convenience to citizens; it is an evidence of public spirit and stimulates a commendable pride and ambition to improve and beautify homes. Visiting strangers pass judgment upon the character and refinement of citizens by the condition of their streets, and the standard of official enterprise and efficiency is measured by the high or low grade of a city's improved thoroughfares.

In presenting this report I desire respectfully to submit to the Honorable Mayor and City Council a suggestion in regard to the adoption of a better system for improving streets in the residence portion of the City, and a method which shall secure protection against objectionable encroachments upon choice and valuable residence property.

Under present conditions it is well known that the best endeavors of citizens toward embellishing and beautifying their surroundings may be defeated, and a most commendable pride and ambition be paralyzed by the introduction of some highly objectionable feature near to or adjoining some costly home, against which the citizen would have absolutely no redress.

To avert so great a misfortune and secure to such citizens the protection and encouragement to which they are justly entitled, I would suggest to your honorable body the advisability of soliciting such legislation as shall authorize the City Council, upon application of a majority of the property owners, to set apart a number of streets to be dedicated and known as a "Home park district," and to place the same under the jurisdiction and management of the Department of Public Works, under the conditions and the legal powers (with appropriate modifications) which now govern the various Boards of Park Commissioners, such legislation to legalize the action of the Department of Public Works in spreading a special assessment upon the property benefited and located within the limits of such district, for the construction and maintenance of public improvements, such improvements to include the establishment of a uniform construction of roadway and walks, the cultivation of trees and lawns, the cleaning, sprinkling and removal of obstructions from streets and walks, the whole to include vacant as well as improved property.

Further authority should be delegated to prohibit the construction of buildings, or use of property for anything other than for residence purposes, and to prevent vacant grounds or buildings being located, occupied or used in any manner as shall in any way injure or detract from the value or desirability of adjoining property.

While such streets or districts could never be included in the boulevard system, nor come under the control of the Park Boards, the advantages to be attained by the adoption of such methods would be incalculable, and the financial and other material benefits resulting would be in a line with if not equaling those which now accrue to property fronting the boulevards; thus encouraging the establishment of permanent homes within the limits of the City, instead of such movements being diverted to the suburbs, and to stimulate the development of more elegant homes, with superior designs of architecture and a higher and more uniform grade of street improvements, all of which would add materially to the attractiveness of the City.

WATER SUPPLY SYSTEM.

The pumping stations are in good repair. An additional engine for the Lake View pumping station has been contracted for which will be in operation about June 1, 1897. New engines are also needed at Chicago avenue, Fourteenth street and Sixty-eighth street pumping stations, in order to give the City satisfactory service.

During the year 93,040,314,218 gallons of water have been pumped into the City mains, an average of 254,208,509 gallons per twenty-four hours. Estimating the population at two millions, this consumption is at the rate of 127 gallons per capita per day.

The City is drawing its water from the lake through the following tunnels :

LAKE VIEW TUNNEL.

6 ft. diameter, length 10,000 feet, supplying Lake View Pumping Station.

CHICAGO AVENUE LAKE TUNNELS.

5 ft. diameter, length 10,560 feet.	}	Supplying North Pumping Station.
7 ft. diameter, length 10,560 feet.		
7 ft. diameter, length 10,560 feet.		

CHICAGO AVENUE LAND TUNNEL.

7 ft. diameter, length 20,856 feet, being an extension of 7-foot lake tunnel from Chicago Avenue Pumping Station to West Pumping Station.

FOUR-MILE LAKE TUNNEL.

8 ft. diameter, length 9,139 feet.	}	From Four-Mile Crib to Park Row shaft.
6 ft. diameter, length 25,200 feet.		

FOUR-MILE LAND TUNNEL.

8 ft. diameter, length 516 feet.	}	From Park Row shaft, supplying Fourteenth Street Pumping Station.
6 ft. diameter, length 2,320 feet.		

The specifications provided for an 8-foot tunnel from the four-mile crib to Park row shaft and thence to the Fourteenth street pumping station, but owing to the character of the soil it was found necessary to split the 8-foot tunnel into two 6-foot tunnels, as shown on the diagram.

7 ft. diameter, length 7,053 feet.	}	From Park Row shaft, supplying Central Pumping Station.
6 ft. diameter, length 480 feet.		

JEFFERSON STREET CONNECTION.

6 ft. diameter, length 625 feet, between Chicago Avenue Land Tunnel and Four-Mile Crib.

SIXTY-EIGHTH STREET TUNNELS.

7 ft. diameter, length 5,037 feet.	}	From Two-Mile Crib, supplying Sixty-Eighth Street Pumping Station.
5 ft. diameter, length 8,030 feet.		
6 ft. diameter, length 5,026 feet, from submerged crib, supplying Sixty-Eighth Street Pumping Station.		

This system makes the present nominal engine capacity as follows :

Lake View Pumping Station,	31,500,000 gallons per 24 hours.
North Side Pumping Station,	99,000,000 gallons per 24 hours.
Central Pumping Station,	36,000,000 gallons per 24 hours.
Fourteenth Street Pumping Station,	54,000,000 gallons per 24 hours.
West Side Pumping Station,	60,000,000 gallons per 24 hours.
Sixty-eighth Street Pumping Station,	74,000,000 gallons per 24 hours.
Total, - - -	354,500,000 gallons per 24 hours.

All these engines draw their water from the lake through tunnels. There are, besides, small pumping stations at Washington Heights and Norwood Park, which draw their water from artesian wells.

TUNNELS.

The nominal tunnel capacity is as follows :

Lake View Tunnel,	72,000,000 gallons per 24 hours.
Two-Mile Tunnels,	250,000,000 gallons per 24 hours.
Four-Mile Tunnel,	140,000,000 gallons per 24 hours.
Sixty-eighth Street Tunnel,	122,000,000 gallons per 24 hours.
Total, - - -	584,000,000 gallons per 24 hours.

TUNNEL AND CRIB CONSTRUCTION.

LAKE VIEW TUNNEL.

This tunnel, which was commenced in 1889, was finished to the outer crib, 10,000 feet from shore, and placed in service during the year.

NORTH SHORE INLET EXTENSION.

The completion of this tunnel during the year adds a third tunnel to the system supplying the Chicago avenue pumping station from the two-mile crib. The latest extension is 6,000 feet in length.

NEW LAND TUNNELS.

The construction of this new system of tunnels, which will supply two new proposed pumping stations, was commenced in the latter part of 1895.

SECTION ONE.

Section one begins at the foot of Oak street on the lake shore and extends to the intersection of North Green street and Grand avenue. The diameter of this tunnel is ten feet. At the close of the year,

6,058 lineal feet of this tunnel had been constructed, leaving a balance unfinished of 2,608 feet.

SECTION TWO.

Section two is an extension of section one, in a southwesterly direction, to the proposed pumping station at Central Park avenue and Fillmore street. This tunnel has a diameter of eight feet. There have been 9,946 feet of this tunnel completed or excavated, leaving 9,879 feet yet to be constructed.

SECTION THREE.

Section three is the northwest branch of this system, commencing at the intersection of North Green street and Grand avenue and extending to the proposed pumping station at Springfield avenue and Bloomingdale road. There have been completed or excavated 3,748 feet, making the remaining portion to be constructed, 18,477 feet.

NORTHEAST LAKE TUNNEL.

This tunnel, ten feet in diameter, is the lake extension of the new land tunnels. It connects with the east end of the land tunnel and runs in a northeasterly direction to a proposed crib four miles from shore. Of this tunnel, 1,280 feet were completed during the year.

SIXTY-EIGHTH STREET TUNNEL EXTENSION.

This tunnel is an extension of the seven-foot tunnel, constructed in 1893 and 1894, from its west end to shore, a distance of about 5,300 feet, of which 2,136 feet had been completed at the end of 1896.

DIVISION OF BRIDGES AND VIADUCT CONSTRUCTION.

DIVERSEY AVENUE BRIDGE.

This bridge was opened for traffic January 11, 1896. Its total cost was \$31,345.10.

WELLS STREET BRIDGE.

This bridge has been altered during the year to a double deck structure, to be used for the Northwestern "L" road. The expense of this alteration was borne by the "L" road company.

SOUTH HALSTED STREET VIADUCT.

This structure, which spans the Union Stock Yards and Transit Company's tracks at Fortieth street, was opened for traffic September 5, 1896. The cost, \$83,594.12, was borne by the railroad company.

NORTH HALSTED STREET BRIDGE.

This bridge is a rolling bascule bridge and crosses the river at North Halsted street. The structure is operated by electricity and compressed air. The bridge was nearly completed at the end of the year; cost about \$114,000.

BRIDGE AND VIADUCT MAINTENANCE.

The expense incurred in the maintenance of all bridges and viaducts for the year 1896, including labor, material, supplies, etc., has been \$127,924.79.

HARBORS OF CHICAGO.

During the year dredging has been done in the Chicago and Calumet rivers as follows :

By the City :

South branch and main Chicago river, 10,710 cubic yards.			
North branch, by Halsted street bridge. 40,630	"	"	
	51,340	"	"
			\$10,332 99

By dock owners under permits from the Department of Public Works :

Chicago river, fees, \$809 50.....	123,200	cubic yards.	
Calumet river, " 556 00.....	102,200	"	"
	225,400	"	"
			\$45,080 00

Under a recent Act of Congress, the general government, for the first time in the history of the City, applied United States funds to the dredging of the Chicago river, west of the angle next east of the Illinois Central Railroad bridge at the river's mouth. Maj. Marshall, of the Corps of Engineers, U. S. A., under contracts for the north and south branches of the Chicago river, as far as Belmont avenue and South-western avenue bridges respectively, had the following dredging done :

North branch, Chicago river, 54,920	cubic yards,	\$5,327 24
South branch, " " 78,408.7	" "	8,546 55

and the improvement of the Calumet river has been continued by the general government—dredging having been done to the amount of 295,073.4 cubic yards, costing \$30,568.82, making a total done during the year by the United States of 428,402.1 cubic yards, costing \$44,442.61.

The total improvement by dredging both harbors of the City is 705,142 cubic yards, costing \$99,855.60.

The contracts with the United States, in operation during the year 1897, contemplate dredging 1,399,397 cubic yards, to cost \$148,310.42 ;

of this, 225,596 cubic yards at \$29,891.47 is to be done in the southern harbor of the City.

Under permits from the Department—

5,577 feet of old docks were repaired.

5,091 feet of old docks were rebuilt.

250 feet of new docks were constructed during the past year and the City also built 200 feet of new dock at the new Water Works Shops and in canal "A" at the West Side Water Works.

The water in Lake Michigan was very low during the year; the highest elevation at the two-mile crib at any time during the year was only equal to the low water of 1847, its average elevation during the year being seven inches below datum, and its lowest stage was twenty inches below low water of 1847, or City datum.

Our commerce by the lake, although subjected to many inconveniences by reason of general low water, increased, however, 334,632 tons over the tonnage for 1895.

The following is our commerce by lake for the year 1896:

Chicago river.....	7,154 vessels,	4,787,250 tons,	entrances.
Chicago river.....	7,102 "	4,719,522 "	clearances.
Calumet river	1,293 "	1,641,174 "	entrances.
Calumet river	1,450 "	1,817,866 "	clearances.
Total trade by lake, City of Chicago, 16,999	"	12,965,812	"

Our trade by lake for the ten years from 1871 to 1880, shows an average annual gain of $37\frac{4}{10}$ per cent. over the average annual trade for the period from 1862 to 1870, inclusive, and our average annual trade for the ten years from 1881 to 1890, inclusive, shows an increase of $27\frac{4}{10}$ per cent., even greater than the average annual trade of the preceding decade; while our average annual trade for the last seven years goes still higher than that for the ten years ending 1890, by the gratifying figures of $32\frac{7}{10}$ per cent., the carrying capacity of our vessels increasing by an annual average of $68\frac{8}{10}$ per cent. over that for the ten years ending 1890.

EXTENSION OF THE WATER PIPE SYSTEM.

Water pipes were laid during the year as follows:

Four (4) inch.....	5,099 feet.
Six (6) inch	295,435 feet.
Eight (8) inch.....	108,709 feet.
Twelve (12) inch	21,308 feet.
Sixteen (16) inch	31 feet.
Twenty-four (24) inch	2,020 feet.

Total.....432,602 feet.

The whole being equal to 81 $\frac{1}{2}$ miles. Small pipe taken up or abandoned 3 $\frac{1}{2}$ miles. Net pipe added to the system during the year, 78 $\frac{1}{2}$ miles, making a total of 1,691 $\frac{1}{2}$ miles of water mains in use at the end of year 1896 within the City limits.

Fire hydrants placed in position during the year.	928
Net number of hydrants added to the system....	909
Total number of fire hydrants now in use	17,375
Stop valves put in place during the year	852
Net number of valves added to the system.....	834
Total number of valves now in use	12,907
12,932 new house-service taps were added, making a total of	276,240
12,932 new house-service pipes were added, mak- ing a total of.....	276,240
The number of service taps inserted in water mains, including re-taps and taps inserted for enlarged service pipes to buildings pre- viously supplied, is.....	13,672

WATER METERS AND HYDRAULIC ELEVATORS.

Number of new meters put in during the year 1896.....	263
Number of old meters removed	106
Net increase	157
Total number of meters now in use.....	5,106
Total number of meters repaired	2,614
Number of City meters removed and replaced by new ones....	

The revenue derived from water measured by these meters and hydraulic elevators for the past year amounted to \$1,039,283.43.

STREET AND ALLEY IMPROVEMENTS.

STREETS AND ALLEYS.

During the year 78.32 miles of streets and 4.33 miles of alleys, a total of 82.65 miles were paved.

Streets curbed and filled, 3.42 miles.

SIDEWALKS.

During the year 150.84 miles of plank sidewalk, 82.73 miles of concrete walk, and 3.03 miles of stone walk were constructed; a total of 236.60 miles.

1.65 miles of concrete walks were constructed by the various Park Boards.

Thus the grand total for the year is 238.25 miles.

FINANCIAL.

Amount paid contractors for street improvements by special assessments	\$1,712,305 21
For sidewalks built by the Bureau under special assessment	30,879 13
For re-paving and repairing improved streets	196,306 39
For grading, ditching, building and repairing aprons, culverts, crossings, etc., on unimproved streets	125,621 60
For sidewalks, general repairs and intersections	70,518 48
For City Parks.....	12,299 73
For new and repaired street lamps and signs.....	52,712 90
Grand Total.....	<u>\$2,200,643 44</u>

WATER OFFICE.

COLLECTIONS.

The net receipts of this office from all sources amounted to \$3,226,559.73. A further sum of \$23,757.77 is properly creditable to this year's business, the same having been paid out by drawbacks from this year's collections for vacancies occurring during 1894, as provided for in the ordinance of January 14, 1895, making a total of \$3,250,317.50. These figures show an actual increase in the collections of 1896 over 1895 of \$9,828.44.

SERVICE PIPES.

During the year 5,586 service pipes were laid, at an average cost of \$12.18.

PLUMBERS' LICENSES.

Plumbers' Licenses to the number of 551, at a profit to the City of \$10.00 each, making a total of \$5,510.00.

INSPECTION DEPARTMENT.

By a special inspection of the entire City, this branch of the Bureau increased the assessment \$45,000 per year.

Following is a table showing, among other things, the appropriations for Public Works from 1888 to 1896, increase of population and area during the same period, and other matters of interest connected with the work of the Department :

YEAR.	Appropriation.	Expenses.	Square Miles of Territory.	Census.
1888	\$1,942,495 65	\$2,057,422 79	37	802,651
1889	2,817,291 20	2,220,865 80	37	880,000
1890	3,581,445 20	2,492,808 45	100	1,208,669
1891	2,429,644 05	2,929,481 47	180	1,350,000
1892	2,597,148 17	2,508,771 98	180	1,488,010
1893	2,708,175 86	2,845,571 88	186.2	1,500,000
1894	1,979,868 85	2,220,821 48	186.2	1,600,000
1895	2,026,568 58	2,024,542 06	186.2	1,725,000
1896	1,780,557 98	1,777,837 11	186.2	1,800,000

YEAR.	Number of Miles of Paved Streets.	Number of Miles of Unimproved Streets.	Cost of Cleaning and Repairing Improved and Unimproved Streets.	Amount of Appropriation per Square Mile of Territory.	Amount of Appropriation per Capita.	Cost per Mile of Cleaning and Repairing Improved and Unimproved Sts.
1888	848	314	\$845,204 69	\$52,499 88	\$3 42	\$521 45
1889	848	314	477,866 65	62,629 49	2 68	721 85
1890	669	1,567	588,468 69	14,341 86	2 18	260 94
1891	774	1,559	808,171 02	18,498 02	1 79	844 26
1892	879	1,498	896,017 02	14,428 60	1 80	877 74
1893	1,007	1,459	999,558 58	14,494 23	1 80	405 88
1894	1,086	1,400	696,627 99	10,615 89	1 23	280 22
1895	1,123.54	1,406.63	681,234 06	10,883 82	1 17	269 24
1896	1,183.64	1,494.61	589,944 43	9,562 53	1 01	220 21

Of the 1,183.64 miles of pavement 108.62 are alleys, but in the total mileage of 2,569.63 miles are treated as streets.

STREET IMPROVEMENTS.

There were 82.65 miles of streets improved during the past year.

There were 233,147 square yards of street pavement repaired.

Total streets in the City.....	2,569.63 miles
Total alleys in the City.....	1,340.03 miles
Total streets paved in the City.....	1,075.02 miles
Total alleys paved in the City	108.62 miles
New sidewalks constructed	238.25 miles
Sidewalks repaired.....	3.08 miles
Total sidewalks in the City.....	4,863.10 miles
Streets cleaned (under contract).....	13,807.89 miles
Number of aprons, culverts, crossings, etc., built.....	5,512
Sidewalk intersections constructed.....	1,855
Number of street lamps (gas)	42,180
Number of street lamps (oil and gasoline).....	10,258
Number of street lamps (electric).....	1,765
Total number of street lamps in the City	54,203
Temporarily discontinued (gas lamps)	652
Number of buildings removed	855

MISCELLANEOUS.

SPECIAL IMPROVEMENTS.

Substructure of North Halsted street bridge.

Superstructure of North Halsted street bridge.

Substructure of South Halsted street bridge.

Superstructure of South Halsted street bridge.

Compressed air and electric equipment for North Halsted street bridge.

Machinery and locks for North Halsted street bridge.

Cast-iron water pipe.

Water tunnel and crib, Lake Michigan.

Water tunnel at Sixty-eighth street.

Building lake crib for Sixty-Eighth street tunnel.

Removing inner Hyde Park crib.

Erecting sewerage pumping station.

Sewerage pumping engines.

Electric machinery, dynamos, engines, and filling and grading grounds for Isolation Hospital.

Bath house building on Wentworth avenue.

Frame fire engine house, 95th street and Cottage Grove avenue.

Observation tower, lake front, Oak street.

Constructing repair shop, Ashland avenue.

CONTRACTS.

Contracts were entered into by the City during the past year for paving and improving streets and alleys, and for constructing various public works; also for furnishing various classes of material and supplies, aggregating an expenditure of \$5,251,254.86, distributed as follows :

193 Contracts for street and alley improvements, at a cost of.....	\$1,863,572 73
1 Contract for curbing, filling and grading streets, aggregating	1,744 00
1 Contract for substructure of North Halsted street bridge	40,590 12
1 Contract for superstructure of North Halsted street bridge	54,500 00
1 Contract for substructure of South Halsted street viaduct	48,270 60
1 Contract for superstructure of South Halsted street viaduct	30,657 00
1 Contract for compressed air and electric equipment for North Halsted street bridge.....	5,379 00
1 Contract for machinery and locks for North Halsted street bridge	12,956 00
1 Contract for paving south approach to Rush street bridge	1,346 74
1 Contract for repairing east approach to Washington street bridge	135 00
1 Contract for repairing Fifth avenue approach to Twelfth street viaduct	310 00
1 Contract for repairing south approach (Clark street) to Twelfth street viaduct.....	270 00
1 Contract for repairing Fifth avenue viaduct.....	1,475 00
1 Contract for planking roadway Milwaukee avenue viaduct	1,180 59
1 Contract for cast-iron wheels for bridges.....	2,644 08

1 Contract for repairing south approach to Rush street bridge	\$ 4,149 33
3 Contracts for furnishing cast-iron water pipe.....	96,401 80
1 Contract for special castings for water pipe.....	12,000 00
1 Contract for hydrant and stop-valve castings.....	7,000 00
1 Contract for cast-iron rings and covers, hydrant chambers	2,300 00
1 Contract for brass castings for hydrant and stop valves	4,780 00
1 Contract for cast-iron manhole and catch-basin covers	3,700 00
1 Contract for corporation ferrules	5,372 24
8 Contracts for coal, for City Hall, bridges and pumping stations	281,380 00
3 Contracts for oak and pine lumber for viaducts, bridges and City yards.....	7,900 00
1 Contract for water tunnel and crib, Lake Michigan	760,000 00
1 Contract for water tunnel at Sixty-eighth street ...	90,000 00
1 Contract for building lake crib, Sixty-eighth street tunnel	34,380 00
1 Contract for removing inner Hyde Park crib	4,500 00
1 Contract for sewerage pumping station.....	7,200 00
1 Contract for sewerage pumping engines	6,945 00
1 Contract for repairing roof at Fourteenth street pumping station.....	2,226 00
1 Contract for filling and grading Isolation Hospital grounds.....	3,139 00
3 Contracts for electric machinery, dynamos, engines, etc., Isolation Hospital.....	5,400 00
1 Contract for hot well and foundations, Kensington sewage pumping station	595 00
1 Contract for bath-house building on Wentworth avenue.....	8,400 00
1 Contract for iron work, painting, plumbing, gas fitting and steam heating for Wentworth avenue bath-house	3,622 00
1 Contract for frame fire engine house, Ninety-fifth street and Cottage Grove avenue.....	2,361 00
1 Contract for observation tower, lake front, Oak street	800 00
1 Contract for constructing repair shop on Ashland avenue.....	24,000 00

2 Contracts for structural and ornamental iron work and for sheet metal work for repair shops on Ashland avenue	\$ 5,704 00
1 Contract for iron shelves and book-cases for water office	590 00
3 Contracts for cleaning and filling hydrant basins..	2,654 28
1 Contract for cleaning and repairing artesian well, Irving Park.....	2,046 00
2 Contracts for sweeping and cleaning streets	268,636 74
5 Contracts for teaming for Water and Sewer Departments	61,860 00
25 Contracts for removing garbage.....	312,573 08
2 Contracts for steam tug-boat service.....	12,073 85
1 Contract for removing dead animals.....	37,500 00
1 Contract for furnishing lamp posts.....	10,398 00
1 Contract for repairing asphalt pavements	34,888 83
118 Contracts for constructing sewers	783,011 78
195 Contracts for laying water mains under special assessments	181,189 46
43 Contracts for laying house drains	26,454 13
102 Contracts for laying water service pipes	68,092 48
	<hr/>
	\$ 5,251,254 86

The following table shows the quantity of water furnished, the total revenue received, and the average amount per million gallons annually, from 1858 to 1896, inclusive :

YEAR	Million Gallons Furnished	Revenue	Revenue per Million Gallons
1858.....	1,092	\$102,178 85	\$93 57
1859.....	1,415	122,753 50	86 75
1860.....	1,717	131,162 73	76 39
1861.....	1,767	131,035 10	74 15
1862..... (15 months)....	2,705	188,448 25	69 66
1863.. (9 months).....	2,336	192,246 39	82 29
1864.....	2,523	224,902 57	89 14
1865.....	2,778	253,114 49	91 11
1866.....	3,169	302,017 59	95 30
1867.....	4,232	338,929 28	80 08
1868.....	5,375	420,686 94	78 26
1869.....	6,801	476,968 24	70 13
1870.....	7,945	539,180 19	67 86
1871.....	8,423	445,834 64	52 93
1872.....	10,051	544,465 90	54 17
1873.....	11,723	708,804 32	60 46
1874.....	13,903	705,926 64	50 77
1875..... (9 months).....	10,957	635,996 54	58 04
1876.....	15,346	771,940 38	50 30
1877.....	19,047	908,509 64	47 70
1878.....	19,564	944,190 97	48 26
1879.....	20,558	922,001 26	44 85
1880.....	21,003	865,618 35	41 21
1881.....	23,332	936,922 07	40 16
1882.....	24,151	1,049,576 90	43 46
1883..	26,742	1,142,868 54	42 73
1884.....	29,286	1,204,338 74	41 12
1885.....	33,451	1,339,038 00	40 03
1886.....	35,693	1,374,837 32	38 52
1887.....	37,199	1,490,023 68	40 05
1888.....	38,122	1,557,116 78	40 84
1889.....	40,504	1,621,786 34	40 04
1890.....	55,614	2,202,724 58	39 61
1891.....	63,552	2,364,463 09	37 21
1892.....	71,035	2,738,434 10	38 55
1893.....	86,298	2,949,548 87	34 18
1894	87,074	3,158,492 94	36 27
1895.....	91,922	3,318,483 85	36 20
1896.....	93,040	3,176,855 71	34 14

SEWERAGE.

During the past year the contract has been let for the West Forty-fifth street sewer system, and a greater part of it constructed, and will be finished early in the coming summer ; when completed it will greatly relieve that part of the City west of North Forty-fifth street from Mud lake to Fullerton avenue.

The contract for the Indiana avenue low level sewer system has been let and completed to the pumping station, the pumping station has been erected and the engines and pumps put in with a capacity of 11,000,000 gallons per day; this system will be completed as soon as the weather will permit. When finished this system will drain the low land in that part of the City south of Ninety-ninth street to the Calumet river, between State street and the Illinois Central Railroad.

The six-foot sewer has been constructed in Montrose boulevard from the north branch of the Chicago river to Milwaukee avenue, and affords great relief to that part of the City north of Irving Park boulevard in times of flood.

The so-called Eighty-third street sewer system has been before the County Court, but confirmation has been delayed on account of an error made by the Court in appointing the assessment commissioners.

The sewerage system has been extended in the various divisions of the City during the year, as follows:

Constructed in the West Division.....	28,656 miles
Constructed in the South Division.....	20,808 miles
Constructed in North Division	7,955 miles
Total	57,419 miles
Number of catch-basins built.....	2,201
Number of manholes built.....	1,990

The cost of constructing sewers and catch-basins during the year was as follows:

West Division	\$480,980 67
South Division.....	195,164 84
North Division.....	45,724 37
	<u>\$721,869 88</u>
Total number of catch-basins.....	43,583
Total number of manholes	48,154
Total number of miles of sewer in the City.....	1,305.857

MAINTENANCE OF SEWERS.

The cost of cleaning and repairing sewers, the cost per mile, and number of miles, also the number of catch-basins and manhole chambers distributed in the three divisions of the City, are as follows:

DIVISION.	MILES OF SEWER.	NUMBER OF CATCH-BASINS.	NUMBER OF MANHOLE CHAMBERS.
West.....	558.478	20,125	19,812
South.....	508.088	17,507	19,083
North.....	239.291	8,152	9,259
Totals.....	1,305.857	45,784	48,154

The cost of repairing sewers during the year was \$46,281.84, being an average cost of \$35.44 per mile.

The cost of cleaning was \$96,901.65, making the average cost \$74.21 per mile.

The total cost of both repairs and cleaning was \$143,183.49, making an average of \$109.64 per mile.

Of the 57.419 miles of sewers constructed during the year, 19.133 miles are of brick and 38.265 miles of vitrified pipe.

Of the 1,305.857 miles of sewers constructed, 501.902 miles are of brick and 803.936 miles are of vitrified pipe.

TOTAL COST OF SEWERS.

DIVISIONS.	MILES.	COST.	AVERAGE COST PER MILE.
West.....	558.478	\$ 7,618,773 91	\$11,851 45
South.....	508.088	7,121,830 92	14,010 69
North.....	239.291	2,920,949 71	12,206 68
Totals.....	1,305.857	\$17,661,554 54	\$13,522 49

STREET PAVING.

During the year 1896 streets were improved as follows :

Paved with cedar blocks.....	43.77 miles.
Paved with macadam.....	13.60 miles.
Paved with granite blocks.....	3.56 miles.
Paved with Medina stone.....	0 miles.
Paved with brick.....	4.71 miles.
Paved with asphalt.....	17.01 miles.
Curbed and filled.....	3.42 miles.
Total number of miles improved.....	86.07 miles.

DISTRIBUTION OF KINDS OF PAVEMENT.

The following table gives the mileage of each class of pavement in use in the three principal divisions of the City :

DIVISION.	Cedar Block, Miles.	Macadam Miles.	Medina Stone, Miles.	Granite, Miles.	Sheet Asphalt, Miles.	Block Asphalt, Miles.	Brick, Miles.	Burned Clay, Miles.	Found'n, Miles.	Total Miles.
North	162.24	63.01	0.49	0.81	4.88	.....	1.57	.....	1.08	234.08
South.....	207.83	259.70	1.55	20.26	10.42	3.05	5.25	.....	.....	508.06
West... ..	382.61	21.60	0.39	4.20	30.64	.....	2.06	.....	.....	441.50
Totals	752.68	344.31	2.43	25.27	45.94	3.05	8.88	.....	1.08	1183.64

Repaving and repairs have been made on improved streets in each division of the City as follows :

North Division.....	55,735 square yards.
South Division.....	98,853 square yards.
West Division.....	78,559 square yards.
*Total	233,147 square yards.

*This does not include the repaving done by private corporations.

SIDEWALKS.

Number of miles of wood, stone and concrete sidewalks built during 1896 :

DIVISION.	MATERIAL.			Total Miles.	Sidewalks Repaired, Miles.	Total Work, Miles.
	Wood, Miles.	Stone, Miles.	Concrete, Miles.			
North.....	28.02	.58	27.75	56.35	.18	56.53
South.....	68.90	.65	28.72	98.27	1.07	99.34
West	53.92	1.80	26.26	81.98	1.83	83.81
Totals.....	150.84	3.03	82.73	236.60	3.08	239.68

Total number of miles of sidewalks under the control of the City and the South, West and Lincoln Park Commissioners, at the close of the year :

CONTROLLED BY.	MATERIAL.			Total Miles.
	Wood, Miles.	Stone, Miles.	Concrete, Miles.	
City	3,900.14	233.53	609.73	4,743.40
South Park Commissioners.....		20.00	30.74	50.74
West Park Commissioners.....		11.05	51.04	62.09
Lincoln Park Commissioners.....		2.17	4.70	6.87
Total Miles.....	3,900.14	266.75	696.21	4,863.10

PARKS.

The cost of maintaining the various parks under the control of this Department during the past year was as follows :

Aldine Square	\$ 1,102 41
Douglas Monument Square.....	1,000 00
Ellis Park	1,000 00
Bickerdike Square	424 87
Jefferson Park (Jefferson)	400 00
Irving Park.....	400 00
East End Park.....	488 45
Green Bay Park.....	600 00
Oak Park.....	833 23
Washington Square.....	1,205 56
Holstein Park.....	400 00
Gross Park	400 00
Congress Park.....	1,348 58
Shedd's Park	531 90
Eldred Park	400 00
Lakewood Park.....	230 00
Norwood Park	402 25
De Kalb Square.....	722 48
Kedzie Park.....	410 00
Total.....	\$12,299 73

BUILDINGS ERECTED.

The report of the Commissioner of Buildings shows that during the year 6,444 buildings were erected, extending over an aggregate frontage of 158,846 feet, at a cost of \$22,730,625.00, the same being distributed in the divisions of the City as follows:

DIVISION.	NUMBER BUILDINGS ERECTED.	AGGREGATE FRONTAGE IN FEET.	FRONTAGE IN MILES.	ESTIMATED VALUE.
North Side.....	1,319	33,879	6.41	\$ 4,622,425 00
South Side.....	2,404	60,054	11.37	11,148,820 00
West Side.....	2,721	64,913	12.29	6,959,370 00
Totals.....	6,444	158,846	30.07	\$22,730,615 00

COMPARISON WITH TEN PREVIOUS YEARS.

YEAR.	NUMBER BUILDINGS ERECTED.	AGGREGATE FRONTAGE IN FEET.	FRONT- AGE IN MILES.	ESTIMATED VALUE.
1885.....	4,638	108,850	20.62	\$19,624,100 00
1886.....	4,664	112,302	21.27	21,324,400 00
1887.....	4,833	115,506	21.88	19,778,100 00
1888.....	4,958	116,419	22.05	20,360,800 00
1889.....	4,931	119,573	22.65	25,065,500 00
1890.....	11,608	266,284	50.43	47,322,100 00
1891.....	11,805	282,672	53.54	54,201,800 00
1892.....	13,194	327,573	62.04	64,740,800 00
1893.....	8,359	216,893	41.07	28,708,750 00
1894.....	9,855	232,487	44.03	33,863,570 00
1895.....	8,633	218,360	41.36	35,010,043 00
1896.....	6,444	158,846	30.07	22,730,615 00
Totals	93,922	2,275,765	431.01	\$392,730,578 00

HOUSE MOVING.

Under the supervision of this Department, 855 buildings were moved, 703 being frame, 151 brick, and 1 iron.

The following table gives the number moved in the different sections of the City, the height, and the total frontage:

NORTH SIDE.	SOUTH SIDE.	WEST SIDE.	TOTAL.
191	280	384	855
ONE STORY.	TWO STORIES.	THREE STORIES.	
407	411	37	

The total frontage was 17,868 feet, or about two and one-half miles.

ASSESSMENTS PREPARED.

Cedar block pavement.....	176
Asphalt pavement.....	25
Macadam pavement.....	56
Vitrified brick pavement.....	16
Granite pavement.....	16
Miscellaneous street and alley improvements.....	64
Openings and widenings.....	23
Water supply pipes.....	242
Water service pipes.....	102
Sewers.....	165
Private drains.....	126
Plank sidewalks.....	299
Cement sidewalks.....	77
Stone sidewalks.....	2
Gas lamp posts.....	167
Boulevard lamp posts.....	23
Electric lamp posts.....	1
Total.....	1,580

MAPS AND PLATS MADE.

Electric lamp post assessments.....	8
Electric lamp post ordinances.....	12
Lamp post ordinances.....	597
Lamp post orders.....	340
Lamp post assessments.....	159
Street improvement assessments and street and alley opening assessments.....	597
Street and alley opening ordinances.....	244
Street Engineer's estimates.....	518
Surveys.....	71
Sidewalk assessments.....	544
Water pipe extension.....	276
Law Department.....	1,525
Miscellaneous purposes.....	250
Total number of maps and plats.....	5,141

STREET LAMPS.

The following table shows the number of street lamps of each kind in use, and the number erected during the year:

DIVISION.	GAS LAMPS.				ELECTRIC LAMPS.			
	No. in City Jan. 1, 1896.	Erected during 1896.	Discontin- ued in 1896.	No. in City Dec. 31, 1896.	No. in City Jan. 1, 1896.	Erected during 1896.	Discontin- ued in 1896.	No. in City Dec. 31, 1896.
North	7,126	880	326	7,180	237	3	.....	240
South	12,466	421	1,806	11,081	846	147	7	986
West	18,254	531	960	17,825	538	17	.....	545
Totals	37,846	1,382	3,092	36,086	1,611	167	7	1,771
DIVISION.	GASOLINE LAMPS.				OIL LAMPS.			
	No. in City Jan. 1, 1896.	Erected during 1896.	Discontin- ued in 1896.	No. in City Dec. 31, 1896.	No. in City Jan. 1, 1896.	Erected during 1896.	Discontin- ued in 1896.	No. in City Dec. 31, 1896.
North	1,233	37	180	1,140	.....	.....	.....	.....
South	5,191	81	693	4,580	194	2	.....	196
West	4,885	230	577	4,538	.....	.....	.....	.....
Totals	11,309	348	1,399	10,258	194	2	.....	196

SCHEDULE I.

GAS BOULEVARD LAMPS.

North Division.....	7,180
South Division.....	11,081
West Division	17,825
	<hr/>
	36,086 @ \$20 00 each, \$ 721,720 00

GASOLINE OIL LAMPS.

North Division..	1,140
South Division.....	4,580
West Division.....	4,538
	<hr/>
	10,258 @ \$15 00 each, 153,870 00
	<hr/>
	<u>\$875,590 00</u>

EXPENSE OF LIGHTING.

The following table shows the cost of lighting the City and maintaining lamps, during the year ending December 31, 1896, including the cost of extinguishing, under schedule adopted by the Council :

Total cost of lighting and maintaining gas lamps	\$ 732,900 13
For material for and lighting of oil lamps and.....	} 158,699 10
For gasoline used by the City for maintaining lamps..	
For maintaining electric lamps—City plants.....	109,901 24
For lighting electric lamps by contract.....	56,996 41
	<hr/>
Total cost of lighting the City	\$1,058,496 88

ELECTRIC LIGHTING.

The following table shows the annual extension of the Municipal Electric Light System from December 24th, 1887, to December 31st, 1896, inclusive:

YEAR.	Number of Power Houses Erected.	Estimated Capacity of Power Houses in 2,000-Candle Power Lights.	Horse Power of Engines installed.	Number of Arc Lights Placed in Operation.	Number of Arc Lights Displacing Gas Lights.	Number of Gas Lights Displaced.	Average Number of Gas Lights Displaced by each Electric Light.
1887.....	* 1	† 125	125	105	76	.....	.....
1888.....	* 1	† 800	800	192	192	826	4 ³ / ₁₀
1889.....	¶ 3	3,000	1,500	372	372	1,452	3 ³ / ₁₀
1890.....	1	850	425	260	260	1,343	5 ¹ / ₁₀
1891.....	.....	.....	.....	64	58	273	4 ⁷ / ₁₀
1892.....	.....	.....	.....	109	88	341	3 ³ / ₁₀
1893.....	.....	.....	.....	10	10	40	4
1894.....	.....	1,000	1,000	‡ 4	.....	.....	.....
1895.....	.....	.....	.....	8	1	1	.....
1896.....	.....	.....	.....	138	91	§ 364	4
Total.....	4	3,850	2,300	1,254	1,148	4,640	4

* Abandoned. † Moved to Plant No. 1. ‡ Decrease. § 23 Gasoline.

¶ The Throop street plant, with capacity for one thousand 2,000-candle power arc lamps and 625-horse power engines, together with the buildings and real estate upon which they were located, was sold to the Metropolitan West Side Elevated Railroad Company, in December, 1893, for \$95,000.00, and real estate upon which to erect and equip a new power station.

This latter was erected at 299 to 301 South Halsted street and fully equipped in 1894 and 1895, with capacity for one thousand 2,000-candle power arc lights and 1,000-horse power engines. The plant was placed in operation October 9th, 1895.

To our electric lighting system we have added during the year 1896 one hundred and forty-two 2,000-candle power arc lamps and have discontinued four, making a net addition of 138, or 1,254 in service December 31, 1896.

To accomplish this we have added nine manholes, 19,068 feet of steel pipe, and 67,095 feet of single conductor electric light wire and cable.

We have added one 125-light dynamo at our Fourteenth street plant, as most of the new lights put in were in the First Ward, where there are now no gas or gasoline lamps.

In the more prominent localities where new lights have been placed we have erected ornamental iron posts to the number of eighty-eight.

We have placed one hundred 16-candle power Edison incandescent lamps in our plant at 299-301 South Halsted street, for use of that power station before arc lights are started and after shutting down in the early morning.

We have made connections in our Halsted street plant so that the same is entirely heated by steam during the cold season, and have also placed oiling systems on our engines therein, which work automatically and save the expense of one oiler.

The total amount expended for construction during the year was \$31,676.32.

The following table shows the number of lights operated from City power stations and rented from private companies, January 1, 1896, together with the number added and discontinued during the year:

SIDE.	CITY POWER STATION.				RENTED LAMPS.				TOTAL.
	Dec. 31, 1895.	Added 1896.	Left off 1896.	Total.	Dec. 31, 1895.	Added 1896.	Left off 1896.	Total.	
North	237	3	.....	240	.....	.....	.....	.....	240
South	351	122	4	469	495	25	3	517	986
West	528	17	.....	545	.....	.....	.....	.....	545
	1,116	142	4	1254	495	25	3	517	1,771

THE CITY ELECTRIC LIGHT SYSTEM COMPRISES :

Power stations.....	4
125-horse power high speed engines.....	9
300-horse power Corliss engines.....	1
500-horse power vertical compound condensing engines.....	2
100-horse power tubular boilers, heaters, pumps, etc.....	6
125-horse power tubular boilers, heaters, pumps, etc.....	8
500-horse power tubular boilers, heaters, pumps, etc.....	3
2,000-candle power single carbon and double carbon arc lamps.....	1,382
Incandescent arc lamps.....	6
Incandescent lamps.....	100
125-light high tension dynamos.....	1
100-light high tension dynamos.....	8
60-light high tension dynamos.....	8
50-light high tension dynamos.....	8
35-light high tension dynamos.....	8
Lamp posts.....	1,131
Lamp hoods.....	1,165
Miles of electric light cable.....	200
Number of feet of underground conduit.....	12,580
Number of feet iron pipe laid underground.....	610,252
Number of manholes.....	372
Number of handholes.....	109

Current is supplied for maintaining and operating twelve hundred and fifty-four 2,000-candle power arc lamps from three of the power stations, located at Fourteenth street and Indiana avenue, Chicago avenue and Sedgwick street, and No. 299-301 S. Halsted street. The station at Rice and Lincoln streets is now used for repair shops of the City Telegraph, Electric Light, Gas and Gasoline Bureaus.

All of the above lights burn all night, from dusk to daylight, every night in the year.

The City rents five hundred and seventeen 2,000-candle power arc lamps from private companies, which are required to burn the same length of time as City lamps. The total cost for the year was \$56,996.41.

The average number of lamps maintained and operated from the City power stations in 1896 was 1,140, and the following table shows the cost in detail of labor and material therefor, together with the average cost per lamp, for each and for both, during the year:

LABOR.	1,140 LAMPS.	PER LAMP.
Engineers and Assistant Engineers.....	\$10,844 64	\$9 51
Dynamo tenders	5,400 00	4 74
Lamp trimmers	14,493 89	12 71
Firemen	17,664 25	15 51
Labor for Repair Shop.....	6,093 45	5 35
All other labor.....	4,118 60	3 61
Total	\$58,634 83	\$51 43
MATERIAL.		
Coal	\$26,262 00	\$23 04
Carbons.....	5,807 06	5 10
Globes	503 77	44
Engine and cylinder oil.....	1,664 10	1 46
Rags and waste.....	291 08	26
Repairing boilers and boiler compound..	1,934 03	1 70
Repairing engines and steam pipes	1,838 14	1 61
Repairing dynamos.....	990 52	87
Repairing cables, conduits, etc.....	3,424 00	3 00
Material for Repair Shop.....	2,996 79	2 62
Rental of real estate	2,500 00	2 19
Other repairs and expenses.....	3,054 92	2 68
Total	\$ 51,266 41	\$44 97
Total for Labor and Material.....	\$109,901 24	\$96 40

SUMMARY OF ELECTRICAL INSPECTION.

MOTORS INSPECTED.

YEAR.	NUMBER.	CAPACITY AND HORSE-POWER.
Previous to 1892	668	2,004
1892	504	1,492
1893	601	1,881
1894	568	1,128
1895	558	1,319
1896	711	3,578
Totals.....	3,610	11,402

Completed inspections of wiring only during 1896..... 587
 Certificates issued for wiring only during 1896..... 296

Isolated plants reinspected during 1896, as follows:

ARC LAMPS.	INCANDESCENT LAMPS.	MOTORS.		GENERATORS.	
		Number.	Horse Power.	Number.	Horse Power.
410	9,774	38	61	42	989

Isolated plants in process of reinspection, 195.

Isolated plants previous to 1896..... 611
 New installations during 1896..... 74
 ————— 685
 Removals during 1896..... 16
 —————
 Total number isolated plants Dec. 31, 1896..... 669

Statement of yearly inspection of electric light lamps from February 14, 1884, up to and including December 31, 1896:

YEAR.	NUMBER OF ARC LAMPS.	NUMBER OF INCAN- DESCENT LAMPS.
1884	1,148	1,885
1885	392	7,609
1886	479	5,225
1887	837	5,424
1888	2,369	17,717
1889	2,623	24,906
1890	2,682	39,543
1891	3,974	87,913
1892	5,046	101,668
1893	6,279	150,545
1894	3,604	67,593
1895	3,228	53,090
1896	4,739	80,251
Totals.....	37,400	643,429

FINANCIAL.

Statement of the sum appropriated by the Common Council, together with various amounts from other sources, to be expended in public improvements under the supervision of the Department of Public Works, during the year 1896:

Balance January 1, 1896, to the credit of Water Fund, \$	133,299 83
Balance January 1, 1896, to the credit of Appropriation Fund	30,938 17

RECEIPTS.

From appropriation for 1896.....	\$ 1,780,557 93
From rent of Rookery lot	35,000 04
From water revenue, including meter and private work and tapping permits	3,247,274 84
From advances to lay water mains	78,983 93
From hydrant wrenches	1,410 00
From sale of water certificates.....	166,962 50

From drain permits and drain licenses.....	\$ 31,794 19
From house-moving permits.....	1,682 00
From deposits for street permits (work done).....	51,559 74
From special assessment sewer inspection and work..	110,139 71
From deposits for sundry improvements, special assessments and other funds.....	593,709 99
From special assessment collections.....	3,351,759 80
Total	\$ 9,615,072 67

EXPENDITURES.

For bridges and viaduct repairs, street cleaning and removal of garbage, repairing improved and unimproved streets, public buildings and parks, Fullerton avenue and Canal pumping stations, improved street intersections, sewer catch-basins, labor, material and salaries	\$ 2,271,084 05
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CONSTRUCTION.

For Small-pox Hospital	\$ 90,080 03	
For North Halsted street bridge.....	111,897 40	
For Stock Yards viaduct.....	84,573 72	
For Diversey street bridge.....	31,246 73	
For new bath house.....	6,550 22	
		324,348 10
For extension water pipe system	\$ 416,394 00	
For water pipe and special castings	106,120 98	
For Lake View water tunnel.....	86,216 95	
For Sixty-eighth street tunnel	59,775 15	
For new land tunnel, 1895.....	424,888 54	
For Western avenue tunnel	1,872 84	
For Northeast lake tunnel.....	238,988 77	
For Two-mile crib	240 02	
For Sixty-eighth street crib.....	42,149 23	
Southwest pumping station.....	11,533 40	
New repair shops	47,175 25	
		1,435,355 13

For maintenance of water system, operating pumping stations, cost of assessing and collecting water taxes, stock on hand, etc.....	\$ 1,174,793 74
For water certificates	363,462 50
For Hyde Park bonds	9,000 00
For Town of Lake bonds.....	15,000 00
For interest on bonds and certificates.....	261,305 23
For advance for laying water pipe refunded.....	83,573 82
For street improvements, street openings, sidewalks, sewers, private drains, water service pipes and lamp posts.....	3,351,759 80
Total	\$ 9,289,682 37
 Balance to credit Water Fund, January 1, 1897.....	 325,382 96
Balance to credit Special Fund, W., January 1, 1897..	7 34
Total	\$ 325,390 30

WATER WORKS RECEIPTS AND EXPENDITURES, 1896.

Credit balance, January 1, 1896 \$ 133,299 83

RECEIPTS.

Water rate collections (including delinquents)	\$ 3,128,893 55
Water permits (permits and plumbers' licenses, etc.)..	27,151 58
Water meter, labor, etc., for private parties	91,229 71
Rent for Rookery lot.....	35,000 04
Advance to lay water pipes.....	78,983 93
From sale of water certificates.....	166,962 50
Hydrant wrenches	1,410 00
Old material sold, etc	4,942 24
	\$ 3,667,873 38

EXPENDITURES.

For water pipe extension.....	\$ 416,394 00
For water pipes and special castings	106,120 98
For Water Works repairs.....	243,570 92
For new land tunnel, 1895.....	424,888 54
For Northeast lake tunnel, 1895	238,988 77
For Western avenue tunnel.....	1,872 84
For Sixty-eighth street tunnel extension.....	59,775 15
For Lake View tunnel	86,216 95
For meter and private works.....	77,635 18
For water permits	30,052 75
For North pumping station.....	143,660 72
For West pumping station.....	77,610 67
For South pumping station.....	84,576 97
For Central pumping station	48,807 16
For Sixty-eighth street pumping station.....	75,308 07
For Lake View pumping station.....	57,236 11
For Washington Heights pumping station.....	5,796 14
For Norwood Park pumping station.....	2,244 17
For Northwest pumping station	76 30
For Southwest pumping station	11,533 40
For Two-mile crib	11,810 05
For Four-mile crib.....	8,981 75
For Lake View crib.....	9,119 33
For Sixty-eighth street crib	42,149 23
For Water Office salary	206,242 15
For Water Office expense.....	13,647 57
For water proportional, office salary.....	28,212 94
For water proportional, office expense.....	13,948 16
For advance for laying water mains, refunded	83,573 82
For hydrant wrench deposits, refunded.....	1,235 00
For miscellaneous items.....	25,838 98
For new repair shops.....	47,175 25
For refund vouchers	9,422 67
For water certificates	363,462 50
For Hyde Park water loan bonds.....	9,000 00
For Town of Lake water loan bonds.....	15,000 00
For water loan interest.....	261,305 23
Total	\$ 3,342,490 42
Balance to credit of the Water Fund, January 1, 1897,	325,382 96
Total	<u>\$ 3,667,873 38</u>

Total cost of Water Works of the City to December 31, 1896, is as follows :

Cost, up to May 1, 1861, when the Works were transferred from the Board of Commissioners to Board of Public Works \$ 1,020,160 21

EXPENDITURES SINCE 1861.

Cost of water pipe including labor	13,499,074 55
Cost of North pumping works.....	929,532 44
Cost of West pumping works.....	944,217 77
Cost of Sixty-eighth street pumping works.....	284,366 60
Cost of Central pumping works	372,227 77
Cost of Washington Heights pumping works	10,246 96
Cost of Lake View pumping works	145,243 82
Cost of South pumping works.....	569,272 84
Cost of new lake tunnel	1,104,744 12
Cost of Lake View tunnel	701,792 45
Cost of new lake shore inlet	132,345 34
Cost of new lake shore inlet extension	146,459 04
Cost of new lake shore inlet extension	21,093 09
Cost of North breakwater crib	41,780 11
Cost of Two-mile crib	102,984 43
Cost of Four-mile crib	467,927 83
Cost of Lake View crib.....	88,051 62
Cost of Sixty-eighth street crib	42,149 23
Cost of Sixty-eighth street tunnel extension.....	614,992 95
Cost of Ashland avenue tunnel	17,453 36
Cost of first lake tunnel	464,866 05
Cost of Second lake tunnel.....	415,709 36
Cost of lake crib protection	149,431 63
Cost of land tunnel to West pumping works.....	542,912 63
Cost of new land tunnel	284,380 04
Cost of Water Works shop.....	27,240 58
Cost of Water Works stock	29,318 00
Cost of Northeast lake tunnel, 1895	238,988 77
Cost of Water Reservoir fence	1,702 87
Cost of addition to Stables.....	1,019 48
Cost of real estate for sites of pumping stations, etc..	242,285 75
Cost of works, annexed territory	1,160,164 24
Cost of Jefferson street tunnel	15,968 17
Cost of new land tunnel, 1895	486,463 79
Cost of Western avenue tunnel	29,252 07
Cost of new repair shops	23,395 25

Total cost of entire works to December 31, 1896.. \$25,369,215 21

Paid as follows :

From general taxes.....	\$ 2,713,878 53
From City of Chicago Water Loan bonds, 6 per cent..	132,000 00
From City of Chicago Water Loan bonds, 4 per cent..	1,485,000 00
From City of Chicago Water Loan bonds, 4 per cent..	1,706,500 00
From City of Chicago Water Loan bonds, 3, $\frac{1}{8}$ per cent.	332,000 00
From City of Chicago Water Loan Bonds, 3 $\frac{1}{2}$ per cent.	333,500 00
From bonds canceled	1,952,500 00
From Hyde Park Water Loan bonds, 5 per cent.....	50,000 00
From Town of Lake Water Loan bonds, 5 per cent ...	90,000 00
From Lake View Water Loan bonds, 4 per cent	50,000 00
From Lake View Water Loan bonds, 5 per cent	23,000 00
From water certificates.....	1,500 00
From water earnings.....	16,499,336 68

Total..... \$25,369,215 21

Total Water Works income to December 31, 1896..... \$42,119,464 95

Total operating expenses and maintenance to December 31, 1896 (including \$7,926,764.15 interest on bonded debt and bonds and certificates canceled) . 25,556,625 85

Difference between income and expenses..... \$16,562,839 10

Accounted for as follows :

Paid toward Water Works construction.	\$16,499,336 68
J. W. Lyons, cashier water office.....	2,000 00
Meter Department, stock on hand	6,748 32
Water Works Shop, stock on hand.....	13,202 89
Tapping Department, stock on hand...	4,015 90
Water pipe, etc., stock on hand	141,999 95
Balance to credit of Water Fund, Jan. 1, 1897	325,382 96
	<u>\$16,992,686 70</u>
Less amount due depositors for hydrant wrenches.....	\$ 2,346 82
Less amount advanced by private parties to lay water-pipe in non-paying districts.....	427,500 78
	<u>429,847 60</u>
	<u>\$16,562,839 10</u>

BONDED DEBT OF WATER WORKS:

City of Chicago Water Loan bonds outstanding Dec. 31, 1896, bearing 4 per cent. interest and maturing as follows :

July 1, 1908.....	\$ 150,000 00	
July 1, 1910.....	159,500 00	
July 1, 1912.....	821,000 00	
July 1, 1914.....	576,000 00	
July 1, 1915.....	1,485,000 00	
	<hr/>	\$ 3,191,500 00

Bearing 3½ per cent. interest, maturing—

July 1, 1909.....	\$ 225,000 00	
July 1, 1910.....	108,500 00	
	<hr/>	333,500 00

Bearing 3⅞ per cent. interest, maturing—

July 1, 1902.....	\$ 332,000 00	
	<hr/>	332,000 00

Bearing 6 per cent interest, maturing—

July 1, 1897.....	\$ 50,000 00	
July 2, 1898.....	82,000 00	
	<hr/>	132,000 00

ANNEXED DISTRICTS.

Town of Lake bonds :

5 per cent. bonds, due April 1, 1897....	\$ 15,000 00	
5 per cent. bonds, due April 1, 1898....	15,000 00	
5 per cent. bonds, due April 1, 1899....	15,000 00	
5 per cent. bonds, due April 1, 1900....	15,000 00	
5 per cent. bonds, due April 1, 1901....	15,000 00	
5 per cent. bonds, due April 1, 1902....	15,000 00	
	<hr/>	90,000 00

Hyde Park Bonds :

5 per cent. bonds, due January 1, 1904. \$	50,000 00	
	<hr/>	50,000 00

Lake View Water bonds :

5 per cent. bonds, due July 1, 1904.....	\$ 23,000 00	
4 per cent. bonds, due July 1, 1907.....	50,000 00	
	<hr/>	73,000 00

Total bonded debt of Water Works..... \$ 4,202,000 00

Total interest paid on Water Loan to Jan. 1, 1897.... \$ 7,926,764 15

Floating indebtedness Water Loan certificates outstanding, 5 per cent. water certificates..... \$ 1,500 00

Comparative statement of the pay rolls of the 21 months of the present administration, from April 1st, 1895, to December 31st, 1896, with the previous 21 months from July 1st, 1893, to March 31st, 1895:

	21 mos. 1893-4-5.	21 mos. 1895-6.	Decrease.
Water Pipe Extension	\$1,114,649 44	\$ 718,326 81	\$ 396,322 63
Repairing Imp. and Unimp. Streets.	774,339 53	622,848 37	151,491 16
Sewerage Department	637,202 08	468,212 20	168,989 88
Pumping Stations	484,320 02	430,207 27	54,112 75
Bridge Repairs	160,170 57	98,161 79	62,008 78
City Pipe Yards	135,474 62	112,292 36	23,182 24
Special Assessment Office	97,913 64	86,916 68	10,996 96
Street Lamp Repairs	59,597 58	52,437 32	7,160 26
Map Department	30,668 51	26,780 57	3,887 94
City Engineer's Office	45,356 96	41,483 24	3,873 72
Commissioner's Office Salaries	49,056 88	47,529 95	1,526 93
Street Department Office Salaries...	26,872 42	26,491 27	381 15
Water Office Salaries	372,885 73	372,033 65	852 08
Street Cleaning Pay Roll	327,487 30	133,674 25	193,813 05
			Increase.
Water Works Shop	81,993 70	90,742 37	8,748 67
	\$4,397,988 98	\$3,328,138 10	\$1,078,599 53
Less increase in Water Works Shops			8,748 67
Total decrease			\$1,069,850 86

Comparative statement of the expenses of the Street and Alley Cleaning Bureau for the 21 months of the present administration, from April 1st, 1895, to December 31st, 1896, with the previous 21 months, from July 1st, 1893, to March 31st, 1895:

	21 mos. 1893-4-5.	21 mos. 1895-6.	Decrease.
Removal of garbage, etc.	\$1,038,680 83	\$716,883 28	\$321,797 55
	10,924 miles.	21,292 miles.	Increase.
Street cleaning, by contract	191,006 73	289,935 67	98,928 94
			Decrease.
Street cleaning, by Bureau	327,487 30	133,674 25	193,813 05
	\$1,557,174 86	\$1,140,493 20	
Decrease			\$416,681 66

TRACK ELEVATION.

Considerable progress has been made during the past year in extending the system of track elevation as shown in detail by the report of the City Engineer. The following is a condensed statement of the work performed :

The Lake Shore & Michigan Southern and the Chicago, Rock Island & Pacific Railway companies jointly began elevating on an ordinance passed March 9, 1894, on territory south of Forty-fifth street, and extending to Fifty-ninth street; constructing sub-ways at Forty-seventh street, Fifty-first street, Fifty-third street, Fifty-fifth street boulevard, Fifty-seventh street, Cloud court and Fifty-ninth street, elevating six tracks.

The Chicago & North-Western Railway worked upon an ordinance passed March 9, 1896, covering track elevation of four and two-tenths miles on the Milwaukee Division, from Clybourn Junction to Rosehill, and four and five-tenths miles on the Wisconsin Division, from Clybourn Junction to Mayfair.

On the Milwaukee Division the Chicago & North-Western Railway elevated three tracks and their yard at Diversey avenue, covering a territory of about two and one-half miles from Diversey avenue to Berteau avenue, where there were constructed thirteen sub-ways in forty-five working days, this being the quickest work done thus far in track elevation in this City. There remains a distance of about one and three-quarters miles to be elevated and six more sub-ways to be constructed to complete the work on this division of the Chicago & North-Western Railway, in accordance with ordinance.

CONCLUSION.

Through the courtesy of His Honor, Mayor Swift, I was appointed Commissioner of Public Works of Chicago, and entered reluctantly in the service of this City July 20th, 1896.

In taking upon myself duties so arduous and responsible, I had no personal interest to serve, nor ambition to gratify other than to do my whole duty, devoting my best energy and ability to the advancement of the City's interests, and to aid and encourage the promotion of all enterprises which would contribute to the betterment of the condition of her citizens. Five months of public service as Commissioner of Public Works have impressed me with the unprecedented growth of the City, and the wonderful development of her charitable and educational institutions, and the expansion of her commercial,

mercantile and manufacturing enterprises. With these evidences of substantial progress, it is reasonable to predict for her a conspicuous place among the first cities of the world, and such a future should inspire in all a pride and ambition to extend as far as possible a class of city improvements which would be the best of its kind and an honor to her present and future greatness.

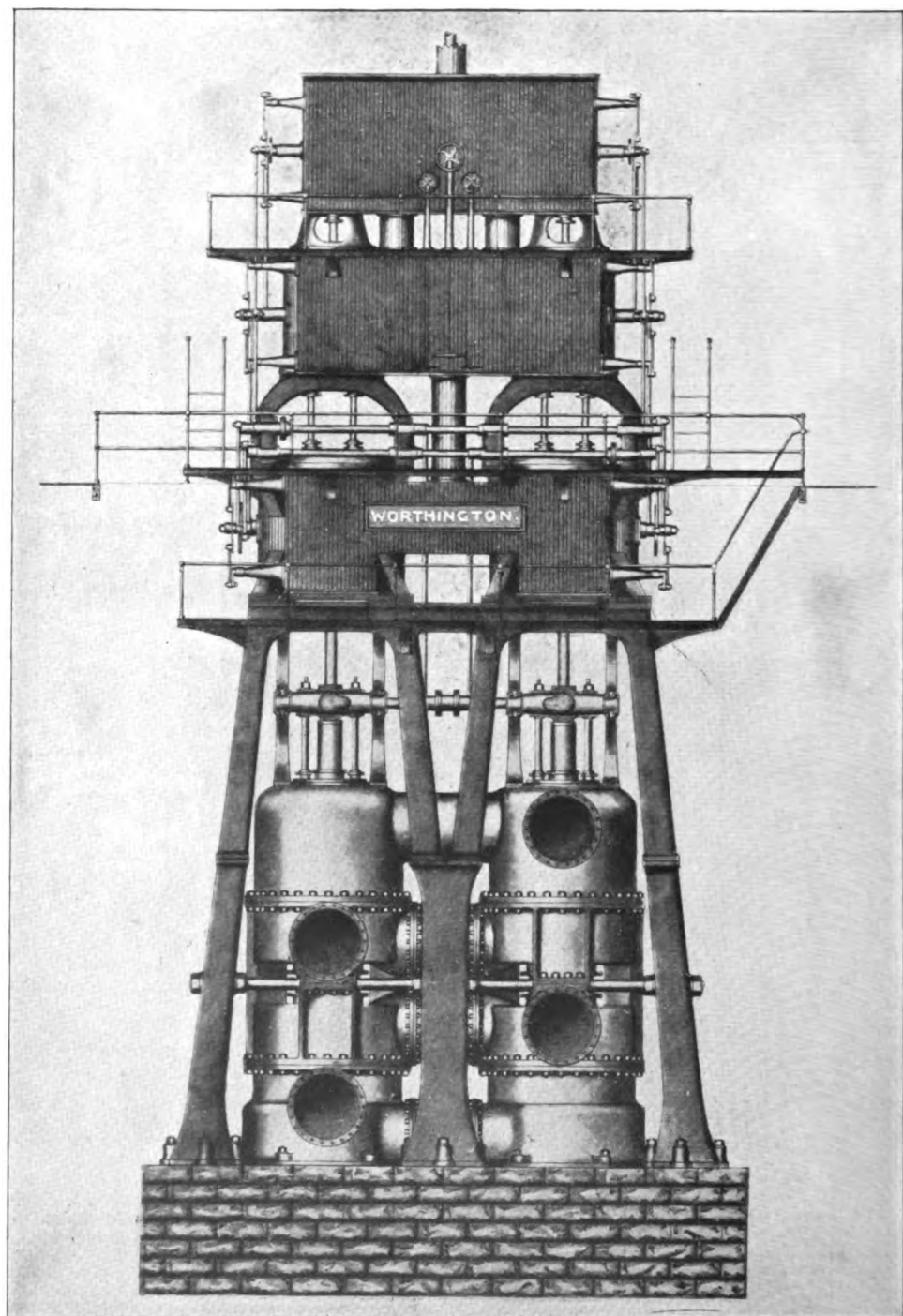
To His Honor, George B. Swift, Mayor, I am indebted for valuable counsel and advice in all important public transactions pertaining to my Department. By his zeal in securing valuable legislation, and co-operating with this Department in the promotion and fulfillment of such enterprises, he has contributed much to the successful management of this branch of the City government, and has shown an honorable devotion in all matters tending to promote the general welfare and advancement of our citizens.

To the Honorable Members of the City Council I extend my sincere thanks for courtesies in all business and personal relations, and for such legislation as will promote through this Department the happiness and welfare of the citizens of Chicago. I desire to commend the heads of the various bureaus for the skill and energy with which they have performed the responsible duties of their respective offices, and to acknowledge my indebtedness for their honorable and faithful co-operation in attaining so successful a management of the business of the Department.

In closing, permit me to express my appreciation of the successful efforts of the Civil Service Commission in securing for this Department the services of those who through competitive examination have demonstrated a superior grade of efficiency and stability, thereby establishing a higher standard of public service in all branches of this Department.

JOSEPH DOWNEY,

Commissioner of Public Works.



WORTHINGTON TRIPLE EXPANSION HIGH DUTY PUMPING ENGINE
SIX ENGINES OF 20,000,000 GALLONS DAILY CAPACITY EACH
FOR THE CITY OF CHICAGO
BUILT BY HENRY R. WORTHINGTON, NEW YORK

REPORT OF THE
Bureau of Engineering
CITY OF CHICAGO

CITY ENGINEER'S REPORT.

HON. JOSEPH DOWNEY,

Commissioner of Public Works.

DEAR SIR—I have the honor to submit herewith the annual report of the Bureau of Engineering for the year ending December 31, 1896.

The subject matter is treated under the following headings, viz:

1. Water Supply System and Auxiliary Stations.
2. Tunnel and Crib Construction.
3. Water Pipe Extension.
4. Bridge and Viaduct Construction.
5. Bridge and Viaduct Maintenance.
6. Harbor.
7. Track Elevation.
8. Architecture.

During the year, 93,040,314,218 gallons of potable water have been pumped into the City mains by all the pumping stations combined, Norwood Park station included, or an average of 254,208,509 gallons per twenty-four hours, which is an increase over 1895 of 2,368,693 gallons per day. Assuming the population of the City at 2,000,000 this consumption is at the rate of 127.1 gallons per capita per day.

The total pumpage in 1894 was 87,073,943,249 gallons; in 1895, 91,921,532,749 gallons; and in 1896, 93,040,314,218 gallons; or an increase in 1896 over 1894 of 5,966,370,869 gallons, and over 1895 of 1,118,781,469 gallons.

The total cost of operation and maintenance in 1896, omitting the cost at the Norwood Park station, was \$468,684.24 as against \$565,760.85 in 1894 and \$535,630.63 in 1895; or a decrease in cost in 1896 of \$97,076.61 compared with 1894 and \$66,946.39 compared with 1895.

The City is drawing its water from Lake Michigan through tunnels, with the exception of the small station at Norwood Park, which is supplied by an artesian well. Washington Heights station is supplied with lake as well as artesian well water.

We have laid during the year 432,602 lineal feet of water mains, as against 350,405 lineal feet in 1895 or an increase in 1896 of 82,197 feet. The total cost for this work in 1896 was \$775,433.32 as against \$1,016,306.78 in 1895, or a decrease in 1896 of \$240,973.46.

Owing to numerous complaints on account of shortage of water in various districts of the City and in order to utilize the available surplus capacity of our tunnels, I respectfully recommend that two new fifteen million-gallon pumping engines be purchased to replace the old ones, known as the '53 and '57 Engines at the North pumping station; also one new fifteen million-gallon pumping engine to take the place of the two Cope-Maxwell engines at the Sixty-eighth street station. A new thirty million-gallon engine should also be purchased for the Fourteenth street station, where foundations for a fourth engine are already in place. It should be noted in connection herewith that the daily consumption of water per capita has decreased from 146 gallons in 1895 to 127.1 gallons in 1896.

I desire to call your attention to a number of bridges and viaducts which should be renewed and which are noted under the head of Bridge and Viaduct Construction.

WATER SUPPLY SYSTEM.

WATER TUNNELS (IN OPERATION).

LAKE VIEW TUNNEL.

This tunnel, which extends from the Lake View Water Works at Halsted street and Montrose boulevard, to a crib located 10,000 feet from shore, was commenced in 1889, but not completed until 1896. The shore heading, constructed from the shore shaft, partly in rock and partly in earth, had been finished a distance of some six thousand feet by the summer of 1892. This portion of the tunnel was immediately utilized by the sinking of a temporary intake crib over the lake end of the tunnel. The east four thousand feet of

tunnel is constructed on a lower level, through solid limestone rock. The tunnel has an internal diameter of six feet, and the total length is 10,000 feet. Water was let in at the outer crib in July, 1896.

CHICAGO AVENUE TUNNELS.

There are three tunnels connecting the Chicago avenue pumping station with the old two-mile crib, located in a northeasterly direction from the pumping station, viz.: one five-foot tunnel and two seven-foot tunnels, one of which continues in a southwesterly direction under the City, to the West Side pumping station, located on Ashland avenue, near Twenty-second street.

The five-foot tunnel, which is the first tunnel constructed for the purpose of water supply, was commenced March 17, 1864. The formal celebration of the completion of this tunnel, and the introduction of lake water took place March 25, 1867. The length of this tunnel is two miles.

The old seven-foot tunnel runs parallel with, and about fifty feet south of the five-foot tunnel, from the crib to the Chicago avenue Water Works, where it connects with the pump wells; thence, in a straight line to the West Side Water Works, located at Ashland avenue and Twenty-second street. The work on this tunnel commenced July 12, 1872, and the lake portion finished July 7, 1874. The land portion was commenced in July, 1873, and completed October 12, 1874. The water was let in about February 1, 1875. The total length of this tunnel, from the crib to the West Side pumping station, is 31,490 feet.

NEW SEVEN-FOOT TUNNEL.

This tunnel, which terminates with a crib built between the old two-mile crib and the protection breakwater surrounding same, was built in three sections. The first section, extending from the pumping station 1,500 feet eastward to a crib constructed for the purpose of serving as a temporary intake, was commenced and finished during the year 1886. The second section, extending from the shore crib to a crib constructed at the northwest end of the government exterior breakwater, a distance of 3,408 feet, was constructed almost entirely during the year 1891, although the important and extremely difficult task of connecting the new with the old work was not finished before February 1, 1892. The third and last section, extending from the breakwater crib to the old two-mile crib, a distance of 6,000 feet, was

commenced September 9, 1895. Work was progressing from the breakwater crib as well as from the old two-mile crib, and connection between the two headings was made May 30, 1896. After cleaning the new tunnel and the shore shaft, water was let in July 21, 1896.

With the completion of this section, a third tunnel extending from the Chicago avenue Water Works to the two-mile crib, was added to the system.

FOUR-MILE TUNNEL.

This tunnel, which supplies the Central and the Fourteenth street pumping stations, consists of three sections: the lake section, the central land section and the Fourteenth street land section.

The lake section of the tunnel, four miles long and commencing at a shaft located on the lake front at Park Row, was originally intended to have an internal diameter of eight feet, as was also the Fourteenth street land section, but although these tunnels were commenced as eight-foot tunnels, it was found necessary after progressing for some distance from the shore shaft, owing to the difficult soil encountered, to split each of these tunnels into two smaller ones, each with an internal diameter of six feet. These six-foot tunnels were again connected some 8,870 feet west of the four-mile crib and between this point and the crib there is only one tunnel, the internal diameter being eight feet.

The Fourteenth street land tunnels were again connected 252 feet north of the pumping station and continued as one eight-foot tunnel to the pump well.

The central land section runs north to a shaft on Lake Front, opposite Peck court, thence in a westerly direction to the Central pumping station. The shaft at Peck court was originally intended as a starting point for the lake tunnel, but owing to the extremely unfavorable soil encountered, this plan was abandoned. The central land tunnel is a seven-foot tunnel from the Park row shaft to Desplaines street, thence a six-foot tunnel to the pumping station.

The land sections of this system of tunnels were commenced in 1887. The central section was completed January 30, and the Fourteenth street section, March 28, 1889.

The lake tunnel was commenced in June, 1888, and June 27, 1892, connection was made between the shore and the lake headings.

An intermediate crib located $2\frac{1}{2}$ miles from shore had to be abandoned owing to the immense quantities of quicksand encountered at this place, and the tunnel makes a detour to the north around this place.

After thorough cleaning and the reconstruction of defective portions of the tunnel, water was let in December 7, 1892.

JEFFERSON STREET TUNNEL.

In order to unite the old system of water tunnels dependent on the two-mile crib with the four-mile system, into a common whole, a six-foot tunnel was built on Jefferson street from a shaft over the old seven-foot land tunnel at the corner of Van Buren street to a shaft sunk for the purpose over the central land tunnel at the corner of Harrison street. This tunnel is about 625 feet long and can be closed against flow in either direction by a double-faced gate placed in a shaft of its own.

SIXTY-EIGHTH STREET TUNNELS.

The land portion of this system, supplying the Sixty-eighth street Water Works, located at Sixty-eighth street and Oglesby avenue, consists of two land tunnels, each of five feet internal diameter and about 650 feet long, running from shafts on the shore to the wells at the pumping station. The first lake tunnel is a continuation of the north land tunnel. It has an internal diameter of 6 feet, is 5,026 feet long and terminates with a submerged intake crib. This tunnel was built by the old village of Hyde Park in 1884.

An extension of this tunnel to a crib 10,000 feet from shore was commenced in 1892. This extension has an internal diameter of 7 feet. A connection between the west end of this tunnel and the east end of the old six-foot tunnel was contemplated, but owing to the many and serious difficulties presenting themselves, this scheme was abandoned. In the west end of the seven-foot tunnel was placed a bulkhead and a five-foot tunnel branching off from the seven-foot tunnel toward the south was constructed and connects with the shore shaft of the south land tunnel. The Sixty-eighth street Water Works, therefore, receives its supply of water from the old submerged intake through the six-foot tunnel, as well as from the new intake placed ten thousand feet from shore, through the seven-foot and five-foot tunnels.

The old and the new systems are connected by a five-foot cross tunnel on Yates avenue. The new system was completed and water let in in June, 1894.

CRIBS AND INTAKES.

LAKE VIEW — OUTER CRIB.

The gates on the intake shaft at this crib were opened July 12th, from which date the gates at the inner crib have been closed. The crib has been provided with temporary quarters for the crib-keeper, Mr. Milton Edwards, and his assistants.

TWO-MILE CRIB.

The new intake between the crib and its protection breakwater was finished and placed in service during the year. No interruption to the flow of water has occurred.

Captain William Dall is keeper.

FOUR-MILE CRIB.

This crib is in good condition. The light-house tower was painted during the summer.

Captain C. F. Frennesen is in charge.

SIXTY-EIGHTH STREET CRIB.

A new superstructure of this crib has been constructed during the year, which will be further described under the heading "Tunnel and Crib Construction."

Captain C. E. Cherry is in charge of this intake.

PUMPING STATIONS.

NORTH PUMPING STATION.

MR. THOMAS FERRIS, Engineer in charge.

With the exception of the large vertical "Cregier" engine, all the engines at this station have been overhauled and are now in good condition for continuous service. The Holly engines and the engine-room have been painted during the year. The old marine boilers are in such condition that they have to be repaired constantly.

A new system of drainage has been constructed, a 24-inch cast-iron pipe having been laid from the pumping station to the lake shore, a distance of about 1,200 feet.

Since the completion of the north shore extension tunnel, there has at all times been sufficient water in the wells to supply all the engines.

WEST PUMPING STATION.

MR. JOHN SANBORN, Engineer in charge.

The engines at this station have been in continuous service the entire year, with the following exceptions: No. 50 was stopped thirteen and one-half days in January on account of the large crank shaft breaking in the latter part of 1895, and waiting for a new shaft to be finished and placed. No. 25 was stopped eight days in April for general repairs. Other repairs have been done at nights and Sundays, when an engine could be shut down without reducing the pressure.

The buildings need exterior and interior painting.

FOURTEENTH STREET PUMPING STATION.

MR. GEORGE F. MATTHEWS, Engineer in charge.

All the engines at this station have been kept in good repair during the year. New discharge plates made entirely of brass have been placed in engines Nos. 1 and 2. All the engines in this station have been filled between the bed plates and cylinders under the water chambers with iron chips backed up by the best Portland cement. All jacket pipes on the three engines have been renewed. All the high pressure and intermediate cylinders have been equipped with Swain's metallic packing. The repairs to the engines have been made at night time.

All the steam pipes, valves and fittings in the boiler room from two to twelve inches have been replaced by new and suitable material. The steam pipes have been covered with asbestos covering and painted.

The boilers are being refitted with new Hawley tubes. Part of the boiler room has been concreted, and cars, tracks and turn-tables have been repaired. All pipes and machinery in the basement have been painted and the entire basement whitewashed. A new roof with three ventilators has been placed over the boiler room and the engine roof; gutters and down spouts have been repaired.

CENTRAL PUMPING STATION.

MR. PHILIP PETRIE, Engineer in charge.

The engines and boilers at this station are in good condition, though running continuously during the year—few repairs being necessary and those of a trifling and inexpensive nature.

SIXTY-EIGHTH STREET PUMPING STATION.

MR. GRANVILLE KIMBALL, Engineer in charge.

The four Gaskill engines and one Worthington high duty engine have been running continuously during the year at such speed as would maintain an average pressure of fifty-five pounds per square inch on the mains at the pumping station, except when it was found necessary to stop any one of them for repairs.

The Worthington engine has been supplied with a new independent duplex condenser and air pump. The old Cope & Maxwell engines are in good condition, but at no time during the operation of the five main engines has it been found necessary to run both of them, though one was run continuously during the summer months. The two old vertical Holly engines have not been in service. The boiler capacity at this station is barely sufficient to run the works, and consists of the following: Four batteries of two boilers each, one battery of four boilers (these twelve boilers are in good condition) and one battery of four boilers, two of which were condemned in 1894 and are out of service.

The electric light plant continues to give satisfaction, the cost for the year being less than one-third of the contract price formerly paid.

LAKE VIEW PUMPING STATION.

MR. F. D. PARKER, Engineer in charge.

The increasing demand on this station necessitates the continuous running of the four pumps, all of which are in good condition, extensive repairs having been made on them during the year.

Boilers, buildings and grounds are all in good order. Water was supplied to this station through a 36-inch intake pipe from the 30th of June to the 12th of July, while tunnel connections were being made, decreasing the amount of pumpage considerably.

WASHINGTON HEIGHTS PUMPING STATION.

MR. SIDNEY CURNICK, Engineer in charge.

This plant is in good condition, no extensive repairs having been necessary during the year. A new storage tank was placed on the tower during the summer, and the station is now well equipped to take care of the district.

NORWOOD PARK PUMPING STATION.

MR. FRANK NORTON, Engineer in charge.

The small pump at this station is in good working order. During the year 21,938,200 gallons of water were pumped, being an increase of over 3,000,000 gallons as compared with last year's pumpage.

AUXILIARY PUMPING STATIONS.

CANAL PUMPING STATION.

MR. FRANK M. NYE, Engineer in charge.

This station is in first-class order. All of the engines have been thoroughly overhauled; brasses, keys and other minor parts renewed where necessary. The boilers have also been inspected, cleaned and put in first-class order.

During the year the pumps have been shut down occasionally for repairs, but only one at a time, and then for as short a time as possible; they have also been stopped to allow the river to rise sufficiently to float vessels stuck in the draw at Fuller street bridge, a contingency that frequently occurs in the present condition of the Chicago river.

The amount of water pumped from the Chicago river into the Illinois and Michigan canal at this station during the year, was 26,075,989,152 cubic feet, or an average of 49,476 cubic feet per minute for the whole year, at a total cost of \$67,318.00, which is an increase in pumpage of 116,799,144 cubic feet, and a reduction in cost of \$11,035.60 compared with the year 1895. The average head pumped against was 6.5.

FULLERTON AVENUE PUMPING STATION.

MR. FRED GIELOW, Engineer in charge.

The plant at this station has been thoroughly overhauled and repaired during the year, and is now in first-class condition.

The total amount of lake water pumped into the north branch of the Chicago river during the year was 3,935,415,127 cubic feet, at a total cost of \$12,964.19, which, compared with 1895, shows an increase in pumpage of 634,895,861 cubic feet, and a reduction in cost of \$4,090.06.

The appended diagram shows the daily pumpage at each station, separately and combined, with the quantities, heads and temperatures of the air and water.

The following tables give information in detail regarding pumpage, expenditure, etc.

Table "A" gives the monthly and annual pumpages at the respective stations, and table "B" gives the most important figures relating to quantities and expenses. Table "C" gives a comparative statement of pumpage and expenditures for the years 1894, 1895 and 1896.

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TABLE "A." MONTHLY PUMPAGE IN GALLONS, 1896.

MONTH.	North Pumping Works.	West Pumping Works.	14th Street Pumping Works.	Central Pumping Works.	68th Street Pumping Works.	Lake View Pumping Works.	Washington Heights Pumping Works.	The City as a whole.
January	2,057,517,520	1,088,825,680	1,177,671,164	970,977,721	1,104,488,965	659,982,986	6,988,250	7,616,297,286
February	1,990,983,694	1,623,914,840	1,110,681,186	901,520,620	988,189,584	639,254,182	6,457,720	7,261,001,826
March	1,841,895,750	1,794,815,400	1,180,322,957	964,564,020	1,050,992,007	699,373,669	6,911,850	7,588,875,658
April	1,764,291,170	1,598,828,400	1,179,909,628	936,097,995	1,088,099,196	664,687,512	6,726,940	7,188,185,841
May	1,988,770,940	1,803,772,960	1,254,407,242	960,614,158	1,200,299,550	757,546,435	7,029,840	7,922,452,125
June	1,930,436,240	1,759,953,080	1,200,273,675	940,716,889	1,138,453,921	739,810,427	6,819,500	7,716,468,782
July	2,158,655,986	1,878,053,340	1,287,650,211	923,605,109	1,269,031,780	675,046,899	7,801,710	8,199,843,985
August	2,276,425,046	1,812,283,680	1,198,817,060	966,661,178	1,259,582,736	840,696,638	8,270,776	8,357,187,114
September	2,173,052,099	1,727,946,880	1,129,396,648	938,902,120	1,144,835,407	791,446,160	6,899,720	7,910,479,084
October	2,191,502,959	1,792,723,520	1,171,489,394	946,950,466	1,128,318,003	637,204,726	6,829,844	7,875,018,412
November	2,083,271,808	1,796,884,400	1,194,089,806	858,361,623	1,045,669,317	606,683,119	6,219,960	7,531,129,028
December	2,174,343,083	1,892,045,600	1,187,329,650	831,896,261	1,111,441,690	698,289,788	6,295,960	7,901,492,082
Totals	24,581,154,740	21,119,491,780	14,206,388,121	11,138,868,160	13,479,347,156	8,409,924,491	83,201,570	93,018,376,018
Total pumpage Norwood Park Works.								21,988,200
Grand Total, City as a whole.								98,040,314,218

TABLE "B." OPERATIONS OF PUMPING STATIONS, CHICAGO, DURING 1896.

	North Side.	West Side.	Fourteenth Street.	Central.
Anthracite Coal, tons	12,797.1570			
Bituminous Coal, tons	10,139.1888	18,212.1898	9,254.1888	7,243.1888
Fuel Oil, gallons				
Price of Anthracite Coal, per ton	\$4.98			
Price of Bituminous Coal, per ton	2.58	\$2.11		\$2.59
Price of Fuel Oil, per 100 gallons			\$2.58	
Cost of Anthracite Coal	63,156.57			
Cost of Bituminous Coal	26,193.98	38,514.36	23,927.05	18,761.14
Cost of Fuel Oil				
Total Cost of Fuel	89,350.55	88,514.36	23,927.05	18,761.14
Salaries	49,476.56	83,316.66	89,797.00	24,806.92
Cost of Oil, Stores and Lighting	3,030.90	1,585.04	1,934.25	3,800.85
Repairs to Buildings, Pumps, Engines and Boilers	2,882.60	1,271.17	9,718.02	1,401.09
Total Expense of Operation and Maintenance	144,740.61	74,687.23	75,876.82	47,772.00
All other Expenses combined	1,871.16	400.62	15.38	
Grand Total of Expenses	146,111.77	75,087.85	75,891.70	47,772.00
Total Gallons Pumped during the year	24,581,154.740	21,119,491.780	14,206,388.121	11,188,868.180
*Per Cent of Pumpage of City as a whole	26.4	22.7	15.3	12.0
Greatest Amount Pumped in one day, gallons	78,494,980 Oct. 14	64,692,500 July 2	45,558,507 Mar. 30	31,907,690 May 2
Least Amount Pumped in one day, gallons	49,734,640 April 19	45,423,000 April 7	80,308,666 Mar. 8	15,143,282 Dec. 27
Average Pumped per day, gallons	67,161,625	57,703,529	38,815,678	80,484,093
Average Head against Pumps, in feet	109.2	104.3	113.5	100.4
Cost of Fuel Pumping 1,000,000 gallons, one foot high	3.85c.	1.75c.	1.45c.	1.45c.
Total Cost of Pumping 1,000,000 gallons, one foot high	8,706c.	8,706c.	4,186c.	4,186c.

*Norwood Park Station not included.

TABLE "B." OPERATIONS OF PUMPING STATIONS, CHICAGO, DURING 1896—CONTINUED.

	Sixty-eighth Street.	Lake View.	Washington Hts.	The City as a whole.
Anthracite Coal, tons	.....	.....	.....	12,797,443
Bituminous Coal, tons	.....	.....	.....	55,806,188
Fuel Oil, gallons	.....	9,702,188	754,988	2,174,076
Price of Anthracite Coal, per ton	2,174,076	.....	.....	\$4.98
Price of Bituminous Coal, per ton	.....	.....	.....	2.34
Price of Fuel Oil, per 100 gallons	.....	\$2.10	\$2.35	1.69
Cost of Anthracite Coal	\$1.69	.....	.....	68,156.57
Cost of Bituminous Coal	.....	.....	.....	129,556.33
Cost of Fuel Oil	.....	20,887.89	1,771.90	86,685.87
Total Cost of Fuel	36,635.87	.....	.....	229,848.76
Salaries	36,635.87	20,387.89	1,771.90	202,187.45
Cost of Oil, Stores and Lighting	80,147.58	21,940.78	3,150.00	18,867.19
Repairs to Buildings, Pumps, Engines and Boilers	1,843.21	1,531.06	141.88	23,880.84
Total Expense of Operation and Maintenance	4,844.59	4,026.79	186.88	468,684.24
All other Expenses combined	72,971.20	47,886.52	5,250.36	2,312.78
Grand Total of Expenses	525.62	.....	.....	470,997.02
Total Gallons Pumped during the year	73,496.88	47,886.52	5,250.36	98,040,314,218
*Per Cent of Pumpage of City as a whole	13,479,947,156	8,409,924,491	88,201,570	100
Greatest Amount Pumped in one day, gallons	14.5	9.0	0.1	284,748,789 July 14
Least Amount Pumped in one day, gallons	45,707,997 July 13	29,452,645 Apr. 28	309,960 Oct. 31	222,140,929 April 5
Average Pumped per day, gallons	31,081,945 Mar. 23	13,290,675 July 7	163,720 Sep. 30	254,908,509
Average Head against Pumps, in feet	36,828.817	22,977,036	227,327	109.5
Cost of Fuel Pumping 1,000,000 gallons, one foot high	127.4	100.3	104.0	2.75 c.
Total Cost of Pumping 1,000,000 gallons, one foot high	2.75 c.	2.75 c.	2.75 c.	4.18 c.

*Norwood Park Station not included.

NORTH SIDE SHOPS.

MR. IRA W. BROWN, Superintendent.

The following new pipe line fixtures and work for the various departments have been made during the year :

HYDRANTS—NEW.

	2¼-inch Single	2¼-inch Double	4-inch Double
On hand January 1, 1896		16	18
Manufactured during 1896	478	1,097	4
Total	478	1,113	17
Delivered to Water Pipe Extension	424	795	5
On hand January 1, 1897	49	318	12

STOP-VALVES—NEW.

	4-inch	6-inch	8-inch	12-inch	16-inch	24-inch	36-inch
On hand January 1, 1896	9	2	15	12	3	4	1
Manufactured during 1896	37	202	92	50	6	7	.....
Purchased during 1896	88	406	149	.....	.....	.....	.....
Total	134	610	256	62	9	11	1
Delivered to Water Pipe Extension	78	600	240	37	3	8	1
On hand January 1, 1897	61	10	16	25	6	3	.....

The expenditures for labor and material during the year are as follows:

473	2½-inch single nozzle hydrants, costing.....	\$ 6,205 55	
1,097	2½ " double " " " "	27,900 09	
4	4 " " " " " "	90 94	
		<hr/>	\$ 34,196 58
	Hydrant repairs		1,524 44
37	4-inch stop-cocks, costing.....	\$ 397 89	
202	6 " " " " "	2,808 51	
92	8 " " " " "	1,870 69	
50	12 " " " " "	1,773 42	
6	16 " " " " "	492 92	
4	24 " " " " "	1,157 65	
		<hr/>	8,501 08
88	4-inch stop-cocks purchased	\$ 440 00	
406	6 " " " " "	3,248 00	
149	8 " " " " "	2,011 50	
		<hr/>	
	Repairing and testing meters.....		3,056 95
	Expenditures on account of water supply systems and other departments		31,504 48
			<hr/>
			<u>\$ 78,783 53</u>

TUNNEL AND CRIB CONSTRUCTION.

MR. JOHN ERICSON, Assistant City Engineer, is in charge of this branch of the Bureau work.

LAKE VIEW TUNNEL.

This tunnel was practically completed and connection made with the shaft at the outer crib, two miles from shore, at the close of the year 1895, and a full history of its construction was given in the annual report for 1895. The connection between the tunnel leading to the pumping station from the intermediate crib, through which the water was being taken, and the tunnel running from the working shaft to the outer crib, was all that was left to be constructed. During January, 1896, all the brickwork in the tunnel leading to the outer crib and the additional depth of shaft at the outer crib was finished and pointed up and the tunnel cleaned out.

Thereafter, a drift was run from the working shaft at the intermediate crib to a point directly under the center of the intake shaft. The contractor's men, except a few necessary to keep the tunnel clear of water, were then laid off until the City was ready to have the connection made. In order to make this connection, it was necessary to provide a temporary intake for the Lake View pumping station. It was intended to utilize an old thirty-inch pipe leading from the shaft near the pumping station out into the lake, but an examination by a diver disclosed the fact that the pipe was buried in and filled for a long distance with sand and otherwise defective, necessitating quite an expenditure of money to make it serviceable. It was, therefore, abandoned and a new thirty-six inch pipe laid from the shore shaft to a point in the lake about 360 feet from shore. This required 600 feet of cast-iron pipe. The land portion, 240 feet, was laid by this Bureau, the lake portion, 360 feet, by the Dunham Towing and Wrecking Company of this City. A plug was placed over the eye of the tunnel in the shore shaft, the gates of the inner crib were shut down June 30th and the pumping out of the old tunnel commenced.

This connection was finished and the gates at the outer crib opened July 12th.

Mr. R. B. Wilcox was the Assistant Engineer in local charge of this tunnel.

NORTH SHORE TUNNEL EXTENSION.

Seven Feet Internal Diameter.

The tunnel described in last year's report under this heading was completed during the year. At the beginning of the year, 1,344 lineal feet of tunnel had been constructed from the breakwater crib; the intake crib, located between the old two-mile crib and its protection breakwater, was finished and the cast-iron cylinders for the intake shaft had been delivered on the crib.

Considerable difficulty and delay were encountered in sinking this shaft owing to great quantities of loose brick, timbers and large stones, which had been dumped into the lake when the new superstructure of the old two-mile crib was constructed and when the old brick light-house tower was torn down.

While excavating for the first length of underpinning, the shaft started to sink, breaking the timbers across the well, carrying the floor down, forcing the piles down in the ground and breaking two of the cluster caps. An extra section of shaft was then ordered, allowing the cast-iron portion of the shaft to be sunk to the hardpan. The shaft was then quickly finished and tunneling westward commenced March 13, 1896. After this date, the construction of the tunnel progressed uninterruptedly from both cribs until May 30th, when the two headings were brought together and connection made.

The progress on this tunnel during the year was as follows :

From Breakwater Crib	4,438 lineal feet.
From Two-mile Crib, including a short drift east.....	1,562.5 lineal feet.

The actual tunneling from the breakwater crib was commenced October 25, 1895. The tunnel proper was completed in 172 working days. Tunneling from the two-mile crib continued sixty working days.

The average daily progress in the breakwater drift was 25.8 lineal feet, and in the two-mile crib drift, 26.0 lineal feet.

Considerable time was required to clean the new tunnel and to remove a bulkhead and a lot of clay, placed in the shore shaft at the foot of Chicago avenue, in order to make it possible to connect the new with the old work at the breakwater crib. This new tunnel was opened for service July 21, 1896.

Mr. C. T. Anderson was the Assistant Engineer in local charge of this improvement. Mr. Paul G. Brown was assistant.

NEW LAND TUNNEL.

SECTION ONE.

This section extends from a point near the lake shore, at the foot of Oak street, to a point near the intersection of North Green street and Grand avenue, a total distance of 8,666 feet. The tunnel on this section has an internal diameter of ten feet.

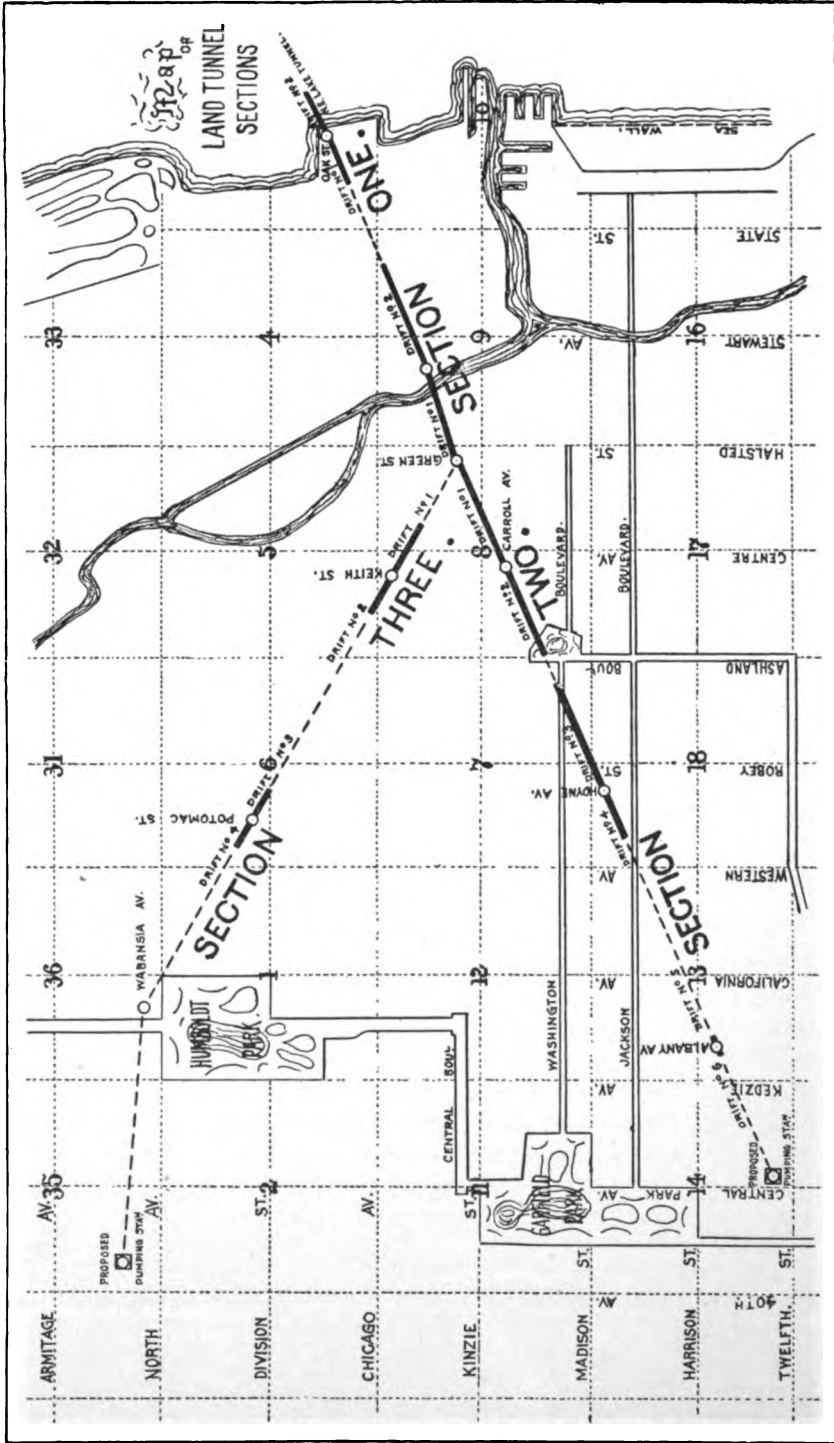
GREEN STREET SHAFT.

Active work on this section was commenced January 18, 1896. Excavation for the Green street shaft was commenced January 24th, and the shaft was completed February 9th. The shaft has an internal diameter of ten feet to an elevation of -29.2. From this point it is widened until at -59.0 it has a diameter of twelve feet. This mode of construction was necessary owing to the large gas and water mains and sewer in the street. This shaft has a total depth of 99.2 feet. A length of 31 feet of 10-foot tunnel was constructed eastward from this shaft.

KINGSBURY STREET SHAFT.

Work from that point was then suspended and a twelve-foot shaft sunk at the intersection of Kingsbury and Ontario streets. Excavation on this shaft was commenced February 27th, and the shaft completed March 14th. Both the Green street and the Kingsbury street shafts were constructed by the underpinning process, and no unusual difficulties were met with. Drifting eastward from Kingsbury street shaft was commenced March 16th, and the west drift was started March 19th. Work was discontinued in the west drift May 7th, and in the east drift May 11th, in order to enable the contractor to install an excavating machine, which was put in the west drift. This machine was experimented with until about the middle of July, when it was abandoned and active work resumed in both drifts. No unusual difficulties were thereafter met with in the prosecution of this work; the soil generally being a very hard clay, at places approximating hardpan. Occasional sand and gas pockets were encountered.

Connection was made November 30th, with the drift at the Green street shaft. Work on the east drift was continued to the end of the year.



The distance between the Kingsbury and Green street shafts is 2,216 feet, of which 2,185 feet was constructed from the former shaft.

A total of 2,679 feet of tunnel was completed eastward from the Kingsbury street shaft during the year.

OAK STREET SHAFT.

This shaft, which marks the eastern terminus of section 1 and beginning of the lake tunnel, was commenced July 20th and completed August 14th, 1896. In sinking this shaft, it was found necessary owing to the large amount of water encountered to use a steel caisson, twenty-four feet in depth, lined with two rings of brick for the upper portion of the shaft. Below this depth, to the bottom of the shaft, the usual method of underpinning with a lining of four rings of brick was employed.

Owing to a strike among the miners, actual tunneling was not commenced until August 31st.

There have been constructed 1,163 lineal feet of tunnel westward from this shaft during the year. The character of the soil has been generally a very hard blue clay resembling hardpan.

At a point 513 feet from the shaft, a vein of quicksand was uncovered in the bottom of the drift, causing a strong flow of sand, silt and water accompanied by considerable gas. This place, however, was successfully passed through.

Section 1 has been in charge of Mr. John Spengler, Assistant Engineer, with Mr. Edwin Woods as sub-assistant.

SECTION TWO.

This section is an extension of section one in a southwesterly direction, and the tunnel has an internal diameter of eight feet. Its western terminus is the site of the proposed pumping station at the northeast corner of Central Park avenue and Fillmore street. Actual work on this section commenced November 23, 1895, and at the close of that year the Carroll avenue shaft, 100 feet deep, 209 lineal feet of tunnel in drift No. 1 and 23 lineal feet in drift No. 2, were completed.

CARROLL AVENUE SHAFT.

Drift No. 1.—The work in this drift progressed continuously until May 23d, when connection was made with the Green street shaft. The total number of feet of tunnel constructed during the year was 2,550.

The general character of the ground in this drift was blue clay, with sand and gravel pockets which at some places extended twelve to fifteen feet above the excavation.

Drift No. 2.—Work on this drift was resumed February 4, 1896, and carried on continuously until June 24, when it was abandoned owing to the numerous complaints from residents in the neighborhood on account of the blasting. During the year, 2,603 lineal feet of tunnel were constructed.

The character of the soil varied considerably. From the shaft to a point 386 feet west thereof, the tunnel runs almost entirely through sand and gravel, which caused large caves and slow progress. The balance of this drift runs through clay mixed with large boulders and through occasional sand pockets.

HOYNE AVENUE SHAFT.

Work on this shaft was commenced June 2d and finished June 15th. This shaft has a clear diameter of ten feet and is 99.5 feet deep.

Drift No. 3.—Tunneling in this drift was commenced June 16th and continued throughout the year. The progress made during the year is 3,127 lineal feet.

The character of the soil in this drift has been mainly soft blue clay, with more or less soft and wet bottom. Considerable quantities of large boulders filled the lower part of the tunnel section from station 19+52, a distance of 300 feet. Beyond this point, the soil has been a mixture of clay and loam.

Drift No. 4.—Tunneling in this drift commenced June 24th. Solid rock in the bottom of this drift was encountered 282 feet west of the shaft and kept rising gradually until at 697 feet from the shaft, where we succeeded in bringing the tunnel entirely into solid rock without the roof falling. This was accomplished after several trials and failures to make the rock roof stand while firing the blasts.

The progress in this drift during the year is as follows:

Tunnel completed, 701 lineal feet.

Tunnel excavated through rock, 496 lineal feet.

ALBANY AVENUE SHAFT.

The construction of this shaft commenced November 4th and by the 8th was finished to the solid rock 61.5 feet from the surface. On the 22d, the shaft had been excavated to a sufficient depth to allow the top of the tunnel drifts to be taken out.

At the close of the year, drift No. 5 had been excavated a distance of 174 feet and drift No. 6, 63.0 feet from the shaft.

The rock through which this tunnel is being excavated shows a tendency to disintegrate when exposed to the air.

Mr. F. G. Ewald was, in September, 1896, succeeded by Mr. C. T. Anderson as Assistant Engineer in local charge of this section. Mr. William G. Atwood is his sub-assistant.

SECTION THREE.

The tunnel on this section is eight feet internal diameter and extends from the Green street shaft to a point near the intersection of Springfield avenue and Bloomingdale road, where the City has purchased a lot on which the proposed new pumping station will be erected. This tunnel, with the exception of about 2,000 feet of the southwest end next to the Green street shaft, is in solid lime rock.

Four working shafts are planned for this section: one on Keith street just south of Chicago avenue, one on Potomac avenue near Leavitt street, one on Wabansia avenue near Humboldt boulevard, and the fourth on the site of the proposed pumping station. The latter shaft will also be used as pump well.

During December, 1895, work was commenced on the shafts at Keith street and Potomac avenue, and tunneling at these points in both directions was carried on during 1896.

On account of controversies between the City and the contractors, work was entirely suspended September 4th. November 14th work was again resumed at both points and continued to the close of the year.

KEITH STREET SHAFT.

This shaft was timbered down to an elevation of -51.2, where rock was encountered, and this timbering is such as to finally admit the necessary brickwork to make the shaft ten feet internal diameter.

The total depth of the shaft is 88.5 feet.

The shaft was completed January 13, and both drifts at this point commenced January 14. The drift running southeasterly is known as No. 1, and the one running northwesterly as No. 2. May 12th bricklaying was commenced.

More or less water has been encountered, but not sufficient to seriously inconvenience the work. The following shows the progress made in these drifts during the year.

Drift No.	Total distance excavated—feet.	Total brickwork		Average.
		Arch.	Invert.	
1	1,181	648	685	666½
2	1,134	294	520	407

POTOMAC AVENUE SHAFT.

This shaft is timbered down to an elevation of -34.9, which is the elevation of the solid rock surface. The total depth of the shaft is 90 feet. The shaft was completed January 27th and both drifts started January 28th.

The drift running southeasterly is known as No. 3 and the one running northwesterly as No. 4.

The progress during the year was as follows:

Drift No.	Total distance excavated—feet.	Total brickwork		Average.
		Arch.	Invert.	
3	698	104	504	304
4	735½	183	299	241

No work has been done as yet on the other shafts. Borings were made at the site of the proposed pumping station to determine elevation of rock, which is -14.8.

The surface surveys were extended as far west as Springfield avenue, and the taking of topography along the line of the tunnel continued.

Mr. E. W. Jackson, having been transferred to the northeast lake tunnel, Mr. John H. Spengler was placed in charge of this section as Assistant Engineer.

RECAPITULATION.

SECTION ONE.

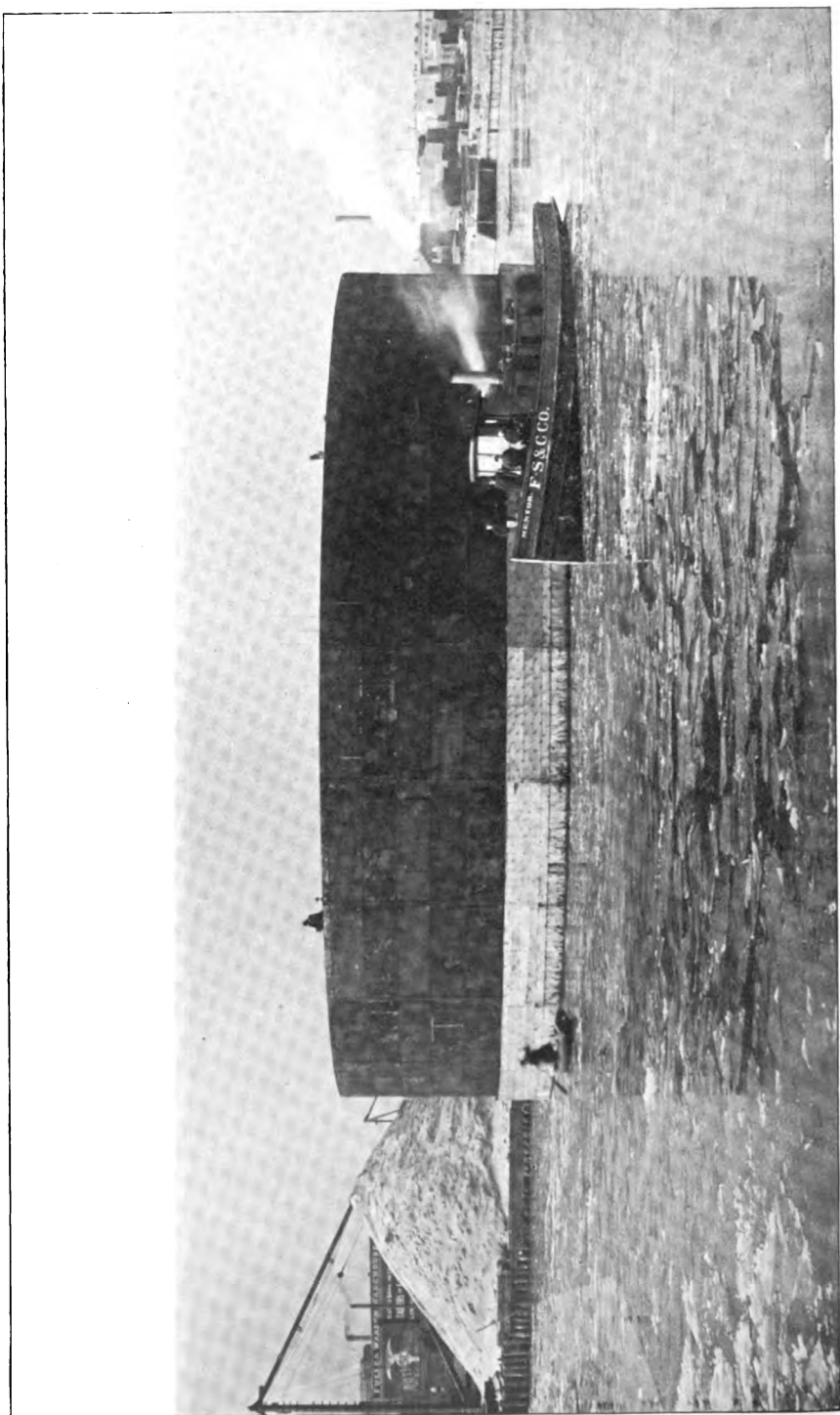
Total number of shafts constructed.....	3
Total number of feet ten-foot tunnel completed.....	6,058
Total number of feet ten-foot tunnel unfinished.....	2,605

SECTION TWO.

Total number of shafts constructed.....	3
Total number of feet eight-foot tunnel completed	9,213
Total number of feet eight-foot rock tunnel excavated (not lined)	733
Total number of feet eight-foot tunnel remaining	9,879

SECTION THREE.

Total number of shafts constructed.....	2
Total number of feet eight-foot rock tunnel completed	1,618.5
Total number of feet eight-foot rock tunnel excavated (not lined)	2,130
Total number of feet eight-foot tunnel remaining	18,477



NEW INTAKE CRIB
(NORTHEAST LAKE TUNNEL)

NORTHEAST LAKE TUNNEL.

This tunnel, which has an internal diameter of ten feet, extends from the Oak street shaft in a northeasterly direction to a point in Lake Michigan four miles from shore.

The construction of the shaft has already been described under heading "Section 1."

Actual tunneling was commenced October 7th and was continued without interruption during the year.

The soil 1,135 feet nearest the shaft has been a very hard clay. From this point eastward, soft blue swelling clay has been encountered in the roof. This caused more or less trouble and delay. Owing to the great size of the excavation, it has been necessary to timber the roof at all times.

The total progress on this tunnel during the year is 1,280 lineal feet.

NEW INTAKE CRIB.

This crib consists of a circular structure 110 feet 10 inches in diameter. The well has a diameter of sixty feet. There is a solid hemlock timber bottom six feet thick. Over this bottom timber walls extend to a height of nineteen courses or about nineteen feet. The top part of the substructure consists of two concentric steel shells between which Portland cement concrete will be placed.

Work on this crib commenced July 28, 1896. August 19th, when about seven feet high, it was successfully launched.

September 28th, when the structure was completed to a height of about twenty feet, work was discontinued until its final location had been determined upon. Work was again resumed November 18th. At the close of the year the steel shells were about all erected and the riveting well under way.

INTERMEDIATE CRIB.

This crib is the same one that served as a working crib in the construction of the Sixty-eighth street tunnel, The Fitz Simons & Connell Company, to whom was awarded the contract of removing said crib, instead of demolishing same, removed the superstructure and the rip-rap filling, pumped the water out and succeeded in getting the structure afloat. It was then towed to the United States Exterior breakwater where eight additional courses of 12x12 inch timbers

were added. It was then brought out and sunk on the line of the proposed tunnel, about two and a quarter miles from shore, October 25th. Since this time, the superstructure has been completed and the crib made ready for active operations.

The shaft will consist of a steel shell, lined with brick and extending into the solid material in the bed of the lake.

Mr. C. T. Anderson, having been transferred to section two, was in September succeeded by Mr. E. W. Jackson as Assistant Engineer in charge of this work. Mr. H. H. Jackman is his sub-assistant.

SIXTY-EIGHTH STREET TUNNEL EXTENSION.

This work consists of the construction of a seven-foot tunnel between a shaft located on the lake front at the northeast corner of Yates avenue and Sixty-eighth street, and a point under the bed of Lake Michigan 4,915 feet from shore, where it will connect with the west end of the seven-foot tunnel running to the Sixty-eighth street crib, constructed in 1893 and 1894. This tunnel will also connect with the Yates avenue shaft at the Sixty-eighth street pumping station. In order to facilitate and hasten the completion of this improvement, a temporary pile crib and working shaft have been placed on the line of the proposed extension 3,625 feet from shore.

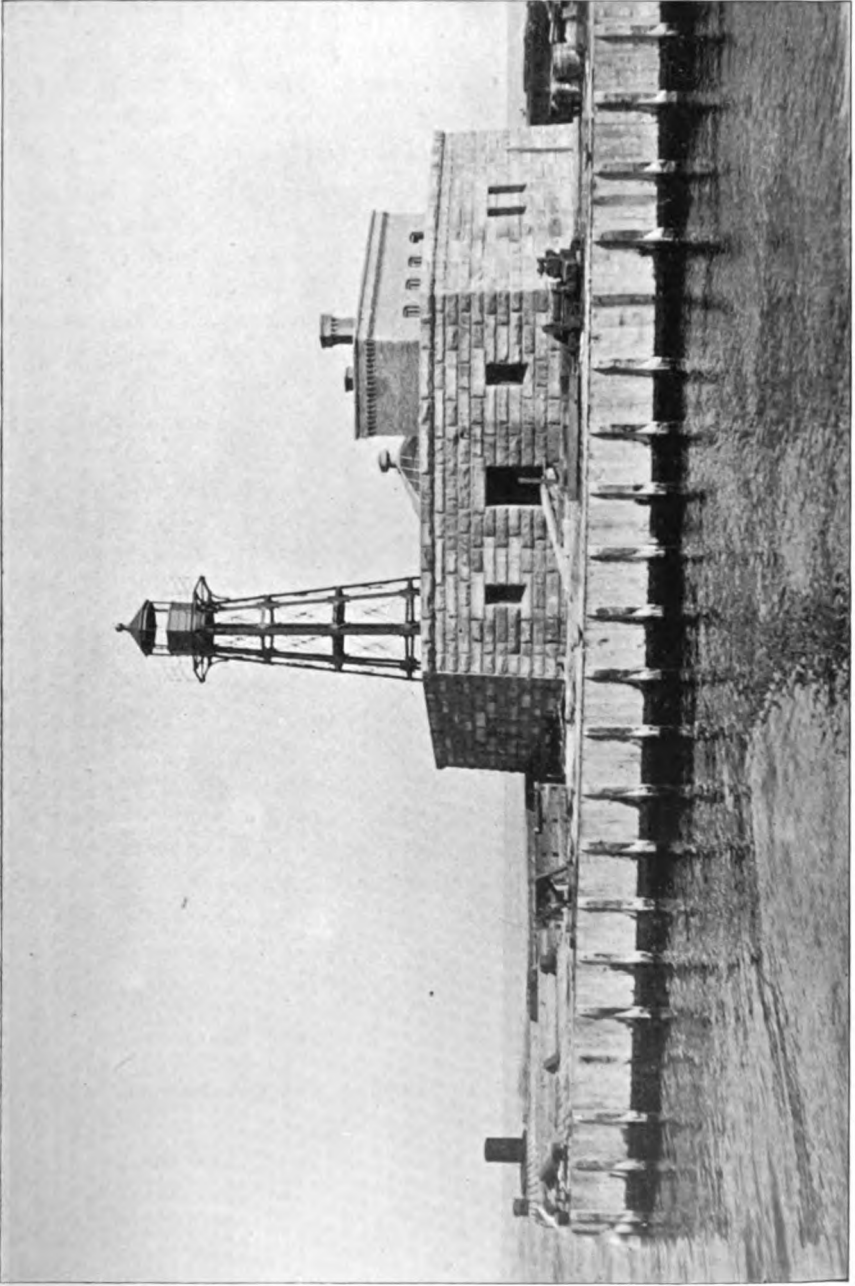
The contract for this work was let September 1, 1896. Actual work on the shore shaft was commenced September 7, 1896. Work on the pile crib was commenced September 20th, but owing to unfavorable weather the crib was not ready for occupancy and work on the shaft not commenced until December 15, 1896.

The progress on this tunnel to the close of the year was as follows :

Drift No. 1, running east from shore shaft...	2,014	feet
“ 2, “ west “ “ “ ...	68	“
“ 3, “ east from lake “ ...	38	“
“ 4, “ west “ “ “ ...	16	“
Lineal feet of shore shaft constructed.....	63.6	“
“ “ lake “ “	69.5	“

The ground through which the work has progressed is a very hard, seamy clay and dry loam, with occasional pockets of quicksand. Blasting with dynamite has been resorted to in excavating for the tunnel.

Mr. R. B. Wilcox, Assistant Engineer, is in local charge of this work.



SIXTY-EIGHTH STREET TWO-MILE INTAKE CRIB

SIXTY-EIGHTH STREET PERMANENT CRIB.

The old superstructure of this crib, constructed of wood, commenced to show signs of weakness and dilapidation and a new structure of stone, concrete and iron was planned.

The contract for this work was let June 2, 1896.

The work included the removal of the old superstructure to an elevation of one foot below City datum, the removal of the rip-rap filling to a depth of 3.5 feet below datum, the placing of iron tie rods through the timber walls, the preparation of a suitable foundation and the erection of a permanent structure.

The superstructure, two stories high, consists of an outer wall of oolitic limestone, an inner wall of one course of stone and a 26-inch brick wall, the space between the two walls being filled with Portland cement concrete to the level of the first floor, eight feet above datum. The second floor is supported by steel I beams and arch tiling. On the second floor there is a brick dwelling covering about one-half of the space around the well except a six-foot passage-way between the dwelling and the outer wall of the crib. The dwelling will furnish quarters for the crib-keeper and his assistants. On the first floor there is a boiler room, engine room, machine, coal and storage rooms.

On the northwest side of the crib there is an iron light-house tower and lantern. The light is about 61 feet above datum. The well is covered by an iron truss roof with skylight of American wire glass. All this work, with the exception of some concrete work and plastering on the lower floor and the pointing up of the stone work, was done at the end of the year. This structure, protected by the new breakwater surrounding it, is one of the most substantial intakes in the City.

WATER PIPE EXTENSION.

MR. H. P. THOMPSON, Superintendent.

During the year, 432,602 feet of mains of the following dimensions were laid :

5,099 feet.....	4-inch.
295,435 feet.....	6 "
108,709 feet.....	8 "
21,308 feet.....	12 "
31 feet.....	16 "
2,020 feet.....	24 "

Of this amount, 241,493 feet of mains of different sizes have been laid under contract by special assessment, and 83,038 feet of pipe, costing \$77,404.40, have been laid at the expense of private parties. Of this amount, \$15,911.79 were advanced by contractors for street improvements, who have been required to advance the money to cover the cost of laying water pipe, where necessary, before going on with the street improvements. The City agrees to refund all money advanced for water pipe when the annual revenue from it pays 10 cents per foot frontage. During the year, 108,071 feet of different size pipe have been laid on revenue and for circulation.

The following work was done during 1896, which is not included in our report of pipe laid and valves set :

At Lake View pumping station, 620 feet of 36-inch pipe was laid and one 36-inch valve set for temporary supply pipe, while connection was being made between the two cribs, which has since been taken out.

At Chicago avenue pumping station, there were 1,394 feet of 24-inch pipe, 143 feet of 16-inch pipe, two 24-inch valves and two 16-inch valves used in laying drain for the pumping works.

At the Smallpox Hospital, 178 feet of 4-inch pipe were laid and two 4-inch valves set for the private use of the hospital.

Ten hundred and twenty-five brick hydrant and stop valve basins were built during the year and two hundred and twenty-one composition basins were placed during the same period. In the building of basins and repairs, 1,152,000 brick and 3,501 barrels of cement have been used. One fire cistern was built in 1896, at Jefferson and Congress streets.

Water mains have been taken up or abandoned in the following streets and other mains put in:

Atlantic street from Thirty-ninth street to Root street.

Commercial street from Paulina street to Wrightwood avenue.

Crilly place crossing Eugenie street.

Elizabeth street from Fiftieth street to Fifty-first street.

Eugenie street from Sedgwick street to La Salle avenue.

Fletcher street from Racine avenue to Perry street.

Franklin street crossing Eugenie street.

Halsted street from Thirty-ninth street to 463 feet south.

Halsted street from 817 feet south of Thirty-ninth street to 598 feet southward.

Irving Park avenue from Vernon avenue to 300 feet west.
Jefferson street from Harrison street to Van Buren street.
Justine street from Forty-ninth street to Fiftieth street.
Lafin street from Forty-ninth street to Fiftieth street.
Marshfield avenue from Roscoe street to Lincoln avenue.
Ohio street from Market street to Wells street.
Otto street from Ashland avenue to Southport avenue.
Perry street from Fletcher street to Belmont avenue.
Snyder street crossing Halsted street.
Superior street from Clark street to State street.
Twenty-third place from Oakley avenue to Hoyne avenue.
Warren avenue from California avenue to Rockwell street.
Wellington avenue from Lincoln street to Perry street.
Wisconsin street from Sedgwick street to 584 feet eastward.

Water mains were lowered in the following streets during the year 1896 :

Anthony avenue from South Park avenue to Seventieth street.
Champlain avenue from Sixty-third street to Sixty-fifth street.
Champlain avenue from Seventy-first street to Seventy-fifth street.
Cregier avenue from Sixty-ninth street to Seventy-first street.
Evans avenue from Sixty-third street to Sixty-fifth street.
Evans avenue from Seventy-first street to Seventy-fifth street.
Forty-seventh street from Armour avenue 300 feet westward.
Fifty-first street from Armour avenue 290 feet westward.
Fifty-third street from Armour avenue 250 feet westward.
Fifty-fifth street boulevard from Armour avenue 350 feet westward.
Fifty-sixth street from Indiana avenue to Prairie avenue.
Fifty-ninth street from Armour avenue 315 feet westward.
Langley avenue from Seventy-first street to Seventy-fifth street.
Sixty-seventh street crossing May street.
Sixty-seventh street from Oglesby avenue 120 feet eastward.
Sixty-seventh street from Cottage Grove avenue 2,587 feet westward.
Sixty-seventh street from Evans avenue 289 feet eastward.
Sixty-ninth street from South Park avenue to Keefe avenue.
Seventieth place from St. Lawrence avenue 375 feet eastward.
Seventy-second place from Illinois Central Railroad 350 feet eastward.
South Chicago avenue from South Park Avenue to Cottage Grove avenue.

South Chicago avenue from Cottage Grove avenue 1,010 feet eastward.

Storms avenue from Seventy-second street to Seventy-third street.

Vernon avenue from Sixty-ninth street to Seventy-third street.

The accompanying tables show in detail the number of new hydrants and new valves placed, the size and length of pipe laid and name of street and district.

HYDRANTS PLACED IN 1896.

DIVISION.	2½-inch Single.	2½-inch Double.	4-inch Double.	2½-inch Double, with one 4-inch Single.	Total.
North		3			3
South		4	1		5
West	100	157			257
Hyde Park	60	79			139
Lake View	32	43			75
Lake	40	91		2	133
Jefferson	67	212			279
Calumet	14	23			37
Totals	313	612	1	2	928

During the year 1896 there were taken out in the North Division two 2½-inch single hydrants, in the South Division three 2½-inch single hydrants, in the West Division three 2½-inch single hydrants, in Hyde Park District one 2½-inch single hydrant, all of which were replaced by 2½-inch double hydrants. Also one 2½-inch double hydrant and one 2½-inch single hydrant in the North Division, one 2½-inch single hydrant in the South Division, two 2½-inch single hydrants in the West Division, four 2½-inch double hydrants in Lake district, were taken out, which were not replaced; also one 2½-inch double hydrant taken out in South Division which was replaced by 4-inch double hydrant.

TOTAL NUMBER OF FIRE HYDRANTS AT THE CLOSE OF 1896.

DIVISION.	2½-inch Single.	2½-inch Double.	4-inch Double.	2½-inch Double, with one 4-inch Single.	TOTAL.
North	414	507	132	.....	1,053
South	795	1,024	194	.....	2,013
West	1,595	4,051	287	.....	5,888
Hyde Park	391	1,744	8	605	2,748
Lake View	234	1,040	.....	1	1,275
Lake	205	805	2	1,596	2,608
Jefferson	172	1,045	4	.....	1,221
Calumet	182	387	.....	55	574
Total	3,938	10,603	577	2,257	17,375

STOP-VALVES PUT IN DURING THE YEAR 1896.

DIVISION.	SIZE OF VALVES.							TOTAL
	4-in.	6-in.	8-in.	12-in.	16-in.	24-in.	36-in.	
North .....	.....	5	1	.....	.....	.....	.....	6
South .....	.....	2	2	.....	.....	.....	.....	4
West	3	143	47	15	.....	2	.....	210
Hyde Park .....	.....	92	38	9	.....	.....	.....	139
Lake View .....	.....	62	7	.....	.....	.....	.....	69
Lake	7	83	32	3	.....	.....	.....	125
Jefferson .....	.....	171	98	6	1	4	.....	280
Calumet	1	17	.....	1	.....	.....	.....	19
Totals	11	575	225	34	1	6	.....	852

During the year 1896, there were taken out in the North Division three 4-inch valves, in the West Division three 4-inch valves, in the Lake View District nine 4-inch valves, in Lake District two 4-inch valves, in Jefferson District one 12-inch valve, which were not replaced.

**TOTAL NUMBER AND SIZE OF VALVES IN USE AT THE CLOSE
OF 1896.**

DIVISION.	SIZE OF VALVES.											TOTAL	
	3-inch.	4-inch.	6-inch.	8-inch.	10-inch.	12-inch.	14-inch.	16-inch.	18-inch.	20-inch.	24-inch.		36-inch.
North		161	428	294	....	32	...	13	....	....	12	3	943
South		155	682	657	....	85	....	25	...	....	29	13	1,646
West		583	2,306	1,205	....	282	....	72	....	....	33	11	4,492
Hyde Park		93	1,078	276	20	80	4	49	....	1	21	6	1,628
Lake View	1	248	721	154	....	31	3	5	....	3	5	4	1,175
Lake		131	1,112	335	2	69	14	13	2	....	18	2	1,698
Jefferson		22	594	322	....	66	....	9	....	....	28	....	1,041
Calumet		4	201	67	....	9	....	2	....	..	1	....	284
Totals	1	1,397	7,122	3,310	22	654	21	188	2	4	147	39	12,907

WORK IN DETAIL.

The following tables show in detail the work of water-pipe extensions :

NORTH DIVISION.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Crilly place	Connecting	Eugenie	21	6
Eugenie	Sedgwick	La Salle avenue.....	1,444	6
Franklin	Crossing	Eugenie	66	6
Hammond	Connecting	Wisconsin	88	6
*Huber	Racine avenue	Herndon	617	6
Ohio	Franklin	Market	327	6
Ohio	Wells	Franklin	333	6
Superior	Clark	State	695	6
Wisconsin	Sedgwick	Eastward	584	8
Total			4,125	6
Add Branch Pipe for Hydrants			36	
Total feet of pipe laid in North Division.....			4,161	

* Laid by Deposit.

SOUTH DIVISION.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
†Thirty-seventh	Gage	Laurel	434	6
Vermont	325 feet S. of Thirty-seventh ..	Thirty-eighth	270	6
Total			704	6
Add Branch Pipe for Hydrants			48	
Total feet of pipe laid in South Division			752	

†Laid by Special Assessment.

WEST DIVISION.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Adams	Crossing	Fortieth avenue	18	6
†Adams	S. Forty-sixth avenue ..	Forty-seventh avenue ..	663	6
†Albany avenue	Huron	Chicago avenue	680	6
*Ambrose	California avenue	Washtenaw avenue	656	6
†Augusta	N. Forty-second ave..	N. Forty-sixth avenue..	2,650	8
*Avers avenue	W. Twelfth	W. Fourteenth	1,294	6
†Avers avenue	W. Sixteenth	W. Nineteenth	1,464	6
†Beach avenue	Homan avenue	Spaulding avenue	624	6
†Carroll avenue	180 ft. W. of Sacramento ave.	Albany avenue	484	6
Chicago avenue	N. Forty-seventh ave..	N. Forty-eighth ave ..	588	8
†Chicago avenue	N. Fortieth avenue	N. Forty-fourth ave..	2,633	12
Christiana avenue	Division	Southward	37	6
†Collins	Albany avenue	Kedzie avenue	584	6
†Colorado avenue	S. Fortieth avenue	S. Forty-third avenue ..	1,613	8
Congress	Crossing	Jefferson	48	6
†W. Congress	Trumbull avenue	81 feet E. of Central Park ave.	1,025	6
†W. Congress	Trumbull avenue	Homan avenue	261	6
*W. Congress	S. Forty-fifth court ..	Westward	140	6
W. Congress	Crossing	S. Fortieth avenue	39	6
†W. S. Congress park ..	Harrison	Van Buren	756	4
†E. S. Congress park ..	Harrison	Congress	380	4
†Cornelia	N. Forty-second ave ..	N. Forty-fourth ave ..	1,348	6
†Cortez	N. Forty-second ave ..	N. Forty-sixth avenue ..	2,690	6
†Crystal	N. Fortieth avenue	N. Forty-second ave ..	1,298	6
†W. Division	Hamlin avenue	Grand avenue	905	12
W. Division	Christiana avenue	Eastward	720	12
†W. Division	N. Fortieth avenue	N. Forty-sixth avenue ..	3,984	12
†Eighteenth	Western avenue	38 feet W. of Campbell avenue.	648	6
†Erie	N. Fiftieth avenue	233 ft. E. of N. Fiftieth avenue.	308	6
†Evergreen	Kedzie avenue	Homan avenue	1,359	6
*Fall	Warren avenue	Madison	327	6
Filmore	S. Forty-first avenue ..	S. Forty-second ave..	686	6
†Fleetwood avenue	North avenue	195 ft. E. of Blanche ..	382	6
Flournoy	Lawndale avenue	Eastward	24	6
Flournoy	S. Forty-third avenue ..	Westward	285	6
†S. Fortieth place	W. Twenty-sixth	W. Thirty-first	2,641	6
†S. Fortieth place	W. Sixteenth	Southward	398	6
N. Fortieth place	Prince	Northward	289	6
S. Fortieth avenue	Ogden avenue	Twenty-second	275	8
†S. Fortieth avenue	Twenty-sixth	Twenty-seventh	592	8
†S. Forty-first avenue ..	Twenty-sixth	Thirtieth	2,010	6
S. Forty-first avenue ..	Sixteenth	Southward	379	6
†S. Forty-first avenue ..	Harvard	Lexington	669	6
†S. Forty-first avenue ..	Colorado avenue	Southward	180	6
S. Forty-first avenue ..	Crystal	Potomac	325	6
†S. Forty-first court	Colorado avenue	Southward	140	6
†S. Forty-first court	W. Twenty-sixth	W. Twenty-eighth	641	6
S. Forty-first court	W. Twenty-eighth	W. Twenty-ninth	676	6
†N. Forty-second court ..	Chicago avenue	Iowa	660	6
†N. Forty-second avenue ..	Chicago avenue	Augusta	1,360	8
*S. Forty-second avenue ..	Park avenue	Lake	311	8
S. Forty-second avenue ..	Crossing	Lake	67	8
*S. Forty-second avenue ..	Randolph	Northward	125	8
S. Forty-second avenue ..	Crossing	Randolph	160	8
*S. Forty-second avenue ..	Randolph	Washington boulevard ..	350	8

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
*S. Forty-second avenue...	Washington boulevard.	Madison	369	8
*S. Forty-second avenue...	Madison	Monroe	260	6
*S. Forty-second avenue...	Monroe	Wilcox avenue	259	6
*S. Forty-second avenue...	Wilcox avenue	Adams	260	6
*S. Forty-second avenue...	Adams	Jackson	259	6
S. Forty-second avenue...	Crossing	Jackson	66	6
*S. Forty-second avenue...	Jackson	Gladys avenue	264	6
S. Forty-second avenue...	Crossing	Gladys avenue	70	6
*S. Forty-second avenue...	Gladys avenue	Van Buren	266	6
*S. Forty-second avenue...	Van Buren	Congress	330	6
S. Forty-second avenue...	Crossing	Congress	69	6
*S. Forty-second avenue...	Congress	Harrison	264	6
S. Forty-second avenue...	Crossing	Harrison	33	6
†S. Forty-second avenue...	Sixteenth	Eighteenth	646	6
S. Forty-second avenue...	Crossing	Twenty-second	157	6
†S. Forty-second avenue...	Twenty-ninth	Thirty-first	1,288	6
S. Forty-third avenue...	Crossing	Gladys avenue	44	6
†N. Forty-third court...	Chicago avenue	Iowa	660	6
†N. Forty-third avenue...	Chicago avenue	Augusta	1,368	6
†N. Forty-third avenue...	Augusta	Division	1,304	6
†N. Forty-third avenue...	Hirsch	North avenue	1,225	6
S. Forty-third avenue...	Crossing	Congress	28	6
S. Forty-third avenue...	Crossing	Twenty-second	26	6
†S. Forty-fourth court...	Fifteenth	Sixteenth	639	6
†N. Forty-fourth avenue...	Chicago avenue	Augusta	1,374	8
S. Forty-fourth avenue...	Crossing	Congress	48	8
S. Forty-fourth avenue...	Crossing	Gladys avenue	26	8
S. Forty-fifth avenue...	Crossing	Gladys avenue	70	6
S. Forty-fifth avenue...	Crossing	Congress	24	6
S. Forty-fifth court...	Crossing	Van Buren	51	6
S. Forty-fifth court...	Crossing	Congress	44	6
S. Forty-fifth court...	Crossing	Gladys avenue	70	6
S. Forty-sixth avenue...	Crossing	Adams	118	6
N. Forty-eighth avenue...	Superior	Chicago avenue	327	8
N. Fifty-first court...	Chicago avenue	Southward	1,046	6
*Francisco	Van Buren	Congress	320	6
*Gladys avenue	S. Forty-second ave...	S. Forty-third avenue.	664	6
*Gladys avenue	S. Forty-fifth avenue.	S. Forty-fifth court...	456	6
Gladys avenue	Crossing	S. Forty-second ave...	41	6
Gladys avenue	Crossing	S. Fortieth avenue...	37	6
†Hadden avenue	N. Forty-second ave...	N. Forty-sixth avenue.	2,624	6
†Hamlin avenue	Potomac avenue	Hirsch	688	8
†Hamlin avenue	Prince street	Frederick street	660	8
Hamlin avenue	Chicago avenue	Northward	290	8
Harding avenue	Dorr place	Southward	325	6
*Harding avenue	Twelfth	Fourteenth	1,288	6
†Harrison	S. Forty-third avenue..	S. Forty-fourth avenue	590	8
Harrison	Crossing	S. Forty-second avenue	48	8
Harvard	Crossing	Lawndale avenue	6	8
Harvard	Crossing	S. Forty-second avenue	33	6
†Harvard	S. Fortieth avenue...	S. Forty-first avenue...	640	6
Hawley avenue	Crossing	Twenty-second	25	6
†Hirsch	Kedzie avenue	Westward	198	8
Homan avenue	Crossing	Flournoy	72	8
†Huron	Sawyer avenue	Homan avenue	1,029	6

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
†Huron.....	Trumbull avenue.....	St. Louis avenue.....	291	6
Indiana.....	Crossing.....	N. Fortieth avenue.....	31	6
†Iowa.....	N. Forty-second ave.....	N. Forty-fourth avenue.....	1,344	6
Jackson.....	Crossing.....	Hamlin avenue.....	40	6
Jackson.....	Crossing.....	S. Fortieth avenue.....	18	6
Jefferson.....	Van Buren.....	Harrison.....	897	8
Kellogg avenue.....	Crossing.....	Twenty-second.....	29	6
†Lawndale avenue.....	Augusta.....	Division.....	1,348	6
†Lawndale avenue.....	Harrison.....	Taylor.....	1,658	6
†Lawndale avenue.....	Indiana.....	Ohio.....	615	6
†Le Moyne avenue.....	Kedzie avenue.....	Spaulding avenue.....	621	6
Lexington.....	Connecting.....	Lawndale avenue.....	26	6
Lexington.....	Crossing.....	S. Forty-first avenue.....	30	6
†Lexington.....	Kedzie avenue.....	Central Park avenue.....	2,585	6
†Lydia.....	Union.....	Halsted.....	413	6
†Millard avenue.....	Douglas Park blvd.....	Sixteenth.....	1,244	6
Milwaukee avenue.....	Crossing.....	Wood.....	9	8
Milwaukee avenue.....	Crossing.....	Lincoln.....	2	6
Milwaukee avenue.....	Crossing.....	Evergreen avenue.....	11	6
Milwaukee avenue.....	Crossing.....	Fontenoy.....	7	6
Milwaukee avenue.....	Wood.....	Robey.....	2,184	12
†Monticello avenue.....	North avenue.....	294 feet N. of Le Moyne.....	283	6
Monticello avenue.....	Prince street.....	Northward.....	312	6
Monroe.....	S. Fortieth avenue.....	Westward.....	37	6
†Moore.....	Robey.....	Lincoln.....	617	6
Polk.....	Crossing.....	Lawndale avenue.....	24	6
Potomac avenue.....	N. Forty-first avenue.....	N. Forty-second ave.....	643	6
Randolph, N. S.....	Crossing.....	S. Forty-second ave.....	70	6
Randolph, S. S.....	Crossing.....	S. Forty-second ave.....	70	6
Ridgeway avenue.....	Chicago avenue.....	Huron.....	670	6
Robey.....	Connecting.....	Milwaukee avenue.....	8	8
†Sawyer avenue.....	Ohio.....	Huron.....	629	6
†Sawyer avenue.....	292 ft. N. of Huron.....	Chicago avenue.....	295	6
†Sawyer avenue.....	Kinzie.....	Central Park blvd.....	519	6
†Sixteenth.....	S. Forty-fourth court.....	S. Forty-fourth avenue.....	333	8
Sixteenth.....	S. Fortieth avenue.....	S. Fortieth court.....	361	8
Spaulding avenue.....	W. Twenty-sixth.....	W. Twenty-seventh.....	671	8
†Spaulding avenue.....	W. Twenty-seventh.....	W. Thirtieth.....	1,282	8
Spaulding avenue.....	Crossing.....	Flournoy.....	72	6
†Spaulding avenue.....	Grand avenue.....	Hirsch.....	2,528	6
†Springfield avenue.....	Sixteenth.....	Nineteenth.....	1,391	6
†Springfield avenue.....	Grand avenue.....	North avenue.....	1,267	8
*Springfield avenue.....	Twelfth.....	Fourteenth.....	1,281	6
St. Louis avenue.....	Crossing.....	Congress.....	74	6
St. Louis avenue.....	Crossing.....	Flournoy.....	75	8
*St. Louis avenue.....	Twenty-fourth.....	Twenty-sixth.....	1,566	8
†Taylor.....	Campbell avenue.....	Rockwell.....	750	6
Taylor.....	Connecting.....	Lawndale avenue.....	6	6
Taylor.....	451 ft. E. of S. Forty-second ave.....	Eastward.....	284	6
Taylor.....	S. Forty-second ave.....	Eastward.....	451	6
†Thomas.....	N. Forty-second ave.....	N. Forty-sixth avenue.....	2,624	6
Thomas.....	Crossing.....	Barclay.....	66	6
†Turner avenue.....	Twenty-fifth.....	Twenty-sixth.....	657	6
†Trumbull avenue.....	Central Park blvd.....	Governor's parkway.....	495	6
†Troy.....	375 ft. S. of Nineteenth.....	Twenty first.....	263	6

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Troy	Nineteenth	Southward	375	6
Trumbull avenue	Twenty-seventh	Twenty-ninth	1,347	8
*Twenty-second place	Oakley avenue	Western avenue	600	6
Twenty-second, N. S.	Connecting	S. Fortieth avenue	29	6
Twenty-second, S. S.	Connecting	S. Fortieth avenue	28	6
Twenty-third place	Oakley avenue	Hoyne avenue	1,336	6
Twenty-fourth	Crossing	St. Louis avenue	72	6
†Twenty-fifth	S. Fortieth avenue	S. Fortieth court	369	6
Twenty-fifth	S. Fortieth court	Westward	212	6
Twenty-fifth	Crossing	St. Louis avenue	72	6
†Twenty-sixth	S. Fortieth avenue	S. Forty-second ave	1,313	8
*Thirty-first	S. Forty-first court	Belt Line R. R.	2,885	8
Thirty-sixth	Crossing	Lincoln	48	6
Van Buren	Connecting	S. Fortieth avenue	85	6
†Van Buren	200 ft. E. of S. Forty-third ave	S. Forty-fifth court	2,059	6
Warren avenue	California avenue	Rockwell	1,262	6
Wilcox avenue	Connecting	S. Fortieth avenue	37	6
Wood	Connecting	Milwaukee avenue	5	8
Total			118,191	
Add Branch Pipe for Hydrants			1,200	4
Add Branch Pipe for Hydrants			1,884	6
Total feet of pipe laid in West Division			116,275	

*Laid by Deposit.

†Laid by Special Assessment.

HYDE PARK DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Alley E. of Grand boul...	185 ft. S. of Forty-ninth	Fiftieth	488	6
Alley N. of Fifty-second..	Drexel avenue	Westward	288	6
Avenue H.....	285 ft. N. of 106th.	107th	953	6
Avenue J.....	106th	148 ft. S. of 109th.	2,184	6
†Avenue L.....	Ninety-fifth	Ninety-seventh.	1,263	6
†Avenue L.....	Ninety-eighth.	100th	1,394	6
†Avenue L.....	101st	103d	1,421	6
†Avenue L.....	104th	105th	643	6
Bond avenue.....	Illinois avenue	Eighty-third place.	550	6
*Burnside avenue.....	Ninety-third	Calumet avenue.....	1,270	6
Calumet avenue.....	Crossing.....	Fifty-sixth	42	6
*Calumet avenue.....	Ninety-fifth	Burnside avenue	5,085	6
Champlain avenue.....	Ninety-fifth	Burnside avenue.....	675	6
†Colfax avenue.....	Seventy-ninth.	Eighty-first	1,302	8
Curtis avenue.....	257 ft. N. of 114th pl.	Northward	150	6
Drexel avenue.....	Connecting	Fifty-ninth	46	6
Drexel avenue.....	Connecting	Seventy-first	6	6
Edwards avenue.....	Connecting	Railroad avenue.....	30	6
Eighty-first place.....	Woodlawn avenue.	Westward	525	6
Eighty-fifth.....	Cottage Grove avenue.	Jackson avenue	334	8
†Eighty-ninth.....	Manistee avenue	Muskegon avenue	377	6
Ellis avenue.....	Connecting	Fifty-ninth	39	6
Ellis avenue.....	Connecting	Seventy-first	24	6
†Ellis avenue.....	Seventy-fourth	Seventy-fifth	656	6
†Escanaba avenue.....	Ninety-sixth	Ninety-seventh.	616	6
†Evans avenue.....	Forty-ninth	Fiftieth	668	6
Forty-ninth	Crossing.....	Kimbark avenue	66	6
Fiftieth.....	Indiana avenue.....	Prairie avenue	408	6
†Fiftieth.....	Grand boulevard	Eastward	209	6
†Fiftieth.....	Champlain avenue.....	Vincennes avenue	885	6
Fifty-third.....	Crossing.....	Indiana avenue.....	102	6
Fifty-fourth.....	Indiana avenue.....	Eastward	180	6
Fifty-sixth.....	Kimbark avenue.....	Monroe avenue.....	444	6
*Fifty-sixth.....	Wabash avenue	Indiana avenue.....	756	6
*Fifty-sixth.....	S. Park avenue.....	Prairie avenue.....	902	6
†Fifty-ninth.....	Cottage Grove avenue.	Rosalie court.	4,709	12
†Fifty-ninth.....	Stony Island avenue ..	Rosalie court.	643	12
Greenwood avenue.....	Seventy-third	S. Chicago avenue.	650	6
Hope avenue.....	Sixty-second	Southward	228	6
Indiana avenue.....	225 feet N. of 114th pl.	Northward	216	6
*Indiana avenue.....	116th	Southward	200	6
Ingleside avenue.....	Connecting	Fifty-ninth	42	6
Ingleside avenue.....	Connecting	Seventy-first	26	6
†Ingleside avenue.....	155 feet N. of Seventy-fourth..	P. Ft. W. & C. Ry...	218	6
Jackson avenue.....	Connecting	Fifty-ninth	46	6
Jackson avenue.....	Eighty-fifth	Eighty-sixth	641	6
†Jeffrey avenue.....	Seventieth.....	Seventy-first	668	8
†Jeffrey avenue.....	Seventy-fifth	Seventy-ninth.....	2,682	8
Junata avenue.....	Ninety-second place ..	Ninety-third	329	8
*Kimbark avenue.....	Forty-ninth	Fiftieth	624	6
Kimbarb avenue.....	Crossing.....	Forty-ninth	46	6
Kimbarb avenue.....	Connecting	Fifty-ninth	45	6
Lexington avenue.....	Connecting	Fifty-ninth	46	6
†Luella avenue.....	Seventy-fifth	Seventy-seventh.....	1,322	6
Madison avenue.....	Connecting	Fifty-ninth	42	6

HYDE PARK DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
McFarlane avenue	Ninety-second place	Ninety-third	338	8
†Michigan avenue	Seventy-first	Seventy-fifth	2,562	6
†Michigan avenue	Ninety-ninth	Ninety-ninth place	349	6
†Michigan avenue	Ninety-ninth place	100th place	599	6
Muskegon avenue	Eighty-second	Southward	328	6
†Muskegon avenue	103d	104th	703	8
Monroe avenue	Connecting	Fifty-ninth	45	6
Monroe avenue	Seventieth	Northward	913	6
Ninety-second place	Juniata avenue	Clark avenue	582	6
Ninety-second place	McFarlane avenue	Westward	417	6
*Ninety-third	C. W. I. R. R.	S. Park avenue	1,349	8
*Ninety-fifth	S. Park avenue	Indiana avenue	1,254	8
Ninety-ninth	Connecting	Michigan avenue	50	12
Nutt avenue	Seventy-fifth	S. Chicago avenue	548	6
103d	Avenue C	Avenue M	2,658	8
†103d	Muskegon avenue	Notre Dame avenue	552	8
104th	Connecting	Muskegon avenue	39	8
106th	Ewing avenue	Avenue H	661	6
†109th	Calhoun avenue	Bensley avenue	310	8
†Prairie avenue	Sixty-first	Sixty-third	1,329	6
Prairie avenue	Crossing	Fifty sixth	72	6
Prairie avenue	Crossing	Sixtieth	80	6
Railroad avenue	Seventy-eighth	Edwards avenue	218	6
Rhodes avenue	Seventy-second	Southward	474	6
Rosalie court	Connecting	Fifty-ninth	26	6
Ross avenue	580 ft. E. of Indiana avenue	Eastward	351	6
†Saginaw avenue	Seventy-ninth	Eighty-first	1,302	6
†Sixty-first	S. Park avenue	State	2,640	8
Sixty-second	Lexington avenue	Greenwood avenue	446	6
†Sixty-third place	Jackson avenue	Eastward	295	6
Sixty-fourth	Crossing	S. Park avenue	72	6
Sixty-fourth	Crossing	Champlain avenue	68	6
Sixty-fourth	Crossing	Evans avenue	72	6
Sixty-fourth	Crossing	Vernon avenue	72	6
Sixty-fifth	Crossing	Champlain avenue	68	6
Sixty-fifth	Crossing	Evans avenue	72	6
Sixty-fifth	Crossing	S. Park avenue	72	6
Sixty fifth	Crossing	Vernon avenue	72	6
Sixty-sixth	Crossing	Champlain avenue	68	6
Sixty-sixth	Crossing	Evans avenue	72	6
Sixty-sixth	Crossing	S. Park avenue	72	6
Sixty-sixth	Crossing	Vernon avenue	72	6
Sixty-eighth	Crossing	Madison avenue	84	6
Sixty-eighth	Connecting	State	33	6
Sixty-eighth	Crossing	Wabash avenue	100	6
Sixty-ninth	S. Park avenue	Calumet avenue	443	6
Seventieth	Connecting	Monroe avenue	32	6
Seventieth	Crossing	Vernon avenue	72	6
Seventieth	Crossing	Wabash avenue	100	6
†Seventy-first place	Woodlawn avenue	I. C. R. R.	421	6
Seventy-first	Drexel avenue	Dobson avenue	1,006	6
Seventy-first	Cottage Grove avenue	Eastward	390	6
Seventy-second	Crossing	Vernon avenue	72	6
Seventy-third	Woodlawn avenue	Eastward	241	6
†Seventy-fourth	Ellis avenue	Drexel avenue	664	6

HYDE PARK DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Seventy-fourth	Crossing	Woodlawn avenue....	56	6
Seventy-fourth	Connecting	State	33	6
Seventy-fourth	Crossing	Nutt avenue	72	6
Seventy-fourth	Crossing	Brooks avenue	72	6
Seventy-fourth	Crossing	Madison avenue....	74	6
Seventy-fourth	Crossing	Adams avenue	72	6
Seventy-fifth	Cottage Grove avenue.	Drexel avenue	693	6
Seventy-sixth place...	Railroad avenue....	Coles avenue....	469	6
Seventy-eighth place	Railroad avenue....	Coles avenue....	473	6
Seventy-eighth	Reynolds avenue....	Railroad avenue....	274	6
†Seventy-ninth	Colfax avenue....	Marquette avenue...	670	12
*S. Park avenue	Ninety-third	Burnside avenue...	489	8
S. Park avenue	Crossing	Sixty-third	76	8
*S. Park avenue	Sixty-first	Sixty-third	1,262	8
State	Crossing	Seventy-fifth	84	8
†Vernon avenue	Sixty-third	Sixty-sixth	2,043	6
Vincennes avenue	Crossing	Sixty-seventh	56	6
Washington avenue...	Connecting	Fifty-ninth	36	6
†Woodlawn avenue	Seventy-fourth	S. Chicago avenue....	600	6
Total			68,957	
Add Branch Pipe for Hydrants			720	4
Add Branch Pipe for Hydrants			948	6
Total feet of pipe laid in Hyde Park District.....			70,625	

*Laid by Deposit.

†Laid by Special Assessment.

LAKE VIEW DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Alley E. of E. Ravenswood Park...	Cosgrove avenue	Southward	290	6
†Ashland avenue	75 ft. N. of Winona ..	Foster avenue	246	6
†Argyle	Evanston avenue	575 feet E. of Clark ..	1,635	8
†Balmoral avenue	Southport avenue	Clark	941	8
Berteau avenue	W. Ravenswood Park ..	Eastward	256	8
*Berwyn avenue	Oakley avenue	Irving avenue	3 1	6
Bradley place	Connecting	Robey	43	6
*Bradley place	Robey	Hoyne	606	6
*Castlewood terrace	Sheridan road	Eastward	1,100	6
Center	Connecting	Southport avenue	66	6
Commercial avenue	Paulina	Wrightwood avenue	1,016	6
*Commonwealth avenue	Surf	Diversey avenue	514	6
Cornelia	W. Ravenswood Park ..	Eastward	136	6
*Cornelia	Sheffield avenue	Wilton avenue	305	6
Fletcher	Racine avenue	Perry	2,007	6
Foster avenue	Connecting	Western avenue	41	6
Foster avenue	Connecting	Robey	12	6
Gordon terrace	550 feet E. of Halsted ..	Eastward	72	6
*Grace	Hoyne avenue	Westward	165	8
*Grace	Hamilton avenue	Eastward	165	8
Grace	W. Ravenswood Park ..	E. Ravenswood Park ..	135	6
*Grace	Hermitage avenue	Westward	316	6
†Irving Park avenue	Halsted	Eastward	874	6
Irving Park avenue	Crossing	Irving avenue	67	8
Irving Park avenue	Crossing	Seeley avenue	68	8
Irving Park avenue	Crossing	Hoyne avenue	68	8
Irving Park avenue	Crossing	Leavitt	77	8
Irving Park avenue	Crossing	Oakley avenue	66	8
Irving Park avenue, N. S. ..	Connecting	Western avenue	37	8
Irving Park avenue, S. S. ..	Connecting	Western avenue	37	8
Irving Park avenue	Crossing	Hamilton avenue	68	8
Irving avenue	Connecting	Irving Park avenue ..	27	6
*Junior terrace	Halsted	Hazel	629	6
*Kenmore avenue	Ainslie avenue	Southward	595	6
*Kenmore avenue	Lawrence avenue	Evanston avenue	2,074	6
Leland avenue	Paulina	Commercial avenue ..	438	6
Leland avenue	Palmer avenue	Wolcott avenue	416	6
Leavitt	Cosgrove avenue	Southward	210	6
Leavitt	Connecting	Irving Park avenue ..	55	8
†Linden avenue	Lawrence avenue	Argyle	1,315	6
Lyman avenue	Montrose boulevard ..	Northward	248	6
†Mara	Addison	Nellie	617	6
Marshfield avenue	Roscoe	School	615	6
Nelson	Ashland avenue	Westward	450	6
Noble avenue	E. Ravenswood Park ..	Eastward	240	6
Oakley avenue	Connecting	Irving Park avenue ..	24	6
Otto	Ashland avenue	Southport avenue	1,349	6
Patterson	193 ft. W of Lincoln avenue ..	Robey	923	6
Patterson	Lincoln avenue	Westward	193	6
Perry	Noble avenue	Northward	230	6
Perry	Belmont avenue	Fletcher	350	6
†Pine Grove avenue	180 ft. N. of Byron ..	Irving Park avenue ..	433	6
E. Ravenswood Park	Addison	Waveland avenue	686	6
†Robey	Winnemac avenue	Foster avenue	1,010	6
*Robey	Turner avenue	Northward	240	8

LAKE VIEW DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Robey.....	240 ft. N. of Turner avenue...	Grace.....	98	8
Robey.....	Connecting.....	Waveland avenue.....	48	8
School.....	W. Ravenswood Park.	Eastward.....	160	6
*Seeley avenue.....	Addison.....	Northward.....	517	6
†Sheffield avenue.....	Bryn Mawr avenue.....	Foster avenue.....	2635	6
Southport avenue.....	Connecting.....	Balmoral Avenue.....	41	6
Southport avenue.....	Connecting.....	Center.....	47	6
State court.....	Briar place.....	Southward.....	231	6
*Surf.....	Lake View avenue.....	Commonwealth avenue.....	400	6
Waveland avenue.....	Alley W. of Lincoln..	Lincoln.....	89	6
*Waveland avenue.....	Robey.....	Alley W. of Lincoln..	845	6
Wellington.....	W. Ravenswood park..	Wood.....	250	6
Wellington.....	Lincoln avenue.....	Perry.....	606	6
Western avenue.....	N. Fifty-ninth.....	Washington.....	839	8
Wilson avenue.....	187 feet E. of Ashland avenue.	Perry.....	210	6
*Wilson avenue.....	Kenmore avenue.....	Sheridan road.....	390	6
Wilson avenue.....	Robey.....	Winchester avenue.....	403	6
Wilson avenue.....	Clark.....	Perry.....	290	6
*Winthrop avenue.....	Kenmore avenue.....	Lawrence avenue.....	1363	6
Total.....			84,059	
Add Branch Pipe for Hydrants.....			384	4
Add Branch Pipe for Hydrants.....			516	6
Total feet of pipe laid in Lake View District.....			84,959	

*Laid by Deposit.

†Laid by Special Assessment.

LAKE DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Aberdeen	Crossing	Forty-eighth	66	6
Aberdeen	Crossing	Fiftieth	42	6
†Aberdeen	Forty-eighth	Fiftieth	1,267	6
†Ada	Fifty-seventh	Southward	136	6
†Ada	73 ft. S. of Fifty-seventh	Fifty-ninth	1,195	6
Ada	Crossing	Sixty-seventh	34	6
Ada	Crossing	Sixty-third	70	6
Atlantic	Thirty-ninth	Root	1,698	6
†Archer avenue	Lawndale avenue	Hamlin avenue	849	8
Armour avenue	Fifty-eighth	Fifty-ninth	591	6
Carpenter	Crossing	Fiftieth	66	6
Carpenter	Crossing	Fifty-eighth	25	6
†Carpenter	Forty-eighth	Fiftieth	1,262	6
†Dreyer	265 ft. S. of Fifty-first.	118 ft. N. of Fifty-third	884	6
†Eighty-seventh	Throop	Winchester avenue ..	4,144	8
†Elizabeth	Alley S. of Garfield boulevard ..	Fifty-seventh	998	6
Elizabeth	Fiftieth	Fifty-first	632	6
Elizabeth	Crossing	Sixty-third	73	6
Elizabeth	Connecting	Sixty-seventh	30	6
†Forty-third	California avenue	Rockwell	1,293	8
†Forty-seventh	Kedzie avenue	Hamlin avenue	4,015	8
Forty-seventh	Connecting	Armour avenue	6	8
Forty-eighth	Crossing	Marshfield avenue	66	6
Forty-ninth	Crossing	Lafin	66	6
Forty-ninth	Crossing	Justine	66	6
*Forty-ninth	Oakley avenue	Eastward	325	6
Forty-ninth	Crossing	Marshfield avenue	66	6
Fiftieth	Crossing	Marshfield avenue	66	6
Fiftieth court	Hoyne avenue	Westward	707	6
Fifty-fourth court	Wright	Eastward	287	6
*Fifty-fifth	Crossing	Ashland avenue	60	4
*Fifty-fifth	Crossing	Center avenue	46	4
*Fifty-fifth	Crossing	Halsted	24	4
Fifty-sixth place	Wright	Eastward	591	6
Fifty-sixth place	Wright	Westward	575	6
Fifty-seventh court	Wentworth avenue ..	LaSalle	350	6
†Goodspeed	Fifty-ninth	Sixty-third	2,666	6
Green	Crossing	Sixty-ninth	33	6
Halsted	Thirty-ninth	200 feet N. of Root ..	1,190	8
†Hamlin avenue	Forty-seventh	Forty-ninth	1,290	8
Hermitage avenue	Sixty-second	Sixty-third	700	6
†Hoyne avenue	Forty-eighth	Forty-ninth	668	6
†Homan avenue	Fifty-first	Northward	648	6
Justine	Forty-ninth	Fiftieth	704	6
†Justine	Sixty-first	Sixty-third	1,348	6
Justine	Sixty-third	Southward	108	6
Lafin	Forty-ninth	Fiftieth	707	6
Lafin	Connecting	Sixty-third	6	6
Lafin	265 feet N. of Sixty-third ..	Northward	264	6
†Lawndale avenue	Forty-seventh	Forty-ninth	1,291	6
Loomis	Connecting	Sixty third	12	6
Loomis	Sixty-fourth	Sixty-fifth	695	6
Loomis	Sixty-fifth	Sixty-sixth	644	6
†May	Forty-eighth	Fiftieth	1,270	6
May	Crossing	Fiftieth	66	6

LAKE DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
May	Crossing	Forty-eighth	25	6
Marshfield avenue	Connecting	Sixty-first	24	6
Packers avenue	1071 ft. N. of Exchange ave ..	Eastward	68	12
†Paulina	Fifty-second	Fifty-fourth	1,404	6
†Paulina	Fifty-ninth	Sixty-third	2,707	6
Peoria	Crossing	Sixty-ninth	29	6
†Ridgeway avenue	Forty-seventh	Forty-ninth	1,217	6
†Seeley avenue	Forty-eighth	Forty-ninth	630	6
*Sixty-first	Marshfield avenue	Hermitage avenue	625	6
Sixty-second	Crossing	May	66	6
†Sixty-third	Ashland avenue	Lafin	757	12
†Sixty-third	Elizabeth	Bishop	1,840	12
Sixty-third	Connecting	Goodspeed	12	12
†Sixty-seventh	Green	Peoria	339	6
†Sixty-seventh	Halsted	Green	308	6
†Sixty-seventh	Morgan	May	1,048	6
Sixty-seventh	Connecting	May	28	6
†Sixty-seventh	Center avenue	Loomis	1,282	6
†Sixty-eighth	La Fayette	Perry avenue	435	6
Sixty-ninth	Loomis	Ada	386	6
Sixty-ninth	Crossing	State	68	6
Seventieth place	Connecting	State	72	6
Seventieth	Crossing	State	104	6
Seventy-first	Crossing	State	102	8
Seventy-third	Crossing	State	96	8
Seventy-fourth	Crossing	State	68	6
†Talmon avenue	Forty-third	Forty-fourth	612	6
†Throop	Alley S. of Fifty-fifth ..	264 ft. N. of Fifty-ninth	2,042	6
Throop	Crossing	Sixty-third	72	6
Throop	Connecting	Sixty-seventh	32	6
Transit avenue	Packers avenue	Westward	503	8
†Vail	Sixty-third	Sixty-seventh	2,586	6
†Washtenaw avenue	Forty-third	Forty-fourth	612	6
Wright	Forty-fourth	Forty-fourth place	308	6
†Wood	Fifty-ninth	Sixty-second	2,019	8
†Wood	Sixty-second	Sixty-third	682	8
Total			59,639	
Add Branch Pipe for Hydrants			480	4
Add Branch Pipe for Hydrants			1,092	6
Total feet of pipe laid in Lake District			61,211	

*Laid by Deposit.

†Laid by Special Assessment.

JEFFERSON DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
*Alley N. of Irving Pk. ave.	Bernard avenue	Eberley avenue.....	337	6
*Alley N. of Irving Pk. ave.	Bernard avenue	Kimball avenue.....	330	6
*Alley N. of Irving Pk. ave.	Eberley avenue	Central Park avenue..	664	6
†Addison	402 feet W. of N. Fortieth ave.	N. Forty-first court...	451	12
Addison	317 feet W. of N. Fortieth ave.	Westward	96	12
Albany avenue	Grace	Northward.....	1,106	6
Albany avenue	North crossing	Irving Park avenue...	25	6
Albany avenue	South crossing	Irving Park avenue...	25	6
Allen avenue.....	Crossing.....	Irving Park avenue...	43	8
*Avers avenue.....	Irving Park avenue...	Montrose avenue.....	2,604	6
*Ballou	Wrightwood avenue..	Marianna.....	709	6
Belden avenue	Crossing.....	N. Forty-second court.	66	6
†Belden avenue	N. Forty-eighth ave..	N. Forty-ninth avenue.	609	6
*Belleplaine avenue.....	Monticello avenue...	Ridgeway avenue....	665	6
*Berteau avenue	Springfield avenue...	Harding avenue.....	338	6
Bernard	Belmont avenue	Center avenue	588	6
*Bernard	Belleplaine avenue...	First alley N. of Irving Pk. ave.	520	6
Bernard	Connecting	Montrose avenue.....	10	6
Bernard	North crossing	Irving Park avenue...	24	6
Bernard	South crossing	Irving Park avenue...	24	6
Byron	Crossing	N. Forty-second ave..	84	6
California avenue.....	South crossing	Irving Park avenue...	27	8
California avenue.....	Crossing.....	Irving Park avenue...	104	8
Campbell avenue.....	North crossing	Irving Park avenue...	37	6
Campbell avenue.....	South crossing	Irving Park avenue...	25	6
†Catalpa court	Fullerton avenue.....	Humboldt boulevard..	840	6
†Central Park avenue	Diversey avenue.....	Milwaukee avenue...	1,112	8
Central Park avenue	Crossing.....	Irving Park avenue...	124	8
Center avenue.....	Crossing.....	Kedzie avenue	77	6
Central Park avenue	Connecting	Montrose avenue.....	12	8
Charles avenue	North crossing	Irving Park avenue...	24	6
Christiana avenue	Irving Park avenue...	Southward	25	6
Christiana avenue	North crossing	Irving Park avenue...	25	6
*Choctaw avenue.....	Selwyn avenue	Northwest	143	6
Choctaw avenue.....	143 ft. N. W. of Selwyn avenue	Maple avenue.....	322	6
*Conneaut avenue.....	Hoffman avenue	California avenue.....	1,246	6
Conneaut avenue	Crossing.....	Kedzie avenue	47	6
†Costello avenue	N. Fortieth avenue...	C., M. & St. P. Ry....	276	6
Costello avenue	Crossing.....	N. Forty-fourth avenue	57	6
Costello avenue	Monticello avenue...	Central Park avenue..	669	6
Cortland	Ridgeway avenue	Hamlin avenue	310	8
Dakin	N. Forty-ninth avenue	N. Fifty-second avenue	1,959	6
Dickens avenue	Crossing.....	N. Forty-fourth avenue	88	6
Diversey avenue	Blow-off	Western avenue	17	12
Diversey avenue	Crossing.....	Western avenue	31	16
Dover avenue	North crossing	Irving Park avenue...	22	6
Drake avenue	South crossing	Irving Park avenue...	25	6
Drake avenue	North crossing	Irving Park avenue...	24	6
Drake avenue	Melrose	Henderson avenue...	714	6
*Eberley avenue.....	Alley N. of Irving Park avenue.	Northward.....	310	6
Eberley avenue	North crossing	Irving Park avenue...	24	6
Eberley avenue	South crossing	Irving Park avenue...	24	6
†Eddy	N. Fortieth avenue...	Avondale avenue.....	2,414	6
Elston avenue.....	South crossing	Irving Park avenue...	37	6
Elston avenue.....	North crossing	Irving Park avenue...	47	8

JEFFERSON DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
*Elston avenue	Irving Park avenue	N. Fortieth avenue	3,088	8
†Elston avenue	75 ft. N. of Montrose avenue	Forest Glen avenue	9,089	8
Everett	N. Forty-first avenue	Westward	133	8
Evergreen avenue	Humboldt boulevard	Southeast	109	6
Faraday	440 ft. E. of Irving	Northeast	65	6
†N. Fortieth court	North avenue	Wabansia avenue	612	6
†N. Fortieth avenue	Berteau avenue	Montrose avenue	1,342	6
†N. Fortieth avenue	99 ft. S. of Cortland	75 feet S. of Bloomingdale road	656	12
†N. Fortieth avenue	Grace	Byron	637	6
N. Fortieth avenue	Connecting	Costello avenue	48	6
†N. Fortieth avenue	Irving Park avenue	Centre	1,239	6
N. Fortieth avenue	Addison	Milton place	337	6
N. Fortieth avenue	Addison	Eddy	334	6
†N. Forty-first avenue	Bloomingdale road	Armitage avenue	1,209	6
†N. Forty-first avenue	Byron	Irving Park avenue	646	6
N. Forty-first avenue	South crossing	Irving Park avenue	18	6
N. Forty-first avenue	North crossing	Irving Park avenue	24	6
†N. Forty-first court	Dickens avenue	Armitage avenue	594	6
*N. Forty-second avenue	Dickens avenue	Northward	300	8
*N. Forty-second avenue	300 feet N. of Dickens avenue	Humboldt avenue	298	8
N. Forty-third court	289 feet S. of Byron	Southward	27	6
N. Forty-third court	Cullom	Northward	196	8
N. Forty-third court	184 feet N. of Irving Park ave.	Northward	28	6
†N. Forty-fourth avenue	Cortland	Armitage avenue	591	8
N. Forty-fourth avenue	Crossing	Irving Park avenue	110	8
†N. Forty-fourth court	Cortland avenue	Armitage avenue	642	6
*N. Forty-fifth avenue	Armitage avenue	Humboldt avenue	1,283	6
†N. Forty-fifth avenue	Cortland avenue	Armitage avenue	642	6
†N. Forty-fifth avenue	310 feet N. of Leland avenue	Lawrence avenue	275	6
N. Forty-seventh avenue	W. Cuyler	Prescott	381	6
N. Forty-seventh avenue	South crossing	Irving Park avenue	26	6
*N. Forty-seventh avenue	Irving Park avenue	Northward	300	6
N. Forty-seventh avenue	North crossing	Irving Park avenue	24	6
†N. Forty-seventh court	Wilson avenue	Sunnyside avenue	652	6
N. Forty-eighth avenue	Connecting	Milwaukee avenue	23	12
†N. Forty-eighth court	Cortland avenue	Armitage avenue	647	6
†N. Forty-eighth court	Armitage avenue	Dickens avenue	585	6
*Forest avenue	Irving	Northward	467	6
N. Fifty-fourth avenue	Leland avenue	Auburn avenue	374	6
†N. Fifty-fourth court	Fullerton avenue	Wrightwood avenue	1,320	6
†N. Fifty-fifth avenue	Fullerton avenue	Wrightwood avenue	1,329	6
†N. Fifty-sixth avenue	Armitage avenue	Wrightwood avenue	3,919	8
†N. Fifty-sixth court	Armitage avenue	Fullerton avenue	2,529	6
N. Fifty-sixth court	Connecting	Fullerton avenue	42	6
†N. Fifty-seventh avenue	Armitage avenue	Fullerton avenue	2,534	6
N. Fifty-seventh avenue	Connecting	Fullerton avenue	42	6
†N. Fifty-seventh court	Armitage avenue	Fullerton avenue	2,527	6
N. Fifty-seventh court	Connecting	Fullerton avenue	42	6
†N. Fifty-eighth avenue	Fullerton avenue	Grand avenue	1,492	8
N. Fifty-eighth avenue	Connecting	Fullerton avenue	30	8
N. Fifty-eighth court	Connecting	Fullerton avenue	40	6
†N. Fifty-eighth court	Grand avenue	Fullerton avenue	1,400	6
†N. Fifty-ninth avenue	Grand avenue	Fullerton avenue	1,312	6
N. Fifty-ninth avenue	Connecting	Fullerton avenue	42	6
†N. Fifty-ninth court	Grand avenue	Fullerton avenue	1,222	6

JEFFERSON DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Francisco	South Crossing	Irving Park avenue ...	25	6
Francisco	North Crossing	Irving Park avenue ...	25	6
†Fullerton avenue	N. Fifty-fourth avenue	N. Fifty-sixth avenue ..	1,302	8
Fullerton avenue	Connecting	Sawyer avenue	46	12
†Fullerton avenue	N. Fifty-sixth avenue	N. Sixtieth avenue	2,613	8
George	Crossing	Kedzie avenue	79	6
Grace	Albany avenue	Troy	350	6
†Grace	Kedzie avenue	Troy	296	6
Grace	Connecting	Sacramento avenue	23	6
Grand avenue	Connecting	Berteau avenue	29	8
*Greenwood avenue	Linden avenue	Myrtle avenue	625	8
Hamlin avenue	Irving Park avenue	Southward	89	8
*Hamlin avenue	Irving Park avenue	Berteau avenue	1,265	8
Hamlin avenue	Connecting	Montrose avenue	15	8
Hamlin avenue	Crossing	Schubert avenue	47	8
Hancock avenue	Crossing	Wrightwood avenue	42	6
*Hamlin avenue	Montrose avenue	Berteau avenue	1,316	8
*Hancock avenue	Marianna avenue	Southward	520	6
*Harding avenue	Montrose avenue	Berteau avenue	1,304	6
†Harding avenue	425 feet N. of North avenue	Bloomington road	820	6
Homan avenue	210 feet S. of Berteau avenue	Southward	125	8
Homan avenue	330 feet S. of Center	Southward	120	8
Homan avenue	Crossing	Irving Park avenue	114	8
Homan avenue	Mentmore avenue	Southward	192	8
Homan avenue	Mentmore avenue	Northward	168	8
†Homan avenue	Costello avenue	Fullerton avenue	1,240	8
†Homan avenue	Fullerton avenue	Northward	476	6
*Humboldt avenue	Hamlin avenue	Central Park avenue ..	328	6
*Humboldt boulevard	Helen court	Diversey	1,658	6
Humboldt	North crossing	Irving Park avenue	25	6
Humboldt	South crossing	Irving Park avenue	25	6
*Irving	Selwyn avenue	Forest avenue	387	6
Irving Park avenue, S. S. ..	Crossing	Albany avenue	72	8
Irving Park avenue, N. S. ..	Crossing	Albany avenue	72	8
Irving Park avenue, S. S. ..	Crossing	Allen avenue	66	8
Irving Park avenue, N. S. ..	Allen avenue	Vernon avenue	477	8
Irving Park avenue, N. S. ..	Crossing	Bernard avenue	71	8
Irving Park avenue, S. S. ..	Crossing	Bernard avenue	71	8
Irving Park avenue, N. S. ..	Crossing	California avenue	76	8
Irving Park avenue, S. S. ..	Crossing	California avenue	76	8
Irving Park avenue, S. S. ..	Crossing	Campbell avenue	68	8
*Irving Park avenue, N. S. ..	Central Park avenue ..	Springfield avenue	1,963	6
Irving Park avenue, S. S. ..	Crossing	Central Park avenue ..	75	8
Irving Park avenue, N. S. ..	Crossing	Central Park avenue ..	66	8
Irving Park avenue, N. S. ..	Crossing	Charles	70	8
Irving Park avenue, S. S. ..	Crossing	Christiana avenue	73	8
Irving Park avenue, N. S. ..	Crossing	Christiana avenue	70	8
Irving Park avenue, N. S. ..	Crossing	Dover avenue	70	8
Irving Park avenue, N. S. ..	Crossing	Drake avenue	70	8
Irving Park avenue, S. S. ..	Crossing	Drake avenue	71	8
Irving Park avenue, N. S. ..	Crossing	Eberley avenue	70	8
Irving Park avenue, S. S. ..	Crossing	Eberley avenue	71	8
Irving Park avenue, S. S. ..	Crossing	Elston avenue	120	8
Irving Park avenue, S. S. ..	Crossing	N. Fortieth avenue	191	8
Irving Park avenue, N. S. ..	Crossing	N. Forty-first court ...	89	8

JEFFERSON DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Irving Park avenue, S. S.	Crossing	N. Forty-first court ...	87	8
Irving Park avenue, N. S.	Crossing	N. Forty-first avenue ..	88	8
Irving Park avenue, S. S.	Crossing	N. Forty-first avenue ..	94	8
Irving Park avenue, N. S.	Crossing	N. Forty-second court ..	61	8
Irving Park avenue, S. S.	Crossing	N. Forty-second court ..	88	8
Irving Park avenue, N. S.	Crossing	N. Forty-third court ..	75	8
Irving Park avenue, S. S.	Crossing	N. Forty-third court ..	74	8
Irving Park avenue, N. S.	Crossing	N. Forty-third avenue ..	47	8
Irving Park avenue, S. S.	Crossing	N. Forty-third avenue ..	71	8
Irving Park avenue, S. S.	Crossing	N. Forty-fourth avenue ..	72	8
Irving Park avenue, N. S.	Crossing	N. Forty-fourth avenue ..	72	8
†Irving Park avenue, N. S.	N. Forty-fifth court ..	N. Forty-fifth avenue ..	146	8
†Irving Park avenue, S. S.	N. Forty-fifth court ..	N. Forty-fifth avenue ..	182	8
Irving Park avenue, N. S.	Crossing	N. Forty-seventh ave ..	70	8
Irving Park avenue, S. S.	Crossing	N. Forty-seventh ave ..	72	8
*Irving Park avenue, N. S.	N. Forty-seventh ave ..	N. Forty-eighth ave ..	888	8
Irving Park avenue, N. S.	Connecting	N. Forty-eighth ave ..	67	8
Irving Park avenue, S. S.	Crossing	Hamlin avenue	76	8
Irving Park avenue, S. S.	Crossing	Heine	69	8
Irving Park avenue, N. S.	Crossing	Heine	70	8
Irving Park avenue, S. S.	Crossing	Humboldt	71	8
Irving Park avenue, N. S.	Crossing	Humboldt	70	8
Irving Park avenue	Connecting	Milwaukee avenue	8	12
Irving Park avenue	Crossing Irving Park avenue ..	103 W. of N. Fortieth avenue ..	64	8
Irving Park avenue, S. S.	Crossing	Irving avenue	88	8
Irving Park avenue, N. S.	Crossing	Irving avenue	84	8
Irving Park avenue, N. S.	Crossing	Kedzie avenue	5	12
			76	8
Irving Park avenue, S. S.	Crossing	Kedzie avenue	6	12
			76	8
Irving Park avenue, S. S.	Crossing	Kimball avenue	78	8
Irving Park avenue, N. S.	Crossing	Kimball avenue	75	8
Irving Park avenue, S. S.	Crossing	Lawndale avenue	70	8
Irving Park avenue, S. S.	Connecting	Milwaukee avenue	6	12
			24	8
Irving Park avenue, N. S.	Crossing	Mozart	71	8
Irving Park avenue, S. S.	Crossing	Mozart	71	8
Irving Park avenue, S. S.	Crossing	Sacramento avenue	78	8
Irving Park avenue, N. S.	Crossing	Sacramento avenue	78	8
Irving Park avenue, N. S.	Crossing	Sheridan avenue	70	8
Irving Park avenue, S. S.	Crossing	Sheridan avenue	70	8
Irving Park avenue, S. S.	Crossing	Springfield avenue	70	8
Irving Park avenue, N. S.	Crossing	Springfield avenue	71	8
Irving Park avenue, S. S.	Crossing	Spaulding avenue	78	8
Irving Park avenue, N. S.	Crossing	Spaulding avenue	71	8
Irving Park avenue, N. S.	Crossing	Syracuse avenue	42	8
Irving Park avenue, N. S.	Crossing	Troy	70	8
Irving Park avenue, S. S.	Crossing	Troy	70	8
Irving Park avenue, S. S.	Crossing	Vernon avenue	76	8
Irving Park avenue, N. S.	Crossing	Whipple	69	8
Irving Park avenue, S. S.	Crossing	Whipple	69	8
Kedzie avenue	Crossing	Irving Park avenue ..	148	24
Kedzie avenue	Roscoe	School	684	8
†Laurel	Diversey	George	742	6
Lawndale avenue	South crossing	Irving Park avenue ..	22	6

JEFFERSON DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
*Lawndale avenue.....	Belleplaine avenue ...	Berteau avenue.....	627	6
*Lawndale avenue.....	Montrose avenue.....	Berteau avenue.....	1,336	6
Lawndale avenue.....	166 feet N. of Wabansia ave...	Northward.....	279	6
Leland avenue.....	N. Forty-fifth avenue ..	Eastward.....	324	6
McLean avenue.....	Crossing.....	N. Forty-fourth ave ..	57	6
*McLean avenue.....	Hamlin avenue.....	Eastward.....	140	6
Melrose.....	Drake avenue.....	Eastward.....	469	6
Milton place.....	Crawford avenue.....	Westward.....	651	6
Milwaukee avenue.....	Crossing.....	Irving Park avenue ..	124	12
Monticello avenue.....	375 ft. S. of Armitage avenue.	Southward.....	60	6
*Monticello avenue.....	Dunning.....	Northward.....	480	6
*Monticello avenue.....	Irving Park avenue ..	Berteau avenue.....	1,291	6
*Monticello avenue.....	Berteau avenue.....	Montrose avenue ..	1,336	6
†Montrose avenue.....	N. Fortieth avenue ..	Central Park avenue ..	2,724	6
Montrose avenue.....	Homan avenue.....	Bernard avenue.....	327	6
†Montrose avenue.....	Western avenue.....	Chicago river.....	1,576	6
Mozart.....	370 ft. N. of Diversey avenue..	Northward.....	180	6
Mozart.....	Irving Park avenue ..	Southward.....	25	6
Mozart.....	Irving Park avenue ..	Northward.....	25	6
Pensacola avenue.....	535 ft. W. of Campbell avenue.	Westward.....	77	4
Prescott.....	Crossing.....	N. Fortieth avenue ..	41	6
Prescott.....	Crossing.....	Irving avenue.....	83	6
Ridgeway avenue.....	Cortland.....	Northward.....	205	6
*Ridgeway avenue.....	Berteau avenue.....	Irving Park avenue ..	1,260	6
*Ridgeway avenue.....	Montrose avenue.....	Berteau avenue.....	1,339	6
Ridgeway avenue.....	Schubert avenue.....	Southward.....	346	6
Roscoe.....	Elston avenue.....	Whipple.....	233	8
Roscoe.....	Troy.....	Kedzie avenue.....	326	8
Sacramento avenue.....	Grace.....	Irving Park avenue ..	1,353	8
Sacramento avenue.....	Grace.....	Waveland avenue.....	615	8
Sacramento avenue.....	Waveland avenue.....	Southward.....	216	8
Sacramento avenue.....	Crossing.....	Irving Park avenue ..	112	8
†Sawyer avenue.....	Mentmore avenue.....	Fullerton avenue.....	754	6
†Selwyn avenue.....	Linden avenue.....	St. Charles avenue ..	1,596	6
Sheridan avenue.....	South crossing.....	Irving Park avenue ..	25	6
Sheridan avenue.....	North crossing.....	Irving Park avenue ..	25	6
Schubert avenue.....	Hamlin avenue.....	Ridgeway avenue.....	346	6
†N. Sixtieth avenue.....	Fullerton avenue.....	Grand avenue.....	1,193	8
Smalley court.....	Crossing.....	Wrightwood avenue ..	42	6
Spaulding avenue.....	Diversey.....	Franklin.....	654	6
Spaulding avenue.....	North crossing.....	Irving Park avenue ..	25	6
Spaulding avenue.....	South crossing.....	Irving Park avenue ..	25	6
*Springfield avenue.....	Belleplaine avenue ..	Berteau avenue.....	657	6
*Springfield avenue.....	Elston avenue.....	Montrose avenue.....	1,102	6
Springfield avenue.....	North crossing.....	Irving Park avenue ..	23	6
Springfield avenue.....	South crossing.....	Irving Park avenue ..	23	6
†Strong.....	N. Fiftieth avenue.....	N. Fifty-third avenue..	1,992	6
*Tripp avenue.....	Humboldt avenue.....	Belden avenue.....	706	6
Troy.....	Grace.....	Waveland avenue.....	645	6
†Troy.....	Grace.....	Irving Park avenue ..	1,266	6
Troy.....	North crossing.....	Irving Park avenue ..	25	6
Troy.....	South crossing.....	Irving Park avenue ..	25	6
Wellington.....	Crossing.....	Kedzie avenue.....	84	8
Western avenue.....	Blow-off.....	In tunnel shaft.....	118	8
Western avenue.....	Noble.....	Franklin.....	1,484	24

JEFFERSON DISTRICT—CONTINUED.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
Western avenue	Armitage avenue	Homer	388	24
*Wabansia avenue	Rockwell	Western avenue	918	8
Warner avenue	97 feet W. of N. Fortieth avenue	Westward	220	12
Whipple	Grace	Waveland avenue	640	6
Whipple	Grace	Irving Park avenue	1,284	6
Whipple	North crossing	Irving Park avenue	25	6
Whipple	South crossing	Irving Park avenue	25	6
Whipple	Crossing	Roscoe	41	6
†Wilson avenue	N. Forty-seventh ave .	N. Forty-seventh court	838	8
*Wrightwood avenue	Ballou	Central Park avenue ..	634	8
†Wrightwood avenue	N. Fifty-fourth avenue	N. Fifty-sixth avenue .	1,800	8
*Wrightwood avenue	Kimball avenue	Ballou	668	8
Total			181,148	
Add Branch Pipe for Hydrants			804	4
Add Branch Pipe for Hydrants			2,544	6
Total feet of pipe laid in Jefferson District			184,496	

*Laid by Deposit.

†Laid by Special Assessment.

CALUMET DISTRICT.

STREET	FROM	TO	Length of Pipe in feet	Diameter in inches
†Butler	100th	100th place	343	6
†Butler	118th	119th	634	6
†Emerald avenue	Eighty-ninth	Ninetieth	550	6
Emerald avenue	123d	Southward	169	6
Halsted	Ninetieth	Southward	90	8
†La Salle	Ninety-ninth	103d	2,627	6
102d	Prospect avenue	Westward	702	6
†104th place	Prospect avenue	Wood	1,322	6
110th place	State	Westward	283	6
Parnell avenue	Crossing	118th	45	6
*Vincennes avenue	331 ft. S. of Eighty-seventh ..	127 ft. S. of Eighty-eighth ..	467	12
Vincennes avenue	Eighty-seventh	Southward	390	12
†Walnut	Ninety-seventh	Ninety-ninth	1,289	6
†Winchester avenue	Eighty-seventh	Eighty-eighth	768	6
Total			9,679	4
Add Branch Pipe for Hydrants			168	
Add Branch Pipe for Hydrants			276	
Total feet of pipe laid in Jefferson District			10,123	

*Laid by Deposit.

†Laid by Special Assessment.

RECAPITULATION OF PIPE LAID DURING 1896, INCLUDING HYDRANT BRANCHES.

DIVISION.	DIAMETER OF PIPE IN INCHES.						Total length of Pipe in Feet.
	4-inch.	6-inch.	8-inch.	12-inch.	16-inch.	24-inch.	36-inch.
North		8,577	584				4,161
South		752					752
West	2,336	78,702	24,806	10,431			116,275
Hyde Park	720	48,769	17,064	6,072			70,625
Lake View	384	30,145	4,480				34,959
Lake	610	41,887	16,887	2,177			61,211
Jefferson	881	84,895	44,898	1,771	31	2,020	134,496
Calumet	168	9,008	90	857			10,123
Total in feet	5,099	295,435	108,709	21,308	31	2,020	432,602

TABLE SHOWING AMOUNT OF PIPE IN THE CITY OF CHICAGO,
AT THE CLOSE OF 1896.

Diameter of Pipe.	1896.	1896.			
	Amount in Use in Feet.	Amount Taken Up or Abandoned in Feet.	Amount Laid in Feet.	Grand Total in Feet in Use at the close of 1896.	Grand Total in Miles.
48	1,355	.....	.....	1,355	0 1 1 1 1
36	117,937	.....	.....	117,937	22 1 1 1 1
30	5,351	.....	.....	5,351	1 1 1 1 1
28	160	.....	.....	160	0 1 1 1 1
24	279,002	.....	2,020	281,022	53 1 1 1 1
20	7,931	.....	.....	7,931	1 1 1 1 1
18	1,000	.....	.....	1,000	0 1 1 1 1
16	235,064	.....	31	235,095	44 1 1 1 1
14	22,552	.....	.....	22,552	4 1 1 1 1
12	493,615	300	21,308	514,623	97 1 1 1 1
10	26,860	.....	.....	26,860	5 1 1 1 1
8	1,755,817	1,061	108,709	1,868,465	352 1 1 1 1
6	4,464,793	108	295,435	4,760,120	901 1 1 1 1
4	1,092,867	14,823	5,099	1,088,143	205 1 1 1 1
3	8,996	.....	.....	8,996	1 1 1 1 1
Total in feet.....	8,513,300	16,292	432,602	8,929,610	.....
Total in miles....	1,612 1 1 1 1	3 1 1 1 1	81 1 1 1 1	1,691 1 1 1 1	1,691 1 1 1 1

Amount of wooden pipe in use in Norwood Park, 16,618 feet of 4-inch and 325 feet of 6-inch, not included in above.

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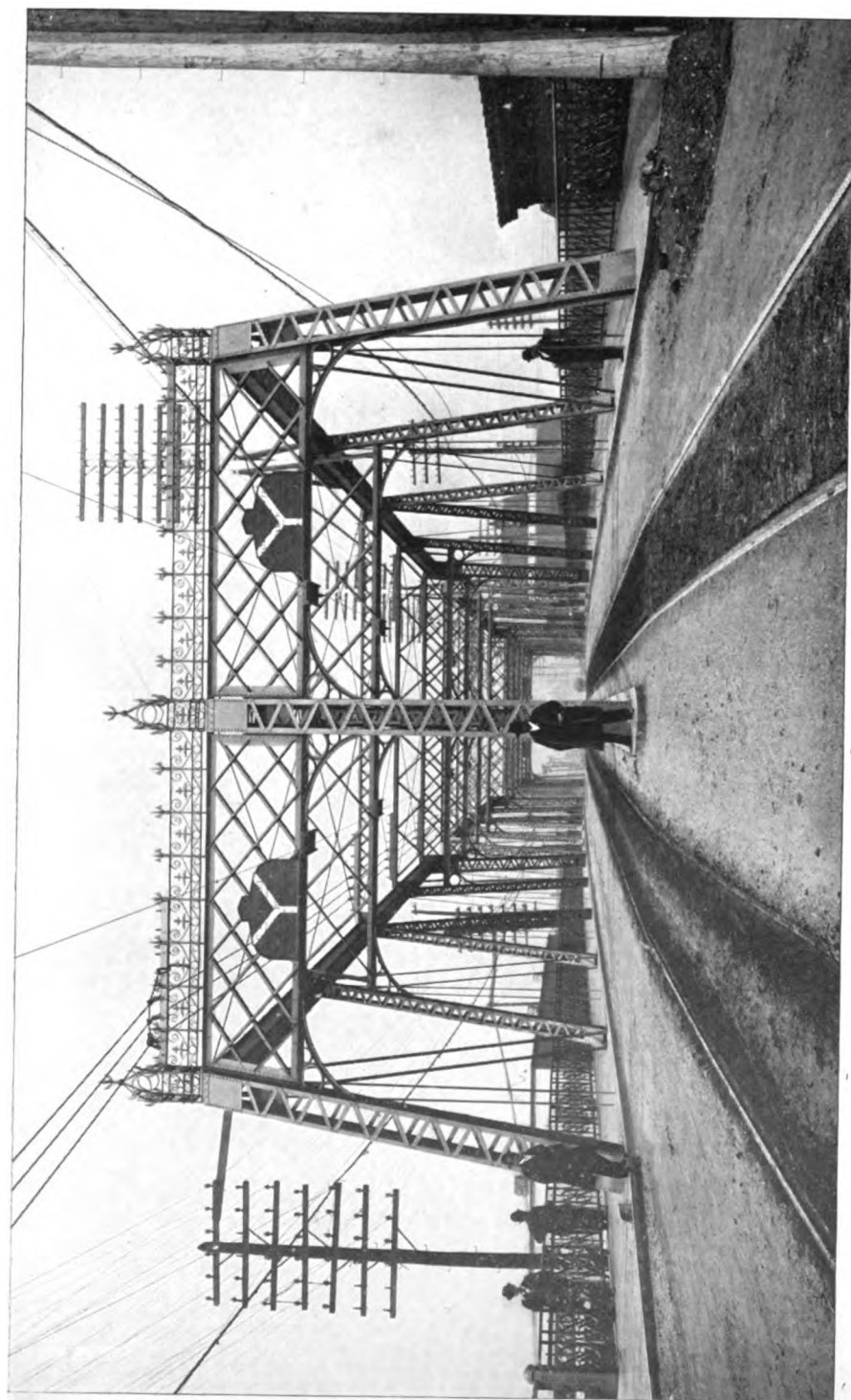
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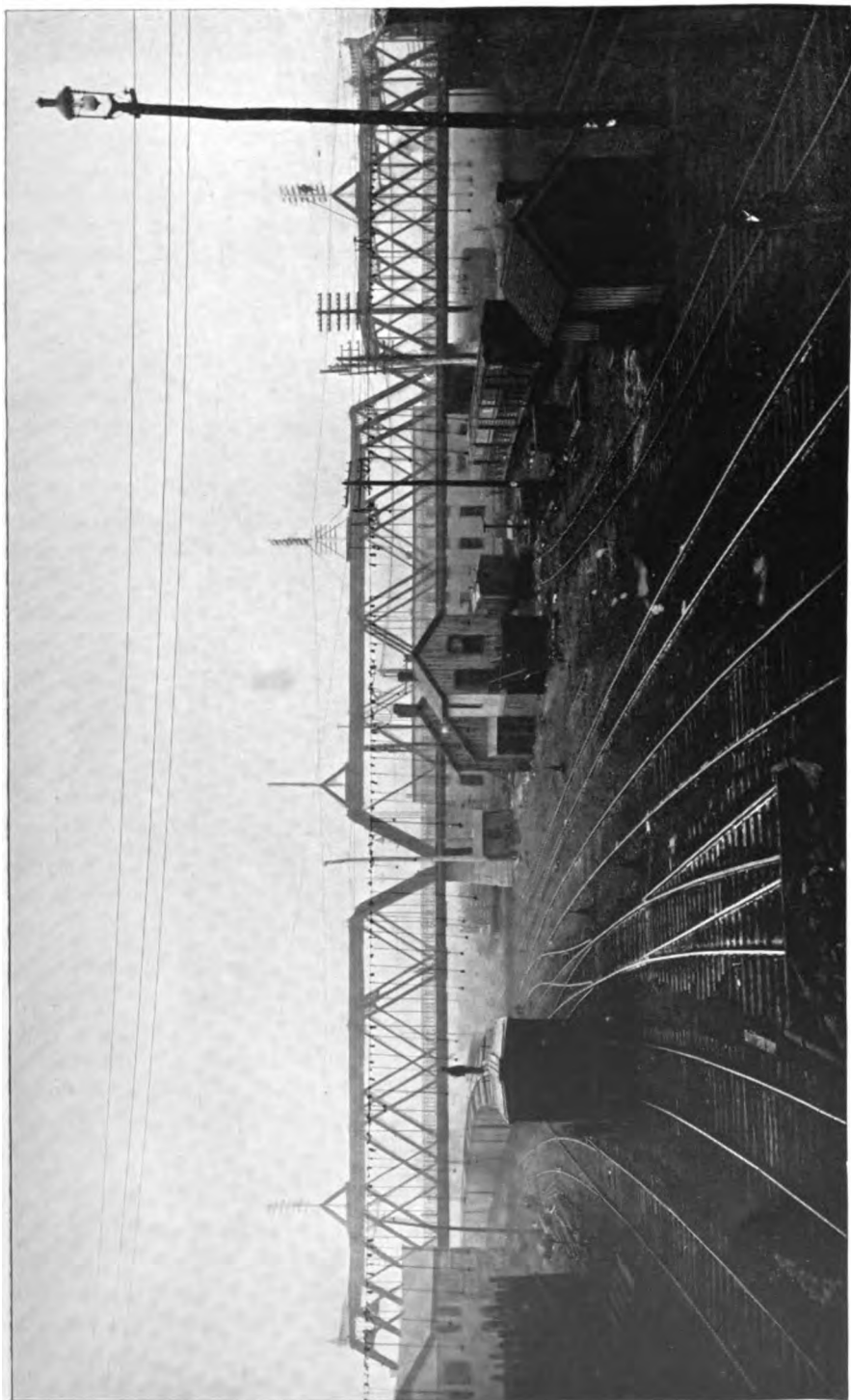
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SOUTH HALSTED STREET VIADUCT
OVER THE TRACKS OF THE UNION STOCK YARDS AND TRANSIT COMPANY)



**SOUTH HALSTED STREET VIADUCT
OVER THE TRACKS OF THE UNION STOCK YARDS AND TRANSIT COMPANY**

DIVISION OF BRIDGE AND VIADUCT CONSTRUCTION.

MR. A. G. RITER, Bridge Engineer, in charge.

DIVERSEY AVENUE BRIDGE.

This bridge, which was fully described in the 1895 report, was opened for traffic January 11, 1896—work having been commenced on the 10th of July, 1895. The total cost was paid by the City, \$34,345.10.

WELLS STREET BRIDGE.

Built in 1888, this is one of the City's most important bridges and during the year has been altered to a double deck structure by and entirely at the expense of the Northwestern Elevated Railroad Company. The work done comprised the placing of a new set of steel rollers, new plate girder drum, new center step and distributing girder and the removal of all of the web members in the seven center panels of all three trusses, and the substitution therefor of new and adequate web members of steel, while an upper deck of steel floor beams and stringers was put in to carry the ties and rails of the "L" road. The old roadway was partially replanked and newly paved, with seven and one-half inch cedar blocks. The old steam plant was removed and replaced by a strictly modern electrical plant.

The Company also built a new house for the bridge-tender.

The bridge was closed to traffic on July 5th and reopened September 20, 1896, during which period foot bridges of a unique and successful design were maintained—all work having been done by Messrs. Shailer & Schniglau, of this City.

WELLS STREET VIADUCT.

To act in connection with Wells street bridge, this Division has prepared plans and specifications for a new double roadway, double deck viaduct span, to take the place of the present pony truss span at Wells street depot. The entire cost will be borne by the Northwestern Elevated Railroad Company and the Chicago & Northwestern Railway Company, the span to be erected early in 1897.

SOUTH HALSTED STREET VIADUCT.

This structure spans the tracks of the Union Stock Yards and Transit Company at Fortieth street, and consists of three double roadway spans; entire width 60 feet, two spans 136 feet and one span 100 feet. (See inset.)

The entire cost of this structure was paid by the Union Stock Yards & Transit Company and the Chicago City Railway Company, and was as follows:

John Ruddy, substructure.....	\$48,271 05
C. L. Strobel, superstructure	31,834 20
Engineering, inspection, etc.....	2,663 87
Sundries, advertising, blue prints, etc.....	825 00
Total cost.....	<u>\$83,594 12</u>

All time records for construction of City structures of similar size were broken on this work; excavation for substructure having been commenced on Tuesday, February 18th, and the viaduct opened for traffic on September 5, 1896, at three o'clock, p. m.

NORTH HALSTED STREET BRIDGE.

This bridge is of the Scherzer rolling bascule type, similar to the Van Buren street and Metropolitan "L" road bridges, and with a 50-foot plate girder deck span constitutes the continuation northward of the Chicago avenue-Halsted street viaduct. The structure is 34 feet centers of trusses, with two 6-foot sidewalks. The trolley tracks are in the center of the roadway, with team space on both sides.

The structure is operated by electricity and compressed air, and is our most modern structure.

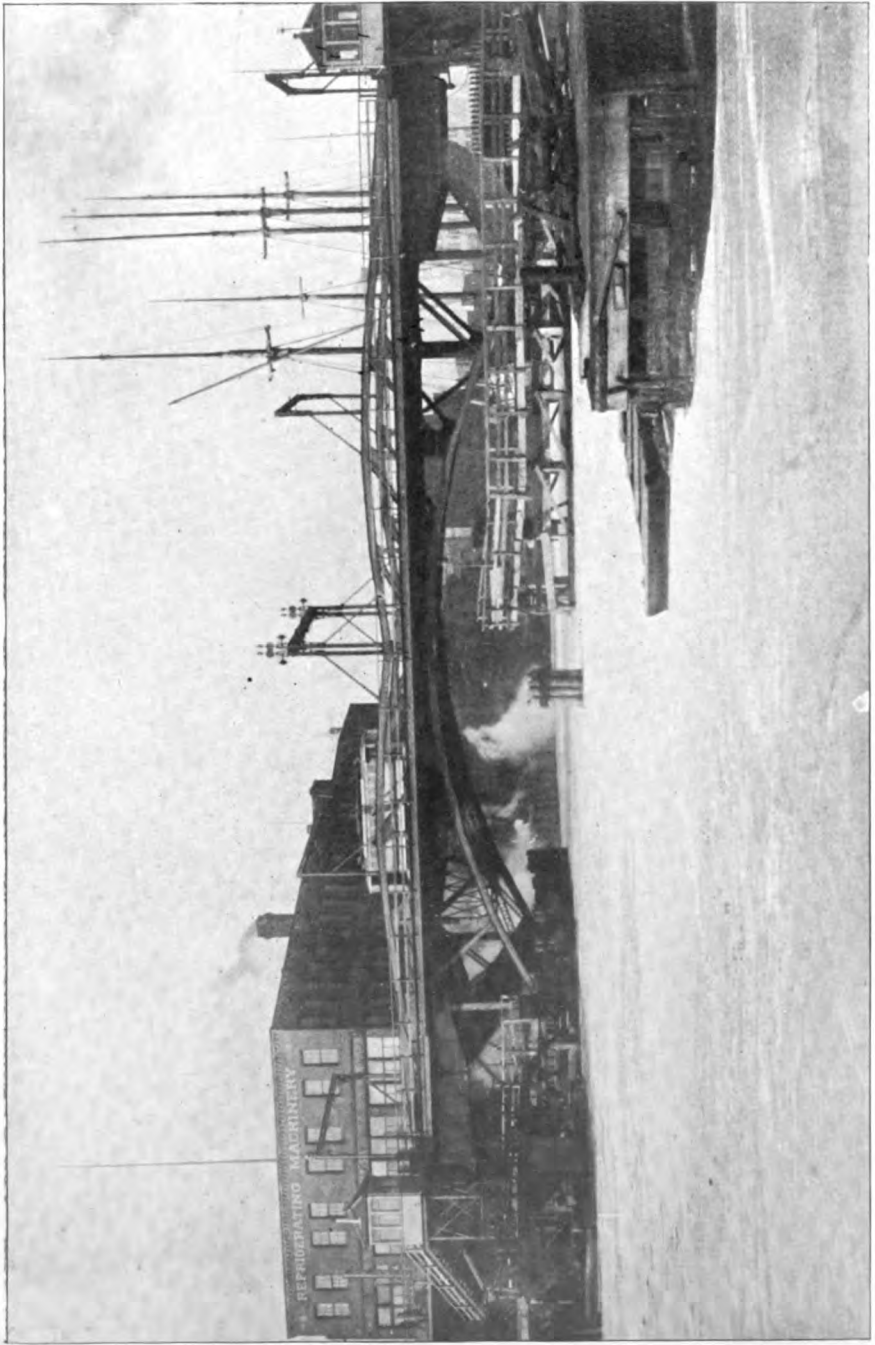
Work was commenced January 22, 1896, and the bridge will be opened for traffic early in January, 1897.

The cost will be about \$114,000.00, of which the City pays 75 per cent. and the North Chicago Street Railway Company 25 per cent.

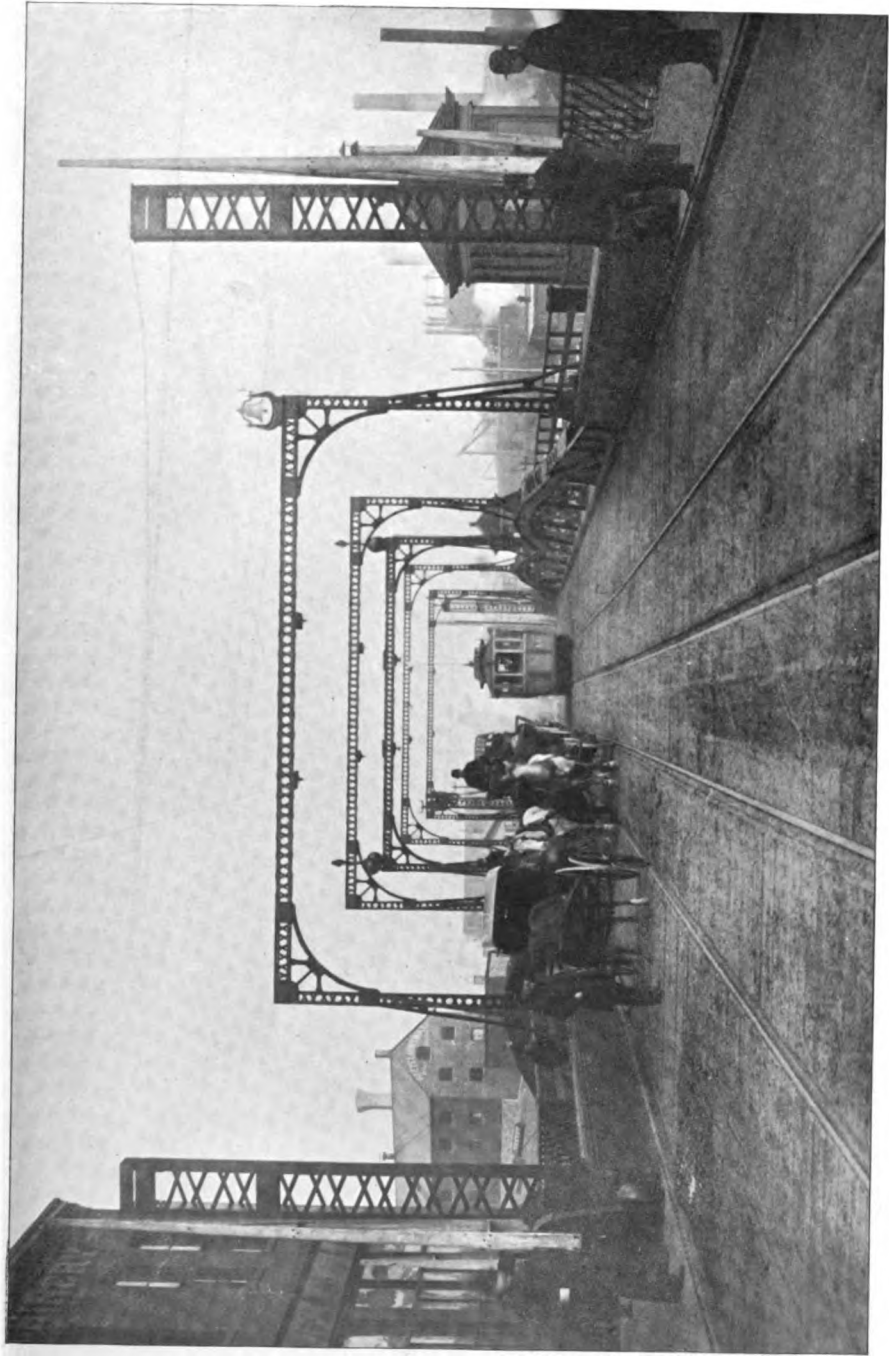
The division of cost is as follows:

Wilson & Jackson, substructure	\$46,572 12
King Bridge Company, superstructure	44,200 00
Vulcan Iron Works, machinery, electrical equipment, etc	13,567 47
Foot bridge, repair department, labor, etc	2,585 58
Engineering, inspection and sundries	3,900 00
Total to date.....	<u>\$110,825 17</u>

The extra work, repairs and various expenses incidental to putting all in readiness for traffic, will in all probability bring the total up to the sum first named.

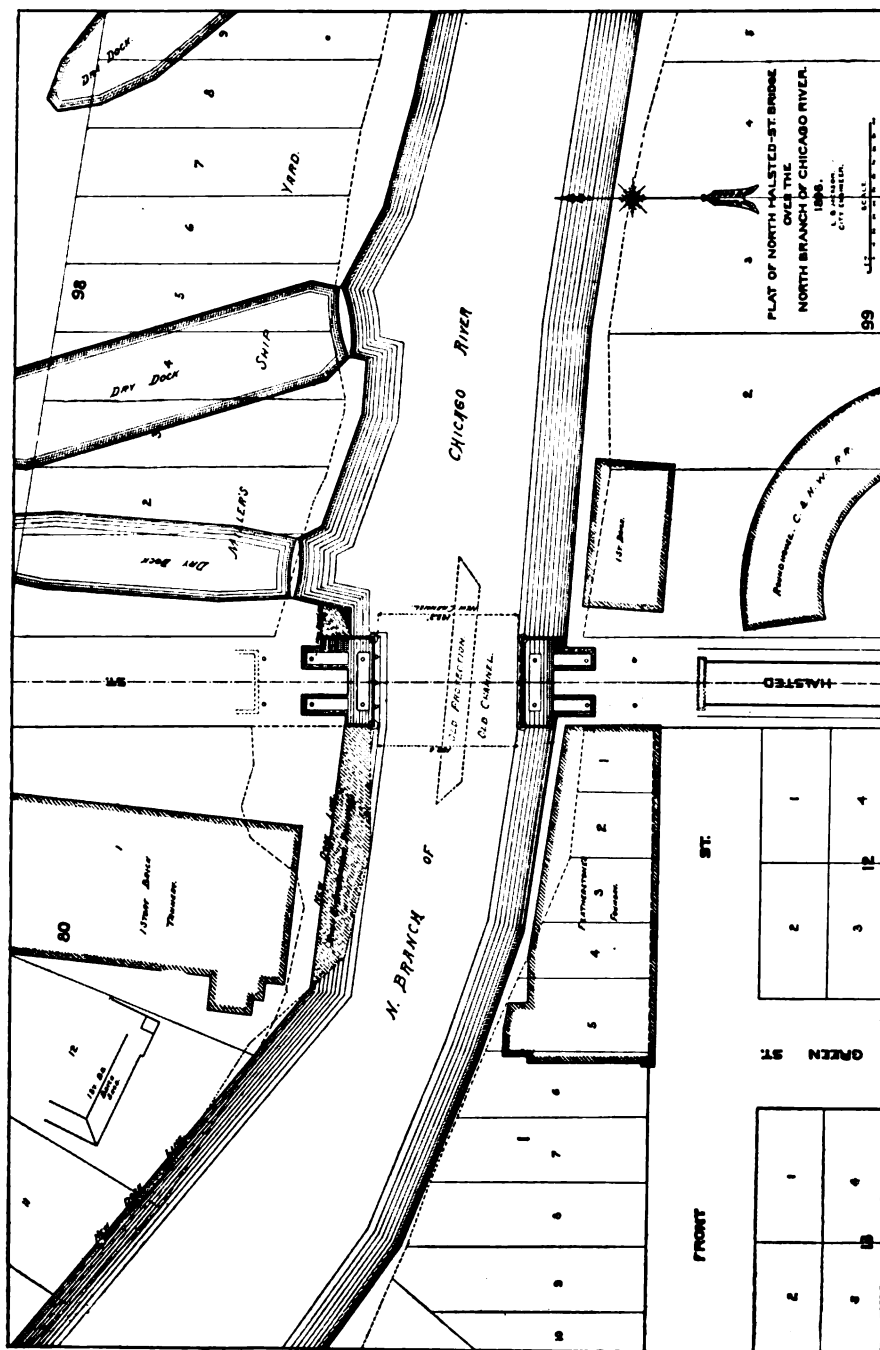


NORTH HALSTED STREET NORTH BRANCH BRIDGE
(SIDE VIEW FROM THE EAST)



NORTH HALSTED STREET NORTH BRANCH BRIDGE
(END VIEW FROM THE SOUTH)

200



NEW STRUCTURES WANTED.

The City is in urgent need of new bridges and viaducts at the following points :

1. Kinzie street, North Branch.
2. North avenue, North Branch.
3. Division street, North Branch.
4. Division street, Ogden Canal.
5. Clybourn place, North Branch.
6. Western avenue, west fork of South Branch.
7. California avenue, west fork of South Branch.
8. Polk street, South Branch.
9. Archer avenue, south fork of South Branch.
10. Chittenden avenue, Calumet River.
11. Kedzie avenue, Illinois and Michigan Canal (fixed span).
12. Canal and Sixteenth street (viaduct).

In the case of the bridges at North avenue and the two places on Division street, it would be seen by reference to the laws and ordinances, clause 3,513 et seq., page 959, that the North Chicago Street Railway Company is compelled to pay one-half of the cost of the construction of these bridges—the ten year clause in which ordinance makes the funds available in the spring of 1897.

ST. CLAIR STREET BRIDGE AND VIADUCT.

Work is being done as fast as data can be collected on a plat and general plan for the bridge and viaduct to connect the Lake Front park with the North Shore drive.

MISCELLANEOUS.

This Division prepared plans for the new light-house tower and lantern for the new Sixty-eighth street crib, and superintended the erection of the same. Also beams and column spans for the new City repair shops at Ashland avenue and Twenty-second street, for the City Architect. Plans and specifications have also been prepared for the west half of the protection, and a complete electrical equipment for the Fullerton avenue bridge.

This Division also furnished plans and supervision for the new City dump, on the lake front, for the Bureau of Street and Alley Cleaning. The work of supervising the erection of the elevated railroads and loop has been a portion of the duties of this Division, and together with the usual miscellaneous work of preparing plans, plats and data for various projects, has constituted the work of the Division for 1896.

BRIDGE AND VIADUCT MAINTENANCE.

COL. L. B. FULLER is Superintendent and MR. J. E. ROEMHELD is Engineer of Bridge and Viaduct repairs.

There are sixty-three bridges and forty-one viaducts operated and maintained by the City of Chicago.

Fifty of the sixty-three bridges are movable structures; seven are fixed spans over the Illinois and Michigan canal and west fork of the South branch; and six are fixed spans over the unnavigable portion of the North branch of the Chicago river. Among the highway bridges are two folding, or jack-knife bridges; one lift bridge; two combination railway and highway bridges; and two bascule or rolling lift bridges. Five of these bridges are operated by electric power, twelve by steam power and the remainder by hand power. One new bridge has been added to the list this year, viz: North Halsted street, bascule, to replace the old hand-power bridge.

In this synopsis, mention will only be made of the most essential repairs. Guided by the principles of economy in the expenditure of a limited appropriation, I have endeavored to keep the bridges and viaducts in a general, fair and safe condition, but in many instances the repairs could not be made as extensively as desired owing to insufficient funds. Notwithstanding, I wish to express my sincere thanks to my superior officers for sustaining me by their prompt aid and decision in the performance of my duty.

Below please find statement of expense of repairs and maintenance of each bridge and viaduct.

BRIDGES.

Adams street bridge.....	\$ 2,072 28
Ashland avenue bridge, river	175 97
Ashland avenue bridge, canal.....	12,372 58
Archer avenue bridge.....	912 90
Belmont avenue bridge	6 40
Chittenden street bridge	12 00
Clark street bridge.....	3,960 60
Chicago avenue bridge.....	352 12
Canal street bridge	2,398 05
Clybourn place bridge.....	273 06
Dearborn street bridge....	2,806 91
Deering street bridge	129 40
Division street bridge, river.....	344 32
Division street bridge, canal.....	219 67
Erie street bridge	244 37
Fullerton avenue bridge	318 02

DEPARTMENT OF PUBLIC WORKS.

Fuller street bridge	\$ 1,447 03
North Halsted street bridge, river.....	651 25
North Halsted street bridge, canal	3,036 95
South Halsted street bridge.....	5,806 59
Harrison street bridge	2,395 91
Indiana street bridge	552 27
Jackson street bridge	3,591 58
Kinzie street bridge.....	1,293 64
Laurel street bridge.....	692 55
Lake street bridge	3,518 89
Madison street bridge.....	3,672 36
Main street bridge	901 82
North Western avenue bridge.....	574 23
North avenue bridge.....	1,751 35
Polk street bridge.....	1,232 77
Rush street bridge	5,322 33
Randolph street bridge	1,514 97
Riverdale bridge.....	740 36
State street bridge.....	1,227 35
Taylor street bridge.....	1,047 04
Van Buren street bridge	4,314 74
Webster avenue bridge.....	646 59
Weed street bridge.....	337 40
Crawford avenue bridge	72 25
Wells street bridge.....	767 29
Washington street bridge.....	745 26
Western avenue bridge	209 45
Diversey avenue bridge.....	248 16
Twelfth street bridge	3,125 80
Eighteenth street bridge.....	3,059 42
Twenty-second street bridge	141 97
Thirty-fifth street bridge	860 11
Ninety-second street bridge.....	1,015 42
Ninety-fifth street bridge	1,043 10
106th street bridge	65 80
Kedzie avenue bridge.....	166 20
General bridges.....	17,982 43
	<hr/>
	\$102,371 28

VIADUCTS.

Ashland avenue viaduct	\$ 235 87
Clark street viaduct.....	28 20
Dearborn street viaduct.....	393 45
Indiana street viaduct	75 75
Desplaines street viaduct	3,827 18
Halsted street and Chicago avenue viaduct...	85 30
Madison street viaduct.....	206 80
Lake street viaduct	870 18
Polk street viaduct.....	39 60

Randolph street viaduct.....	\$ 455 98
Taylor street viaduct	103 23
Thirty-fifth street viaduct	481 03
Adams street viaduct	690 75
Sangamon street viaduct	286 05
Milwaukee avenue viaduct	11,163 45
Canal and Sixteenth streets viaduct	504 59
Eighteenth street viaduct	1,943 24
Twelfth street viaduct	1,925 94
Washington street viaduct	1,079 35
Wells street viaduct.....	15 61
North Western avenue viaduct.....	208 51
Jackson street viaduct	830 55
Center avenue viaduct	102 90
	<hr/>
	\$127,924 79
Stock on hand at shops (Eighteenth and Lake streets).....	4,848 34 .
	<hr/>
	\$132,773 13

The most extensive repairs have been made, as follows :

Rush Street Bridge.—An entirely new and substantial masonry approach, with retaining wall, cement sidewalk and iron railing, was built at the south approach to replace the old and decayed wooden trestle.

State Street Bridge.—The entire floor system of roadway was repaved; also extensive repairs were made to center pier protection.

Dearborn Street Bridge.—Floor system was reconstructed for electric car service. The protection for center pier has been entirely rebuilt and bridge painted.

Clark Street Bridge.—The old and worn cast-iron turntable wheels of this bridge were removed and a new set of cast-steel wheels substituted. The new wheels were two inches larger in diameter than the old ones and the bridge had to be raised accordingly. By means of the interlocking wedge system, an invention of Assistant Engineer Roemheld, of this Department, the bridge was raised by its own power two and one-half inches in less than ten minutes. Not a jack-screw or stick of timber were used. This was accomplished with a delay of traffic of less than four hours, and a saving to the City of more than a thousand dollars.

Wells street bridge was dismantled of steam plant, rolling gear and turntable, and completely rebuilt for electric railway service. This expense was borne by the Northwestern Elevated Railway Company.

Lake Street Bridge.—Entire new floor, consisting of sub-planking and repaving.

Randolph Street Bridge.—East approach was reinforced.

Madison Street Bridge.—New floor system.

Jackson Street Bridge.—New chord covering for the entire structure.

Van Buren Street Bridge.—Bascule bridge; the entire electrical plant has been reorganized. Operators' houses have been removed from center of roadway and new, substantial ones rebuilt on outer edge of sidewalk, where operator can command a full view of river and roadway simultaneously. Arrangements have been made with the West Chicago Street Railway Company to supply power for the operating of bridge at one-quarter of the former cost, a saving to the City of \$1,800.00 per annum. The center-locking device, which makes a rigid span of the structure, has been out of order for over a year, and by various alterations was put into successful operation.

Harrison Street Bridge.—West approach was entirely rebuilt.

Eighteenth Street Bridge.—New floor. The old turntable wheels of this bridge were removed and new wheels substituted. The work was done by the interlocking wedge system, with a delay to traffic of only four hours, and a saving to the City of about \$1,000.00.

Twelfth Street Bridge.—The machinery and boiler have been thoroughly overhauled. The center pier protection was rebuilt.

Canal Street Bridge.—Has been repeatedly out of service, owing to the failure of machinery, which consists of a sprocket and chain arrangement, and by which it has been found impossible to keep the bridge in operation any length of time without making extensive repairs. Alterations are now in progress, by which a pinion and quadrant of rack will be substituted.

South Halsted Street Lift Bridge has been completely overhauled in its mechanical parts, and counterweights adjusted, whereby it can now be operated by one engine, saving a large expense in coal.

Main Street Bridge.—A new set of wheels for turntable and tracks have been provided for this bridge, and will be placed in position as soon as possible.

Ashland Avenue Canal Bridge.—New abutment and retaining wall on the north side. New floor and sidewalk for the entire bridge.

South Western Avenue Bridge.—Repairs to floor and trusses.

Laurel Street Bridge.—New floor system and sidewalks.

Ninety-second Street Bridge.—Piles for new protection pier have been driven.

Chittenden Street Bridge.—Lumber for new structure provided, but owing to controversy in regard to location, nothing further has been done.

Riverdale Bridge.—Bridge rebuilt.

Erie Street Bridge.—New circle at both ends.

Chicago Avenue Bridge.—New wheel bents.

North Halsted Street Canal Bridge.—New approach on north side of bridge; new pinion and racks. Two story brick bridge house moved to accommodate new location of bridge.

Weed Street Bridge.—New cables and pinion.

North Avenue Bridge.—New center protection.

Milwaukee Avenue Viaduct.—Repairs to trusses; new floor and sidewalk; both roadways repaved and completely rebuilt in floor system for electric car service, and plank roadway replaced by pine paving.

Desplaines Street Viaduct.—New floor, sidewalk and railing repaired.

Canal and Sixteenth Street Viaduct.—Twelve timber bents, chord covers, and a portion of the floor being replaced.

Archer Avenue Bridge.—New approaches on both sides of bridge, and repairs now in progress on center pier.

Polk Street Bridge.—New sidewalks and repairs to sidewalk on west viaduct.

Taylor Street Viaduct.—Extensive repairs to sidewalk on west side of river.

Twelfth Street Viaduct.—Extensive repairs made to the roadway and sidewalk on the system of viaducts from Canal street to Wabash avenue.

Thirty-fifth Street Viaduct.—Roadway and sidewalks repaired.

In addition, the following bridges and viaducts have been painted during the year:

Adams street bridge,
Adams street viaduct,
Jackson street bridge,
Jackson street viaduct,
Fullerton avenue bridge,
State street bridge,
Halsted street canal viaduct,
Madison street bridge,

Washington street viaduct,
Randolph street viaduct,
Lake street viaduct,
Milwaukee avenue viaduct and
railing to approach,
Desplaines street viaduct and
railing to approach.

No.	BRIDGES.	SUPERSTRUCTURE.						
		Length. ft.	Width. ft.	Operation.	Material.	Date.	Contractors.	Cost.
1	Rush Street.	211	.....	Hand	Iron	1856	Harper & Tweedale	\$ 54,000
1a	" " rebuilt	211	.....	"	Wood	1864	Fox & Howard	8,900
1b	" " "	211	33	"	Iron	1872	Detroit Bridge Co.	15,600
1c	" " "	240	59	Steam	"	1884	Rust & Coolidge	49,370
2	State Street	184	35	Hand	Wood	1864	Fox & Howard	32,000
2a	" " rebuilt	184	36	"	Iron	1872	Keystone Bridge Co.	22,500
2b	" " "	184	39	Steam	Steel	1887	A. Gottlieb & Co.	24,440
3	Dearborn Street.....	60	.....	Hand	Wood	1834	.....	.....
3a	" " "	190	35.5	Steam	Iron	1872	Fox & Howard	22,820
4	Clark Street.....	.....	.....	.....	Wood	1840	.....	3,000
4a	" " " .....	.....	.....	Hand	"	1857	Chapin & Co.	.....
4b	" " rebuilt	180	32	"	Combination	1866	Thos. Mackin	14,200
4c	" " "	180	37.5	"	"	1872	Fox & Howard	32,000
4d	" " "	215	59	Steam	Steel	1889	Variety Iron Works	69,875
5	Wells Street.....	.....	.....	.....	Wood	1840	.....	3,000
5a	" " rebuilt	190	.....	Hand	"	1856	Harper	.....
5b	" " "	190	35	"	"	1862	Fox & Howard	5,290
5c	" " "	190	35.25	"	Iron	1872	" "	22,820
5d	" " "	220	59	Steam	Steel	1888	Keystone Bridge Co.	86,750
6	Lake Street .....	.....	.....	.....	Wood	1849	.....	.....
6a	" " rebuilt	185	.....	Hand	"	1859	N. Chapin	.....
6b	" " "	185	33	"	Combination	1868	Fox & Howard	11,450
6c	" " "	220	59	Steam	Iron	1885	Detroit Bridge Co.	57,533
7	Randolph Street .....	.....	.....	.....	Wood	1849	.....	.....
7a	" " rebuilt	153	32.5	Hand	"	1864	L. B. Boomer	5,000
7b	" " "	157	34	Steam	Iron	1874	Keystone Bridge Co.	10,850
8	Washington Street.....	157	31.5	"	"	1875	American Bridge Co.	11,495

BRIDGES—MARCH, 1897.

SUBSTRUCTURE.			APPROACHES.	REMARKS.
Material.	Contractors.	Cost.	Type.	
Stone on piles	Harper & Tweedale	Included in super. contract	Curb and filling	
" "	Old work repaired	.....	" "	Burned in fire of 1871.
" "	Detroit Bridge Co.	\$ 8,874	" "	Destroyed by collision with schooner "Granger," Nov. 22, 1883.
Concrete and ma- sonry on piles	Fitz Simons & Connell Co.	70,674	" "	
Piles	Fox & Howard	Included in super. contract	" "	Burned in fire of 1871.
Masonry on piles	Keystone Bridge Co.	\$ 27,000	" "	New turn-table built in 1880 by the Keystone Bridge Co.; cost, \$2,500.
" "	Old work repaired	.....	Viaduct	
Piles	.....	.....	.....	This was the first draw-bridge built over the Chicago river.
Masonry on grill- age	1888 Fitz Simons & Connell Co.	30,000	Viaduct	Superstructure erected at Wells street moved in 1888.
Piles	.....	.....	.....	Swept away by flood of 1849.
"	Chapin & Co.	.....	Curb and filling	Substructure repaired 1871, by Earn- shaw & Goble; cost, \$4,000.
"	Old work repaired	.....	" "	Burned in fire of 1871.
"	Fox & Howard	Included in super. contract	" "	Superstructure moved to Webster avenue in 1889.
Concrete and ma- sonry on piles	Fitz Simons & Connell Co.	\$ 62,500	" "	North Chicago Street Railway Co. paid all.
Piles	.....	.....	.....
"	Harper	.....	Curb and filling	
"	Old work repaired	.....	" "	Burned in fire of 1871.
Masonry on piles	Fox & Howard	26,182	" "	Superstructure moved to Dearborn street in 1888.
Concrete and ma- sonry on piles	Fitz Simons & Connell Co.	59,000	" "	N. C. St. Ry. Co. paid all. Double decked and reinforced by Northwestern Elevated R. R. in 1896.
Piles	.....	.....	.....	The first means for crossing the Chi- cago river was a ferry, located at the site of the present Lake street bridge, first established in 1829.
Center pier piles; abutments stone	N. Chapin	.....	Girder	
" "	Old work repaired	.....	"
Concrete and ma- sonry on piles	Fitz Simons & Connell Co.	69,726	"	Double decked and reinforced by Lake St. Elevated R. R. in 1893.
Piles	.....	.....	.....	A crossing was constructed of rough logs near the site of the present Randolph street bridge in 1833, which was used until 1840.
"	L. B. Boomer	Included in super. contract	Curb and filling	
"	Old work repaired	.....	" "
Masonry and con- crete	Fitz Simons & Connell Co.	\$ 46,099	Girder	Substructure paid for by West Chi- cago Street Railway Co.; super- structure erected at Madison street moved in 1891.

No.	BRIDGES.	SUPERSTRUCTURE.						
		Length, ft.	Width, ft.	Operation.	Material.	Date.	Contractors.	Cost.
9	Madison Street.....	.....	.....	.....	Wood	1849	.....	.....
9a	" " rebuilt	155	.....	Hand	Iron	1857	Gaylord	\$ 42,000
9b	" " "	157	31.5	Steam	"	1875	American Bridge Co.	11,495
9c	" " "	197	52	"	Steel	1891	Riter & Conley	52,500
10	Adams Street.....	160	31	Hand	Combination	1869	Fox & Howard	37,860
10a	" " rebuilt	160	32	"	Iron	1872	Keystone Bridge Co.	14,880
10b	" " "	259	59	Steam	Steel	1889	King Bridge Co.	68,500
11	Jackson Street	280	59	"	"	1888	Detroit Bridge Co.	76,500
12	Van Buren Street	163	.....	Hand	Combination	1867	Fox & Howard	13,470
12a	" " rebuilt ...	163	34	"	"	1872	E. Sweet, Jr. & Co.	13,200
12b	" "	115	59	Electric power	Steel	1895	C. L. Strobel	87,175
13	Harrison Street	175	31	Hand	Iron	1877	American Bridge Co.	24,875
14	Polk Street.....	154	31	"	Combination	1869	Fox & Howard	29,450
14a	" " rebuilt	154	31	"	Iron	1872	King Iron Bridge Co.	12,625
15	Taylor Street	161.4	32	"	"	1872	Keystone Bridge Co.	14,880
16	Twelfth Street	202	32.75	"	Combination	1868	Fox & Howard	44,450
16a	" " rebuilt	220	59	Steam	Steel	1886	Chicago Forge & Bolt Co.	41,159
17	Eighteenth Street.....	175	32	Hand	Combination	1868	Fox & Howard	28,500
17a	" " rebuilt ...	186.5	35	"	Iron and steel	1888	King Bridge Co.	21,500
18	Canal Street	200	35	"	Howe truss	1891	A. Gottlieb & Co.	11,989
18a	" "	100	35	Steam	Steel	1893	Shailer & Schniglaui	.....
19	Twenty-second Street.....	210	32	Hand	Combination	1871	Fox & Howard	26,900
20	Archer Avenue (Ogden Slip)	115	40	"	"	1871	" "	15,000
21	South Halsted Street	150	31.25	"	Wood	1861	" "	8,500

BRIDGES—MARCH, 1897.—CONTINUED.

SUBSTRUCTURE.			APPROACHES.	REMARKS.
Material.	Contractors.	Cost.	Type.	
Piles	.....	.....	.....
Masonry on piles	Gaylord	Included in super. contract	Curb and filling	
Repaired	American Bridge Co.	\$ 3,505	" "	Superstructure moved to Washing- ton street in 1891.
Concrete and ma- sonry on piles	Fitz Simons & Connell Co.	52,000	Girder, curb and filling	
Center pier piles; abutments stone	Fox & Howard	Included in super. contract	"	Burned in fire of 1871.
Masonry on piles	" "	\$ 31,264	"	Superstructure moved to Taylor street in 1889.
Concrete and ma- sonry on piles	Fitz Simons & Connell Co.	54,721	"	
" "	" "	49,807	Viaduct	
Center pier piles; abutments stone	Fox & Howard	4,800	Curb and filling	Burned in fire of 1871.
Masonry on piles	E. Sweet, Jr. & Co.	Included in super. contract	" "	
" "	Fitz Simons & Connell Co.	\$ 82,525	Old approaches, slightly altered	First bridge of the Scherzer rolling type. The Metropolitan Elevated R. R. Co. contributed \$45,000.
Piles	American Bridge Co.	Included in super. contract	Curb and filling	
"	Fox & Howard	"	Viaduct and girders	
Masonry on piles	E. Sweet, Jr. & Co.	\$ 23,970	" "	East abutment rebuilt in 1882 by E. F. Gobel & Co.; cost, \$8,573.
Concrete and ma- sonry on piles	Chicago D. & D. Co.	25,500	Viaduct	Substructure built at expense of West Chicago Street Railway Co. Superstructure built at Adams street moved in 1889.
Masonry on piles	Fox & Howard	Included in super. contract	Curb and filling	
Concrete and ma- sonry on piles	Fitz Simons & Connell Co.	\$ 59,851	Viaduct	
Piles	Fox & Howard	Included in super. contract	Viaduct, curb and filling	
Concrete and ma- sonry on piles	Chicago D. & D. Co.	\$ 41,288	"	
Piles	" "	7,141	Timber	Removed to Belmont avenue in 1892. (Condemned by U. S. Govt. as an obstruction to navigation.)
Masonry on piles	Shailer & Schniglaui	.....	Timber trestles	Lift bridge, Harmon's patent. To- tal cost, \$46,844.90.
Piles	Fox & Howard	Included in super. contract	Curb and filling	
"	" "	"	Timber	Removed, and slip filled by C. S. F. & C. R. R.
"	" "	"	Curb and filling	

CHICAGO

No.	BRIDGES.	SUPERSTRUCTURE.						
		Length, ft.	Width, ft.	Operation.	Material.	Date.	Contractors.	Cost.
21a	South Halsted Street rebuilt	150	33	Hand	Iron	1872	King Iron Bridge Co.	\$ 15,900
21b	" " "	130	61.4	Steam	Steel	1895	Pittsburg Bridge Co.	.....
22	Main Street (Throop).....	152	29	Hand	Combination	1868	Fox & Howard	12,450
23	Deering Street	200	30	"	Iron	1889	Shailer & Schniglau	17,080
24	Ashland Ave. (West Fork).	160	20.5	"	"	1883	Detroit Bridge Co.	10,500
25	South Western Avenue.....	125	21.3	"	Combination	1869	F. E. Canda	13,000
26	Fuller Street	125	19.5	"	Wood	1865	N. Chapin & Co.	7,500
26a	" " rebuilt	127	19.5	"	Combination	1877	G. W. James	4,210
27	Archer Avenue.....	152	28.75	"	"	1870	Fox & Howard	11,500
28	Douglas Avenue	141.5	21.3	"	"	1874	" "	9,800
28a	" " rebuilt (35th st.)	170	35	"	Howe truss	1891	Shailer & Schniglau	10,545
29	Ashland Ave. (South Fork)	152	18.5	"	Wood	1871	Fox & Howard	5,000
29a	" " (canal)	128	.....	Fixed	Iron	1886	Pittsburgh Bridge Co.	3,622
30	Western Avenue (canal) ....	.....	.....	"	Wood	1870	C. Fitz Simons	1,840
30a	" " rebuilt	118	18	"	Iron	1882	Massillon Bridge Co.	5,900
31	Kedzie Avenue (canal).....	108	.....	"	"	1879	" "	2,879
31a	" " (West Fork)	109	16	"	"	1881	" "	3,765
32	Crawford Avenue .....	.....	.....	"	Wood	.....	.....	.....
33	Laurel Street.....	154	33	Hand	Iron	1888	Chicago Forge & Bolt Co.	.....
34	Kinzie Street	170	31.5	"	Combination	1870	Fox & Howard	15,850
35	Indiana Street	163	32	"	"	1869	" "	48,800
36	Erie Street	200	32	"	"	1871	" "	30,000
37	Chicago Avenue.....	175	32	"	"	1867	" "	26,700
37a	" " rebuilt	175	32.5	"	"	1872	" "	20,850
38	North Halsted Street.....	140	20	"	Wood	1866	" "	7,000
38a	" " " rebuilt.	140	.....	"	Combination	1877	W. B. Howard	4,190

BRIDGES—MARCH, 1897.—CONTINUED.

SUBSTRUCTURE.			APPROACHES.	REMARKS.
Material.	Contractors.	Cost.	Type.	
Piles	Old substructure used	.....	Timber	Demolished by collision, steamer Tioga, June 30, 1892.
Masonry to bed rock	Pittsburg Bridge Co.	.....	Old approaches, slightly altered	First, and only bridge of the Waddell lift type. Total cost, \$237,180.52 complete.
Piles	Fox & Howard	Included in super. contract	Timber	
"	Chicago D. & D. Co.	\$ 9,964	"	
"	Harry Fox & Co.	6,302	"	
"	F. E. Canda	Included in super. contract	"	
"	N. Chapin & Co.	"	"	Blown down by storm of May 5, 1876.
"	Old abutments repaired	.....	Curb, filling and timber	
"	Fox & Howard	Included in super. contract	Timber	
"	" "	"	"	
"	Kimbell & Cobb Stone Co.	\$ 10,227	"	
"	Fox & Howard	Included in super. contract	"	
"	Pittsburg Bridge Co.	"	"	
"	C. Fitz Simons	"	Filling	
Stone	Massillon Bridge Co.	\$ 1,021	"	
"	" "	Included in super. contract	"	
Wood	" "	\$ 634	"	Old wooden bridge here destroyed by flood of 1881.
Piles	.....	.....	"
"	.....	.....	Curb and filling	Built by Town of Lake before annexation in 1889.
"	Fox & Howard	Included in super. contract	Curb and filling, and timber	The first crossing over the North Branch was a float bridge constructed in 1832, near the site of the present Kinzie st. bridge, and used for foot passengers only.
Masonry on piles	" "	"	Viaduct and girder	
Center pier piles; abutments stone	" "	"	Viaduct and curb, and filling	Wooden float bridge until 1871.
Piles	" "	"	Curb and filling	Burned in fire of 1871.
"	" "	"	"	
"	" "	"	Timber	
"	Old work repaired	.....	"	Substructure rebuilt in 1884 by Chicago Dredg. & Dock Co.; cost, \$10,490. Bridge demolished to make room for new bridge in 1896.

No.	BRIDGES.	SUPERSTRUCTURE.						
		Length, ft.	Width, ft.	Operation.	Material.	Date.	Contractors.	Cost.
38b	North Halsted Street.....	127	50	Electric power	Steel	1897	King Bridge Co.	\$ 57,768
38c	" " " (canal)	228	32	Hand	Iron	1874	Fox & Howard	29,945
39	Division Street	180	29	"	Combination	1869	" "	15,795
39a	" " (canal)	176	29	"	"	1870	" "	17,700
40	Weed Street (canal)	150	33	"	Iron	1891	Shraier & Schniglaue	8,296
41	North Avenue.....	145	19.5	"	Wood	1865	N. Chapin & Co.	3,700
41a	" " rebuilt.....	150	29	"	Combination	1877	Conro, Carkin & Co.	7,149
42	Clybourn Place	140	32	"	"	1873	Fox & Howard	13,700
43	Webster Avenue	180	37.5	"	"	1872	" "	32,000
44	Fullerton Avenue.....	225	20	Fixed	Wood	1874	" "	1,490
44a	" " rebuilt....	125	20	Hand	Combination	1877	I. W. Lavin & Co.	2,978
44b	" "	164.6	35.4	"	Steel	1895	Chicago Bridge & Iron Co.	11,956.12
45	Diversey Boulevard.....	184.2	35.4	"	"	1896	Lassig Bridge & Iron Co.	14,961.58
46	North Western Avenue	266	36	"	Howe Truss	1891	Binder & Seifert	14,000
47	Belmont Avenue	77.67	19.10	Fixed	Iron	1875	King Bridge Co.	.....
47a	" "	200	35	Hand	Wood	1893	City	7,773.37
48	Irving Park Boulevard	65.5	19.10	Fixed	Iron	.....	.....	.....
49	Montrose Boulevard .....	.....	.....	"	Combination	.....	.....	.....
50	Rutledge Avenue.....	.....	.....	"	"	.....	.....	.....
51	Jefferson Avenue .....	.....	.....	"	Wood	.....	.....	.....
52	Forest Glen Avenue.....	.....	.....	"	"	.....	.....	.....
53	Carpenter Road .....	.....	.....	"	"	.....	.....	.....
54	Ninety-second Street.....	200	34	Hand	Iron	.....	.....	.....
55	Ninety-fifth Street	200	35	"	Howe Truss	1891	Chicago Forge & Bolt Co.	13,350
56	106th Street.....	.....	.....	"	Wood	.....	.....	.....
57	Chittenden Road .....	.....	.....	"	"	.....	.....	.....
58	Riverdale .....	.....	.....	.....	"	.....	.....	.....

BRIDGES—MARCH, 1897.—CONTINUED.

SUBSTRUCTURE.			APPROACHES.	REMARKS.
Material.	Contractors.	Cost.	Type.	
Masonry on piles	Wilson & Jackson	\$ 46,572.12	Old approaches	Second rolling bascule bridge; double roadway, two trusses. Total cost about \$114,000, of which the N. C. St. Ry. Co. pays 25 per cent.
Piles	Fox & Howard	Included in super. contract	Timber	
"	" "	"	"	
"	" "	"	"	
"	Shaller & Schniglaue	"	"	Lift bridge, built under Capt. Harmon's patents.
"	N. Chapin & Co.	"	"	
"	Old substructure used	.....	"
"	Fox & Howard	Included in super. contract	"	A wooden bridge was built here in 1862, by Fox & Howard; cost, \$1,000.
"	Chicago D. & D. Co.	\$ 11,500	"	Superstructure built at Clark st. moved in 1889.
"	Fox & Howard	Included in super. contract	"	
"	I. W. Lavin & Co.	"	"	Town of Lake View paid \$4,466; total cost, \$7,444.
Masonry on bed rock	FitzSimons & Connell Co.	\$ 15,796.67	Timber trestles and paved fill.	Pratt truss. Electric power to be put on in 1897. N. C. St. Ry. Co. contributed \$18,000.
Masonry on piles	Lydon & Drews Co.	16,383.52	"	Connects the north and west boulevard systems.
Piles	Chicago D. & D. Co.	18,706.00	Timber	
Stone	.....	.....	Filling	Demolished to make room for new bridge in 1893.
Piles and timber	Chicago D. & D. Co.	19,259.19	Timber trestles	Superstructure of first Canal st. bridge. Necessary real estate cost \$5,500 additional.
Stone	.....	.....	Filling	
"	"	
"	"	
"	"	
"	"	
"	"	
Pier, stone on piles; abuts. piles	.....	.....	Timber	
Piles	Kimbell & Cobb Stone Co.	12,259	"	
.....	
.....	
.....	.....	.....	.....	Pontoon bridge.

Total length of bridge built by the City of Chicago, as far as the records go, 14,875.07 feet or 2.81 miles.
 " existing bridges built by the City of Chicago, 8,760.90 feet or 1.66 mile.
 " cost of all bridges built by the City of Chicago, as per available records, \$3,135,909.87.

TABLE OF VIADUCTS, GIVING LENGTHS, WIDTHS,

No.	LOCATION.	Character of Superstructure.	Length, ft.	Width, ft.	CHARACTER OF SUBSTRUCTURE.	CONTRACTOR SUBSTRUCTURE.
1	State Street	Wrought iron	304	59	Masonry abutments, small piers with Phoenix columns	Unknown
2	Dearborn Avenue	Steel	379.5	40	Masonry abutments, small piers, with steel columns	M. C. & J. Duffy, \$13,191.43
3	Clark Street	Wrought iron	83	80	Masonry abutments	Unknown
3a	" "	Steel	83	73	Masonry abutments, old repaired	City \$1,368.91
4	Wells Street	Wrought iron	83	80	Masonry abutments	Unknown
5	Indiana Street	Wood	614	31.8	Masonry piers and abutments	Unknown \$54,687.00
5a	" "	Iron	613.07	38	Old, repaired	City
6	Erie Street	Wood	467	34	Masonry piers and abutments	Unknown
6a	" "	Iron	463.37	38	Old, repaired	City
7	Chicago Avenue and Halsted Street	"	238 716	60 49	Masonry piers and abutments and iron columns	Duffy & Sons
8	Lake Street	Wrought and Cast iron	78.25	60	Masonry abutments	Unknown
8a	" "	Iron	106.2	60	Old, rebuilt	Fitz Simons & Connell \$12,880.70
9	Randolph Street	Wrought and Cast iron	81	60	Masonry abutments	Unknown
10	Washington Street	Steel	251	32	Masonry abutments, small piers, steel columns	J. J. Duffy \$9,567.00
11	Madison Street	Wrought and Cast iron	98	60	Masonry abutments	Unknown
11a	" "	Steel	128	59	Concrete abutment, small piers east, steel columns	Fitz Simons & Connell
12	Adams Street	Iron	306	33.5	Masonry abutments, small piers, iron columns	Unknown
12a	" "	"	208.6	58	Masonry abutments, small piers, concrete filled steel columns	City
13	Jackson Street	Steel	359.3	58	Masonry piers and abutments	Sackley & Peterson
14	Van Buren Street	Iron	35 65	60 62	Masonry abutments	Unknown
14a	" "	Steel	67	58	Same, repaired	J. S. Patterson, sub-contractor \$1,238.00
15	Harrison Street	Iron	498.66	38	Masonry piers and abutments	J. J. Kearns
16	West Polk Street	"	346	33	Same	E. F. Gobel

MAIN APPROACHES, GRADIENTS, ETC.

CONTRACTOR SUPERSTRUCTURE.	Date.	City Paid.	Railroads Paid.	Totals.	APPROACHES.			
					Location.	Length, ft.	Gradient.	Character.
Keystone Bridge Co.	1872	.....	.....	\$ 29,840 00	North South	270 Bridge	1:36 Level	C. W. with P. F. Bridge.
M. Lassig \$44,957.00	1889	\$ 22,858 74	\$ 40,000 00	62,858 74	North South	178 Bridge	1:20 Level	C. W. with P. F. Bridge.
Keystone	1872	24,277 43	14,730 00	39,007 43	North South	278.5	1:37.5	C. W. with P. F. "
A. Gottlieb & Co. \$9,981.60	1892	Nothing	All	11,444 87	North South	394.7 168	1:37.3 for 210.7 1:100 for 184.0 1:40	" "
Keystone	1872	12,570 65	Nothing	12,570 65	North South	230 176	1:27.5 1:54	" "
F. E. Canda \$23,010.00	1869	.....	.....	78,697 00	West East	228 Bridge	1:24 Level	" Bridge.
Pittsburg Bridge Co.	1888	54,491 39	Nothing	54,491 39	West East	Same "	Same "	Same. "
Fox & Howard	1871	23,056 25	"	23,056 25	West East	350 Bridge	1:26 Level	C. W. with P. F. Bridge.
Edw. Hemberle \$37,438.00	1885	45,000 00	"	45,000 00	West East	Same "	Same "	Same. "
Pittsburg Bridge Co.	1884	149,637 50	135,696 91	285,334 41	West East North South	768 550 Bridge 758	1:40 1:30 Level 1:37	W. E. and S. C. W. with P. F. N. Bridge.
Keystone	1872	.....	.....	13,505 00	West East	176 75	1:21.5	C. W. with P. F. Same to Bridge.
Masillon Bridge Co. \$26,127.14	1887	Nothing	39,007 84	39,007 84	West East	230.4 75.53	1:23 1:37	Same. "
Keystone	1871	.....	12,206 00	12,206 00	West East	268 76.28	1:70 1:40	" Timber Trestle.
King Bridge Co. \$16,685.00	1890	20,237 63	6,014 37	26,252 00	West East	146 Bridge	1:21 Level	C. W. with P. F. Bridge.
Keystone	1866	15,675 00	.....	15,675 00	West East	221 65.5	1:31.7	C. W. with P. F. Same to Bridge.
Penn. Bridge Co.	1891	11,200 00	Nothing	11,200 00	West East	222.75 48.75 Girder	1:30.43 1:23.89	Same. Girder Span to Bridge.
Keystone	1869	25,883 87	19,000 00	44,833 87	West East	200 Bridge	1:18.40 Level	C. W. with P. F. Bridge.
Keystone \$27,993.00	1885	.....	All	33,462 40	West East	Same Bridge	Same 1:115	C. W. with P. F. Bridge.
Gottlieb \$75,700.00	1888	137,600 00	74,600 00	212,200 00	West East Canal St. } S N	524.69 Bridge 306.66 355.0	1:35 Level 1:30.15 1:50.8	C. W. with P. F. Bridge. C. W. with P. F.
American Bridge Co.	1870 1880	3,275 00	4,440 56	7,715 56	West East	176 184	1:23 1:26.7	" "
Chicago Bridge & Iron Co. \$6,790.78	1895	6,494 00	1,150 30	7,644 30	West East	176 184	Slightly Raised "	" "
Rust & Coolidge	1881	19,851 75	76,567 55	96,419 30	West East	360 300	1:40 1:40	" "
Central Bridge Co.	1882	Nothing	115,009 49	115,009 49	West East	498.28 334.52	1:38.03 1:41.41	" "

TABLE OF VIADUCTS, GIVING LENGTHS, WIDTHS,

No.	LOCATION.	Character of Superstructure.	Length, ft.	Width, ft.	CHARACTER OF SUBSTRUCTURE.	CONTRACTOR SUBSTRUCTURE.
17	Polk Street	Steel	375.5	40	Same	Unknown
18	West Taylor Street	"	900	58	Masonry abutments, small piers, steel columns	Jas. Kincade \$20,777.98
19	Taylor Street	"	976.63	36 and 40	Same	Unknown
20	Twelfth and Beech Streets	Iron	58	58	Masonry abutments	"
20a	Twelfth and Beech Streets	"	140	56	Same	Rebuilt by M. P. Garrity
21	Twelfth Street from bridge west and Lumber Street approach	"	363.5 365.0	58 40	Masonry piers and abutments Masonry abutment, small piers and columns	Jos. Downey, \$31,504.18 for Twelfth St. 7,750.00 for Lumber St.
22	Twelfth Street west of Clark, first section	"	495.35	58	Masonry piers and abutments, and small piers and columns	Kinsella, Daly & Co. \$47,372.40
22a	Twelfth Street west of Clark, second section	"	374	58	Same	Jos. Downey
22b	Twelfth St. from Clark Street to Wabash Ave.	Steel	979.95	58	"	Sackley & Peterson \$34,448.00
23	Fifth Ave. approach to Twelfth St. viaduct	"	658.81	60	"	Jos. Downey
24	West Eighteenth Street	Iron	184	36	Masonry abutments	Jas. Clowry \$15,215.16
25	Eighteenth Street	Steel	463.87	38 and 58	Masonry piers and abutments	Jos. Downey
26	Canal and Sixteenth Sts.	Iron	300	64	Masonry abutments, small piers, and columns	De Golyer & Hubbard \$36,180.00
27	Halsted and Sixteenth Streets	"	176.5	60	Same	Unknown
27a	Halsted and Sixteenth Streets	"	176.51	60	"	Old, repaired and rebuilt by City
28	Center Avenue and Sixteenth Street	"	473.0	58	Masonry piers and abutments	M. P. Garrity \$61,380.00
29	Blue Island Avenue, Throop Street and Sixteenth Street	"	122 101	65.67 55.67	Masonry abutments, small piers and columns	Cox Bros. \$60,728.00
29a	Extensions to Blue Island Ave., Halsted St., Center Ave., and Canal St. viaducts by C. G. W. Ry.	Steel	40-52-36 30.5-35 40 40	Same as old viaducts	Concrete abutments	C. G. W. Ry. Co.
30	Milwaukee Avenue and Desplaines Street	Iron	680 472	59 65	Masonry abutments, small piers and columns	\$70,361.40 Jas. Kincade, 1875
31	Halsted—Kinzie	"	473	62	Same	Wm. Hildreth \$23,792.00

MAIN APPROACHES, GRADIENTS, ETC.—CONTINUED.

CONTRACTOR SUPERSTRUCTURE.	Date.	City Paid.	Railroads Paid.	Totals.	APPROACHES.			
					Location.	Length, ft.	Gradient.	Character.
Unknown	1888	Nothing	All	Unknown	West East Fifth Ave. N.	Bridge Dead end 280	Level 1:17.5	Bridge. Dead end. C. W. with P. F.
American Bridge Works \$62,250.00	1891	"	"	\$ 83,027 98	West East	305 Bridge	1:23 Level	" Bridge
Binder & Seifert	1892	"	"	Unknown	West East Fifth Ave. N.	Dead end 280	" 1:17.5	" Dead end C. W. with P. F.
American Bridge Co. \$4,449.00	1873	\$ 7,549 62	\$ 25,668 25	33,217 87	West East	408 378.5	1:32 1:30	" "
Rust & Coolidge \$18,440.00	1884	7,554 20	24,306 84	31,861 04	West East	331 Same	1:29.68 Same	" "
Gottlieb \$48,100 for Twelfth St. 23,900 for Lumber St.	1887	.....	111,214 18	111,214 18	West East Lumber St. S.	230 Bridge 150	1:40 Level 1:33.33	" Bridge. C. W. with P. F. "
King Bridge Co. \$70,800.00	1886	84,522 40	44,600 00	129,122 40	West East Clark St. } N } S	Viaduct " 592 490	Level " 1-40 1-30	Viaduct. C. W. with P. F. "
M. Lassig	1888	20,000 00	Balance	Unknown	West East	Bridge Viaduct	Level "	Bridge. Viaduct.
Riter & Conley \$175,208.00	1889	Nothing	209,736 00	209,736 00	West East	Viaduct 167.7	Level 1:22.28	" C. W. with P. F.
Chicago Forge & Bolt Co.	1888	"	60,000 00	60,000 00	South North	Viaduct 200	Level 1:40	Viaduct. C. W. with P. F.
Keystone \$11,194.00	1879	19,842 82	14,000 00	33,842 82	West East	330 130	1:28 1:40.5	" Timber trestle to bdg.
Keystone	1888	Nothing	114,446 00	114,446 00	West East	Bridge 320	Level 1:26.4	Bridge. C. W. with P. F.
Fox & Howard \$37,200.00	1873	30,000 00	96,401 29	126,401 29	North South	550 530	1:42.5 1:39.5	" "
Detroit Bridge Co.	1869	Nothing	24,725 00	24,725 00	North South	410 265	1:31.0 1:21.0	" "
Leighton Bridge Works	1881	17,685 73	Nothing	17,685 73	North South	Same "	Same "	" "
Edw. Hemberle \$77,737.33	1884	105,063 74	47,666 38	152,730 12	North South	722 722	1:40 1:40	" "
Keystone \$16,931.00	1876	74,201 34	22,126 80	96,328 14	Southwest Northeast North South	570 507 423 433.5	1:39 1:37 1:31 1:30	" " " "
Gottlieb	1886	Nothing	85,987 57	85,987 57	.....	.....	.....	Same as before additions, but shorter.
American, and Leighton Bridge Works \$70,010.15	1876 1880	164,165 00	131,878 00	296,043 00	Northwest Southeast North South	670 540 510 435	1:50 1:40 1:40 1:40	C. W. with P. F. " " "
Soulerin, James & Co. \$51,428.00	1874	65,477 46	65,357 81	130,835 27	North South	524 472	1:38.5 1:39	" "

TABLE OF VIADUCTS, GIVING LENGTHS, WIDTHS,

No.	LOCATION.	Character of Superstructure.	Length, ft.	Width, ft.	CHARACTER OF SUBSTRUCTURE.	CONTRACTOR SUBSTRUCTURE.
31a	Halsted—Kinzie	Steel	545.26	60	New masonry piers and abutments	Sackley & Peterson \$19,914.63
32	Sangamon—Kinzie	Iron	458	38	Masonry piers and abutments	M. C. & J. Duffy
33	Ashland—Kinzie	Steel	376.42	58	Same, with small piers and columns	Wm. F. Hair \$44,439.07
34	Western—Kinzie	"	140	58	Masonry abutments	M. C. & J. Duffy \$57,910.89
35	Ogden Boulevard	"	440.41	120	Masonry piers and abutments	Jas. Kincade \$84,500.00
36	Halsted and Fortieth Streets	"	372	60	Same	John Ruddy \$48,271.05
37	Thirty-fifth and Stewart Avenue	"	405.53	58	"	Robt. Wilson \$94,679.06
38	Sixty-first Street	Built by Iron	Town of 804	Lake before annexation, no plans or 32.5	Masonry piers and abutments and small piers and columns	records available.
	Totals		19,796.31	3,099.8		

MAIN APPROACHES, GRADIENTS, ETC.—CONTINUED.

CONTRACTOR SUPERSTRUCTURE.	Date.	City Paid.	Railroads Paid.	Totals.	APPROACHES.			
					Location.	Length. ft.	Gradient.	Character.
Milwaukee Bridge & Iron Co. \$54,570.43	1893	Nothing	All	\$ 76,891 25	North South	Same, slightly raised	Practically the same	Same, slightly raised and altered.
Cunningham & Keepers \$60,000.00	1881	\$ 50,129 24	\$ 48,847 79	98,977 03	North South Kinnie St. { W { E	495 440	1:30 1:30 1:17.5 both	C. W. with P. F. " "
Gottlieb \$44,684.00	1888	29,217 99	65,399 36	94,317 35	North South	542 325	1:26.26 1:26.5	" "
Chicago Forge & Bolt Co. \$17,000.00	1889	Nothing	80,712 88	80,712 88	North South	603.1 563	1:27.65 1:28	" "
American Bridge Works \$118,220.00	1892	113,645 47	89,144 99	202,790 46	Southwest Northeast	450 450	1:25 1:25	" "
C. L. Strobel \$31,834.20	1896	Nothing	83,594 12	83,594 12	North South	582.66 567.14	1:30.0 1:29.0	" "
Gottlieb \$65,102.00	1889	"	159,781 06	159,781 06	West East	637 773	1:27.81 1:33.33	" "
					West East	100 100	1:25 Same	" "
				\$3,811,690.16		27,909.16	Av. 1:34.23	

Total length of viaducts built, as far as records show, 19,796.31 feet or 3.75 miles.

" " existing viaducts, 18,168.06 feet or 3.44 miles.

" cost of all viaducts, as per records, \$3,811,690.16.

Average cost per viaduct, \$81,099.79.

" gradient, 1:34.23. Total length, main approaches, 27,909.16 feet or 5.28 miles.

Total width of viaducts built, 3,099.8 feet or .58 mile.

" " existing viaducts, 2,498.16 feet or .47 mile.

Of the total divisible amounts the Railroads have paid 63 $\frac{1}{3}$ % and the City 36 $\frac{2}{3}$ %. Appx.

If the City has paid the difference between the divisible amounts and the total sum, then the City has paid 39 $\frac{1}{3}$ % and the Railroads 60 $\frac{2}{3}$ %. Appx.

HARBORS OF THE CITY OF CHICAGO.

CONSISTING OF THE CHICAGO RIVER AND BRANCHES AND THE
CALUMET RIVER AND BRANCHES.

RICARD O'S. BURKE, Assistant Engineer, in charge.
CAPTAIN JOHN F. MOORE, Harbor Master.
JOHN C. WECKLER, Vessel Despatcher.

Owing to the contemplated dredging of the Chicago river and its branches by the United States government during the year, but slight provision was made by the Council in the appropriations for 1896 for this purpose, and that made (\$5,000) was rendered inadequate for satisfying the demands of emergency work (work that without prompt action would entail expense and inconvenience on the marine interests) by having two-fifths of it applied to the payment of an old dredging charge.

The dredging done in 1896 is as follows :

In main Chicago river and South branch	10,710 cu. yds.	
In North branch, draws of Halsted street bridge and widening North branch north thereof by property of Grey, Clark & Engel.....	40,630 cu. yds.	
Total dredging by the City	51,340 cu. yds.	Cost, \$10,332 99

The United States government has done the following under the direction of Major W. L. Marshall, Corps of Engineers, U. S. A.:

North branch, Chicago river, on contract	54,920 cu. yds.	Cost, \$ 5,327 24
South branch and main Chicago river, on contract.....	78,408.7 cu. yds.	Cost, 8,546 55
Calumet river, mouth and main river	295,073.4 cu. yds.	Cost, 30,568 82
Total dredging by the U. S. in harbors of City of Chicago on ———		
contracts continued into 1897.	428,402.1 cu. yds.	Cost, \$44,442 61

For improvement of their dock fronts, the owners have during the year dredged under permits from the City as follows:

Chicago river, 101 permits....	fees, \$ 809.50,	removing 123,200 cu. yds.
Calumet river, 17 permits....	fees, 556.00,	removing 102,200 cu. yds.
Total dredged by dock owners,	fees, 1,365.50,	removing 225,400 cu. yds.
Costing about	\$45,080.00.	

The total dredging done by all interests, exclusive of that done under the contracts with the Sanitary District of Chicago, in the harbor of the City is 805,142.1 cubic yards, costing \$99,855.60, or about 14.2 cents per cubic yard.

Of the contracts for dredging continued into year 1897, the following work remains to be done by the United States, viz.:

North branch Chicago river.....	793,780 cu. yds., at 9.7 c,	\$76,996 66
South branch and main Chicago river....	380,021 cu. yds., at 10 c,	41,422 29
Calumet river.....	225,596 cu. yds., at 13¼ c,	29,891 47

Total harbors City of Chicago carried over
to year 1897, contracts with U. S.....1,399,397 cu. yds. To cost, \$148,310 42

IMPROVEMENT OF WEST FORK, SOUTH BRANCH,

west from Western avenue bridge, by the blasting and removal of rock and hardpan from that branch, has been continued under the contract with the Fitz Simons & Connell Company, dated September 1, 1893, commenced by order of Council of May 29, 1893, and during the year the following work has been done:

2,669 cu. yds. of clay at 29c.....	\$ 774 01
7,561.2 cu. yds. rock and hardpan at \$3.90	29,488 68
	<hr/>
	\$30,262 69

The further prosecution of this work has been suspended in view of the fact that it is expected to be completed at the expense of the United States.

CONSTRUCTION AND REPAIR OF DOCKS.

The City improved its property at the West Side pumping station by renewing two hundred feet of dock at the head of Canal A, at a cost of \$1,800.00, and private dock owners in the Chicago and Calumet rivers have taken out 59 dock permits from the City at a cost of \$1,463.77 in fees, under which the following improvements were done:

5,577 feet of old dock were repaired.
5,091 feet of old dock were rebuilt, and
250 feet of new dock were constructed,

making a total dockage of the harbors of the City, on the Calumet and Chicago rivers, of over fifty-one miles. A material part of each river front remains yet to be docked, much of which is expected to be

done during the ensuing year. The dock permits during the year included, in addition to the above repairs, renewal and construction, the construction of one bridge protection, that of the Calumet & Blue Island Railroad company, near Ninety-first street on the Calumet river; the repairs of two bridge protections in the Chicago river and the construction of one coffer-dam in the South branch, south of Van Buren street.

The United States had the south pier at the mouth of the Calumet river extended 400 feet, the superstructure having been completed for 300 feet of that distance.

In addition to the surveys required for giving of lines for work under the dock permits issued during the year, a survey has been made of that part of the North branch from Clybourn place to North avenue, for the purpose of some needed improvements in the North branch by the Chicago, Milwaukee & St. Paul railroad bridge, where the marine interests have been subjected to many inconveniences in the passing of that bridge.

A survey and estimate were made for condemnation of land on the west side of the North branch, south from Diversey avenue (placed at \$11,100) for the needed widening of the North branch.

A survey has been made from Belmont avenue south to the North Western avenue bridge for the establishment of dock lines on the west side of the river, from 100 feet south of Belmont avenue to the harbor line established by dedication of Meyer & Toll, in lot 20 of the Snow estate.

For the estimated cost of condemnation of the lands required for harbor area under the ordinance of March 8, 1895, from Belmont avenue to Lawrence avenue, the amount of \$74,600 has been asked.

The admission of Jefferson and Lake View into the City has added many miles of river and lake frontage of which the City has no surveys except that from Belmont avenue to Lawrence avenue. In order that this information be obtained and filed for the service of our citizens, surveys should be made of that part of the North branch from Lawrence avenue north to the City limits, for which an appropriation of \$2,000 has been asked. The many features of interest and questions involved along the front of the City on the shore of Lake Michigan make accurate information of the shore line, from Evanston to the Indiana boundary, an important matter to the City. In consequence, an appropriation for this survey of \$4,320 has been asked.

The following obstructions to navigation were removed by the City during the year:

The "Clipper City," from North branch, at a cost of.....	\$425.00
The "Tempest," from Slip "D," Lake Front, at a cost of...	345.00
The "Dewey," from near North avenue, at a cost of.....	25.00

The canal boat "China" was sunk on November 2, 1896, and was removed by the United States government January 9, 1897—the delay arising from the necessity of advertising and perfecting all the essentials of a formal contract, which is the practice under the general government.

ELEVATION OF LAKE MICHIGAN.

The low water period has become more decided during the past year, the elevation of the lake not going higher than datum at the two-mile crib at any time during the year. This period commenced in 1887, when it was only 1.96 feet above datum, as against 2.64 feet above for the prior year; and went lower yearly, until in 1891 it was only one-twentieth of a foot above datum. Since then it gradually, every year (except for 1894), decreased in elevation below datum until its present average is seven inches below the plane of low water of 1847. The greatest monthly range at the two-mile crib was in February, when it was 1.4 feet; the greatest range for the year at the same station was 1.7 feet, being from datum, the highest water during the year, to 1.7 feet below low water of 1847. The average elevation of the North branch at Chicago avenue pipe yards above the average elevation of the lake at the two-mile crib is a trifle less than one-fifth of a foot.

THE FOLLOWING TABLE SHOWS THE ELEVATION OF LAKE MICHIGAN AND OF THE CHICAGO RIVER, AT CHICAGO AVE. PIPE YARDS.

MONTHS, 1896.	ELEVATION OF WATER (MEANS).										
	CHICAGO AVE. PIPE YARD.				TWO-MILE CRIB.				RIVER AND LAKE.		
	Max.	Min.	Mean.	Range	Max.	Min.	Mean.	Range.	River.	Lake.	Dif.
January	-0.10	-1.20	-0.76	1 10	-0.40	-1.70	-1.00	1.30	-0.76	-1.00	0.24
February	-0.10	-1.20	-0.70	1.10	-0.00	-1.40	-0.85	1.40	-0.70	-0.85	0.15
March	+0.10	-1.70	-0.77	1.80	-0.10	-1.40	-0.86	1.30	-0.77	-0.86	0.09
April	-0.10	-1.00	-0.64	0.90	-0.20	-1.40	-0.80	1.20	-0.64	-0.80	0.16
May	-0.10	-0.80	-0.38	0.70	-0.10	-1.00	-0.57	0.90	-0.38	-0.57	0.19
June	+0.40	-0.40	+0.02	0.80	-0.00	-0.60	-0.27	0.60	+0.02	-0.27	0.29
July	+0.40	-0.30	+0.04	0.70	-0.00	-0.60	-0.30	0.60	+0.04	-0.30	0.34
August	+0.40	-0.60	-0.07	1.00	-0.00	-0.70	-0.27	0.70	-0.07	-0.27	0.20
September	+0.60	-0.90	-0.11	1.50	-0.00	-1.20	-0.34	1.20	-0.11	-0.34	0.23
October	+0. 0	-1.00	-0.25	1.60	-0.00	-1.20	-0.43	1.20	0.25	-0.43	0.18
November	+0.30	-1.00	-0.48	1.30	-0.10	-1.20	-0.59	1.10	-0.48	-0.59	0.11
December	+0.20	-1.30	-0.63	1.40	-0.20	-1.30	-0.71	1.10	-0.63	-0.71	0.09
YEAR, 1896	+0.40	-1.70	-0.39	2.30	0.00	-1.70	-0.58	1.70	-0.39	-0.58	0.19

TABLE SHOWING MAXIMUM, MINIMUM AND MEAN WATER IN
LAKE MICHIGAN ANNUALLY, FROM 1854 TO 1896, BOTH
INCLUSIVE, IN FEET.

Year.	Max.	Min.	Mean.	Year.	Max.	Min.	Mean.
1854.....	.....	.....	1.83	1876.....	4.31	0.34	2.56
1855.....	3.45	0.15	1.56	1877.....	3.56	1.04	2.31
1856.....	3.56	0.42	1.60	1878.....	3.14	0.51	2.00
1857.....	4.35	0.60	2.42	1879.....	2.51	-0.49	1.06
1858.....	4.69	1.33	2.00	1880.....	2.81	-0.99	1.16
1859.....	4.45	1.31	2.98	1881.....	3.01	-2.19	1.26
1860.....	3.53	1.30	2.54	1882.....	3.01	-0.99	2.00
1861.....	4.40	1.20	2.56	1883.....	3.81	-0.99	2.10
1862.....	3.30	0.70	2.50	1884.....	3.31	-0.01	2.24
1863.....	3.30	-0.80	2.10	1885.....	3.71	-0.01	2.48
1864.....	2.80	-0.40	1.57	1886.....	4.41	0.01	2.64
1865.....	3.66	-1.08	1.30	1887.....	3.11	0.01	1.96
1866.....	2.50	0.00	1.07	1888.....	3.01	0.01	1.30
1867.....	2.60	-0.41	1.49	1889.....	2.51	-0.79	0.77
1868.....	2.58	-1.00	1.01	1890.....	2.21	-0.99	0.63
1869.....	2.13	0.41	1.13	1891.....	1.61	-2.39	0.05
1870.....	3.25	-0.30	2.09	1892.....	1.30	-3.60	-0.17
1871.....	2.80	-0.40	1.77	1893.....	1.00	-1.30	-0.20
1872.....	1.80	-0.74	0.81	1894.....	1.80	-1.80	0.50
1873.....	2.73	-0.76	1.40	1895.....	0.63	-1.24	-0.49
1874.....	2.80	-0.20	1.67	1896.....	0.00	-1.70	-0.58
1875.....	3.01	-0.34	1.45				

Table showing Precipitation and Mean Temperature and Mean Barometric Pressure in inches, and degrees Fahr., over the basin of upper lakes, and Mean Water in Lake Michigan, in inches, by years, from 1871 to 1896, both inclusive, with the annual increase or decrease.

YEAR	BASIN OF UPPER LAKES.									LAKE MICHIGAN.		
	Precipitation.	Difference with Preceding Year.		Mean Temp.	Difference with Preceding Year.		Pressure.	Difference with Preceding Year.		Levels of Mean Water.	Difference with Preceding Year.	
	Inches.	Inc.	Dec.	Deg's.	Inc.	Dec.	Inches.	Inc.	Dec.	Inches.	Inc.	Dec.
1871	30.75			47.2			29.26			21.24		
1872	29.59		1.16	44.2		3.0	29.26	0.00	0.00	9.62		11.62
1873	32.49	2.90		44.3	0.1		29.25		.01	16.80	7.18	
1874	29.56		2.93	46.3	2.0		29.31	.06		20.04	3.24	
1875	33.06	3.50		42.0		4.3	29.26		.05	17.40		2.64
1876	28.93		4.13	45.1	3.1		29.25		.01	30.72	13.32	
1877	36.23	7.30		47.5	2.4		29.28	.03		27.72		3.00
1878	38.35	2.12		49.2	1.7		29.22		.06	24.00		3.72
1879	35.51		2.84	46.5		2.7	29.30	.08		12.72		11.28
1880	38.36	2.85		47.0	0.5		29.28		.02	13.92	1.20	
1881	42.42	4.06		47.1	0.1		29.29	.01		15.12	1.20	
1882	37.28		5.14	48.2	1.1		29.29	.00	.00	24.00	8.88	
1883	32.66		4.62	44.4		3.8	29.28		.01	25.20	1.20	
1884	34.31	1.65		46.2	1.8		29.28	.00	.00	28.88	1.68	
1885	32.99		1.32	43.8		2.4	29.26		.02	28.56	1.68	
1886	30.56		2.43	45.8	2.0		29.28	.02		31.68	3.12	
1887	29.63		0.93	45.5		0.3	29.29	.01		23.52		8.16
1888	27.57		2.06	43.8		1.7	29.31	.02		15.60		7.92
1889	28.65	1.08		45.9	2.1		29.29		.02	9.24		6.36
1890	34.58	5.93		46.0	0.1		29.30	.01		7.56		1.68
1891	29.62		4.96	46.4	0.4		29.30	.00	.00	0.60		6.96
1892	34.15	4.53		44.7		1.7	29.31	.01		-2.04		2.64
1893	31.46		2.69	43.8		0.9	29.26		.05	-2.35		0.31
1894	29.51		1.95	46.9	3.1		29.28	.02		6.00	8.35	
1895	26.03		3.48	44.9		2.0	29.29	.01		-5.88	0.00	11.88
1896	31.59	5.56		46.1	1.2		29.30	.01		-6.96	0.00	1.08

BY LAKE PERIODS.

YEAR	BASIN OF UPPER LAKES.									LAKE MICHIGAN.			ANNUAL.
	Precipitation.	Difference with Preced'g Year.		Mean Temp.	Difference with Preced'g Year.		Press-ure.	Difference with Preced'g Year.		Levels of Mean Water.	Difference with Preceding Year.		
	Inches	Inc.	Dec.	Deg's.	Inc.	Dec.	Inches.	Inc.	Dec.	Inches	Inc.	Dec.	
1871 to 1896	32.72			45.8			29.26			20.03			Means 1871-1879
	35.71	2.99		46.1	0.3		29.28	.02		23.91	3.88		" 1880-1886
	30.81		4.90	46.6	0.5		29.29	.01		7.45		16.46	" 1887-1893
	29.04		1.77	46.0		0.6	29.29	.00	.00	2.28		9.73	" 1894-1896
	32.53			45.7			29.28			15.11			" 26 years.

COMMERCE BY LAKE.

Notwithstanding the low water in Lake Michigan and the Chicago river, the trade of the City by lake increased 334,632 tons over that for the year 1895, while the number of vessels carrying this trade is 1233 less than the number similarly engaged in that year—both facts establishing the truth of the constantly increasing carrying capacity of the vessels entering our ports.

COMMERCE BY LAKE.—TONNAGE OF THE DISTRICT OF CHICAGO, 1896.
ENTRANCES.

PORTS.	COASTING TRADE.						FOREIGN TRADE.						TOTALS.								
	STEAM.			SAIL.			TOTAL.			STEAM.					SAIL.			TOTAL.			
	No.		Tons.	No.		Tons.	No.		Tons.	No.		Tons.			No.		Tons.	No.		Tons.	No.
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	
Chicago.....	5,366	4,152,719	1,810	603,578	7,076	4,756,307	13	11,965	65	18,978	78	30,943	7,154	4,787,260							
South Chicago.....	806	1,185,150	475	449,965	1,280	1,635,115	5	3,498	8	2,561	13	6,059	1,293	1,641,174							
Michigan City.....	157	41,746	59	10,982	216	52,728	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	6,328	5,379,625	2,344	1,064,525	8,573	6,444,150	18	15,463	73	21,539	91	37,002	8,663	6,481,152							

CLEARANCES.

PORTS.	COASTING TRADE.						FOREIGN TRADE.						TOTALS.	
	STEAM.		SAIL.		TOTAL.		STEAM.		SAIL.		TOTAL.			
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.		
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Chicago	5,148	4,010,923	1,739	575,099	6,887	4,586,022	98	83,375	122	50,125	215	133,500	7,102	4,719,522
South Chicago	878	1,296,568	488	461,998	1,366	1,757,581	50	43,021	34	18,264	34	.....	1,450	1,817,866
Michigan City	157	41,572	64	12,243	321	53,815	.....	.....	.....	.....	.....	.....	221	53,815
Total	6,183	5,348,078	2,291	1,049,340	8,474	6,397,418	143	126,396	156	68,389	299	193,783	8,773	6,591,303

CITY OF CHICAGO—SUMMARY OF COMMERCE BY LAKE.

WHERE.	ENTRANCES.		CLEARANCES.		TOTALS.	
	VESSELS.	TONNAGE.	VESSELS.	TONNAGE.	VESSELS.	TONNAGE.
Chicago river.....	7,154	4,787,250	7,102	4,719,522	14,256	9,506,772
Calumet river.....	1,298	1,641,174	1,450	1,817,866	2,748	3,459,040
AVERAGE CARGO:						
	Tons.					
Chicago river.....	667					
Calumet river.....	1,261					
City	763					
City of Chicago.....	8,447	6,428,424	8,552	6,537,888	16,999	12,965,812

Of the fifty-four leading items of our trade by the lake, the following principal ones are selected:

SHIPPED FROM CHICAGO.

Flour, barrels 1,736,935 as against 1,148,489 in 1895.
 Grain, bushels 110,952,258 " " 80,420,296 " 1895.
 Packages of miscellaneous merchandise, 2,415,236 " " 1,967,209 " 1895.

RECEIVED AT CHICAGO.

Coal, tons 1,360,300 as against 1,268,564 in 1895.
 Lumber, Laths and Shingles, feet of .. 940,116,000 " " 1,277,527,000 " 1895.
 Grain, bushels 127,821 " " 1,507,610 " 1895.
 Packages of miscellaneous merchandise 13,230,269 " " 9,702,381 " 1895.

COMPARATIVE STATEMENT

of entrances and clearances for the fiscal year ending June 30, 1896, from the Supervising Agent of the Treasury Department:

Baltimore, Md.....	entrances, 1,810	clearances, 2,683	total, 4,493
Boston, Mass.....	" 3,019	" 3,243	" 6,262
New Orleans, La.....	" 1,212	" 1,189	" 2,401
Philadelphia, Pa.....	" 1,846	" 2,064	" 3,910
San Francisco, Cal.....	" 1,105	" 1,395	" 2,500
Totals.....	entrances, 8,992	clearances, 10,574	total, 19,566
New York, N. Y.....	entrances, 7,174	clearances, 6,788	total, 13,962
Chicago, Ill.....	" 9,263	" 9,424	" 18,687
Chicago less than the total for Baltimore, Boston, New Orleans, Philadelphia and San Francisco.....			879
Chicago more than New York.....			4,725

The tonnage of the principal American and European ports, year 1894, from report of Chief of the Bureau of Statistics, Treasury Department, Washington, D. C.:

	Tons.		Tons.
London	14,433,580	Antwerp.....	10,083,228
Chicago.....	10,284,172	Hamburg	12,447,706
Liverpool	10,489,578	Bremen.....	4,325,487
Cardiff	10,478,394	New York	15,333,398
Hull	3,933,123	Boston.....	3,403,682
Tyne Ports	8,655,115	Philadelphia	3,173,031
Glasgow ..	2,760,274	Baltimore	2,727,486
Havre.....	4,562,692	New Orleans	2,230,692
Bordeaux	2,168,472	San Francisco.....	3,528,291
Dunkirk.....	2,381,588	Puget Sound	3,654,929
Marseilles.....	7,374,591	Chicago, 1896	12,965,812

COMMERCE BY LAKE AND CANAL—CITY OF CHICAGO,

from 1848 to 1896, by years, with population 1831 to 1896. Compiled from official records of the Department.

Year.	VESSELS BY LAKE.			BY ILL. & MICH. CANAL.			POPULATION.	REMARKS.
	Total No.	Total Tonnage.	Average Cargo, Ton.	Boats, No.	Tonnage.	Tolls Dollars.		
1848	.....	.....	.....	.....	.....	87,890	20,023	
1849	.....	.....	.....	.....	.....	118,375	23,047	
1850	.....	.....	.....	.....	.....	125,504	28,269	
1851	.....	.....	.....	.....	.....	173,300	34,000	
1852	.....	.....	.....	.....	.....	168,577	38,734	
1853	.....	.....	.....	.....	.....	173,372	60,662	
1854	.....	.....	.....	.....	.....	198,326	65,872	
1855	.....	.....	.....	.....	.....	180,519	80,023	
1856	.....	.....	.....	.....	.....	184,310	86,000	
1857	.....	.....	.....	.....	.....	197,830	93,000	
1858	.....	.....	.....	.....	.....	197,171	84,000	
1859	.....	.....	.....	.....	.....	132,147	94,000	
1860	.....	.....	.....	201	367,437	138,554	109,460	
1861	.....	.....	.....	194	547,295	218,040	120,000	
1862	14,687	3,847,246	262	211	673,590	264,647	137,030	Population Prior Years.
1863	17,135	4,333,832	252	240	619,599	210,386	150,000	
1864	17,762	4,339,770	244	228	510,286	156,607	161,288	
1865	20,179	4,199,135	208	228	616,140	300,810	178,492	1831 60
1866	22,199	4,620,092	208	230	746,815	202,958	200,418	1832 600
1867	24,370	5,101,203	209	209	746,954	252,231	225,000	1833 350
1868	26,399	6,005,403	265	218	737,827	215,720	252,054	1834 1,900
1869	27,602	6,273,346	227	219	817,738	238,759	280,000	1835 3,265
1870	25,172	6,033,207	239	179	585,970	149,635	298,700	1836 4,000
1871	24,632	6,178,336	251	186	628,975	159,050	334,270	1837 4,179
1872	25,353	6,077,542	239	173	783,641	165,874	367,396	1838 4,000
1873	23,734	6,564,542	239	172	849,533	166,641	380,000	1839 4,200
1874	21,547	6,329,711	204	152	712,020	144,831	395,400	1840 4,470
1875	21,095	6,279,055	298	142	676,025	107,081	407,000	1841 5,500
1876	19,245	6,167,736	320	145	691,946	113,293	420,000	1842 6,590
1877	20,517	6,585,415	321	145	605,912	96,913	439,776	1843 7,580
1878	20,984	7,239,673	345	140	598,792	84,330	450,000	1844 8,000
1879	23,873	7,757,395	325	136	669,559	89,064	475,000	1845 12,088
1880	25,520	9,154,351	345	133	751,360	92,296	503,298	1846 14,169
1881	26,005	8,762,247	337	133	826,133	85,130	540,000	1847 16,859
1882	26,977	9,754,949	362	132	1,011,287	85,947	560,693	
1883	23,932	7,790,337	325	132	925,575	77,975	580,000	
1884	22,826	7,508,696	330	134	956,721	77,102	630,000	
1885	21,542	7,306,222	339	135	827,355	66,800	664,634	
1886	22,372	7,877,080	352	130	803,019	62,516	704,000	
1887	23,972	8,749,852	365	132	742,074	58,024	760,000	
1888	22,095	8,890,658	402	127	751,055	56,028	830,000	
1889	21,788	10,267,831	471	114	917,047	60,605	1,100,000	
1890	20,133	10,116,051	502	104	742,392	65,112	1,200,000	
1891	19,680	10,862,898	522	97	641,156	49,557	1,320,000	
1892	21,123	11,780,393	565	95	783,288	54,937	1,450,000	
1893	17,044	10,788,029	692	82	529,816	38,702	1,600,000	
1894	16,202	10,284,178	635	85	617,811	44,928	1,640,000	
1895	18,232	12,631,180	693	83	591,407	39,106	1,725,000	
1896	16,999	12,965,812	763	67	446,762	34,543	2,000,000	

TABLE SHOWING MOVEMENTS OF COMMERCE BY LAKE, IN PERIODS FROM 1862 TO 1896, BOTH INCLUSIVE.

PERIOD.	YEARLY AVERAGE TONNAGE.			YEARLY AVERAGE NO. VESSELS.			YEARLY AVERAGE CARGO.		
	Tons.	Increase or Decrease.		No.	Increase or Decrease.		Tons.	Increase or Decrease.	
		Tons.	Per cent.		No.	Per cent.		Tons.	Per cent.
1863 to 1870	4,972,582	.....	.....	21,723	.....	.....	229	.....	.....
1871 to 1880	6,838,376	+1,860,794	37.4	22,650	+ 927	+ 4.3	302	+ 78	32.0
1881 to 1890	8,702,693	+1,869,317	27.4	23,169	+ 519	+ 2.3	376	+ 74	24.5
1891 to 1896	11,552,082	+2,849,389	32.7	18,231	-4,956	-21.4	634	+258	68.6

A study of the foregoing table is instructive. We see that our trade by the lake for the ten years ending 1880 averaged annually $37\frac{4}{10}$ per cent. more than the annual average from 1862 to 1870, but for the next ten years, 1881 to 1890, the annual average falls to only $27\frac{4}{10}$ per cent. of an increase over that for 1871 to 1880; yet a better condition is reached in the annual average of the last six years, which is $32\frac{7}{10}$ per cent. greater than that for the period 1881 to 1890. The increase in the average cargo and the marked decrease in the average number of vessels are suggestive. The average cargo for the last six years is $68\frac{6}{10}$ per cent. greater than that for the ten years ending in 1890, and the decade 1881-1890 was itself $24\frac{5}{10}$ per cent. greater than the average cargo for the ten years 1871 to 1880, which surpassed the average cargo for the period 1862 to 1870 by 32 per cent. The average number of vessels gradually decreased to the period ending 1890, when it was $21\frac{3}{10}$ per cent. over the average number for period 1871 to 1880; but in the last six years the average number fell 4,956 vessels per year, or $21\frac{4}{10}$ per cent. less than the average number for the ten years 1881 to 1890.

The greatest number of vessels that entered the port of Chicago in any one year was in 1869, when it was 27,602, carrying 6,273,346 tons; and the least number was in 1862, when it was 14,687, carrying 3,847,246 tons.

The steady, well defined increase in the carrying capacity of the vessels now entering our ports, and the decided decrease in the number of vessels while our lake trade increases every year, make an imperative demand for greater depth in both the Chicago and Calumet rivers; especially is this true in the case of the former.

VESSEL MOVEMENT IN CHICAGO RIVER.

The following tables of the movement of vessels inside the Chicago river have been compiled from the records of the Vessel Dispatcher's office, but these records do not show the vessel movements in the Calumet river. Movement of vessels and operation of bridges from April to December, 1896, day and night—from records of the Vessel Dispatcher.

BRIDGES.	NUMBER.				AVERAGE.					PERCENTAGE OF TIME.	
	Days in Service.	Hours Open.	Vessels Passed.	Swings of Bridge.	No. of Vessels per Day.	No. of Swings per Day.	Time Open per Swing.	Time Open per Hour.	Time Open per Day.	Bridge Closed.	Bridge Open.
		<small>h. m.</small>					<small>m. s.</small>	<small>m. s.</small>	<small>m. s.</small>		
Rush street..	229	376.41	10,237	8,565	44.70	37.40	2.64	4.11	98.69	93.15	.0685
State street..	229	306.33	9,607	7,858	41.95	34.81	2.34	3.85	80.32	94.43	.0557
Dearborn st..	229	295.14	9,171	7,496	40.05	32.73	2.36	3.22	77.35	94.63	.0537
Wells street..	229	281.25	8,208	6,756	35.84	29.50	2.50	3.07	73.73	94.88	.0512
Lake street..	229	294.49	6,137	5,121	26.81	22.36	3.45	3.22	77.24	94.64	.0536
Jackson street	229	249.21	6,205	5,240	27.10	22.8	2.86	3.72	65.33	95.47	.0453
Harrison st..	229	318.37	6,110	4,963	26.68	21.67	3.85	3.48	83.48	94.21	.0579
12th street...	229	280.15	6,054	5,013	26.44	21.89	3.35	3.06	73.43	94.91	.0509
18th street...	229	218.01	5,048	4,419	22.04	19.30	2.96	2.38	57.12	96.03	.0397
22nd street..	229	247.48	4,875	4,143	21.29	18.09	3.59	2.75	64.98	95.49	.0451
Kinzie street.	229	294.21	6,095	4,858	26.62	19.03	4.05	3.21	77.12	94.64	.0536

DETAILS OF VESSEL MOVEMENTS—PASSING BRIDGES, BY MONTHS, YEAR 1896.

MONTHS, 1896.	Rush St.			State St.			Dearborn St.			Wells St.			Lake St.			Jackson St.			Harrison St.			12th St.			18th St.			22nd St.			Kinzie St.		
	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.	No. Vessels.	No. Swings.	Minutes Open.
May	1297	1017	2784	1166	899	2463	1147	913	2163	1087	872	2264	818	658	2331	811	644	1857	783	634	2435	779	658	1864	661	551	1669	638	527	1780	754	477	2221
June	1523	1248	3648	1430	1132	2799	1348	1070	2487	1208	940	2130	906	728	2428	915	735	2147	899	679	2536	915	708	1892	760	653	1978	787	601	2398	873	614	2526
July	1767	1510	4208	1731	1302	3023	1602	1271	2947	1401	1118	2994	986	814	2779	988	801	1559	1014	825	2728	980	814	2184	850	769	2205	828	699	2410	978	737	2832
August	1644	1394	3928	1550	1295	2850	1430	1166	2884	1334	1073	2945	887	723	2506	880	745	2347	856	685	2515	843	707	2059	775	658	1966	694	580	2182	840	594	2416
September.	1304	1114	2712	1123	969	2197	1036	897	2212	880	738	2151	754	657	2123	758	684	1922	761	635	2453	740	619	2366	644	575	1841	616	530	1895	801	589	2278
October ..	1239	1063	2534	1239	1063	2534	1239	1063	2534	1083	913	2270	880	723	2404	896	768	2111	847	700	2951	847	700	2951	653	560	1618	671	569	2413	828	623	2490
November.	1133	867	2143	1063	932	2151	1063	932	2115	981	836	1965	720	628	2328	751	670	2000	752	621	2749	752	621	2749	569	515	1383	545	489	1369	745	532	2070
December.	380	325	744	286	266	576	266	266	576	266	266	576	206	190	700	204	191	812	198	182	750	198	183	750	146	138	421	146	138	421	276	202	818

An examination of the preceding tables of the movement of vessels shows that of the whole number engaged in our trade by the lake 16.14 per cent used the Calumet river, and the balance or 83.86 per cent. used the Chicago river. Of this latter number, 28.2 per cent. stopped east of Rush street bridge, 71.8 per cent. going west of it; 14.2 per cent. of the whole number using the Chicago river stopped between Wells and Rush street bridges, 57.6 per cent. of our whole Chicago river vessel movement going west of Lake street bridge.

Twenty-eight and nine-tenths per cent. of our Chicago river vessels passed down the South branch, while 28.7 per cent. of them passed up the North branch. In addition to this, there was a movement from branch to branch of Chicago river, for of the vessels passing west of Wells street bridge 2,012 passed Kinzie and Lake street bridges, exchanging their positions from one branch to the other of the Chicago river, keeping west of Wells street while so doing.

Of the whole number of vessels that went down the South branch, 79.4 per cent. passed beyond Twenty-second street bridge; the balance or 20.6 per cent. of the vessels that entered the South branch remained north of Twenty-second street bridge.

No record has been kept during the year of the vessel movement in the North branch north of Kinzie street bridge, but during the year 1895, 73.58 per cent. of the whole North branch trade went up the North branch and the Ogden canal beyond Chicago avenue bridge.

The following tables of temperature and precipitation for Chicago, from 1830 and 1843 to 1896 respectively, have been compiled from the official records of the United States Signal Service and the United States Weather Bureau :

TEMPERATURE BY MONTHS, SEASONS AND YEARS, FROM 1830 TO
1896, INCLUSIVE—AT CHICAGO, ILL.

Year.	MONTHLY MEANS.												MEANS. SEASONS AND YEARS						Year.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Spring.	Summer.	Autumn.	Winter.	Annual.		
1830	23	20	37	53	59	64	75	72	58	57	45	26	49.7	70.3	53.3	.....	50	1830
1831	18	20	37	43	57	69	72	70	61	49	32	15	45.7	70.3	47.3	21.3	45	1831	
1832	24	15	37	49	55	68	70.6	71.4	62.9	54	39.9	33.2	47	70	52.3	18	45	1832	
1833	29.7	27.6	33.3	50.5	60.1	63.6	72.4	70.3	64	45.5	39.8	34.1	48	68.8	49.8	30.2	49.2	1833	
1834	13.3	34.9	36.6	47.4	54.6	62.9	74.3	71.2	60.1	46.3	40.3	29.6	46.2	69.5	48.9	27.4	47.6	1834	
1835	28.1	14	32	42.5	54.6	63.1	67.1	65	54.3	47.9	34.2	24.8	43	65.1	45.5	23.9	44	1835	
1836	22.4	21.7	26.1	42.4	53.5	58.6	66.5	61.9	56.7	46.8	34.3	24.2	40.7	62.3	45.9	23	42.9	1836	
1837	23	25	28	38	48	61	66	65	59	50	40	26	38	64	49.7	24.1	44	1837	
1838	25	11	42	49	40	50	66	74	69	58	48	25	19	44	69.7	43.7	20.7	44	1838
1839	30	28	35	53	54	61	73	66	54	59	31	27	47.8	66.7	48	25.3	48	1839	
1840	21	28	37	46	58	66	68	66	56	49	35	26	47	66.7	48.7	25.3	46	1840	
1841	22	23	35	41	56	67	69	67	57	48	37	27	43.7	67.7	47.3	23.7	46	1841	
1842	25	28	43	52	52	59	67	65	61	52	30	23	49.7	63.7	47.7	26.7	46	1842	
1843	26	13	18	45	53	65	71	67	65	44	23	32	38	67.7	47.3	20.4	44	1843	
1844	22	30.8	38.4	55.3	58.7	68	73.6	68	68.6	48	34	31	50.8	68.5	50.2	28.3	49	1844	
1845	35	35	39	51	58	68	75	70	63	51	37	23	49.3	71.3	50.3	33	50	1845	
1846	39	31	42	49	62	64	78	75	62	53	43	34	51	72.3	54	31	53	1846	
1847	30	30	32	42	53	65	78	67	64	51	41	30	44	69.3	52	35	48	1847	
1848	32	31	36	46	58	68	69	69	58	55	36	27	44.7	68.7	49.7	31	49	1848	
1849	22	21	38	42	50	66	70	66	62	50	45	27	43.3	67.3	52.3	23.3	46	1849	
1850	30	32	34	41	51	66	74	71	61	51	43	26	42	70.4	51.7	28	48	1850	
1851	28	35	40	45	53	64	71	61	61	51	36	23	46	68	51.3	29.7	49	1851	
1852	22	32	34	39	56	66	72	68	59	54	35	28	42.7	69	51	25.7	47	1852	
1853	29.7	29.1	37	47	52	67	68	68	63	50	39	30	44.7	67.7	50.4	28.9	48	1853	
1854	19	25	38	44	54	66	74	72	67	55	38	28	45.3	70.7	53.3	26	49	1854	
1855	26	18	31	48	56	62	70	67	63	46	37	22	45	66.6	48.3	24	45	1855	
1856	13	17	27	44	51	68	71	65	59	49	35	18.4	40.7	68	47.7	17.3	43	1856	
1857	10.7	30.6	27.9	34.6	50.4	63.1	71.5	67.7	62.8	48.9	29.9	31.4	37.6	67.8	47.2	19.9	44.2	1857	
1858	33	19	36	43	52	68	73	70	63	50	35	25	43.7	70.4	49.3	27.8	48	1858	
1859	27	29	38	41	55	62	74	71	59	49	32.9	15.7	44.7	69	47	28	46	1859	
1860	18.1	26.8	35.1	42.6	57.7	63	68.2	68.8	57.6	49.5	31.3	20.5	45.1	66.7	45.8	20.2	44.9	1860	
1861	21	29.4	31.7	43	49.1	63.2	66.2	68.5	61	48.4	34.1	28.4	41.3	66	47.8	23.9	44	1861	
1862	18.2	30.9	32.1	43	61.8	57	68	70.9	63.8	51.2	34.4	30.3	42.3	65.8	49.9	22.5	45.1	1862	
1863	33.5	20.6	31.9	41.9	52.7	59.4	65.6	65.6	56.9	39.9	33.4	26.3	42.2	63.5	43.4	28.1	44.3	1863	
1864	16.2	23.6	27.4	36.6	60.6	67.9	68	58.4	43	32.5	17.8	40.6	40.6	65.5	44.6	22	42.5	1864	
1865	17.2	26	32.2	42.6	51.3	61.2	62.9	66.3	46.6	35.4	20.2	42	42	64.7	49.4	20.3	44.3	1865	
1866	17.7	17.9	26.4	43.8	61.4	69.4	72.2	68.9	60.8	53.8	40.9	25.8	40.5	71.8	51.8	18.6	46.2	1866	
1867	19.9	30.8	29.5	46.5	60.7	72.4	73.1	74.5	67.4	56.1	43.5	28.8	42.2	73.3	55.7	25.6	49.4	1867	
1868	17.9	34.7	42.4	44.4	54.2	66	80.6	71.8	61.8	50.8	38	22.6	47	72.8	50	23.8	47.9	1868	
1869	31.2	29.3	29.5	45.2	53.1	64.3	71.2	72.1	64.9	43.2	33.9	28.6	42.6	69.2	47.3	27.7	47.2	1869	
1870	25.9	27.5	32.5	48.4	62.4	69.3	76.8	72.7	68.7	55.1	42.3	27.1	47.8	72.9	55.4	27.3	50.7	1870	
1871	30.9	30.2	41.2	51.2	66.7	66.8	73	72.7	61	54.6	35	20	49.7	70.8	50.2	29.7	49.4	1871	
1872	23	25.6	28.1	47.2	56.1	69.2	72.2	71.8	63.9	50.1	31.6	19	43.8	71.1	48.5	23.6	46.5	1872	
1873	20.4	34.1	34.3	43	52.7	70.3	70.8	72.1	62.1	48.9	34.5	32	43.7	71.1	48.4	21.2	47.2	1873	
1874	28.9	31.4	36.5	48.6	69.3	70.5	74.8	71.8	66.4	53	40.3	38.5	44.8	72.4	53.2	20.4	50.4	1874	
1875	17.9	14.7	31.8	42.5	55.5	63.1	68.8	68.4	61	47.5	37	36.8	43.3	66.8	48.5	32	44.4	1875	
1876	32	31.8	33.9	46.5	59	67.5	73.5	73.5	61.1	48.8	39.3	20	46.5	71.5	49.7	33.9	49	1876	
1877	21.9	36.4	29.4	45.4	56.9	66.1	73.1	71.1	66.5	54.7	39.7	42.8	43.9	70.1	53.6	26.1	50.3	1877	
1878	31.2	35.7	44.3	52.2	55.5	65.4	74.8	73.6	65.9	52	43.1	23.7	50.7	71.5	53.7	36.6	51.4	1878	
1879	21.4	27.4	39.1	46.8	57.6	64.7	73	72.6	61.2	59.9	41.9	30.3	47.8	70.1	54.3	24.2	49.9	1879	
1880	40.1	34.6	37.9	48.5	64.2	69.9	72.4	72.4	62.5	50.8	31.4	23	50.2	71.6	48.2	35	50.6	1880	
1881	19.5	24.7	32.2	41.5	61	63	72.9	75	69.5	55.9	39.9	37.1	44.9	70.3	55.1	22.4	49.4	1881	
1882	28.3	38.2	38.3	45.9	61.7	63.6	68.6	71.2	65	56.5	41.7	26	45.3	67.8	54.4	31.5	49.6	1882	
1883	13	23	31.4	45.6	52.1	64.1	71	68.3	60.7	51.8	41.5	30.1	43.3	67.8	51.3	21.8	46.3	1883	
1884	19.2	27.7	34.2	44.3	53.8	65.9	69.2	68.8	68.9	56.4	39.6	28.4	45.1	67.7	55	25.7	48.2	1884	
1885	18.3	16.8	30	45.3	53.8	65.4	72.8	68.1	63.9	51	41.9	31.1	42.7	69.1	52.8	21.2	46.4	1885	
1886	21.4	28.1	36.1	49.1	57	66	71.4	72.4	66.1	56.6	38.2	25	49.7	69.9	53.6	26.9	49	1886	
1887	17.8	27.1	31.9	47.4	64	67.3	76	69.7	62.5	47.3	38	28.1	46.2	70	49.3	23.1	47.7	1887	
1888	15.1	23	30.5	45.4	62.6	67.4	72.6	69.4	59.8	49.1	41.6	32.2	42.8	69.8	50.2	22.1	46.6	1888	
1889	29	19.9	38.4	46.8	56.8	62.3	70.5	70.6	62.8	49.4	38.6	40.6	47.7	67.8	50.3	27	48.8	1889	
1890	30.8	32.4	29.5	45.6	53.4	70.2	72.1	67.6	60.4	51.4	41.9	30.6	42.8	70	51.2	34.6	48.8	1890	
1891	30.2	28.6	30.6	47	53.4	65.7	67	69	69	52.6	33.8	35.4	43.7	67.2	51.8	29.8	48.5	1891	
1892	19	30.5	31	44	52.4	61.4	71.6	70.9	63.9	53.6	34.7	23.4	42.5	67.9	50.7	28.4	46.6	1892	
1893	12	21.5	33.2	44.3	52.8	67.8	73.8	69.8	64.1	52.6	36	25.4	43.3	70.5	50.9	18.9	46.1	1893	
1894	27.5	23	41.2	46.8	56.1	71.4	73.4	70.8	66.2	52.1	34.4	32.4	48	72.5	50.9	25.3	49.6	1894	
1895	15.5	17	31.7	46.1	59.1	70	70.2	72.5	68.6	46.2	36.5	30	45.6	70.9	50.4	22.3	47.1	1895	
1896	27	26.6	31.3	53.4	65.4	67	72.3	72.8	60.5	49.5	38.4	32.1	50	70.7	49.4	27.8	49.8	1896	

**PRECIPITATION AT CHICAGO, ILL., IN INCHES AND DECIMALS BY
MONTHS, SEASONS AND YEARS, FROM 1843 TO 1896, INCLUSIVE.**

Year.	MONTHLY TOTALS.												TOTALS, SEASONS AND YEARS.					Year.
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Spring.	Summer.	Autumn.	Winter.	Annual.	
1843	2.0	1.9	3.0	4.5	4.0	4.6	1.4	2.4	3.0	1.2	5.1	2.4	11.5	8.4	9.3	...	35.50	1843
1844	2.8	1.3	1.76	2.76	6.0	5.5	5.0	4.2	0.8	1.6	0.7	0.7	10.52	14.7	3.1	6.5	33.12	1844
1845	0.0	0.5	2.2	6.5	2.0	3.8	3.5	1.2	4.4	1.4	3.3	1.5	10.7	8.5	9.1	3.2	32.30	1845
1846	4.9	1.8	2.6	7.8	2.4	4.3	2.9	1.0	5.0	0.8	1.5	5.0	12.8	8.2	7.3	8.2	40.00	1846
1847	2.3	3.5	1.5	2.1	3.3	1.5	2.8	2.0	3.2	4.6	4.8	1.2	6.9	6.3	12.6	10.8	32.80	1847
1848	1.6	2.4	4.5	3.3	3.8	4.4	3.4	5.1	2.2	3.2	2.1	8.4	11.6	12.9	7.5	5.2	44.40	1848
1849	5.5	1.0	4.7	1.8	3.8	3.6	2.3	3.5	2.6	2.8	1.4	1.2	10.3	9.4	6.8	14.9	31.20	1849
1850	2.1	0.7	2.0	3.8	1.9	3.1	2.1	6.4	1.4	2.0	3.2	1.7	7.7	11.6	7.6	4.0	30.40	1850
1851	1.5	3.8	0.8	4.2	6.7	5.3	3.8	3.1	3.2	2.3	2.3	1.6	11.7	12.2	7.8	7.0	38.60	1851
1852	2.0	1.2	5.5	4.8	2.4	2.5	3.4	0.6	2.3	6.8	4.0	3.3	12.7	6.5	13.1	4.8	38.80	1852
1853	1.4	2.2	1.8	2.8	4.4	4.9	6.1	2.2	4.2	2.0	2.1	2.8	9.0	13.2	9.3	6.9	36.40	1853
1854	1.3	1.9	2.1	2.1	3.1	2.6	3.0	0.9	1.6	3.6	1.0	1.4	7.3	6.5	6.2	5.5	24.60	1854
1855	8.0	0.6	2.6	1.4	2.5	3.7	5.8	3.2	2.3	2.0	2.2	2.0	6.5	12.7	6.5	10.0	36.30	1855
1856	0.9	1.8	0.6	2.6	4.8	2.5	2.1	1.3	2.5	2.1	3.98	3.86	8.0	6.9	8.55	4.7	29.04	1856
1857	1.09	5.43	2.5	2.19	6.33	4.14	3.0	5.0	2.2	4.0	2.7	1.2	11.02	12.14	8.9	10.38	39.83	1857
1858	1.3	1.4	3.0	3.1	7.8	6.3	5.9	3.2	4.0	4.6	4.5	2.0	13.9	15.4	13.1	1.9	47.10	1858
1859	1.4	1.8	5.2	3.4	3.6	1.7	0.9	0.4	2.2	4.1	2.8	1.8	12.2	3.0	9.1	5.2	29.30	1859
1860	1.6	1.6	1.0	2.8	4.6	3.5	5.3	2.6	2.8	4.1	2.3	4.2	8.4	11.4	9.2	5.0	36.40	1860
1861	1.4	3.0	3.4	4.7	3.7	2.1	4.3	2.4	3.4	7.5	1.5	1.9	11.8	8.8	12.4	8.6	39.30	1861
1862	4.0	0.7	3.0	5.2	4.3	2.9	6.7	3.6	5.6	2.92	1.2	1.3	11.5	13.2	9.72	6.6	40.42	1862
1863	2.8	2.6	2.1	2.1	5.1	1.3	2.3	4.2	1.6	4.0	1.9	3.6	9.3	7.8	7.5	6.7	33.60	1863
1864	1.6	0.4	2.1	3.2	1.9	2.1	6.4	1.1	2.1	1.9	3.1	2.5	7.3	9.6	7.1	5.6	28.40	1864
1865	0.4	3.1	3.1	3.8	1.5	5.1	6.1	7.2	4.8	4.0	0.5	0.6	8.4	18.5	9.3	6.0	40.20	1865
1866	2.8	1.6	2.2	2.8	2.0	4.4	4.7	4.2	4.6	2.8	0.8	3.4	7.0	13.3	8.2	5.0	36.30	1866
1867	1.93	2.22	1.58	1.70	4.42	1.86	1.52	2.33	0.57	1.28	1.89	1.11	7.70	5.71	3.74	7.55	22.41	1867
1868	1.28	0.92	5.24	3.00	3.74	3.11	2.87	3.56	7.08	1.69	2.60	1.40	11.98	9.45	11.37	3.21	36.48	1868
1869	1.97	2.23	1.33	4.30	5.69	5.03	3.26	1.32	0.89	1.10	2.42	2.03	11.22	10.61	4.1	5.60	31.57	1869
1870	1.95	0.86	1.81	1.15	0.80	1.70	3.71	2.07	2.82	2.43	1.16	2.46	3.78	7.48	6.41	4.84	22.92	1870
1871	4.13	1.45	2.66	3.79	3.90	5.56	2.52	2.01	0.74	1.88	3.62	3.41	10.35	10.10	12.24	8.04	35.61	1871
1872	0.68	0.84	3.79	3.03	3.24	3.45	3.09	2.59	6.43	0.65	1.06	0.22	10.06	9.13	8.14	5.14	29.07	1872
1873	2.56	0.47	0.89	6.22	7.20	1.44	4.04	1.58	3.53	2.43	1.61	4.44	14.31	7.06	7.57	3.25	36.41	1873
1874	3.47	1.51	2.15	2.67	2.08	3.25	0.58	3.15	3.76	2.55	2.83	0.63	6.90	6.98	8.14	8.42	28.63	1874
1875	0.96	1.99	1.43	2.32	3.64	5.17	7.18	3.28	4.39	4.32	0.75	2.62	7.39	15.60	9.46	8.58	38.06	1875
1876	3.22	3.80	4.07	2.07	1.85	5.96	3.11	3.66	3.74	1.20	3.25	0.48	7.96	12.73	8.29	9.74	36.48	1876
1877	1.91	0.06	5.34	2.42	1.81	6.04	2.98	3.06	2.02	6.15	6.08	2.75	9.60	12.08	14.25	2.45	41.01	1877
1878	1.31	2.12	4.39	5.57	5.22	3.02	6.09	3.66	1.99	5.17	0.83	2.54	15.18	12.77	7.99	6.18	41.95	1878
1879	0.54	1.47	2.12	1.93	3.89	3.18	5.58	0.45	1.18	2.72	4.93	2.47	8.19	9.21	8.83	4.69	30.71	1879
1880	3.53	2.91	2.25	5.20	4.97	3.60	3.07	4.47	2.25	3.19	0.87	1.11	12.42	10.04	6.31	8.81	37.32	1880
1881	0.87	5.98	2.96	1.84	1.85	5.93	4.31	0.54	4.31	6.89	5.97	2.67	6.68	10.78	17.21	8.06	44.18	1881
1882	1.55	2.24	3.43	6.72	5.52	5.71	3.43	4.96	0.91	3.40	1.48	1.99	15.07	14.00	5.87	6.46	41.84	1882
1883	1.74	4.74	4.42	3.72	7.32	5.61	5.53	1.21	1.36	1.36	5.26	1.59	11.46	12.36	13.98	8.47	45.86	1883
1884	1.30	3.27	5.16	3.05	1.53	2.11	3.71	2.50	2.29	3.59	1.80	4.21	9.74	8.32	7.68	6.25	34.61	1884
1885	1.18	2.01	0.57	4.00	3.17	5.20	2.44	11.28	2.97	3.87	2.33	3.35	7.74	18.92	9.17	9.40	44.37	1885
1886	3.56	1.51	1.79	1.29	1.00	0.94	1.53	3.38	6.83	1.42	1.66	1.76	4.08	5.85	10.01	8.42	26.77	1886
1887	3.13	5.10	0.89	0.46	1.38	1.63	1.05	3.35	4.03	2.03	2.41	3.87	2.63	6.03	4.47	9.29	29.13	1887
1888	1.56	1.51	2.99	2.13	6.22	1.66	3.93	2.10	0.98	2.85	2.89	1.94	11.34	7.69	6.72	6.74	30.86	1888
1889	1.64	1.31	1.43	2.35	6.38	2.93	9.56	0.39	2.76	1.82	4.59	1.80	9.18	12.88	8.06	4.09	34.95	1889
1890	2.98	2.42	3.10	3.23	5.13	3.25	2.57	2.56	1.39	4.20	1.59	1.25	10.46	8.40	7.18	7.90	32.69	1890
1891	1.99	1.95	2.13	3.14	2.09	2.42	2.47	4.52	0.32	0.36	2.83	1.63	7.36	9.41	4.51	5.19	26.54	1891
1892	1.99	1.67	2.21	2.17	6.77	10.58	2.23	1.85	1.34	1.54	2.68	1.63	11.15	14.66	5.56	4.88	36.56	1892
1893	2.08	2.44	1.69	4.16	1.93	3.59	3.08	0.18	1.98	1.75	2.45	2.14	7.78	6.85	6.18	6.15	27.47	1893
1894	1.55	2.15	2.66	2.65	3.35	1.96	0.60	0.60	0.28	0.84	1.18	1.66	8.66	3.16	10.30	5.84	27.46	1894
1895	2.15	1.60	1.32	0.86	1.99	1.79	2.62	6.49	0.89	0.51	5.60	6.76	4.17	10.70	7.00	5.41	38.38	1895
1896	1.12	3.48	1.26	2.79	4.16	2.63	3.61	3.52	6.70	1.46	2.16	0.16	8.21	9.96	10.22	11.36	33.14	1896

Tables of meteorological data for Chicago are furnished through the courtesy of the Chief and local officers of the United States Weather Bureau, Department of Agriculture.

MONTHLY MEAN BAR. PRESSURE—ANNUAL MEANS, FROM
1873 TO 1896—FOR CHICAGO.

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Annual.
1873.....	29.13	29.14	29.14	29.05	29.02	29.10	29.13	29.17	29.17	29.15	29.11	29.21	29.13
1874.....	.21	.22	.18	.19	.11	.09	.13	.13	.16	.21	.19	.22	.17
1875.....	.31	.19	.10	.10	.06	.10	.12	.10	.17	.10	.17	.03	.13
1876.....	.16	.15	.10	.09	.10	.02	.12	.16	.12	.06	.10	.18	.11
1877.....	.22	.27	.14	.07	.15	.04	.09	.09	.14	.11	.14	.19	.14
1878.....	.14	.05	.04	28.91	.06	.06	.11	.04	.18	.12	.15	.16	.08
1879.....	.22	.19	.18	29.13	.16	.13	.10	.11	.21	.25	.18	.19	.17
1880.....	.13	.16	.19	.06	.11	.10	.12	.16	.18	.18	.28	.21	.16
1881.....	.23	.21	.00	.13	.15	.07	.15	.15	.09	.20	.18	.21	.15
1882.....	.23	.13	.16	.15	.11	.02	.15	.12	.21	.14	.25	.20	.16
1883.....	.23	.35	.15	.07	.06	.06	.12	.20	.20	.22	.19	.19	.17
1884.....	.25	.13	.13	.07	.07	.16	.06	.17	.15	.24	.19	.20	.15
1885.....	.22	.10	.18	.13	.05	.15	.10	.11	.16	.11	.09	.15	.13
1886.....	.15	.17	.08	.17	.09	.12	.11	.11	.17	.30	.13	.27	.16
1887.....	.16	.23	.18	.07	.11	.11	.10	.14	.20	.17	.17	.16	.15
1888.....	.31	.14	.20	.25	.04	.05	.16	.16	.19	.09	.24	.17	.17
1889.....	.03	.21	.11	.13	.07	.10	.10	.20	.14	.25	.18	.15	.14
1890.....	.23	.16	.18	.21	.14	.11	.14	.19	.23	.06	.17	.20	.16
1891.....	.16	.11	.14	.12	.23	.07	.16	.12	.25	.22	.17	.14	.16
1892.....	.20	.20	.17	.15	.02	.06	.20	.15	.21	.18	.17	.20	.16
1893.....	.08	.19	.11	.01	.03	.10	.10	.15	.12	.13	.14	.18	.11
1894.....	.17	.20	.11	.12	.07	.13	.16	.17	.17	.06	.17	.19	.14
1895.....	.10	.32	.14	.12	.13	.17	.14	.08	.14	.18	.21	30.00	.25
1896.....	29.23	29.04	29.16	29.14	29.07	29.11	29.15	29.16	29.15	29.17	29.21	29.27	29.16

MAXIMUM DAILY PRESSURE, 1896.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....	29.13	29.10	29.24	29.06	28.96	29.34	29.34	29.16	29.38	29.36	29.09	29.70
2.....	29.10	29.11	29.55	29.20	29.02	29.35	29.22	29.14	29.23	29.31	29.08	29.61
3.....	29.62	28.73	29.59	29.49	29.14	29.24	29.19	29.17	29.35	29.31	29.25	29.67
4.....	29.69	28.84	29.55	29.50	29.09	29.10	29.11	29.15	28.35	29.32	29.00	29.11
5.....	29.57	28.85	29.37	29.46	29.14	29.13	29.17	29.06	29.00	29.29	29.02	28.95
6.....	29.29	28.85	28.93	29.49	29.27	29.13	29.24	29.17	29.12	29.39	29.12	29.20
7.....	29.38	29.08	29.20	26.56	29.35	29.05	29.35	29.20	29.18	29.49	29.10	29.36
8.....	29.34	29.12	29.31	29.56	29.39	28.93	29.31	29.10	29.18	29.51	29.10	29.30
9.....	29.15	28.93	29.25	29.26	29.39	29.03	29.20	29.10	29.11	29.45	20.15	29.10
10.....	29.21	29.00	28.97	29.35	29.22	29.16	29.28	29.14	29.09	29.32	29.06	29.20
11.....	29.14	29.32	28.99	29.16	29.11	29.22	26.33	29.16	29.18	29.25	29.28	29.72
12.....	29.24	29.34	29.30	29.15	29.02	29.02	29.26	29.26	29.36	29.29	29.42	28.91
13.....	29.40	29.21	29.59	28.98	29.00	29.12	29.15	29.27	29.45	29.31	29.49	29.10
14.....	29.64	29.33	29.71	28.99	29.02	29.21	29.12	29.23	29.32	29.26	29.38	29.16
15.....	29.64	29.36	29.48	29.03	29.24	29.25	29.12	29.19	29.30	29.14	29.04	29.34
16.....	29.39	29.62	29.19	29.17	29.21	29.26	29.24	29.32	29.18	29.10	29.12	29.42
17.....	29.33	29.62	29.29	29.18	29.02	29.19	29.31	29.36	29.03	29.14	29.25	29.28
18.....	29.20	29.13	29.26	29.06	29.05	29.19	29.31	29.38	29.09	29.23	29.39	29.49
19.....	29.28	29.12	29.22	29.24	29.20	29.11	29.23	29.51	29.38	29.22	29.63	29.48
20.....	29.25	29.51	29.33	29.22	29.19	29.10	29.10	29.39	29.40	29.05	29.64	29.26
21.....	29.31	29.60	29.14	29.26	29.14	29.07	29.17	29.09	29.15	29.21	29.52	29.20
22.....	29.20	29.39	29.57	29.37	29.34	29.16	29.23	28.95	29.49	29.26	29.63	29.11
23.....	29.00	29.19	29.65	29.27	29.35	29.11	29.27	29.20	29.52	29.14	29.39	29.65
24.....	29.00	28.38	29.62	29.17	29.26	29.14	29.12	29.28	29.33	29.16	29.63	29.81
25.....	29.38	29.42	29.09	29.25	29.01	29.32	29.22	29.19	29.18	29.19	29.39	29.73
26.....	29.54	28.87	29.23	29.11	29.04	29.44	29.16	29.27	29.31	29.20	29.09	29.66
27.....	29.49	28.70	29.24	29.13	29.07	29.32	29.06	29.49	29.40	29.24	29.36	28.80
28.....	29.40	28.97	28.98	29.14	29.10	29.06	29.14	29.56	29.40	29.14	29.66	29.65
29.....	29.31	29.02	28.88	29.07	29.15	29.31	29.13	29.40	29.07	29.14	29.73	29.47
30.....	29.39	.....	29.16	28.96	29.04	29.37	29.25	29.13	29.14	28.84	29.76	29.47
31.....	29.28	.....	29.17	.....	29.19	.....	29.33	29.25	.....	28.95	.....	29.45
Means	29.33	29.16	29.29	29.22	29.15	29.18	29.22	29.24	29.26	29.23	29.32	29.43

Year 1896, 29.26 inches.

MINIMUM DAILY PRESSURE, 1896.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....	28.86	29.00	28.94	28.80	28.72	29.21	29.21	28.93	29.23	29.15	28.94	19.60
2.....	28.80	28.77	29.24	29.01	28.78	29.23	29.11	29.03	28.97	29.26	28.93	29.43
3.....	29.13	28.60	29.64	29.20	29.04	29.09	29.07	29.04	29.05	29.25	28.99	29.15
4.....	29.55	28.71	29.38	29.40	29.04	29.00	29.05	29.04	29.04	29.26	28.91	28.91
5.....	29.34	28.72	28.91	29.36	29.08	29.04	29.05	28.98	28.80	29.25	28.64	28.78
6.....	29.06	28.68	28.85	29.41	29.15	29.01	29.02	29.06	28.92	29.28	28.97	28.99
7.....	29.07	28.86	28.90	29.42	29.27	28.95	29.24	26.11	29.09	29.40	28.98	29.21
8.....	28.95	28.95	29.20	29.30	29.27	28.78	29.20	28.96	29.09	29.41	29.05	29.04
9.....	28.97	28.87	28.91	28.99	29.18	28.80	29.12	29.00	29.05	29.30	29.06	28.93
10.....	29.15	28.66	28.90	29.04	29.09	29.03	29.16	29.06	28.89	29.23	28.67	28.98
11.....	28.77	29.02	28.80	29.03	29.00	29.04	29.22	29.06	28.96	29.16	28.75	29.00
12.....	28.90	28.95	28.99	28.99	28.93	28.85	29.10	29.16	29.18	29.19	29.29	28.73
13.....	29.25	28.90	29.30	28.65	28.87	28.90	29.09	29.19	29.32	29.26	29.39	28.75
14.....	29.41	28.99	29.51	28.75	28.71	29.12	28.90	29.11	29.20	29.15	29.03	29.11
15.....	29.40	28.95	29.17	28.94	29.04	29.18	28.88	29.07	29.20	29.04	29.00	29.13
16.....	29.28	29.37	29.11	29.03	28.82	29.19	29.10	29.14	28.68	29.02	29.04	29.29
17.....	29.22	29.18	29.18	29.04	28.77	29.11	29.24	29.28	28.91	29.00	29.10	28.93
18.....	29.05	28.76	29.00	28.88	28.97	29.10	29.20	29.27	29.02	29.14	28.96	28.93
19.....	29.18	28.77	28.91	28.98	29.03	29.01	29.07	29.39	29.01	28.85	29.40	29.24
20.....	29.16	29.12	29.15	29.01	29.08	29.01	29.04	29.10	29.16	28.94	29.32	29.18
21.....	29.21	29.40	28.76	29.05	29.05	28.98	29.09	28.93	29.05	29.02	29.20	29.09
22.....	29.03	29.11	29.13	29.26	29.15	29.07	29.07	28.80	29.14	29.15	29.41	28.76
23.....	28.78	29.06	29.54	28.96	29.26	29.04	29.02	28.98	29.32	28.88	29.17	29.13
24.....	28.75	29.18	29.12	28.93	29.01	29.05	28.93	29.19	29.09	28.90	29.36	29.66
25.....	29.00	28.87	28.70	29.12	28.69	29.08	29.13	28.97	29.03	29.08	29.11	29.33
26.....	29.40	28.68	28.79	28.95	28.87	29.32	28.88	28.98	29.20	29.10	28.66	29.31
27.....	29.37	28.53	28.99	28.93	28.66	28.93	28.93	29.28	29.28	29.11	28.72	29.64
28.....	29.25	28.71	28.39	29.06	28.64	28.86	29.06	29.40	29.10	29.08	29.38	29.41
29.....	29.21	28.92	28.49	28.90	29.03	29.03	29.02	29.15	28.56	28.72	29.65	29.41
30.....	29.30	.....	28.89	28.87	28.82	29.28	29.04	28.94	28.41	28.67	29.63	29.38
31.....	29.02	.....	28.90	.....	29.01	.....	29.17	29.00	.....	28.82	.....	29.23
Means.....	29.12	28.91	29.08	29.04	28.97	29.04	29.08	29.08	29.04	29.10	29.09	29.15

Year 1896, 29.05 inches.

MEAN DAILY PRESSURE, 1896.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....	29.00	29.04	29.07	28.95	28.87	29.28	29.28	29.02	29.30	29.30	29.02	29.65
2.....	28.90	28.97	29.44	29.10	28.88	29.28	29.18	29.10	29.09	29.28	29.02	29.52
3.....	29.40	28.66	29.57	29.31	29.09	29.17	29.14	29.10	29.26	29.27	29.13	29.37
4.....	29.63	28.78	29.49	29.46	29.07	29.06	29.07	29.08	29.23	29.29	28.95	28.99
5.....	29.49	28.78	29.14	29.42	29.11	29.10	29.11	29.03	28.89	29.27	28.81	28.86
6.....	29.14	28.74	28.88	29.45	29.23	29.08	29.13	29.12	29.03	29.33	29.04	29.12
7.....	29.24	28.98	29.05	29.51	29.32	29.01	29.30	29.16	29.14	29.44	29.06	29.31
8.....	29.35	29.04	29.26	29.47	29.32	28.82	29.27	29.03	29.12	29.46	29.08	29.14
9.....	29.08	28.89	29.08	29.02	29.24	28.91	29.14	29.04	29.07	29.39	29.10	29.02
10.....	29.17	28.84	28.94	29.20	29.16	29.12	29.23	29.09	28.98	29.28	28.88	29.06
11.....	28.98	29.20	28.88	29.13	29.06	29.14	29.28	29.11	29.08	29.21	29.07	29.13
12.....	29.11	29.16	29.14	29.07	28.98	28.92	29.19	29.23	29.29	29.24	29.37	28.84
13.....	29.30	29.05	29.46	28.82	28.95	29.00	29.12	29.24	29.36	29.29	29.44	28.94
14.....	29.57	29.21	29.62	28.90	28.83	29.18	29.02	29.18	29.25	29.21	29.16	29.13
15.....	29.56	29.11	29.28	28.99	29.18	29.22	29.00	29.14	29.24	29.09	29.02	29.23
16.....	29.33	29.52	29.14	29.12	29.08	29.23	29.20	29.25	29.01	29.06	29.07	29.34
17.....	29.27	29.47	29.24	29.12	28.93	29.16	29.28	29.32	28.97	29.07	29.19	29.09
18.....	29.13	28.93	29.15	28.98	29.00	29.14	29.27	29.31	29.05	29.20	29.11	29.24
19.....	29.23	28.92	29.03	29.18	29.14	29.07	29.16	29.45	29.21	29.03	29.57	29.38
20.....	29.20	29.33	29.26	29.09	29.14	29.06	29.07	29.26	29.30	29.01	29.52	29.16
21.....	29.26	29.52	28.94	29.16	29.08	29.04	29.12	28.99	29.10	29.15	29.31	29.16
22.....	29.12	29.46	29.44	29.31	29.26	29.11	29.13	28.86	29.36	29.21	29.55	28.91
23.....	28.86	29.12	29.60	29.12	29.31	29.08	29.18	29.11	29.44	28.98	29.26	29.46
24.....	28.82	29.26	29.44	29.07	29.17	29.10	29.03	29.24	29.24	29.08	29.51	29.76
25.....	29.20	29.22	28.83	29.18	28.81	29.18	29.17	29.08	29.08	29.13	29.26	29.51
26.....	29.49	28.82	29.09	29.02	28.96	29.37	29.02	29.14	29.25	29.14	28.83	29.50
27.....	29.42	28.58	29.15	29.04	28.94	29.11	29.01	29.41	29.36	29.18	29.08	29.71
28.....	29.33	28.85	28.62	29.11	28.91	28.99	29.12	29.50	29.28	29.11	29.55	29.57
29.....	29.25	28.97	28.67	28.98	29.10	29.18	29.08	29.29	28.86	28.97	29.69	29.44
30.....	29.34	.....	29.06	28.90	28.94	29.33	29.14	29.02	28.75	28.75	29.69	29.42
31.....	29.14	.....	29.05	.....	29.11	.....	29.26	29.14	.....	28.90	.....	29.37
Means.....	29.23	29.04	29.16	29.14	29.07	29.11	29.15	29.16	29.15	29.17	29.21	29.27

Year 1896, 29.16 inches.

DAILY MAXIMUM TEMPERATURE, 1896.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....	30	38	22	58	76	57	86	81	73	58	55	23
2.....	33	37	28	32	67	61	87	74	85	56	69	26
3.....	3	32	28	43	77	60	85	86	68	57	58	33
4.....	5	32	30	35	71	77	75	94	64	60	58	33
5.....	12	36	38	53	70	87	70	95	68	67	38	49
6.....	28	34	42	48	73	84	70	85	64	55	47	40
7.....	32	31	32	35	83	89	68	83	73	47	40	39
8.....	31	29	35	41	86	77	71	98	77	49	30	43
9.....	34	32	36	46	89	64	73	93	87	57	36	50
10.....	38	39	34	60	89	63	83	93	88	66	48	53
11.....	38	28	28	75	84	70	88	92	63	59	44	53
12.....	23	25	14	30	85	69	91	76	66	56	32	57
13.....	25	28	22	70	79	71	92	75	75	57	30	43
14.....	35	40	26	73	74	79	93	85	68	62	53	38
15.....	32	40	28	80	77	72	82	83	65	66	63	36
16.....	41	19	34	84	65	66	63	75	72	51	70	40
17.....	43	22	37	88	77	72	72	70	65	47	68	41
18.....	37	25	38	83	74	77	69	70	62	42	65	35
19.....	30	12	32	68	59	85	71	65	55	46	33	26
20.....	40	7	35	72	60	82	85	78	62	43	35	30
21.....	35	19	52	58	78	76	79	74	68	53	37	25
22.....	29	38	40	45	69	74	85	84	55	50	43	32
23.....	35	41	29	58	59	69	71	76	61	50	51	30
24.....	38	39	42	73	84	69	66	71	70	44	51	26
25.....	34	39	57	61	81	86	78	83	71	56	61	31
26.....	27	47	50	68	76	72	91	72	62	67	63	34
27.....	40	58	38	62	73	81	85	65	54	70	58	39
28.....	32	45	57	80	65	72	81	68	55	75	16	44
29.....	48	30	57	75	72	69	92	79	57	71	18	42
30.....	50	.....	52	68	76	86	83	81	66	64	14	48
31.....	45	.....	58	.....	57	.....	73	69	.....	49	.....	50
Means	32.3	33.5	37.3	62.2	74.5	73.9	79.3	79.7	67.3	56.1	45.9	38.3

Year 1896: 56.6.

DAILY MINIMUM TEMPERATURE, 1896.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....	10	30	22	29	56	51	69	68	60	51	36	8
2.....	16	29	14	18	55	52	72	65	60	52	50	17
3.....	-4	30	25	25	56	52	69	68	58	54	45	18
4.....	-9	27	24	31	54	56	64	69	57	49	40	24
5.....	-3	21	24	33	54	62	61	73	52	49	31	38
6.....	10	27	30	34	60	71	61	73	48	46	25	33
7.....	26	21	24	28	64	63	60	72	54	38	29	32
8.....	26	23	24	32	67	63	68	76	58	37	26	32
9.....	26	19	28	32	69	50	64	73	66	43	23	28
10.....	30	22	28	37	69	51	64	78	63	46	35	33
11.....	30	20	12	49	66	55	68	70	57	53	31	33
12.....	14	19	6	60	63	53	68	70	62	49	23	41
13.....	13	17	6	57	59	54	70	70	61	52	18	36
14.....	10	16	13	51	64	64	68	72	63	49	30	33
15.....	23	17	21	58	51	58	58	68	59	49	42	32
16.....	22	12	25	64	56	58	56	68	61	48	51	31
17.....	31	8	29	47	56	60	62	58	59	33	45	30
18.....	29	13	31	66	57	63	62	60	53	34	31	24
19.....	22	-6	28	52	46	67	64	60	46	31	27	21
20.....	29	-9	20	48	50	65	66	58	42	29	29	21
21.....	27	-3	32	44	59	67	69	68	49	29	27	15
22.....	27	17	24	41	48	65	69	68	41	37	25	22
23.....	28	35	24	42	48	64	57	57	40	34	33	19
24.....	34	30	35	47	51	62	59	62	45	30	37	16
25.....	29	28	34	48	61	69	61	61	55	33	43	15
26.....	24	37	26	50	60	64	66	61	54	42	57	29
27.....	25	42	26	50	56	64	67	54	50	48	14	30
28.....	27	30	35	50	55	60	70	56	50	58	8	30
29.....	28	26	40	57	51	60	70	60	48	59	8	37
30.....	37	.....	40	58	50	61	69	61	46	40	6	40
31.....	36	.....	41	.....	50	.....	69	63	.....	37	.....	41
Means	21.7	20.6	25.2	44.6	56.5	60.1	65.0	65.8	53.9	43.0	30.8	27.5

Year 1896: 42.9.

MEAN DAILY TEMPERATURE, 1896.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.	20	34	24	44	66	54	78	74	66	54	46	16
2.	24	33	21	25	61	56	80	70	72	54	60	22
3.	0	31	26	34	66	56	77	77	63	56	53	26
4.	-2	30	37	33	62	66	70	82	60	54	49	28
5.	4	28	31	43	63	74	66	84	60	58	34	41
6.	19	30	36	41	68	78	66	79	56	50	36	36
7.	29	26	28	32	74	76	64	77	64	42	34	36
8.	28	26	30	36	76	70	67	87	68	43	28	38
9.	30	26	32	34	79	57	68	83	76	50	30	39
10.	34	30	31	48	79	57	74	86	76	56	42	43
11.	34	24	20	62	75	62	78	81	60	56	38	42
12.	18	22	10	70	74	61	80	73	64	52	28	49
13.	19	22	14	64	69	62	81	72	68	54	24	39
14.	22	28	20	63	64	72	80	78	66	56	41	36
15.	23	28	24	69	64	65	70	76	62	58	52	34
16.	32	16	30	74	60	62	60	72	66	46	60	36
17.	36	15	33	65	66	66	67	64	62	40	54	36
18.	33	19	34	74	66	70	66	65	58	38	43	30
19.	26	3	30	60	52	76	68	62	50	38	30	24
20.	34	-1	28	60	55	74	76	68	52	36	32	26
21.	31	8	42	51	68	72	74	71	58	36	32	20
22.	28	28	32	43	58	70	77	76	48	44	34	27
23.	33	38	26	50	54	66	64	66	50	42	42	24
24.	36	34	34	60	68	66	62	66	58	37	44	21
25.	32	34	46	54	71	73	70	72	63	44	53	23
26.	26	42	38	59	68	68	78	66	58	54	60	32
27.	32	50	32	56	64	72	76	60	52	59	36	34
28.	30	38	46	65	60	66	76	63	52	66	13	37
29.	38	28	48	66	62	64	81	70	53	65	13	40
30.	44	.....	46	63	63	74	76	71	56	52	10	44
31.	40	.....	50	.....	54	.....	71	66	.....	43	.....	46
Means	27.0	26.6	31.3	53.4	65.4	67.0	72.3	72.8	60.5	49.5	38.4	33.0

Year 1896: 49.8.

DAILY PRECIPITATION, 1896.

DATE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....	.00	.01	.27	Trace	Trace	.00	.00	.16	.00	.00	.00	.00
2.....	.04	Trace	.00	Trace	.14	.00	.00	.00	.00	.00	.05	Trace
3.....	Trace	1.52	.00	.00	.00	.33	.06	.00	.17	.00	.23	.00
4.....	.00	.15	.00	.00	.00	.00	.00	.00	Trace	.00	.20	.06
5.....	.06	.00	.02	.00	.00	Trace	.00	.00	.22	.00	.57	.01
6.....	.10	.00	.12	.00	.00	.00	.00	1.22	.00	.00	.00	Trace
7.....	.00	.00	Trace	.00	.00	.52	.00	.02	.00	.00	Trace	Trace
8.....	Trace	Trace	.00	.00	.00	.40	.00	Trace	.00	.00	0.02	Trace
9.....	.00	Trace	Trace	.20	.00	Trace	.00	.00	.03	.00	Trace	.00
10.....	.00	.01	Trace	.13	.00	.02	.00	.00	.00	.00	.10	.00
11.....	.00	.00	.30	Trace	.00	.00	.00	Trace	.11	.00	Trace	.00
12.....	.00	.85	Trace	.00	.00	.38	.00	1.22	.37	.00	.00	.00
13.....	.00	.60	.00	.15	.00	.02	.00	.00	.95	.00	.00	Trace
14.....	.00	.00	.00	.07	.03	.00	.10	Trace	2.42	.00	.00	Trace
15.....	Trace	.02	.15	.00	.00	.20	.00	Trace	Trace	.00	.00	Trace
16.....	.00	.03	Trace	.00	.01	.00	.00	.04	Trace	.00	.00	.00
17.....	Trace	.06	.00	.00	.52	.00	.00	.00	.00	.92	.00	Trace
18.....	.08	.17	.06	.00	.26	.00	.07	.00	.59	.00	.04	.04
19.....	.01	.03	.09	.10	.55	.44	0.67	.00	.04	.02	.00	Trace
20.....	.00	.00	.00	1.13	.00	.39	Trace	.00	.00	.00	.00	Trace
21.....	.00	.00	.00	.06	.33	Trace	.00	.00	.00	.00	.38	.00
22.....	.01	Trace	Trace	.00	.00	.00	.00	0.86	Trace	.00	.00	.10
23.....	.58	.03	.00	.49	.00	.04	.43	Trace	.00	.00	.15	.04
24.....	.03	.00	.00	.29	.00	Trace	.44	.00	.00	.00	.08	Trace
25.....	.01	Trace	Trace	.00	1.47	.02	.00	.00	.03	.00	.04	.00
26.....	Trace	.06	Trace	.11	.00	.00	1.19	.00	Trace	.00	.35	Trace
27.....	.00	.00	.00	.07	.35	.00	.65	.00	.01	.00	Trace	.00
28.....	.00	.00	.19	.00	Trace	.06	.00	.00	.00	.28	.00	Trace
29.....	.00	.00	.07	Trace	.00	.00	Trace	.00	.46	.04	.00	Trace
30.....	.00	.00	.00	Trace	.50	.00	.00	.00	1.27	.11	.00	Trace
31.....	.20	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
Sums.....	1.12	3.48	1.28	2.79	4.16	2.82	3.61	3.52	6.70	1.86	2.16	.16

Year 1896: 33.14 inches.

From the table on the prior page and accompanying diagram, on which are shown the meteorological conditions over the basin of the upper lakes, we obtain important facts affecting the level of Lake Michigan. We see that, with a temperature of 45.7 degrees Fahrenheit and 29.28 Bar., an average annual rainfall of 32.53 inches over the catchment area of Lake Michigan gives an annual elevation of that lake at about 15 inches above datum. The conditions of one year appear to be felt in the elevation of the lake during that following, if there be no material departure from the normal. We see the low rainfall of 1874, $3\frac{1}{10}$ inches below the normal, and $2\frac{3}{10}$ inches less than that for 1873, and an increase of temperature and a barometer higher than the normal, were conditions all tending—except high barometer—to decrease the elevation of the lake in the following year; and that decrease took place, a fall of $2\frac{8}{10}$ inches, notwithstanding that during that year 1875 an increase of $3\frac{1}{2}$ inches of rainfall took place, $\frac{5}{10}$ inches above the normal—and the temperature fell $4\frac{3}{10}$ degrees below 1874, or $3\frac{1}{10}$ degrees below the normal, while the barometer was favorable to increased evaporation from the lake surface; but, while against these conditions favorable to increase of elevation of lake in 1875—the lake actually went down because of the influence of the conditions of 1874—we see the favorable conditions of 1875 bring the lake up in the following year above the normal by an increase in that year of $13\frac{3}{10}$ inches, although during that same year the rainfall was over four inches less than in 1875, and the temperature, made more effective by a lower barometer, was over three degrees higher than in 1875—all conditions in 1876 being thus actively hostile to an increase in the level of Lake Michigan, yet, because of the conditions of 1875, it did increase. Unless we have some heavy rains over the lake basin before the frost is out of the ground, so that it will pass directly to the lake, there is nothing to induce us to hope for any improvement of the lake level; but, on the contrary, as the precipitation for 1896 is below the normal, the mean water for this coming year must be still lower than that for 1896, but the conditions shown during January of 1897 give promise of a better result.

TRACK ELEVATION.

MR. T. P. McDONOUGH, Assistant Engineer in charge.

During the year the Lake Shore & Michigan Southern Railway Company and the Chicago, Rock Island & Pacific Railway Company, acting under an ordinance passed July 9, 1894, have elevated jointly six tracks a distance of two miles, or from Forty-fifth street to Fifty-ninth street. Subways were constructed at each of the following streets:

Forty-seventh street.....	66 ft. wide, clear headroom	13.5 feet.
Fifty-first street	66 " " "	12 "
Fifty-third street	66 " " "	12 "
Fifty-fifth street boulevard..	200 " " "	13.5 "
Fifty-seventh street	66 " " "	12 "
Fifty-eighth street, or Cloud court	66 " " "	12 "
Fifty-ninth street.....	66 " " "	12 "

In July, 1896, an ordinance was introduced in the City Council amending the above ordinance so as to extend track elevation on the Lake Shore & Michigan Southern Railway as far south as St. Lawrence avenue. This amendatory ordinance provides for elevating the switching yard of the Lake Shore & Michigan Southern Railway Company at Sixty-third street, and for the construction of a subway at Sixty-seventh street and at South Park avenue; each to have a clear head-room of 12½ feet.

The Chicago & North-Western Railway Company was the next road to perform active work on track elevation during the year. An ordinance was passed March 30th, providing for elevation of their tracks on the Wisconsin Division between Clybourn Junction and a point in Mayfair Yard near North Forty-third court, a distance of about 4.5 miles. Subways were provided for at each of the following streets:

North Wood street	66 ft. wide, clear headroom	12 feet.
Webster avenue	66 " " "	12 "
North Robey street.....	66 " " "	13.5 "
West Fullerton avenue	73 " " "	13.5 "
North Leavitt street.....	66 " " "	12 "
North Western avenue.....	66 " " "	13.5 "
North Campbell avenue	66 " " "	12 "
Footway in Schubert avenue	10 " " "	8 "
North Rockwell st. and Hoff- man avenue	66 " " "	12 "

West Diversey avenue	66 ft. wide, clear headroom	13.5 feet.
Washtenaw avenue	66 " " "	12 "
North California avenue....	66 " " "	12 "
West Wellington street.....	66 " " "	12 "
North Sacramento avenue ...	66 " " "	12 "
North Albany avenue.....	80 " " "	12 "
West Belmont avenue.....	66 " " "	13.5 "
North Kedzie avenue	66 " " "	13.5 "
Kimball avenue	66 " " "	12 "
West Addison street	66 " " "	12 "
North Fortieth avenue	66 " " "	13.5 "
North Forty-first court	80 " " "	12 "
Irving Park boulevard.....	100 " " "	13.5 "
North Forty-second avenue..	80 " " "	12 "
North Forty-second court....	80 " " "	12 "
North Forty-third court.....	66 " " "	12 "
North Forty-fourth avenue ..	66 " " "	10 "

In all twenty-five subways. And on the Milwaukee line of the Chicago & North-Western Railway, and extending from Clybourn Junction to Rose Hill, a distance of about 4.2 miles, and providing for the construction of a subway at each of the following streets :

Diversey avenue	66 ft. wide, clear headroom	13.5 feet.
Wellington street.....	66 " " "	12 "
Noble avenue.....	66 " " "	12 "
Belmont avenue	66 " " "	13.5 "
Melrose street	66 " " "	10 "
School street	66 " " "	12 "
Roscoe street	66 " " "	12 "
Cornelia street	66 " " "	12 "
Lincoln and Addison comb'd	66 " " "	13.5 "
Grace street	66 " " "	12 "
Irving Park boulevard.....	100 " " "	12 "
Berteau avenue.....	80 " " "	12 "
Montrose avenue	80 " " "	12 "
Sunnyside avenue	80 " " "	10 "
Wilson avenue.....	80 " " "	10 "
Leland avenue.....	80 " " "	10 "
Lawrence avenue.....	80 " " "	12 "
Winnemac avenue.....	80 " " "	12 "
Foster avenue	66 " " "	12 "
Balmoral avenue	66 " " "	12 "

In all nineteen. Of these, there were thirteen constructed during the year, extending from Diversey avenue to and including Berteau avenue, a distance of about two and one-half miles, which were constructed in exactly forty-five working days, which is the quickest

work done thus far in track elevation in this City. There remains a distance of about one and three-fourths miles to be elevated and six more subways to be constructed to complete the work of track elevation on this division.

No work has been done on the Wisconsin line of the Wisconsin division between Clybourn Junction and Mayfair.

On June 11, 1896, an ordinance was passed which provided for the elevation of the tracks in Rockwell street, viz.: Chicago & North-Western Railway and Pittsburgh, Cincinnati, Chicago & St. Louis Railway companies, beginning at Western avenue and extending south to about the center of Ogden avenue, a distance of about two miles, and provides for a subway at each of the following streets:

Fulton street	66 ft. wide, clear headroom	12 feet.
West Lake street	80 " " "	12.5 "
Park avenue.....	60 " " "	12 "
Washington boulevard	66 " " "	13.5 "
Warren avenue	66 " " "	12 "
West Madison street.....	73 " " "	12.5 "
West Monroe street.....	66 " " "	12 "
Wilcox avenue.....	66 " " "	12 "
West Adams street	66 " " "	12 "
Jackson boulevard.....	66 " " "	13.5 "
West Congress street	66 " " "	12 "
West Van Buren street	66 " " "	12.5 "
West Harrison street	66 " " "	12.5 "
Flournoy street.....	66 " " "	12 "
Lexington street.....	66 " " "	12 "
West Polk street	66 " " "	12 "
Harvard street	66 " " "	12 "
West Taylor street	66 " " "	12.5 "
West Twelfth street	100 " " "	12.5 "

In all nineteen subways. Actual work under foregoing ordinance has not been commenced.

In conjunction with the above work of track elevation, the Chicago & Northern Pacific R. R. Company is to elevate about three-fourths of a mile of track and to provide for subways at West Twelfth street and Washtenaw avenue, and this is embodied in the ordinance passed July 11, 1896, known as the Rockwell street ordinance.

On June 27th, 1896, an ordinance was passed which provided for the elevation of the tracks of the Pittsburgh, Ft. Wayne & Chicago

Railway Company in Stewart avenue from Fifty-fifth street boulevard south to State street, a distance of about two miles ; this ordinance provides for a subway at each of the following streets :

Fifty-fifth street boulevard..	200 ft. wide, clear headroom	13.5 feet.
Fifty-seventh street	66 " " "	12 "
Fifty-eighth st. passageway.	25 " " "	12 "
Fifty-ninth street	66 " " "	13.5 "
Sixtieth street	60 " " "	12 "
Maple street.....	66 " " "	12 "
Sixty-first street.....	66 " " "	13.5 "
Chestnut street	66 " " "	12 "
Princeton boulevard.....	66 " " "	12 "
Sixty-second passageway....	25 " " "	11 "
Wentworth avenue.....	80 " " "	13.5 "
Sixty-third street.....	66 " " "	13.5 "
State street.....	60 " " "	13.5 "

In consideration of allowing the tracks to remain in Stewart avenue, the Pittsburgh, Ft. Wayne & Chicago Railway Company is to procure and dedicate for street purposes, a street thirty-three feet wide next west of and adjoining the west line of Stewart avenue, north and south of Maple avenue, and extending from the south line of Fifty-fifth street to the north line of Maple avenue ; thence to continue southwardly on a curve to a point where the same shall intersect the west line of Stewart avenue. The railway company is now procuring and purchasing the ground necessary for the new Stewart avenue, but no active work has been done as yet on track elevation or towards making the proposed street.

In July, 1896, an ordinance was introduced in the City Council amending the above ordinance so as to extend track elevation on the Pittsburgh, Ft. Wayne & Chicago Railway from State street south to St. Lawrence avenue ; this amendatory ordinance provides for the construction of a subway at Sixty-seventh street and South Park avenue, each to have a clear headroom of twelve and one-half feet.

In July, 1896, an ordinance was introduced in the City Council to provide for the elevation of the St. Charles Air Line and all the other adjacent tracks crossing South Clark street immediately north of Sixteenth street. Several plans have been prepared for the elevation of this line. The one most favorably considered eliminates the railroad grade crossings of the Lake Shore & Michigan Southern Railway, the Chicago, Rock Island & Pacific Railway with the Chicago & Western Indiana Railway and the Atchison, Topeka &

Santa Fe Railway, which plan requires the depression of the two last named railroads and the elevation of the first two above named railroads.

All the plans proposed to elevate the Air Line Railroad sufficiently to provide for subways at all of the streets and alleys, running north and south from Clark street east to Indiana avenue without any depression.

An ordinance has been prepared by the Union Stock Yard & Transit Company to enable the Lake Shore & Michigan Southern Railway Company and the Chicago, Rock Island & Pacific Railway Company, to prosecute the work of elevating their tracks to conform with the ordinance passed July 9, 1894, by permitting the depression of the tracks of the Union Stock Yard & Transit Company under the tracks of the Lake Shore & Michigan Southern Railway and the Chicago, Rock Island & Pacific Railway in Fortieth street, the east depression to begin at the west line of Dearborn street and the west depression to end at east line of Wentworth avenue. The ordinance also provides for elevating the "Y" connections to the Lake Shore & Michigan Southern and Chicago, Rock Island & Pacific Railways. Plans have been prepared for the elevation of the Union Stock Yard & Transit Company from Halsted street east to the Illinois Central Railroad, a distance of about four miles; the portion of the line east of the Lake Shore & Michigan Southern Railway to be carried on an open iron structure, thus providing subways for all streets and alleys from State street to Lake avenue, both inclusive; and the portion of the line west of the Lake Shore & Michigan Southern Railway to be constructed on a similar plan as now being used on the Lake Shore & Michigan Southern Railway.

Plans have been prepared for the elevation of the Pittsburgh, Ft. Wayne & Chicago Railway from Fifty-fifth street boulevard northwardly to Eighteenth street, a distance of nearly four miles, and provides for the construction of about twenty-five subways.

Plans have been prepared for the elevation of the Chicago & Western Indiana Railway from Sixty-ninth street northwardly to Eighteenth street viaduct, a distance of about six miles, and provides for the construction of about forty subways.

Plans have been prepared for the elevation of the tracks of the Chicago, Burlington & Quincy Railroad Company, from the railroad crossings at Western avenue westward to West Forty-sixth street (City limits), a distance of about two and one-half miles, and the same provides for the construction of about fourteen subways.



KENSINGTON SEWAGE PUMPING STATION

Plans have been prepared for the elevation of the tracks of the Chicago & North-Western Railway, from Clybourn Junction southwardly to Chicago avenue viaduct, a distance of about one and three-quarters miles, and provides for the construction of fifteen subways.

Surveys and profiles have been made for proposed elevation of the Chicago, Evanston & Lake Superior branch of the Chicago, Milwaukee & St. Paul Railway, also the Council Bluffs division of said railway along Bloomingdale road from Pacific Junction to junction of Evanston branch.

DIVISION OF ARCHITECTURE.

MR. R. BRUCE WATSON, City Architect.

The following buildings have been designed and supervised by this Division during the year:

FIRE DEPARTMENT.

MARYLAND AVENUE FIRE ENGINE HOUSE, No. 63.

The Maryland avenue fire engine house, referred to in the last annual report, has been completed and occupied since March 1, 1896. Dimensions of building are 26 feet by 82 feet. The front of first story is built of a selected blue Bedford stone, and richly carved in detail. The second story is of buff Roman brick with copper bay. The interior throughout is finished in hardwood. The cost of building was \$6,797. (See illustration.)

NINETY-FIFTH STREET ENGINE HOUSE, No. 82.

On December 30th, contract was let for a two-story fire engine house located on Ninety-fifth street, at the head of Cottage Grove avenue. Work was commenced January 18, 1896, and is to be completed and ready for occupancy March 18, 1897. The building will be of frame construction, back plastered throughout, with galvanized bay and cornice on front. Interior throughout will be of hardwood, and will cost complete \$2,800.

ENGINE HOUSE, TRUCK 2.

Corner Washington and Clinton Streets.

Contracts were let November 11, 1896, for new stone sidewalk built on iron beams and columns. Said work was completed November 30, 1896, and cost complete \$707.

ENGINE HOUSE, No. 83.

Plans are now being made for fire engine house to be located on South place, between Magnolia avenue and Evanston avenue, to be constructed of frame, with copper bays and cornices on front. Interior throughout to be of hardwood, and will cost complete \$3,000.

DEPARTMENT OF SEWERS.

Contract for the Kensington Sewerage pumping station, located on Indiana avenue, between 116th and 117th streets, was let on April 25, 1896, and work was commenced immediately thereafter. The building is completed and in working order at the present date. The dimensions of same are 30 feet by 75 feet; engine room is 28 feet by 28 feet; boiler room is 21 feet 6 inches by 28 feet, with smoke-stack 3 feet inside diameter and 85 feet high; coal room is 14 feet by 21 feet.

The front is built of pressed brick with highly ornamented design in terra cotta, sides and rear are of common brick. Interior of engine room is of pressed brick with tile roof constructed on steel trusses. The cost complete was \$7,200. (See illustration.)

CITY REPAIR SHOPS.

Having to vacate the present site of our City repair shops, plans and specifications were drawn and contracts let for new buildings, located on Ashland avenue near Twenty-second street. Work was commenced November 17, 1896, and will be completed and ready for occupancy February 15, 1897. Cost of building, complete, \$35,000. The shops are built of brick with steel columns and steel beams for floor supports; gravel roof; oak and maple floors; pressed brick fronts with copper cornices; heated by steam; lighted by electricity. Outside dimensions of machine repair shop are 80 feet by 125 feet; machine shop proper is 76 feet by 51 feet; blacksmith shop is 76 feet by 30 feet; store rooms 21 feet by 25 feet, and 11 feet by 18 feet; oil room is 8 feet by 25 feet; engine room is 16 feet by 30 feet; lavatory, 18 feet by 19 feet. There is also separate office and tool room.

The second story is divided into pattern storage room, pattern making room and lumber store room. In rear of machine shop are built the storage sheds, which are covered with heavy corrugated iron inside and outside, including roof. Said sheds are used for the storage of castings, fire plugs, etc.; also storage for two steam rollers and coal wagons.



NEW CITY REPAIR SHOPS

The police repair shop is 75 feet by 150 feet, outside dimensions. These buildings are so arranged that the shipment of machinery, etc., can be received or delivered by means of water or rail. (See illustration.)

HOUSE OF CORRECTION.

Sketches have been prepared for Boys' Reformatory in connection with the John Worthy Manual Training School. Said building is to be built of common brick with stone trimmings. Outside dimensions 70 feet by 264 feet, and will contain 150 cells and dormitory for 48 boys, making in all accommodation for 198 inmates. This building will be of the best modern construction, especial attention being given to the heating, ventilating and sanitary arrangements. Cells will be built of steel construction and to cantilever for balconies, doing away with all posts, making a clean floor space. The interior partitions are to be of hollow tile. The entire building to be plastered in Portland cement with all corners rounded, leaving no spaces to catch dust or dirt, and doing away with as much woodwork as possible. The entire building is to be of fire-proof construction. All floors are to be of cement and so graded as to flush itself dry. Above dormitory will be a chapel, 46 feet by 66 feet. Estimated cost, \$50,000.

HEALTH DEPARTMENT.

WENTWORTH AVENUE BATH HOUSE.

Contracts were let for a bath house located on Wentworth avenue between Thirty-eighth and Thirty-ninth streets. Dimensions of building are as follows: The front part of building, which consists of waiting rooms and office, is 30 feet by 49 feet 6 inches; wing part, which is the bath proper, is 26 feet by 70 feet, and contains thirty-one separate dressing rooms and shower baths, one tub bath, and all necessary toilet arrangements annexed.

The basement is divided into a boiler room, laundry, and soup kitchens. The front part of the building is so arranged that, at any time the Department sees fit, another wing can be added similar to the one now built, which will give a separate division for males and females, with separate entrances, waiting rooms, etc. This double wing arrangement will give sixty-two shower baths with dressing rooms and two tub baths.

Work on building was commenced September 24, 1896, and will be completed on or before February 15, 1897. The cost complete will be \$13,500.

The front is built of pressed brick with ornamental terra cotta entrances. The rest of the building is built of common brick. Inside throughout is plastered with cement plaster. Floor of bath proper is of cement laid on hollow tile arches supported by steel beams and columns. The interior is finished in oak, using as little wood as possible in bath proper. The dividing partitions of all stalls in bath proper are of slate, with all necessary nickel-plated attachments.

CITY ISOLATION HOSPITAL.

MR. D. E. WAID, Superintendent.

The history of the Hospital for Contagious Diseases, formerly intended for smallpox, was given in the preceding annual report. The institution occupies ten acres of ground, located at Thirty-fourth street and Lawndale avenue. It was completed, including all eight buildings, ready for reception of patients, December 1, 1896, and cost complete, including heating, cooking, laundry and disinfecting apparatus, the fences and grading of grounds, \$112,000. The buildings are brick, with steel beam and tile arch floors, tile roofs and polished oak interior finish. They are fire-proof and embody the most modern ideas for the safety, comfort and treatment of patients. A central plant supplies heat and electric light to all the buildings. The wards have a special ventilating system with automatic temperature control. The steam cooking and steam laundry apparatus is sufficient to care for five hundred patients and the general executive capacity of the institution corresponds.

Appreciating thoroughly your hearty co-operation during the past year in the management of this Bureau, as well as the efficient aid of my assistants, I respectfully submit the foregoing report.

Very respectfully yours,

LEWIS B. JACKSON,
City Engineer.

REPORT OF THE
Bureau of Water Rates
CITY OF CHICAGO

WATER OFFICE REPORT

HON. JOSEPH DOWNEY,
Commissioner of Public Works.

DEAR SIR: In conformity with the usual custom the Annual Report of the Bureau of Water Rate Collections for the year ending December 31, 1896, is herewith respectfully submitted.

Detailed statistics of the various sub-branches, embracing the Collection, Assessor's, Permit, Meter Clerical, Meter Mechanical, Shut Off and Inspection Departments, are included.

The unparalleled depression in business during the year has largely affected the revenue and collections of the Bureau; notwithstanding this, I regard the year's work as highly satisfactory.

While the increase in revenue as shown by comparison with the report of 1895 is only \$23,585.75, in reality the actual increase will be about \$135,000.00; in explanation of which I will say that a vast amount of matter was removed from the records by annual inspections and special examinations, the same having accumulated for two and three years and discovered in transferring the old to a new set of ward books in May last.

COLLECTIONS.

The total net collections from all sources for the year 1896 amounted to \$3,226,559.73, received as follows:

Assessed Rates	\$2,103,016 54
Meter Rates	1,023,285 09
Permits	43,767 90
Plumbers' Licenses	5,510 00
Assessor's Miscellaneous	26,197 75
Meter Mechanical Department	24,782 45
<hr/>	
Total	\$3,226,559 73
Total for 1895	3,215,137 10
<hr/>	
Increase over 1895	\$ 11,422 63

The assessed rates increased \$35,155.19 and the meter rates \$19,081.61 over 1895, though these were largely offset by the falling off in receipts from permits, plumbers' licenses, miscellaneous and meter mechanical, the general apathy in business affecting the receipts from all these sources except those from plumbers' licenses, which were transferred to the City Collector's Office by an ordinance which went into effect May 1st last; all fees for plumbers' licenses received subsequent to this date being paid to the City Collector.

The total increase in collections for the years 1895 and 1896, or the term of the present administration, over 1893 and 1894, the previous term, is \$593,609.56. This, in my estimation, all conditions considered, should be regarded as an excellent showing.

EXPENSES.

The entire expense of operating the Bureau for the year 1896 was \$285,831.95 as against \$309,273.30 for 1895—a net saving of \$23,441.35. In this connection the following statement showing the gradual reduction of the percentage of expenditures to collections during the last six years will be found interesting; the year 1896 furnishing the largest receipts, least expense, and smallest percentage of any during the six years.

Year.	Receipts.	Expenses.	Per cent.
1891.....	\$2,331,286 20	\$303,879 86	13
1892.....	2,592,111 67	336,956 79	13
1893	2,837,827 35	294,968 60	10 $\frac{1}{2}$
1894.....	3,010,259 92	287,306 92	9 $\frac{1}{2}$
1895.....	3,215,137 10	309,273 30	9 $\frac{1}{2}$
1896.....	3,226,559 73	285,831 95	8 $\frac{1}{2}$

It will be remembered that the year 1895 contained four months for which the present administration is not responsible, being the closing months of the previous administration. The same ratio of expense to receipts for the remaining eight months would in all probability have reduced the expense of 1895 to nine per cent. A continuance of present conditions will no doubt reduce the percentage of 1897 proportionally.

UNCOLLECTED.

The amount of uncollected taxes due the Bureau is \$484,001.08; of this \$70,106.74 is due for water used and paid for by meter measurement, composed mostly of the monthly tax which will be paid

within the coming month. The remainder, \$413,894.34, with the exception of perhaps twenty-five per cent., the amount which usually remains on the books each year, though the water supply is shut off, will be collected in the usual manner by means of the shut-off force by the first of May, 1897.

EXEMPTIONS.

Under the ordinance covering same, water taxes (assessed rates) have been abated on account of municipal and public buildings to the amount of \$33,888.76, and \$29,154.88 on account of religious, charitable and educational institutions.

November 16, 1896, an ordinance was passed granting water free of expense to be used in connection with the parks and boulevards under the control of the South Park Commissioners in consideration of their assuming the control and expense of maintaining Jackson street boulevard, thus relieving them of the payment of \$5,000.00, per annum, to the City. Under this agreement the last of the park systems is exempt from the payment of water taxes, the West Side parks being exempt for some time by reason of assuming the care of the small City parks, and Lincoln Park using City water for drinking purposes only, and which is furnished free—water for all other purposes is pumped by their own engines and at their own expense.

REARRANGEMENT OF OFFICE.

No improvements will be suggested except the enlargement and rearrangement of the office as shown in the drawings I presented you recently. This will cost according to reliable estimates about \$10,000.00, and I desire to urge upon you the necessity of securing for this purpose the necessary appropriation, in order that the change may be made during the slack season this summer, as it is becoming utterly impossible to transact the business of the department with any degree of comfort or satisfaction either to the employees or to the public in the present crowded quarters.

CIVIL SERVICE LAW.

Too much praise cannot be bestowed upon the civil service law and its rigid and successful enforcement by His Honor Mayor Swift, and Commissioner Downey. Its beneficial influence upon this the

largest clerical department in the City government is most noticeable in various ways. Its most marked effects are perhaps that a better grade of efficiency is created among the employees by relieving them from the fear of political changes; also the feeling of security with which the law surrounds those who are trustworthy and competent.

Honest effort for improvement and promotion is stimulated by reason of the knowledge that reward is procured by merit alone and without regard to the influences heretofore in vogue under the old system. With the assistance of the civil service law, and under the direction of the present able Commissioner of Public Works, I firmly believe this Bureau is in better condition with regard to business management, economy in expenditures, discipline among the employees, absolute honesty and fidelity to the interests of the City, and fair and equitable treatment to all classes of taxpayers without reference to race, creed or politics, than during any previous period in the history of the Bureau, and should the present conditions prevail for another year will challenge comparison with any similar institution, public or private.

I should consider this report incomplete if I failed to testify to the influence to the civil service law in accomplishing the results.

ACCOUNTING DEPARTMENT.

In addition to many improvements of minor importance in the Accounting Department on the first day of May, 1896, an entire new set of ward books, eighty-two in number, was opened; the old ones in use for the previous two years being completed. Arrangements were made and the system altered so that the entries of payments on these books could be balanced with the receipts of the cashier and with the returns of the assessors. At the end of the term, and for the first time I believe in the history of the Bureau, the total figures of the assessors', Cashier's and ward books were compared, and a balance secured, which resulted in revealing irregularities and shortages in several wards. Several dismissals from the force followed, but the shortages were in every instance collected, so that the City suffered the loss of not a single cent.

REFUNDS.

Heretofore the manner of allowing refunds for duplicate or over-payments, which no system yet suggested or devised seems to prevent, has been, after the claim was properly recorded and verified, to

voucher the same through the book-keeper of the Department of Public Works, and the Comptroller's Office, entailing a delay of a month or more in payment and no end of complaint from the taxpayers. A change was made last May whereby an order was made, similar to that already in use for rebates on erroneous assessments, for the amount of rebate signed by the Superintendent of Water and Commissioner of Public Works, and cashed by the Cashier of the Water Office without delay to the taxpayers as formerly. The orders are delivered to the Comptroller by the City Treasurer, who in turn receives warrants which are retained by him as authority for the payment of cash through this office for the refunds.

COLLECTIONS BY UNITED STATES AND PACIFIC EXPRESS CO.

During the year the Bureau collected through the United States and Pacific Express Company in payment of 64,343 bills a total of \$343,146.81.

The taxpayers' attention is particularly directed to this convenient method of paying water tax bills; this can be done at any of the branch offices of the above company by the additional payment of five cents, or one car-fare.

On the backs of all water bills will be found printed the location of these agencies in every ward and within a short distance of any point in the City.

COMPARISON OF RATES.

The Bureau is constantly in receipt of complaints from taxpayers regarding what is termed the excessive rates charged for water in this City. More especially is this noticeable during these times of depression when a large percentage of our citizens are in straitened circumstances and are unable to comprehend the reason why the City should not furnish water at cheaper rates with such a vast body of water at our doors. In order to show that our charges are not excessive, but, on the contrary, are among the cheapest of any in the country, I desire to quote the figures from a former report, which I find to be substantially correct, showing the rates per annum of the ordinary two-story eight-room house, supplied with a bath

room, closet, wash-basin and kitchen sink, and the use of water for sprinkling lawns and washing windows and sidewalks, in ten of the principal cities :

St. Louis	\$27.00
Kansas City.....	26.50
Pittsburgh.....	26.50
Milwaukee.....	24.25
Boston (sprinkling prohibited unless under meter control)....	22.00
Brooklyn	22.00
Cincinnati	20.25
Philadelphia.....	18.00
New York (sprinkling or use of hose prohibited)	13.00
Chicago.....	13.50

In addition to this Cincinnati is the only city where a discount is allowed; on the contrary, in several of these places a penalty is added where the bills are not paid by a given period; whereas a discount of 15 per cent. is given in Chicago when bills are paid promptly.

Meter rates are as follows in the cities hereinbefore mentioned :

Kansas City	36 cents per 1,000 gallons.
St. Louis	30 " " " "
Omaha.....	30 " " " "
Milwaukee	20 " " " "
Boston.....	18 $\frac{3}{4}$ " " " "
Cincinnati	15 " " " "
New York	13 $\frac{1}{4}$ " " " "
Chicago, 10 cents for the first 165,000 gallons and 8 cents beyond that amount.	

ASSESSOR'S AND PERMIT DEPARTMENTS.

In January, 1896, the office of Chief Permit Clerk was abolished and the salary of that official saved to the Department. The Permit Department was consolidated with the Assessor's Department and placed under the immediate supervision of the Assessor. As the interests of these two branches of the Bureau are closely allied, the consolidation could have none other than a beneficial effect, as the results have shown.

There were inserted during the year 12,932 ferrules, 11,521 of which were screw and 1,411 driven. 837 retaps were made. A total of 6,059 applications were made for ferrules to water service pipes, exclusive of City contracts and retaps.

The entire amount of permits issued for all sizes of connections for the year was 13,672. \$5,510.00 was collected by this Department for plumbers' licenses for the period from January 1 to April 30; subsequent to which all such fees have been paid to the City Collector, as stated heretofore.

Five thousand five hundred and eighty-six service pipes were laid during the year at a total cost of \$68,092.48, or an average cost per pipe of \$12.18. This shows a slight increase over the cost of the same work in 1895; this is more than accounted for by the advance in the price of lead pipe over that paid in 1895.

Great difficulty and inconvenience has been experienced for several years past by reason of the fact that the Draughting Department has been unable to furnish the location of service pipe connections for shut-off and other purposes, owing to the incomplete condition of the records procured from the annexed districts, such as Hyde Park and Town of Lake. Atlases and plat blocks were in some instances entirely missing and as duplicate copies could not be secured the annoyance and delay to the Bureau can be easily imagined.

A great amount of labor and search among old records of all kinds, as well as by the locating and shut-off men, has been required to overcome this obstacle; and while our Map Department is still far from perfect we are to-day in possession of a complete set of map tracings for every lot and block located within the water district of the City. Plat books containing a permanent record for all pipe connections will in all probability be finished within a year or so.

METER MECHANICAL DEPARTMENT.

January 1, 1896, there were in service, by actual count, 4,949 meters. We placed during the year in new locations 263 meters. We substituted 101 new meters for the same number of old and worthless ones. Total number in service December 31, 1896, is 5,106.

There were in service December 31, 1896, 308 hydraulic elevators. During the year 1896 twenty-eight of these were removed, owing to the change in power from water to electric, or otherwise; leaving still in use 280.

Early in August, owing to the active competition of several meter manufacturers for the trade of the City, considerable contention was created regarding the respective merits of the different

makes of meters in use by the City. The management of the Bureau was charged with favoritism toward certain meters to the exclusion, it was claimed, of others equally as reliable and durable. At my suggestion you appointed an expert committee, composed of mechanical engineers, whose duty it was to make examinations of the various styles of meters and render an opinion as to which was the best adapted to the uses required by the condition of this City. This report delivered to you and published shortly thereafter, and generally considered just and reliable, in effect sustained the attitude of the management of the Bureau regarding the purchase of meters, thus ending the controversy.

At the end of nearly two years' experience as head of this Bureau, after vainly endeavoring to materially increase the meter supply of the City, it is my firm conviction that the present method of forcing consumers to supply themselves with meters at their own expense is a failure, if not unjust to both consumer and the City. Radical measures, in my opinion, should at once be adopted to check the enormous waste of water, each year growing larger, by those at present paying by assessed rates, and the shortage among others not as conveniently located to mains with a good pressure. In my judgment this can be best accomplished through the purchase of all meters by the City itself, and the immediate enforcement of their use by all large consumers. The principal objection will thereby be removed and the City suffer no loss, as has been demonstrated in other cities where the additional expense incurred through the purchase of meters has been more than overcome by the gain in revenue through their use.

INSPECTION DEPARTMENT.

In addition to its other work, as detailed hereafter, the Department made an inspection of every saloon in the City, the locations of which were secured by the aid of the saloon license records in the City Collector's office, resulting in locating 986 saloons for which special charges are made over ordinary stores, and increasing the revenue from this source for 1896, and all subsequent years in which they are in use, \$10,912.46.

The reinspection of Wards 16, 20, 21, 22, 23 and 24 will make an annual increase of \$22,048.00.

Wards 25 and 26 were also inspected in 1896, but the increased assessment will not be brought upon the books until the early part of 1897. We estimate this will result in an increase of about \$20,000.00.

New buildings were inspected in November and December, and properly creditable to 1896, but not entered on Assessor's checks until January, 1897, which will increase the revenue \$14,870.25.

The records of this Department show the number of buildings in the City, December 31, 1896, as follows:

Private dwellings	140,730
Apartment houses	18,995
Factory buildings	4,863
Stores and office buildings.....	36,627
Totals.....	201,215

Following is the number of buildings located in the water district May 1, 1896:

Assessed.....	182,714
Meter control.....	6,674
Total.....	189,388

SHUT-OFF DEPARTMENT.

During the year 1896 the Leak, Waste and Shut-Off Department served 5,838 notices of leaks and wastes; distributed and served 119,380 water bills and shut-off notices. We also shut off for delinquent taxes 3,943 connections and investigated 1,425 complaints.

INSPECTION DEPARTMENT.

The following is the report of the work done by Water Inspectors for the year 1896:

All buildings in the Sixteenth, Twentieth, Twenty-first, Twenty-second, Twenty-third, Twenty-fourth, Twenty-fifth and Twenty-sixth Wards were thoroughly re-inspected.

Five hundred and ninety-nine (599) surveys were made for pipe petitions and pipe deposits.

BUILDINGS EXAMINED.

1896.	One-Story.	Two-Story.	Three-Story.	Four-Story.	Five-Story.	Six-Story.	Special Examination.	Examination for Vacancies.	New Buildings Examined.	Total per Month.
January	867	1,624	823	241	12	2	305	37	.....	3,911
February ...	852	1,803	940	127	10	1	295	42	.....	4,069
March	893	1,301	402	111	34	17	410	59	.....	3,227
April	488	1,782	1,416	271	24	2	380	63	.....	4,426
May	884	1,567	232	37	2	1	1,480	112	.....	4,315
June	742	1,309	202	15	1	3	1,301	139	.....	3,712
July	709	1,202	299	17	3	2	923	107	784	4,046
August	647	1,609	839	19	5	6	509	95	196	3,925
September..	593	1,591	1,229	485	46	5	478	89	112	4,628
October	452	926	933	943	303	42	451	52	1,288	5,390
November ..	227	940	510	253	27	3	1,231	103	142	3,436
December ..	239	1,398	497	263	39	5	647	63	896	4,047
TOTAL ..	7,503	17,051	8,322	2,782	506	89	8,410	961	3,418	49,132

LEAK, WASTE AND SHUT-OFF DEPARTMENTS.

The following table shows the work done by the leak, waste and shut-off force :

1906.	Leak and Waste Notices Served.	Bills and Shut-off Notices Delivered and Served.	Shut-off for Back Taxes.	Shut-off for Leaks.	Water Turned On.	Charges for Shutting Off Water.	Complaints Investigated.
January.....	90	3,750	61	14	20	\$90.00	48
February.....	78	4,100	58	10	16	75.00	53
March.....	212	4,520	75	18	38	211.50	58
April.....	370	4,610	112	13	61	369.50	71
May.....	883	35,125	420	20	282	711.00	95
June.....	908	5,230	508	22	210	892.50	186
July.....	872	4,100	612	19	301	908.50	202
August.....	781	4,625	630	14	332	872.00	218
September.....	782	3,840	508	17	274	780.50	120
October.....	570	42,650	468	13	267	732.50	131
November.....	282	3,210	389	13	224	570.00	162
December.....	110	3,620	102	14	183	232.00	82
TOTAL.....	5,838	119,380	3,943	187	2,158	\$5,874 00	1,425

WATER SERVICE PIPES LET AND PUT IN BY CONTRACT DURING YEAR ENDING DECEMBER 31, 1896,
SHOWING THE NUMBER OF PIPES AND THE TOTAL AMOUNT OF CONTRACT
AND AMOUNT FOR TAPS AND ASSESSOR'S COST.

STREET	FROM	TO	Number of Pipes	Assessor's Cost	Taps	Amount of Contract
Aberdeen	Sixty-third	Sixty-seventh	78	\$ 117 60	\$ 278 00	\$ 913 56
Ada	Fifty-ninth	Sixty-third	60	90 00	210 00	674 12
Ada	Fifty-fifth	Fifty-ninth	139	209 50	486 50	1,284 70
Albany avenue	Ohio	Chicago avenue	28	42 00	98 00	189 00
Ashland avenue	Balmoral avenue	Winnemac avenue	74	111 13	259 00	867 15
Atlantic	Forty-third	Goshen	54	81 50	189 00	512 18
Avers avenue	Grand avenue	North avenue	103	154 58	300 50	1,243 18
Berlin	California avenue	Myrtle	25	87 53	87 50	320 22
Bonney avenue	Ogden avenue	Douglas Park boulevard	79	118 50	276 50	981 12
Bonney avenue	Colorado avenue	Harrison	10	15 00	35 00	151 68
Carpenter	Sixty-third	Sixty-seventh	48	72 00	118 00	511 28
Champlain avenue	Sixty-third	Sixty-seventh	74	111 51	259 00	905 25
Champlain avenue	Seventy first	Seventy fifth	98	147 16	848 00	986 70
Collins	Kedzie avenue	Albany avenue	24	36 08	84 00	825 86
Columbia avenue	Humboldt	North avenue	130	195 00	455 00	2,003 30
Congress	Central Park avenue	Homan avenue	46	69 00	161 00	583 74
Congress Park	Van Buren	Harrison	47	70 74	164 50	502 66
Cornelia	Washtenaw avenue	Rockwell	45	67 70	157 50	526 75
Cornelia	Wilton	Halsted	88	57 04	133 00	528 60
Cromwell	Milwaukee avenue	Fullerton avenue	9	18 50	81 50	132 49
Diversey avenue	Milwaukee avenue	Crawford avenue	92	188 06	322 00	1,157 80
Dobson avenue	Seventy first	Seventy third	36	54 29	126 00	323 85
Drexel avenue	Seventy-first	Seventy-third	11	16 60	38 50	118 04
Drexel avenue	Seventy-third	Seventy-fifth	48	72 00	168 00	686 48
Drake avenue	Chicago avenue	Huron	20	39 12	91 00	277 30
Eberhardt avenue	Kedzie avenue	Homan avenue	55	82 85	192 50	657 40

Eighty-ninth	South Chicago avenue	Illinois Central R. R.	10	15 06	35 00	154 40
Eighteenth	Western avenue	California avenue	78	109 82	255 50	671 28
Elk Grove avenue	Armitage avenue	Webster avenue	17	25 63	50 50	230 40
Evans avenue	Seventy-first	Seventy-fifth	63	91 77	220 50	716 04
Ewing avenue	Ninety-second	100th	114	216 00	504 00	1,728 86
Fiftieth	Cottage Grove avenue	St. Lawrence avenue	15	22 50	52 50	199 50
Fifth	Ashland avenue	Morgan	9	13 53	81 50	95 29
Fifty-ninth	Stony Island avenue	Cottage Grove avenue	30	45 04	105 00	501 56
Fifty-fourth place	Union avenue	Wallace	17	25 63	59 00	208 98
Fifty-sixth place	Stewart avenue	Wallace	10	15 00	35 00	132 00
Fifty-sixth	State	South Park avenue	35	52 50	123 50	392 00
Fleetwood	Blackhawk	North avenue	10	15 02	35 00	163 28
Flournoy	Perry avenue	Racine	27	40 59	94 50	328 50
Forty-first	California avenue	Washtenaw avenue	36	54 00	126 00	3-9 13
Forty-eighth	Halsted	Stewart avenue	23	38 15	77 00	193 45
Forty-sixth	Halsted	Ashland avenue	44	66 00	154 00	407 88
Francisco	Union avenue	Stewart avenue	6	9 00	21 00	64 90
Gladys avenue	Van Buren	Twelfth	10	15 06	35 00	115 44
Grace	West Fortieth	West Forty-sixth	164	247 30	574 00	2,014 26
Humboldt	Ashland avenue	Southport avenue	20	28 00	70 00	292 00
Huron	Cornelia	Division	33	49 65	115 50	453 61
Irving Park boulevard	Western avenue	Washtenaw avenue	11	.....	38 50	190 72
Jackson avenue	Halsted	Lake shore	41	61 98	143 50	533 28
Justine	Seventy-second	Seventy-fifth	35	53 68	122 50	466 72
Kimball avenue	Fifty-fifth	Sixty-third	194	201 54	679 00	2,650 20
Kinney avenue	Armitage avenue	Milwaukee avenue	83	.....	283 50	1,296 00
Leavitt	North avenue	Humboldt	143	214 67	500 50	2,061 89
Langley avenue	Archer avenue	Bross	89	58 56	138 50	417 24
Lawndale avenue	Seventy first	Seventy-fifth	69	104 16	241 50	783 87
Madison avenue	Colorado avenue	Harrison	11	16 59	38 50	113 55
May	Sixty-seventh	Seventy-fifth	88	133 25	308 00	1,806 31
Monticello avenue	Sixty-third	Sixty-seventh	51	76 97	178 50	632 75
McLean avenue	Frederick	North avenue	38	59 23	133 00	464 52
Ninety first	Kimball avenue	Hamlin avenue	47	70 56	164 50	462 42
Ninety-fifth	Commercial avenue	Green Bay avenue	31	46 65	108 50	469 19
Ninety-third	Calumet river	Torrence avenue	63	94 59	220 50	1,382 76
Olga	St. Lawrence avenue	Cottage Grove avenue	89	58 86	136 50	418 50
Oakley avenue	Grace	Waveland avenue	20	30 10	70 00	284 50
120th	Hamburg	Ems	21	31 61	78 50	223 46
	Halsted	Clinton	84	51 20	119 00	392 16

WATER SERVICE PIPES LET AND PUT IN BY CONTRACT DURING YEAR—CONTINUED.

STREET	FROM	TO	Number of Pipes	Assessor's Cost	Taps	Amount of Contract
Park avenue	Forty-fifth	Forty-sixth	40	\$ 60 20	\$ 140 00	\$ 584 60
Paulina	Graceland avenue	Berteau	21	31 56	78 80	241 65
Paulina	Fifty-ninth	Sixty-first	74	111 28	259 00	676 83
Pine	E. Ravenswood Park	Clark	67	100 66	234 50	616 91
Pine Grove avenue	Irving Park boulevard	180 ft. N. of Byron	20	80 16	70 00	279 24
Rhine	Milwaukee avenue	Myrtle	7	10 68	24 50	95 10
Ridge avenue	Grand avenue	Devon	13	19 62	45 50	145 22
Rockwell	Twelfth	Twenty-second	41	61 60	143 50	683 64
State	Sixty-eighth	Seventy-fifth	286	430 56	1,001 00	8,539 12
Superior	Washtenaw avenue	California avenue	30	45 29	105 00	239 81
Schell avenue	Seventy-third	Illinois Central R. R.	40	60 80	140 00	507 30
Schell avenue	Seventy-first	South Chicago avenue	29	43 51	101 50	344 51
Seventy second	Schell avenue	Illinois Central R. R.	17	25 62	59 50	215 74
Seminary avenue	Eddy	Newport avenue	11	16 60	38 50	148 84
Seely avenue	Fifty-third	Fifty-fourth	6	9 08	21 00	63 99
Sixty-seventh	Morgan	Loomis	116	174 08	406 00	1,625 08
Sixty-seventh	Halsted	Sangamon	18	27 00	63 00	239 40
Sixty-seventh	South Park avenue	Stony Island	163	252 84	588 00	1,488 10
Sheridan road	Bryn Mawr avenue	North Fifty-ninth	96	144 00	336 00	1,152 00
Stanley Terrace	Jackson boulevard	Van Buren	8	12 00	28 00	88 56
Station	Leavitt	Western avenue	26	39 03	91 00	271 15
St. Louis avenue	Ogden avenue	Twenty-sixth	190	285 63	665 00	2,161 57
St. Lawrence avenue	Seventy-third	Seventy-fifth	54	81 29	189 00	714 67
Thomas	North Leavitt	North Wood	19	28 65	68 50	275 16
Thirty seventh	Halsted	Laurel	32	48 03	113 00	323 49
Turner avenue	Rockwell	Douglas Park boulevard	30	45 23	105 00	334 88
Twenty-fifth	Rockwell	Lawndale avenue	46	69 24	161 00	470 84
Union avenue	Fifty-ninth	Sixty-first	18	27 00	63 00	280 40
Van Buren	West Fortieth	West Forty-sixth	197	295 66	689 50	2,308 68
Victor	Evanston avenue	Swift	23	34 30	90 50	281 84
Vincennes avenue	Sixty-third	South Chicago avenue	183	198 93	462 00	1,744 06
Washington avenue	Everett	Center	53	79 56	186 50	643 87

Wellington avenue	Lincoln	Perry	53	79 55	185 50	712 84
West Fortieth	Armitage avenue	North avenue	187	206 44	479 50	1,867 74
West Forty-second	Lake	Twelfth	96	144 03	836 00	863 47
Woodlawn avenue	Seventy-first	Seventy-fifth	43	63 21	147 00	696 15
TOTALS			5,586	\$ 8,256 91	\$19,498 50	\$68,092 48

Average cost per pipe under contract let in 1895.....\$11.72¹⁵/₁₀₀

Average cost per pipe under contract let in 1896..... 13.18¹⁵/₁₀₀

Cost per pipe in 1896 over 1895..... .46¹⁵/₁₀₀

LIST OF STREETS ORDERED FOR IMPROVEMENT, WITH ESTIMATES, NUMBER AND COST OF WATER SERVICE PIPES RETURNED TO SUPERINTENDENT OF SPECIAL ASSESSMENTS DURING THE YEAR 1896.

STREET	FROM	TO	Number of Pipes	Amount
Aberdeen.....	Forty-seventh	Fifty-first	94	\$1,692 00
Albany avenue.....	Ohio	Chicago avenue.....	All in	
Avers avenue	North avenue	Grand avenue	108	1,728 00
Aldine avenue	Present terminus	Lake Shore drive	25	400 00
Ashland avenue.....	Archer avenue.....	Ill. & Mich. Canal..	None Needed.	
Armour avenue	Fifty-eighth	Fifty-ninth	No Main.....	
Argyle	Clark	Evanston ave.	91	1,638 00
Ashland avenue.....	Twenty-second	South to river	None Needed.	
Avers avenue	West Nineteenth	Ogden avenue	Not Assessed.	
Aberdeen.....	Sixty-seventh	Sixty-ninth	Not Assessed.	
Albany avenue.....	Elston avenue	Belmont avenue	67	1,206 00
Ashland avenue.....	Sixty-third	Sixty-ninth	Not Assessed.	
Augusta	Robey	Leavitt	Duplicate	
Albany avenue.....	Kinzie	Chicago avenue	Duplicate	
Ashland avenue.....	Balmoral avenue.....	Edgewater place	Not Assessed.	
Allen avenue	Milwaukee avenue	Kimball avenue	Not Assessed.	
Ashland avenue.....	Balmoral avenue.....	Edgewater avenue	Duplicate	
Avers avenue	Twenty-second	C., B. & Q. R. R. ...	29	522 00
Bonaparte	Archer avenue	Lock	Duplicate	
Buffalo avenue	Eighty-seventh	Ninety-second	All in	
Bishop	Sixty-third	Sixty-fifth	60	1,080 00
Bishop	Sixty-fifth	Sixty-seventh	66	1,188 00
Baker avenue	Wallace	Wabash R. R.	Not Assessed.	
Barnett	Robey	Leavitt	43	774 00
Bissell	Garfield avenue.....	Webster avenue	All in	
Berwyn avenue	Winthrop avenue	C., M. & St. P. Ry. ...	No Main	
Bernard avenue	Noble	Belmont avenue.....	Not Assessed.	
Berlin	Western avenue	Leavitt	All in	
Carpenter	Sixty-seventh	Sixty-ninth	Not Assessed.	
Canal	Archer avenue.....	To the bridge	No Main	
Central Boulevard ..	Garfield Park	Humboldt Park.....	No Main	
Cornelia	Robey	Leavitt	58	954 00
Cortland	North Fortieth ave. ..	N. Forty-fourth ave. ..	No Frontage ..	
Carroll avenue	North Fortieth ave. ..	N. Forty-fifth ave. ..	All in	
Chicago avenue	North Fortieth ave. ..	N. Forty-second ave. ..	Not Assessed.	
Christiana avenue ..	Milwaukee avenue	George	Not Assessed.	
Christiana avenue ..	Wellington avenue	Belmont avenue.....	Not Assessed.	
Central Park avenue.	Harrison	Twelfth	74	1,332 00
Catalpa place	Humboldt avenue.....	Edgewood avenue ..	59	1,062 00
Cross	Lyman	Thirty-first	All in	
Commercial	Addison	Lincoln	All in	
Curtis	Lake	Huron	All in	
Carpenter	Chicago avenue.....	George	All in	
Cottage Grove ave. ..	Sixtieth	Seventy-first	All in	
Center	Clark	Southport avenue	All in	
Cortez	California avenue	Humboldt	No Frontage ..	
Champlain avenue.....	Sixty-third	Sixty-seventh	74	1,204 00
Cornelia	Wilson	Halsted	45	720 00
Curtis	Fulton	Carroll avenue	Duplicate	
Crescent place	Evanston avenue	North Halsted	No Main	
Craft	Aldine	Belmont avenue	All in	
Dix	Front	George	Notified	

LIST OF STREETS ORDERED FOR IMPROVEMENT—CONTINUED.

STREET	FROM	TO	Number of Pipes	Amount
Dearborn.....	Fifty-ninth.....	Sixtieth.....	Notified.....	
Dunning.....	Humboldt boulevard.	Alley W. Sawyer ave.	No Frontage.....	
Dawson avenue ..	Milwaukee avenue ..	Wellington avenue..	Not Assessed.....	
Drake avenue.....	Elbridge avenue.....	Belmont avenue.....	Not Assessed.....	
Dunning.....	Sacramento avenue..	California avenue ..	Not Assessed.....	
Evergreen avenue ..	Rockwell.....	California avenue ..	All in.....	
Emerald avenue.....	Fifty-ninth.....	Sixtieth.....	Not Assessed.....	
Emerald avenue.....	Seventy-second.....	Seventy-fifth.....	Not Assessed.....	
Erie avenue.....	180th.....	Howard avenue.....	No Main.....	
Eastwood avenue ..	Robey.....	Leavitt.....	All in.....	
Evanston avenue ..	Thorndale avenue..	Devon avenue.....	Out of District.	
West Eighteenth ..	Western avenue.....	California avenue ..	84.....	\$1,184 00
Evanston avenue ..	Lawrence avenue ..	Foster avenue.....	Duplicate.....	
Estes avenue.....	Ridge Avenue boul.	Lake Michigan.....	Out of District.	
Edgewater place ..	Ashland avenue.....	Clark.....	No Frontage.....	
Elbridge avenue ..	N. Central Park ave.	Noble.....	Not Assessed.....	
Eberly avenue.....	Belmont avenue.....	Noble.....	Not Assessed.....	
Enis.....	Western avenue.....	Leavitt.....	Not Assessed.....	
Fiftieth place.....	Morgan.....	Halsted.....	84.....	612 00
Forty-ninth place..	Morgan.....	Halsted.....	58.....	954 00
Fiftieth.....	Morgan.....	Center avenue.....	Duplicate.....	
Front.....	Lesing.....	Carpenter.....	All in.....	
Fav.....	Chicago avenue.....	Front.....	R. R. Property	
Fall.....	Madison.....	Warren avenue.....	No Frontage.....	
Fifty-fourth place..	Union avenue.....	Wallace.....	31.....	496 00
Fortieth court.....	West Park avenue..	West Randolph.....	Notified.....	
Fortieth avenue "S"	Taylor.....	Sixteenth.....	Duplicate.....	
Fletcher.....	Racine.....	Perry.....	28.....	448 00
Fisk.....	Springer avenue ..	Southern terminus.	Notified.....	
Forty-sixth.....	Loomis.....	Robey.....	Not Assessed.....	
Flournoy.....	Central Park avenue	Lawndale avenue ..	Duplicate.....	
West Fourteenth ..	Wood.....	Robey.....	All in.....	
N. Fortieth avenue ..	West North avenue ..	Armitage avenue ..	No Main.....	
Francisco avenue ..	Elston avenue.....	Belmont avenue ..	All in.....	
Fullerton avenue ..	N. Fortieth avenue ..	N. Forty-eighth ..	No Main.....	
Forty-sixth.....	Greenwood avenue ..	Woodlawn avenue ..	All in.....	
Fullerton avenue ..	Kedzie avenue.....	N. Fortieth avenue ..	No Main.....	
S. Forty-fourth ave.	Madison.....	Lake.....	Notified.....	
S. Forty-third ave.	Madison.....	Lake.....	Notified.....	
Fulton.....	S. Forty-fourth ave.	S. Forty-sixth ave.	Not Assessed.....	
S. Forty-first court.	Colorado avenue..	Harvard.....	83.....	594 00
S. Forty-first avenue	Madison.....	Van Buren.....	No Frontage.....	
Forty-first avenue ..	Colorado avenue ..	Sixteenth.....	138.....	2,484 00
Francisco avenue ..	Fullerton ave.....	Diversey.....	Not Assessed.....	
Frankfort.....	Hoyne avenue.....	Oakley avenue.....	Duplicate.....	
S. Fortieth avenue ..	Lake.....	Sixteenth.....	Duplicate.....	
Forty-seventh.....	Paulina.....	Western avenue ..	No Assessment.....	
George.....	Kedzie avenue.....	Woodard avenue ..	No Main.....	
Goodspeed.....	Forty-third.....	Forty-seventh.....	63.....	1,134 00
Grand avenue.....	N. Forty-fourth ave.	N. Seventy-second avenue	No Main.....	
Grand avenue.....	Chicago ave.....	Division.....	Duplicate.....	
Gresham avenue ..	Milwaukee avenue ..	Noble.....	Not Assessed.....	
George.....	Sangamon.....	Carpenter.....	No Frontage.....	
Humboldt.....	West Division.....	Cornelia.....	89.....	624 00
Hoyne avenue.....	Archer avenue.....	Thirty-fourth.....	All in.....	
Humboldt.....	Chicago avenue.....	Cornelia.....	45.....	810 00
S. Hamilton avenue.	Archer avenue.....	Thirty-seventh.....	All in.....	

LIST OF STREETS ORDERED FOR IMPROVEMENT—CONTINUED.

STREET	FROM	TO	Number of Pipes	Amount
Howard avenue . . .	Erie avenue . . .	138th . . .	No Main . . .	
Halsted . . .	Archer avenue . . .	155 ft. S. of Twenty-fifth pl.	All in . . .	
Huron . . .	Western avenue . . .	Washtenaw avenue . . .	54 . . .	\$ 864 00
S. Hermitage ave . .	Forty-fifth . . .	Forty seventh . . .	75 . . .	1,200 00
Homan avenue . . .	Kinzie . . .	Central Park avenue . .	Duplicate . . .	
Hoyne avenue . . .	Harrison . . .	Washington . . .	All in . . .	
Humboldt . . .	Elston . . .	Hesing avenue . . .	No Frontage . .	
Hesing avenue . . .	Kedzie . . .	Elston avenue . . .	No Frontage . .	
Hayes avenue . . .	Sheridan road . . .	Winthrop avenue . . .	Out of District .	
Homan avenue . . .	Harrison . . .	Flournoy . . .	No Frontage . .	
Harding avenue . . .	Chicago avenue . .	Augusta . . .	43 . . .	774 00
West Huron . . .	Rockwell . . .	Washtenaw avenue . .	Duplicate . . .	
Harvard avenue . . .	Sixty-third . . .	Sixty-seventh . . .	No Main . . .	
Harvard . . .	N. Fortieth avenue .	N. Forty-second ave . .	Not Assessed . .	
Humboldt avenue . .	Western avenue . . .	California avenue . . .	Duplicate . . .	
Herndon . . .	Belmont avenue . . .	Roscoe boulevard . . .	Not Assessed . .	
Humboldt . . .	Diversey avenue . .	C. & N.-W. Ry. . .	Duplicate . . .	
Humboldt . . .	Milwaukee avenue .	Diversey . . .	Not Assessed . .	
Hamburg . . .	Western avenue . .	Leavitt . . .	All in . . .	
Irving Park avenue .	Halsted . . .	925 feet east . . .	No Main . . .	
Indiana avenue . . .	Seventy-first . . .	Seventy-third . . .	No Main . . .	
Iowa . . .	Hoyne avenue . . .	Leavitt . . .	30 . . .	540 00
Irving avenue . . .	Hamburg . . .	Ems . . .	No Assessment . .	
Jefferson . . .	Lake . . .	Austin avenue . . .	Notified . . .	
John's place . . .	Halsted . . .	C., B. & Q. R. R. . .	Notified . . .	
Justine . . .	Sixty-third . . .	Sixty-fifth . . .	52 . . .	936 00
Justine . . .	Sixty-fifth . . .	Sixty-seventh . . .	73 . . .	1,314 00
Kedzie avenue . . .	Elston avenue . . .	Belmont avenue . . .	No Main . . .	
Kimball avenue . . .	Belmont avenue . .	Wellington . . .	Not Assessed . .	
Linden place . . .	Humboldt boulevard .	Thomas avenue . . .	No Main . . .	
LaSalle . . .	Thirty-ninth . . .	L. S. & M. S. R. Ry. .	Notified . . .	
Lydia . . .	Des Plaines . . .	Halsted . . .	Not Assessed . .	
Leavitt . . .	Archer avenue . . .	Thirty-first . . .	All in . . .	
Leland avenue . . .	Pemberton . . .	Sheridan road . . .	Notified . . .	
Lunt avenue . . .	Ridge avenue . . .	516 ft. E. Sheridan rd. .	All in . . .	
Linwood . . .	California avenue . .	Humboldt . . .	All in . . .	
Lake View avenue . .	Roslyn place . . .	173 ft. S. Arlington pl. .	Notified . . .	
Lowe avenue . . .	Seventy-second . . .	Seventy-fifth . . .	No Main . . .	
Langley avenue . . .	Ninety-first . . .	Ninety-third . . .	No Frontage . . .	
Loomis . . .	Sixty-third . . .	Sixty-fifth . . .		
Lafin . . .	Sixty-third . . .	Sixty-fifth . . .	No Main . . .	
Loomis . . .	Sixty-fifth . . .	Sixty-seventh . . .	78 . . .	1,404 00
Lafin . . .	Sixty-fifth . . .	Sixty-seventh . . .	34 . . .	810 00
Lawndale avenue . .	Colorado avenue . .	Harrison . . .	18 . . .	304 00
Linden avenue . . .	Kedzie avenue . . .	North Troy . . .	All in . . .	
Law avenue . . .	Harrison . . .	Polk . . .	Notified . . .	
Leavitt . . .	Chicago avenue . . .	Division . . .	185 . . .	2,466 00
Layton . . .	Wallace . . .	Stewart avenue . . .	Not Assessed . .	
Lincoln . . .	Forty-seventh . . .	Fifty-first . . .	All in . . .	
Morgan . . .	Sixty-fifth . . .	Sixty-ninth . . .	Not Assessed . .	
Morgan . . .	Forty-seventh . . .	Fifty-first . . .	No Main . . .	
May . . .	Forty-eighth . . .	Forty-ninth . . .	No Main . . .	
Monroe . . .	Western avenue . . .	75 ft. E. Oakley ave. .	Notified . . .	
Montrose boulevard .	Evanston avenue . .	C. & E. R. R. . .	No Frontage . . .	
Marshfield avenue . .	Lincoln . . .	Cornelia . . .	No Assessment . .	
Montrose boulevard .	Robey . . .	Western . . .	No Frontage . . .	
Marshfield avenue . .	Forty-fifth . . .	Forty-seventh . . .	24 . . .	432 00

LIST OF STREETS ORDERED FOR IMPROVEMENT—CONTINUED.

STREET	FROM	TO	Number of Pipes	Amount
May	Sixty seventh	Sixty-eighth	Not Assessed	
Monroe avenue	Sixty-eighth	Seventieth	No Main	
Marshfield avenue	Sixty-third	Sixty-fifth	Not Assessed	
Monticello avenue	Chicago avenue	Grand avenue	129	\$2,322 00
Marvin place	Park avenue	Randolph	Not Assessed	
Mozart	Fullerton avenue	Diversey	No Main	
Morgan	Sixty-fifth	Sixty-ninth	Not Assessed	
McLean avenue	Kimball avenue	Hamlin avenue	78	1,248 00
McAlister place	Sibley	Loomis	All in	
McAlister place	Sibley	Center avenue	All in	
McAuley avenue	North avenue	Humboldt avenue	231	3,636 00
W. Nineteenth	May	Fisk	All in	
Newberry avenue	Fourteenth place	C. & N.-W. Ry.	All in	
Ninety-first	South Park avenue	Cottage Grove ave	Duplicate	
Ninety-first place	South Park avenue	Cottage Grove ave	171	2,736 00
Ninety-second	C. & W. Ind. R. R.	Cottage Grove ave	129	2,080 00
Ninety-second pl.	C. & W. Ind. R. R.	Cottage Grove ave	100	1,600 00
Ninety-third	St. Lawrence avenue	Cottage Grove ave	41	656 00
Ninety-first	Exchange avenue	South Chicago ave	No Main	
Noble	Ashland	Wood	All in	
Nelson avenue	Blucher	Soult	21	378 00
Noble avenue	Kedzie	Central Park avenue	No Main	
Norwood avenue	Milwaukee avenue	Norwood Park	No Main	
Oakley avenue	Thirty-first	Thirty-fifth	75	1,200 00
Otto	Ashland avenue	C. E. & L. S. R. R.	Notified	
Otto	Gross Park avenue	Robey	Notified	
Ogden avenue	Warren avenue	Twelfth	Notified	
Oakley avenue	Hamburgh	Ems	26	416 00
Oakley avenue	Ems	Fullerton	38	608 00
Oakley avenue	Hamburgh	Fullerton	Duplicate	
Peoria	Forty-ninth	Fifty-first	No Main	
Peoria	Sixty-sixth	Sixty-ninth	Not Assessed	
Phillips	Halsted	Sangamon	20	320 00
Perry avenue	Sixty-fifth	Sixty-ninth	15	270 00
Phillips	Sangamon	Green	Duplicate	
South Park avenue	C. & W. Ind. Ry	Ninetieth	No Main	
Pleasant place	Western avenue	Leavitt	All in	
Pine Grove avenue	Sheridan road	180 feet north	No Frontage	
Robey	Archer avenue	Thirty-fourth	All in	
Robey	Archer avenue	Thirty-ninth	All in	
Rockwell	W. Chicago avenue	Grand avenue	All in	
West Roscoe	Kedzie avenue	Elston avenue	Notified	
Ridge road	Homan avenue	North City Limits	Out of District	
N. Ridgeway avenue	W. Chicago avenue	West Division	123	2,196 00
Rockwell	Augusta	Division	Duplicate	
Rice	Washtenaw avenue	Rockwell	Not Assessed	
Roscoe	Present E. terminus	Lake Shore drive	St. Improved	
Robey	Forty-seventh	Fifty-first	Not Assessed	
Sixty-ninth	South Park avenue	Calumet avenue	14	252 00
Sixty-seventh	Halsted	Morgan	11	198 00
Sixty-eighth	Halsted	Morgan		
Sangamon	Sixty-sixth	Sixty-ninth	No Main	
Stone avenue	Morgan	Center avenue	33	594 00
Sangamon	Front	Lessing	No Frontage	
Superior	Halsted	Morgan	33	594 00
Sherman	Fifty-ninth	Sixtieth	No Main	
Sixtieth	Halsted	Union avenue	All in	

LIST OF STREETS ORDERED FOR IMPROVEMENT—CONTINUED.

STREET	FROM	TO	Number of Pipes	Amount
Sixty-ninth	Halsted	Ashland avenue	Duplicate	
Sixty-eighth	Wentworth avenue	State	Duplicate	
Sixty-second	Madison avenue	I. C. R. R.	Notified	
Seminary avenue	Newport avenue	Eddy	15	\$ 240 00
Stratford place	Eastern terminus	Lake Shore drive	Not Assessed	
St. Lawrence ave.	Ninety-first	Ninety-third	Not Assessed	
Sixty-fourth	Loomis	Ashland avenue	No Main	
Sixty-fifth	Loomis	Ashland avenue	Not Assessed	
Spaulding avenue	Van Buren	Congress	No Frontage	
Stanley terrace	Jackson boulevard	Van Buren	10	160 00
Superior avenue	Ninety-second	Ninety-third	12	216 00
Sixty-sixth	Loomis	Ashland avenue	No Main	
Sixty-seventh	Loomis	Ashland avenue	No Main	
Sheridan road	North Fifty-ninth	Bryn Mawr avenue	87	1,740 00
Sixty-eighth	Morgan	Center avenue	No Main	
Sacramento avenue	Elston avenue	Belmont avenue	28	414 00
Sacramento avenue	Milwaukee avenue	Diversey	No Main	
Seventy-second pl.	Woodlawn avenue	I. C. R. R.	No Main	
Seventy-first	State	Indiana avenue	No Frontage	
Seventy-first	State	Perry avenue	No Main	
Sheridan road	Hayes avenue	North City Limits	Out of District	
Sawyer avenue	Twenty-fourth	Twenty-sixth	72	1,296 00
South Chicago ave	Eighty-seventh	Ninety-first	No Main	
Southport avenue	Morse avenue	Homan avenue	Out of District	
Springfield avenue	Chicago avenue	Augusta	55	990 00
Sixty-ninth	Addison avenue	Woodlawn avenue	Notified	
Sheridan road	Montrose avenue	Foster avenue	106	2,120 00
Sixty-fourth	Stewart avenue	Wentworth avenue	No Main	
Sixty-fifth	Stewart avenue	Wentworth avenue	No Main	
Sixty-sixth	Stewart avenue	Wentworth avenue	No Main	
Sixty-seventh	Stewart avenue	Wentworth avenue	Not Assessed	
Spaulding avenue	Twenty-fourth	Twenty-sixth	60	1,080 00
Sawyer avenue	Diversey avenue	Belmont avenue	Not Assessed	
Spaulding avenue	Diversey avenue	Belmont avenue	Not Assessed	
Sacramento avenue	Diversey avenue	C. & N.-W. Ry	Duplicate	
Sixty-eighth	Sangamon	Morgan	No Frontage	
Seventy-fourth	Yates avenue	Bond avenue	140	1,890 00
Turner avenue	West Twelfth	Douglas Park boul.	40	640 00
W. Twentieth place	Peoria	Sangamon	Notified	
Thirty-sixth	Ashland avenue	Robey	No Frontage	
Thirty-fifth place	Halsted	Laurel	Notified	
Troy	Elston avenue	Belmont avenue	No Main	
Tilden avenue	Aberdeen	Center avenue	All in	
Troy	Central Park boul.	Chicago avenue	All in	
Troy	Kinzie	Central Park boul.	All in	
West Thirteenth	Johnson	Canal	Notified	
Troy	Diversey avenue	C. & N.-W. Ry	Not Assessed	
Turner avenue	Jackson boulevard	Van Buren	Notified	
Union avenue	Seventy-second	Seventy-fifth	Not Assessed	
Union avenue	118th	119th	20	360 00
Union	Twelfth	Railroad tracks	25	450 00
Vincennes avenue	C. & W. Ind. R. R.	Ninety-first	No Frontage	
Wellington	Lincoln avenue	Perry	103	1,792 00
Water	St. Clair	E. line W. & L. H. C. C. D. Co.	Notified	
Wood	Forty-third	Forty-seventh	91	1,638 00
Wrightwood avenue	Logan Square	Hamlin avenue	No Main	
Wabansia avenue	Kedzie avenue	Central Park avenue	Not Assessed	

LIST OF STREETS ORDERED FOR IMPROVEMENT—CONTINUED.

STREET	FROM	TO	Number of Pipes	Amount
Whipple.....	Elston avenue	Belmont avenue	48	\$ 774 00
Wellington	Ashland avenue	Wood	Duplicate	
Wood	Forty-seventh	Fifty-first	Not Assessed	
Winthrop avenue...	Lawrence avenue ...	Ainslee avenue	61	1,098 00
Woodard avenue...	Milwaukee avenue ..	Spaulding avenue...	Not Assessed	
Wisner	Milwaukee avenue ..	Wellington	Not Assessed	
Wellington	Kedzie avenue.....	Kimball avenue	Not Assessed	
Wellington	Kedzie avenue.....	C. & N.-W. Ry.....	Not Assessed	
Yorktown	Thirty-first	Thirty-fifth	Notified.....	
Yale avenue	Sixty-third	Sixty-seventh.....	Not Assessed	

Total number of streets assessed..... 70

Total number of pipes..... 4,806

Total amount for pipes.....\$74,086 00

PERMIT DEPARTMENT.

SCREW FERRULES INSERTED IN YEAR 1896.

MONTHS.	$\frac{3}{4}$ -inch Ferrules Inserted.	$\frac{1}{2}$ -inch Ferrules Inserted.	1-inch Ferrules Inserted.	Grand Total of Screw Ferrules Inserted.
January... ..	80	84	.....	164
February.....	97	152	2	251
March.....	157	255	8	420
April.....	324	418	7	749
May.....	347	506	20	873
June.....	237	1,685	11	1,933
July.....	239	1,428	14	1,681
August.....	251	885	9	1,145
September....	240	1,255	.....	1,495
October.....	204	899	9	1,112
November.....	149	791	2	942
December.....	185	557	14	756
TOTAL.....	2,510	8,915	96	11,521

DRIVEN FERRULES INSERTED DURING YEAR 1896.

MONTHS.	$\frac{3}{4}$ -inch Ferrules Inserted.	$\frac{1}{2}$ -inch Ferrules Inserted.	1-inch Ferrules Inserted.	Grand Total of Driven Ferrules Inserted.
January.....	.....	91	.....	91
February.....	.....	4	.....	4
March.....	.....	.....	.....	.....
April.....	1	458	.....	459
May.....	.....	713	.....	713
June.....	50	48	.....	98
July.....	46	.....	.....	46
TOTAL.. ..	97	1,314	.....	1,411

NOTE.—All ferrules inserted subsequent to July 31, 1896, were screw ferrules.

SUMMARY OF FERRULES INSERTED.

	$\frac{3}{8}$ -inch.	$\frac{1}{2}$ -inch.	1-inch.	Grand Total.
Screw ferrules	2,510	8,915	96	11,521
Driven ferrules	97	1,814	.....	1,411
GRAND TOTAL	2,507	10,229	96	12,932

Re-taps inserted in 1896 :

$\frac{3}{8}$ -inch	510
$\frac{1}{2}$ -inch	327
Total	837

The number of applications made at this office for ferrules to water service pipes during the past year (exclusive of City contracts and re-taps) were as follows :

Inserted in old part of City	1,825
Inserted in Lake View	1,233
Inserted in Hyde Park	1,135
Inserted in Town of Lake	653
Inserted in Calumet	258
Inserted in Cicero	344
Inserted in Jefferson	1,061
GRAND TOTAL	6,059

PERMITS.

Permits were issued during the year 1896 as follows :

For tapping water mains for pipes to inside of curb for future use	7,529
For tapping water mains for enlarged service pipes to houses previously supplied	508
For tapping water mains for service pipes to houses not previously supplied	4,895
For connection to service pipes inside of curb lines	342
For 8-inch cast iron pipes to be used as service pipes	1
For 6-inch cast iron pipes to be used as service pipes	4
For 4-inch cast iron pipes to be used as service pipes	35
For 3-inch cast iron pipes to be used as service pipes	1
For 2-inch cast iron pipes to be used as service pipes	81
For miscellaneous or special permits	276
GRAND TOTAL	13,672

**TABULATED STATEMENT SHOWING THE NUMBER OF FERRULES
INSERTED EACH YEAR FOR THE LAST SEVENTEEN YEARS,
AND THE TOTAL NUMBER IN USE DECEMBER 31, 1896.**

Year.	Original Town.	*Lake View.	Hyde Park.	*Town of Lake.	*Calumet.	*Cicero.	*Jefferson.	Total.
1880.....	63,510	.....	.....	.....	.....	.....	.....	63,510
1880.....	4,439	.....	.....	.....	.....	.....	.....	4,439
1881.....	5,078	.....	.....	.....	.....	.....	.....	5,078
1882.....	5,213	.....	.....	.....	.....	.....	.....	5,213
1883.....	6,656	.....	.....	.....	.....	.....	.....	6,656
1884.....	6,637	.....	.....	.....	.....	.....	.....	6,637
1885.....	6,555	.....	.....	.....	.....	.....	.....	6,555
1886.....	8,083	.....	.....	.....	.....	.....	.....	8,083
1887.....	8,808	.....	.....	.....	.....	.....	.....	8,808
1888.....	10,089	.....	.....	.....	.....	.....	.....	10,089
1889.....	.....	.....	♢ 8,775	.....	.....	.....	.....	8,775
1889.....	7,617	889	1,730	1,286	.....	.....	.....	11,522
1890.....	10,127	3,440	3,833	3,951	152	289	20	21,812
1891.....	10,237	2,458	5,658	4,165	234	59	570	23,381
1892.....	7,224	3,173	4,813	3,882	271	63	2,146	21,572
1893.....	7,990	2,334	3,586	4,223	308	153	1,435	20,029
1894.....	6,642	2,271	2,770	1,922	392	843	1,044	15,884
1895.....	5,015	2,263	3,152	1,750	410	750	1,326	14,665
1896.....	3,551	1,927	2,792	1,838	292	1,663	869	12,933
Total	184,071	18,754	37,109	23,017	2,059	3,820	7,410	276,240

* Number of ferrules inserted in suburbs previous to annexation, unknown.

♢ Number of ferrules inserted previous to 1880.

♢ Number of ferrules inserted in Hyde Park previous to annexation.

METER MECHANICAL DEPARTMENT.

Number of meters in service December 31, 1895	4,949
Number of meters set in new location during 1896.....	263
	<hr/>
Total number of meters in service during 1896.....	5,212
Number of meters removed—property assessed	50
Number of meters removed permanently—supply cut off.....	56
	<hr/>
Total number of meters removed during 1896	106
	<hr/>
Total number of meters in service December 31, 1896.....	5,106
	<hr/> <hr/>
Number of hydraulic elevators in use December 31, 1895	308
Number of hydraulic elevators removed during 1896	28
	<hr/>
Total number of hydraulic elevators in use December 31, 1896.....	280
	<hr/> <hr/>
Number of meters set during 1896 in new location	263
Number of meters set during 1896 replacing others.....	101
	<hr/>
Total number of meters set during 1896.....	364
	<hr/> <hr/>
Number of meters in stock December 31, 1895	28
Number of meters bought from manufacturers during 1896	251
Number of meters bought from private parties during 1896	80
Number of meters furnished by private parties during 1896.....	40
	<hr/>
Total number of meters on hand during 1896.....	399
Total number of meters set during 1896.....	364
	<hr/>
Total number of meters on hand December 31, 1896.....	35
	<hr/> <hr/>
Number of meters repaired during 1896 for which bills were rendered.....	1,368
Number of meters repaired during 1895 for which bills were rendered.....	1,248

NAMES AND SIZES OF WATER METERS IN USE DECEMBER 31, 1896.

MAKE	SIZE										Total
	$\frac{1}{2}$ -inch	$\frac{3}{4}$ -inch	$\frac{1}{2}$ -inch	1-inch	1 $\frac{1}{4}$ -inch	2-inch	3-inch	4-inch	6-inch	10-inch	
Worthington	5	262	877	1,147	912	866	468	31	8	.....	4,071
Thomson .....	.....	1	16	16	41	27	15	15	7	.....	188
Crown	1	4	26	60	68	101	33	86	17	.....	896
Hersey .....	.....	1	26	39	72	108	58	48	16	.....	368
Gem .....	.....	.....	.....	.....	.....	15	8	10	8	2	43
Nash .....	.....	10	29	34	13	.....	.....	.....	.....	.....	86
Empire .....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	8
Westinghouse .....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Total	6	278	474	1,800	1,106	1,117	582	190	51	2	5,106

The foregoing meters are distributed among the various establishments as follows:

Flats and stores.....	688
Business houses.....	887
Residences and apartment buildings.....	792
Railroads	413
Manufactories	1,088
Breweries	128
Liveries.....	142
Packing houses.....	105
Laundries.....	78
Hotels	211
Office buildings	217
Theaters	23
Miscellaneous	266
Charitable institutions.....	68
<hr/>	
Total.....	5,106

REPORT OF THE ACCOUNTING DEPARTMENT.

INCOME ACCOUNT.

REVENUE.

General Assessment (May 1, 1896).....	\$ 2,566,834	90
Increase back tax.....	6,983	80
Increase current tax.....	90,213	12
Increase shut-off.....	4,886	36
	<hr/>	\$ 2,668,918 18
Less—		
Discount allowed.....	\$ 315,885	74
Erroneous assessments refunded.....	1,598	86
Decreased on account of municipal and public build- ings.....	33,888	76
Decreased on account of religious, charitable and educational institutions.....	29,154	88
Decreased on account of over-payments, as per affi- davits and special examinations, removal or destruction of buildings, changes to meter con- trol and other causes.....	133,473	51
Allowances made on current bills to cover draw- back on amounts previously paid on vacant property, in accordance with City Ordinance passed January 14, 1895.....	23,757	77
	<hr/>	537,759 52
Net revenue from assessed rates.....	\$ 2,131,158	66
Amount charged for water supplied through meters	1,039,283	43
Assessor's miscellaneous charges for sprinkling wagons, tugs, skating rinks, etc.....	17,940	84
Assessor's charges on special assessments.....	8,256	91
	<hr/>	\$ 3,196,639 84
Less—		
Net cost of operating Meter Mechanical Depart- ment, as per statement.....	\$ 11,812	57
Net cost of operating Permit Department, as per statement.....	7,971	56
	<hr/>	19,784 13
Net revenue Bureau of Water.....		\$ 3,176,855 71

EXPENSES.

Binding vouchers.....	\$ 56	36
Postage.....	7,600	00
Railroad transportation.....	205	10
Street-car tickets.....	1,730	56
Printing and stationery.....	3,526	32
Shut-off tools, etc.....	123	43
Miscellaneous.....	405	80
Pay rolls (Meter Mechanical and Permit Depart- ment omitted).....	206,242	15
	<hr/>	219,889 72
Net income Bureau of Water.....		\$ 2,956,965 99

PERMIT DEPARTMENT—INCOME ACCOUNT.

DEBIT.

Stock account, January 1, 1896, per inventory	\$	4,079 03	
Amount paid for ferrules	\$	5,792 50	
Amount paid for plugs		19 47	
			5,811 97
Amount paid for printing and stationery	\$	173 10	
Amount paid for transportation		334 15	
Amount paid for drills		1,132 54	
Amount paid for tools, tapes, etc.		1,343 01	
Amount paid for repairs to tapping machines		258 38	
Amount paid for miscellaneous		55 14	
			3,296 32
Salaries of clerks	\$	4,750 94	
Salaries of inspectors		11,848 56	
Salaries of tappers		13,230 54	
Salaries of expressmen		12,024 00	
Salaries of foremen		1,042 00	
Salaries of laborers		5,182 00	
			48,078 04
	\$		61,265 36

CREDIT.

Amount received for inserting ferrules, per cash book	\$	21,599 90	
Amount charged for ferrules inserted for street improvement service and deducted from contractors' bills—5,586 at \$3.50 each	\$	19,493 50	
Amount due for re-taps		2,674 50	
			22,168 00
Amount received for 551 plumbers' licenses, at \$10.00 each		5,510 00	
Stock on hand, as per inventory		4,015 90	
			53,293.80
Net loss of the Department	\$		7,971 56

METER MECHANICAL DEPARTMENT—INCOME ACCOUNT.

DEBIT.

Stock account, January 1, 1896, as per inventory . . .		\$ 11,069 43
Amount paid for meters	\$ 15,404 54	
Amount paid for covers	605 96	
Amount paid for couplings	325 49	
Amount paid for fittings	1,173 84	
Amount paid for lumber	462 58	
Amount paid for repairs	2,522 71	
		20,495 12
Amount paid for printing and stationery	\$ 79 75	
Amount paid for transportation	64 22	
Amount paid for horse feed	216 00	
Amount paid for tools	33 99	
Amount paid for matches, oil, etc.	18 78	
Amount paid for sawdust, nails, etc.	45 30	
		458 04
Salary of superintendent	\$ 1,500 00	
Salary of foreman	1,200 00	
Salaries of clerks	1,980 00	
Salaries of meter-setters	5,758 00	
Salaries of laborers	1,927 00	
Salaries of expressmen	3,058 50	
		15,423 50
		\$ 47,446 09

CREDIT.

Cash received for meters, 2 inches and over	\$10,759 84	
Cash received for meters, under 2 inches	9,084 26	
Cash received for repairs to meters	4,938 35	
	\$ 24,782 45	
Amount due and uncollected for repairs	\$ 4,102 75	
Stock on hand, as per inventory	6,748 32	
	10,851 07	
		35,633 52
Net loss of the Department		\$ 11,812 57

BALANCE SHEET.

DEBIT.

Balance uncollected December 31, 1895.....	\$ 439,860 62
Inventory, Meter Department, December 31, 1895...	8,113 50
Accounts receivable, Meter Department, December 31, 1895.....	2,955 93
Inventory, Permit Department, December 31, 1895..	4,079 03
Cash from Comptroller in 1896 for merchandise.....	24,955 37
Cash from Comptroller in 1896 for expenses.....	288,497 34
Net income 1896, as per income account.....	2,956,965 99

CREDIT.

Debit balance against Comptroller, December 31, 1896.....	\$3,185,374 98
Amount charged Cashier, Department of Public Works	10,759 84
Amount charged Special Assessment Department..	27,750 41
Amount charged City Engineer's Department.....	2,674 50
Inventory, Meter Mechanical Department.....	6,748 32
Inventory, Permit Department	4,015 90
Balance uncollected—assessed rates	413,794 34
Balance uncollected—meter rates.....	70,206 74
Balance uncollected—meter repairs.....	4,102 75
	<hr/>
	\$3,725,427 78 \$3,725,427 78

ANALYSIS OF LEDGER—ASSESSED RATES ACCOUNT.

WARD	DEBIT					CREDIT					
	Balance Jan. 1, 1896	General Assessment	Increases	Refunds	Discounts	Total	Decreases	Discounts	Collections	Balance Dec 31, 1896	Total
1.....	\$12,854 14	\$ 60,217 75	\$ 2,337 02	\$ 80 93	\$ 10 93	\$ 75,600 66	\$10,971 07	\$ 6,831 46	\$ 46,192 04	\$ 11,506 09	\$ 75,600 66
2.....	9,154 85	60,507 75	1,078 67	201 59	94 80	71,037 85	9,418 97	6,628 42	45,290 89	9,701 57	71,037 85
3.....	8,217 00	63,368 25	1,698 93	151 16	24 32	73,479 68	5,087 67	8,637 84	55,014 32	8,779 85	73,479 68
4.....	8,389 55	78,705 70	1,377 44	134 03	22 14	88,628 98	7,387 22	9,586 53	62,940 84	8,714 27	88,628 98
5.....	5,090 10	63,371 75	1,352 23	46 42	5 42	69,865 92	3,982 55	8,608 80	52,443 96	4,882 61	69,865 92
6.....	9,860 90	67,753 50	2,885 49	64 53	9 98	80,574 38	5,020 72	8,738 44	55,724 49	11,092 74	80,574 38
7.....	4,324 70	44,420 15	701 90	35 07	47 03	50,544 85	2,617 92	5,899 75	36,737 18	4,268 00	50,544 85
8.....	2,721 35	44,050 50	923 26	7 87	862 90	49,545 88	2,539 16	5,935 83	39,369 30	3,721 59	49,545 88
9.....	4,757 94	59,358 25	2,163 44	30 13	3 96	66,280 40	4,004 90	8,081 35	48,037 85	6,178 30	66,280 40
10.....	9,753 94	97,708 00	6,853 12	37 68	118 82	114,558 56	6,846 31	13,023 15	84,427 94	10,261 13	114,558 56
11.....	11,167 35	70,518 55	1,101 10	117 44	13 51	83,915 95	5,964 71	10,089 95	62,016 50	10,814 49	83,915 95
12.....	14,313 21	151,094 25	1,166 68	361 52	4,046 30	173,842 08	11,598 13	10,241 26	127,351 06	15,763 60	173,842 08
13.....	15,269 92	81,141 25	2,771 45	137 28	20 89	99,639 06	5,695 92	13,823 23	83,075 12	14,707 61	99,639 06
14.....	18,165 87	88,628 98	5,322 50	243 97	51 51	109,639 06	5,752 86	9,969 13	84,249 48	14,707 61	109,639 06
15.....	18,827 65	98,128 00	4,383 02	109 23	82 23	122,131 43	10,768 86	12,423 23	83,075 12	14,707 61	122,131 43
16.....	5,169 14	70,342 25	4,000 30	65 10	6 87	77,342 72	3,752 86	9,969 13	60,676 60	5,138 25	77,342 72
17.....	11,762 57	38,307 50	607 77	75 90	78 80	44,269 21	3,278 93	4,897 84	29,966 19	5,138 25	44,269 21
18.....	49,108 25	49,108 25	1,109 92	97 25	39 24	62,138 23	5,532 27	5,532 27	49,657 97	11,858 52	62,138 23
19.....	9,401 00	67,668 50	1,619 27	64 60	6 76	79,388 56	3,625 21	6,967 99	42,110 38	10,768 54	79,388 56
20.....	2,902 08	48,137 25	4,402 11	35 94	76 64	56,104 14	4,332 08	8,261 46	3,400 66	8,400 66	56,104 14
21.....	2,807 02	66,278 75	3,709 27	82 21	16 71	72,962 89	4,432 08	8,778 56	50,464 97	9,764 38	72,962 89
22.....	2,798 35	66,081 00	1,302 09	121 19	15 03	70,819 34	5,846 23	8,778 56	52,671 01	3,024 54	70,819 34
23.....	4,364 12	54,475 00	2,215 09	37 41	74 25	61,076 65	5,913 42	8,778 56	44,194 98	3,678 13	61,076 65
24.....	7,748 40	71,458 30	2,964 84	165 63	73 41	82,401 32	7,734 69	8,778 56	57,578 85	8,304 51	82,401 32
25.....	8,478 28	98,699 25	4,624 80	165 52	34 58	109,869 40	4,924 39	13,065 47	67,673 54	5,971 77	109,869 40
26.....	12,662 31	91,305 50	5,602 52	204 49	73 41	112,040 76	8,299 98	13,065 47	44,673 54	17,016 87	112,040 76
27.....	20,651 01	35,802 50	4,050 51	87 17	13 03	60,804 22	3,490 54	3,715 11	27,984 36	25,514 21	60,804 22
28.....	8,970 64	31,567 00	3,096 57	43 84	7 16	43,675 21	2,274 63	3,940 19	27,429 37	10,041 12	43,675 21
29.....	13,413 51	54,782 05	1,074 52	218 80	50 77	69,539 65	4,145 20	6,169 14	44,465 10	14,760 21	69,539 65
30.....	34,654 47	154,121 50	3,644 63	317 51	43 13	192,783 24	11,521 18	18,051 79	131,051 79	25,168 48	192,783 24
31.....	20,643 53	103,868 80	6,441 66	277 87	47 37	141,279 23	9,497 86	12,353 71	81,833 86	87,608 80	141,279 23
32.....	17,367 42	145,189 20	3,914 83	404 52	39 11	166,915 08	10,165 88	17,895 43	121,500 56	17,868 81	166,915 08
33.....	13,908 46	53,914 00	2,346 13	121 73	18 06	70,308 41	6,306 53	6,174 79	42,692 84	16,134 26	70,308 41
34.....	32,113 16	121,852 25	6,930 85	578 41	59 24	161,533 91	10,987 54	13,301 67	98,196 54	38,578 86	161,533 91
TOTAL.....	\$385,652 22	\$2,566,384 90	\$108,265 45	\$ 4,913 63	\$ 4,714 98	\$3,067,481 18	\$221,567 09	\$323,608 21	\$2,109,621 54	\$413,794 34	\$3,067,481 18

**DETAILED STATEMENT OF CASH COLLECTED DURING 1896.
(NET.)**

1896.	Assessed Rates.	* Meter Rates.	Permits.	Licenses.	Assessor's Miscella- neous.	Meter Mechanical Dept.	TOTAL.
January	\$ 35,021 52	\$ 40,677 93	\$ 523 30	.....	\$ 26 50	\$ 472 40	\$ 76,721 65
February	23,951 26	83,594 66	917 80	\$ 810 00	53 50	952 90	110,280 12
March.....	24,773 57	92,255 39	1,466 50	1,900 00	91 13	1,343 20	121,829 79
April	20,609 08	69,764 60	2,184 00	590 00	993 40	1,754 95	95,896 03
May.....	369,477 56	92,661 09	3,093 10	410 00	2,740 01	2,045 93	470,427 69
June.....	496,891 23	82,770 33	3,261 00	190 00	2,830 00	1,638 13	587,580 69
July.....	113,173 97	83,742 28	2,015 90	680 00	3,542 92	1,239 70	204,394 77
August.....	44,542 15	78,736 79	1,709 30	670 00	2,961 01	614 00	129,232 25
September..	23,915 68	75,005 90	1,469 30	190 00	2,242 00	909 25	103,732 13
October.....	22,557 18	83,091 95	1,766 80	40 00	1,237 14	1,024 00	109,717 07
November.....	299,933 69	72,529 95	967 10	30 00	538 48	427 05	374,426 27
December.....	628,169 65	168,455 22	2,225 80	.....	684 75	1,601 10	801,136 52
TOTAL.....	\$2,103,016 54	\$1,023,285 09	\$ 21,599 90	\$5,510 00	\$17,940 84	\$14,022 61	\$3,185,374 98

The following amounts should be added to the foregoing :

Amount due from Cashier, Department of Public Works, on account of large meters	\$ 10,759 84
Amount due from Special Assessment Department for ferrules on street improvements.....	19,493 50
Amount due from Special Assessment Department for Assessor's cost on street improvements	8,256 91
Amount due from Engineer's Department for retaps	2,674 50
Total	\$ 41,184 75
Grand total net collections from all sources.....	\$3,226,559 73

DETAILED STATEMENT OF ASSESSOR'S INCREASE AND DECREASE CHECKS FOR THE YEAR 1896.

1896.	INCREASE.				DECREASE.			
	Current Tax.	Back Tax.	Shut-off.	Total.	Current Tax.	Back Tax.	Draw-Back.	Total.
January	\$ 3,034 79	\$ 46 26	\$ 412 03	\$ 3,493 07	\$ 9,291 58	\$ 1,641 36	\$ 1,156 78	\$ 12,089 73
February	3,965 79	50 00	321 01	4,336 80	6,105 47	2,690 31	642 87	9,438 65
March	5,867 01	11 80	429 27	6,308 08	2,974 53	2,232 46	868 93	6,075 90
April	2,718 46	7 50	448 05	3,169 01	5,389 14	1,670 53	588 54	7,598 20
May	7,015 07	117 00	667 80	7,799 37	17,881 30	5,255 84	3,170 40	26,307 54
June	6,686 48	174 75	580 83	7,441 56	15,326 31	4,386 27	4,493 96	24,206 54
July	8,332 60	229 25	362 02	8,923 87	8,386 60	4,073 73	1,541 40	13,951 73
August	8,046 43	3,299 58	283 14	11,579 15	5,633 36	4,910 06	377 59	10,921 01
September	12,985 65	2,418 42	344 52	15,698 59	7,055 68	4,068 73	212 50	11,331 91
October	25,314 22	403 99	298 63	26,011 84	3,317 80	2,068 56	159 63	5,545 99
November	3,046 86	200 75	378 81	3,626 42	5,815 59	3,684 75	4,964 04	14,464 38
December	3,254 76	24 50	416 26	3,695 52	68,880 81	4,361 40	5,586 14	78,828 85
Total	\$ 90,213 12	\$ 6,963 80	\$ 4,896 36	\$ 102,083 28	\$ 155,468 16	\$ 41,063 99	\$ 23,757 77	\$ 220,274 93

WATER OFFICE—DETAILED STATEMENT OF PAY ROLLS FOR THE YEAR ENDING DECEMBER 31, 1896.

DEPARTMENTS.	Assessor's.	Collection.	Inspection.	Meter Rates.	Meter Mechanical	Permit.	Shut-off.	Total.
January ..	\$ 2,041 63	\$ 4,699 96	\$ 3,459 88	\$ 2,061 25	\$ 1,320 50	\$ 3,951 81	\$ 2,809 13	\$ 20,363 64
February ..	3,076 02	7,841 63	5,719 07	2,343 75	1,414 50	5,943 75	2,746 88	28,185 80
March ..	2,453 15	5,659 96	4,752 84	2,265 00	1,298 00	3,699 94	2,183 75	22,257 64
April ..	2,429 15	5,638 38	4,612 50	2,265 00	1,285 00	3,673 50	2,022 00	21,920 48
May ..	2,854 15	5,581 72	4,612 50	2,265 00	1,266 00	3,699 76	2,184 50	21,863 63
June ..	2,354 15	5,530 83	4,587 50	2,343 00	1,301 00	3,796 52	2,176 50	21,969 50
July ..	2,374 15	5,608 33	4,462 50	2,398 50	1,265 00	3,873 00	2,323 75	22,305 23
August ..	2,373 51	5,537 77	4,462 50	2,343 00	1,311 00	3,910 76	2,154 00	22,092 54
September ..	2,429 15	5,586 93	4,462 50	2,340 50	1,288 00	4,004 00	2,176 50	22,287 58
October ..	2,874 15	5,586 43	4,462 50	2,260 50	1,338 00	4,143 00	2,283 00	22,447 58
November ..	2,264 15	5,490 00	4,490 00	2,030 00	1,333 00	4,030 00	2,110 50	21,747 65
December ..	2,857 23	5,652 05	4,549 59	2,107 50	1,324 50	4,352 00	2,355 75	22,596 62
Total ..	\$38,880 58	\$68,358 94	\$54,633 88	\$27,043 00	\$15,639 50	\$48,078 04	\$27,336 25	\$268,959 69

NOTE—25 per cent. of January salaries were retained and added to the February rolls.

**DETAILED STATEMENT OF ASSESSOR'S MISCELLANEOUS
RECEIPTS.**

1896.	Inspection.	Leak and Waste.	Shut-off.	Sprinklers.	Tugs.	Miscella- neous.	Total.
January	\$ 28 50	.....	\$ 8 00	.....	.....	.....	\$ 26 50
February	12 50	\$ 4 50	.....	.....	.....	\$ 26 50	53 50
March	34 50	.....	9 13	\$ 37 50	.....	10 00	91 13
April	7 00	.....	19 95	528 35	... ..	488 10	998 40
May	280 50	.....	29 01	2,857 50	\$10 00	63 00	2,740 01
June	361 50	.....	.....	2,484 00	10 00	24 50	2,890 00
July	77 00	4 00	7 88	2,884 00	.....	570 04	3,542 92
August	88 00	8 50	22 01	2,887 50	10 00	.....	2,961 01
September	14 50	8 00	12 00	2,212 50	.....	.....	2,242 00
October	5 00	5 25	24 01	1,192 50	5 00	5 88	1,387 14
November	276 00	.....	9 98	100 00	2 00	150 50	528 48
December	560 50	2 25	8 00	.....	.....	119 00	684 75
Total	\$1,690 50	\$22 50	\$139 97	\$14,633 85	\$87 00	\$1,417 02	\$17,940 84

DETAIL OF GENERAL ASSESSMENT, FROM MAY, 1896, TO MAY, 1897.

Ward.	Frontage.	Water Closets.	Urinals.	Baths.	Wash Basins.	Ex. Rooms and Persons.	Saloons.	Hose, Trough and Fountain.	Laundries.	Steam Heating and Engine.	Stables.	Miscellaneous.	Total Assessment.
1	\$ 20,675 50	\$12,086 25	\$1,468 50	\$ 950 25	\$ 6,270 00	\$ 6,988 25	\$ 1,881 00	\$ 539 00	\$ 207 75	\$ 4,911 75	\$ 1,265 00	\$ 2,974 50	\$ 60,217 75
2	28,549 00	10,663 50	396 50	3,503 00	4,594 00	4,708 75	700 00	2,551 00	173 50	972 25	2,782 00	944 25	60,507 75
3	34,199 50	10,728 00	196 50	3,706 00	4,308 50	5,006 50	515 00	3,572 50	229 00	252 50	1,881 00	765 75	63,358 25
4	40,008 00	13,759 50	262 00	5,812 00	5,330 50	5,161 50	450 00	4,566 00	124 00	379 20	2,032 00	821 00	78,705 70
5	35,310 50	8,072 50	283 00	1,498 50	1,022 00	11,564 50	955 00	1,022 00	81 00	876 00	1,979 00	1,063 75	63,371 75
6	47,090 50	4,899 00	166 00	856 50	978 50	8,400 50	1,175 00	825 00	30 00	571 00	1,753 75	977 75	87,753 50
7	24,018 00	4,765 50	185 00	577 50	986 50	10,228 75	1,685 00	341 00	87 00	376 00	1,774 00	804 90	45,429 15
8	21,552 75	4,980 50	161 50	600 00	704 00	12,194 25	740 00	484 00	54 50	647 00	1,186 50	745 50	44,050 50
9	59,759 50	11,577 00	242 00	4,841 00	2,192 00	13,858 00	950 00	619 50	96 00	647 00	2,099 00	873 75	59,355 25
10	39,414 00	13,127 00	184 50	4,606 50	4,775 50	12,334 50	1,055 00	2,479 50	69 00	632 00	1,759 50	854 50	97,795 00
11	81,194 00	25,771 00	378 00	13,668 00	8,470 50	5,987 50	530 00	3,231 00	167 00	1,081 30	3,382 50	1,029 75	76,516 55
12	53,255 00	9,779 00	394 00	4,823 50	2,420 50	5,917 50	755 00	2,702 00	173 00	603 00	4,025 50	1,549 25	151,094 25
13	66,391 50	14,290 25	337 50	5,340 00	2,610 50	12,921 75	745 00	2,733 00	90 00	1,108 50	2,317 75	808 50	87,141 25
14	32,667 50	9,528 50	193 50	3,256 00	1,840 00	7,727 75	990 00	4,239 00	48 00	987 00	1,978 50	924 50	95,829 50
15	24,349 00	7,973 50	276 00	641 00	1,016 50	7,415 50	1,010 00	354 00	132 00	960 50	1,855 25	1,068 50	98,129 00
16	34,930 00	7,892 00	410 50	2,193 50	2,962 00	4,562 75	1,316 00	1,092 00	137 00	1,259 00	1,301 00	1,110 25	70,342 25
17	24,637 50	8,026 00	204 50	3,317 00	1,534 00	10,251 00	915 00	621 00	221 00	949 00	1,638 00	1,437 00	49,109 25
18	33,687 50	11,012 50	227 00	4,866 00	3,257 50	6,225 00	485 00	2,000 60	41 00	377 50	1,337 50	621 75	67,668 50
19	29,662 50	11,438 00	276 00	3,787 00	3,925 50	10,767 50	730 00	2,356 00	92 00	246 50	1,444 00	658 75	48,757 25
20	23,104 50	8,939 00	265 50	1,818 00	1,225 00	13,143 25	903 00	408 00	66 00	495 00	2,088 00	1,163 50	66,373 75
21	31,321 00	15,321 00	426 00	6,164 50	5,628 50	8,993 50	672 00	2,574 00	150 00	1,296 50	1,900 00	1,322 25	74,458 00
22	50,718 50	15,415 50	204 00	8,573 50	4,368 50	6,284 00	472 00	9,030 00	113 00	751 30	1,517 00	1,157 00	111,458 00
23	61,928 50	8,919 50	204 50	3,693 50	2,400 25	5,711 50	728 00	4,793 00	63 00	255 00	2,300 00	1,824 25	98,069 25
24	27,894 50	9,699 00	154 50	3,773 00	559 00	5,724 00	350 00	1,811 00	27 00	720 75	2,093 00	745 00	91,535 50
25	24,858 00	1,842 00	69 50	1,593 00	697 50	1,153 00	265 00	699 00	3 00	109 00	588 00	353 50	35,802 50
26	35,103 00	4,253 50	205 00	1,562 00	1,102 50	5,640 75	1,850 75	7,897 00	61 00	920 80	2,453 00	156 00	54,732 05
27	34,570 50	15,125 00	391 00	3,173 50	3,670 00	14,053 00	1,940 00	7,897 00	33 25	1,01 25	4,374 50	2,089 50	104,121 50
28	65,960 50	8,566 50	220 00	5,363 50	3,662 50	5,571 00	456 00	7,714 00	87 00	406 00	4,723 00	1,103 80	103,868 80
29	65,019 00	26,425 25	150 00	14,069 50	10,342 50	8,630 25	166 00	13,601 00	56 00	985 40	2,170 00	1,023 50	145,199 20
30	37,884 50	3,564 00	202 50	1,918 00	1,472 00	4,116 75	861 00	7,125 00	24 00	791 50	842 25	518 50	53,914 00
31	77,526 50	13,493 00	416 50	8,977 00	4,969 50	7,583 50	879 00	7,125 00	73 00	1,596 50	1,769 25	891 50	121,852 25
Total	\$1,419,187 75	\$345,825 75	\$9,589 50	\$130,357 75	\$102,403 25	\$279,020 25	\$27,712 00	\$106,808 50	\$3,223 00	\$34,084 70	\$85,595 75	\$34,021 70	\$2,556,534 90

COMPARATIVE STATEMENT
OF
GENERAL ASSESSMENT FOR THE YEARS 1895 AND 1896.

	1895.	1896.
Frontage	\$ 1,343,042 00	\$ 1,419,187 75
Water closets	321,237 00	345,825 75
Urinals	9,457 00	9,589 50
Baths	120,823 00	136,357 75
Wash basins.....	93,269 75	102,403 25
Extra rooms and persons	257,759 50	279,020 25
Saloons	27,757 00	27,712 00
Hose, trough and fountains.....	75,773 00	106,808 50
Laundries	4,389 25	3,228 00
Steam heating and engines	36,878 00	34,084 70
Stables	68,329 50	68,595 75
Miscellaneous.....	33,925 90	34,021 70
Total	\$ 2,392,640 90	\$ 2,566,834 90
Increase 1896 over 1895.....		\$ 174,194 00.

I desire to say in conclusion that whatever has been accomplished worthy of praise is largely due to the active interest and support of yourself and His Honor, Mayor Swift, upon all questions pertaining to the welfare of the Bureau. For this, as well as for the courtesy to and confidence reposed in us at all times, the thanks of myself and staff are gratefully extended.

Respectfully submitted,

J. C. CRAIG,

Superintendent of Water.

REPORT OF THE
Bureau of Sewers
CITY OF CHICAGO

BUREAU OF SEWERS

HON. JOSEPH DOWNEY,

Commissioner of Public Works :

DEAR SIR:—Herewith I submit the Twenty-first Annual Report of the Bureau of Sewers, for the year ending December 31, 1896:

For building sewers and catch-basins.....	\$721,869 88
For cleaning sewers and catch-basins.....	96,901 65
For repairing sewers and catch-basins.....	46,281 84
For adjusting to grade manholes and catch-basins on streets being improved.....	45,057 70
For house drains.....	27,938 63
For appropriated salaries	24,568 82
For office expenses.....	934 59
For pumping stations.....	38,949 01
Total	<hr/> \$1,002,502 12

**NEW SEWERS AND CATCH-BASINS BUILT DURING THE YEAR 1896,
AND COST OF SAME.**

Length in Feet.	Size.	Average Cut.	Average Price per Foot.	Cost.
970	6 -inch.	5.0	\$0.84	\$ 324 90
2,498	9 "	7.0	.67	1,648 85
146,279	12 "	7.0	.99	144,758 76
52,460	15 "	8.5	1.19	62,148 66
25,619	2 -foot.	10.5	1.98	50,805 27
4,568	2½ "	12.7	2.88	13,186 61
10,499	3 "	13.8	3.39	35,667 69
3,061	3½ "	13.2	3.85	11,774 84
10,499	4 "	11.9	4.05	42,354 82
5,144	4½ "	12.4	4.09	21,085 07
7,677	5 "	13.8	4.53	34,789 41
8,755	5½ "	11.2	4.84	42,445 89
4,942	6 "	10.0	5.77	28,508 92
1,491	7 "	16.1	10.67	15,907 75
1,782	8 "	16.7	11.64	31,787 72
6,188	8½ "	17.8	12.86	79,553 22
9,900	9 "	17.8	10.62	105,188 00
*303,172				\$ 721,869 83

* The above figures include cost of catch-basins, etc.

**TOTAL NUMBER OF MANHOLES AND CATCH-BASINS IN PLACE
DECEMBER 31, 1896, IN THE CITY LIMITS.**

DIVISIONS.	Constructed During the Year.			Total Built During 1896.	Total Built Previous to 1896.	Total in Place December 31, 1896.
	South.	West.	North.			
Catch-basins ..	911	987	308	2,201	43,583	45,784
Manholes.....	788	902	300	1,990	46,164	48,154

SIZE AND LENGTH OF SEWERS CONSTRUCTED IN THE DIFFERENT WARDS IN THE CITY
DURING THE YEAR 1896.

WARDS.	6-inch.	9-inch.	12-inch.	15-inch.	2-foot.	2½-foot.	3-foot.	3½-foot.	4-foot.	4½-foot.	5-foot.	5½-foot.	6-foot.	7-foot.	8-foot.	8½-foot.	9-foot.	Total.
6th			2,437		740													3,177
8th		242																242
10th			13,882	5,807	2,664													21,783
12th		1,186	3,178	1,962														6,345
13th			6,579	544	900													7,823
14th			720															720
15th			6,542	1,908														8,445
17th			150															150
20th			626															626
21st			366															366
25th			16,232	4,080	2,066													21,397
26th			12,788	3,119	1,968													18,643
27th	970		19,433	13,663			738		5,657	2,476	5,655	6,955	4,942	1,491				62,650
28th			14,842	2,680	3,349		1,476								2,723	6,188	9,900	44,365
29th			2,621				3,346											2,621
30th			21,051	6,004	5,287													33,332
31st			7,363	5,569	6,381				2,667									32,600
32d			8,106	419														8,525
33d			7,738	2,659	564													11,061
34th		1,011	2,945	4,161	1,831				1,000	2,085	2,022	1,800						19,521
Total	970	2,438	146,279	52,480	25,619	4,568	10,499	8,061	10,449	5,144	7,677	8,755	4,942	1,491	2,723	6,188	9,900	303,172

TOTAL COST FOR THE CONSTRUCTION OF SEWERS AND CATCH-BASINS, AND MAINTAINING SAME, SINCE THE ESTABLISHMENT OF THE SEWERAGE SYSTEM IN 1855 TO JANUARY 1, 1897.

Year.	Lineal feet of Sewers Built.	No. of Catch-Basins Built.	No. of Man-holes Built.	No. of House Drains Put In.	Cost of Cleaning Sewers and Catch-Basins.	Street Intersections and Repairs of Sewers.	Cost of Construction.
Previous to 1861.	283,586	1,174	2,102	2,194	\$ 5,619 48	No amts. found on reports.	\$ 665,188 46
1861.	2,826	18	33	249	1,715 60	\$ 2,951 76	8,617 31
1862.	15,676	72	66	365	4,897 24	3,024 07	57,036 42
1863.	39,605	192	204	586	5,065 40	2,058 11	169,527 38
1864.	25,021	189	183	512	9,417 81	4,597 63	87,221 43
1865.	29,948	223	168	1,288	13,818 07	7,493 56	137,643 09
1866.	48,127	327	271	3,732	28,445 16	7,773 65	225,564 53
1867.	89,681	418	555	3,703	26,540 81	9,581 42	416,730 51
1868.	47,841	480	293	3,261	26,954 06	11,287 08	197,152 92
1869.	139,705	771	928	3,979	26,015 68	7,527 16	654,141 26
1870.	78,166	626	468	5,187	21,464 30	10,954 74	258,664 70
1871.	50,716	277	357	3,093	17,415 46	42,557 72	153,295 86
1872.	47,842	245	341	1,435	21,484 16	16,975 40	173,255 76
1873.	146,702	897	1,015	4,691	31,229 27	29,781 97	450,222 90
1874.	222,322	1,054	1,474	6,292	36,884 57	21,996 72	587,507 38
1875.	120,971	958	789	3,365	32,098 23	28,107 40	842,932 39
1876.	15,248	155	75	1,172	29,345 41	19,803 29	79,545 23
1877.	64,666	363	431	1,822	35,763 33	16,959 44	291,829 63
1878.	88,031	492	603	1,544	25,704 37	19,259 49	87,264 97
1879.	145,381	820	1,043	2,953	29,286 67	10,649 69	180,840 50
1880.	79,128	271	554	4,196	25,561 48	25,068 11	92,544 08
1881.	132,076	548	917	4,810	34,512 15	30,967 89	452,310 06
1882.	98,515	792	725	5,677	33,969 35	26,618 05	224,450 16
1883.	75,364	835	497	5,963	34,749 74	25,140 81	232,084 33
1884.	101,547	751	654	5,957	43,678 03	37,893 29	258,020 91
1885.	118,647	796	854	6,825	46,532 18	45,333 02	303,188 08
1886.	103,198	734	723	7,441	51,110 46	50,707 64	177,647 24
1887.	90,584	756	605	8,100	50,264 65	43,789 60	186,496 93
1888.	104,903	816	674	8,152	52,422 41	53,782 97	228,567 57
1889.	171,023	1,351	1,190	4,303	61,503 01	63,459 25	350,234 54
Annexed Districts } previous to 1890. }	998,573	6,102	8,620	Estimated cost of construction, cost of maintenance not known.			2,614,224 75
1890.	379,203	2,986	2,604	9,279	107,873 34	83,388 08	826,718 67
1891.	546,918	3,979	3,736	11,812	123,620 44	95,906 75	1,532,990 44
1892.	549,258	3,866	3,714	12,562	142,720 52	70,747 83	1,290,017 98
Norwood and Rogers Park } annexed previous to 1893 }	96,697	326	231	No. of house drains and cost of construction not known.			172,846 30
1893.	708,176	4,811	4,825	14,198	132,633 51	114,702 78	1,606,720 09
1894.	350,944	2,597	2,259	8,928	154,225 45	130,749 03	1,014,489 86
1895.	196,349	1,515	1,409	1,621	134,424 44	93,713 66	356,950 01
1896.	303,172	2,201	1,990	6,161	96,901 65	91,339 54	721,869 88
Totals.	\$6,900,331	45,784	48,180	176,352	\$1,755,867 89	\$1,356,648 60	\$17,661,554 54

*Of this amount 5,897 feet have been taken up and replaced by sewers of larger size, leaving in place January 1, 1897, 6,894,934 feet, or 1,305.857 miles.

†Of this number, 26 manholes have been abandoned, leaving in place January 1, 1897, 48,154.

Of the above 1,305.857 miles, 501,902 miles are of brick construction and 803,936 miles are of vitrified pipe.

Length and Interior Diameter of Sewers in Place December 31, 1896, in the Different Wards of the City.

WARDS.	6 Inch.	9 Inch.	12 Inch.	15 Inch.	18 Inch.	20 Inch.	22 Inch.	2 Feet.	2½ Feet.	2½ Feet.	3 Feet.	3½ Feet.	3½ Feet.	4 Feet.
1st..			66,572	1,870				15,210	6,077	17,033	12,327			1,996
2d..			42,821	1,320	985			25,369	282	15,280	3,648			670
3d..			37,861	5,904	3,720			22,750		14,692	668			670
4th..		1,889	43,481	10,462	6,156			28,117		24,784	5,067	916		1,061
5th..			50,315	16,249	5,288			34,157		7,020	6,966	1,600		4,180
6th..			75,443	37,095	10,128			54,867		24,670	10,446	1,685		4,975
7th..			32,167	3,686		1,625		21,572		3,683	4,137	2,958		5,040
8th..		242	36,601	4,403				20,085		2,545	1,863	2,323		4,000
9th..			40,987	18,726	125			13,013		971	4,214	3,972		4,025
10th..			172,790	118,032	667			60,481		15,818	12,128	11,088		12,856
11th..			45,789	3,925	999			34,093		2,225	1,582			9,541
12th..		2,434	149,561	89,443	10,665			81,637		10,725	14,090	10,430		10,260
13th..		860	100,638	53,592	4,761			27,930		7,555	9,851	9,975		11,950
14th..		116	111,838	59,967	4,320			51,178		8,329	4,604	3,045		6,217
15th..			124,433	115,869	330			60,583		16,776	5,444	1,626		2,399
16th..			29,271	9,371				16,778		382	2,265			5,275
17th..			21,643	650				35,074			4,315			6,755
18th..			31,529					32,845						
19th..			42,641	1,114				36,055			1,023			9,390
20th..			39,464	13,860	5,010			23,619		7,333	3,168	2,739		3,000
21st..			47,213	6,848	1,275			16,900		12,010	515	1,020		2,510
22d..			35,182	789	1,526			22,449		7,525	2,179			660
23d..			33,146	1,796				25,838		3,841	1,962			3,157
24th..			36,071	4,432	661			44,310		1,441	4,531			2,591
25th..		47,475	184,412	90,093	20,490			33,207	4,817	15,074	11,580	4,810	885	7,591
26th..		2,520	161,087	94,336	3,380			37,011		11,192	12,508	11,218		11,965
27th..	970		60,639	127,733	433			23,975		6,350	4,790	4,669		10,253
28th..			129,116	61,569		3,100		28,397		20,202	14,918			2,336
29th..		225	32,732	36,905		1,300		28,397		6,842	7,023			6,380
30th..		1,913	167,259	132,932	24,151			47,891		12,117	6,639	740		9,440
31st..	10,270	33,237	98,125	87,272	13,852	330	261	29,115		21,165	14,711	8,425		7,771
32d..		770	90,083	57,547	4,119			112,118		5,377	4,736	2,451		19,017
33d..			36,189	35,249	658			17,869		5,642	4,896	4,516		3,970
34th..	769	32,777	144,642	84,812	6,917			81,316	4,771	24,821	3,589	222		9,130
Total	18,009	124,458	2,561,896	1,887,801	142,918	9,479	261	1,225,197	15,947	332,920	202,363	106,150	885	200,861

Length and Interior Diameter of Sewers in Place December 31, 1896, in the Different Wards of the City—Continued.

WARDS.	4½ Feet.	4½ Feet.	5 Feet.	5½ Feet.	6 Feet.	7 Feet.	7½ Feet.	8 Feet.	9 Feet.	10 Feet.	10½ Feet.	TOTAL.
1st...			247									121,262
2d...			4,255		1,480							96,110
3d...												86,265
4th...	1,261		1,058		704							124,946
5th...	2,600		1,360		1,680							131,415
6th...	3,532		8,018		3,112		667					238,895
7th...	280		5,750									79,273
8th...	3,955			2,651								75,997
9th...	3,675								1,625			94,884
10th...	6,114		3,380	1,463	8,308	1,462		5,161	11,636			432,784
11th...	18,440											116,594
12th...	4,075			2,656	1,582	1,983						389,541
13th...	1,995		2,809									242,249
14th...	7,030		11,194	1,370	518	2,702	3,972	1,320				277,007
15th...			6,823	3,994	7,359	2,125	6,630	3,952	5,865			364,258
16th...			5,210		1,494							70,046
17th...	6,940		6,817		1,296							53,490
18th...	4,011		10,775									79,160
19th...	10,130		9,305									109,558
20th...	2,220											100,413
21st...	2,843											91,134
22d...	655		2,765									73,780
23d...			5,583		753							76,001
24th...	2,615		5,537		3,301							105,540
25th...	1,335		2,855	2,150								431,363
26th...	2,648		11,555	2,362	6,660							368,442
27th...	3,358		9,185	12,008	14,685	7,998						294,816
28th...	1,350		1,458		1,532			5,401	13,534			301,085
29th...	2,650	3,933	7,070		4,730	5,290	667		4,715			142,429
30th...	7,812		2,984	2,654	2,635	4,010		5,339	5,300			445,023
31st...	4,116		15,847	3,975	6,552	4,005						368,971
32d...	2,200		1,950									307,632
33d...	2,358		1,676	1,488	9,410	3,936						447,196
34th...	7,965		5,637	10,214	4,734	2,656			2,005	4,650	5,285	137,857
Total...	123,163	3,933	151,103	47,045	82,525	34,215	11,936	21,173	39,380	5,300	5,285	6,894,936

**SEWERS CONSTRUCTED DURING THE YEAR 1896 IN THE
WEST DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Augusta	N. Forty-second ave ..	N. Forty-sixth avenue.	1	2,578
Avers avenue	Irving Park avenue ...	Belle Plaine avenue...	1½	665
Avers avenue	Belle Plaine avenue...	Berteau avenue.....	1	420
Avers avenue	Montrose avenue	Cullom avenue	1½	664
Avers avenue	Cullom avenue	Berteau avenue.....	1	667
South Avers avenue ...	West Thirteenth	1st Alley S. of Twelfth	1	498
South Avers avenue ...	West Fourteenth	West Thirteenth	1½	660
South Avers avenue ...	West Twenty-sixth	West Thirty-first	1	2,690
Belle Plaine avenue...	Monticello avenue	Lawndale avenue.....	1	335
Berlin	N. California avenue...	N. Talman avenue ...	1	965
Boulevard way	West Twenty-fifth	Douglas boulevard...	1	368
Carroll avenue.....	Albany avenue	Sacramento avenue...	1	606
Catalpa court	Fullerton avenue	Alley E. of Humboldt Pk. Blvd.	1	685
S. S. Central Park blvd.	Spaulding avenue	Kedzie avenue	1	630
S. S. Central Park blvd.	Ohio	Indiana avenue.....	1½	544
S. S. Central Park blvd.	Indiana	Austin avenue.....	1	350
S. S. Central Park blvd.	Ohio	C., M. & St. P. Ry...	1	435
Chicago avenue	N. Fortieth avenue	N. Forty-third avenue.	3	2,022
Chicago avenue	N. Forty-third avenue.	N. Forty-fifth avenue.	2½	1,338
Chicago avenue	N. Forty-fifth avenue.	N. Forty-sixth avenue.	1½	602
E. S. Congress Park ..	West Van Buren	West Harrison	1	600
W. S. Congress Park ..	West Van Buren	West Harrison	1	600
Cornelia	N. Forty-second ave ..	N. Forty-fourth avenue	1	1,289
Cortez	N. Forty-second ave ..	N. Forty-fourth avenue	1	2,578
Drake avenue	Diversey avenue.....	Wolfgram	1½	328
Drake avenue.....	Wolfgram	Alley West of Milwaukee avenue.	1	340
W. S. Elston avenue...	Irving Park avenue	Berteau avenue.....	1	1,900
E. S. Elston avenue ...	Irving Park avenue	Ridgeway avenue ...	1½	900
E. S. Elston avenue ...	Ridgeway avenue	Avers avenue	1	854
Emmet	Kedzie avenue	Northwest	1	385
N. Fairfield avenue...	Diversey avenue.....	C. & N.-W. Ry.....	1	450
N. Fortieth avenue ...	Armitage avenue	Humboldt avenue....	1½	1,300
N. Fortieth avenue ...	Humboldt avenue	C., M. & St. P. Ry...	1	494
N. Fortieth avenue ...	Fullerton avenue	C., M. & St. P. Ry...	1	590
N. Forty-first avenue ..	Montrose avenue	Cullom avenue.....	1½	670
N. Forty-first avenue ..	Cullom avenue	Berteau avenue.....	1	667
N. Forty-first court ...	Montrose avenue	Cullom avenue.....	1½	660
N. Forty-first court ...	Cullom avenue	Berteau avenue.....	1	671
N. Forty-second avenue	Montrose avenue	Cullom avenue.....	1½	670
N. Forty-second avenue	Cullom avenue	Berteau avenue.....	1	666
N. Forty-second avenue	Montrose avenue	Linden avenue	1	319
N. Forty-second avenue	Chicago avenue	Iowa avenue	1	669
N. Forty-second court ..	Chicago avenue	Iowa	1	641
N. Forty-second court ..	Linden avenue	Sunnyside avenue	1	273
N. Forty-second court ..	Sunnyside avenue	Cullom avenue.....	1½	1,080
N. Forty-second court ..	Cullom avenue	Berteau avenue.....	1	664
S. Forty-second avenue.	West Thirtieth	West Twenty-eighth..	1	1,347
S. Forty-second avenue.	West Thirty-first	West Thirtieth	1½	672
N. Forty-third avenue ..	Cullom avenue	Sunnyside avenue	1½	1,339
N. Forty-third avenue ..	Cullom avenue.....	Berteau avenue.....	1	670
N. Forty-third avenue ..	Sunnyside avenue	Wilson avenue	1	667
N. Forty-third avenue ..	Chicago avenue	Cortez	2	1,671
N. Forty-third avenue ..	Cortez	Thomas	1½	347
N. Forty-third court ...	Chicago avenue	Iowa	1	642

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
N. Forty-fourth avenue.	Chicago avenue	Iowa	1	670
S. Forty-fourth avenue.	West Fourteenth	West Fifteenth	1½	665
N. Forty-fourth avenue	West Fifteenth	100 ft. N. of W. Sixteenth	1	538
N. Forty-fifth avenue	Irving Park avenue	West Bryon	1½	662
N. Forty-fifth avenue	Chicago avenue	Cortez	2	1,678
N. Forty-fifth avenue	Cortez	Thomas	1½	344
S. Forty-fifth avenue	Chicago river	West Twelfth	9	9,900
S. Forty-seventh avenue	Harrison	Madison	8½	2,672
N. and S. Forty-eighth avenue	Madison	Lake	8½	1,740
N. and S. Forty-eighth avenue	Cortez	Division	8½	1,110
N. Forty-eighth avenue	Division	North avenue	8	2,732
N. Forty-eighth avenue	North avenue	Grand avenue	7	1,491
N. Forty-eighth avenue	Grand avenue	Fullerton avenue	4	3,752
N. Forty-eighth avenue	Fullerton avenue	Wrightwood avenue	3	1,476
Folansbee	Alley W. of Sacramento avenue	Alley E. of Humboldt Pk. blvd.	1	902
Francisco	Polk	Lexington	1	148
Francisco	West Twenty-fifth	Douglas Park blvd.	1½	390
Grand avenue	N. Forty-eighth avenue	N. Fifty-second avenue	5½	2,960
Grand avenue	N. Fifty-second avenue	Fifty-sixth avenue	5	2,770
Hamlin avenue	Irving Park avenue	Alley E. of Elston ave.	1	780
Hamlin avenue	Elston avenue	Berteau avenue	1	410
Hamlin avenue	Montrose avenue	Cullom avenue	1½	664
Hamlin avenue	Cullom Avenue	Berteau avenue	1	671
Hamlin avenue	West Twenty-sixth	West Thirty-first	1	2,690
N. Harding avenue	Montrose avenue	Cullom avenue	1	667
N. Harding avenue	North avenue	Waubansia avenue	1½	625
N. Harding avenue	West Thirteenth	Alley S. of W. Twelfth	1	498
N. Harding avenue	West Fourteenth	West Thirteenth	1½	660
N. Harding avenue	West Twenty-sixth	West Thirty-first	1	2,690
N. Harding avenue	West Thirty-first	West Thirty-second	1½	637
N. Harding avenue	West Thirty-second	West Thirty-third	1	640
Hirsch	Spaulding avenue	Homan avenue	1	643
Homer	N. Albany avenue	West	1	236
West Huron	St. Louis avenue	Drake avenue	1	300
West Huron	Kedzie avenue	N. Spaulding avenue	1	633
West Huron	North Fortieth	Lawndale avenue	1	1,606
Iowa	N. Forty-second ave.	N. Forty-fourth ave.	1	1,350
Iowa	Western avenue	Campbell avenue	1	640
Lawndale avenue	Montrose avenue	Cullom avenue	1½	675
Lawndale avenue	Cullom avenue	Berteau avenue	1	672
Lawndale avenue	Belle Plaine avenue	Berteau avenue	1	668
Lexington	Kedzie avenue	Spaulding avenue	1½	662
Lexington	Spaulding avenue	St. Louis avenue	1	1,338
Lexington	St. Louis avenue	Central Park avenue	1½	660
Madison	Forty-seventh avenue	Forty-eighth avenue	8½	666
Monticello avenue	Irving Park avenue	Belle Plaine avenue	1½	663
Monticello avenue	Belle Plaine avenue	Berteau avenue	1	665
Monticello avenue	Montrose avenue	Cullom avenue	1½	669
Monticello avenue	Cullom avenue	Berteau avenue	1	675
Monticello avenue	West North avenue	32 ft. N. of Hirsch	1	1,210
Montrose avenue	River	Kimball avenue	6	4,942
Montrose avenue	Kimball avenue	N. Fortieth avenue	5½	3,995
Montrose avenue	N. Fortieth avenue	N. Forty-fourth ave.	5	2,885
Montrose avenue	N. Forty-fourth ave.	N. Forty-eighth ave.	4½	2,478
Montrose avenue	N. Forty-eighth ave.	W. S. Milwaukee ave.	4	1,935
Moffat	N. Albany avenue	West	1	232

WEST DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
West Noble	California avenue	Elston avenue	1	476
Ohio	W. S. Central Park	E. S. Central Park blvd. . .	2	200
Phillips	Green	East 117 feet	1	150
Ridgeway avenue	Irving Park avenue	Alley E. of Elston ave. . .	1	474
Ridgeway avenue	Elston avenue	Berteau avenue	1	740
Ridgeway avenue	Montrose avenue	Cullom avenue	1½	663
Ridgeway avenue	Cullom avenue	Berteau avenue	1	672
Ridgeway avenue	North avenue	LeMoyne	1½	598
Ridgeway avenue	LeMoyne	Hirsch	1	658
North Sawyer avenue	S. S. Central Pk. blvd. . . .	West Kinzie	1	522
St. Louis avenue	Colorado avenue	Alley North of Colorado avenue .	¾	100
St. Louis avenue	Jackson	Alley North of Jackson . . .	¾	140
St. Louis avenue	Adams	Alley N. of Adams	1	175
St. Louis avenue	Monroe	Alley N. of Monroe	¾	185
St. Louis avenue	Alley S. of Grenshaw avenue .	Alley N. of Grenshaw avenue .	1	317
Springfield avenue	Montrose avenue	Cullom avenue	1½	666
Springfield avenue	Cullom avenue	Alley N. of Elston ave. . .	1	342
S. Springfield avenue	West Thirteenth	Alley S. W. of Twelfth	1	498
S. Springfield avenue	West Fourteenth	West Thirteenth	1½	660
S. Springfield avenue	West Twenty-sixth	West Thirty-first	1	2,690
West Superior	N. California avenue	Washtenaw avenue	1	625
West Taylor	Central Park avenue	Lawndale avenue	1½	660
Thomas	Forty-second avenue	Forty-sixth avenue	1	2,580
Trumbull avenue	Huron	Chicago avenue	1	625
West Twenty-seventh	S. Fortieth avenue	S. Springfield avenue	2	666
West Twenty-seventh	Springfield avenue	S. Hamlin avenue	1½	700
West Twenty-eighth	S. Fortieth avenue	Springfield avenue	2	666
West Twenty-eighth	S. Springfield avenue	S. Hamlin avenue	1½	700
West Thirtieth	S. Fortieth avenue	Springfield avenue	2	666
West Thirtieth	Springfield avenue	Hamlin avenue	1½	700
West Thirty-first	S. Fortieth avenue	Springfield avenue	2	666
West Thirty-first	Springfield avenue	Hamlin avenue	1½	700
West Thirty-first	S. Fortieth avenue	S. Forty-second ave.	3	1,324
Whipple	Diversey avenue	George	1½	665
Whipple	Avondale avenue	North Wellington	1½	640
Wolfram	Drake avenue	Alley W. of Milwaukee avenue .	1	400
Wrightwood avenue	Kimball avenue	Central Park avenue	1	1,340
Wright court	Grand avenue	First alley north	1	208
Total number of feet				150,121

**SEWERS, CONSTRUCTED DURING THE YEAR 1896 IN THE
SOUTH DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Ada.....	Fifty-ninth.....	Sixtieth.....	1	637
Ada.....	Sixtieth.....	Sixty-second.....	1½	1,340
Ada.....	Sixty-second.....	Sixty-third.....	1	641
Ada.....	Alley S. of Garfield boulevard	P., C., C. & St. L. Ry.	1	1,939
Ada.....	West Fifty-ninth.....	North to railway.....	1	276
Alley S. of Garfield blvd.	Ashland avenue.....	Lafin.....	1½	620
Alley S. of Garfield blvd.	Lafin.....	Loomis.....	1	675
Alley W. of Drexel blvd.	Forty-third.....	Forty-fourth.....	1	666
Alley W. of Grand blvd.	Forty seventh.....	Forty-sixth.....	1	584
Alley N. of Fifty-second	Drexel boulevard.....	West.....	1	302
Armour avenue.....	Fifty-ninth.....	North.....	1	559
Avenue L.....	P., Ft. W. & C. Ry.	100th.....	1	273
Avenue L.....	100th.....	101st.....	1½	697
Avenue L.....	101st.....	102nd.....	1	724
Avenue L.....	Ninety-seventh.....	Ninety-ninth.....	1	1,326
Avenue M.....	Ninety-fifth.....	Ninety-sixth.....	2	584
Avenue M.....	100th.....	101st.....	1½	668
Avenue M.....	Ninety-sixth.....	Ninety-seventh.....	1½	661
Avenue M.....	101st.....	102d.....	1	698
Avenue M.....	Ninety-seventh.....	B. & O. R. R.....	1	1,042
Avenue M.....	100th.....	P., Ft. W. & C. Ry.....	1	595
Bishop.....	Sixty-first.....	Sixty-third.....	1	1,326
Bishop.....	Alley S. of Garfield boulevard	P., C., C. & St. L. Ry.	1	1,977
Bishop.....	West Fifty-ninth.....	North to railroad.....	1	246
Bross avenue.....	S. Oakley avenue.....	South Irving avenue..	1	363
Butler.....	118th.....	119th.....	1½	642
Carpenter.....	Sixty-ninth.....	15 ft. N. of Seventieth.	1	630
Coles avenue.....	Seventy-third.....	Seventy-fifth.....	1	1,521
Cregier avenue.....	Seventieth.....	Seventy-first.....	1	646
Elizabeth.....	Sixty-first.....	Sixtieth.....	1½	660
Elizabeth.....	Sixty-ninth.....	Seventieth.....	1	659
Elizabeth.....	Fifty-seventh.....	Fifty-eighth.....	1	660
Elizabeth.....	West Fifty-ninth.....	P., C., C. & St. L. Ry..	1	275
Eighty-eighth.....	Halsted.....	Morgan.....	4	1,339
Eighty-eighth.....	Morgan.....	Centre avenue.....	3½	1,323
Eighty-eighth.....	Centre avenue.....	Loomis.....	8	1,325
Eighty-eighth.....	Loomis.....	Ashland avenue.....	2½	1,328
Eighty-eighth.....	Ashland avenue.....	Beverly avenue.....	2	2,172
Fifth avenue.....	Fifty-ninth.....	Alley N. of Fifty-ninth	1	395
Fifth avenue.....	West Forty-fifth.....	W. Forty-fifth place...	1	96
Fiftieth.....	Cottage Grove avenue..	East of Langley avenue	1	553
Fiftieth.....	St. Lawrence avenue.....	Vincennes avenue.....	1	599
Fiftieth.....	Woodlawn avenue.....	Kimbark avenue.....	1	443
Fifty-second.....	Halsted.....	Peoria.....	1½	613
Fifty-second.....	Peoria.....	Morgan.....	1	634
Fifty-fourth place...	Ellis avenue.....	Greenwood avenue.....	1	375
Fifty-sixth.....	South Park avenue.....	Calumet avenue.....	1½	419
Fifty-sixth.....	Calumet avenue.....	Indiana avenue.....	1	702
Fifty-seventh.....	Ashland avenue.....	Loomis.....	2	1,282
Hermitage avenue.....	Forty-fifth.....	Forty-sixth.....	1	663
Hermitage avenue.....	Fifty-first.....	Grand Trunk Ry.....	1	1,168
Howard court.....	Ninety-ninth.....	North 525 feet.....	1½	539
Howard court.....	525 ft. N. of Ninety-ninth	Ninety-sixth.....	1	1,484
Howard court.....	Ninety-sixth.....	Ninety-fifth.....	1½	648

SOUTH DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
South Hoyne avenue . .	Thirty-fourth	Thirty-fifth	1	617
Indiana avenue	127th	124th	5	2,022
Indiana avenue	124th	120th	4½	2,666
Indiana avenue	120th	Pumping Sta. 200 ft. S. of 116th	4	2,095
Indiana ave. & 130th . .	Calumet River	127th	5½	1,800
Indiana avenue	200 ft. S. of 116th . . .	116th	3½	230
Justine	Sixty-first	Sixty-third	1	1,325
Justine	Alley S. of Garfield boulevard .	P., C., C. & St. L. Ry. .	1	1,950
Justine	Fifty-ninth	P., C., C. & St. L. Ry. .	1	249
Kimbark avenue	Fiftieth	Forty-ninth	1	600
Lafin	West Fifty-ninth	North to railroad	1	249
Lafin	Sixty-first	Sixty-third	1	1,325
Lafin	Alley S. of Garfield boulevard .	P., C., C. & St. L. Ry. .	1	1,958
Leavitt	Archer avenue	Thirty-fifth place	1	150
Leavitt	Archer avenue	Thirty-seventh	2	740
Longwood avenue	Ninety-ninth	230 ft. N. of Ninety-eighth .	1½	938
Longwood avenue	230 feet N. of Ninety-eighth .	Ninety-fifth	1	1,720
Loomis	Fifty-ninth	Sixtieth	1	637
Loomis	Sixtieth	Sixty-first	1½	656
Loomis	West Fifty-ninth	North to railroad	1	269
Loomis	Sixty-first	Sixty-third	1	1,325
Loomis	Alley S. of Garfield boulevard .	P., C., C. & St. L. Ry. .	1	1,973
La Salle	117th	Alley north of 118th . .	1	492
May	Sixty-seventh	Sixty-ninth	1½	1,324
Marshfield avenue	Fifty-first	Sixty-second	1½	615
Marshfield avenue	Sixty-second	Sixty-fourth	1	1,341
Marshfield avenue	Forty-fifth	Forty-sixth	1	695
S. Normal parkway	Butler	C., R. I. & P. Ry. . . .	1	1,247
Ninety-fifth	Halsted	Morgan	4	1,328
Ninety-fifth	Morgan	Lafin	3	3,328
Ninety-fifth	Lafin	P., C., C. & St. L. Ry. .	2½	867
Ninety-fifth	Charles avenue	Longwood avenue	1½	1,194
Ninety-fifth	Longwood avenue	Robey	2½	1,035
Ninety-ninth	Charles avenue	Howard court	2	1,003
Ninety-ninth	Howard court	Longwood avenue	3	1,024
Ninety-ninth	Longwood avenue	Leavitt	2	2,210
Ninety-ninth	Avenue L	Avenue K	1	327
South Oakley avenue . . .	Archer avenue	C. & A. R. R.	1	211
South Oakley avenue . . .	Ill. & Mich. canal	Thirty-third	1	650
111th	Wentworth avenue	Clark	1½	562
111th	Clark	State	1	751
116th	Indiana avenue	Prairie avenue	3½	330
117th	Wentworth avenue	Perry avenue	1½	644
Prairie avenue	116th	Northward	3½	440
Prairie avenue	Sixty-ninth	Seventy-first	1½	1,333
Prairie avenue	Fifty-fifth	Fifty-eighth	2	1,831
Prairie avenue	Fifty-eighth	Fifty-ninth	1½	666
Prairie avenue	Fifty-ninth	Sixtieth	1	832
Perry avenue	Alley north of 117th . . .	Alley north of 118th . .	1	644
Sixty-fifth	Langley avenue	190 ft. W. of Langley avenue .	1	226
Seipp avenue	Sixty-ninth	Seventieth	1½	663
Seipp avenue	Seventieth	Seventy-first	1	636
W. S. of Stony Island avenue	Seventy-third	Seventy-fifth	1½	314
Sixty-first	Ashland avenue	Loomis	2	1,316
Sixty-first	Loomis	Ada	1	320

SOUTH DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Sixty-first	Centre avenue	Ada	2	1,016
Sixty-first	Ashland avenue	Marshfield avenue	2	358
Sixty-second	Ashland avenue	Loomis	2	1,815
Sixty-third	Ashland avenue	Marshfield avenue	1½	366
Sixty-ninth	Ashland avenue	Lafin	2	654
Sixty-ninth	Lafin	Bishop	1½	327
Sixty-ninth	Bishop	Loomis	1	329
Thirty-seventh place	Laurel	Gage	1	405
Throop	Fifty-ninth	Sixtieth	1	636
Throop	Sixtieth	Sixty-second	1½	1,317
Throop	Sixty-second	Sixty-third	1	666
Union avenue	Sixty-first	Sixtieth place	1	328
Wood	101st place	103rd	2	843
Wood	101st	101st place	1½	411
South Winchester	Eighty-seventh	Eighty-eighth	1	747
Total number of feet				108,814

**SEWERS CONSTRUCTED DURING THE YEAR 1896 IN THE
NORTH DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Alley N. of Montrose boulevard.	Clifton avenue	West.	1	184
Berteau avenue	Western avenue	Irving avenue	2	993
Berteau avenue	Irving avenue	Leavitt	1½	329
Berteau avenue	Robey	West 467 feet	1	497
Berteau avenue	25 ft. W. of E. L. E. Ravens'd Pk.	West.	1	121
Byron	Commercial avenue	E. Ravenswood Park.	1	272
Cameron avenue	Southport avenue	Alley east of Clark	1	767
Claremont avenue	Berteau avenue	Belle Plaine avenue	1	664
Clifton avenue	Wilson avenue	Evanston avenue	1	496
Clifton avenue	Wilson avenue	Sunnyside avenue	1½	676
Clifton avenue	Sunnyside avenue	W.S. of Montrose blvd	1	658
Commonwealth avenue.	Surf.	Diversey avenue	1	484
N. side of Diversey ave.	124 ft. E. of E. L. E. Ravens'd Pk	164 ft. W. of W. L. W. Ravens'd Pk	3½	369
S. side of Diversey ave.	124 ft. E. of E. L. E. Ravens'd Pk	164 ft. W. of W. L. W. Ravens'd Pk	3½	369
Dunning	Southport avenue	High	1	307
E. side of Evanston ave.	C., M. & St. P. Ry.	420 ft. S. of S. Line Wilson ave.	1	1,034
E. side of Evanston ave.	Lawrence avenue	590 ft. S. of S. Line Lawrence ave.	1	620
E. side of Evanston ave.	Sunnyside avenue	Montrose avenue	1	598
W. side of Evanston } avenue	M. H. on E. Side, 275 ft. S. of S. Line Lawrence avenue	C. M. & St. P. Ry at 27 ft. E. of W. Line of Evanston ave	1	684
W. side of Evanston ave.	190 ft. N. of N. Line Wilson ave	65 ft. N. of N. L. Sunnyside ave	1	870
W. side of Evanston ave.	65 ft. N. of N. L. Sunnyside ave	111 ft. S. of S. L. Sunnyside ave	1	242
W. side of Evanston ave.	111 ft. S. of S. L. Sunnyside ave	Montrose avenue	1	640
S. side of Foster avenue	538 feet west of Lincoln ave	West	½	970
Gordon terrace	547 E. of E. line of Clarendon.	East	1	54
Grace	North Robey	Alley W. of Lincoln ave	1	477
East side of Herndon	Wrightwood avenue	123 ft. S. of Marianna.	1	514
Huber	Herndon	Racine avenue	1	626
Irving Park avenue	383 ft. E. of E. line of Pinedrove ave	East	2	107
Irving avenue	Irving Park avenue	Belle Plaine avenue	1	665
Irving avenue	Berteau avenue	Belle Plaine avenue	1	665
Junior terrace	Clarendon avenue	Fremont street	1	562
Kenmore avenue	Wilson avenue	Evanston avenue	2	710
Kenmore avenue	Wilson avenue	Winthrop avenue	1½	160
Kenmore avenue	Winthrop avenue	Lawrence avenue	1	1,178
Leavitt	Berteau avenue	Belle Plaine avenue	1	667
Leavitt	Irving Park avenue	Belle Plaine avenue	1	668
Leland avenue	Racine avenue	East	1	51
Leland avenue	Kenmore avenue	East	1	100
Leland avenue	Kenmore avenue	West	1	100
Leland avenue	Winthrop avenue	West	1	51
N. Marshfield avenue	820 feet S. of Diversey avenue.	Alley N. of Wrightwood avenue	1	308
Montrose boulevard	Western avenue	Irving avenue	2	1,006
Montrose boulevard	Irving avenue	50 ft. west of Leavitt.	1	255
North side of Montrose boulevard	Clifton avenue	East	1	150
Oakley avenue	Berteau avenue	Belle Plaine avenue	1	666
Oakley avenue	Irving Park avenue	Belle Plaine avenue	1	665
Oakley avenue	Oakdale avenue	Noble at Clybourn ave.	1½	1,020
Pine Grove avenue	Irving Park avenue	End of old sewer 180 ft. N. of Byron	1	419
Racine avenue	Wilson avenue	Sunnyside avenue	1½	666
Racine avenue	Sunnyside avenue	Montrose boulevard	1	615
Racine avenue	Wilson avenue	Evanston avenue	1	946
E. Ravenswood Park	Lawrence avenue	Winnemac avenue	1	1,620
Ridge avenue	95 ft. N.-W. of Thome.	917 ft. N. of Devon ave.	1½	1,770

NORTH DIVISION—CONTINUED.

STREET	FROM	TO	Diam. in feet	Length in feet
Ridge avenue	917 ft. N. of Devon ave.	Pratt	1	1,831
Shades place	Orchard	14 ft. W. of W. line of Vine .	1	866
School	Oakley avenue	140 ft. E. of Irving ave.	1	508
Sheridan road	Foster avenue	Berwyn avenue	1½	629
Sheridan road	Berwyn avenue	Catalpa avenue	1	1,337
Sheridan road	Catalpa avenue	Bryn Mawr avenue ..	1½	670
Sunnyside avenue	Clifton avenue	West	1	100
Sunnyside avenue	Kenmore avenue	East	1	166
Sunnyside avenue	Clark	Alley east of Dover...	1	449
Wayne avenue	Foster avenue	Berwyn avenue	1½	659
Wayne avenue	Berwyn avenue	Catalpa avenue	1	1,343
Wayne avenue	Catalpa avenue	Bryn Mawr avenue ...	1½	621
Wellington avenue	Clybourn avenue	Alley E. of Oakley ave.	1	506
Wilson avenue	Sheridan road	Evanston avenue	2	765
Wilson avenue	Evans:on avenue ...	Racine avenue	2	503
Winthrop avenue	Kenmore avenue	Lawrence avenue	1	1,361
Total number of feet				42,002

**WING SEWERS CONSTRUCTED DURING THE YEAR 1896 IN
THE WEST DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Cortez	Manhole in Humboldt	East	1	40
Thomas	Humboldt	East	1	40
Huron	Harding avenue	East	1	40
N. Forty-seventh ave ..	Irving avenue	South	1	60
Alley bet. Washington & Warren av.	Manhole in Kedzie av.	West	9	246
Alley bet. Sangamon and Morgan	Manhole in Maxwell ..	North	9	242
Alley bet. Harrison and Congress	Manhole in Kedzie av.	West	9	282
Alley bet. Harrison and Congress	Manhole in Homan av.	East	9	282
Total				1,182

**WING SEWERS CONSTRUCTED DURING THE YEAR 1896 IN
THE SOUTH DIVISION.**

STREET	FROM	TO	Diam. in feet	Length in feet
Kimbark avenue	M. H. in Sixty-seventh	North	9	42
Thirty-seventh	Manhole in Honore...	West	1	42
Fifty-eighth	Manhole in Jackson ..	East	9	85
Fifty-eighth	M. H. in Ingleside ave.	West	9	94
Woodlawn avenue.....	M. H. in Sixty-seventh	North	9	44
Monroe avenue	M. H. in Sixty-seventh	North	9	46
Washington avenue....	M. H. in Sixty-seventh	North	9	40
Sixtieth	Wabash avenue	West	9	110
Sixtieth	Wabash avenue	East	9	110
Sixtieth	Michigan avenue.....	East	9	110
Fifty-sixth	Wabash avenue	West	9	100
Fifty-sixth	Wabash avenue	East	9	110
Fifty-sixth	Michigan avenue	East	9	120
Total				1,053

MANHOLES AND CATCH-BASINS RAISED TO GRADE ON STREETS BEING IMPROVED, WITH COST OF SAME, DURING THE YEAR 1896, AS FOLLOWS:

No.	DESCRIPTION OF WORK DONE.	Cement	Brick.	Iron Cover.	Wood Cover.	Straight Pipe.		Curved Pipe. 9-inch.	Junctions	Feet of Boxes.	Bottoms.	Coat.		TOTAL COST.
						9-inch.	12-inch.					9-inch Traps.	Material.	
2,978	Manholes raised to grade... Catch-basins raised to grade	2,852	761,200	778	385	6,726	114	144	5	840	35	47	431,163 \$2 13,953 98	\$45,057 70
2,982														

AMOUNT EXPENDED FOR REPAIRS OF SEWERS, MANHOLES AND CATCH-BASINS, ALSO MANHOLE AND CATCH-BASIN COVERS, DURING THE YEAR 1896, AS FOLLOWS:

[illegible]

**SEWERS AND CATCH-BASINS CLEANED IN THE THREE DIVISIONS OF THE CITY
DURING THE YEAR 1896.**

METHOD.	South Division.		West Division.		North Division.		Total.		Average Cost per 100 feet.
	Feet Cleaned.	Cost.	Feet Cleaned.	Cost.	Feet Cleaned.	Cost.	Feet Cleaned.	Cost.	
Flushing.....	577,450	\$ 6,355 71	250,052	\$2,764 51	520,850	\$ 5,743 32	1,348,352	\$14,863 54	\$1 10
Iron Scraper.....	433,073	25,557 40	18,000	1,068 10	55,077	3,265 65	506,150	29,891 15	5 90
Wood Scraper.....	100,500	2,090 30	90,000	1,871 90	87,600	1,821 98	278,100	5,784 12	2 08
Total.....	1,111,023	\$34,003 41	338,052	\$5,704 51	663,527	\$10,830 95	2,192,602	\$50,538 87	
Opening Inlets to Catch-basins, attending complaints, etc.....								2,025 80	
Total.....								\$53,164 47	
	No. of.		No. of.		No. of.		Total No. of.		Average Cost per Basin.
		Cost.		Cost.		Cost.		Cost.	
Catch-basins Cleaned ...	6,576	\$21,550 66	2,500	\$8,181 88	3,245	\$10,624 98	12,321	\$40,357 02	\$3 28
Cost of Cleaning Sewers and Catch-basins								\$98,521 49	
Miscellaneous Bills for Repairs of Tools, Supplies, etc.								3,380 16	
Total Cost of Cleaning Sewers and Catch-basins								\$98,901 65	

**RECEIPTS IN HOUSE DRAIN DEPARTMENT DURING
THE YEAR 1896.**

DIVISION.	PERMITS ISSUED.								Receipts.
	6-inch.	9-inch.	12-inch.	15-inch.	Total.	Junctions.		Special Ass'mt.	
						6-in.	9-in.		
West	1,867	42	4	.....	1,913	31	7	840	1,257 50
North	1,105	31	.....	.....	1,136	23	5	149	6,102 19
South	2,252	70	3	1	2,326	128	10	784	13,116 50
Totals	5,224	145	7	1	5,375	182	22	1,228	\$ 29,476 19
Receipts from licenses.....									2,318 00
Receipts from special assessments, etc.....									24,165 59
Total receipts									\$ 55,959 78

**NUMBER OF HOUSE DRAINS PUT IN PLACE DURING THE YEAR 1896,
UNDER SPECIAL ASSESSMENT.**

DIVISION.	Total number of drains.	Total length of drains.	Total cost.	Average cost per drain.	Average length drain in feet.	Average cost per foot in cents.
South	8,612	106,782	\$ 15,822 66	\$ 4 24	29.54	14.84
West	2,164	62,878	9,561 69	4 42	28.88	15.83
North	423	11,942	1,807 82	4 27	28.28	15.14
Total.....	6,199	181,102	\$ 26,692 17	\$ 4 81	29.22	14.74

Making a total of 34.3 miles of six (6) inch drains laid by contract and paid for by special assessment.

Respectfully submitted,

G. L. CLAUSEN,

Superintendent Bureau of Sewers.

REPORT OF THE
Bureau of Streets
CITY OF CHICAGO

BUREAU OF STREETS.

HON. JOSEPH DOWNEY,

Commissioner of Public Works.

DEAR SIR: I have the honor to submit herewith the Twenty-first Annual Report of the Bureau of Streets for year ending December 31, 1896.

A review of the work accomplished during the past year by the various departments of this Bureau is presented in detail; also information relative to the different railroads centering in this City, and extension of the various street railway lines operating within the corporation limits.

FINANCIAL STATEMENT.

Amount paid contractors for street improvements by special assessments.....	\$1,712,305 21
For sidewalks built by the Bureau under special assessment	30,879 13
For re-paving and repairing improved streets	196,306 39
For grading, ditching, building and repairing aprons, culverts, crossings, etc., on unimproved streets.....	125,621 60
For sidewalk general repairs, and intersections ...	70,518 48
For City parks	12,299 73
For new and repaired street lamps and signs.....	52,712 90
GRAND TOTAL	<u><u>\$2,200,643 44</u></u>

STREET AND ALLEY IMPROVEMENTS.

In addition to attending to the work under construction twenty-one lettings were prepared and advertised, and contracts for thirty-five alleys and 203 streets awarded; seventy-nine surveys for the opening or widening of alleys and streets and seventy-one surveys showing obstructions upon the public highways were made, and 363 preliminary estimates for alley and street improvements were returned to Special Assessment Bureau, divided as follows:

KINDS OF PAVEMENT.	Square Yards.	Lineal Feet.	Lineal Miles	Estimated Cost.
Cedar block.....	1,402,920	394,029	74.63	\$2,301,466 90
Brick.....	175,855	51,103	9.68	435,147 99
Asphalt.....	300,253	88,165	16.70	804,612 21
Macadam.....	1,122,995	277,723	52.60	1,411,199 63
Granite.....	58,673	14,855	2.18	196,844 02
Total for 1896.....	3,060,696	825,844	156.42	\$5,153,190 74
“ “ 1895.....	2,808,520	805,709	152.59	5,491,765 12

This increase of 252,176 square yards of paving estimated during 1896 over the amount estimated during 1895 is composed thus:

Cedar block.....	339,144	square yards decrease.
Brick.....	147,711	“ “ “
Asphalt.....	165,450	“ “ increase.
Macadam.....	548,615	“ “ “
Granite.....	24,966	“ “ “

Of the 82.65 miles of pavement laid during the year, cedar block was 53 per cent., asphalt 20.6 per cent., granite 4.2 per cent., macadam 16.5 per cent. and brick 5.7 per cent. By reference to the table on page 241 it will be seen that cedar block and macadam pavements are constantly diminishing, while granite, asphalt and brick are on the increase. This condition may not continue during the next year owing to the fact that the preliminary estimates for brick paving have decreased about 50 per cent., while those for macadam have had a like increase.

Notwithstanding that the engineering force of this Bureau was reduced one-fifth at the beginning of the year, I am pleased to report that the amount of work carried on during 1896 exceeds that of 1895 by 73 per cent., and as the Assistant Engineers in charge of improvements were personally accountable for the character of the work, better results were obtained than under previous methods.

The following tables show the progress of alley and street improvements, and the character of pavement laid :

ALLEYS IMPROVED

NAME	FROM	BETWEEN	Commenced
Alley	May to Ann	Washington boulevard and Madison	May 18, 1896
Alley	Diller to Western avenue	Kinzie and Fulton	June 4, 1896
Alley	Kedzie ave. to alley west	Washington blvd. and Warren ave	Oct. 26, 1896
Alley	Michigan ave. to 125 ft. E.	River and South Water	May 21, 1896
Alley	Michigan av. to Central av.	South Water and Lake	May 25, 1896
Alley	Randolph N. to E. terminus	Market and Franklin	May 28, 1896
Alley	120 ft. E. of 5th av. to a point 86 ft. E.	Randolph and Washington	July 15, 1896
Alley	Clark to Dearborn	Monroe and Adams	Aug. 15, 1896
Alley	Sixteenth to Eighteenth	Michigan and Indiana avenues	Aug. 26, 1896
*Alley east and west	Johnson pl. to Iglehart pl.	Twenty-seventh and Twenty-eighth	July 10, 1896
Alley	Twenty-eighth to Swift pl.	Wentworth and 5th aves.	May 5, 1896
Alley	Whitehouse pl. to 31st	Wentworth and 5th aves.	May 2, 1896
Alley	42d to 43d	Wabash and Michigan avenues	Sept. 23, 1896
Alley	Forty-fourth to Forty-fifth	Berkeley and Greenwood avenues	May 15, 1896
Alley	Lake ave. to I. C. R. R.	North of Fifty-third	Oct. 2, 1896
Alley	Adams to Jackson	Desplaines and Jefferson	Aug. 12, 1896
Alley	Hamilton ave. to Leavitt	Adams and Jackson blvd.	Aug. 17, 1896
Alley	Oakley ave. to 100 ft. W.	Adams and Jackson blvd.	Aug. 15, 1896
Alleys, all	Adams to Jackson blvd.	Central Pk. blvd. and St. Louis ave.	Oct. 13, 1896
Alleys, all	Colorado av. to Jackson bd.	Albany ave. and Troy	Oct. 8, 1896
Alley	Paulina to Congress	Congress and Harrison	April 11, 1896
Alley	Kedzie av. to Homan av.	Congress and Harrison	Aug. 27, 1896
Alley	Halsted to Desplaines	DeKoven and Bunker	Aug. 28, 1896
Alleys, all	Flournoy to Lexington	Douglas boul. and Springfield	Aug. 13, 1896
Alleys, all	Harrison to Flournoy	Campbell and Western avs.	June 2, 1896
Alleys, all	Jackson blvd. to VanBuren	Honore and Lincoln	May 9, 1896
Alleys, all	Madison to Monroe	St. Louis and Homan avs.	May 7, 1896
Alleys, all	Madison to Monroe	St. Louis and Central Park avs.	Dec. 1, 1895
Alleys, all	Monroe to Adams	St. Louis and Homan avs.	Dec. 1, 1895
Alleys, all	Polk to Harvard	Albany and Kedzie aves.	May 1, 1896
Alleys, all	Twelfth to Maxwell	Morgan and Sangamon	Aug. 15, 1896
Alleys, all	Van Buren to Congress	Centre ave. and Throop	Oct. 22, 1896
*Alley	Fullerton av. to 190 ft. N.	Clark and Larrabee	Oct. 16, 1896
Alley	Racine ave. to Seminary ave	Wrightwood ave. and Seminary pl.	May 9, 1896
*Alley	State to alley east	North ave. and Schiller	April 22, 1896
Alley	North ave. to Germania pl.	Clark and La Salle ave.	May 4, 1896
Alley	First east of State	Division and Scott	May 1, 1896
Alley	Osgood to Seminary ave.	Garfield ave. and Center	May 4, 1896
Alley	Orchard to Burling	Willow and North ave.	April 28, 1896
Alley	Sheffield ave. to Osgood	Garfield ave. and Center	May 25, 1896
Alley	Vine to Orchard	Willow and North ave.	June 19, 1896
Alley	Franklin to Market	Superior and Huron	Sept. 1, 1896
Alley	Ohio to Indiana	Wells and Franklin	Dec. 7, 1896

*Private Contract.

DURING 1896.

Finished	CONTRACTOR	Nature of Improvement	Square Yards	Lineal Feet
May 15, 1896	R. F. Conway.....	Cedar.....	804	162
June 6, 1896	Sackley & Peterson.....	".....	1,107	653
Nov. 23, 1896	Sackley & Peterson.....	Brick.....	1,748	1,042
May 27, 1896	Gaffney & Long.....	Granite.....	285	128
May 27, 1896	Sackley & Peterson.....	".....	174	180
May 30, 1896	Sackley & Peterson.....	".....	150	185
July 16, 1896	Dillon & Conlan.....	".....	172	86
Aug. 27, 1896	J. V. McAdam.....	Brick.....	576	322
Sept. 7, 1896	Henry Rath.....	Cedar.....	1,522	780
July 20, 1896	A. J. McBean & Co.....	".....	500	370
May 8, 1896	Garden City P. & P. Co.....	".....	770	462
May 6, 1896	Garden City P. & P. Co.....	".....	846	476
Oct. 14, 1896	R. F. Wilson.....	".....	1,290	591
June 5, 1896	Sackley & Peterson.....	".....	820	620
Oct. 17, 1896	Henry Rath.....	Brick.....	222	181
Sept. 1, 1896	Henry Rath.....	Cedar.....	773	387
Sept. 3, 1896	Naugle, Holcomb & Co.....	".....	778	454
Oct. 14, 1896	R. F. Wilson & Co.....	".....	176	100
Nov. 9, 1896	R. F. Conway.....	".....	1,344	637
Oct. 23, 1896	J. B. Smith & Co.....	".....	1,250	750
May 9, 1896	R. F. Conway.....	".....	600	315
Oct. 14, 1896	R. F. Wilson & Co.....	".....	2,309	1,385
Oct. 20, 1896	A. J. McBean & Co.....	".....	1,306	904
Oct. 10, 1896	Wilson & Thatcher.....	".....	1,240	744
July 30, 1896	Sackley & Peterson.....	".....	1,211	726
May 22, 1896	R. F. Conway.....	".....	908	653
June 5, 1896	R. F. Conway.....	".....	1,353	648
June 10, 1896	Sackley & Peterson.....	".....	1,547	738
June 10, 1896	Sackley & Peterson.....	".....	1,357	648
July 30, 1896	Sackley & Peterson.....	".....	1,204	725
Oct. 14, 1896	Wilson & Thatcher.....	".....	767	498
Nov. 28, 1896	A. J. McBean & Co.....	".....	1,929	1,240
Oct. 18, 1896	Garden City P. & P. Co.....	".....	480	192
May 11, 1896	Henry Rath.....	".....	978	595
May 6, 1896	Simpson Bros.....	Asphalt.....	230	130
May 5, 1896	Henry Rath.....	Cedar.....	474	227
May 2, 1896	Henry Rath.....	".....	524	269
May 8, 1896	Henry Rath.....	".....	1,254	724
May 2, 1896	Henry Rath.....	".....	2,741	1,171
June 6, 1896	Sackley & Peterson.....	".....	1,187	732
June 22, 1896	Henry Rath.....	".....	893	456
Sept. 8, 1896	Henry Rath.....	".....	618	325
Dec. 12, 1896	Henry Rath.....	".....	753	438

STREETS IMPROVED

NAME	FROM	TO	Commenced
Ada	Fiftieth	Fifty-first	Sept. 3, 1896
Adams	Halsted	Morgan	June 20, 1896
*Adams	Hamlin avenue	Fortieth avenue	April 15, 1896
Addison avenue	Sixty-ninth	Seventy-first	Oct. 3, 1896
Alice place	Powell avenue	Perry avenue	April 18, 1896
Arch	Archer avenue	Lyman	Jan. 15, 1896
Ashland avenue	Fifty-ninth	Sixty-third	Oct. 20, 1895
Attrill	State	Milwaukee avenue	Oct. 18, 1895
Balmoral avenue	Ashland avenue	East Ravenswood Park	Nov. 8, 1895
Berwyn avenue	Clark	Southport avenue	April 10, 1896
Bingham	Armitage avenue	Cornelia	Oct. 18, 1895
Birch	Robey	Kendall	Sept. 30, 1896
Blue Island avenue	Harrison	Fifteenth place	June 1, 1896
*Bradley place	Halsted	Rokeby	May 11, 1896
*Byron	Robey	Leavitt	July 30, 1896
Byron	Humboldt boulevard	California avenue	Sept. 9, 1895
California avenue	Humboldt boulevard	Elston avenue	Aug. 1, 1896
*Canal	Kinzie	Fulton	Oct. 26, 1896
Carlisle place	Albany avenue	Kedzie avenue	March 1, 1896
Carpenter	Huron	Chicago avenue	June 29, 1896
Chaney	Point	East terminus	Oct. 18, 1895
Cherry place	Powell avenue	Perry avenue	April 18, 1896
Clara place	Western avenue	Perry avenue	April 18, 1896
Clement avenue	South Park avenue	Seventieth	Mar. 26, 1896
Clinton	Milwaukee avenue	831 feet north	Oct. 14, 1896
Collins	Albany avenue	Kedzie avenue	Mar. 1, 1896
Commercial ave.	Paulina	Terra Cotta place	July 31, 1896
Congress	Homan avenue	Central Park avenue	May 7, 1896
Congress	Fortieth	Forty-sixth	May 12, 1896
*Congress	Hamlin avenue	Fortieth avenue	April 15, 1896
Congress Park	Van Buren	Harrison	May 1, 1896
Conneaut avenue	Hoffman avenue	California avenue	Dec. 1, 1895
Cornelia	Point	Milwaukee avenue	Oct. 18, 1895
Cornelia	Halsted	Sheffield avenue	May 12, 1896
Cornelia	Milwaukee avenue	Ashland avenue	Oct. 30, 1896
Crossing	Paulina	C. & N.-W. Ry.	April 29, 1896
Dearborn avenue	Burton place	Chicago avenue	Oct. 18, 1896
Dickens avenue	Humboldt boulevard	California avenue	Sept. 9, 1895
Diversey avenue	Kedzie avenue	Milwaukee avenue	May 18, 1896
Division	Clark	Lake Shore drive	Unfinished...
Division	Milwaukee avenue	N. Branch Chicago river	July 24, 1896
Dryer	Forty-seventh	Fifty-first	April 1, 1896
*Dunning	Kimball avenue	Alley east of Spaulding	April 20, 1896
Eagle	Desplaines	Union	Nov. 10, 1895
Eagle	Halsted	Union	May 5, 1896
E. Ravenswood Pk.	North Fifty-ninth	Claremont avenue	Nov. 8, 1895
Eastwood avenue	Robey	Leavitt	June 13, 1896
Edbrooke place	Western avenue	Perry avenue	April 18, 1896
Elizabeth	Fiftieth	Fifty-first	Sept. 9, 1896
Elizabeth	Lake	Randolph	July 8, 1896
Elizabeth	Austin avenue	Kinzie	July 2, 1896
Elizabeth	Lake	170 ft. north of Carroll	July 20, 1896
Ellis avenue	Forty-first	Forty-third	Aug. 14, 1896
Ellis avenue	Forty-third	Forty-sixth	Oct. 12, 1895
Elm	State	Lake Shore drive	Aug. 21, 1896
Elston avenue	North avenue	Armitage avenue	June 1, 1896
Elston avenue	North avenue	Milwaukee avenue	July 15, 1896

DURING 1896.

Finished	CONTRACTOR	Nature of Improvement	Square Yards	Lineal Feet
Oct. 5, 1896	A. J. McBean & Co.	Cedar	2,635	624
Aug. 31, 1896	Sackley & Peterson	"	3,189	1,228
Sept. 25, 1896	Western Paving Co.	Asphalt	3,882	1,294
Dec. 20, 1896	Assyrian Asphalt Co.	"	4,880	1,350
Aug. 18, 1896	R. F. Conway	Cedar	1,800	540
June 13, 1896	Sackley & Peterson	Curb and fill		811
May 15, 1896	R. F. Conway	Brick	5,187	1,458
Aug. 31, 1896	Naugle, Holcomb & Co.	Cedar	1,371	441
May 26, 1896	O. Vider	"	4,367	1,310
June 6, 1896	Henry Rath	Macadam	3,217	965
Aug. 31, 1896	Naugle, Holcomb & Co.	Cedar	4,996	1,183
Nov. 28, 1896	O. Vider	"	2,204	522
Aug. 19, 1896	Henry Rath	"	22,009	6,000
June 14, 1896	Minnehaha Granite Co.	Macadam	1,804	580
Sept. 10, 1896	Dolese & Shepard	Macadam	4,000	1,200
May 5, 1896	Naugle, Holcomb & Co.	Cedar	3,617	1,085
Dec. 9, 1896	Naugle, Holcomb & Co.	"	15,860	3,664
Unfinished . . .	Dillon & Conlon	Brick	2,420	830
Aug. 12, 1896	Assyrian Asphalt Co.	Asphalt	1,991	664
Aug. 15, 1896	Chas. V. McAdam	Brick	2,111	500
Aug. 31, 1896	Naugle, Holcomb & Co.	Cedar	683	220
Aug. 18, 1896	R. F. Conway	"	1,806	542
Aug. 18, 1896	R. F. Conway	"	3,268	980
July 15, 1896	C. M. Netterstrom	Brick	5,510	1,590
Oct. 26, 1896	Sackley & Peterson	Cedar	1,466	381
Aug. 9, 1896	Assyrian Asphalt Co.	Asphalt	1,957	652
Aug. 9, 1896	J. B. Smith & Co.	Cedar	2,728	772
Oct. 1, 1896	Standard Paving Co.	Asphalt	4,222	1,407
Sept. 23, 1896	Standard Paving Co.	"	12,862	4,335
Sept. 25, 1896	Western Paving Co.	"	4,443	1,290
June 23, 1896	White & Valentine	Curb and fill		730
July 16, 1896	R. F. Conway	Cedar	4,372	1,311
Aug. 31, 1896	Naugle, Holcomb & Co.	"	3,567	844
Nov. 3, 1896	Henry Rath	Macadam	5,650	1,338
Nov. 18, 1896	R. F. Conway	Cedar	7,140	2,142
June 22, 1896	R. F. Conway	"	1,950	462
Oct. 31, 1896	Barber Asphalt Paving Co.	Asphalt	20,000	5,000
May 5, 1896	Naugle, Holcomb & Co.	Cedar	1,110	333
June 15, 1896	O. Vider	"	5,608	1,302
Sept. 12, 1896	Standard Paving Co.	Curb and fill		1,575
June 27, 1896	O. Vider	Cedar	9,366	2,409
June 27, 1896	Sackley & Peterson	"	11,248	2,664
June 27, 1896	Dolese & Shepard	Macadam	1,633	490
Mar. 19, 1896	J. Conlan	Granite	986	320
May 22, 1896	Gaffney & Long	"	1,337	420
May 26, 1896	O. Vidder	Cedar	6,666	2,000
July 8, 1896	J. B. Smith & Co.	"	4,395	1,364
Aug. 18, 1896	R. F. Conway	"	3,297	989
Oct. 5, 1896	A. J. McBean & Co.	"	2,634	624
July 25, 1896	Standard Paving Co.	Asphalt	1,387	402
Aug. 3, 1896	A. J. McBean & Co.	Cedar	1,674	397
Sept. 3, 1896	R. F. Conway	"	4,329	1,025
Sept. 15, 1896	Barber Asphalt Paving Co.	Asphalt	4,424	1,284
May 14, 1896	Sackley & Peterson	Macadam	7,156	2,078
Nov. 25, 1896	Henry Rath	"	4,438	993
July 11, 1896	Henry Rath	Cedar	7,589	3,022
Aug. 5, 1896	R. F. Conway	"	14,365	5,281

STREETS IMPROVED

NAME	FROM	TO	Commenced
Erie	Wells	N. branch Chicago river..	Sept. 24, 1896
Erie	Wells	State	Sept. 24, 1896
Eugenie	Clark	Sedgwick	Aug. 21, 1896
Evans avenue	Sixty-third	Sixty-seventh	Sept. 1, 1896
Evergreen	Rockwell	California avenue	May 13, 1896
Ewing avenue	Ninety-second	102d	May 15, 1896
Fairfield avenue	Sixteenth	Twenty-second	Nov. 1, 1895
*Fairfield avenue	Cortland	Armitage avenue	June 3, 1896
Falls	Madison	Warren avenue	May 27, 1896
Farragut	Clark	Southport avenue	April 2, 1896
*Fifth avenue	Van Buren	Chicago river	July 14, 1896
Fortieth court	Park avenue	Randolph	July 6, 1896
Forty-second ave	Lake	Twelfth	July 1, 1896
Forty-second ave	North avenue	Humboldt avenue	June 8, 1896
Forty-second ave	Berteau avenue	Grace avenue	Aug. 28, 1896
Forty-fourth avenue	Armitage avenue	North avenue	June 30, 1896
Forty-sixth	Ellis avenue	Greenwood avenue	Nov. 18, 1895
Forty-seventh	Cottage Grove avenue	Drexel boulevard	Dec. 26, 1895
Forty-eighth	Vincennes avenue	Grand boulevard	Nov. 11, 1895
Forty-eighth	Vincennes avenue	St. Lawrence avenue	Nov. 20, 1895
Fifty-fourth place	Union avenue	Wallace	Sept. 11, 1896
Fifty-sixth	State	South Park avenue	Sept. 15, 1896
Fifty-eighth	Cottage Grove avenue	Ellis avenue	June 28, 1896
Fletcher	Racine avenue	Perry	Aug. 24, 1896
Flournoy	Albany avenue	Central Park avenue	April 1, 1896
Flournoy	Washtenaw avenue	California avenue	Jan. 1, 1896
Frances place	Point	California avenue	Oct. 18, 1895
Francis	Charlton	Southport avenue	April 21, 1896
Francisco	Van Buren	Harrison	June 1, 1896
Franklin	Van Buren	Charles place	Sept. 16, 1896
*Fulton	Jefferson	Desplaines	July 1, 1896
*Fulton, north ½	Union	Desplaines	June 12, 1896
*Gladys avenue	Fortieth avenue	Hamlin avenue	April 15, 1896
Gladys avenue	Fortieth avenue	Forty sixth avenue	April 20, 1896
Grace	Southport avenue	Ashland avenue	Unfinished ...
*Grace	Robey	Hamilton avenue	July 30, 1896
Greenwood avenue	Hoffman avenue	California avenue	Dec. 1, 1895
Groveland avenue	Twenty-ninth	Thirty-third	June 22, 1896
Halsted	Archer avenue	155 ft. S. of Twenty-fifth place	Aug. 10, 1896
*Hamilton avenue	Irving Park boulevard	Grace	July 30, 1896
*Hamlin avenue	Madison	Colorado avenue	April 15, 1896
Harding avenue	Chicago avenue	Kinzie	May 4, 1896
*Hawthorn place	Lake Shore drive	East terminus	May 1, 1896
Henry court	Point	East terminus	Oct. 18, 1895
Hinman avenue	Western avenue	Pan Handle Ry	June 1, 1896
Howard avenue	North avenue	Humboldt avenue	Oct. 25, 1895
*Hoyne avenue	Irving Park boulevard	Grace	July 30, 1896
Humboldt	Cornelia	Division	Oct. 5, 1896
Humboldt	Armitage avenue	Palmer avenue	Sept. 9, 1895
Illinois	Wells	Clark	Sept. 26, 1895
Indiana avenue	Fifty-first	Fifth-fifth	June 5, 1896
Indiana	Monticello avenue	Crawford avenue	June 18, 1896
Irving Park avenue	Halsted	Lake Michigan	Sept. 10, 1896
Irving Park blvd	Robey	North Forty-eighth ave	Nov. 23, 1896
Jackson avenue	P., Ft. W. & C. Ry	Seventy-fifth	Nov. 1, 1896
*Jackson	Hamlin avenue	Fortieth avenue	April 16, 1896
Jefferson avenue	Seventy-first	Seventy-third	April 6, 1896

DURING 1896—CONTINUED.

Finished	CONTRACTOR	Nature of Improvement	Square Yards	Lineal Feet
Oct. 24, 1896	O Vider	Cedar	7,834	2,435
Oct. 24, 1896	R. F. Conway	"	6,693	1,478
Oct. 7, 1896	Sackley & Peterson	"	5,699	1,598
Oct. 15, 1896	Barber Asphalt Paving Co. . .	Asphalt	8,335	2,780
Aug. 5, 1896	Standard Paving Co.	"	3,940	1,314
Dec. 24, 1896	Naugle, Holcomb & Co.	Cedar	26,333	6,995
Sept. 1, 1896	R. F. Conway	"	10,792	2,556
June 29, 1896	R. F. Wilson & Co.	"	2,090	627
June 27, 1896	Sackley & Peterson	"	1,164	306
June 6, 1896	Henry Rath	Macadam	3,217	965
Sept. 6, 1896	Dillon & Conlon	Granite	15,131	3,960
Aug. 11, 1896	Sackley & Peterson	Cedar	1,828	420
Sept. 23, 1896	R. F. Conway	"	29,351	7,096
Aug. 31, 1896	O. Vider	"	16,774	3,975
Unfinished . . .	J. Bairstow & Bro.	Macadam	7,612	2,537
Oct. 5, 1896	J. B. Smith & Co.	Cedar	6,826	1,365
May 19, 1896	Sackley & Peterson	Macadam	2,338	658
May 25, 1896	Talbot Paving Co.	Cedar	1,643	570
May 14, 1896	C. M. Netterstrom	Brick	2,320	614
June 15, 1896	J. Bairstow	Macadam	2,356	624
Oct. 8, 1896	Garden City P. & P. Co.	Cedar	2,576	610
Dec. 10, 1896	R. Wilson & Co.	"	9,040	2,600
Oct. 6, 1896	Gaffney & Long	Macadam	4,679	1,135
Nov. 21, 1896	O. Vider	Cedar	7,626	1,806
Aug. 3, 1896	Bermudez Asphalt Paving Co. .	Asphalt	10,223	3,408
Sept. 3, 1896	R. F. Conway	Cedar	2,364	709
Aug. 31, 1896	Naugle, Holcomb & Co.	"	1,469	441
Aug. 10, 1896	J. Bairstow	Macadam	3,267	980
Oct. 8, 1896	R. F. Conway	Cedar	2,831	675
Nov. 4, 1896	R. F. Conway	Brick	2,109	578
July 23, 1896	Gaffney & Long	Granite	1,710	320
June 27, 1896	Gaffney & Long	"	850	319
Sept. 25, 1886	Western Paving Co.	Asphalt	3,876	1,292
Sept. 11, 1896	Bermudez Asphalt Paving Co. .	"	12,180	4,060
.....	Harry Rath	Curbing .....	.....	1,242
Sept. 10, 1896	Dolese & Shepard	Macadam	3,800	900
July 16, 1896	R. F. Conway	Cedar	4,014	1,204
Sept. 14, 1896	R. F. Conway	Brick	10,983	2,593
Sept. 26, 1896	R. F. Conway	Cedar	1,686	562
Sept. 10, 1896	Dolese & Shepard	Macadam	4,333	1,300
Sept. 25, 1896	Western Paving & Supply Co. .	Asphalt	6,399	2,304
Aug. 17, 1896	A. Jaicks	"	7,992	2,664
June 1, 1896	Dolese & Shepard	Macadam	533	160
Aug. 31, 1896	Naugle, Holcomb & Co.	Cedar	713	214
Dec. 16, 1896	Henry Rath	"	2,230	530
May 8, 1896	O. Vider	"	15,143	3,589
Sept. 10, 1896	Dolese & Shepard	Macadam	4,333	1,300
Nov. 17, 1896	Bermudez Asphalt Paving Co. .	Asphalt	6,498	1,950
May 5, 1896	Naugle, Holcomb & Co.	Cedar	2,244	673
May 6, 1896	Farley & Green	Brick	2,390	717
July 11, 1896	Garden City P. & P. Co.	Cedar	14,792	2,663
June 25, 1896	R. F. Conway	"	7,811	2,343
Oct. 15, 1896	R. F. Wilson & Co.	Macadam	3,673	870
Unfinished . . .	J. Bairstow & Bro.	Filling .....	.....	10,560
Unfinished . . .	R. F. Conway	Macadam	5,800	1,400
Sept. 26, 1896	Western P. & S. Co.	Asphalt	4,445	1,291
Sept. 26, 1896	Dolese & Shepard	Macadam	3,883	1,142

STREETS IMPROVED

NAME	FROM	TO	Commenced
Jefferson court	Western avenue	Perry avenue	April 18, 1896
Jefferson	Van Buren	Harrison	June 1, 1896
Jefferson	Randolph	Madison	May 18, 1896
*Jefferson	Fulton	Carroll avenue	Sept. 28, 1896
*Jefferson	Kinzie	Grand avenue	Nov. 9, 1896
Julia court	Stave	West terminus	Oct. 18, 1896
*Junior terrace	Halsted	Hazel	June 25, 1896
Justine	Forty-ninth	Fifty-first	May 20, 1896
Kedzie avenue	Milwaukee avenue	Belmont avenue	June 30, 1896
Keefe avenue	Clement avenue	South Chicago avenue	Mar. 26, 1896
*Kenmore avenue	Lawrence avenue	Sunnyside avenue	June 15, 1896
*Kimball avenue	Fullerton avenue	Wrightwood avenue	July 20, 1896
Lafin	Forty-ninth	Fifty first	Aug. 13, 1896
Lake	Homan avenue	Crawford avenue	April 23, 1896
La Salle avenue	Chicago avenue	Illinois	April 8, 1896
La Salle	Sixty-first	Sixty-third	Oct. 24, 1896
Laurel avenue	Fullerton avenue	Diversey avenue	Dec. 1, 1896
Leavitt	Ogden avenue	Twelfth	Aug. 1, 1896
*Leavitt	Irving Park boulevard	Byron	July 30, 1896
*Leland	Racine avenue	Sheridan road	June 15, 1896
Le Moyne	Leavitt	California avenue	Sept. 16, 1896
Lincoln	Armitage avenue	Asylum place	Oct. 17, 1896
Lincoln	Thirty-fifth	Thirty-eighth	May 25, 1896
Linden avenue	Humboldt boulevard	Diversey avenue	Aug. 1, 1896
Lunt avenue	Ridge avenue	Lake Michigan	May 23, 1896
Madison avenue	Sixty-seventh	Seventy-fifth	July 1, 1896
Madison	Paulina	Centre avenue	June 24, 1896
Madison	Jefferson	Canal	Aug. 1, 1896
Madison	Paulina	Western avenue	Oct. 14, 1896
Madison	Canal	Viaduct	Aug. 1, 1896
Madison	Viaduct	S. Branch Chicago river	Aug. 1, 1896
Marshfield avenue	Lincoln avenue	Cornelia	May 31, 1896
May	Fifty-ninth	Sixty-third	April 29, 1896
Mead	Fullerton avenue	Wrightwood avenue	Aug. 10, 1896
Melrose	Lake Shore drive	East terminus	July 20, 1896
Michigan	Wells	Clark	Oct. 12, 1896
Milwaukee avenue	Chicago avenue	Ashland avenue	Sept. 24, 1896
Moffat	Western avenue	Rockwell	May 8, 1896
*Monroe	Hamlin avenue	Fortieth avenue	April 15, 1896
Moore	Wood	Pan Handle Ry	Jan. 2, 1896
Mozart	Armitage avenue	Palmer avenue	Sept. 9, 1896
Myrtle avenue	Milwaukee avenue	Diversey avenue	Dec. 1, 1896
Newport avenue	Lincoln avenue	East Ravenswood Park	May 29, 1896
Nineteenth place	May	Fisk	June 1, 1896
Ninety-first	Exchange avenue	Green Bay avenue	May 5, 1896
North avenue	Ashland avenue	N. Branch Chicago river	Oct. 20, 1896
North Fifty-ninth	Clark	Southport avenue	April 10, 1896
North Fifty-ninth	East Ravenswood Park	Robey	Oct. 3, 1896
Nutt avenue	Seventy-first	Seventy-third	April 6, 1896
Oak	Wells	Clark	May 14, 1896
Oakenwald avenue	Forty-third	Forty-fourth	April 13, 1896
Oglesby avenue	Sixty-ninth	Seventy-first	Oct. 8, 1896
Ohio	Wells	Orleans	June 5, 1896
Olga	Waveland avenue	Grace	May 27, 1896
Ontario	Wells	Clark	June 15, 1896
Otto	Ashland avenue	C. E. & L. S. R. R.	June 1, 1896
Park avenue	Fortieth avenue	Forty-sixth avenue	Oct. 19, 1896

DURING 1896—CONTINUED.

Finished	CONTRACTOR	Nature of Improvement	Square Yards	Lineal Feet
Aug. 18, 1896	R. F. Conway.....	Cedar	3,284	985
Sept. 28, 1896	Jas. Conlan	Granite	3,757	829
June 29, 1896	Jas. Conlan	"	3,921	870
Oct. 15, 1896	Gaffney & Long	"	2,742	454
Nov. 23, 1896	Garden City P. & P. Co.....	Cedar	3,040	720
Aug. 31, 1896	Naugle, Holcomb & Co.....	"	727	218
June 30, 1896	Brownell Improvement Co..	Macadam	1,850	555
Oct. 25, 1896	Wilson & Thatcher	Cedar	5,519	1,307
Aug. 30, 1896	Sackley & Peterson	"	16,037	3,800
July 15, 1896	C. M. Netterstrom.....	Brick	1,722	505
July 31, 1896	O. C. Simonds	Macadam	5,716	1,874
Aug. 10, 1896	Kimball & Cobb Stone Co..	"	4,067	1,220
Oct. 12, 1896	A. J. McBean & Co.	Cedar	5,678	1,345
June 27, 1896	R. F. Conway.....	"	8,185	2,715
May 20, 1896	A. J. McBean & Co.	"	9,425	2,192
Jan. 4, 1896	Henry Rath.....	Macadam	1,813	544
July 16, 1896	R. F. Conway.....	Cedar	7,915	2,375
Sept. 7, 1896	R. F. Conway.....	"	2,880	682
Sept. 10, 1896	Dolese & Shepard	Macadam	2,533	600
July 31, 1896	O. C. Simonds	"	4,206	1,153
Oct. 20, 1896	Sackley & Peterson	Cedar	11,398	3,940
Nov. 28, 1896	Sackley & Peterson	"	5,211	1,284
June 20, 1896	R. F. Wilson.....	"	8,531	2,020
Dec. 9, 1896	Naugle, Holcomb & Co....	"	4,712	1,116
Aug. 3, 1896	J. B. Smith & Co.	"	27,282	6,127
Nov. 5, 1896	A. J. McBean & Co.	Macadam	20,910	5,348
Aug. 11, 1896	Barber Asphalt Paving Co..	Asphalt.....	12,169	3,319
Sept. 9, 1896	Barber Asphalt Paving Co..	"	3,051	858
Nov. 9, 1896	Barber Asphalt Paving Co..	"	5,227	1,488
Aug. 17, 1896	Gaffney & Long	Granite.....	901	250
Aug. 17, 1896	Gaffney & Long	Oak blocks.....	383	137
Aug. 20, 1896	R. F. Conway.....	Cedar	4,021	1,206
June 17, 1896	R. F. Conway.....	"	10,707	2,536
July 18, 1896	O. Vider	"	5,605	1,328
July 22, 1896	Dolese & Shepard	Macadam	610	183
Nov. 19, 1896	R. F. Conway.....	Granite.....	3,961	768
May 5, 1896	Talbot Paving Co.	Cedar	14,150	4,932
June 3, 1896	J. B. Smith & Co.	"	5,095	1,207
Sept. 25, 1896	Western Paving & Supply Co.	Asphalt.....	3,912	1,304
June 21, 1896	R. F. Conway.....	Cedar	16,972	4,145
May 5, 1896	Naugle, Holcomb & Co....	"	2,244	672
July 16, 1896	R. F. Conway.....	"	13,070	3,921
June 30, 1896	Sackley & Peterson	"	1,792	448
Sept. 29, 1896	R. F. Conway.....	"	1,206	388
Oct. 20, 1896	H. Heinson.....	"	10,386	2,977
Nov. 19, 1896	J. B. Smith & Co.	"	7,415	2,988
June 6, 1896	Henry Rath.....	Macadam	3,217	965
May 2, 1896	Henry Rath.....	Cedar	6,334	1,500
Sept. 26, 1896	Dolese & Shepard	Macadam	3,833	1,135
May 23, 1896	Garden City P. & P. Co.....	Cedar	2,728	738
May 22, 1896	Assyrian Asphalt Co.	Asphalt.....	3,380	950
Dec. 20, 1896	Assyrian Asphalt Co.	"	4,420	1,300
July 4, 1896	Henry Rath.....	Cedar	3,229	673
Aug. 10, 1896	Garden City P. & P. Co.....	"	2,500	703
June 30, 1896	R. F. Wilson.....	"	2,276	681
July 18, 1896	Sackley & Peterson	"	10,072	2,385
Dec. 19, 1896	Bermudez Asphalt Paving Co.	Asphalt.....	17,630	3,960

STREETS IMPROVED

NAME	FROM	TO	Commenced
Paulina	Graceland avenue	Berteau avenue	June 15, 1896
Paulina	Lincoln avenue	Cornelia	Oct. 26, 1896
Pearl	Webster avenue	Garfield avenue	Aug. 4, 1896
Peck court	State	Michigan avenue	May 1, 1896
Pine	Chicago avenue	Indiana	Oct. 21, 1896
Pine Grove avenue	Irving Park avenue	180 feet north of Byron ..	Oct. 21, 1896
Pleasant place	Western avenue	Perry avenue	April 18, 1896
Point	Armitage avenue	California avenue	Oct. 18, 1895
Polk	Ogden avenue	Western avenue	Oct. 24, 1896
Prairie avenue	Twenty-second	Twenty-fifth	Sept. 15, 1896
Prindville	State	Milwaukee avenue	Oct. 18, 1895
Rascher avenue	Ashland avenue	East Ravenswood Park ..	Nov. 8, 1895
River	Michigan avenue	250 feet east	July 15, 1896
Rockwell	Ogden avenue	Sixteenth	Aug. 30, 1895
*Rockwell	Ogden avenue	Washburn avenue	Aug. 1, 1896
*Roscoe	Lake Shore drive	East terminus	May 1, 1896
Rush	Ohio	Chicago river	May 23, 1896
St. George court	State	Milwaukee avenue	Oct. 18, 1895
St. Helen	State	West terminus	Oct. 18, 1895
St. Louis avenue	Ogden avenue	Twenty-sixth	April 5, 1896
St. Louis avenue	Madison	Colorado avenue	June 10, 1896
St. Lawrence ave.	Sixty-third	South Chicago avenue ..	Nov. 1, 1895
St. Mary	State	West terminus	Oct. 18, 1895
*Seeley avenue	Irving Park boulevard ..	Grace	July 30, 1896
Seminary avenue	Newport avenue	Eddy	Aug. 19, 1896
Sheldon	Madison	Washington boulevard ..	Oct. 17, 1896
Sheridan road	North Fifty-ninth	Bryn Mawr avenue	Unfinished ...
Sixteenth	Albany avenue	Kedzie avenue	Mar. 1, 1896
Sixtieth	State	South Park avenue	July 15, 1896
Sixty-second	Madison avenue	I. C. R. R.	July 26, 1896
Sixty-fifth	State	C., R. I. & P. Ry.	April 23, 1896
Sixty-seventh	South Park avenue	Stony Island avenue	Oct. 20, 1895
Sixty-ninth	South Park avenue	Clement avenue	Mar. 26, 1896
Sixty-ninth	Woodlawn avenue	I. C. R. R.	Oct. 8, 1896
Seventieth	Addison avenue	I. C. R. R.	Oct. 8, 1896
Seventy-first	Woodlawn avenue	I. C. R. R.	Oct. 8, 1896
Seventy-first	South Park avenue	Cottage Grove avenue ..	Nov. 1, 1895
Seventy-first	I. C. R. R.	Stony Island avenue	April 6, 1896
Seventy-first place ..	I. C. R. R.	Stony Island avenue	April 6, 1896
Seventy-second	I. C. R. R.	Stony Island avenue	April 6, 1896
Seventy-second pl.	I. C. R. R.	Stony Island avenue	April 6, 1896
Seventy-third	Rhodes avenue	Cottage Grove avenue ..	Nov. 1, 1896
Seventy-fourth	St. Lawrence avenue	Jackson avenue	Nov. 1, 1896
South Chicago ave	South Park avenue	Seventy-fifth	June 1, 1896
South Park avenue	Twenty-fourth	Thirty-fifth	July 27, 1896
South Park avenue	Sixtieth	Sixty-third	June 1, 1896
South Park avenue	Sixty-third	Sixty-seventh	May 10, 1896
Southport avenue	North fifty-ninth	Balmoral avenue	April 10, 1896
*Spaulding avenue	Fullerton avenue	Wrightwood avenue	April 20, 1896
Springfield avenue ..	Madison	Colorado avenue	April 15, 1896
State	Sixty-eighth	Seventy-fifth	Jan. 22, 1896
State	California avenue	Armitage avenue	Oct. 18, 1895
*Stratford place	Lake Shore drive	East terminus	May 1, 1896
Summerdale ave.	Clark	Southport avenue	April 10, 1896
*Sunnyside avenue	Clark	Alley east of Dover	July 21, 1896
*Sunnyside avenue	Evanston avenue	Sheridan road	June 15, 1896
Superior	Clark	State	July 17, 1896

DURING 1896—CONTINUED.

Finished	CONTRACTOR	Nature of Improvement	Square Yards	Lineal Feet
Oct. 5, 1896	Sackley & Peterson	Brick	4,702	1,322
Nov. 25, 1896	J. B. Smith & Co.	"	1,883	628
Sept. 21, 1896	A. J. McBean & Co.	Cedar	1,544	632
May 25, 1896	Geo. Powell	Brick	3,100	984
Dec. 12, 1896	Henry Rath	Macadam	6,510	1,958
Nov. 9, 1896	Henry Rath	"	1,858	380
Aug. 18, 1896	R. F. Conway	Cedar	3,295	989
Aug. 31, 1896	Naugle, Holcomb & Co.	"	4,548	1,079
Nov. 17, 1896	R. F. Conway	"	9,978	2,363
Oct. 21, 1896	Assyrian Asphalt Co.	Asphalt	8,754	2,073
Aug. 31, 1896	Naugle, Holcomb & Co.	Cedar	1,332	428
May 26, 1896	O. Vider	"	4,867	1,310
July 30, 1896	Powell Bros.	Granite	864	262
Aug. 19, 1896	Sackley & Peterson	Cedar	5,348	1,267
Oct. 17, 1896	B. Harrington	"	800	200
June 1, 1896	Dolese & Shepard	Macadam	600	180
July 15, 1896	Sackley & Peterson	Granite	5,652	1,364
Aug. 31, 1896	Naugle, Holcomb & Co.	Cedar	1,409	423
Aug. 31, 1896	Naugle, Holcomb & Co.	"	678	218
July 24, 1896	Trinidad Asphalt R. Co.	Asphalt	12,007	4,002
Aug. 21, 1896	Assyrian Asphalt Co.	"	6,023	1,428
May 25, 1896	Garden City P. & P. Co.	Cedar	16,991	3,914
Aug. 31, 1896	Naugle, Holcomb & Co.	"	678	218
Sept. 10, 1896	Dolese & Shepard	Macadam	4,333	1,300
Sept. 8, 1896	Sackley & Peterson	Cedar	2,356	558
Oct. 27, 1896	Sackley & Peterson	"	1,857	440
.....	J. Bairstow & Bro.	Curb and fill	.....	2,600
Aug. 21, 1896	Assyrian Asphalt Co.	Asphalt	1,956	652
Nov. 25, 1896	C. M. Netterstrom	Macadam	7,897	2,511
Sept. 26, 1896	Sackley & Peterson	"	1,061	312
May 22, 1896	J. B. Smith & Co.	Cedar	4,181	1,254
June 24, 1896	Naugle, Holcomb & Co.	"	23,280	8,059
July 15, 1896	C. M. Netterstrom	Brick	1,877	466
Dec. 20, 1896	Assyrian Asphalt Co.	Asphalt	2,132	750
Dec. 20, 1896	Assyrian Asphalt Co.	"	1,160	400
Dec. 20, 1896	Assyrian Asphalt Co.	"	1,640	550
Oct. 10, 1896	H. Hiensen	Macadam	6,730	2,245
Sept. 26, 1896	Dolese & Shepard	"	4,529	1,297
Sept. 26, 1896	Dolese & Shepard	"	5,922	1,736
Sept. 26, 1896	Dolese & Shepard	"	6,619	1,894
Sept. 26, 1896	Dolese & Shepard	"	6,631	1,911
Unfinished	R. F. Conway	"	4,000	1,200
Unfinished	R. F. Conway	"	4,000	1,200
Unfinished	Talbot Paving Co.	Brick	30,750	5,659
Oct. 15, 1896	Assyrian Asphalt Co.	Asphalt	26,150	6,724
Oct. 20, 1896	Sackley & Peterson	Macadam	4,995	2,286
Sept. 15, 1896	Barber Asphalt Paving Co.	Asphalt	7,940	2,634
June 6, 1896	Henry Rath	Macadam	4,832	1,450
June 27, 1896	Dolese & Shepard	"	4,333	1,300
Sept. 25, 1896	Western P. & S. Co.	Asphalt	8,548	2,518
Dec. 13, 1896	C. M. Netterstrom	Macadam	26,089	4,892
Aug. 31, 1896	Naugle, Holcomb & Co.	Cedar	8,699	2,062
June 1, 1896	Dolese & Shepard	Macadam	440	110
June 6, 1896	Henry Rath	"	3,217	965
July 26, 1896	O. C. Simonds	"	1,827	514
July 31, 1896	O. C. Simonds	"	1,812	559
Aug. 18, 1896	R. F. Conway	Cedar	3,140	740

STREETS IMPROVED

NAME	FROM	TO	Commenced
Swift	Francis	Ridge avenue	April 21, 1896
Thomas	Wood	Leavitt	Oct. 28, 1896
Turner avenue	Twelfth	Douglas boulevard	Aug. 10, 1896
Twentieth place	Peoria	Sangamon	Aug. 12, 1896
*Twenty-second	St. Louis avenue	Trumbull avenue	April 1, 1896
Twenty-third	Homan avenue	Central Park avenue	May 25, 1896
Twenty-third place	Hoyne avenue	Oakley avenue	Oct. 25, 1896
Twenty-fourth	Wabash avenue	Michigan avenue	July 9, 1896
Twenty-seventh	Cottage Grove avenue	I. C. R. R.	May 4, 1896
*Twenty-eighth	Cottage Grove avenue	Groveland avenue	July 10, 1896
Thirty-third	Ashland avenue	Archer avenue	Nov. 11, 1895
*Van Buren	Hamlin avenue	Fortieth avenue	April 15, 1896
Vernon avenue	Sixty-ninth	Seventy-third	Mar. 26, 1896
Victor	Evanston avenue	Swift	April 21, 1896
Wabansia avenue	Western avenue	Kedzie avenue	July 1, 1896
*Wabash avenue	Lake	Harrison	May 1, 1896
Wabash avenue	Sixty-sixth	Seventy-first	Sept. 10, 1895
Warren avenue	Homan avenue	Falls	Oct. 16, 1896
Warren avenue	Leavitt	Ogden avenue	Sept. 19, 1896
Washington	Desplaines	Canal	Oct. 12, 1896
Washington	Water	Canal	Sept. 25, 1896
Washtenaw ave	Washington boulevard	Jackson boulevard	Sept. 16, 1896
Water	St. Clair	160 feet east	May 27, 1896
Wellington avenue	Lincoln avenue	Perry avenue	June 8, 1896
*Wentworth avenue	Twenty-first	Thirty-ninth	Aug. 3, 1896
*Wilcox avenue	Hamlin avenue	Fortieth avenue	April 15, 1896
*Wilson avenue	Robey	Leavitt	June 13, 1896
*Wilson avenue	Racine avenue	Sheridan road	June 15, 1896
*Winthrop avenue	Lawrence avenue	Kenmore avenue	June 15, 1896
Wisconsin	Clark	Sedgwick	July 6, 1896
Wright	North Fifty-ninth	Claremont avenue	Nov. 8, 1895
*Wrightwood ave	Kimball avenue	Central Park avenue	Oct. 18, 1896

* Private Contract.

DURING 1896—CONTINUED.

Finished	CONTRACTOR	Nature of Improvement	Square Yards	Lineal Feet
Aug. 10, 1896	J. Bairstow.....	Macadam.....	2,766	830
Unfinished...	R. F. Conway.....	Cedar.....	9,925	2,595
Oct. 21, 1896	Barber Asphalt Paving Co....	Asphalt.....	3,731	1,244
Nov. 7, 1896	A. J. McBean & Co.....	Cedar.....	1,115	358
Aug. 4, 1896	R. F. Conway.....	".....	1,484	700
Aug. 20, 1896	A. J. McBean & Co.....	Macadam.....	3,834	1,150
Nov. 16, 1896	R. F. Conway.....	Curb wall.....	.....	500
July 31, 1896	R. F. Conway.....	Cedar.....	1,716	404
June 11, 1896	Dillon & Conlan.....	Granite.....	2,110	680
July 20, 1896	A. J. McBean & Co.....	Cedar.....	787	300
May 19, 1896	Naugle, Holcomb & Co.....	".....	6,116	1,450
Sept. 25, 1896	Western P. & S. Co.....	Asphalt.....	3,891	1,297
July 15, 1896	C. M. Netterstrom.....	Brick.....	9,297	2,780
Aug. 10, 1896	J. Bairstow.....	Macadam.....	2,940	882
Oct. 22, 1896	Sackley & Peterson.....	Cedar.....	14,606	4,882
July 18, 1896	Dillon & Conlan.....	Granite.....	21,511	4,486
Nov. 25, 1896	Mexican Asphalt Co.....	Asphalt.....	11,583	3,295
Unfinished....	Assyrian Asphalt Co.....	".....	16,921	5,220
Oct. 12, 1896	Barber Asphalt Paving Co....	".....	15,643	3,705
Nov. 19, 1896	R. F. Conway.....	Granite.....	3,848	1,196
Oct. 6, 1896	Sackley & Peterson.....	".....	767	190
Oct. 16, 1896	R. F. Conway.....	Cedar.....	6,104	1,831
Aug. 4, 1896	Gaffney & Long.....	Granite.....	4,990	1,604
Aug. 4, 1896	R. F. Conway.....	Cedar.....	2,825	669
Oct. 2, 1896	Chicago City Railway Co....	".....	33,800	11,530
Sept. 25, 1896	Western P. & S. Co.....	Asphalt.....	3,879	1,298
July 8, 1896	Henry Rath.....	Brick.....	4,780	1,355
July 31, 1896	O. C. Simonds.....	Macadam.....	5,306	1,194
July 31, 1896	O. C. Simonds.....	".....	4,067	1,274
July 28, 1896	J. V. McAdam.....	Brick.....	3,813	900
May 26, 1896	O. Vider.....	Cedar.....	6,832	2,050
Nov. 30, 1896	Brownell Imp. Co.....	Macadam.....	4,200	1,260

SUMMARY.

Total lineal feet cedar block pavement in alleys.....	20,765	or	3.98	miles.
Total lineal feet cedar block pavement in streets.....	210,360	"	39.84	"
Total lineal feet asphalt pavement in alleys.....	180	"	0.02	"
Total lineal feet asphalt pavement in streets.....	89,700	"	16.99	"
Total lineal feet granite pavement in alleys.....	479	"	0.09	"
Total lineal feet granite pavement in streets.....	18,292	"	3.47	"
Total lineal feet macadam pavement in streets.....	71,827	"	13.60	"
Total lineal feet brick pavement in alleys.....	1,495	"	0.29	"
Total lineal feet brick pavement in streets.....	23,363	"	4.42	"
Total lineal feet curb and fill in streets.....	18,018	"	3.42	"

Total 454,420 or 86.07 miles.

SUMMARY OF STREETS IMPROVED DURING 1896.

PAVEMENT.	NORTH DIVISION, Including Lake View and Rogers Park.				SOUTH DIVISION, Including Hyde Park and Lake.				WEST DIVISION, Including Jefferson and Cicero.				TOTALS.				
	Square Yards.	Lineal Feet.	Miles.		Square Yards.	Lineal Feet.	Miles.		Square Yards.	Lineal Feet.	Miles.		Square Yards.	Lineal Feet.	Miles.	Alleys. Miles.	Streets. Miles.
Cedar Blocks.....	146,500	40,489	7.67		205,334	58,307	11.04		456,589	132,339	25.06		808,513	231,125	43.77	3.93	39.84
Asphalt	20,230	5,130	0.97		84,798	24,090	4.56		200,910	60,610	11.48		305,938	89,830	17.01	0.02	16.99
Granite	14,603	3,736	0.71		40,379	9,807	1.87		20,819	5,168	0.98		75,801	18,771	3.56	0.09	3.47
Macadam	100,405	28,272	5.35		131,190	35,598	6.74		24,679	7,957	1.51		257,274	71,827	13.60	.....	13.60
Brick	17,567	4,911	0.93		73,133	17,575	3.33		6,279	2,372	0.45		98,979	24,858	4.71	0.29	4.42
Totals	299,395	82,538	15.63		535,034	146,437	27.54		710,276	208,436	39.48		1,544,705	436,411	82.65	4.33	78.32
Curbed and Filled .....	.....	5,417	1.03		.....	811	0.16		.....	11,790	2.23		.....	18,018	3.42	.....	3.42
Grand Totals	299,395	87,955	16.66		535,034	146,248	27.70		710,276	220,226	41.71		1,544,705	454,429	86.07	4.33	81.74

TABLE SHOWING PERCENTAGE OF EACH CLASS OF PAVEMENT.

PAVEMENT.	1896.		1895.		1894.		1893.		1892.	
	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.	Miles.	Per Cent.
Cedar Block...	752.68	63.59	726.01	64.62	705.07	64.90	648.38	64.38	554.75	63.13
Macadam.....	344.31	29.09	332.14	29.56	324.69	29.89	310.81	30.86	282.74	32.19
Medina Stone..	2.43	0.21	2.49	0.22	2.58	0.24	2.58	0.26	2.58	0.29
Granite Block..	25.27	2.13	23.31	2.07	22.90	2.11	22.64	2.25	21.82	2.50
Sheet Asphalt.	45.94	3.88	30.75	2.74	24.99	2.29	16.65	1.65	12.32	1.40
Block Asphalt..	3.05	0.26	3.59	0.32	3.59	0.33	3.59	0.36	3.59	0.40
Brick.....	8.88	0.75	4.17	0.37	1.81	0.12	1.09	0.11	0.67	0.07
"Foundation"	1.08	0.09	1.08	0.10	1.08	0.10	1.08	0.11	.....	.....
Burnt Clay...	.....	.....	.....	.....	0.23	0.02	0.23	0.02	0.23	0.02
Totals..	1,183.64	100	1,123.54	100	1,086.44	100	1,007.95	100	878.70	100

DISTRIBUTION OF KIND OF PAVEMENT.

DIVISION.	Cedar Block.	Macadam	Medina Stone.	Granite.	Sheet Asphalt.	Block Asphalt.	Brick.	Founda-tion.	Total.
North	162.24	63.01	0.49	0.81	4.88	.....	1.57	1.08	234.08
South	207.83	259.70	1.55	20.26	10.42	3.05	5.25	.....	508.06
West	382.61	21.60	0.80	4.20	30.64	.....	2.06	.....	441.50
TOTALS.....	752.68	344.31	2.43	25.27	45.94	3.05	8.88	1.08	1,183.64

RECAPITULATION OF STREETS AND ALLEYS BY TOWNSHIPS, SHOWING IMPROVED AND UNIMPROVED
STREETS AND ALLEYS AT THE CLOSE OF THE YEAR 1896.

TOWNSHIP	Total Streets— Miles.	Total Alleys— Miles.	Cedar Block.	Macadam.	Medina Stone.	Granite.	Sheet Asphalt.	Block Asphalt.	Brick.	"Foundation."	Improved Streets and Alleys—Miles.	Unimproved Streets and Alleys—Miles.	Repaved in 1896 —Miles.		
													Streets.	Alleys.	Total.
*Hyde Park.....	749.78	857.45	28.39	179.61	.....	.....	5.67	.....	8.38	.....	217.05	890.18	0.94	.....	0.94
Jefferson.....	319.83	121.53	39.18	1.29	.....	.....	0.77	.....	.....	.....	41.24	400.12	.....	.....	.....
Lake.....	390.31	258.99	59.37	70.96	.....	.....	.....	.....	0.54	.....	130.87	518.43	.....	.....	.....
Lake View.....	157.17	102.60	60.37	57.37	.....	.....	.....	.....	1.06	.....	118.80	140.97	0.23	.....	0.23
North Town.....	169.72	78.60	98.03	1.62	0.49	0.81	4.57	.....	0.51	.....	106.03	142.29	4.21	.....	4.21
Norwood Park...	26.50	10.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	36.93	.....	.....	.....
Regen Pl. & West Ridge	35.55	17.25	3.84	4.02	.....	.....	0.81	.....	.....	1.08	9.25	43.55	.....	.....	.....
South Town.....	230.26	108.18	120.07	9.13	1.55	20.26	4.75	3.05	1.33	.....	160.14	178.40	6.59	0.23	6.82
West Town.....	490.41	285.00	843.43	20.31	0.89	4.20	29.87	.....	2.06	.....	400.26	375.15	10.35	.....	10.35
Totals.....	2,569.63	1,340.03	752.68	344.81	2.43	25.27	45.94	8.05	8.88	1.08	†1,183.64	2,726.02	22.82	0.23	23.55

* Including Calumet, Washington Heights and Gano. † Of this total paved mileage 1,075.02 are Streets and 108.62 are Alleys.

The following table shows the amount of pavement laid in streets and alleys each year since the introduction of street paving in 1855 to the present year. From 1835 to 1844 the work on streets consisted of grading only. From 1844 to 1855 improvements were made by plank-ing, after which the more substantial forms of paving came into use :

YEAR.	MILES.	YEAR.	MILES.	YEAR.	MILES.		
					Alleys.	Streets.	Totals.
1855	1.72	1869	5.46	1881	0.13	24.89	24.52
1856	0.26	1869	18.32	1882	0.58	24.37	24.95
1857	2.62	1870	19.96	1883	1.96	20.53	22.49
1858	7.20	1871	25.63	1884	1.60	32.92	34.52
1859	5.70	1872	1.82	1885	1.16	36.90	38.06
1860	.....	1873	10.19	1886	1.51	42.15	43.66
1861	0.69	1874	9.07	1887	2.60	34.15	36.75
1862	2.57	1875	11.49	1888	2.19	52.14	54.33
1863	2.00	1876	10.50	1889 }	3.78	103.90	*146.54
1864	2.40	1877	12.29	1890	8.50	91.22	107.68
1865	2.03	1878	11.01	1891	12.86	104.73	117.59
1866	8.87	1879	6.88	1892	14.26	93.71	107.97
1867	11.37	1880	16.84	1893 }	31.36	106.10	*6.91
				1894	16.94	75.01	187.46
				1895	5.27	42.48	91.95
				1896	4.33	78.32	47.75
							82.65
Totals.....					109.03	1,003.02	1,432.94

* The mileage in heavy type opposite the years 1889 and 1893 gives the total amount of paved streets prior to those years in the annexed territories of Hyde Park, Lake and Lake View, and of Rogers Park and West Ridge, respectively.

Of this amount 248.70 miles have been repaved during the same period, which reduces the actual amount of paved streets and alleys within the corporate limits on December 31, 1896, to 1,183.64 miles (streets, 1,075.02; alleys, 108.62). To this may be added 1,494.61 miles of unimproved streets, and 1,231.41 miles of unimproved alleys; which makes a total of 3,909.66 miles of streets in Chicago at this date.

RECAPITULATION.

STREETS.	Streets-Miles.	Alleys-Miles.	Total-Miles.
Improved	1,075.03	108.62	1,183.64
Unimproved	1,494.61	1,231.41	2,726.02
Total Miles.....	2,569.63	1,840.03	3,909.66

REPAVING.

The amount of repaving done by the division foremen in repairing improved streets, the replacing of pavement where openings were made by Water, Sewer and Fire Departments, etc., and on account of street permits and general repairs, is shown in the following table :

FOR WHAT PURPOSE.	NORTH DIV.	SOUTH DIV.	WEST DIV.	TOTAL.
	Square Yds.	Square Yds.	Square Yds.	Square Yds.
General Repairs.....	38,680	46,573	71,095	156,298
Water Department.....	765	256	391	1,412
Sewer Department.....	13	536	162	711
Fire Department.....	.....	60	.....	60
Street Permits.....	4,849	13,689	6,824	25,362
TOTALS.....	44,257	61,114	78,472	183,843
Amount of repaving done by contractors on street repairs for the City.... }	11,478	37,739	87	49,304
GRAND TOTAL.....	55,735	98,853	78,559	233,147

(Of the 183,843 square yards of repaving, 85,742 square yards was with old material.)

Total number of square yards, 233,147.

The above does not include any repaving done by contractors for gas companies, Bureau of Light, etc.

LUMBER.

The following table shows in detail the amount of lumber used by the division foremen in the construction and repair of aprons, culverts, crossings, etc., and also for sidewalk intersections and general repairs:

FOR WHAT USED.	NORTH DIVISION.		SOUTH DIVISION.		WEST DIVISION.	
	No.	LUMBER.	No.	LUMBER.	No.	LUMBER.
		Sq. Feet.		Sq. Feet.		Sq. Feet.
Aprons	119	8,121	451	17,676	888	82,814
Crossings	237	9,958	1,245	166,781	1,005	124,092
Culverts	44	8,265	777	128,900	406	42,775
Drains	16	807	81	43,019	71	11,471
Steps and Railings	243	1,970	142	6,011	298	15,230
Street repairs		28,626		32,508		50,768
Sidewalk intersections	478	37,241	455	34,137	927	101,518
Sidewalk, general repairs		181,751		684,028		576,281
Totals		211,739		1,113,055		954,894

RECAPITULATION.

North Division 211,739 feet of lumber.
 South Division 1,113,055 feet of lumber.
 West Division 954,894 feet of lumber.

Grand Total..... 2,279,688 feet of lumber

(In this amount is included 290,342 feet of old lumber.)

Total number of aprons built and repaired..... 953
 Total number of crossings built and repaired 2,487
 Total number of culverts built and repaired 1,227
 Total number of drain boxes built and repaired..... 168
 Total number of steps and railings built and repaired 677
 Total number of intersections built and repaired. 1,855

UNIMPROVED STREETS.

The money at the disposal of this Bureau for the purpose of grading, ditching, etc., has been judiciously expended in keeping unimproved streets in good passable condition, and keeping ditches flooded in localities where sewers have not yet been built.

The total length of streets graded and ditched by the division foremen amounts, in the aggregate, to nine hundred and three (903) miles, proportioned as follows :

	Grading.	Ditching.
North Division	3 miles.	8 miles.
South Division	87 miles.	164 miles.
West Division	590 miles.	51 miles.
Totals	680 miles.	223 miles.

The division foremen cleaned macadam streets as follows :

North Division	68 miles.
South Division	82 miles.
West Division	3 miles.
Total	153 miles.

SIDEWALKS.

During the year 1896, 150.84 miles of plank sidewalk, 82.73 miles of concrete walk, and 3.03 miles of stone walk were constructed, making a total of 236.60 miles ; 1.65 miles of concrete walks were constructed by the various park boards, making a grand total for the year of 238.25 miles.

Two hundred and fifty-nine ordinances were passed for wood walks of which six were repealed, 125 for concrete walks of which thirteen were repealed, and fifteen for stone walks of which one was repealed, making a total of 399 ordinances passed for sidewalks, of which number 379 are now in force.

There were 289 estimates for plank walks and 139 estimates for concrete and stone walks prepared for the Honorable City Council during the year.

Seven thousand two hundred and sixteen (7,216) complaints of defective walks were registered, reported on by the inspectors and notice sent to the property owners to put same in proper condition. About ninety per cent. complied with said notice.

The following tables show in detail the amount of sidewalk constructed during the year, and the total mileage now under control of the City and various park boards:

**NUMBER OF MILES OF WOOD, STONE AND CONCRETE SIDEWALKS
BUILT DURING 1896.**

DIVISION.	Wood, Miles.	Stone, Miles.	Concrete, Miles.	Total Miles.	Sidewalks Repaired.	Total Miles.
North	28.02	0.58	27.75	56.35	0.18	56.53
South	68.9	0.65	28.72	98.27	1.07	99.34
West	53.92	1.8	26.26	81.98	1.83	83.81
Totals	150.84	3.03	82.73	236.60	3.08	239.68

**TOTAL NUMBER OF MILES OF SIDEWALK UNDER THE CONTROL
OF THE CITY AND THE SOUTH, WEST AND LINCOLN PARK
COMMISSIONERS AT THE CLOSE OF THE YEAR.**

UNDER CONTROL OF	MATERIAL.			TOTAL MILES.
	Wood, Miles.	Stone, Miles.	Concrete, Miles.	
City	3,900.14	233.53	609.73	4,743.40
South Park Commissioners		20.00	30.74	50.74
West Park Commissioners		11.05	51.04	62.09
Lincoln Park Commissioners		2.17	4.70	6.87
Totals	3,900.14	266.75	698.21	4,865.10

At the suggestion of this Bureau, the City Council extended the districts in which the construction of wooden sidewalks is prohibited in the different divisions of the City, as follows:

NORTH DIVISION.

Commencing at the river and running east on the north line of Lake street to the east line of Fifth avenue; thence north along the east line of Fifth avenue and Wells street to Wisconsin street; thence west on the south line of Wisconsin street to east line of Halsted street; thence north of the east line of Halsted street to the south line of Fullerton avenue; thence west on the south line of Fullerton avenue to the east line of Racine avenue; thence north of the east line of Racine avenue to the east line of Clark street; thence north on the east line of Clark street to the city limits.

SOUTH DIVISION.

Commencing at the eastern terminus of Fifty-fifth street and running west on the south side of said Fifty-fifth street to State street; thence north on the west line of State street to Van Buren street; thence west on the south line of Van Buren street to the river.

WEST DIVISION.

Commencing at the west line of the Chicago river and extending along the south line of Van Buren street to the west line of Western avenue; thence north of the west line of Western avenue to the north line of Lake street, thence east on north line of Lake street to west line of Ashland avenue, thence north on said west line of Ashland avenue to the south line of Chicago avenue, thence west on the south line of Chicago avenue to the east line of Western avenue, thence north on the east line of Western avenue to the south line of Division street, thence west on the south line of Division street to the west line of California avenue, thence north on the west line of California avenue to the north line of North avenue, thence east on the north line of North avenue, to the northeast line of Milwaukee avenue, thence southeast on the northeast line of Milwaukee avenue to the north line of Lake street, thence east on the north line of Lake street to the river.

Taking into consideration the improved appearance of the streets where stone or concrete walks have been substituted for wooden ones, the saving in cost of repair to the property owner and the City, and the removal of the cause of accidents through defective walks, fully justified this change.

PERMITS FOR OPENING STREETS.

Two thousand and fifty-four (2,054) permits were issued to sundry persons to open improved streets. A cash deposit covering cost of replacing pavement, etc., to its original condition was made on each permit issued.

Three thousand one hundred and forty-five (3,145) openings were made on improved streets by gas companies and sundry other corporations, under general and special deposits, the work of replacing the pavements being done by contractors, subject to inspection and acceptance of the Department, the cost of such inspection being borne by the respective corporations.

Five thousand six hundred (5,600) permits were issued to sundry persons to open unimproved streets. The City incurring no expense on account of these openings, no deposit was required. These permits, however, are issued to licensed plumbers, contractors, etc., only upon filing a bond to protect the City against damages resulting from accidents through such openings.

Total number of openings, ten thousand seven hundred and ninety-nine (10,799).

The following statement shows in detail the amount of deposits, cost of repairs, amount rebated, etc.:

OPENING STREETS.

Amount of deposits made	\$41,169 65
Amount retained for cost of repaving.....	10,555 46
Amount rebated to depositors.....	24,611 06
Amount retained on unsettled permits	6,003 13
Average amount of each deposit	20 04
Average amount retained for costs.....	5 14

CORPORATION PERMITS.

Amount of deposits made	\$76,688 02
Amount of repaving charges.....	37,487 06
Amount rebated to depositors.....	23,375 85
Amount retained on unsettled permits	15,825 11
Amount paid by corporations for inspection.....	36,010 66

PERMITS FOR USE OF STREETS.

Seven hundred and forty-five (745) permits were issued to sundry parties to occupy streets for the purpose of depositing material thereon during the construction of buildings. A uniform deposit is made in each instance, and a bond filed by the party securing permit to protect the City against possible damage suits in case of accident, due to the negligence of owner or contractor, during life of permits.

The following statement shows in detail the amount of deposits, cost of repairs, amount rebated, etc.:

Amount of cash deposits made.....	\$27,923 00
Amount retained for use of streets.....	4,113 00
Amount rebated to depositors.....	17,477 00
Amount retained on unsettled permits.....	6,333 00
Average amount of cash deposits.....	37 48
Average amount retained for use of streets.....	5 52

HOUSE-MOVING.

Eight hundred and fifty-five (855) permits to move buildings were granted, of which seven hundred and three (703) were for frame buildings, one hundred and fifty-one (151) brick, and one (1) iron, the total frontage aggregating seventeen thousand eight hundred and sixty-eight (17,868) lineal feet.

Of this number one hundred and ninety-one (191) were in the North Division, two hundred and eighty (280) in the South Division, and three hundred and eighty-four (384) in the West Division. Four hundred and seven (407) were one story, four hundred and eleven (411) were two stories, and thirty-seven (37) were three stories high.

Total cash receipts, one thousand six hundred and ninety dollars (\$1,690.00).

The total receipts from permits issued during the year are inadequate to pay the salaries of the permit clerk and inspector, and there is, therefore, no surplus to repair the streets damaged. The necessity for a more equitable adjustment of charges for permits is apparent.

Under City ordinances at present the fees are limited to one dollar (\$1.00) for moving a building to another part of the same lot upon which the building stands ; and a charge of (\$5.00) for moving a building from one lot to another, where street is used.

Inasmuch as the amount of damage to streets over which buildings are moved depends wholly upon the weight of the building, and the amount of pavement disturbed by the driving of stakes and other methods necessarily employed by the house-mover in the prosecution of his work, the fees should be graded proportionate to the injury done.

HOUSE MOVING.

MONTHS, 1896.	Permits Issued.	MATERIAL.			STORIES HIGH.				DIVISION.			FRONTAGE.	FEES.		Cash Receipts.
		Frame.	Brick.	Iron.	One.	Two.	Three.	Four.	North.	South.	West.		\$1.00	5.00	
January.....	69	56	13	.....	29	35	5	....	24	19	27	1,397	39	30	\$ 189 00
February.....	72	56	16	.....	30	38	4	....	19	22	31	1,453	52	20	152 00
March.....	103	77	26	.....	45	54	4	...	34	24	45	2,114	80	23	195 00
April.....	163	142	21	.....	72	86	5	....	39	55	69	3,270	132	31	287 00
May.....	105	86	19	.....	51	47	7	....	14	42	29	2,131	84	21	189 00
June.....	62	52	10	.....	32	28	2	....	12	22	28	1,302	46	16	126 00
July.....	75	56	19	.....	38	30	7	....	13	23	39	1,656	47	28	187 00
August.....	50	44	6	.....	25	25	.....	....	14	15	21	1,035	38	12	98 00
September.....	49	37	12	.....	30	18	1	....	7	14	28	1,108	38	10	88 00
October.....	50	45	5	.....	24	26	.....	....	9	18	23	1,236	43	7	78 00
November.....	24	21	3	.....	12	11	1	....	3	11	10	437	21	3	36 00
December.....	33	28	4	1	19	13	1	....	3	16	14	671	25	8	65 00
TOTALS.....	855	708	151	1	407	411	37	....	191	380	384	17,868	645	209	\$1,690 00

STREET LAMPS.

The large amount of work done by the City Lamp Department during the year 1896 surpasses that of any previous year in the history of Chicago. This was accomplished by strict economy and the application of systematic business methods.

During the year 1896 there were erected ten thousand four hundred and fifty-two (10,452) new and repaired gas and gasoline lamps, of which five thousand nine hundred and seventy-one (5,971) were City gas pattern, four thousand and fifty-six (4,056) Boulevard gas pattern, and the balance, four hundred and twenty-five (425) gasoline, which, together with the number of lamps previously erected, gives a grand total of fifty-four thousand two hundred and three (54,203) in the City. Six thousand and fifty-two gas lamps having been temporarily discontinued, leaves the total number of lamps in actual service December 31, 1896, 48,151.

The above grand total, including lights of all descriptions, is made up as follows:

Gas lamps—People's Gas Light & Coke Co.....	17,875
Chicago Gas Light & Coke Co.....	6,966
Suburban Gas Co.....	4,261
Hyde Park Gas Co.....	3,578
Lake Gas Co.	2,902
Calumet Gas Co.....	546
Total gas lamps	36,128
Gasoline	10,258
Electric, City plants.....	1,243
Electric by contract.....	522
Total number in actual service	48,151

In addition to the above, this Department takes care of six thousand and fifty-two (6,052) services and posts at present discontinued on account of insufficient appropriation. The above number of services is distributed amongst the different gas companies.

GAS LAMPS ERECTED.

New gas lamps placed on posts for Special Assessment Department during the year 1896, and for which credit will be made to the Street Lamp Fund—	
City pattern lamp.....	1,210
Boulevard pattern lamp.....	292
Boulevard erected by order of Common Council in front of public buildings and churches	83
New and repaired City pattern gas lamps, placed on posts, to replace worn out ones	4,761
Boulevard, repaired and placed on posts	3,681
Gasoline lamps for repairs.....	425
Total	10,452

STREET SIGNS.

The total number of street signs made and placed in position, thirteen thousand two hundred and four (13,204) of various kinds, as follows :

Blue glass signs, City pattern lamps.....	11,370
Electric glass signs, 4x18.....	50
Miner glass signs, 3½ x11¼.....	893
Tin signs for wagons, Street Department.....	300
Wood signs for different City parks and streets.....	68
Sign frames.....	523
Total number of signs.....	13,204

LAMP POSTS ERECTED.

Posts erected, moved and placed to grade and proper location, and leaks repaired.	681
Posts straightened and fastened.....	2,190
Total.....	2,871

This Department has also taken care of and kept in repair and good condition 44,200 lamp services.

The above work has for years past been done by the different gas companies, and the result of this Department taking charge and doing the necessary repairs, is a saving of some thousands of dollars to the City.

The following is a statement which shows in detail the amount received and cost of work done, and total expenditure for the year, including the amount paid the different gas companies, pay roll, supplies, etc.

RECEIPTS.

Appropriation	\$ 40,000 00
Received from Special Assessment Department for work done	\$ 11,041 00
Collected from permits.....	218 50
Bills collected from various parties on account of damage done to lamps and posts by accident	924 55
Collected from sale of broken posts.....	37 25
	<hr/>
	12,221 30
Total receipts	\$52,221 30

I would further state that this Bureau has done \$1,100.00 worth of work for different City Departments for which returns have not yet been made.

EXPENDITURES.

Pay roll	\$ 30,640 60
Supplies	10,061 90

GAS COMPANIES.

People's Gas Light & Coke Co.....	\$ 5,983 71
Chicago Gas Light & Coke Co	2,750 16
Lake Gas Co.....	311 80
Hyde Park Gas Co.....	212 19
Suburban Gas Co.....	736 18
	<hr/>
	9,994 04

Grand total cost of material, labor of all kinds, used in the manufacture and repair of street lamps, posts, services, street signs, and other repair work inci- dental to gas or gasoline operations	<hr/>
	\$ 50,696 54
Leaving a credit to this Department of.....	<hr/>
	\$ 1,524 76

RAILROAD GATES AND FENCES.

The amount of work done up to date by the various railroad companies in compliance with the Council order of March 26, 1890, for the erection of gates, fences and lights for the greater safety of the public, is shown in the following table:

NAME.	Fences Constructed—Miles.					Total Miles.	Gates in Operation	Kind of Lights in Use.
	Wall.	Board.	Picket.	Metal.	Wire.			
Chicago & North-Western46	6.79	10.17	2.55	38.59	58.56	116	Gas.
Illinois Central.	11.34	.20	.15	.20	22.00	33.89	32	Electric.
Chicago, Rock Island & Pacific.	1.70	.11	4.59	4.78	11.18	29	Electric.
Chicago, Milwaukee & St. Paul.	13.69	13.69	63	Gas.
Chicago & Northern Pacific . . . . .	.34	....	2.75	6.50	9.59	29	Oil.
Pennsylvania Railroad Co.	1.60	8.58	....	.46	10.64	48	Electric.
Lake Shore & Michigan Southern	2.35	8.64	....	2.40	13.39	25	Electric.
Chicago, Burlington & Quincy	5.05	....	....	4.74	9.79	34	Gas and oil.
New York, Chicago & St. Louis. . . . .	....	4.18	..	6.77	10.95	..	Oil.
Baltimore & Ohio. . . . .	.60	....	....	5.91	6.51	7	Electric.
Pittsburg, Cincinnati & St. Louis.31	.16	3.01	.63	12.42	16.53	104	Oil and electric.
Atchison, Topeka & Santa Fe. . . . .	.49	....	....	5.78	6.27	23	Oil.
Chicago & Grand Trunk. . . . .	....	....	....	3.60	3.60	7	Oil.
Chicago & Western Indiana. . . . .	....	1.36	....	33.31	34.67	48	Electric.
Wabash . . . . .	....	....	....	7.50	7.50	..	.....
Chicago & Alton. . . . .	.11	..	.08	3.48	3.67	54	Oil and gas.
Union Stock Yards & Transit Co. . . . .	....	....	....	....	....	15	Electric.
Totals	16.27	3.98	32.12	6.13	171.93	250.43	634	

STREET RAILWAYS.

Street railway extensions were made by the different companies as follows :

CALUMET ELECTRIC STREET RAILWAY COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Avenue L.....	Ninety-eighth.....	108th	6,500	Electric.
Avenue N.....	Ninety-fifth	Ninety-eighth.....	2,000	"
Bond avenue.....	Cheltenham place	Eighty-third	8,300	"
Cheltenham place	Lake avenue	Bond avenue	500	"
Eighty-third	Bond avenue.....	I. C. R. R.	900	"
Ninety-first	Mackinaw avenue	Erie avenue	1,600	"
Ninety-eighth	Avenue N.....	Avenue L.....	700	"
108th	Avenue L.....	State line.....	4,000	"
Railroad avenue.....	Seventy-third	Seventy-eighth.....	4,000	"
Seventy-eighth	Railroad avenue.....	Lake avenue.....	1,500	"
Seventy-third	Stony Island ave	Railroad avenue.....	6,000	"
Sixty-sixth	South Park avenue.....	St. Lawrence ave.....	1,300	"
St. Lawrence avenue.....	Sixty-sixth	Seventy-fifth.....	6,000	"
South Park avenue.....	Sixty-third	Sixty-seventh	2,600	"
Total			40,900	7.75 miles.

CHICAGO CITY RAILWAY COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Archer avenue	Thirty-eighth	Kedzie avenue	11,880	Electric.
Centre avenue.....	Sixty-third	Forty-seventh.....	21,120	"
Fifty-ninth	State.....	Leavitt.	29,040	"
Forty-seventh	Western avenue	Kedzie avenue	10,560	"
Halsted	Sixty-ninth	Seventy-ninth	18,200	"
Kedzie avenue	Thirty-eighth	Sixty-third	83,000	"
Sixty-ninth	Leavitt.....	Western avenue.....	8,620	"
Total			121,420	28 miles.

CHICAGO ELECTRIC TRANSIT COMPANY.

STREET	FROM	TO	Lineal feet	POWER
California avenue.....	Belmont avenue.....	Roscoe boulevard..	1,329	Electric.
Irving Park boulevard..	Evanston avenue ..	Milwaukee avenue..	26,133	"
Total			27,462	5.2 miles.

CHICAGO GENERAL RAILWAY COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Lawndale avenue.....	Twenty-eighth	Thirty-fifth	4,200	Electric.
Twenty-second	Lawndale avenue..	Ogden avenue	4,200	"
Twenty-fifth	Homan avenue....	Kedzie avenue	1,850	"
Total			6,950	1.31 miles.

ENGLEWOOD & CHICAGO ELECTRIC RAILWAY COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Eighty-first	Vincennes road ...	Halsted	2,380	Electric.
Halsted	Eighty first	Summit avenue ...	2,420	"
Seventy-first	South Chicago ave.	State	2,580	"
Seventy-ninth	State	Vincennes road ...	2,640	"
Sixty-seventh	Vernon avenue	Vincennes avenue .	320	"
South Chicago avenue .	Vincennes avenue .	Seventy-first	2,740	"
State	Seventy-first	Seventy-ninth	5,280	"
Summit avenue	Halsted	Vincennes road	1,040	"
Vernon avenue	Sixty-third	Sixty-seventh	2,640	"
Vincennes avenue	Sixty-seventh	South Chicago ave..	660	"
Vincennes road	Seventy-ninth	Eighty-first	1,850	"
Vincennes road	Summit avenue ...	107th	18,990	"
Total			40,740	7.71 miles.

OGDEN STREET RAILWAY COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Fortieth avenue	Madison	Twelfth	5,510	Electric.
Fortieth avenue	Twelfth	Ogden avenue	5,890	"
Total			10,900	2.06 miles.

METROPOLITAN WEST SIDE ELEVATED RAILROAD COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Branch .....	.....	.....	.....	.....
Douglas Park	Paulina	Western avenue ...	12,670	Electric.
Total			12,670	2.4 miles.

SOUTH CHICAGO CITY RAILWAY COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Sixty-fourth.....	Stony Island ave ..	Madison avenue...	1,820	Electric.
Madison avenue.....	Sixty-fourth	Sixty-third	660	"
Total.....			1,980	.87 mile.

UNION LOOP COMPANY.

STREET	FROM	TO	Lineal feet	POWER
Fifth avenue	Lake.....	Van Buren	8,400	Electric.
Van Buren.....	Fifth avenue.....	Wabash avenue ...	2,100	"
Wabash avenue.....	Van Buren.....	Lake.....	3,400	"
Total.....			8,900	1.7 miles.

**NUMBER OF MILES OF STREETS OCCUPIED BY HORSE, CABLE,
ELECTRIC AND ELEVATED RAILWAYS IN SERVICE
DECEMBER 31, 1896.**

CORPORATIONS.	Cable.	Horse.	Electric.	Elevated.		Total.
				Steam.	Electric	
Calumet Electric Street Railway Co.			85.45			85.45
Chicago City Railway Co.	17.72	4.70	77.75			100.17
Chicago Electric Transit Co.			14.88			14.88
Chicago General Railway Co.			9.92			9.92
Chicago & Jefferson Urban Transit Co.			2.85			2.85
Chicago North Shore Street Railway Co.			8.00			8.00
Cicero & Proviso Street Railway Co.				8.21		8.21
Chicago & S. S. Rapid Transit Co.			8.5			8.5
Englewood & Chicago Elec. St. Ry. Co.			7.71			7.71
† General Electric Railway Co.						
Lake Street Elevated Railroad Co.				6.75		6.75
Metropolitan West Side Elevated R. R.					18.6	18.6
North Chicago Electric Railway Co.			6.75			6.75
North Chicago Street Railroad Co.	9.25	8.00	86.11			48.86
North Side Electric Street Railway Co.			2.84			2.84
* Northwestern Elevated Railroad Co.						
Ogden Street Railway Co.			8.06			8.06
South Chicago City Railway Co.			17.82			17.82
Union Elevated Railroad Co.					1.7	1.7
West Chicago Street Railroad Co.	14.98	1.50	79.69			96.17
Totals.	41.95	9.20	310.28	14.96	15.3	391.69

* In course of construction. † Incorporated.

For the uniform courtesy extended to me by your Department and other City officials with whom my duties brought me in contact, I feel profoundly grateful.

The loyal support of my assistants, and the cheerful obedience of the subordinates in the several departments of this Bureau, made it possible for me to carry out your instructions and thereby render acceptable service to the public.

Respectfully submitted,

R. J. MACDONALD,

Superintendent of Streets.

REPORT OF THE
BUREAU OF
Street and Alley Cleaning
CITY OF CHICAGO

BUREAU OF

STREET AND ALLEY CLEANING

HON. JOSEPH DOWNEY,
Commissioner of Public Works :

DEAR SIR: In presenting the annual report of this Bureau for the year 1896, I respectfully refer you to the following statement of receipts and expenditures, which indicates a judicious and economical distribution of the funds appropriated, and with an efficient and energetic corps of assistants I have been able to accomplish the best possible results in all branches of the public service coming under the jurisdiction of this Bureau.

FINANCIAL.

Appropriation	\$ 651,000 00
Sundries, receipts from dump, etc.....	21,420 05
Total amount to defray expenses	<u>\$ 672,420 05</u>

EXPENDITURES.

Garbage account.....	\$ 312,573 08
Street cleaning account.....	268,636 74
Ward foremen account.....	33,972 57
Office salaries account	9,499 14
Removal of dead animals.....	37,500 00
Balance turned over to general fund.....	10,238 52
	<u>\$ 672,420 05</u>

During the year 2,448.58 lineal miles of streets were cleaned at an expense of \$8.40 per mile—10,837.23 lineal miles of streets were cleaned at \$12.50 per mile—2,360.83 lineal miles of streets were cleaned at \$2.50 (work done in day time in the First district); 209.35 lineal miles of alleys at \$6.80 per mile (First district), 312.73 lineal miles of bridges, viaducts and approaches at \$8.40 per lineal mile, making a total of \$165,976.03.

Since November 12, 1896, 1,107 lineal miles of streets were cleaned under this Bureau by the City by hand, cost of which amounted to \$12,047.25, or an average of \$10.88 per mile.

The unimproved alleys were cleaned during the year at a cost of \$10,051.89.

During the year 16,769 dead animals were removed from the City; of this number 5,753 were horses, 284 cows, 10,002 dogs and 730 cats.

To remove the garbage and ashes from thirty-four wards it took 83,806 teams, making 197,127 loads, amounting to 10,020,934 yards.

My experience in the management of the Street Cleaning Bureau has led me to investigate the merits of the various systems under which such work is performed, and I have reached the conclusion that the City is laboring under disadvantages and sustaining annually great financial loss in consequence of the law prohibiting the letting of City contracts for a term not exceeding one year. The work of sweeping and cleaning the streets and alleys of the City necessitates the expenditure of a large sum of money for the necessary machinery and outfit, and persons competing for such work must not only be in possession of sufficient resources to procure such plant, but must make their bid sufficiently high to cover a probable loss from the purchase of an outfit for doing such work which they may not be permitted to continue beyond one season; thus the same conditions prevail from year to year, the City losing annually.

To provide against such loss and place the City in a position to sweep and clean the streets and alleys in a satisfactory manner, at a minimum cost, I would suggest the propriety of the City owning the machinery and necessary apparatus required in the performance of such work. Such ownership would be valuable in preventing a possible combination to maintain excessive prices, and the City under an emergency would be in position to do the whole work with day labor, or if to be done under contract, the small amount of capital required under such conditions would admit of greater competition in securing such contract, and would further secure to the City a greatly improved service, with clean streets at a reduced cost.

Respectfully,

J. C. W. RHODE,

Superintendent.

REPORT OF THE
Bureau of Special Assessments
CITY OF CHICAGO

BUREAU OF SPECIAL ASSESSMENTS.

HON. JOSEPH DOWNEY,

Commissioner of Public Works.

DEAR SIR:—I submit herewith, in tabular form, a statement of special assessments made in this Department during the year 1896, with a summary of the estimated cost of the same ; also the amount of special assessments made each year during the past thirty-six years.

In submitting this report, I beg to hope that the new bill in regard to special assessments prepared by the Law Department, under the direction of the Mayor and City Council, may become a law, as it does away with the objectionable features of the present law.

Very truly yours,

H. J. JONES,

Sup't of Special Assessments.

WOODEN BLOCK PAVEMENT.

No. of War'nt	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21396	G. and P.	Elston avenue	North avenue	Armitage avenue	\$ 13,000 00
21427	C. F. and P.	Francisco	Van Buren	Harrison	4,682 84
21428	C. G. and P.	Indiana avenue	Fifty-first	Fifty-fifth	27,724 16
21429	C. G. and P.	Fifty-sixth	State	South Park avenue	18,463 88
21430	C. G. and P.	Sixty-ninth	Halsted	South Park avenue	39,819 57
21437	C. G. and P.	Blue Island avenue	Halsted	West Fifteenth place	35,688 94
21445	C. F. and P.	Cross	Lyman	Thirty-first	1,674 22
21472	C. F. and P.	Keeney avenue	North avenue	Humboldt avenue	28,392 70
21486	C. G. and P.	Elston avenue	Division	North avenue	16,392 43
21499	C. G. and P.	Elizabeth	West Lake	170 ft. north of Carroll avenue	8,999 07
21501	C. G. and P.	Clara place	System		88,245 04
21507	C. G. and P.	West Division	Milwaukee avenue	North branch of Chicago river	18,524 46
21521	C. F. and P.	Sixty-third	Centre avenue	Ashland avenue	20,067 17
21522	C. G. and P.	Forty-sixth	Halsted	Wabash Railroad	15,671 73
21528	C. G. and P.	Avers avenue	West Nineteenth	Ogden avenue	6,500 00
21524	C. F. and P.	West Twenty-third place	California avenue	Douglas Park boulevard	7,000 00
21526	C. G. and P.	Superior	North Clark	North State	4,813 28
21532	C. F. and P.	Lincoln	Asylum place	Webster avenue	8,752 55
21537	C. F. and P.	Spaulding avenue	Ogden avenue	Douglas boulevard	14,708 25
21540	C. G. and P.	Birch	Robey	Kendall	3,980 31
21545	C. G. and P.	Eugenie	North Clark	Sedgwick	9,519 40
21548	C. G. and P.	Erie	Wells	North branch of Chicago river	12,888 91
21569	C. G. and P.	Halsted	Archer avenue	165 ft. south of Twenty-fifth pl.	1,989 50
21594	C. F. and P.	Congress Park	Van Buren	Harrison	5,627 77
21595	C. F. and P.	West Forty-second	Lake	Twelfth	59,081 77
21661	C. G. and P.	Erie	Wells	State	9,616 22
21664	C. G. and P.	Le Moyne	Leavitt	California avenue	20,000 00
21665	C. G. and P.	Washtenaw avenue	Jackson boulevard	Washington boulevard	11,122 50
21669	C. G. and P.	Clinton	Milwaukee avenue	881 feet north	2,584 55
21715	C. G. and P.	Thomas	Leavitt	Wood	14,500 00
21744	C. G. and P.	La Salle	Thirty-ninth	888 feet south	3,203 20
21754	C. F. and P.	West Twenty-third place	Hoey avenue	Oakley avenue	8,600 00
21773	C. G. and P.	North Fortieth avenue	Armitage avenue	North avenue	19,227 88
21776	C. F. and P.	Cornell	Ashland avenue	Milwaukee avenue	17,113 45
21777	C. G. and P.	Fifty-eighth	Wentworth avenue	Stewart avenue	7,916 65
21778	C. G. and P.	Morgan street system	Sixty-fifth	Sixty-ninth	66,461 34

21779	C. G. and P.	Robey	Forty-seventh.	Fifty-second	27,000 00
21780	C. G. and P.	Forty-seventh.	Paulina	Western avenue	26,000 00
21781	C. G. and P.	Lincoln	Forty-seventh.	Fifty-first.	21,064 23
21783	C. G. and P.	North avenue	North branch of Chicago river.	Ashland avenue	10,000 00
21784	C. G. and P.	West Polk	Ogden avenue	Washington boulevard	11,698 80
21786	C. G. and P.	Sheldon	Madison	Washington boulevard	2,890 31
21802	G. and P.	State	Thirty-ninth	Fortieth	2,156 85
21803	C. G. and P.	Hermitage avenue	Addison	Lincoln avenue	8,464 11
21805	C. F. and P.	Francisco	Twelfth	Lexington	12,801 04
21806	C. F. and P.	Berlin	System		40,000 00
21867	C. F. and P.	Curtis	Fulton	Carroll avenue	1,686 70
21878	C. G. and P.	Cornelia	Ashland avenue	Milwaukee avenue	12,000 00
21908	C. F. and P.	Thirty-seventh place.	Halsted	Morgan	9,708 10
21918	C. F. and P.	Thirty-fifth court	Halsted	Morgan	9,320 70
21973	C. F. and P.	Leavitt	West Chicago avenue	Division	20,160 86
22014	C. G. and P.	Iowa	Hoyle avenue	Leavitt	5,180 12
22130	C. F. and P.	Hamburg	Western avenue	Robey	17,841 00
22136	C. G. and P.	Cottage Grove avenue	South Chicago avenue	Seventy-fifth	14,640 46
22187	C. G. and P.	Thirty-third	Halsted	Morgan	4,998 00
22188	C. G. and P.	Phillips	Sangamon	Green	1,804 80
22181	Repaving	Canal	Adams	Van Buren	7,285 71
22183	C. F. and P.	Oak	Larrabee	Hawthorne avenue	4,067 24
22191	C. G. and P.	Green	Carroll avenue	Lake	4,851 55
22205	C. and P.	Cornelia	Robey	Leavitt	9,809 08
22218	C. G. and P.	Twenty-fourth	State	Wabash avenue	2,450 00
22228	C. F. and P.	Sawyer avenue	Twenty-second	Twentieth	17,000 00
22238	C. F. and P.	Spaulding avenue	Van Buren	Congress	1,870 85
22293	C. F. and P.	Twelfth	Forty-fourth avenue	Forty-sixth avenue	9,000 00
22294	C. G. and P.	Marshfield avenue	Sixty-third	Sixty-fifth	9,500 00
22386	C. F. and P.	Cortez	Robey	Leavitt	10,000 00
Total					\$ 920,111 13

MACADAMIZED PAVEMENT.

No. of Ward	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21868	C. F. and M.	Atlantic	Thirty-ninth	Root	\$ 8,867 98
21864	C. G. and M. (A. & S. S.)	120th	Clinton	Halsted	2,021 88
21899	C. G. and M.	Madison avenue	Sixty-seventh	Seventy-fifth	87,380 19

MACADAMIZED PAVEMENT—CONTINUED.

No. of Warrant	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21405	C. G. and M.	Sixtieth	State	South Park avenue	\$ 14,896 84
21432	C. G. and M.	Fifty-eighth	Cottage Grove avenue	Ellis avenue	6,171 01
21433	C. G. and M.	Sheridan road	North Fifty-ninth	Bryn Mawr avenue	13,463 76
21561	C. G. and M.	North Forty-second avenue	Berteaue avenue	Grace	12,256 58
21570	C. G. and M.	Catalpa place	Humboldt boulevard	Edgewood avenue	10,500 00
21693	C. G. and M.	Sixtieth place	Halsted	Union avenue, etc.	12,500 00
21734	C. G. and M.	Elm	State	Lake Shore drive	7,091 78
21768	C. G. and M.	Pine	Chicago avenue	Indiana	10,525 12
21774	C. G. and M.	Seventieth	Stony Island avenue	Cregier avenue	3,567 45
21787	C. G. and M.	Champlain avenue	Sixty-third	Sixty-seventh	16,999 92
21804	C. F. and M.	Rice	Washienaw avenue	Rockwell	4,500 00
21828	C. F. and M.	Irving Park boulevard	North Forty-eighth avenue	Robey	121,277 82
21836	C. G. and M.	South Normal Park way	Wright	C., R. I. & P. Ry.	5,841 09
21846	C. F. and M.	Cornelia	Washienaw avenue	Rockwell	4,500 00
21877	G. and M.	Vernon avenue	Thirty-first	Thirty-third	4,813 92
21880	C. G. and M.	Fiftieth	Grand boulevard	Cottage Grove avenue	10,186 36
21883	C. F. and M.	Hamlin avenue	Chicago avenue	North avenue	34,954 12
21905	C. F. and M.	Avers avenue	Grand avenue	West North avenue	12,270 04
21974	C. G. and M.	Superior	Rush	450 feet east of St. Clair	7,180 00
21991	C. F. and M.	Argyle	Clark	Evanston avenue	9,850 00
22148	C. G. and M.	Pine	Indiana	Illinois	2,108 00
22149	C. F. and M.	South Hamilton avenue	Archer avenue	Thirty-seventh	5,008 31
22189	C. G. and M.	Craft	Aldine avenue	Belmont avenue	1,586 38
22190	C. G. and M.	Sherwin avenue	C., E. & L. S. R. R.	1,900 feet east	6,400 00
22295	C. G. and M.	Kimball avenue	Diversey	Wrightwood avenue	4,264 00
22344	C. G. and M.	System of streets	St. Lawrence avenue, etc., etc.		148,000 00
	Total				\$ 537,717 28

VITRIFIED BRICK PAVEMENT.

No. of Ward's	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21353	C. G. and P.	Groveland avenue.	Twenty-ninth.	Thirty-third	\$ 28,480 45
21414	C. G. and P.	Vernon avenue.	System.	Seventy-fifth.	42,000 00
21508	C. F. and P.	South Chicago avenue.	South Park avenue	Chicago avenue.	93,006 09
21588	C. G. and P.	Carpenter	Honore		7,488 08
21544	G. and P.	Wisconsin	North Clark	Sedgwick	4,814 08
21694	C. G. and P.	Franklin	Van Buren	Charles place	5,436 50
21769	C. G. and P.	Paulina	Lincoln avenue	Cornelia	5,443 07
23183	C. G. and P.	Ogden avenue	Warren avenue.	West Twelfth.	74,500 00
22184	C. G. and P.	Wentworth avenue	Fifty-fifth	Sixty-third	55,880 92
22206	G and P.	Bissell	Garfield avenue.	First alley S. of Webster ave.	8,718 45
	Total				\$ 819,099 57

SHEET ASPHALT PAVEMENT.

No. of Ward's	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21423	G. G. and P.	South Park avenue.	Twenty-fourth.	Thirty-fifth.	\$ 82,913 10
21481	P.	Prairie avenue	Twenty-second	Twenty-fifth	21,034 82
21439	C. G. and P.	Elizabeth	West Randolph	West Lake	8,516 10
21494	C. G. and P.	West Madison	Centre avenue	Paulina	37,213 61
21498	C. F. and P.	St. Louis avenue.	Madison	Colorado avenue	17,032 00
21525	C. G. and P.	Ellis avenue	Forty-first	Forty-third	11,000 00
21597	C. F. and P.	Turner avenue	West Twelfth.	Douglas Park boulevard.	12,820 60
21600	C. F. and P.	Evans avenue.	Sixty-third	Sixty-seventh	26,919 10
21611	C. F. and P.	Humboldt	Cornelia	Division.	16,500 00
21656	G. and P.	Dearborn avenue.	Chicago avenue	Barton place.	10,613 90
21729	C. F. and P.	Addison avenue.	System.	Forty-sixth avenue	86,327 30
21735	C. F. and P.	Park avenue.	Fortieth avenue	West Van Buren	64,500 00
21764	C. G. and P.	Stanley terrace	Jackson boulevard	Ogden avenue	4,038 60
21823	G. and P.	Warren avenue	Leavitt.	98 feet east of Fall	15,703 00
21871	C. G. and P.	Warren avenue	Homan avenue.	Lake Shore drive.	50,000 00
21878	C. G. and P.	Division.	North Clark		16,000 00

SHEET ASPHALT PAVEMENT—CONTINUED.

No. of War't	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21876	C. G. and P.	West Madison	Canal	Jefferson	\$ 8,900 62
21886	C. F. and P.	South Park avenue	Sixty-seventh	Seventy-first	23,639 64
21983	F. and P.	Milwaukee avenue	Ashland avenue	North avenue	33,948 70
22137	C. G. and P.	West Madison	Paulina	Western avenue	47,736 64
22343	C. G. and P.	System of streets, Cottage Grove	avenue, Thirty-ninth, etc.		46,861 45
	Total				\$ 577,946 08

GRANITE BLOCK PAVEMENT.

No. of War't	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21894	C. G. and P.	Rush	Ohio	Chicago river	\$ 16,898 15
21409	G. and P.	Jefferson	Van Buren	Harrison	11,682 41
21436	C. G. and P.	River	Michigan avenue	250 feet east	3,273 11
21555	C. G. and P.	West Madison	Canal	South branch Chicago river	3,958 03
21682	G. and P.	Washington	Canal	West Water	2,617 35
21663	C. G. and P.	Fulton	Desplaines	Canal	13,404 13
21785	C. G. and P.	West Washington	Desplaines	Canal	13,458 48
21887	C. G. and P.	Michigan	Clark	Wells	12,502 57
21895	G. and P.	Pacific avenue	Harrison	Polk	12,744 70
	Total				\$ 90,528 93

ALLEYS—WOODEN BLOCK PAVEMENT.

No. of War't	IMPROVEMENT	FROM	BETWEEN	AMOUNT
21401	C. G. and P.	Flournoy to Lexington	Springfield avenue and Douglas Park boulevard	\$ 1,793 65
21596	C. F. and P.	Kedzie avenue to Homan avenue	Congress and Harrison	2,961 87
21601	C. F. and P.	Desplaines to Jefferson	Adams and Jackson	1,586 83
21683	C. G. and P.	Forty-second to Forty-third	Wabash and Michigan avenues	1,584 90

21668	C. G. and P.	Central Park avenue to St. Louis avenue.....	Adams and Jackson boulevard.....	1,598 13
21674	C. F. and P.	Albany avenue to Troy	Colorado avenue and Jackson boulevard.....	1,681 00
21686	C. G. and P.	Wells to Franklin	Ohio and Indiana	1,140 15
21741	C. F. and P.	Forty-fifth to Forty-fifth place	Halsted and Emerald avenue	903 25
21755	C. G. and P.	Vernon to Rhodes avenues	Fifth south of Thirty-fifth.....	500 00
21775	C. G. and P.	Forty-second place to Forty-third	Vincennes avenue and Grand boulevard	2,281 23
21800	C. F. and P.	Congress to Harrison	First west of Sacramento avenue	864 40
21851	G and P.	Aldine square south to E. & W. alley	Vincennes and Stanton avenues	800 00
21852	C. G. and P.	Forty-fourth to Forty-fifth.....	Lowe avenue and Wallace	1,828 46
21856	C. G. and P.	Ashland avenue to Laflin.....	Edgemont avenue and Twelfth.....	1,788 80
21860	C. F. and P.	Union to Wallace	Forty-third and Forty-fourth.....	948 18
21864	C. G. and P.	Washenaw avenue to California avenue	Adams and Jackson boulevard.....	1,465 08
21872	G. and P.	Fortieth to Forty-first.....	Vincennes and Langley avenues.....	8,713 19
22078	C. G. and P.	Thirty-ninth to Fortieth	Dearborn and State	1,629 76
22129	C. G. and P.	Green to Randolph	Halsted and Washington	1,938 41
22204	C. and P.	Liberty to Jefferson	Fourteenth and Union.....	1,288 67
22207	C. G. and P.	Forty-fifth to Forty-fifth place.....	Vincennes avenue and Grand boulevard.....	1,938 61
22208	C. G. and P.	Twenty-ninth to Thirtieth	Canal and Butler	1,252 95
Total.....				\$ 34,108 86

ALLEYS—VITRIFIED BRICK PAVEMENT.

No. of War'nt	IMPROVEMENT	FROM	BETWEEN	AMOUNT
21517	C. G. and P.	Clark to Dearborn.....	Monroe and Adams	\$ 1,406 16
21820	C. F. and P.	Kedzie avenue to alley west.....	Warren avenue and Washington boulevard	4,772 68
Total.....				\$ 6,178 84

ALLEYS—ASPHALT PAVEMENT.

No. of War'nt	IMPROVEMENT	FROM	BETWEEN	AMOUNT
21909	C. G. and P.	Polk to 400 feet south	Clark and Pacific avenue	\$ 1,408 75
Total.....				\$ 1,408 75

ALLEYS—GRANITE BLOCK PAVEMENT.

No. of War'nt	IMPROVEMENT	FROM	BETWEEN	AMOUNT
21408	C. G. and P.	Michigan avenue to 125 feet east	South Water and River.	\$ 961 90
	Total			\$ 961 90

OPENING AND WIDENING STREETS AND ALLEYS.

No. of War'nt	IMPROVEMENT	NAME OF STREET	FROM	TO	AMOUNT
21413	Opening	Polk	Central Park avenue	Garfield boulevard	\$ 8,408 50
21431	Widening	South Park avenue	Sixtieth	Sixty-first	2,113 00
21434	Opening	Forquer	Central Park avenue	Garfield boulevard	8,579 50
21435	Opening	Lexington avenue	Central Park avenue	Garfield boulevard	7,829 00
21506	Opening	A	Lake	Park avenue	4,441 70
21770	Opening	Sixtieth	State	Wentworth avenue	52,758 83
21788	Opening	Alley between Archer avenue, Lyman, Elias ct. and Bonfield	Lyman, Elias ct. and Bonfield	Auburn	3,853 00
21886	Opening	Thirty first place	Laurel	Garfield boulevard	5,594 80
22113	Opening	Flournoy	Central Park avenue	Garfield boulevard	8,579 50
22845	Opening and Widening	State	Ninety-fifth	111th	31,167 27
	Total				\$ 192,819 60

WATER SUPPLY PIPES.

No. of War'nt	NAME OF STREET	FROM	TO	AMOUNT
21851	Forty-seventh	Kedzie avenue	Hamlin avenue	\$ 6,085 46
21896	North Forty-second avenue	West Chicago avenue	Augusta	2,263 10
21402	Crystal	North Fortieth avenue	North Forty second avenue	1,716 14
21407	North Forty-second court	West Chicago avenue	Iowa	908 44
21410	North Forty-fourth court	Courtland avenue	Armitage avenue	787 18
21411	Fifty-ninth	Cottage Grove avenue	I. C. R. R.	5,244 88

21412	North Forty-fifth avenue	Armitage avenue	Courtland avenue	808 56
21415	North Forty-fourth avenue	West Chicago avenue	Augusta	2,279 00
21416	West Chicago avenue	North Fortieth avenue	North Forty-fourth avenue	5,354 06
21417	Iowa	North Forty-second avenue	North Forty-fourth avenue	1,652 54
21418	North Forty-third avenue	West Chicago avenue	Augusta	1,949 34
21419	North Forty-third court	West Chicago avenue	Iowa	983 78
21420	Cornelia	North Forty-second avenue	North Forty-fourth avenue	1,719 33
21425	South Forty-first avenue	Harvard	Lexington	918 89
21446	West Van Buren	200 feet east of West Forty-third	West Forty-sixth place	3,820 66
21504	Lexington	Kedzie avenue	Central Park avenue	3,377 50
21508	Haddon avenue	Forty-second avenue	Forty-sixth avenue	3,738 62
21509	Augusta	North Forty-second	North Forty-sixth	4,110 68
21510	West Division	Fortieth avenue	Forty-sixth avenue	8,978 96
21511	Thomas	North Forty-second avenue	North Forty-sixth avenue	3,738 62
21512	Cortez	North Forty-second avenue	North Forty-sixth avenue	1,665 26
21513	North Forty-third avenue	West Division	Augusta	3,535 10
21514	Sheffield avenue	Bryn Mawr avenue	Foster avenue	14,601 18
21516	Elston avenue	Montrose boulevard	Forest Glen avenue	1,908 36
21520	North Forty-first avenue	Armitage avenue	Bloomingtondale road	738 64
21527	Butler	118th	118th	8,816 00
21528	Fullerton avenue	North Fifty-sixth avenue	North Sixtieth avenue	3,055 34
21641	Montrose avenue	Western avenue	North branch of Chicago river	362 51
21644	Sixty-ninth	South Park avenue	Calumet avenue	210 25
21645	Phillips	Green	Halsted	419 34
21672	Butler	100th	100th place	2,656 86
21678	North Fortieth court	Armitage avenue	Wabansia avenue	752 08
21677	North Fortieth court	Wabansia avenue	North avenue	1,837 44
21678	North Forty sixth court	Fullerton avenue	Humboldt avenue	603 71
21679	Lydia	Halsted	Union	738 64
21680	Dix	Front	Lessing	1,054 99
21681	North Forty-first court	Hirsch	North avenue	1,045 50
21683	Catalpa court	Humboldt boulevard	Fullerton avenue	1,759 98
21683	Carpenter	West Forty-eighth	West Fiftieth	1,786 76
21684	May	West Forty-eighth	West Fiftieth	1,821 00
21685	Aberdeen	West Forty-eighth	Ninety-third	854 82
21743	Elizabeth avenue	Ninety-second	Ninety-third	854 82
21743	Central avenue	Ninety-second	South Forty-first	897 66
21746	Harvard	South Fortieth avenue	300 feet south	519 25
21747	South Fortieth court	West Sixteenth	Woodlawn avenue	449 20
21765	Seventy-fourth	Lexington avenue	Forty-ninth avenue	1,447 20
21807	Chicago avenue	Forty-eighth avenue	Evansston avenue	969 43
21808	Crescent place	Halsted		

WATER SUPPLY PIPES—CONTINUED.

No. of Ward	NAME OF STREET	FROM	TO	AMOUNT
21809	Magnolia avenue	Devon avenue	Granville avenue	\$ 1,824 00
21811	Seventy-third	Woodlawn avenue	I. C. R.	890 50
21812	Seventy-third	South Chicago avenue	Greenwood avenue	796 32
21813	Twelfth	Forty-third court	Forty-fourth avenue	754 09
21814	Fillmore	Forty-fourth avenue	Forty-fifth court	1,608 00
21815	Gresham	Forty-fourth avenue	Forty-fifth court	1,608 00
21818	Winchester avenue	Eighty-seventh	Eighty-eighth	854 82
21823	Homan avenue	Central Park boulevard	Chicago avenue	8,004 56
21824	Avenue L	106th	110th	8,810 70
21833	Rockwell	West Twelfth	720 feet south	859 70
21834	Fifty-seventh	Indiana avenue	South Park avenue	1,664 20
21879	Throop	Garfield boulevard	Fifty-ninth	2,705 12
21883	North Forty-first court	Humboldt avenue	Dickens avenue	929 19
21898	North Fifty-first avenue	Bloomingtondale road	North avenue	1,875 14
21900	North Sawyer avenue	Fullerton avenue	Mentmore avenue	947 50
21921	Evanston avenue	Hood	Granville avenue	503 80
21923	Hood avenue	Southport avenue	Evanston avenue	1,987 20
21923	Colorado avenue	Forty-third avenue	110 ft. S. W. of Forty-sixth avenue	8,784 01
21924	North Forty-fifth court	West Berteau avenue	Irving Park avenue	1,812 69
21927	Sixty-ninth	Cottage Grove avenue	South Chicago avenue	1,697 80
21938	North Fifty-fourth avenue	Fullerton avenue	Wrightwood avenue	2,179 20
21939	100th place	125 feet east of State	Michigan avenue	1,042 49
21931	North Whipple	West George	Avondale avenue	1,673 68
21933	Eighty-seventh	Winchester avenue	Throop	4,861 07
21979	Ashland avenue	Sixty-fifth	Sixty-seventh	2,102 70
21980	North Forty-fourth avenue	Cortland avenue	60 ft. south of Bloomingtondale road	1,345 48
21981	Sacramento avenue	Humboldt boulevard	200 feet south	420 64
21982	West Division	North Homan avenue	Christiana avenue	655 31
21983	Wrightwood avenue	Logan square	Hamlin avenue	6,065 17
21984	Dickens avenue	North Hamlin avenue	Lawndale avenue	1,497 54
21985	Sunnyside avenue	Claremont avenue	Western avenue	449 21
21866	North Forty-seventh avenue	North avenue	180 feet north of Wabansia avenue	978 00
21987	Edgewater avenue	Southport avenue	Clark	1,589 22
21988	Bishop	West Sixty-sixth	West Sixty-seventh	980 87
21989	Justine	875 feet south of West Sixty-sixth	West Sixty-seventh	895 65
21990	Loomis	Sixty-fifth	Sixty-seventh	1,686 67

22026	North Spaulding avenue.....	Kinzie.....	Central Park boulevard.....	7609 80
22032	Bernard avenue.....	Elston avenue.....	Irving Park avenue.....	2,315 16
22075	South Forty-fourth court.....	West Fourteenth.....	West Fifteenth.....	786 26
22076	West Sixteenth.....	South Fortieth court.....	South Forty-second avenue.....	1,189 40
22077	South Forty-third avenue.....	West Fifteenth.....	West Sixteenth.....	753 06
22079	West Fullerton avenue.....	Monticello avenue.....	100 feet east of North Fortieth avenue.....	5,155 96
22080	Seventy-second place.....	Woodlawn avenue.....	I. C. R. R.....	418 25
22081	South Forty-second court.....	West Fifteenth.....	West Sixteenth.....	753 06
22103	North Fifty-third avenue.....	Fullerton avenue.....	Grand avenue.....	8,402 30
22104	North Forty-third court.....	South Forty-second avenue.....	250 feet west of S. Forty-second court.....	8,255 90
22105	Harvard.....	State.....	Perry avenue.....	1,881 60
22106	Seventy-first.....	North Forty-second avenue.....	North Forty-third avenue.....	1,234 02
22107	Crystal.....	Escanaba avenue.....	South Chicago avenue.....	929 80
22109	Ninety-first.....	Forty-first avenue.....	Forty-second avenue.....	572 81
22110	West Harrison.....	West Bloomingdale road.....	West Cortland.....	978 00
22122	North Lawndale avenue.....	West Belmont avenue.....	West Noble avenue.....	886 95
22125	North Central Park avenue.....	Twelfth.....	Fillmore.....	913 73
22133	Forty-fourth avenue.....	court (Washington heights).....		942 65
22346	System of streets, Tracy avenue and			26,000 00
	Total.....			\$ 225,969 43

WATER SERVICE PIPES.

No. of War'nt	NAME OF STREET	FROM	TO	AMOUNT
21424	Madison avenue.....	Sixty-seventh.....	Seventy-fifth.....	\$ 2,128 00
21451	Grace.....	Ashland avenue.....	Southport avenue.....	860 00
21452	Olga.....	Grace.....	Waveland avenue.....	577 50
21453	West Fortieth.....	North avenue.....	Armitage avenue.....	2,533 00
21500	Justine.....	Fifty-fifth.....	Sixty-third.....	4,911 75
21549	Fifty-fourth place.....	Union avenue.....	Wallace.....	558 00
21554	Elizabeth avenue.....	Kedzie avenue.....	Homan avenue.....	1,003 00
21564	Humboldt avenue.....	Cornelia.....	Division.....	682 50
21565	Turner avenue.....	Twelfth.....	Douglas Park boulevard.....	700 00
21566	May.....	Sixty-third.....	Sixty-seventh.....	1,826 00
21571	Avers avenue.....	North avenue.....	Grand avenue.....	1,896 00
21575	Seventy-second.....	Schell avenue.....	I. C. R. R.....	488 00
21576	Woodlawn avenue.....	Seventy-first.....	Seventy-fifth.....	919 00

WATER SERVICE PIPES—CONTINUED.

No. of War'nt	NAME OF STREET	FROM	TO	AMOUNT
21577	Schell avenue.....	Seventy-first.....	South Chicago avenue.....	\$ 712 50
21578	Carpenter.....	Sixty-third.....	Sixty-seventh.....	1,123 00
21579	Aberdeen.....	Sixty-third.....	Sixty-ninth.....	1,530 00
21580	Drexel avenue.....	Seventy first.....	South Chicago avenue.....	277 50
21581	Cornelia.....	Washenaw avenue.....	Rockwell.....	806 00
21589	Seminary avenue.....	Eddy avenue.....	Newport avenue.....	270 00
21609	Huron.....	Western avenue.....	Washenaw avenue.....	918 00
21610	Fletcher avenue.....	Perry.....	Racine avenue.....	490 00
21625	Wellington avenue.....	Lincoln.....	Perry.....	1,904 00
21626	Ninety-third.....	St. Lawrence avenue.....	Cottage Grove avenue.....	697 00
21627	Champlain avenue.....	Sixty-third.....	Cottage Grove avenue.....	1,411 00
21628	Fifty-sixth place.....	Stewart avenue.....	Wallace.....	185 00
21629	Ridge avenue.....	Grand avenue.....	Devon avenue.....	252 00
21630	West Twentieth place.....	Peoria.....	Sangamon.....	111 00
21631	Paulina.....	Graceland avenue.....	Berteau avenue.....	448 50
21658	Sheridan road.....	Bryn Mawr avenue.....	North Fifty-ninth.....	1,824 00
21660	Cornelia avenue.....	Willow avenue.....	Halsted.....	765 00
21756	Hermitage avenue.....	Forty-fifth.....	Forty-seventh.....	1,275 00
21757	Oakley avenue.....	Hamburg.....	Ems.....	455 00
21758	Lawndale avenue.....	Colorado avenue.....	Harrison.....	832 50
21759	West Eighteenth.....	Western avenue.....	California avenue.....	1,258 00
21760	Dobson avenue.....	Seventy-first.....	Seventy-third.....	697 00
21761	McLean avenue.....	Kimball avenue.....	Hamlin avenue.....	1,326 00
21762	Stanley terrace.....	Jackson boulevard.....	West Van Buren.....	190 00
21789	Brooks avenue.....	Seventy-third.....	Seventy-fifth.....	1,295 00
21829	Seventy-second.....	St. Lawrence avenue.....	Cottage Grove avenue.....	111 00
21830	Langley avenue.....	Seventy-first.....	Seventy-fifth.....	1,870 00
21831	Evans avenue.....	Seventy-first.....	Seventy-fifth.....	1,751 00
21832	Champlain avenue.....	Seventy-third.....	Seventy-fifth.....	2,499 00
21881	Thirty-third.....	Halsted.....	Laurel.....	885 00
21913	Oakley avenue.....	Thirty-first.....	Thirty-fifth.....	1,275 00
21914	Pierce avenue.....	North Kedzie avenue.....	North Homan avenue.....	986 00
21919	Farragut avenue.....	East Ravenswood Park.....	Ashland avenue.....	1,172 50
21930	Thirty-fifth place.....	Halsted.....	Laurel.....	306 00
21950	West Forty-ninth place.....	Morgan.....	Halsted.....	1,007 00
21951	Oakley avenue.....	Ems.....	Fullerton avenue.....	846 00

21952	Phillips	Halsted	Sangamon	850 00
21953	Fiftieth place	Morgan	Halsted	646 00
21954	Stone avenue (Forty-seventh place)	Morgan	Centre avenue	627 00
21955	Seventy-first place	Woodlawn avenue	I. C. R.	551 00
21956	South Sawyer avenue	West Twenty-fourth	West Twenty-sixth	1,368 00
21957	Greenwood avenue	Seventy-first	Seventy-fifth	1,026 00
21958	Goodspeed	Forty-third	Forty-seventh	1,197 00
21959	Lexington	Seventy-first	Seventy-fourth	969 00
21960	Paulina	Forty-fifth	Forty-seventh	896 00
21961	Seventy-third	South Chicago avenue	I. C. R.	817 00
21962	Paulina	Forty-seventh	Fifty-first	760 00
21963	Leavitt	Chicago avenue	Division	2,603 00
21964	Cook	Forty seventh	Forty-ninth	235 50
21965	Sixty-ninth	Calumet avenue	South Park avenue	280 00
21966	LeMoynes	Kedzie avenue	Homan avenue	912 00
21967	Whipple	Elston avenue	Belmont avenue	817 00
21968	Burnett	Robey	Leavitt	817 00
21969	Cornelia	Robey	Leavitt	1,007 00
21970	Iowa	Hoynes avenue	Leavitt	570 00
22013	Weage avenue	North Kedzie avenue	North Homan avenue	1,235 00
22037	Bishop	Sixty-third	Sixty-fifth	1,140 00
22067	Superior avenue	Ninety-second	Ninety-third	246 00
22068	Lafin	Sixty-third	Sixty-fifth	855 00
22069	Justine	Sixty-third	Sixty-fifth	988 00
22070	Argyle	Clark	Evansston avenue	1,729 00
22071	Sixty-third	Centre avenue	Ashland avenue	8,281 25
22181	Beach avenue	North Kedzie avenue	North Homan avenue	1,312 50
22198	Peoria	Sixty-sixth	Sixty-seventh	331 50
22194	Bishop	Sixty-fifth	Sixty-seventh	1,254 00
22195	Loomis	Sixty-third	Sixty-fifth	1,482 00
22253	Marshfield avenue	Sixty-third	Sixty-fifth	624 00
22254	Union avenue	118th	Sixty-fifth	390 00
22255	Sixty-seventh	Halsted	Morgan	235 50
22256	Sheridan avenue	Grand avenue	North avenue	1,468 00
22289	Sangamon	Sixty-sixth	Sixty-seventh	205 00
22842	Diversey avenue	Milwaukee avenue	Crawford avenue	2,788 00
Total				\$ 86,507 50

SEWERS.

No. of Ward	NAME OF STREET	FROM	TO	AMOUNT
21400	Lexington	Kedzie avenue.	Central Park avenue.	\$ 4,091 55
21406	West Chicago avenue	System	.....	89,267 10
21493	North Fifty-fifth avenue	Irving Park avenue.	Byron.	1,037 42
21495	South Normal Parkway	Butler	C., R. I. & P. Ry.	1,852 72
21515	Sheridan road	Foster avenue	Bryn Mawr avenue.	3,106 04
21543	Eighty-eighth	Halsted.	Beverly avenue.	31,655 10
21546	Evars avenue	Fifty-first	Grand Trunk Ry.	1,811 51
21562	Ninety-ninth	Avenue K.	Avenue L, etc.	2,286 18
21563	Avenue L	P., Ft. W. & C. Ry	102nd.	2,614 15
21598	Forty-fifth	System	.....	542,151 53
21602	Hirsch.	Spaulding avenue.	Homan avenue	998 45
21603	Loomis	West Fifty-ninth.	270 feet north	393 30
21604	Bishop.	West Fifty-ninth.	260 feet north	394 90
21605	Lafin	West Fifty-ninth.	260 feet north	398 55
21608	Ridge avenue	Thome avenue.	Pratt avenue.	6,473 24
21615	West Fifty-seventh (Justine) system	Lafin (Bishop)	Loomis	15,648 29
21621	West Huron	St. Louis avenue.	Drake avenue.	366 00
21635	Marshfield avenue	Diversey avenue	Wrightwood avenue.	425 06
21636	Elizabeth	West Fifty-ninth	277 feet north	418 51
21637	Ada	West Fifty-ninth	270 feet north	354 45
21640	Wellington.	Albany avenue	Humboldt avenue.	1,092 00
21642	Follansbee	Humboldt boulevard	Sacramento avenue	1,450 50
21643	Whipple	Avondale avenue	Wellington	1,050 77
21649	Moffatt	Albany avenue.	230 feet west	848 15
21650	Homer	Albany avenue	230 feet west	860 23
21651	Justine	West Fifty-ninth.	260 feet north	398 55
21652	Ada	Garfield boulevard	Englewood Connecting R. R.	2,535 23
21653	Boulevard way	West Twenty-fifth	Douglas Park boulevard	1,845 48
21654	Monticello avenue	North avenue	Hirsch.	1,113 84
21670	Catalpa court.	Fullerton avenue	Humboldt Park boulevard	2,187 49
21780	North Forty-first avenue	Montrose avenue.	Berteau avenue	3,137 90
21731	North Forty-second court	Linden avenue	Berteau avenue	2,609 18
21732	North Forty-second avenue	Linden avenue	Berteau avenue	3,263 70
21736	Coles avenue	Seventy-third	Seventy-fifth	706 81
21745	Armour avenue	West Fifty-ninth.	522 feet north	866 00
21748	Leavitt	Archer avenue.	Thirty-fifth place	

21749	Hoyle avenue.	Thirty-fourth	Thirty-fifth.	1,070 16
21750	Berteau avenue	Robey	467 feet west	744 00
21751	Avenue M	Ninety-fifth	B. & O. R. R.	4,217 10
21752	Avenue M	100th	P., Ft. W. & C. Ry	868 15
21753	Phillips	Green	117 feet East	255 75
21767	West 117th system.	LaSalle	Perry avenue, etc.	2,898 10
21810	West 102nd	Prospect avenue	Wood	1,804 70
21817	Winchester avenue.	Eighty-seventh	Eighty-eighth	1,869 18
21819	Forty-third avenue.	Wilson avenue	Berteau avenue	4,800 85
21826	North Forty-first court	Montrose avenue	Berteau avenue	1,931 47
21827	Oakley avenue	Illinois and Michigan canal	Thirty-third, etc.	1,814 80
21835	Central Park avenue	Diversey	Wrightwood avenue	2,198 70
21845	West Sixty-first, etc.	Ashland avenue	Marshfield avenue	4,306 94
21853	Ridgeway avenue	Fullerton avenue	Wrightwood avenue	2,216 26
21854	Ballou	Diversey avenue	Wrightwood avenue	2,256 55
21855	Wrightwood avenue	Sawyer avenue	Hamlin avenue	4,425 61
21857	Leavitt	Sunnyside avenue.	Wilson avenue.	872 24
21858	West 118th	System		2,721 27
21859	Washtenaw avenue	West Twenty second	Boulevard way	6,110 74
21862	Douglas boulevard	Seventy-first	Seventy-third	2,580 24
21864	Seipp avenue.	Calumet river	P., Ft. W. & C. Ry	3,774 59
21864	103rd	North Fortieth avenue	North Forty-sixth avenue	14,521 70
21901	Fullerton avenue.	West Ninety-ninth	West 107th	12,089 53
21903	Prospect avenue	Alley south of Fifty-fifth	West 107th	11,816 08
21911	Throop	West Wilson avenue	Englewood Connecting R. R.	2,379 89
21915	North Forty-fourth avenue.	West North avenue	Avondale avenue, etc.	4,841 05
21985	Monticello avenue	West North avenue	Bloomington road	2,148 67
21988	Turner avenue.	West Twenty-sixth.	West Twenty-seventh	811 73
21971	Hancock avenue.	West Diversey	Alley N. of W. Wrightwood avenue.	1,837 47
21972	South Marshfield avenue	West Sixty-fourth	West Sixty-sixth	1,909 06
21975	Eberly avenue.	West Irving Park avenue	West Montrose avenue	4,103 40
21976	North Kimball avenue	West Irving Park avenue	West Montrose avenue	4,318 00
22004	North Bernard avenue.	West Irving Park avenue	West Montrose avenue	4,170 16
22031	North Forty-fifth court	West Irving Park avenue	Northern terminus	1,968 88
22066	Union avenue	West Seventy-third	478 feet south of Seventy-fourth	1,559 38
22082	West Forty-first	Butler	447 feet east.	807 00
22083	Elizabeth	Alley south of Fifty-fifth	Fifty-seventh	1,386 84
23146	Avenue M	102nd	104th	2,270 88
23147	Avenue L	102nd	399 feet south of 104th	2,223 78
22161	West Eighteenth place	South Wood	West 195 feet	297 49
22163	Princeton avenue	Alley south of 118th	119th	748 20
22163	Harvard avenue.	Alley south of 118th	119th	748 20

SEWERS—CONTINUED.

No. of Warr't	NAME OF STREET	FROM	TO	AMOUNT
22164	Dickens avenue.....	Kimball avenue.....	Ballou	\$ 1,119 67
22165	Stewart avenue.....	Alley south of 118th.....	119th.....	748 10
22166	Yale avenue.....	Alley south of 118th.....	119th.....	748 20
22167	Seventy-second.....	Ingleside avenue.....	Alley east of Ingleside avenue.....	177 00
22168	Western avenue.....	Winnemac avenue.....	Foster avenue.....	1,757 44
22169	Central Park avenue.....	Fullerton avenue.....	Alley south of Wrightwood avenue.....	1,738 51
22170	118th.....	Lowe avenue.....	Union avenue.....	363 90
22197	Butler.....	Alley south of 118th.....	118th.....	1,861 15
22257	Parnell avenue.....	Alley south of 118th.....	118th.....	1,861 15
22258	Eggleson avenue.....	Alley south of 118th.....	118th.....	1,861 15
22259	117th.....	Eggleson avenue.....	Wallace.....	1,168 40
22260	118th.....	Wentworth avenue.....	Wallace.....	4,107 56
22261	School.....	Humboldt.....	West 107 feet.....	188 55
22262	May.....	Sixty-ninth.....	Seventieth.....	983 35
22263	Ninety-first.....	Escanaba avenue.....	Muskegon avenue.....	414 80
22264	Loomis.....	Sixty-ninth.....	Seventieth.....	1,073 71
22265	Belden avenue.....	Kimball avenue.....	40 feet west of Spaulding avenue.....	578 63
22266	McLean avenue.....	Sawyer avenue.....	Alley west of Kedzie avenue.....	544 50
22267	Fifty-second place.....	Princeton avenue.....	275 feet west.....	389 07
22268	Sixty-second.....	May.....	Alley east.....	218 74
22269	Seventy-first.....	State.....	180 feet east of Vincennes road.....	905 29
22270	Ashland avenue.....	Sixty-third.....	Sixty-fifth.....	2,079 18
22271	Pensacola avenue.....	Western avenue.....	Campbell avenue.....	1,286 60
	Total.....			\$ 534,080 77

DRAINS.

No. of Warr't	NAME OF STREET	FROM	TO	AMOUNT
21869	Evergreen avenue.....	Kedzie avenue.....	Homan avenue.....	\$ 984 00
21870	Lawndale avenue.....	West Chicago avenue.....	West Division.....	1,898 00
21871	Beach avenue.....	Kedzie avenue.....	Homan avenue.....	948 00

31872	Olga	Grace	Waveland avenue	380 00
31873	Fiftieth place	Morgan	Union	781 00
31874	Hirsch	Kedzie avenue	Homan avenue	876 00
31875	Ward	Waveland avenue	Addison	389 00
31876	Evergreen avenue	Rockwell	California avenue	445 50
31877	Crystal	Kedzie avenue	Homan avenue	600 00
31878	Ashland avenue	Balmoral avenue	Winneconne avenue	1,452 00
31879	Cornelia	Rockwell	Washtenaw avenue	575 00
31880	Catalpa place	Humboldt boulevard	Edgewood avenue	808 00
31881	South Ada	Forty-seventh	Forty-ninth	822 00
31882	South Elizabeth	Forty-seventh	Forty-ninth	204 00
31883	West Superior	Washtenaw avenue	California avenue	462 50
31884	Cronwell	Milwaukee avenue	Fullerton avenue	406 00
31885	Spaulding avenue	Grand avenue	North avenue	1,332 00
31886	Lawndale avenue	West Kinzie	West Ohio	816 00
31887	Greenwood avenue	Seventy-first	Seventy-fifth	1,157 00
31888	Berlin	California avenue	Talman avenue	780 00
31889	Rhine	Milwaukee avenue	Talman avenue	650 00
31890	Lexington avenue	Seventy-first	Seventy-fourth	1,261 00
31891	Dobson avenue	Seventy-first	Seventy-third	741 00
31892	Spaulding avenue	Central Park boulevard	West Ohio	888 00
31893	West Ohio	Springfield avenue	North Fortieth avenue	208 00
31441	Jackson avenue	Seventy-second	Seventy-fifth	1,008 00
31442	Sixty-ninth	South Park avenue	Calumet avenue	185 00
31443	Seminary avenue	Newport avenue	Eddy	208 00
31444	Ninety-first	Exchange avenue	Commercial avenue	208 00
31454	Drexel avenue	Seventy-third	Seventy-fifth	840 00
31455	Ingleside avenue	Seventy-first	South Chicago avenue	499 50
31456	Ingleside avenue	Seventy-third	Seventy-fifth	758 00
31461	Humboldt	Division	Cornelia	564 00
31462	Humboldt	Chicago avenue	Cornelia	552 00
31463	Humboldt	Diversey avenue	C. & N.-W. Ry.	1,118 00
31464	Avers avenue	North avenue	Grand avenue	1,485 00
31465	Winchester avenue	Foster avenue	Winneconne avenue	702 00
31466	Robey	Foster avenue	Winneconne avenue	798 00
31467	Lincoln	Foster avenue	Winneconne avenue	676 00
31468	Thomas	Wood	Leavitt	572 00
31473	Sawyer avenue	C. & N.-W. Ry.	Chicago avenue	1,417 00
31474	Drexel avenue	Seventy-first	South Chicago avenue	312 00
31475	Langley avenue	Seventy-first	Seventy-fifth	1,416 00
31476	Seventy-fourth	St. Lawrence avenue	Ellis avenue	210 00
31477	Seventy-second	Ingleside avenue	I. C. R. R.	600 00

DRAINS—CONTINUED.

No. of Warr't	NAME OF STREET	FROM	TO	AMOUNT
21478	Evans avenue	Seventy-first	Seventy-fifth	\$ 1,044 00
21479	Seventy-third	South Chicago avenue	I. C. K. R.	480 00
21480	Ellis avenue	Seventy-first	Seventy-third	728 00
21481	St. Lawrence avenue	Seventy-third	Seventy-fifth	900 00
21482	Forty-eighth	Robey	Leavitt	624 00
21483	Seely avenue	Forty-seventh	Forty-ninth	1,020 00
21484	Sixty eighth	Halsted	Morgan	391 00
21485	Forty-seventh place	Morgan	Centre avenue	508 00
21486	Peoria	Sixty sixth	Sixty seventh	312 00
21487	Woodlawn avenue	Seventy-first	Seventy-fifth	1,176 00
21488	Seventy-first place	Woodlawn avenue	I. C. K. R.	387 50
21489	Sangamon	Sixty-sixth	Sixty-seventh	260 00
21490	Paulina	Forty-seventh	Forty-ninth	800 00
21491	Fiftieth	Morgan	Ashland avenue	216 00
21492	Morgan	Sixty-fifth	Sixty-ninth	1,480 00
21505	State	Seventy-first	Seventy-fifth	3,282 00
21529	Fifty-fourth place	Wallace	Union	312 50
21530	West Congress	Homan avenue	Central Park avenue	504 00
21531	Sixty-second	Madison avenue	I. C. K. R.	208 00
21534	Champaign avenue	Seventy-first	Seventy-fifth	1,920 00
21535	120th	Halsted	Butler	616 00
21539	Otto	Ashland avenue	C., E. & L. S. R.	418 50
21541	South Chicago avenue	South Park avenue	Seventy-fifth	2,641 25
21550	Fletcher	Racine avenue	Perry	445 50
21551	Washtenaw avenue	West Chicago avenue	Grand avenue	238 00
21552	West Twentieth place	Johnson	Sangamon	160 00
21556	Ladın	Forty-ninth	Fifty-first	287 50
21557	Ada	Fiftieth	Fifty-first	192 00
21558	Carmen avenue	Clark	Southport avenue	650 00
21559	Elizabeth	Fiftieth	Fifty-first	162 50
21560	Paulina	Berteau avenue	Irving Park boulevard	728 00
21567	Broom	Grand avenue	West Ohio	115 00
21568	Thirty-third	Halsted	Laurel	378 00
21572	Turner avenue	West Twelfth	Douglas Park boulevard	480 00
21573	Sixty-third	Centre avenue	Ashland avenue	2,014 50
21592	La Salle	Thirty-ninth	Fortieth	208 00

21693	Frankfort.....	Hoyle avenue.....	Leavitt.....	196 00
21698	Forty-eighth avenue.....	West Madison.....	West Chicago avenue.....	2,254 00
21694	McLean avenue.....	Kimball avenue.....	Hamlin avenue.....	1,573 00
21699	Sheridan road.....	Bryn Mawr avenue.....	North Fifty-ninth.....	1,056 00
21763	West Twenty-third place.....	California avenue.....	Douglas Park boulevard.....	162 00
21771	Diversey.....	Milwaukee avenue.....	Crawford avenue.....	2,960 00
21890	Drake avenue.....	Chicago avenue.....	Ohio.....	1,398 00
21906	Evansston avenue.....	Foster avenue.....	Montrose boulevard.....	8,052 50
21916	West Harrison.....	South Fortieth avenue.....	South Forty-sixth avenue.....	2,749 50
21917	South Oakley avenue.....	Thirty-fifth.....	Illinois and Michigan canal.....	1,236 00
21925	Pierce.....	North Kedzie avenue.....	North Homan avenue.....	880 00
21949	Seventy-first.....	State.....	Perry avenue.....	319 00
22203	Robey.....	Forty seventh.....	Fifty-second.....	2,021 00
22220	East side of Sheridan road.....	Foster avenue.....	Bryn Mawr avenue.....	1,152 00
22221	Rice.....	Washtenaw avenue.....	Rockwell.....	396 00
22251	Stanley terrace.....	Jackson boulevard.....	Van Buren.....	140 00
22253	Ada.....	Fifty-ninth.....	Sixtieth.....	163 03
22290	Aberdeen.....	Sixty-seventh.....	Sixty-ninth.....	888 00
22291	Carpenter.....	Sixty-seventh.....	Sixty-ninth.....	682 00
22302	Champlain avenue.....	Sixty-third.....	Sixty-ninth.....	2,468 25
	Total.....			\$ 84,154 58

CEMENT SIDEWALKS.

No. of Warrant	NAME OF STREET	FROM	TO	AMOUNT
21393	Lexington.....	Garfield boulevard.....	Crawford avenue.....	\$ 3,306 15
21404	Loomis.....	Van Buren.....	Harrison.....	731 90
21408	Throop.....	Madison.....	Harrison.....	4,230 40
21423	Congress.....	Robey.....	Ogden avenue.....	894 07
21543	Twenty-third.....	Wabash avenue.....	I. C. R. R.....	613 00
21553	Seventy-fifth.....	Railroad avenue.....	Bond avenue.....	346 80
21574	Adams avenue.....	Seventy-third.....	Seventy-fifth.....	804 70
21583	Emerald avenue.....	Forty-third.....	Forty-seventh.....	1,154 40
21589	Jefferson avenue.....	Seventy-first.....	Seventy-third.....	1,399 65
21612	Lafin.....	Madison.....	Monroe.....	944 50
21691	Champlain avenue.....	Fiftieth.....	Fiftieth place.....	717 60
21692	Irving Park avenue.....	Halsted.....	Lake Shore.....	1,657 50

CEMENT SIDEWALKS—CONTINUED.

No. of Ward	NAME OF STREET	FROM	TO	AMOUNT
21806	Jefferson avenue	Fifty-fifth	Fifty-seventh	\$ 700 93
21816	Forty-eighth	Prairie avenue	Indiana avenue	235 40
21888	Goethe	Astor	Lake Shore drive	462 60
21899	Sheffield avenue	Wellington	George	751 40
21907	Campbell avenue	Madison	Harrison	1,302 50
21913	Madison avenue	Seventy-third	Seventy-fifth	2,188 75
21948	Hawthorne place	Evanson avenue	Lake Shore drive	204 40
22005	Madison avenue	Seventy-first	Seventy-third	1,788 42
22030	Nutt (Kimbark) avenue	Seventy-first place	Seventy-third	185 00
22088	Champlain avenue	Forty-fifth	Forty-sixth	147 50
22053	Fiftieth	Michigan avenue	Grand boulevard	1,337 08
22063	Palmer	Sunnyside avenue	Wilson avenue	210 00
22064	Rossano	Sixty-sixth	Sixty-seventh	417 20
22084	Forty-second	Berkeley avenue	Ellis avenue	48 80
22120	Clement avenue	South Park avenue	Seventieth	2,980 46
22139	St. Lawrence avenue	Sixty-third	Sixty-seventh	1,267 85
22140	Vernon avenue	Sixty-ninth	Seventy-third	2,266 76
22278	Sawyer avenue	Twelfth	Fifteenth	1,467 89
	Total			\$ 34,808 48

PLANK SIDEWALKS.

No. of Ward	NAME OF STREET	FROM	TO	AMOUNT
21447	Western avenue	Fulton	Park avenue	\$ 283 53
21448	East Ravenswood Park	Cosgrove avenue	Graceland avenue	523 80
21471	Jackson	Forty-sixth	Forty-eighth	298 20
21497	Lake	Hamlin avenue	West Fortieth	969 91
21518	Seventy-first	Stony Island avenue	Cregier avenue	263 56
21586	Colfax avenue	Eighty-sixth	Eighty-seventh	480 00
21594	Kedzie avenue	Nineteenth	C. B. & Q. R. R.	168 00
21595	Argyle	Evanson avenue	Southport avenue	124 00

21586	Joseph.....	Kedzie avenue.....	Grant.....	669 57
21587	Spaulding avenue.....	Grant avenue.....	Thirty-ninth.....	124 80
21588	Smith.....	Grant avenue.....	Rockwell.....	181 65
21606	Commercial avenue.....	Seventy-ninth.....	Baltimore avenue.....	1,206 52
21607	Buffalo avenue.....	Eighty-fourth.....	Eighty-sixth.....	359 70
21620	Champlain avenue.....	Burnside avenue.....	Ninety-fifth.....	187 25
21666	California avenue.....	Madison.....	Twelfth.....	4,595 60
21671	Western avenue.....	Belmont avenue.....	Roscoe.....	86 90
21675	Charles.....	100th.....	108d.....	125 00
21676	Thirty-fourth place.....	Morgan.....	Ullman.....	464 10
21690	Cottage Grove avenue.....	Eighty-ninth.....	Ninety-first.....	422 94
21693	111th place.....	State.....	C. & E. I. R.....	204 93
21694	105th.....	Avenue N.....	Avenue L.....	152 04
21695	101st.....	Avenue L.....	Avenue N.....	206 22
21696	106th.....	Avenue K.....	Avenue O.....	442 52
21697	Elston avenue.....	North avenue.....	Armitage avenue.....	957 95
21699	110th.....	Michigan avenue.....	State.....	302 02
21700	Paulina.....	Byron.....	Webster avenue.....	958 65
21701	Parker avenue.....	Kimball avenue.....	Ballou.....	229 40
21702	Clinton.....	101st.....	108d.....	350 76
21703	Prospect avenue.....	Ninety-fifth.....	Ninety-seventh.....	152 45
21704	Seventy-seventh.....	Cottage Grove avenue.....	Greenwood avenue.....	550 20
21705	Central avenue.....	Eighty-second.....	Eighty-third.....	142 38
21706	Eighty-second.....	South Chicago avenue.....	Central avenue.....	812 80
21707	Lincoln avenue.....	Wellington.....	Belmont avenue.....	498 60
21708	Mentmore avenue.....	Ballou.....	Kimball avenue.....	148 68
21709	Jeffrey avenue.....	Jackson Park.....	Seventy-first.....	229 40
21710	Jefferson avenue.....	Franklin.....	Lawrence avenue.....	196 98
21711	Eightieth.....	Bond avenue.....	Arthur avenue.....	134 10
21712	Wabansia.....	Clybourn avenue.....	Chicago river.....	122 40
21713	Avenue L.....	Ninety-sixth.....	108th.....	677 16
21714	Centre.....	Park avenue.....	Greenwood avenue.....	213 36
21716	Thirty-third place.....	Halsted.....	Morgan.....	319 15
21717	Farrell.....	Archer avenue.....	Lyman.....	126 00
21718	Twelfth.....	Garfield boulevard.....	Kedzie.....	805 86
21719	Avenue N.....	100th.....	106th.....	362 34
21720	Jefferson avenue.....	Humboldt avenue.....	Belden avenue.....	200 76
21721	Balden avenue.....	Jefferson avenue.....	Forty-ninth avenue.....	240 54
21722	Costello avenue.....	Springfield avenue.....	North Fortieth avenue.....	32 34
21723	Adams.....	Jefferson avenue.....	Lombard.....	202 86
21724	Balden avenue.....	Forty-ninth court.....	Fifty-second avenue.....	542 52
21725	Huntingdon.....	C., M. & St. P. Ry.....	Jefferson avenue.....	180 00

PLANK SIDEWALKS—CONTINUED.

No. of Wor't	NAME OF STREET	FROM	TO	AMOUNT
21727	110th	Wentworth avenue	Stewart avenue	\$ 377 85
21728	Ninety-sixth	Avenue N	Avenue L	154 56
21766	De Kalb	Flournoy	Polk	209 50
21782	Byron	C. & E. R. R.	Sheffield avenue	168 90
21805	Champlain avenue	Archer avenue	Thirty-seventh	551 20
21838	Auburn avenue	Thirty-first	Thirty-third	207 60
21842	Cregier avenue	Sixty-ninth	Seventy-first	310 00
21843	Commercial avenue	Ninety eighth	102nd	447 81
21844	Colfax avenue	Eighty-eighth	Eighty-ninth	99 20
21847	Jackson avenue	Fifty-fifth	Fifty-sixth	108 80
21848	Jane	California avenue	Rockwell	178 95
21875	Kedzie avenue	Archer avenue	Forty-ninth	578 24
21891	Aberdeen	Forty-seventh	Sixty-third	1,628 43
21897	Sixty-first	Ellis avenue	Wharton avenue	280 00
21902	Ellis avenue	Eighty-first	Eighty-second	411 18
21934	Carondelet avenue	191st	Howard avenue	355 32
21936	Forty-ninth avenue	Iowa	Delaware	88 40
21937	Eighty-ninth	Superior avenue	The Strand	275 52
21939	Drexel avenue	Eighty-fourth	Eighty-seventh	318 50
21940	Bulwer	Nineteenth	C. R. I. & P. Ry	40 00
21941	Pennsylvania avenue	Bloomingtondale avenue	Armitage avenue	340 89
21942	Elizabeth avenue	Sixty second	Sixty-third	191 80
21943	Seventy-seventh	Bond avenue	Railroad avenue	294 00
21944	McAuley	Wabansia avenue	Corland	243 60
21945	Thirty-ninth	California avenue	321 feet west of Archer avenue	140 85
21946	Fifty-second avenue	Lake	Madison	284 24
21947	Twenty-seventh	Troy	Kedzie avenue	79 20
21977	Calumet avenue	Fifty-eighth	Sixty-first	201 68
21978	Morgan	Fifty-seventh	Sixty-third	1,126 02
22006	Avenue M	Ninety-sixth	106th	1,071 51
22007	Armour avenue	Thirty-fifth	Thirty-sixth	162 40
22008	Indiana avenue	110th	111th	109 30
22009	Christiana avenue	Grand avenue	Division	211 75
22010	Austin avenue	Campbell avenue	Oakley avenue	257 60
22011	Austin avenue	Diversey	Fullerton avenue	809 16
22016	Twenty-seventh	Whipple	Troy	828 40

220231	101st	Wood.....	Prospect avenue	140 00
220232	Edwards avenue.....	Seventy-ninth.....	Eightieth.....	225 40
220233	Green Bay avenue.....	Eighty-ninth.....	Ninety-first.....	222 25
220234	Wabansia avenue.....	McCauley avenue (Forty-first court).....	Forty-second (Keeney) avenue.....	116 00
220235	Hamlin avenue.....	Armitage avenue.....	Dickens avenue.....	159 60
220236	Ontario avenue.....	Ninetieth.....	South Chicago avenue.....	472 85
220237	Eric avenue.....	Ninety-second.....	South Chicago avenue.....	820 00
220238	Burnside avenue.....	Champlain avenue.....	Cottage Grove avenue.....	816 75
220239	Herdon.....	Clybourn avenue.....	Fullerton avenue.....	118 65
220240	Eighty-fifth.....	Mackinaw avenue.....	Ontario avenue.....	223 04
220241	Eighty-ninth place.....	Cottage Grove avenue.....	Dauphin avenue.....	163 80
220242	West Nineteenth.....	Albany avenue.....	California avenue.....	477 40
220243	Cossitt.....	Franklin.....	Washington.....	251 16
220244	Charlton.....	Thirty-third.....	Thirty-fourth.....	169 65
220245	Ohio.....	Kedzie avenue.....	West Fortieth.....	1,655 09
220246	Peck court.....	Western avenue.....	Elm.....	258 02
220247	Manistee avenue.....	Eighty-seventh.....	Ninetieth.....	645 48
220248	Ninety-eighth.....	Avenue L.....	Avenue J.....	164 00
220249	Seventy-sixth.....	Coles avenue.....	Railroad avenue.....	54 00
220250	Ninety-sixth.....	Ewing avenue.....	Avenue L.....	161 60
220251	101st.....	Avenue L.....	Indiana boulevard.....	239 07
220252	103rd.....	Seventy-ninth.....	Indiana boulevard.....	817 10
220253	Reynolds avenue.....	Leavitt.....	Railroad avenue.....	481 64
220254	Bremen.....	Prospect avenue.....	Western avenue.....	346 85
220255	105th.....	Cottage Grove avenue.....	Washington avenue.....	499 95
220256	Ninetieth.....	Escanaba avenue.....	Dauphin avenue.....	158 60
220257	Eighty-ninth.....	Lundy's Lane.....	Muskegon avenue.....	84 24
220258	Belmont avenue.....	Robey.....	Thirty-third.....	419 25
220259	Parnell avenue.....	100th.....	Lincoln avenue.....	123 06
220260	Rockwell.....	Huron.....	102nd.....	308 70
220261	St. Louis avenue.....	Sixteenth.....	Grand avenue.....	187 25
220262	Lincoln.....	Thirty-fourth.....	Ogden avenue.....	281 40
220263	Muskegon avenue.....	Eighty-seventh.....	Thirty-fifth.....	125 60
220264	Harbor avenue.....	Ninety-second.....	Eighty-ninth.....	619 20
220265	Hart (Campbell) avenue.....	Thirty-ninth.....	Superior avenue.....	71 20
220266	Poplar avenue.....	Twenty-ninth.....	Fortieth.....	125 20
220267	Vernon avenue.....	Grace.....	Thirty-first.....	172 90
220268	Grant avenue.....	Wabansia avenue.....	Douglas.....	181 04
220269	Norwood avenue.....	Western avenue.....	Armitage avenue.....	672 52
220270	Ninety-fifth.....	Morgan.....	Sheridan avenue.....	267 88
220271	101st place.....	Elizabeth.....	Logan avenue.....	137 70
220272			C., R. I. & P. Ry.....	111 88

PLANK SIDEWALKS—CONTINUED.

No. of Warrant	NAME OF STREET	FROM	TO	AMOUNT
22088	Thirty-fifth.....	Ullman.....	Laurel.....	\$ 204 24
22089	Thirty-third.....	Ashland avenue.....	Archer avenue.....	422 10
22090	Eighty-third.....	Illinois avenue.....	Bond avenue.....	456 00
22108	Webster avenue.....	Halsted.....	Lewis.....	120 00
22111	Thirty-seventh.....	Ashland avenue.....	Western terminus.....	840 56
22112	May.....	Thirty-first.....	Fifty-fourth.....	161 00
22114	Sacramento avenue.....	Irving Park avenue.....	Montrose avenue.....	148 16
22115	Grove.....	Sacramento avenue.....	Genesee.....	156 45
22116	Railroad avenue.....	Seventy-fourth.....	Seventy-ninth.....	1,181 72
22117	Seventy-sixth place.....	Coles avenue.....	Railroad avenue.....	196 70
22118	Robey.....	Addison avenue.....	Graceland avenue.....	77 70
22119	Thirty-first.....	Halsted.....	Morgan.....	226 95
22121	Prescott.....	Sacramento avenue.....	Genesee.....	405 28
22123	Florence avenue.....	Wood.....	Prospect avenue.....	274 40
22124	105th.....	Avenue J.....	Avenue L.....	81 06
22126	Kedzie avenue.....	Thirty-eighth.....	Illinois and Michigan canal.....	111 85
22145	Linden avenue.....	Sixty-seventh.....	Sixty-ninth.....	168 00
22171	St. Elmo.....	Lincoln avenue.....	Wood.....	68 80
22172	Page.....	Fifty-third.....	Fifty-fourth.....	425 49
22173	Fifty-eighth.....	Eberhardt avenue.....	Central Park avenue.....	200 00
12174	Railroad avenue.....	Montrose boulevard.....	Hunting avenue.....	109 50
22175	St. Louis avenue.....	Sixteenth.....	Douglas boulevard.....	488 58
22176	Western avenue.....	North avenue.....	Bloomingtondale road.....	191 45
22177	106th.....	Leavitt.....	Armada.....	136 80
22178	Wall.....	Thirty-first.....	James.....	194 70
22179	Spaulding avenue.....	Twelfth.....	Douglas boulevard.....	825 50
22180	Whipple.....	Twenty-sixth.....	220 feet north.....	88 40
22198	Ogden avenue.....	Trumbull avenue.....	Crawford avenue.....	1,063 59
22199	Indiana avenue.....	134th.....	Calumet river.....	176 80
22200	Bishop.....	Fiftieth.....	Fifty-first.....	144 90
22201	Sixty-fifth court.....	Wright.....	Honore.....	250 25
22202	135th.....	Eric avenue.....	Buffalo avenue.....	331 84
22209	Twenty-seventh.....	Bonney avenue.....	Hamlin avenue.....	102 50
22210	Houston avenue.....	180th.....	Howard avenue.....	1,069 28
22211	Manistee avenue.....	Eightieth.....	Eighty-first.....	183 65
22219	Fifty-ninth.....	State.....	Ashland avenue.....	8,769 13

22222	Wrightwood avenue.....	Logan square.....	Alley west of Sawyer avenue.....	246 40
22224	Twenty-sixth.....	Bonney avenue.....	Hamlin avenue.....	88 70
22229	Millard avenue.....	Twelfth.....	Douglas boulevard.....	888 80
22230	Division.....	Grand avenue.....	Crawford avenue.....	191 66
22231	Bonney avenue.....	Ogden avenue.....	Twenty-sixth.....	719 86
22232	Daley.....	Thirty-sixth.....	C. & A. R. R.....	91 59
22233	Atlantic.....	Forty-seventh.....	Fifty-fifth.....	986 47
22234	119th.....	Kedzie avenue.....	Douglas Park boulevard.....	810 40
22235	Fifty-third.....	Ashland avenue.....	Wood.....	276 80
22236	Sangamon.....	Fifty-ninth.....	Sixty-third.....	530 10
22237	Grand avenue.....	Reed.....	Oak Park avenue.....	118 85
22238	Armitage avenue.....	Howard avenue.....	Vanetta avenue.....	385 60
22239	Palmer avenue.....	California avenue.....	Humboldt boulevard.....	382 84
22240	Columbus avenue.....	Greenwood avenue.....	Division.....	664 70
22241	Tracy avenue.....	Forty-seventh.....	Fiftieth.....	564 90
22242	Turner avenue.....	Twelfth.....	Douglas boulevard.....	514 43
22243	Whipple.....	Diversey.....	Franklin.....	274 05
22244	Charles.....	100th place.....	108rd.....	840 84
22245	Ashland avenue.....	Archer avenue.....	Illinois and Michigan canal.....	973 80
22246	McAlpine.....	Thirty-third.....	Thirty-fifth.....	288 80
22247	Pennsylvania avenue.....	North avenue.....	Bloomington road.....	623 08
22248	Fox.....	Thirty first.....	Thirty-second place.....	218 00
22249	Seventy-fourth.....	Railroad avenue.....	Lake avenue.....	854 09
22250	May.....	Sixty-third.....	Sixty-seventh.....	906 87
22273	Lee avenue.....	California avenue.....	Kedzie avenue.....	175 60
22278	Elk Grove avenue.....	Armitage avenue.....	Hervey.....	194 95
22274	Thirty-first.....	Halsted.....	Laurel.....	354 80
22275	Lafin.....	Sixty-third.....	Sixty-fifth.....	502 18
22276	Armin avenue.....	Clark.....	East Ravenswood Park.....	306 72
22277	Bishop.....	Forty-seventh.....	Forty-eighth.....	97 65
22279	Sixty-first.....	Halsted.....	Ashland avenue.....	1,828 00
22280	Lawndale avenue.....	Ogden avenue.....	Twenty-ninth.....	1,149 05
22281	Halsted.....	Sixty-third.....	Sixty-ninth.....	1,197 20
22282	St. Louis avenue.....	Twenty-third.....	Twenty-seventh.....	1,806 20
22283	Leavitt.....	106th.....	107th.....	201 20
22284	Muskegon avenue.....	108rd.....	104th.....	277 40
22285	181st.....	Carondelet avenue.....	Ontario avenue.....	327 96
22286	182nd.....	Carondelet avenue.....	Superior avenue.....	404 95
22287	Ontario avenue.....	130th.....	Howard avenue.....	652 06
22287	Albany avenue.....	Twenty-first.....	Twenty-second.....	86 50
22288	Kedzie avenue.....	Belmont avenue.....	Milwaukee avenue.....	671 80
22290	Moore.....	Wood.....	Pan Handle Ry.....	736 20

PLANK SIDEWALKS—CONTINUED.

No. of Warrant	NAME OF STREET	FROM	TO	AMOUNT \$
22800	Greenwood avenue.	Montrose boulevard	Lawrence avenue	586 80
22801	Polk	Halsted	Alley east of Blue Island avenue.	119 00
22802	California avenue.	Thirty eighth	Thirty-ninth	110 70
22803	Rice place	Twenty-second	Moore	870 40
22804	Clark avenue.	Western avenue.	Milton	89 20
22805	Rebecca.	Rockwell	Pan Handle Ry.	144 50
22806	Carpenter.	Fifty fifth	Sixty-third	562 80
22807	St. Louis avenue.	C. & N. W. Ry	Chicago avenue.	888 00
22808	Homan avenue	Ogden avenue	Twenty-second	280 80
22809	Princeton avenue	Forty third place	Forty-fourth court	415 47
22810	Avenue L.	Ninety fifth	106th	411 25
22811	Lincoln	Thirty-fifth.	Thirty-eighth	822 65
22812	Hoyne avenue.	Montrose boulevard	Lawrence avenue	214 20
22813	Iowa	Fifty first	Fifty second.	272 52
22814	Troy	Huron	Chicago avenue.	208 95
22815	Ewing	Desplaines	Halsted	316 40
22816	Seventy ninth	Vincennes avenue	Wright	181 60
22817	Ninety fifth	Commercial avenue	South Chicago avenue.	141 25
22818	Ninety-sixth.	Commercial avenue	P., Ft. W. & C. Ry.	855 20
22819	Seventh avenue.	Ninety-seventh	Ninety-ninth	827 25
22820	Sanford.	Pacific avenue	City limits	90 90
22821	Ninety first	Green Bay avenue	Exchange avenue	855 50
22822	Longwood avenue.	Ninety-ninth	101st place.	451 15
22823	Delaware	Forty-eighth avenue	Fiftieth avenue	163 80
22824	Green Bay avenue.	133rd.	134th	172 00
22825	119th.	Peoria	Pan Handle Ry.	267 05
22826	Howard avenue	Carondelet avenue	136th.	704 20
22827	Seventy-second.	Cottage Grove avenue.	Evans avenue	66 15
22828	Springer avenue.	Laurel	Waterville	553 00
22829	The Strand	Eighty ninth	Harbor avenue	455 20
22830	133rd.	Carondelet avenue	P., Ft. W. & C. Ry.	553 00
22831	132nd	Ontario avenue	Buffalo avenue	178 60
22832	Superior avenue	133rd	136th.	318 60
22833	Buffalo avenue.	133rd	136th.	820 40
22834	Sixty-second	Wentworth avenue.	La Salle	213 80
22835	Eighty-seventh	Halsted.	C., R. I. & P. Ry.	71 75

228386	111th.....	State.....	C. & E. I. R. R.....	512 80
228387	Victoria avenue.....	Eighty first.....	South Chicago avenue.....	180 80
228388	Dauphin avenue.....	Ninetieth.....	Ninety-third.....	260 40
228389	Eighty-first place.....	Emerald avenue.....	C, R. I. & P. Ry.....	187 35
228390	Thirty-first.....	Archer avenue.....	C. & A. R. R.....	185 76
228391	Saginaw avenue.....	Eightieth.....	Eighty-first.....	187 60
Total.....				\$ 93,804 84

GAS LAMP POSTS.

No. of W'at	No. of Posts	NAME OF STREET	FROM	TO	AMOUNT
21854	6	North Irving avenue.....	School.....	Roscoe.....	\$ 189 00
21855	8	Herndon.....	Melrose.....	Roscoe.....	262 00
21856	13	Addison avenue.....	Lincoln avenue.....	North Robey.....	409 50
21857	{ 23 L. P. & 24 com.	North Albany avenue.....	Humboldt boulevard.....	Belmont avenue.....	1,119 50
21858	21	Park avenue.....	North Forty-fourth avenue.....	North Forty-sixth avenue.....	666 50
21859	7	Lexington.....	South Fortieth avenue.....	South Forty-first avenue.....	320 50
21860	5	Eightieth court.....	Houston avenue.....	Exchange avenue.....	157 50
21861	2	West Thirty-third place.....	Ashland avenue.....	200 feet west.....	68 00
21862	23	Escanaba avenue.....	Eighty seventh.....	Ninety-first.....	709 50
21865	25	South Fairfield avenue.....	West Sixteenth.....	West Twenty-second.....	762 50
21866	2	Armitage avenue.....	Elston avenue.....	Mendell.....	68 00
21867	2	North Carpenter.....	Milwaukee avenue.....	West Chicago avenue.....	68 00
21868	15	Cornelia.....	North Rockwell.....	Western avenue.....	472 50
21869	23	Bloom.....	Thirty-fifth.....	Thirty eighth.....	657 70
21898	23	Lincoln.....	Thirty-fifth.....	Thirty-eighth.....	657 70
21438	13	Sixty-second.....	Greenwood avenue.....	Madison avenue.....	409 50
21449	14	Augusta.....	California avenue.....	Rockwell.....	441 00
21450	45	California avenue.....	Belmont avenue.....	Humboldt boulevard.....	1,372 50
21457	9	Seventy-ninth.....	Bond avenue.....	Commercial avenue.....	283 50
21458	8	Augusta.....	Rockwell.....	Campbell avenue.....	252 00
21459	2	Seventieth.....	Kimbark avenue.....	Chauncey avenue.....	65 50
21460	5	Sixty-ninth.....	I. C. R. R.....	Chauncey avenue.....	157 00
21469	18	Thirty-ninth.....	Cottage Grove avenue.....	State.....	771 00
21519	17	North Forty-eighth avenue.....	Indiana.....	Fulton.....	553 50
21591	3	Lake View avenue.....	Roslyn place.....	Arlington place.....	101 00

GAS LAMP POSTS—CONTINUED.

No. of War'nt	No. of Posts	NAME OF STREET	FROM	TO	AMOUNT
21592	4	Seventy-fourth	Bond avenue	Coles avenue	\$ 130 00
21598	3	South Chicago avenue	Exchange avenue	862 feet northwest	101 00
21613	2	Fifty-second	Madison avenue	Hibbard avenue	65 50
21614	4	Thirty-fifth	Centre avenue	South branch of Chicago river	128 50
21616	4	Seventy-fifth place	Railroad avenue	Coles avenue	128 50
21617	3	Seventy-eighth	Bond avenue	Coles avenue	99 50
21618	4	Seventy-seventh place	Railroad avenue	Coles avenue	128 50
21619	15	Coles avenue	Seventy-seventh	Cheltenham place	472 50
21638	21	Lake	North Forty-sixth avenue	North Forty-eighth avenue	656 50
21647	14	Kimbark avenue	Sixty-ninth	Seventy-first	441 00
21648	3	Seventy first	Woodlawn avenue	I. C. R. R.	97 00
21655	14	Chauncy avenue	Sixty-ninth	Seventy-first	441 00
21657	4	Seventy-third place	Eastern terminus	Railroad avenue	91 88
21659	6	West Sixty-first	Morgan	Centre avenue	189 00
21726	13	Cottage Grove avenue	Sixty-third	Sixty-fifth	416 00
21737	7	High	Fullerton avenue	Dunning	230 50
21738	4	Newport avenue	Wood	Lincoln avenue	128 50
21739	3	Montrose avenue	Halsted	Lake Michigan	99 50
21740	13	Elizabeth	Forty-seventh	Forty-ninth	409 50
21773	3	Gross avenue	Belmont avenue	Melrose	101 00
21790	9	West Sixty seventh	Morgan	Halsted	233 50
21791	21	Sangamon	Sixty-sixth	Sixty-ninth	636 50
21792	27	Halsted	Seventy-first	Seventy fifth	815 50
21793	11	West Forty-eighth place	Halsted	Wallace	346 50
21794	9	West Sixty-eighth	Halsted	Morgan	233 50
21795	12	Lafin	Forty-ninth	Fifty-first	233 50
21796	13	Ada	Forty-seventh	Forty-ninth	878 00
21797	14	Green	Sixty-seventh	Sixty-ninth	409 50
21798	7	Lafin	Forty-sixth	Forty-seventh	441 00
21799	7	Morgan	Sixty-eighth	Sixty-ninth	230 50
21801	6	Lunt avenue	Ridge road	Robey	320 50
21839	24	Marshfield avenue	West Forty-seventh	West Fifty-first	199 00
21840	11	Carmen avenue	North Clark	Southport avenue	738 00
21841	6	Lowe avenue	West Fifty-ninth	West Sixtieth	846 50
21849	9	Homan avenue	West Lake	Kinzie	199 00
21850	9	Fifty-seventh	Halsted	Morgan	238 00

21861	3	Spaulding avenue.....	Scott.....	Van Buren.....	101 00
21863	14	West Van Buren.....	Kedzie avenue.....	Homan avenue.....	448 00
21868	63	West Chicago avenue.....	Kedzie avenue.....	West Fortieth.....	1,938 00
21869	6	Fifty-ninth.....	Indiana avenue.....	Calumet avenue.....	193 00
21870	17	Indiana.....	St. Clair.....	Lake Michigan.....	544 00
21889	86	Thirty fifth.....	Western avenue.....	Chicago river.....	2,890 33
21893	27	Bishop.....	Fifty-first.....	Fifty-fifth.....	887 00
21896	70	West Madison.....	Fortieth.....	Forty-sixth.....	2,170 00
21910	35	Lunt avenue.....	North Ashland avenue.....	Lake Michigan.....	1,014 76
21920	18	West Fifty-third.....	Morgan.....	Halsted.....	409 50
21926	28	Washtenaw avenue.....	Jackson.....	Washington boulevard.....	594 50
21992	25	West Van Buren.....	South Forty-sixth avenue.....	South Forty-third avenue.....	787 50
21993	13	Marshfield avenue.....	West Forty-fifth.....	West Forty-seventh.....	409 50
21994	18	Bishop.....	West Sixty-third.....	West Sixty-fifth.....	409 50
21995	13	Lafin.....	West Sixty-third.....	West Sixty-fifth.....	409 50
21996	13	South Hermitage (Page) avenue.....	West Forty-fifth.....	West Forty-seventh.....	409 50
21997	13	South Paulina.....	West Forty-fifth.....	West Sixty-sixth.....	128 50
21998	4	Emerald (Regina) avenue.....	West Sixty-fifth.....	West Sixty-sixth.....	128 50
21999	20	South Marshfield (Dreyer) ave.....	West Sixty-second.....	West Sixty-fifth.....	680 00
22000	8	Lowe (Sherman) avenue.....	Root.....	West Forty-second.....	99 50
22001	8	Union avenue.....	Root.....	West Forty-third.....	253 00
22008	6	Union avenue.....	West Seventy-ninth.....	West Eightieth.....	189 00
22012	5	Eighty-first.....	Exchange avenue.....	Houston avenue.....	187 50
22015	13	Justine.....	West Sixty-third.....	West Sixty-fifth.....	409 50
22017	6	West Fourteenth (Collins) place.....	South Kedzie avenue.....	South Albany avenue.....	189 00
22018	6	Carlisle place.....	South Kedzie avenue.....	South Albany avenue.....	189 00
22019	6	West Twenty-third (Moore).....	South Lincoln.....	South Wood.....	189 00
22020	36	Flournoy.....	South Albany avenue.....	Central Park avenue.....	1,093 00
22091	27	May.....	Sixty-third.....	Sixty seventh.....	850 50
22092	27	Wood.....	Forty-seventh.....	Forty-third.....	850 50
22093	27	Honore.....	Forty-third.....	Forty-seventh.....	850 50
22094	3	Chanay.....	Point.....	125 feet north.....	58 00
22095	4	South Fortieth court.....	Park avenue.....	Randolph.....	108 50
22096	4	Ens.....	North Maplewood avenue.....	Powell avenue.....	108 50
22097	6	North Fairfield avenue.....	Cortland.....	Armitage avenue.....	159 00
22098	6	Crossing.....	North Paulina.....	C. & N-W Ry.....	159 00
22099	7	West Twentieth.....	South Washtenaw avenue.....	South Rockwell.....	185 00
22100	7	West Twenty-fifth.....	Leavitt.....	Hoyle avenue.....	185 50
22101	13	Moffat.....	Rockwell.....	North Western avenue.....	318 00
22102	15	Sawyer avenue.....	Fullerton avenue.....	Wrightwood avenue.....	897 50
22141	15	West Twelfth.....	South Forty-second avenue.....	South Fortieth avenue.....	897 50
22142	33	West Twenty-third.....	South Lincoln.....	South Western avenue.....	848 00

GAS LAMP POSTS—CONTINUED.

No. of Warr't	No. of Posts	NAME OF STREET	FROM	TO	AMOUNT
22143	45	North Kedzie avenue	Logan Square	West Belmont avenue	\$ 1,192 50
22144	48	North Forty-third (Howard) ave.	West North avenue	Humboldt avenue	1,272 00
22150	8	Berenice avenue	North Robey	Lincoln avenue	124 50
22151	10	Morse avenue	Evansston avenue	Lake Michigan	265 00
22152	4	Potwin place	North Leavitt	North Hamilton avenue	176 00
22153	4	Fremont	Grace	Bradley place	176 00
22154	7	Lunt avenue	Morton	Ridge road	185 50
22155	9	Southport avenue	North Shore avenue	Albion avenue	298 50
22156	5	Herndon avenue	Wellington	Lincoln avenue	182 50
22157	4	Fifty-sixth	Indiana avenue	Prairie avenue	176 00
22158	15	Montrose avenue	North Western avenue	Lincoln avenue	397 50
22159	6	East side of North Robey	Grace	Lincoln avenue	159 00
22160	2	Seventy-second	Langley avenue	Cottage Grove avenue	58 00
22163	5	Millard avenue	West Harrison	Colorado avenue	182 50
22164	8	North side of West Kinzie	North Claremont avenue	North Oakley avenue	84 50
22185	12	South Forty-first avenue	Washington	Lake	818 00
22186	8	North side of Irving Park blvd.	North Robey	North Leavitt	212 00
22187	5	St. Louis avenue	Adams	Colorado avenue	182 50
22189	14	South Carpenter	Sixty-seventh	Sixty-ninth	371 00
22192	8	North Ashland avenue	Chase avenue	Sherwin avenue	95 00
22196	7	Thomas	North Leavitt	North Hoyne avenue	185 50
22212	14	Wellington	North Ashland avenue	Southport avenue	871 00
22213	12	South Halsted	West Sixty-ninth	West Seventy-first	318 00
22214	25	Evans avenue	West Seventy-fifth	P., Ft. W. & C. Ry	662 50
22215	27	Langley avenue	Seventy-first	Seventy-fifth	715 50
22216	9 connections, 21 L. P. & 2 connections }	Frankfort	North Maplewood avenue	North Western avenue	135 00
22217	16	West Indiana	Monticello avenue	North Fortieth avenue	586 50
22225	16	North Robey	Addison	Roscoe	424 00
22226	5	South Lawndale avenue	Colorado avenue	Harrison	182 50
22227	8	St. Louis avenue	Madison	Monroe	84 50
22288	8	West Sixty-fifth	Stewart avenue	Wentworth avenue	84 50
Total					\$ 58,536 82

BOULEVARD LAMP POSTS.

No. of War'nt	No. of Posts	NAME OF STREET	FROM	TO	AMOUNT
21470	7	St. Lawrence avenue.....	Forty-ninth	Fiftieth	\$ 280 80
21590	15	Vincennes avenue.....	Forty eighth	Fiftieth	504 12
21639	8	Graceland avenue.....	Halsted.....	Lake Michigan	314 00
21646	18	Belmont avenue	East Ravenswood Park	Ashland avenue	445 25
21663	30	Indiana avenue	Fifty-first	Fifty-fifth	1,170 00
21687	27	Sheffield avenue.....	Bryn Mawr avenue	Foster avenue	981 50
21688	8	Shields avenue	West Fifty-ninth	870 feet north	99 50
23002	14	Vernon avenue	Seventy-first	Seventy-third	497 00
		Total.....	.....	.....	\$ 4,191 67

SUMMARY.

STREETS.

Wooden Block Pavement:

North Division	\$ 48,557 60	
South Division	328,828 24	
West Division	542,725 29	
	<hr/>	\$ 920,111 13

Macadam Pavement:

North Division	\$ 67,810 03	
South Division	269,648 69	
West Division	200,258 56	
	<hr/>	537,717 28

Vitrified Brick Pavement:

North Division	\$ 13,974 55	
South Division	223,191 96	
West Division	81,933 06	
	<hr/>	319,099 57

Asphalt Pavement:

North Division	\$ 62,941 20	
South Division	212,387 11	
West Division	301,917 77	
	<hr/>	577,246 08

Granite Block Pavement:

North Division	\$ 29,395 72	
South Division	16,017 81	
West Division	45,115 39	
	<hr/>	90,528 92

ALLEYS.

Wooden Block Pavement:

North Division	\$ 1,140 15	
South Division	16,198 42	
West Division	16,855 29	
	<hr/>	34,193 86

Vitrified Brick Pavement:

South Division	\$ 1,406 16	
West Division	4,772 68	
	<hr/>	6,178 84

Asphalt Pavement:

South Division	\$ 1,408 75	
	<hr/>	1,408 75

Granite Block Pavement:

South Division	\$ 961 90	
	<hr/>	961 90

MISCELLANEOUS.

Opening and Widening:

South Division.....	\$	94,986	40	
West Division		37,833	20	
				\$ 132,819 60

Water Supply Pipes:

North Division.....	\$	12,363	30	
South Division.....		71,748	90	
West Division		141,857	22	
				225,969 42

Water Service Pipes:

North Division	\$	10,489	50	
South Division		46,993	50	
West Division		29,024	50	
				86,507 50

Sewers:

North Division.....	\$	13,377	62	
South Division.....		690,999	23	
West Division		129,703	92	
				834,080 77

Drains:

North Division	\$	12,012	50	
South Division		40,184	53	
West Division		31,957	50	
				84,154 53

Cement Sidewalks:

North Division	\$	3,285	90	
South Division.....		18,645	67	
West Division		12,876	91	
				34,808 48

Plank Sidewalks:

North Division	\$	2,744	51	
South Division		56,270	63	
West Division		34,789	70	
				93,804 84

Gas Lamp Posts:

North Division	\$	6,450	76	
South Division.....		25,154	06	
West Division.....		21,932	00	
				53,536 82

Boulevard Lamp Posts:

North Division.....	\$	1,690	75	
South Division.....		2,500	92	
				4,191 67

TOTAL				\$ 4,037,319 96
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RECAPITULATION.

Assessments

Prepared.	
66 Streets, wooden block pavement.....	\$ 920,111 13
29 Streets, macadam pavement.....	537,717 28
10 Streets, vitrified brick pavement.....	319,099 57
21 Streets, asphalt pavement.....	577,246 08
9 Streets, granite block pavement.....	90,528 92
22 Alleys, wooden block pavement.....	34,193 86
2 Alleys, vitrified brick pavement.....	6,178 84
1 Alley, asphalt pavement.....	1,408 75
1 Alley, granite block pavement.....	961 90
10 Opening and widening.....	132,819 60
103 Water supply pipes.....	225,969 42
85 Water service pipes.....	86,507 50
101 Sewers.....	834,080 77
101 Drains.....	84,154 53
30 Sidewalks, cement.....	34,808 48
248 Sidewalks, plank.....	93,804 84
134 Lamp posts, gas.....	53,536 82
8 Lamp posts, boulevard.....	4,191 67
Total	\$ 4,037,319 96

LIST OF ASSESSMENTS FOR EACH YEAR SINCE 1861.

For the year ending April 1, 1862.....	\$ 42,635 49
For the year ending April 1, 1863.....	46,493 67
For the year ending April 1, 1864.....	889,169 31
For the year ending April 1, 1865.....	108,576 35
For the year ending April 1, 1866.....	802,574 56
For the year ending April 1, 1867.....	817,206 18
For the year ending April 1, 1868.....	1,854,436 48
For the year ending April 1, 1869.....	2,395,683 08
For the year ending April 1, 1870.....	2,836,852 48
For the year ending April 1, 1871.....	2,859,885 89
For the year ending April 1, 1872.....	62,222 25
For the year ending April 1, 1873.....	.....
For the year ending April 1, 1874.....	749,460 27
For the year ending April 1, 1875.....	728,254 42
For the nine months ending December 31, 1875.....	60,585 72
For the year ending December 31, 1876.....	1,516,081 07
For the year ending December 31, 1877.....	124,498 48
For the year ending December 31, 1878.....	284,900 45
For the year ending December 31, 1879.....	588,963 44
For the year ending December 31, 1880.....	980,895 50

For the year ending December 31, 1881.....	\$ 1,227,169 71
For the year ending December 31, 1882.....	1,395,872 98
For the year ending December 31, 1883.....	2,232,757 04
For the year ending December 31, 1884.....	2,857,905 28
For the year ending December 31, 1885.....	2,889,544 80
For the year ending December 31, 1886.....	3,307,567 99
For the year ending December 31, 1887.....	3,160,474 67
For the year ending December 31, 1888.....	3,655,956 78
For the year ending December 31, 1889.....	4,220,869 98
For the year ending December 31, 1890.....	6,987,155 48
For the year ending December 31, 1891.....	8,790,448 29
For the year ending December 31, 1892.....	14,505,701 79
For the year ending December 31, 1893.....	6,001,445 65
For the year ending December 31, 1894.....	2,903,814 16
For the year ending December 31, 1895.....	4,337,214 44
For the year ending December 31, 1896.....	4,037,319 96
<hr/>	
Total for thirty-six years.....	\$88,800,088.99

REPORT OF THE
Bureau of Maps and Plats
FOR 1896

BUREAU OF MAPS AND PLATS.

HON. JOSEPH DOWNEY,

COMMISSIONER OF PUBLIC WORKS:

DEAR SIR:—Herewith I have the honor to submit the annual report of the Bureau of Maps and Plats, for the year 1896.

In examining the work done, I beg to draw your attention to the fact that our working force for 1896 was reduced by order of the Council. Notwithstanding this there was apparently more accomplished than in 1895, but it was impossible, with the reduced force, to renew all defaced official record plats, which should have been done.

The work performed by this Bureau during the year 1896 was as follows:

Plats were prepared for—

Electric lamp post assessments	8
Electric lamp post ordinances	12
Lamp post ordinances	597
Lamp post orders	340
Lamp post assessments	159
Street improvement and street and alley opening assessments	597
Street and alley opening ordinances	244
Street Engineer's estimates	518
Surveys	71
Sidewalk assessments	544
Water pipe assessments	276
Law Department ..	1,525
Miscellaneous purposes	250
Total	5,141

The number of distance sheets figured in this Bureau for the Bureau of Street and Alley cleaning was 1,322.

One hundred and ninety-four (194) new subdivisions of real estate within the City limits were recorded, and two hundred and eighty-two

(282) entries were made of the same upon the several sets of atlases in charge of this Bureau.

Thirty-two (32) vacations were placed on record and fifty-nine (59) entries were made of the same on the atlases.

Thirty-five (35) street openings were placed on record and forty-nine (49) entries were made of the same on the atlases.

Six (6) alley openings were recorded and eight (8) entries of the same were made on the atlases.

Plats for ninety-five (95) street openings were made ready for record.

Plats of the entire City of Chicago in three volumes, for the use of the City Gas Inspector's Bureau, were commenced in 1895, and the third volume was made and completed in 1896. Work was begun on the restoration of the plats of Hyde Park, but only twenty (20) pages could be completed, owing to lack of help as stated.

One draughtsman of this Bureau served during the spring session of the City Tax Commission for said Commission nearly two and one-half months, and another draughtsman of this Bureau served with the Special City Drainage Commission from November 12, 1896, to January 1, 1897.

About eight thousand (8,000) house number notices were served on owners, agents, etc., and the corresponding house number certificates were issued upon demand, free of charge, by this Bureau.

On the 12th day of March, 1896, this Bureau commenced to charge for legal descriptions, etc., and the cash receipts, which were almost exclusively for said legal descriptions, amounted to fifteen hundred and twenty-eight $1\frac{5}{8}$ dollars (\$1,528 $1\frac{5}{8}$) up to January 1, 1897, which amount was turned over from time to time, as received, to the Treasury Bureau of the Department of Public Works.

Over three hundred and ninety-five thousand feet (viz.: 395,017- $1\frac{2}{3}$ feet), equal to seventy-four $1\frac{1}{10}$ miles (74 $1\frac{1}{10}$ miles) of frontage were checked off by this Bureau to verify petitions for City Railway Companies, asking for right of way, etc.

There was no increase of territory in 1896.

The present area of Chicago consists of and grew as follows :

	Square Miles.
After the sixth annexation, <i>April 29, 1889</i> , Chicago covered	43.812
The <i>seventh extension</i> was added <i>July 15, 1889</i> , and consists of the following :	
Part of Cicero, viz.: the east half of Sections 4 and 9 of Township 39 north, Range 13, E. 3d P. M.	1.000
City of Lake View	10.408
Town of Jefferson, except Sections 25, 35 and 36	29.530
Town of Lake	36.000
Village of Hyde Park.....	49.132
The eighth extension, the village of Gano, was added April 1, 1890	1.773
The ninth extension, South Englewood, was added May 12, 1890.....	2.899
The tenth extension, the village of Washington Heights, was added November 4, 1890	2.810
And the village of West Roseland, was added November 4, 1890	1.793
The eleventh extension, the village of Fernwood, was added April 7, 1891	0.981
The twelfth extension, the village of West Ridge, was added April 19, 1893.....	2.125
And the village of Rogers Park was added April 19, 1893.....	1.750
The thirteenth extension, the village of Norwood Park, was added November 7, 1893	2.125
The fourteenth extension, part of Calumet, was added February 25, 1895.....	1.000
Total area of the City of Chicago, December 31, 1896,	187.138

~~See~~ Herewith please find colored Map showing *all extensions* of Chicago up to January 1, 1897.

For a detailed report on the growth of Chicago, beginning with the Town of Chicago, February 11, 1835, see latter part of my report.

The extreme length of Chicago is 26 miles, and its extreme width 14½ miles.

MILEAGE OF STREETS AND ALLEYS

added to our City during the year 1896, by subdivisions and condemnations:

LOCATION.	STREETS.		ALLEYS.	
	Miles.	Feet.	Miles.	Feet.
Calumet, including Washington Heights and Gano.....	.....	3,730	.....	2,725
Hyde Park.....	6	4,090	4	60
Jefferson.....	18	4,800	2	4,540
Lake.....	2	4,440	1	2,670
Lake View.....	6	280	3	585
North Town.....	.....	.....	.....	.....
Norwood Park.....	.....	.....	.....	.....
Rogers Park and West Ridge.....	.....	2,820	.....	450
South Town.....	.....	3,300	.....	2,525
West Town.....	3	20	2	540
Totals.....	39	2,360	14	3,535

Accompanying the report will be found a

HALF-SECTIONAL MAP OF CHICAGO,

which was prepared by this Bureau, and shows the following :

All Public Schools,	All Fire Engine Houses,
" Water Works,	" Hook and Ladder Stations,
" " Cribs,	" Public Buildings,
" " Tunnels,	" " Bath Houses,
" " Mains,	" " Parks,
" Pumping Stations,	" Boulevards,
" Police Stations,	" Steam Railroads,
with Nos. of Precincts,	

as also proposed park extensions with "Drives" and "Waterways" at the Lake Front, all of which will, no doubt, be of general interest to the citizens of Chicago, and show them how magnificent our already beautiful Garden City will look when the proposed *Lake Front Improvements* are complete.

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THE GROWTH OF CHICAGO.

(See colored map.)

THE "TOWN OF CHICAGO."

John H. Kinzie, Gurdon S. Hubbard, Ebenezer Goodrich, John K. Boyer and John S. C. Hogan were the first trustees. It was incorporated by Act of *February 11, 1835*, and comprised all that territory covered by sections 9 and 16, north and south fractional section 10 and fractional section 15, in town 39 north, range 14 east of 3d principal meridian, with the following provision: "Provided that the authority of the Board of Trustees of the said Town of Chicago shall not extend over the south fractional section 10 until the same shall cease to be occupied by the United States."

THE "CITY OF CHICAGO."

Incorporated by Act of March 4, 1837, comprised "the district of country in the County of Cook, etc., known as the east $\frac{1}{2}$ of the southeast $\frac{1}{4}$ of section 33, township 40 north, range 14 east, and fractional section 34, township 40 north, range 14 east; also the east $\frac{1}{4}$ of sections 6, 7, 18 and 19, all of fractional section 3, and of sections 4, 5, 8 and 9, and fractional section 10 (except the southwest fractional $\frac{1}{4}$ thereof, occupied as a military post, until the same should become private property), fractional section 15, sections 16, 17, 20, 21, and fractional section 22, township 39 north, range 14 east."

Total area, March 4, 1837, 10.635 square miles.

FIRST EXTENSION OF CITY LIMITS.

Act of February 16, 1847, provided "That the district of country in the County of Cook, etc., known and described as follows, to-wit: All that part of township 39 north, range 14 east of the 3d principal meridian, which lies north of the north line of sections 27, 28, 29 and 30 of said township, and the east $\frac{1}{2}$ of section 33, township 40 north, range 14 east, and fractional section 34, township 40 north, range 14 east, shall hereafter be included in, constitute and be known by the name of City of Chicago."

Area of first extension	3.375	square miles.
Carried	10.635	" "
Total area of City, February 16, 1847.....	14.01	" "

SECOND EXTENSION OF CITY LIMITS.

Act of February 12, 1853, provides "that the corporate limits and jurisdiction of the City of Chicago shall be, and the same are hereby extended so as to embrace and include within the same the several tracts of land hereinafter described, which shall be deemed parts of the divisions of the said City named in connection therewith, as follows :

"North Division.—All those parts of sections 31 and 32, township 40 north, range 14 east, lying east of the center of the North branch of the Chicago river, and the west $\frac{1}{2}$ of section 33, in same township and range.

"South Division.—All of fractional section 27, township 39 north, range 14 east, and so much of the shore and bed of the lake as lies within one mile east of said section, and all of that part of section 28, same township and range, lying south and east of the south branch of the Chicago river.

"West Division.—All those parts of sections 28, 29 and 30, township 39 north, range 14 east, lying north of the South branch of the Chicago river."

Area of second extension	3.988	square miles.		
Carried	14.01		"	"
Total area of City, February 12, 1853.....	17.998		"	"

THIRD EXTENSION OF CITY LIMITS.

Act of February 13, 1863, provides "The corporate limits and jurisdiction of the City of Chicago shall embrace and include within the same all of township 39 north, range 14 east of 3d principal meridian, and all of sections 31, 32 and 33, and fractional section 34, township 40 north, range 14 east, together with so much of the waters and bed of Lake Michigan as lies within one mile of the shore thereof, and east of the territory aforesaid."

Area of third extension.....	6.284	square miles.		
Carried	17.998		"	"
Total area of City, February 13, 1863.....	24.282		"	"

FOURTH EXTENSION OF CITY LIMITS.

Act of February 27, 1869, provides "That the territorial limits of the City of Chicago shall be, and are hereby extended as follows : That part of section 30, township 40 north, range 14 east, which lies

west of the North branch of the Chicago river ; sections 1, 2, 11, 12, 13, 14, 23, 24, 25, 26, and that part of sections 35 and 36 lying northwest of the center of the Illinois and Michigan canal, all in township 39 north, range 13 east, shall be, and are hereby added to the City."

Area of fourth extension	11.38	square miles.
Carried	24.282	" "
<hr/>		
Total area of City, February 27, 1869 . . .	35.662	" "

FIFTH EXTENSION OF CITY LIMITS.

Act of May 16, 1887, provides "That Section 36, township 40 north, range 13 east, town of Jefferson, shall be and is hereby added to the City."

Area of fifth extension	1.000	square mile.
Carried	35.662	" miles.
<hr/>		
Total area of City, May 16, 1887	36.662	" "

SIXTH EXTENSION OF CITY LIMITS.

Act of April 29, 1889, provides "That that part of sections 35 and 36 lying southeasterly of the center of Illinois and Michigan canal, in township 39 north, range 13 east of 3d principal meridian, in Cook County, Illinois ; also that part of sections 3, 10, 15, and the east $\frac{3}{4}$ of sections 22, 27 and 34, lying northwest of the center of the Illinois and Michigan canal, in township 39 north, range 13 east of the 3d principal meridian, etc. ; and also section 25, township 40 north, of range 13 east of 3d principal meridian, etc., be and the same are hereby declared to be annexed to the incorporated City of Chicago."

Area of sixth extension	7.15	square miles.
Carried	36.662	" "
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Total area of City, April 29, 1889	43.812	" "

SEVENTH EXTENSION OF CITY LIMITS.

July 15, 1889, an order was filed in the County Court of Cook County, declaring the result of a special election, held June 29, 1889,

by which the following territory, all situated in the County of Cook, Illinois, was annexed to the City of Chicago, viz. :

1.—Part of Town of Cicero, viz : The east ½ of sections 4 and 9, township 39 north, range 13 east of 3d principal meridian	1.000 square mile.		
2.—The City of Lake View.....	10.408	"	miles.
3.—The Town of Jefferson (except sections 25 and 36, formerly annexed).....	29.530	"	"
4.—The Town of Lake.....	36.000	"	"
5.—The Village of Hyde Park	49.132	"	"
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Total area of seventh extension.....	126.070	"	"
Carried	43.812	"	"
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Total extension of City, July 15, 1889..	169.882	"	"

EIGHTH EXTENSION OF CITY LIMITS.

By election held April 1, 1890.

The Village of Gano.—The south ½ of section 21, all of section 28 north of the Indian boundary line, that part of section 28 south of the Indian boundary line, lying west of the east line of said village of Gano, and north of the Little Calumet river; also that part of section 33 north of the Indian boundary line, lying north of the Little Calumet river, and that part of the east ½ of the northwest ¼ of section 33 south of the Indian boundary line, lying north of the Little Calumet river, all in town 37 north, range 14 east of the principal meridian.

Area of eighth extension.....	1.773 square miles		
Carried	169.882	"	"
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Total area of City, April 1, 1890.....	171.655	"	"

NINTH EXTENSION OF CITY LIMITS.

By ordinance passed May 12, 1890, sections 5 and 6, also the northeast ¼ of section 4, except the west fifty feet of the south 666 feet thereof; also the northwest ¼ of section 4, except the west south 666 feet thereof; also the southeast ¼ of section 4, except the west fifty feet thereof; also the northeast ¼ section 9, except the

west fifty feet thereof; all in town 37 north, range 14 east of the 3d principal meridian.

Area of ninth extension	2.899 square miles		
Carried	171.655	"	"
Total area of City, May 12, 1890.....	174.554	"	"

TENTH EXTENSION OF CITY LIMITS.

By election held November 4, 1890.

1. *Village of Washington Heights.*—Section 7, the west $\frac{3}{4}$ and northeast $\frac{1}{4}$ of northeast quarter of section 8, and the north $\frac{1}{2}$ of section 17 and 18, all in town 37 north, range 14 east of 3d principal meridian. 2.81 square miles.

2. *Village of West Roseland.*—Southeast $\frac{1}{4}$ section 9 (except the west fifty feet thereof), the east $\frac{1}{4}$ of northeast $\frac{1}{4}$ of section 20, the north $\frac{1}{2}$ of section 21, and all of section 16, all in town 37 north, range 14 east of 3d principal meridian. 1.793 square miles.

Total area of tenth extension.....	4.603 square miles.		
Carried	174.554	"	"
Total area of City, November 4, 1890..	179.157	"	"

ELEVENTH EXTENSION OF CITY LIMITS.

By election held April 7, 1891.

The Village of Fernwood, viz.: The west half and the west fifty feet of east $\frac{1}{2}$ of section 9, the east $\frac{1}{2}$ of the southeast $\frac{1}{4}$ and the southeast quarter of the northeast $\frac{1}{4}$ of section 8, the southwest $\frac{1}{4}$ and the south 666 feet of the northwest $\frac{1}{4}$ and the west fifty feet of the southeast $\frac{1}{4}$, and the west fifty feet of the south 666 feet of the northeast $\frac{1}{4}$ of section 4, all in town 37 north, range 14 east of the 3d principal meridian.

Area of eleventh extension	0.981 square miles.		
Carried	179.157	"	"
Total area of City, April 7, 1891.....	180.138	"	"

TWELFTH EXTENSION OF CITY LIMITS.

By election held April 4, 1893.

The Village of Rogers Park.—Commencing at the intersection of Indian boundary line and shore of Lake Michigan in section 29, township 41, north range 14; thence southwesterly on Indian boundary

line to the intersection with center line running east and west of said section 29; thence west on said center line to a point on east and west center line of section 30, 200 feet west of center of public road known as "Ridge road;" then southeasterly on a line parallel with center of said road to the center line running east and west of section 31; then east to center of said Ridge road, then southeasterly on center of said road to south line of township 41; thence east on said south line to the shore of Lake Michigan; thence northwesterly along shore to place of beginning—being 2.125 square miles.

The Village of West Ridge.—Commencing at intersection of the center line of Ridge road with south line of section 31, township 41 north, range 14, then north along center of said road to east and west center line of section 31; then west on said center line 200 feet, thence northwesterly on a line parallel with the center of Ridge road and 200 feet distant therefrom to east and west center line of section 30; thence west on said center line of section 30 to west line of southeast $\frac{1}{4}$ of section 25, township 41 north, range 13; thence south on west line of said southeast $\frac{1}{4}$ of section 25 to south line of said section; thence west on said south line to southwest corner of said section; thence south on west line of section 36, township 41 north, range 13, to south line of said township; thence east on south line of said township to place of beginning. Also the southwest $\frac{1}{4}$ of said section 25, township 41 north, range 13, having been annexed to the village of West Ridge. Filed for record April 10, 1893, in Book 4,247, page 191—being 1.75 square miles.

Area of twelfth extension	3.875 square miles.
Carried	180.138 " "
<hr/>	
Total area of City April 4, 1893	184.013 " "

THIRTEENTH EXTENSION OF CITY LIMITS.

By election held November 7, 1893.

Village of Norwood Park.—All of section 6, township 40 north, range 13; the west $\frac{1}{2}$ of section 5, township 40 north, range 13; the south $\frac{1}{2}$ of the south $\frac{1}{2}$ of fractional section 31, township 41 north, range 13; the east $\frac{1}{2}$ of the east $\frac{1}{2}$ of section 1, township 40 north, range 12; the southeast $\frac{1}{4}$ of the southeast $\frac{1}{4}$ of section 36, township 41 north, range 12.

FIRST ANNEXATION TO VILLAGE OF NORWOOD PARK.

Filed for record February 13, 1891. Document No. 1,418,596, in Book 48, page 11.

Blocks 10, 11 and 12, in subdivision of lot 2 (except Anna Mary Wingert's subdivision) of the Government division of the northeast $\frac{1}{4}$ of fractional section 1, township 40 north, range 12 east (said block 12 being known as "Schleiter's Addition to Norwood Park" in the town of Norwood Park).

SECOND ANNEXATION TO THE VILLAGE OF NORWOOD PARK.

Filed for record November 6, 1891. Document No. 1,564,587, in Book 52, page 11.

That portion of lots 9, 10 and 11, in Fred Ebinger's subdivision of 67.90 acres, in the southwest $\frac{1}{4}$ of section 31, township 41 north, range 13, etc., lying immediately north of and adjoining said village.

Total area of thirteenth extension	2.125 square miles.		
Carried	184.013	"	"
<hr/>			
Total area of City November 7, 1893 ..	186.138	"	"

FOURTEENTH EXTENSION OF CITY LIMITS.

By ordinance of the City Council, February 25, 1895.

This extension is situated in the town of Calumet and consists of the south $\frac{1}{2}$ of section 20 and the north $\frac{1}{2}$ of section 29, township 37 north, range 14 east of 3d principal meridian, and is bounded as follows:

On the east by Halsted street.
On the west by Ashland avenue.
On the north by 115th street.
On the south by 123d street.

~~43~~ The above was filed for record March 13, 1895. Document No. 2,185,319, in Book 64, pages 26 to 29.

Total area of fourteenth extension	1.000 square mile.		
Carried	186.138	"	miles.
<hr/>			
Total area of Chicago, February 25, 1895.	187.138	"	"
Or 119,768.32 acres.			

THE PARK AND BOULEVARD SYSTEM OF THE CITY OF CHICAGO.

PARKS AND BOULEVARDS UNDER THE CONTROL OF THE RESPECTIVE PARK COMMISSIONERS.

NORTH SIDE.

PARKS.

Lincoln Park.....	area, 320.00	acres
Union Square, corner of Goethe and Astor streets.....	" 0.46	"
Triangle between Clark, LaSalle and Eugene streets.....	" 0.0225	"
Triangle between Clark, Wells and Ogden front.....	" 0.0482	"
Total.....	" 320.5307	"

June 27, 1887, the City Council passed an ordinance turning above two triangles over to the Lincoln Park Commissioners, who accepted them June 30, 1887; and Union Square was turned over by ordinance November 30, 1891, and accepted by Park Commissioners December 16, 1891.

NORTH SIDE—CONTINUED.

BOULEVARDS.	Length in Feet.	Date of Ordinance.	Date of Acceptance by Park Commissioners.
Lincoln park blvd. (formerly Pine st.), from Pearson st. to Oak st.	1,180	April 13, 1884.	May 17, 1884.
Lake Shore drive, from Oak st. to North ave.	3,290	.....	.....
Lake Shore drive (in Lincoln park), from North ave. to Diversey	8,850	.....	.....
Lake View ave. blvd., from Diversey to Belmont ave.	2,621	.....	.....
Sheridan road, from Belmont ave. to Rodgers ave. (City limits)	32,180	May 8, 1893.	July 26, 1893.
Dearborn ave., from Burton place to North ave.	580	July 8, 1895.	Oct. 15, 1895.
North ave., from Clark st. to Lake Shore drive.	1,382	Dec. 28, 1885.	Jan. 5, 1886.
North Park ave., from Clark st. to Fullerton ave.	2,357	July 15, 1886.	Aug. 18, 1886.
Fullerton ave., from North Park ave. to Clark st.	1,091	July 6, 1891.	July 14, 1891.
Fullerton ave., from North Clark st. to Orchard st.	1,540	Feb. 20, 1893.	Mar. 27, 1893.
Diversey ave., from Lake View blvd. to Clark st.	1,680	Sept. 21, 1891.	Oct. 21, 1891.
Diversey ave., from Clark st. to north branch of Chicago river.	10,170	Jan. 14, 1895.	Apr. 12, 1895.
Ridge ave., from Devon ave. to north City limits.	8,140	May 18, 1896.	June 9, 1896.
Outer drive, near lake shore in Lincoln park.	5,700	.....	.....
Total length.	80,761	or 15.2956 miles.	
Lincoln park regatta course, about...	6,000		

WEST SIDE.

ORIGINAL PARKS.	Acres.	Date of Ordinance.	Date of Acceptance by Park Commissioners.
Humboldt park	200.62	.....	Nov. 4, 1869.
Garfield park.....	185.87	.....	Nov. 4, 1869.
Douglas park	179.79	.....	Nov. 4, 1869.
PARKS ACCEPTED FROM THE CITY.			
Union park.....	14.80	Oct. 9, 1885.	Oct. 12, 1885.
Jefferson park.....	5.42	Oct. 9, 1885.	Oct. 12, 1885.
Vernon park.....	4.51	Oct. 12, 1885.	Nov. 9, 1885.
Wicker park	4.89	Oct. 26, 1885.	Nov. 9, 1885.
Campbell park.....	.55	Oct. 25, { Nov. 25, } 1889.	Dec. 24, 1889.
Logan square.....	6.06	.....	.....
Palmer square	15.79	.....	.....
Sacramento square.....	3.65	.....	.....
Total.....	621.95		

WEST SIDE—CONTINUED.

ORIGINAL BOULEVARDS.	Length in Miles.	Date of Ordinance.	Date of Acceptance by Park Commissioners.
Humboldt blvd., from Western ave. to Humboldt park	2.50	.....	Nov. 4, 1869.
Central blvd., from Central Park ave. to Humboldt park	1.56	.....	Nov. 4, 1869.
Douglas blvd., from Douglas park to Garfield Park	1.67	.....	Nov. 4, 1869.
BOULEVARDS ACCEPTED FROM THE CITY.			
Southwest blvd., from Douglas park to Illinois & Michigan canal	2.00	.....	May 2, 1881.
Washington blvd., from Halsted st. to Garfield park	3.25	July 7, 1879.	Oct. 17, 1879.
Twelfth st. blvd., from Ashland ave. to Ogden ave.	0.89	Jan. 17, 1887.	Jan. 24, 1887.
Ashland blvd., from Washington blvd. to Twelfth st.	1.25	July 26, 1886. }	Jan. 31, 1887.
Ashland blvd., from Washington blvd. to Lake st		Jan. 3, 1887. }	
Ogden ave. blvd., from Twelfth st. to Albany avenue	1.15	Jan. 31, 1887.	Mar. 7, 1887.
Jackson blvd., from Halsted st. to Garfield park	3.50	Jan. 17, 1887.	Jan. 24, 1887.
Warren ave. blvd., from Garfield park to W. Fortieth st.	0.25	Oct. 22, 1888.	Mar. 17, 1891.
W. Washington st. blvd., from W. Fortieth st. to W. Fifty-second st.	1.50	Oct. 12, 1891.	Mar. 8, 1892.
W. Fortieth st. blvd., from Warren ave. to W. Washington st.	0.02	Oct. 12, 1891.	Mar. 8, 1892.
Polk st. blvd., abutting Vernon Park.	0.11	Feb. 26, 1894.	April 10, 1894.
Central Park ave. blvd., from Madison st. to Colorado ave.	0.36	Oct. 12, 1891.	Mar. 8, 1892.
Diversey st. blvd., from Oakley ave. to river	0.13	June 10, 1895.	July 9, 1895.
Jackson blvd., from Halsted st. to river	0.47	Oct. 7, 1895.	Oct. 22, 1895.
Humboldt blvd., from Western ave. to Diversey st.	0.32	March 2, 1896.	Mar. 10, 1896.
		By condemnation.	Nov. 26, 1895.
Total length of blvds.	20.93		

SOUTH SIDE.

PARKS.	Area in Acres.	Date of Ordinance.	Date of Acceptance by Park Commissioners.
Washington park	371.00	.....	.....
Jackson park	586.00	.....	.....
Gage park	20.00	.....	.....
Midway Plaisance	80.00	.....	.....
Lake Front park { Old Lake Front park, 41.30 / New Lake Front park, 169.60 }	210.90	July 27, 1896.	Nov. 27, '96.
Total.....	1,267.90		

§§ All above parks, except Lake Front park, were acquired and taken under the original Park Acts.

BOULEVARDS.	Miles.	Date of Ordinance.	Date of Acceptance by Park Commissioners.
Michigan ave. blvd., from Randolph st. to Sixty-third st.....	7.000	{ June 27, '79 Oct. 17, '84	July 15, '79. Dec. 31, '84.
Grand blvd., from Thirty-fifth st. to Fifty-first st.....	4.130	.....	.....
Drexel blvd., from Oakwood blvd. to Fifty-first st.....	3.050	.....	.....
Oakwood blvd., from Drexel blvd. to Grand blvd.....	0.500	.....	.....
Southwest blvd., from Canal st. to Fifty-fifth st.....	3.000	.....	.....
Garfield blvd., from Western ave. to South Park ave.....	7.140	.....	.....
Midway Plaisance blvd., from Cottage Grove ave. to Stony Island ave...	2.000	.....	.....
Fifty-first st. blvd., from Drexel blvd. to Washington ave.....	0.750	.....	.....
Thirty-fifth st. blvd., from Michigan ave. to South Park ave.....	0.375	.....	.....
Jackson st. blvd., from Michigan ave. to river	0.750	{ May 16, '96 } { Oct. 19, '96 }	Nov. 16, '96.
Washington ave. blvd., from Forty-ninth st. to Fifty-ninth st.....	1.250	.....	.....
Total.....	29.945		

§§ All boulevards having no dates of acceptance by Park Commissioners were acquired and taken under the original Park Acts.

RECAPITULATION.

UNDER CONTROL OF PARK COMMISSIONERS.

PARKS.

	Area in Acres.
North Side	320.53
West Side.....	621.95
South Side.....	1,267.90
Total	2,210.38 or 3.377 square miles

BOULEVARDS.

	Miles.
North Side.....	15.2956
West Side.....	20.9300
South Side.....	29.9450
Total	66.1706

PARKS AND PUBLIC SQUARES,

UNDER CONTROL OF THE CITY.

NORTH SIDE.

	Area in Acres.
Gross park, Otto street, between Paulina and Wood streets.....	0.53
Washington square, Dearborn avenue, Clark street, Walton and Washington places	2.30
Green Bay park, State street, Rush street and Bellevue place.....	0.19
Oak park, Cass, Rush and Chestnut streets	0.20
Total	3.22

WEST SIDE.

	Area in Acres.
Bickerdike square, south side of Ohio street, between Armour and Bickerdike streets	0.94
Irving Park, southeast corner of Irving Park boulevard and Irving ave.	0.25
Holstein Park, Oakley avenue, between Emis and Hamburg streets	2.38
Congress park, west of Rockwell street, between Van Buren and Harrison streets.....	0.68
Shedd's park, south of C., B. & Q. R. R., between Lawndale and Millard avenues and south of Twenty-third street.....	1.08
Total.....	5.33

SOUTH SIDE.

	Area in Acres.
Aldine square, west side of Vincennes avenue, between Thirty-seventh and Thirty-eighth streets.....	1.49
Ellis park, Vincennes and Cottage Grove avenues, between Thirty-sixth and Thirty-seventh streets.....	3.37
Adams park, Kidder court, Dobson avenue and Seventy-sixth street....	0.82
Douglas Monument park, I. C. R. R., Thirty-fifth street and Groveland park.....	2.02
East End park, Fifty-first street, Fifty-third street and East End avenue	5.20
Lakewood park, Lake avenue, Greenwood avenue and Forty-third street	0.27
Total.....	<u>13.17</u>

RECAPITULATION.

PARKS AND SQUARES UNDER CONTROL OF THE CITY.

	Area in Acres.
North side.....	3.22
West side.....	5.33
South side.....	13.17
Total.....	<u>21.72</u>

LENGTH OF THE LONGEST STREETS OF THE CITY.

	Miles.
WESTERN AVENUE. —Running north and south from Howard street (northern City limits) to 107th street (southern City limits).....	22
HALSTED STREET. —Running north and south from Lake Michigan (northern terminus) to Little Calumet river (southern City limits)....	21½
STATE STREET. —Running north and south from North avenue (foot of Lincoln park) to Blue Island road or 127th street.....	17
MILWAUKEE AVENUE. —Running diagonally from southeast to northwest, from the intersection of West Lake and Canal streets to Nutwood avenue (northern City limits).....	11½
EIGHTY-SEVENTH STREET. —Running east and west from Lake Michigan to West Forty-eighth street (western City limits).....	10½
NORTH AVENUE. —Running east and west from Lake Michigan to West Seventy-second street (western City limits).....	9½
Total combined length of our six longest streets.....	<u>91</u>

Respectfully submitted,

O. L. WULLWEBER,

Superintendent of the Bureau of Maps and Plats.

Book-keeper's Statement.

BOOK-KEEPER'S STATEMENT.

HON. JOSEPH DOWNEY,
Commissioner of Public Works.

DEAR SIR:—I herewith respectfully submit statement in detail of the Receipts and Expenditures of your Department for the year 1896:

WATER FUND.

Balance to credit, Jan. 1st, 1896	\$133,299 83
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RECEIPTS.

Amount collected during the year for current water rents assessed	\$2,108,512 28
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Amount collected during the year for current water rents, meter measure- ments	1,020,381 27
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Acc't Water Permits.

Amount received for taps and permits, also plumbers' licenses and special assess- ment work	27,151 58
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Acc't Meters and Private Work.

Amount received for labor and material used in laying and repairing water supply pipes for elevators and gen- eral supply of water, also for changing location of hydrants and stop cocks and repairing meters	91,229 71
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Carried forward	\$3,247,274 84	\$ 133,299 83
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Brought forward.....	\$3,247,274 84	\$ 133,299 83
<i>Acc't North Pump. Works.</i>		
Amount received for scrap iron, empty barrels, etc...	43 80	
<i>Acc't South Pump. Works.</i>		
Amount received for scrap iron, etc.....	13 50	
<i>Acc't Central Pump. Works.</i>		
Amount received for empty barrels, etc	37 45	
<i>Acc't West Pump. Works.</i>		
Amount received for scrap iron, empty barrels, etc...	25 80	
<i>Acc't Sixth-eighth St. Pump. Works.</i>		
Amount received for empty barrels, etc.....	411 12	
<i>Acc't Wash. Heights Pump. Works.</i>		
Amount received for scrap iron	6 55	
<i>Acc't Lake View Pump. Works.</i>		
Amount received for scrap iron, etc.....	15 75	
<i>Acc't Hydrant Wrenches.</i>		
Amount received as de- posit for loan of hydrant wrenches.....	1,410 00	
Carried forward.....	\$3,249,238 81	\$ 133,299 83

Brought forward	\$3,249,288 81	\$ 133,299 83
<i>Acc't Water Works Shop.</i>		
Amount received for brass borings, lead dross, scrap iron, etc.	1,330 60	
<i>Acc't Water Pipe Extension.</i>		
Amount received for lowering and repairing water pipe.	3,057 67	
Rent of Rookery Lot	35,000 04	
From private parties to lay water mains	78,983 93	
From sale of Water Certificates	166,962 50	
		<u>3,534,573 55</u>
Grand total.		<u>\$3,667,873 88</u>

EXPENDITURES.

<i>Acc't Water Pipe Extension and Water Pipe and Special Castings.</i>	
Labor.	\$ 211,762 89
Water pipe and special castings	106,120 98
Cost of labor and material furnished by Water Works Shops.	65,824 90
Teaming	25,427 64
Hydrant rings, covers, stop-cocks, chambers, etc.	8,294 39
Comp. hydrant basins.	4,226 86
Blasting and excavating.	3,021 47
Coal	713 38
Cement	3,469 07
Horse-shoeing	434 10
Plumbing.	2,154 29
Lumber	3,009 36
Transfers to Special Assessments.	42,163 69
Carried forward	<u>\$ 476,623 02</u>

Brought forward.....	\$ 476,623 02	
Hardware	1,931 95	
Brick	6,687 64	
Interest on water certificates	13,468 67	
Lead	8,503 03	
Oil and grease	301 53	
Cash items	232 24	
Stationery	280 94	
Sand and Gravel	712 16	
Advertising	102 18	
Car tickets	891 72	
Smith's pat. sleeves.....	1,392 50	
Nails	2,595 00	
Cedar blocks	219 00	
Rent.....	210 00	
Repaving	2,742 16	
Telephone service.....	31 25	
Payment of Note Metro- politan National Bank ...	4,635 00	
Sundries—Stationery, print- ing, ice, etc.....	954 99	
	<hr/>	\$ 522,514 98

Water Works Repairs.

Labor.....	\$ 204,585 08	
Cost of labor and material furnished by Water Works		
Shops.....	20,216 46	
Teaming	5,472 82	
Lumber	3,288 77	
Hydrant chambers, castings, etc	2,614 79	
Pipe	348 66	
Water supply furnished by Rogers Park Pumps	7,044 34	
	<hr/>	243,570 92

Acc't Water Office Expense.

Advertising.....	\$ 60 40	
Cash Items	51 35	
Telephone Service	309 96	
	<hr/>	
Carried forward	\$ 421 71	\$ 766,085 90

Brought forward	\$	421 71	\$ 766,085 90
Stamps.....		7,400 00	
Hardware		112 66	
Lumber		46 08	
Stationery, car fare, etc		5,458 79	
Rent, Water Office South Halsted street.....		208 33	
		<hr/>	13,647 57

Acc't Water Fund Proportion of Office Salaries and Expense.

Labor.....	\$	29,628 62	
Stationery, postage, annual report, etc.....		5,050 06	
Hardware		247 19	
Cash items		4,683 08	
Telephone service		326 25	
Car tickets		1,479 85	
Advertising.....		190 30	
Express charges.....		180 08	
Sundries		375 67	
		<hr/>	42,161 10

Acc't Two-Mile Crib.

Labor.....	\$	6,068 89	
Construction.....		240 02	
Tug service.....		4,089 25	
Coal.....		390 00	
Oil, grease and waste		41 75	
Hardware		284 77	
Sundries.....		95 37	
		<hr/>	11,810 05

Acc't Four-Mile Crib.

Labor	\$	3,831 29	
Tug service.....		4,642 25	
Hardware		188 15	
Lumber		20 67	
Oil and grease		22 64	
Coal.....		226 00	
Sundries		50 75	
		<hr/>	8,981 75

Carried forward..... \$ 842,686 37

Brought forward..... \$ 842,686 37

Acc't Lake View Crib.

Labor.....	\$ 2,740 95	
Lumber	109 26	
Hardware	161 62	
Oil and grease	20 95	
Tug service.....	4,530 19	
Cable	1,345 00	
Board of Inspectors	75 88	
Coal.....	130 00	
Sundries	5 48	
		9,119 33

Acc't Hyde Park Crib.

Construction.....	\$ 37,800 00	
Tug service.....	631 25	
Hardware	8 49	
Oil and grease.....	10 34	
Refund on plans.....	160 00	
Cable	1,310 00	
Specifications.....	25 00	
Advertising.....	3 60	
Labor and material.....	2,106 32	
Coal.....	84 50	
Sundries	9 73	
		42,149 23

Acc't North Pump. Works.

Labor	\$ 49,103 26	
Cost of work done by Water		
Work Shops	2,255 93	
Coal	85,243 40	
Repairing boilers and engine	2,188 77	
Oil and grease.....	851 57	
Waste and packing	285 31	
Telephone service	156 25	
Lumber	67 50	
Brick, cement, etc.....	68 55	
Gaskets and valves	124 16	
Paving.....	491 49	
Carried forward	\$ 140,836 19	\$ 893,954 93

Brought forward	\$ 140,836 19	\$ 893,954 93
Boiler compound	196 80	
Hardware	362 01	
Gas	1,149 40	
Cash items	4 50	
Metal polish, soap and soap powder	45 88	
Paint, oil and putty	514 09	
Sprinkling	250 00	
Plumbing	159 93	
Ice	40 62	
Sundries	111 30	
	<hr/>	143,660 72

Acc't South Pump. Works.

Labor	\$ 41,394 89	
Cost of labor and material furnished by Water Works		
Shop	309 78	
Coal	31,057 63	
Repairing boiler, engine, etc.	1,199 87	
Valves	1,258 05	
Gaskets	159 57	
Oil and grease	631 20	
Hardware	484 84	
Steam fitting	2,635 10	
Brick, clay, cement and sand	180 29	
Stationery	13 00	
Gas	808 60	
Waste and packing	636 32	
Paint, oil, putty, etc	74 15	
Lumber	94 49	
Ice	30 38	
Repairing roof	2,226 00	
Redemption tax certificate .	1,299 90	
Sundries	82 86	
	<hr/>	84,576 97

Acc't West Pump. Works.

Labor	\$ 33,946 64	
Coal	38,842 39	
Repairing boiler, engine, etc.	1,651 00	
	<hr/>	
Carried forward	\$ 74,440 03	\$1,122,192 62

Brought forward	\$	74,440 03	\$1,122,192 62
Oil and grease		769 58	
Waste and packing		251 77	
Valves		558 44	
Hose, etc.		177 90	
Lumber		325 06	
Hardware		223 72	
Ice		98 37	
Gas		325 40	
Sand, brick and clay		81 84	
Electric supplies		143 65	
Boiler compound		103 26	
Sundries		111 65	
			77,010 67

*Acc't Norwood Park Pump.
Works.*

Labor	\$	1,617 75	
Coal		512 35	
Oil and grease		25 73	
Hardware		21 01	
Boiler compound		18 55	
Waste and packing		8 47	
Cash items		21 75	
Repairing boiler		2 75	
Sundries		15 81	
			2,244 17

Acc't Central Pump. Works.

Labor	\$	25,624 68	
Repairing boiler, engine, etc.		1,074 41	
Coal		19,133 98	
Oil and grease		936 60	
Waste		479 71	
Metal polish		17 50	
Gas		284 40	
Hardware		429 29	
Fire clay and brick		239 00	
Soap and soap powder		55 22	
Lumber		300 61	
Sundries		231 76	
			48,807 16

Carried forward

\$1,250,854 62

Brought forward.

\$1,250,854 62

*Acc't Sixty-eighth Street
Pump. Works.*

Labor	\$ 34,264 66	
Cost of labor and material furnished by Water Works		
Shop	1,033 06	
Coal	16 00	
Fuel oil	33,772 03	
Hardware	716 57	
Ice	88 75	
Oil and grease	1,048 17	
Waste and packing	685 86	
Cash items	10 90	
Repairing dynamo	129 63	
Air pumps	450 00	
Valves	477 60	
Condenser cone	300 00	
Engine fittings	147 66	
Sand, cement and brick	116 75	
Lumber	53 62	
Cancellation certificate No. 14,869 for receiving well at Seventieth street	642 71	
Special assessment paving boulv'd and Yates avenue.	1,103 42	
Sundries	250 68	
		75,308 07

*Acc't Washington Heights
Pump. Works.*

Labor	\$ 3,206 85	
Coal	1,756 81	
Oil and grease	64 19	
Waste and packing	45 01	
Repairing tank	70 00	
Cash items	11 50	
Fire clay and brick	5 33	
Smoke stack	90 00	
Carried forward	\$ 5,249 69	\$1,326,162 69

Brought forward	\$	5,249 69	\$1,326,162 69
Hardware		41 94	
Sundries		12 06	
Tank		492 45	
			5,796 14

Acc't Lake View Pump. Works.

Labor	\$	25,485 63	
Cost of labor and material furnished by Water Works			
Shop.....		269 04	
Coal.....		21,480 95	
Oil and grease.....		898 80	
Hardware		440 99	
Gas.....		400 10	
Telephone service.....		125 00	
Waste and packing.....		268 17	
Fire clay and brick.....		39 75	
Boiler compound.....		72 80	
Steam fitting.....		438 10	
New pump and repairing old one		1,716 73	
Dunham Towing Co., laying pipe		2,488 66	
Removing 620 feet inlet pipe		775 00	
Diver		250 00	
Cash item		5 28	
Electric supplies		22 90	
Repairing engine, boilers, etc.		1,453 28	
Valves, etc.....		296 34	
Sundries.....		308 59	
			57,236 11

Acc't Southwest Pump. Works.

Purchase site	\$	11,500 00	
Examining title		27 00	
Advertising.....		6 40	
			11,533 40

*Acc't Northwest Pump.
Works.*

Advertising		76 30	
Carried forward.....			\$1,400,804 64

Brought forward \$1,400,804 64

Acc't Water Meter and Private Works.

Labor	\$ 50,181 26	
Cost of labor and material furnished by Water Works		
Shop	1,374 04	
Meters	16,399 65	
Rebates on deposits for setting meters, etc.	3,945 59	
Meter covers	773 56	
Flanges, nipples, valves, etc.	1,540 63	
Taps	1,406 93	
Rebates on deposit for use of water	1,230 23	
Lumber	453 83	
Hardware	81 63	
Plumbing	91 14	
Sundries	156 70	
		77,835 18

Acc't Water Works Shop.

Labor	\$ 49,295 59
Brass castings	25,265 62
Iron and iron castings	4,673 62
Repairing boiler	238 99
Hardware	1,896 51
Valves	6,599 39
Coal	2,086 67
Gas	217 40
Lead	1,185 13
Waste and packing	197 66
Oil and grease	75 14
Steel	836 51
Lumber	30 22
Paint, oil, putty, etc.	60 08
Cash items	7 93
Stationery	28 86
Brick, sand and cement	38 03
Sundries	102 48
	\$ 92,835 83

Carried forward \$ 92,835 83 \$1,478,439 82

Brought forward	\$	92,835 83	\$1,478,439 82
Amount transferred to water pipe extension, pumping station, etc.		92,835 83	
<i>Acc't Northwest Land Tunnel.</i>			
Labor		37,851 43	
Contractors		369,138 43	
Cost of labor and material furnished by Water Works			
Shop		245 66	
Hardware		398 16	
Lumber		74 77	
Stationery		86 04	
Rent		1,185 00	
Inspecting and repairing in- struments		307 35	
Gas		15 90	
Damages account blasting in tunnel		1,623 00	
Testing machine		250 00	
Site for Northwest Pumping Station		100 00	
Taxes on pumping site		185 52	
Telephone service		89 30	
Purchase land		13,400 00	
Sundries		137 98	
		<hr/>	424,888 54
<i>Acc't Lake View Tunnel.</i>			
Labor	\$	2,993 95	
Contractors		82,322 96	
Board for Inspectors		152 12	
Diving		335 75	
Filling shaft		405 00	
Sundries		7 17	
		<hr/>	86,216 95
<i>Acc't Western Ave. Tunnel.</i>			
Labor	\$	1,816 27	
Iron piling		56 57	
		<hr/>	1,872 84
Carried forward			<hr/> \$1,991,418 15

Brought forward..... \$1,991,418 15

Acc't Water Permits.

Labor.....	\$ 48,096 04	
Mueller drills and fixtures ..	521 43	
Tap machine and fixtures...	2,890 10	
Hardware	99 89	
Ferrules.....	5,372 24	
Stationery	191 39	
Sundries	33 24	
	<hr/>	57,204 33

Acc't Sixty-eighth Street Tunnel Extension.

Labor.....	\$ 3,763 26	
Contractors	33,870 89	
Constructing bridge	293 00	
Hardware	23 80	
Cable	35 00	
Building breakwater	21,669 17	
Sundries	120 03	
	<hr/>	59,775 15

Acc't Northeast Lake Tunnel.

Labor.....	\$ 9,129 26	
Contractor	229,607 40	
Refund on deposits for plans	190 00	
Advertising	26 91	
Cash item	16 80	
Sundries	18 40	
	<hr/>	238,988 77

Acc't Water Office Salaries.

Collecting water rents assessed, inspectors, assessors and draughtsmen.....	206,242 15
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Acc't New Repair Shop.

Labor.....	\$ 560 00	
Contractors.....	19,520 00	
Site.....	23,760 00	
	<hr/>	
Carried forward	\$ 43,840 00	\$2,553,628 55

Brought forward....	\$ 43,840 00	\$2,553,628 55
Building dock.....	1,800 00	
Setting glass.....	726 00	
Teaming	379 16	
Sundries	430 09	
	<hr/>	47,175 25

Other Expenses.

Water loan interest.....	\$ 261,305 23	
Water loan certificates.....	363,462 50	
Hyde Park bonds.....	9,000 00	
Town of Lake bonds.....	15,000 00	
Refunding advances to lay water pipe.....	83,573 82	
Refund for hydrant wrenches,	1,235 00	
Miscellaneous items	1,604 07	
Refunding duplicate pay- ments of water tax, etc. .	6,506 00	
	<hr/>	741,886 62

Total expenses.....	\$3,342,490 42
Balance to credit of water fund, January 1, 1897	325,382 96
	<hr/>

\$3,667,873 38

SEWER FUND

RECEIPTS.

Amount received from house drain permits.....	\$ 29,476 19	
Amount received from drain layers' licenses.....	2,318 00	
Amount appropriated by City Council for repairing and cleaning sewers and catch-basins.....	\$ 125,000 00	
Amount appropriated for sewer office salaries.....	25,040 00	
Amount appropriated for extension of Seventy-third street pile outlet.....	1,645 00	
Amount appropriated for extension of Belmont avenue pile outlet.....	1,500 00	
Amount appropriated for Sixty-ninth street sewer pump.....	8,631 00	
Amount appropriated for Seventieth street sewer pump.....	8,015 00	
Amount appropriated for Seventy-third street sewer pump.....	8,015 00	
Amount appropriated for Ninety-fourth street sewer pump.....	4,080 00	
Amount appropriated for Woodlawn sewer pump...	8,415 00	
Amount received from private parties for labor and material	11,054 09	
Received from special assessment for work and inspection.....	110,139 71	
	<hr/>	311,534 80
Total receipts.....		<hr/> <hr/> \$ 343,328 99

EXPENSES.

Sewers North Division	\$ 1,457 67
Sewers South Division	4,048 15
Sewers West Division	4,578 95
House drains	28,197 61
Cleaning sewers and catch- basins	96,901 65
Repairing sewers and catch- basins	46,247 32
Intersections	44,111 57
Sewer office expense	934 59
Sewer office salaries	24,568 82
Seventy-third street pile out- let	1,595 00
Belmont avenue pile outlet..	1,385 00
Salaries of inspectors (spe- cial assessment work)....	41,340 72
Miscellaneous items	4,692 36

OTHER EXPENSES.

Sixty-ninth street sewer pump	10,317 69
Seventieth street sewer pump	7,817 99
Seventy-third street sewer pump	7,043 08
Ninety-fourth street sewer pump	3,235 79
Woodlawn sewer pump	10,496 97
Kensington sewer pump	2 25

	\$ 338,973 18
Transferred to General Fund	4,355 81
Total	\$ 343,328 99

APPROPRIATION FUND.

RECEIPTS.

Acc't Improved Streets.

Amount appropriated by City

Council \$ 175,000 00

Other receipts 22,160 98

\$ 197,160 98*Acc't Unimproved Streets.*

Amount appropriated by City

Council..... \$ 125,000 00

Other receipts 823 44

125,823 44*Acc't Scavenger Service.*

Amount appropriated by City

Council \$ 345,000 00

Other receipts 4,837 15

349,837 15*Acc't Cleaning Improved and
Macadam Streets.*

Amount appropriated by City

Council..... \$ 225,000 00

Other receipts 11,538 46

236,538 46*Acc't Ward Inspectors.*

Amount appropriated by City

Council..... 34,000 00

Acc't Removal Dead Animals.

Amount appropriated by City

Council..... 37,500 00

*Acc't Street and Alley Clean-
ing, Office Salaries.*

Amount appropriated by City

Council 9,500 00

Carried forward \$ 990,860 03

Brought forward		\$ 990,860 03
<i>Acc't Public Buildings.</i>		
Amount appropriated by City Council.....	\$ 40,000 00	
Receipts from Public Library, etc.....	4,034 83	
	<hr/>	44,034 83
<i>Acc't Janitors' Salaries.</i>		
Amount appropriated by City Council.....	\$ 43,748 20	
Other receipts	1,121 25	
	<hr/>	44,869 45
<i>Acc't Bridge Telephone Operators' Salary.</i>		
Amount appropriated by City Council		8,880 00
<i>Acc't Public Parks.</i>		
Amount appropriated by City Council.....	\$ 11,500 00	
Balance from 1895.....	1,264 78	
	<hr/>	12,764 78
<i>Acc't House Moving Permits.</i>		
Amount received from permits.		1,682 00
<i>Acc't Street Permits.</i>		
Amount received for work on permits.....		51,559 74
<i>Acc't Special Assessments.</i>		
Amount received from special assessment fund for cost of making and collecting special assessments, salaries and office expenses		244,941 40
	<hr/>	
Carried forward		\$1,399,092 23

Brought forward		\$1,399,092 23
<i>Acc't Street Lamp Repairs.</i>		
Amount appropriated by City Council		40,000 00
Amount received from special assessments, gas company, judgments, etc.		12,663 72
<i>Acc't Street Department Office Expense.</i>		
Amount appropriated by City Council	\$ 1,000 00	
Other receipts	2 50	
	<hr/>	1,002 50
<i>Acc't City Engineer's Office Expense.</i>		
Amount appropriated by City Council		500 00
<i>Acc't Map Office Expense.</i>		
Amount appropriated by City Council	\$ 1,000 00	
Other receipts	1,583 05	
	<hr/>	2,583 05
<i>Acc't Proportional Office Salaries.</i>		
Amount appropriated by City Council		14,245 00
<i>Acc't Street Department Office Salaries.</i>		
Amount appropriated by City Council		15,630 00
<i>Acc't City Engineer's Office Salaries.</i>		
Amount appropriated by City Council		12,475 00
Carried forward		<hr/> \$1,498,191 50

Brought forward		\$1,498,191 50
<i>Acc't Proportional Office Expense.</i>		
Amount appropriated by City Council		1,750 00
<i>Acc't Chicago Harbor.</i>		
Amount appropriated by City Council		5,670 00
<i>Acc't Street Opening and Obstruction Inspectors' Salaries.</i>		
Amount appropriated by City Council		7,200 00
<i>Acc't Bridge Repairs.</i>		
Amount appropriated by City Council	\$ 100,000 00	
Other receipts	13,201 53	
	<hr/>	113,201 53
<i>Acc't Vessel Despatcher's Salary.</i>		
Amount appropriated by City Council		2,250 00
<i>Acc't Steam Roller Engineer's Salary.</i>		
Amount appropriated by City Council	\$ 1,800 00	
Amount received for use of steam roller	1,195 14	
	<hr/>	2,995 14
<i>Acc't Bridge Tenders' Salaries.</i>		
Amount appropriated by City Council		88,415 00
Carried forward		<hr/> \$1,719,673 17

Brought forward		\$1,719,673 17
<i>Acc't Fullerton Avenue Conduit.</i>		
Amount appropriated by City Council	\$ 15,475 00	
Other receipts	11 80	
	<hr/>	15,486 80
<i>Acc't Canal Pump. Station.</i>		
Amount appropriated by City Council	\$ 53,655 00	
Other receipts	42 20	
	<hr/>	53,697 20
<i>Acc't Fullerton Ave. Bridge.</i>		
Amount appropriated by City Council	\$ 2,500 00	
Balance from 1895	1,503 33	
	<hr/>	4,003 33
<i>Acc't Special Deposits.</i>		
Amount received for inspection		4,517 70
<i>Acc't North Halsted Street Bridge.</i>		
Amount appropriated by City Council	\$ 75,000 00	
Other receipts	13,556 25	
	<hr/>	88,556 25
<i>Acc't Stock Yards Viaduct.</i>		
Receipts		82,912 72
<i>Acc't Bridgeport Lock.</i>		
Amount appropriated by City Council		4,000 00
<i>Acc't Public Library.</i>		
Receipts from extras		1,036 25
Carried forward		<hr/> \$1,973,883 42

Brought forward		\$1,973,883 42
<i>Acc't Street Privileges.</i>		
Receipts from Street Privileges		6,266 25
<i>Acc't Diversey Ave. Bridge.</i>		
Amount appropriated by City Council	\$ 17,000 00	
Balance from 1895	13,566 01	
	<hr/>	30,566 01
<i>Acc't Map Dept. Salary.</i>		
Amount appropriated by City Council		14,940 00
<i>Snow Acc't.</i>		
Receipts from dumps, etc . . .		10,613 19
<i>Acc't Public Benefits.</i>		
Amount appropriated by City Council		1,000 00
<i>Acc't Improvement East Side of La Salle Street.</i>		
Amount appropriated by City Council		1,083 73
<i>Acc't Building Dock.</i>		
Amount appropriated by City Council	\$ 2,000 00	
Other receipts	1,543 23	
	<hr/>	3,543 23
<i>Acc't Dredging Permits.</i>		
Amount appropriated by City Council	\$ 5,000 00	
Other receipts	1,881 25	
	<hr/>	6,881 25
Carried forward		<hr/> \$2,048,777 08

Brought forward \$2,048,777 08

Acc't Chittenden Bridge.

Amount appropriated by City

Council \$ 1,500 00

Other receipts 5 00

1,505 00

Acc't Unpaid Pay Rolls.

Balance from 1895 \$ 15,947 80

Other receipts 47 25

15,995 05

*Acc't Removal Rock from the
West Fork of the South
Branch of the Chicago
River.*

Amount appropriated by City

Council

15,000 00

Acc't Sidewalk Repairs.

Amount appropriated by City

Council \$ 60,000 00

Other receipts 9,777 21

69,777 21

Acc't Smallpox Hospital.

Balance appropriated 1895. \$ 57,735 81

Other receipts 161 36

57,897 17

From general fund, etc.

31,642 75

New Bath House.

Balance appropriated 1895 .

11,516 24

Total receipts.....

\$ 2,252,110 50

EXPENSES.

Acc't Improved Streets.

Labor \$ 144,376 11

Labor and material 2,171 40

Lumber 2,680 90

Paving blocks 17,167 62

Carried forward..... \$ 166,396 03

Brought forward	\$ 166,396 03	
Crushed stone	11,928 75	
Tar, sand, cement and gravel	7,260 04	
Car tickets	1,939 00	
Rent.....	1,650 00	
Cash items	173 75	
Hardware	270 59	
Electric light service during 1895.....	3,781 22	
Improvement to south ap- proach to Rush street bridge	1,249 62	
Repaving.....	1,236 95	
Coal.....	87 85	
Sundries	332 59	
		\$ 196,306 39

Acc't Unimproved Streets.

Labor.....	\$ 98,761 08	
Labor and material.....	4,588 85	
Lumber	5,633 20	
Crushed stone	9,446 17	
Hardware	1,717 39	
Coal	229 50	
Sand, gravel and tar.....	654 79	
Rent.....	500 00	
Electric light service during 1895.....	1,478 11	
Car tickets.....	144 21	
Paving blocks.....	2,338 50	
Sundries	79 80	
		125,621 60

Acc't Sidewalk Repairs.

Labor.....	\$ 51,910 59	
Labor and material.....	2,573 36	
Lumber	13,744 23	
Hardware	1,540 05	
Other expenses	750 25	
		70,518 48
Carried forward. ...		\$ 392,446 07

Brought forward

\$ 392,446 07

Acc't Bridge Repairs.

Labor	\$ 48,663 22
Labor and material.....	5,506 39
Lumber	20,087 70
Teaming	449 40
Oil and grease	836 73
Coal	11,749 47
Electric power.....	4,334 43
Iron material	5,225 96
Hardware	2,230 90
Repairing boilers.....	1,599 29
Steel castings	1,248 90
Paving blocks.....	752 10
Gravel, cement, brick and clay	235 55
Iron work on Milwaukee ave. viaduct	972 00
Dredging, driving piles and repairing Ashland ave. bridge	11,193 90
Labor and iron work on So. Halsted street viaduct....	2,224 04
Driving piles, etc., at sundry bridges.....	7,935 80
Paving	1,180 59
Repairing Fifth ave.viaduct.	1,475 00
Paint, oil, etc	1,066 72
Labor and material on Van Buren street viaduct	875 83
Stone	542 77
Stationery	218 05
Waste, packing, etc	92 24
Cash items	134 07
Electric supplies.....	179 45
Repairing motor.....	666 25
Gas.....	202 60
Plumbing.....	141 91
Valves, gaskets, etc.....	75 65
Sundries	698 57

132,795 48

Carried forward.....

\$ 525,241 95

Brought forward		\$ 525,241 95
<i>Acc't Street Lamp Repairs.</i>		
Labor	\$ 30,423 94	
Repairing street lamps	12,388 86	
Glass and lamp fittings	9,616 72	
Lamp posts	202 50	
Telephone service	60 44	
Other expenses	20 44	
	<hr/>	52,712 90
<i>Acc't Diversey Ave. Bridge.</i>		
Labor	\$ 290 07	
Construction	30,706 43	
Inspecting and Testing		
Material	140 87	
Hardware	91 11	
Sundries	18 25	
	<hr/>	31,246 73
<i>Acc't Fullerton Ave. Bridge.</i>		
Labor	\$ 475 56	
Painting	265 00	
Sundries	66	
	<hr/>	741 22
<i>Acc't North Halsted Street Bridge.</i>		
Labor	\$ 5,337 21	
Construction	101,713 02	
Building foot bridge	475 00	
Services of civil engineer . . .	2,450 00	
Advertising	226 60	
Royalty	750 00	
Specifications	80 30	
Refunded on plans	25 00	
Other expenses	840 27	
	<hr/>	111,897 40
Carried forward		<hr/>
		\$ 721,840 20

Brought forward \$ 721,840 20

Acc't Stock Yards Viaduct.

Construction	\$ 79,105	
Account raising building . . .	395 00	
Labor	3,980 58	
Gas	49 20	
Specifications	56 50	
Advertising	23 85	
Land damages	900 00	
Other expenses	63 34	
	<hr/>	84,573 72

Acc't Fullerton Avenue Conduit.

Labor	\$ 7,351 61	
Coal	4,180 22	
Gas	305 00	
Oil and grease	268 64	
Waste and packing	56 93	
Hardware	93 52	
Boiler compound	73 76	
Other expenses	341 98	
	<hr/>	12,671 66

Acc't Canal Pump. Works.

Labor	\$ 26,991 92	
Labor and material	1,263 33	
Repairing boiler and fittings for engine, etc.	5,849 19	
Coal	34,214 39	
Oil and grease	1,395 01	
Blacksmithing	358 20	
Lumber	302 35	
Steam fitting	1,041 27	
Cement, brick, clay, etc. . . .	408 22	
Boiler compound	154 37	
Other expenses	276 80	
	<hr/>	72,255 05

Carried forward \$ 891,340 63

Brought forward \$ 891,340 63

Acc't Special Assessments.

Salaries of clerks, engineers, rodmen, etc.	\$ 122,959 98	
Services as Commissioners..	19,930 02	
Clerk of County Court	26,995 30	
Real estate expert	20,871 80	
Legal services	7,532 36	
Advertising	4,680 98	
Collecting special assess- ments	35,859 82	
Stationery, car-fare, printing, etc	4,293 01	
Cancellation tax certificate .	564 63	
Cash items	998 09	
Telephone service	248 07	
		244,934 06

Acc't Smallpox Hospital.

Labor	\$ 4,608 08	
Construction	62,507 87	
Heating and ventilating	9,340 00	
Sewerage work	1,511 00	
Plumbing	5,180 95	
Electric wiring, etc	1,752 50	
Furnace	400 00	
Laundry machine	1,735 00	
Insurance	375 00	
Blue prints, etc	43 64	
Advertising	12 38	
Dynamo engine	2,120 61	
Electric fixtures	493 00	
		90,080 03

Acc't Chicago Harbor.

Salaries	\$ 3,671 51	
Dredging	1,993 85	
Other expenses	29 64	
		5,695 00
Carried forward		\$1,232,049 72

Brought forward \$1,232,049 72

Acc't Steam Roller.

Labor	\$ 2,352 72	
Coal	165 40	
Fittings	162 97	
Oil and grease	17 36	
Hardware	13 64	
Cash item	7 25	
Sundries	5 42	
	<hr/>	2,724 76

Acc't Street Cleaning.

Street cleaning by contract..	\$ 161,586 11	
Street cleaning by Bureau ..	102,112 61	
Stationery	579 80	
Hardware	548 27	
Snow plow	750 00	
Brooms	669 63	
Telephone service.....	123 75	
Cash items	86 40	
Car tickets	181 27	
Other expenses.....	1,998 90	
	<hr/>	268,636 74

Acc't Garbage.

Labor.....	\$ 29,128 09	
Removal garbage, ashes, etc.	283,443 99	
	<hr/>	312,572 08

Acc't Street Permits.

Street Permits.....		30,428 48
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Acc't New Bath House.

Construction	\$ 5,425 00	
Plumbing	680 00	
Heating.....	400 00	
Stationery, advertising, etc..	45 22	
	<hr/>	6,550 22

Acc't Dredging Permits.

Labor.....	\$ 6,706 75	
Other expenses	174 50	
	<hr/>	6,881 25

Carried forward..... \$1,859,843 25

Brought forward		\$1,859,843 25
<i>Acc't Removal Dead Animals.</i>		
Removal Dead Animals		37,500 00
<i>Acc't Street Privileges.</i>		
Services, etc.....		4,543 32
<i>Acc't City Hall.</i>		
Coal.....	\$ 24,188 02	
Repairing boilers, engines, etc.....	1,020 56	
Repairing elevators.....	675 38	
Steam fitting.....	1,806 38	
Hardware	842 55	
Oil and grease.....	665 45	
Waste and packing	425 99	
Ice	677 12	
Soap, etc.....	298 49	
Brooms, brushes, etc.....	382 18	
Labor and material.....	5,551 66	
Electric supplies	439 31	
Decorating	315 00	
Brick, sand and cement	308 02	
Electric light service.....	695 98	
Lumber	422 12	
Repairing dynamo.....	83 50	
Telephone service.....	33 75	
Re-lettering signs.....	174 00	
Lamps, etc	91 35	
Paint, putty and oil	128 09	
Cash items	70 34	
Other expenses.....	933 67	
		<hr/> 40,228 91
<i>Acc't Street and Alley Clean- ing, Office Salary.</i>		
Office salaries.....		9,649 14
<i>Acc't Ward Inspectors.</i>		
Ward inspectors.....		34,172 57
Carried forward.....		<hr/> \$1,985,937 19

Brought forward		\$1,985,937 19
<i>Acc't Public Parks—Washington Park.</i>		
Labor	\$ 1,204 55	
Other expenses	1 01	
	<hr/>	1,205 56
<i>Acc't Aldine Square.</i>		
Labor	\$ 932 40	
Plants, trees, etc.	170 01	
	<hr/>	1,102 41
<i>Acc't Douglas Monument Park.</i>		
Labor	\$ 778 01	
Trees, plants, etc.	221 99	
	<hr/>	1,000 00
<i>Acc't Ellis Park.</i>		
Labor	\$ 888 29	
Plants, seeds, etc.	79 09	
Other expenses	32 62	
	<hr/>	1,000 00
<i>Acc't Shedd's Park.</i>		
Labor, etc.		531 90
<i>Acc't Congress Park.</i>		
Labor	\$ 400 00	
Cutting and setting curb stones	948 58	
	<hr/>	1,348 58
<i>Acc't Lakewood Park.</i>		
Labor	\$ 169 00	
Trees, seeds, etc.	61 00	
	<hr/>	230 00
<i>Acc't Gross Park.</i>		
Labor, etc.		400 00
Carried forward		<hr/> \$1,992,755 64

Brought forward		\$1,992,755 64
<i>Acc't Oak Park.</i>		
Labor, etc.....		833 23
<i>Acc't Green Bay Park.</i>		
Labor, etc.		600 00
<i>Acc't Jefferson Park.</i>		
Labor, etc		400 00
<i>Acc't Bickerdike Park.</i>		
Labor.....	\$	330 00
Seeds, plants, etc.....		94 87
		<hr/> 424 87
<i>Acc't Kedzie Park.</i>		
Labor, etc.....		410 00
<i>Acc't Norwood Park.</i>		
Labor.....	\$	22 45
Trees, seeds, etc.....		352 50
Other expenses		27 30
		<hr/> 402 25
<i>Acc't East End Park.</i>		
Labor.....	\$	400 00
Other expenses.....		88 45
		<hr/> 488 45
<i>Acc't De Kalb Square.</i>		
Labor.....	\$	143 00
Urns, fence and fountain ...		514 48
Plumbing.....		65 00
		<hr/> 722 48
<i>Acc't Holstein Park.</i>		
Labor, etc.....		400 00
		<hr/>
Carried forward.....		\$1,997,436 92

Brought forward		\$1,997,486 92	
<i>Acc't Eldred Park.</i>			
Labor, etc.		400 00	
<i>Acc't Irving Park.</i>			
Labor, etc.		400 00	
<i>Acc't Bridgeport Lock.</i>			
Services of lock tender.		2,600 00	
<i>Acc't Building Dock.</i>			
Labor.	\$	3,464 48	
Other expenses.		51 25	
		<hr/>	3,515 73
<i>Acc't Salaries.</i>			
Janitors' salaries.	\$	47,602 65	
Bridge Telephone Operators		6,554 40	
House-moving Clerks.		1,567 00	
Street Depart't office salaries		15,354 51	
City Engineer's office salary.		12,117 61	
Map Department salary.		14,940 00	
Proportional office salary.		14,209 36	
Street opening and obstruction inspectors' salary.		6,980 34	
Vessel Despatcher's salary.		2,250 00	
Bridge Tenders' salary.		88,415 00	
Public Library		1,036 25	
Deposit for inspection		4,113 75	
		<hr/>	215,140 87
<i>Acc't Miscellaneous Expenses.</i>			
Street Department, office expense	\$	773 62	
City Engineer's office expense		453 65	
Map Department expense		323 73	
Proportional office expense.		269 11	
Improvement east side of La Salle street		1,033 23	
		<hr/>	
Carried forward.	\$	2,853 34	\$2,219,493 52

Brought forward	\$	2,853 34	\$2,219,493 52
Public benefits		391 22	
Removal of rock from the west fork of the S. branch of the Chicago river.....		15,000 00	
Unpaid pay rolls		14,365 08	
		<hr/>	32,609 64
Total.....			\$2,252,103 16
Balance to credit of special fund			7 34
		<hr/>	<hr/>
			\$2,252,110 50

SPECIAL DEPOSIT FUND.

Balance carried forward from 1895	\$	76,171 83
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RECEIPTS.

Suspense account.....	\$	417 22
Street permit depositors....		133,260 75
Corporation account.....		62,330 27
Badge account		731 00
		<hr/>
Total credits.....	\$	272,911 07

EXPENSES.

Suspense account.....	\$	2,694 85
Street permit depositors....		155,437 06
Corporation account.....		62,115 19
Badge account		25 00
		<hr/>
Total expenses.....		220,272 10
		<hr/>
Balance Jan. 1, 1897...		<hr/>
		\$52,638 97

TRIAL BALANCE.

LEDGER, DEPARTMENT OF PUBLIC WORKS, CHICAGO,
DECEMBER 31, 1896.

	<i>Dr.</i>	<i>Cr.</i>
Water fund	\$ 325,382 96	
Water Works	25,348,192 98	
Water Works, income.....		\$42,110,042 28
Water fund, general taxes.....		2,713,878 53
Annexed territory.....		197,525 48
Water loan bonds, 6 per cent.....		132,000 00
Water loan bonds, 4 per cent.....		3,191,500 00
Water loan bonds, $3\frac{5}{10}\%$ per cent.....		332,000 00
Water loan bonds, $3\frac{1}{2}\%$ per cent.....		333,500 00
Water loan bonds, canceled.....		1,516,900 00
Water loan certificates, 5 per cent....		1,500 00
Water loan, interest	7,924,820 65	
Water loan bonds, Hyde Park 5 per cent.		50,000 00
Water loan bonds, Town of Lake 5 per cent		90,000 00
Water Works, expense and repair acc't.	17,547,330 19	
Water loan bonds, Lake View 4 per cent.		50,000 00
Water loan bonds, Lake View 5 per cent.		23,000 00
J. W. Lyons, cashier water office	2,000 00	
Meter Department, stock account.	6,748 32	
Water Works shop, stock account	13,202 89	
Tapping Department, stock account....	4,015 90	
Advances to lay water pipe		427,500 78
Hydrant wrenches.....		2,346 82
Annexed territory, sewers		2,614,224 75
Sewers constructed by Special Assessments		6,738,613 96
Sewers, North Division.....	2,773,789 50	
Sewers, South Division.....	7,061,108 72	
Sewers, West Division	7,470,608 05	
Carried forward.....	\$68,477,200 16	\$60,524,532 60

Brought forward	\$68,477,200 18	\$60,524,532 60
Sewerage loan bonds, 4 per cent.....		2,117,500 00
Sewerage loan bonds, 7 per cent.....		13,000 00
Sewerage loan bonds, 4½ per cent.....		489,500 00
Sewerage loan bonds canceled.....		380,000 00
Sewerage fund, general taxes and construction		4,933,532 48
Sewerage maintenance account.....		27,117 70
Sewer stock account	7,982 62	
Appropriation fund.....		1,492 66
Special assessments		7 34
John Freeman, cashier.....	1,500 00	
Street lamp fund	2,920 49	
Gasoline street lamps.....	158,899 10	
Gas street lamps		161,619 59
Special deposit fund.....	52,638 97	
Suspense account		4,855 79
Street Engineers		134 00
Street permit depositors.....		11,741 52
Advances to construct sewers.....		12,431 37
Corporation account		22,770 29
Badge account		706 00
	<u>\$ 68,700,941 34</u>	<u>\$ 68,700,941 34</u>

Respectfully submitted,

LOUIS E. GOSSELIN,
Book-keeper Dept. of Public Works.

APPENDIX.

APPENDIX.

For the convenience of the Department of Public Works and officials of the City the following has been added to this report, forming an index with an extract of the franchises granted by the City Council to the various Street Railway Companies, including surface and elevated roads, and also the ordinances passed from time to time extending lines and granting other privileges to such roads, covering a period commencing March 4, 1837, and ending April 1, 1897 :

CALUMET ELECTRIC RAILWAY COMPANY.

(See Map, Page 364.)

For railway on South Chicago avenue, from Seventy-fifth street to Ninety-fifth street; also on Ninety-third street, Ninety-fifth street and Washington avenue; also to the "Nickel Plate" shops, and on Cottage Grove avenue, Michigan avenue, Kensington avenue, Howard street, One Hundred and Fifteenth street and Stony Island avenue; also on Madison avenue, Sixty-seventh street, Cottage Grove avenue, alley in Block 9, Cornell, and on Michigan avenue, One Hundred and Sixteenth street. Passed January 18th, 1892; twenty years.

Same: Street railway on Seventy-fifth street, from Chicago, Rock Island & Pacific Railway to Stony Island avenue. Passed July 25th, 1892; twenty years.

Same: Street railway on Ninety-first street, Stony Island avenue, One Hundred and Nineteenth street, One Hundred and Fifteenth street, Kensington avenue, Noble court, Michigan avenue, Woodlawn avenue, Drexel avenue, and for subway under the I. C. R. R. at Ninety-third street. Passed March 6, 1893; twenty years.

Same: To extend railway on One Hundred and Nineteenth street, from Emerald avenue west to Halsted street; thence south on Halsted street to One Hundred and Twenty-first street. Passed February 18, 1895; twenty years.

Same: Passed November 11, 1895, to continue during life of ordinances heretofore granted to said Company, for extending. Commencing at South Chicago avenue and Eighty-third street, east on Eighty-third street to Bond avenue, north and northwest on Bond

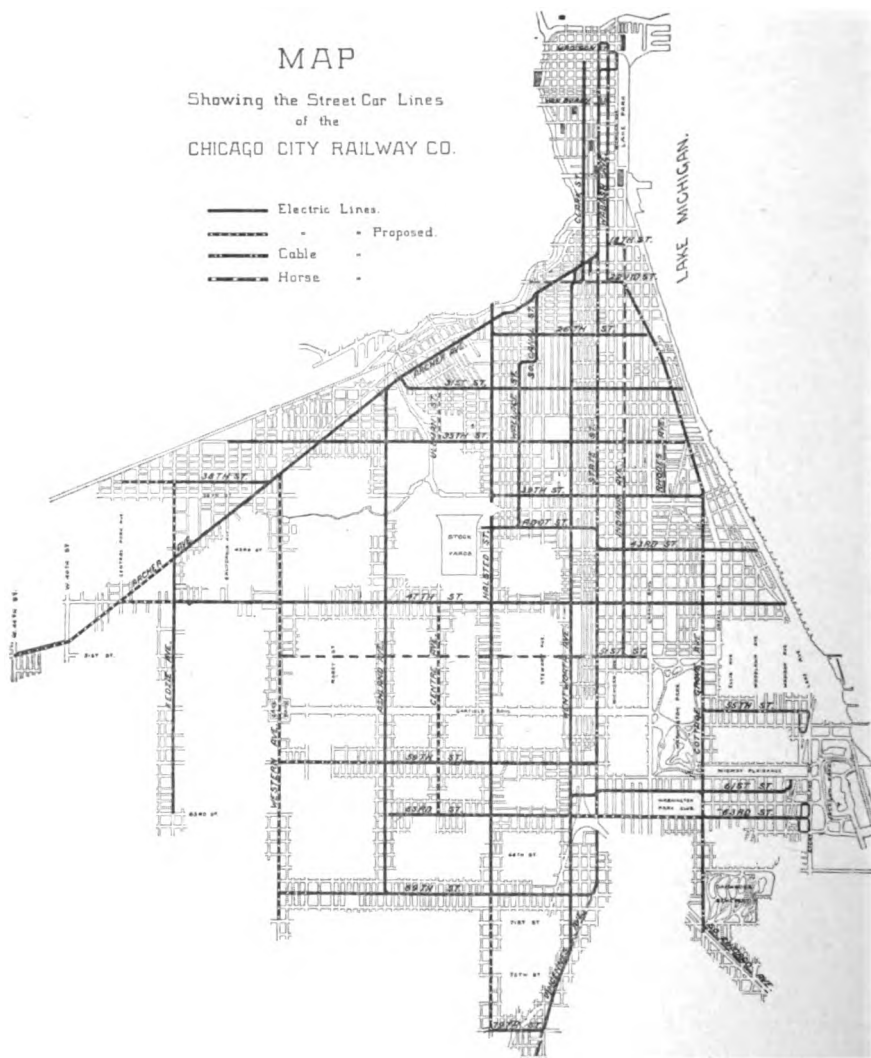


avenue to Cheltenham place, northeast on Cheltenham place to Lake avenue (extended), northwest to Lake avenue (extended) 840 feet to Seventy-eighth street, southeast on Seventy-eighth street to Railroad avenue, northwest on Railroad avenue to Seventy-third street, on Seventy-third street to Stony Island avenue; also beginning at Ninety-third street and Erie avenue, thence north on Erie avenue to Eighty-seventh street, thence northwest on Baltimore avenue to Eighty-third street, making connection with tracks herein provided for, etc.

Same: Erie avenue, from Ninety-third street to South Chicago avenue. Ordinance passed June 29, 1896, p. 558; twenty years.

Same: Beginning at the intersection of South Chicago avenue and Seventy-fifth street, thence southeasterly along South Chicago avenue to Ninety-fifth street, thence east along Ninety-fifth street to Avenue K.

Also commencing at the intersection of Ninety-third street with Stony Island avenue, thence west on Ninety-third street to its intersection with Washington avenue, thence south on Washington avenue to the right of way of the Chicago & Western Indiana Railroad Company, thence westerly along and across the alleys in Block ten (10) of the Calumet and Chicago Canal & Dock Company subdivision of that part of the southeast quarter (S. E. $\frac{1}{4}$) of Section two (2), Township 37 north, Range 14 east, to the east line of the New York, Chicago & St. Louis Railroad and north of Chicago & Western Indiana Railroad, thence on private property to west line of New York, Chicago & St. Louis Railroad Company's shop grounds, thence northwesterly to Ninety-third street, thence west on Ninety-third street to Cottage Grove avenue, thence north on Cottage Grove avenue to Seventy-second street. Also south on Cottage Grove avenue from Ninety-third street to Ninety-fifth street, and west on Ninety-fifth street from Cottage Grove avenue to South Park avenue, extended. Also commencing at the corner of Ninety-third street and Cottage Grove avenue, thence west on Ninety-third street to South Park avenue, extended. Thence southerly on property of the Calumet and Chicago Canal & Dock Company to Ninety-fifth street, thence west on Ninety-fifth street to State street, and also commencing at the intersection of Ninety-fifth street and Michigan avenue, thence south on Michigan avenue to Kensington avenue, thence east on Kensington avenue to Howard street, thence north on Howard street to One Hundred and Fifteenth street, thence west on One Hundred and Fifteenth street to Michigan avenue. Also commencing at the intersection of Ninety-third street and Stony Island avenue, south on



Stony Island avenue to One Hundred and Third street. Also commencing at the intersection of South Chicago avenue with Madison avenue, thence north on Madison avenue to Sixty-seventh street, thence east on Sixty-seventh street to Stony Island avenue. Also from Cottage Grove avenue across Lot forty-one (41), in Block nine (9), Cornell, to an alley south of and parallel to the right of way of the Pittsburgh, Ft. Wayne & Chicago Railway Company in said Block nine (9), Cornell, thence along said alley to Lot one (1), Block nine (9), Cornell.

Also commencing at the corner of Michigan avenue and Kensington avenue, thence south on Michigan avenue to One Hundred and Nineteenth street, thence west on One Hundred and Nineteenth street to Wentworth avenue, thence north on Wentworth avenue to One Hundred and Sixteenth street, thence east on One Hundred and Sixteenth street to Michigan avenue.

CALUMET ELECTRIC AND SOUTH CHICAGO CITY RAILWAY COMPANIES.

(See Map, Page 364.)

For street railway on Stony Island avenue, Sixty-seventh and Seventy-ninth streets. Passed October 10, 1892; twenty years.

CHICAGO CITY RAILWAY COMPANY.

(See Map, Page 366.)

First incorporated February 14, 1859, for twenty-five years. Charter renewed February 6, 1865, for ninety-nine years. First franchise granted August 16, 1858, to Henry Fuller, Franklin Parmalee and Liberty Bigelow, et al.; on State street, Ringgold place, Cottage Grove avenue, Archer road and Madison street, for twenty-five years. May 23, 1859, ordinance for railway in the South and West Divisions, viz.: Lake street to the present or future City limits; Randolph street (or Park street) to intersect the Lake street track at Union Park; Desplaines street, from Lake street to Milwaukee avenue; on Milwaukee avenue from Desplaines street to City limits (present or future); Canal street, from Lake street to Polk street; Harrison street, from Canal street to Southwestern plank road and Blue Island avenue; Market street, from Lake street to Madison street; Wells street or Fifth avenue (south) from Randolph street to Polk street, thence west on Polk street to Canal street; Van Buren street, from State street to Southwestern plank road; Blue Island avenue, from Harrison street to Chicago, Burlington & Quincy Railroad; Twelfth street, from State street east to Wabash avenue, south on Wabash avenue to

Old street, east on Old street to Indiana avenue, south on Indiana avenue to Cottage Grove avenue, also in Twelfth street from State street to Blue Island avenue. Passed May 23, 1859. Franchise good for twenty-five years from date of incorporation. Act of Legislature, February 14, 1859.

Same: By ordinance passed July 30, 1883 (as amended August 6, 1883). This Company is granted twenty years extension of franchise upon all existing street railway lines. (Sec. 2902 M. C. of 1890.)

Same: Railway on Wabash avenue, from Twenty-second to Madison street, and west on Madison to State. Passed December 21, 1894; no time limit.

Same: On East Van Buren street, from State to fifty feet east of Wabash avenue. Passed March 26, 1877; twenty years.

Same: Halsted street, from Thirty-ninth street to South branch Chicago river. Passed July 9, 1877; twenty years.

Same: (Cable power.) Authorizing change to cable. Trains to be not more than two cars and the grappling car. Passed January 17, 1881.

Same: On Wabash avenue, from Madison to Lake street, and north to connect with Chicago West Division Railway at Randolph street and Lake street. Cable permitted. Passed July 11, 1881. Grant twenty years, and until the Council grant privilege to some other person.

Same: On Archer avenue to Western avenue; Pitney avenue, from Archer avenue to Thirty-first street, thence on Thirty-first street to Lake Park avenue; Hanover street, from Archer avenue to Twenty-ninth street, on Twenty-ninth street to Wallace street, thence south to Thirty-ninth street; Ashland avenue, from Archer to Thirty-ninth street; Thirty-fifth street, from Cottage Grove avenue to Stanton avenue, thence south on Stanton avenue to Thirty-ninth street. Cable power permitted. Passed May 26, 1884; twenty years.

Same: On Twenty-second street, from State to the river; Twenty-sixth street, from Cottage Grove to Halsted; Thirty-fifth street, from State to Ullman; Ullman, from Thirty-first to Thirty-fifth; Pitney avenue, from Archer avenue to Chicago & Alton Railroad. Cable permitted. Passed February 25, 1887; amended October 8, 1888; twenty years.

Same: On Wallace street, from Twenty-sixth to Thirty-first. Passed October 24, 1887; twenty years from June 13, 1887.

Same: On Dearborn street, between Twentieth and Twenty-first streets, and on Twenty-first street from Dearborn to State. Passed February 25, 1889; twenty years from July 30, 1883.

Same: On Halsted street, from Sixty-ninth to Seventy-ninth streets. Extending time for construction until sixty days after sewer shall have been completed. Passed May 19, 1890.

Same: On Jefferson avenue, upon the removal of existing tracks, between Jefferson and Lake avenues; Forty-sixth and Forty-seventh streets; eight feet farther south, permitting it to connect with present tracks on Jefferson and Lake avenues. Passed November 10, 1890.

Same: On Seventy-fifth street, from Chicago, Rock Island & Pacific Railway to South Chicago branch of Illinois Central Railroad. Passed March 24, 1891; twenty years.

Same: Additional tracks on Thirty-ninth street, between Wentworth avenue and Halsted street. Passed October 19, 1891; ending February 5, 1907.

Same: "Loop" on Madison street, Michigan avenue, Randolph street and Wabash avenue. Passed March 21, 1892; ending July 30, 1903.

Same: On Seventy-fifth street, from Chicago, Rock Island & Pacific Railway to Greenwood avenue. Passed March 21, 1892; twenty years.

Same: On Halsted street, from Sixty-ninth street to Summit avenue, and on Summit avenue to Eighty-seventh street. Passed March 21, 1892, and May 2, 1892; each twenty years. (See later ordinance passed July 16, 1894, for twenty years, reading "On Halsted street, from Sixty-ninth street to Seventy-ninth street.")

Same: On Thirty-fifth street, from State street to Rhodes avenue. Passed March 21, 1892; twenty years.

Same: On Thirty-fifth street, from Ullman street to California avenue. Passed March 21, 1892; twenty years.

Same: For a "Loop" on Sixty-second street, Sixty-third street, Sixty-fourth street, Grace avenue and Stony Island avenue. Passed March 14, 1892; twenty years.

Same: On Forty-seventh street, from Cottage Grove avenue to State street, from State street to Ashland avenue, and from Ashland avenue to Southwestern boulevard. (Two Ordinances.) Passed March 21, 1892; twenty years.

Same: For "Loop" on Sixty-first street, Madison avenue, Sixty-first court, South Park court and Stony Island avenue. Passed March 21, 1892; twenty years.

Same: Permit for electricity on Halsted street, Archer avenue, Thirty-eighth street, Thirty-fifth street, Forty-seventh street, Sixty-first street, Cottage Grove avenue, Sixty-third street, Sixty-fourth street, Madison avenue, Grace avenue, Indiana avenue (from Thirty-ninth to Fifty-first), and on Fifty-first street. Passed March 21, 1892.

Same: On South Park court, from Sixtieth to Sixty-first street. Passed July 21, 1892; twenty years.

Same: Permit to conduct electric power from power-house at Fifty-second street and Wabash avenue to sundry points; also permit to operate cars by overhead trolley on State street, from Sixty-first street to the viaduct, and over the viaduct to Wentworth avenue to Sixty-third street, and on Sixty-third street to west terminus of tracks. Passed February 23, 1893.

Same: Railway on Sixty-third street, from Cottage Grove avenue to State street. Passed April 4, 1894; twenty years.

Same: For underground conduit at Wabash avenue and Twenty-first street. Passed April 4, 1894. To extend during the life of the street railway ordinances at these points.

Same: Permit for electricity "trolley" on Twenty-sixth street, Thirty-first, Thirty-ninth, Fifty-first, Sixty-ninth and Seventy-ninth streets, Archer avenue, Forty-third street, Halsted street, Wentworth avenue, Ashland avenue, Hanover street, Wallace street, State street from Sixty-third street to Vincennes avenue, and thence on Vincennes avenue to terminus of the railway. Passed April 4, 1894; ten years.

Same: Railway on Wallace street from Thirty-ninth to Root street. Passed April 4, 1894; twenty years.

Same: July 16, 1893, changing to electricity on Twenty-sixth, Thirty-first, Thirty-ninth, Fifty-first, Sixty-ninth and Seventy-ninth streets.

Same: Archer avenue from river west to Thirty-eighth street, thence to terminus in Thirty-eighth street.

Same: Forty-third street from eastern terminus on that street west to State street, thence on State street to Root, thence on Root street to terminus on said Root street.

Same: Halsted street, from Archer avenue to southern terminus of tracks on said Halsted street.

Same: Wentworth avenue, from Archer avenue to southern terminus.

Same: Ashland avenue, from Archer avenue to southern terminus.

Same: South Chicago avenue, from Seventy-first to Seventy-fifth street.

Same: Hanover street (now South Canal), Butler and Wallace, respectively.

Same: State street, from Sixty-third street to Vincennes avenue, and thence to terminus on said Vincennes avenue.

Same: Eighteenth street and Indiana avenue (upon consent being obtained from majority of property owners), \$100,000 to be paid by said Company for electric street lighting and \$150,000 to be paid in connection with the elevation of the Chicago, Rock Island & Pacific and Lake Shore and Michigan Southern Railway tracks and subways at various streets.

Same: On Sixty-third street, from Cottage Grove avenue to State street. Passed July 16, 1894; twenty years.

Same: On Centre avenue, from Forty-seventh to Sixty-third street, to connect with present tracks on Forty-seventh and in Sixty-third streets. Passed July 16, 1894; twenty years.

Same: On Wallace street, from Thirty-ninth to Root street. Passed July 16, 1894; twenty years.

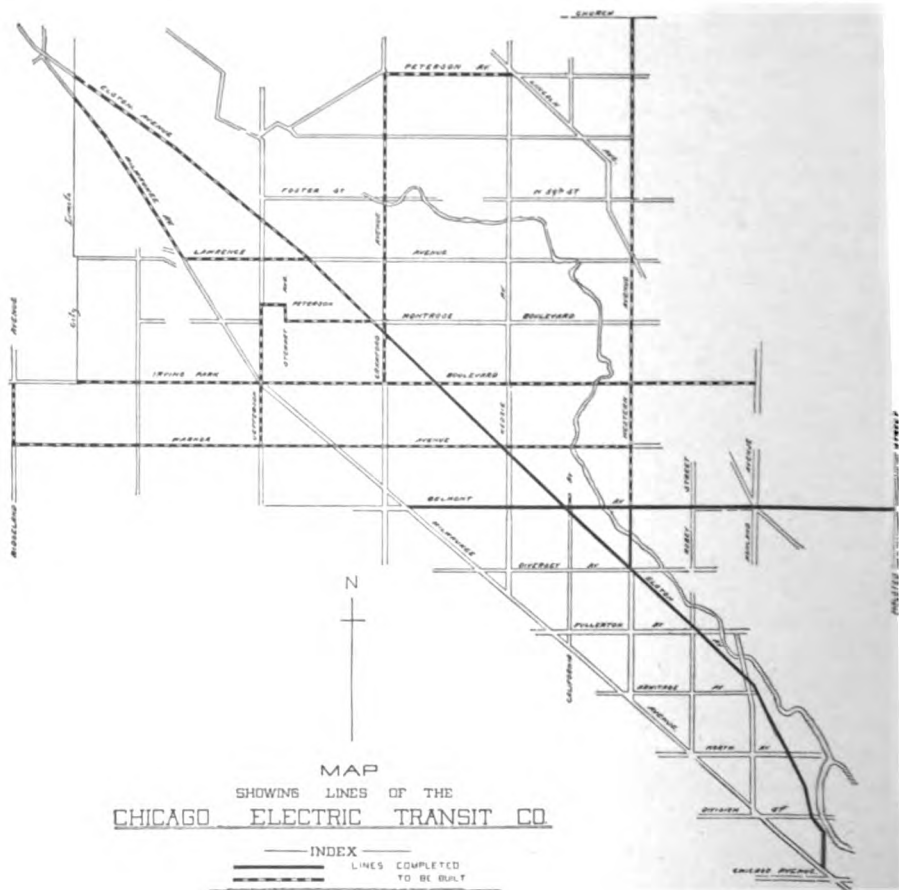
Same: On Halsted street, from Sixty-ninth to Seventy-ninth street, to connect with present line on Halsted street (Electric). Passed July 16, 1894; twenty years.

Same: Conduit in Twenty-first street. Rights to cease when rights and privileges to Chicago City Railway Company shall cease upon State street and Wabash avenue at Twenty-first street. For conduit in Twenty-first street, from tracks of Chicago City Railway Company in State street to tracks of said company in Wabash avenue. Passed July 16, 1894.

Same: For tracks on Forty-seventh street, Kedzie avenue, Archer avenue, Western avenue, Sixty-ninth street, Seventy-ninth street, Thirty-eighth street, Fifty-ninth street. Passed July 8, 1895; twenty years.

Same: For electricity on Archer avenue, from river east to State; Clark street, from Adams to Twenty-second, thence east to Wentworth avenue, and thence south; Ullman street, Halsted street, Twenty-second street, Dearborn street and Thirty-ninth street. Passed July 15, 1895.

Same: Trolley on Clark street to Washington street. Amending ordinance of July 15, 1895, so as to read "Washington street," in place of "Adams street." Passed November 11, 1895.



Same : Extending the time for the completion of the tracks on Sixty-third street, from Cottage Grove avenue to State street. Passed April 8, 1896.

Same : Fifty-first street, from State street to Western avenue. Ordinance passed July 6, 1896. P. 632.

Same : Wentworth avenue, from Thirty-ninth to Twenty-second street; Wentworth avenue, from Twenty-second street to Archer avenue. Ordinance passed June 11, 1896. P. 404; twenty years.

CHICAGO AND ENGLEWOOD HORSE AND DUMMY R. R. Co.

Ordinance extending time for construction to six months after a sewer shall have been constructed in Wentworth avenue. Passed July 23, 1877.

Same : For railway on Wentworth avenue, from Thirty-ninth street to Twentieth street. For animal power only, street improvements (8 feet or 16 feet), speed, rate of fare, commutation tickets, etc., funeral cars, limit of charge for, etc. Passed July 31, 1876; twenty years.

CHICAGO ELECTRIC TRANSIT COMPANY.

(See Map, Page 372.)

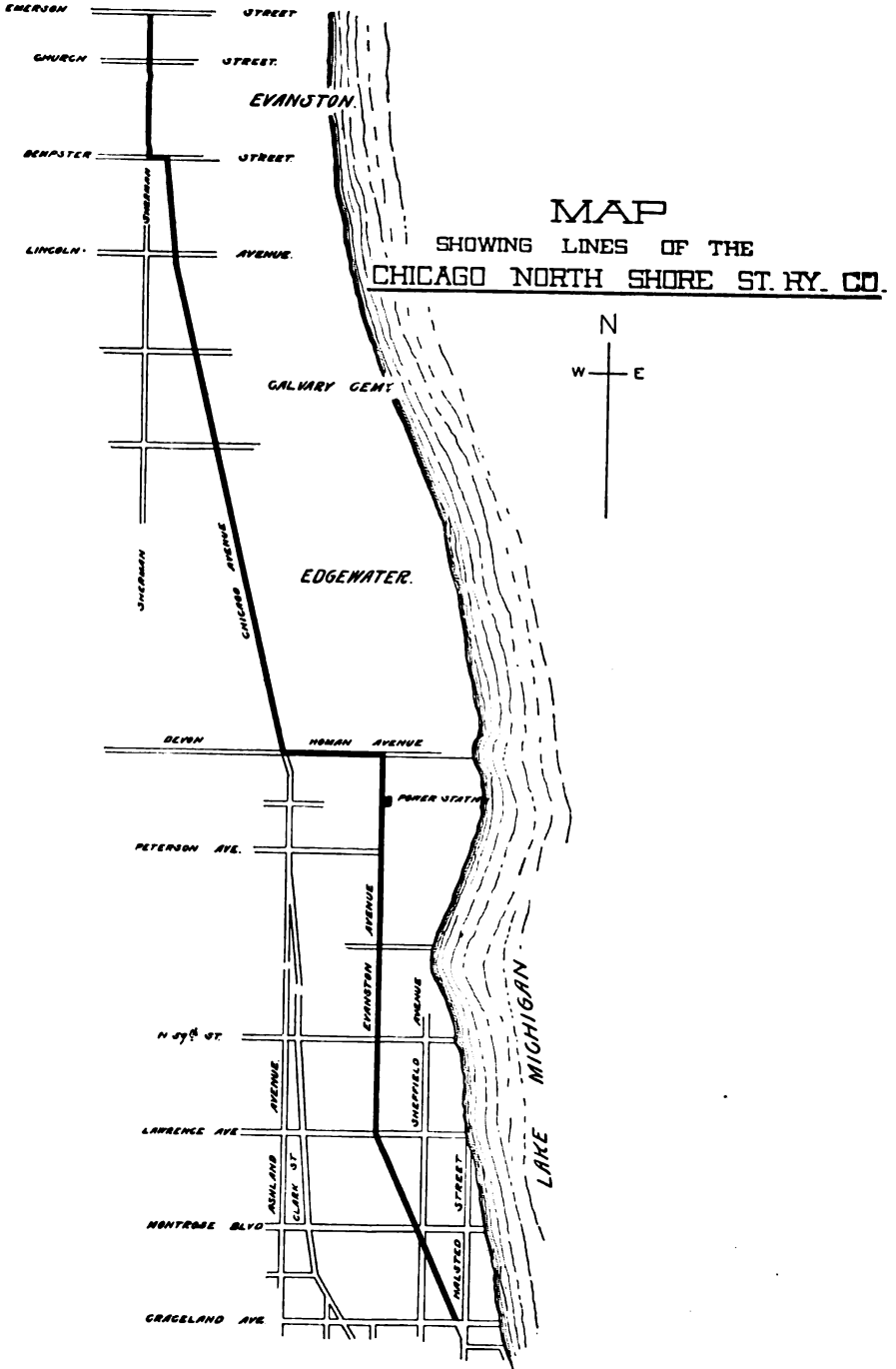
Commencing at the southwest line of Milwaukee avenue, thence east to Belmont avenue to northwest line of Elston avenue; in Belmont avenue, from Western avenue to Robey street; in Belmont avenue, from Ashland avenue to North Halsted street. Passed February 11, 1895; twenty years.

Same : On Irving Park boulevard and Graceland avenue, between west line of Milwaukee avenue and east line of Ashland avenue. Passed October 21, 1895; twenty years.

CHICAGO ELECTRIC TRANSIT COMPANY.

(Successor to Jefferson Street Railway Company.)

Ordinance passed November 23, 1896. P. 1149, Section 1.—That providing the said Chicago Electric Transit Company shall lay any tracks on that portion of Irving Park boulevard between the west line of Milwaukee avenue and westerly City limits before the sewer is placed in the center of the street by the City authorities, the sewer shall be laid on either side of the street so as not to disturb or interfere with the railroad tracks heretofore and hereby authorized.



CHICAGO AND EVANSTON ELECTRIC RAILWAY COMPANY.

Street railway on Lawrence avenue, from Clark street to Evanston avenue, and thence on Evanston avenue to north City limits, and on Church street from Evanston avenue to Clark street. Animal power prohibited. Passed April 11, 1892; twenty years.

Same: Ordinance amending above by eliminating "Lawrence avenue," and permitting railway on Evanston avenue, from Grace-land avenue to north City limits, and on Church street between Evanston avenue and Clark street. Passed April 25, 1892; twenty years.

Note: See Chicago & North Shore Street Railway Company.

CHICAGO NORTH SHORE STREET RAILWAY COMPANY.

(See Map, Page 374.)

Amending ordinance of April 11 and April 25, 1892, striking out the name "Chicago and Evanston Electric Street Railway Company," etc., and for franchise in connection with the North Chicago City Railway Company, and the North Chicago Street Railroad Company. Passed April 5, 1893; franchise extends to April 1, 1912.

Same: Franchise of Chicago and Evanston Street Railway Company, confirmed in this company. Passed March 20, 1893.

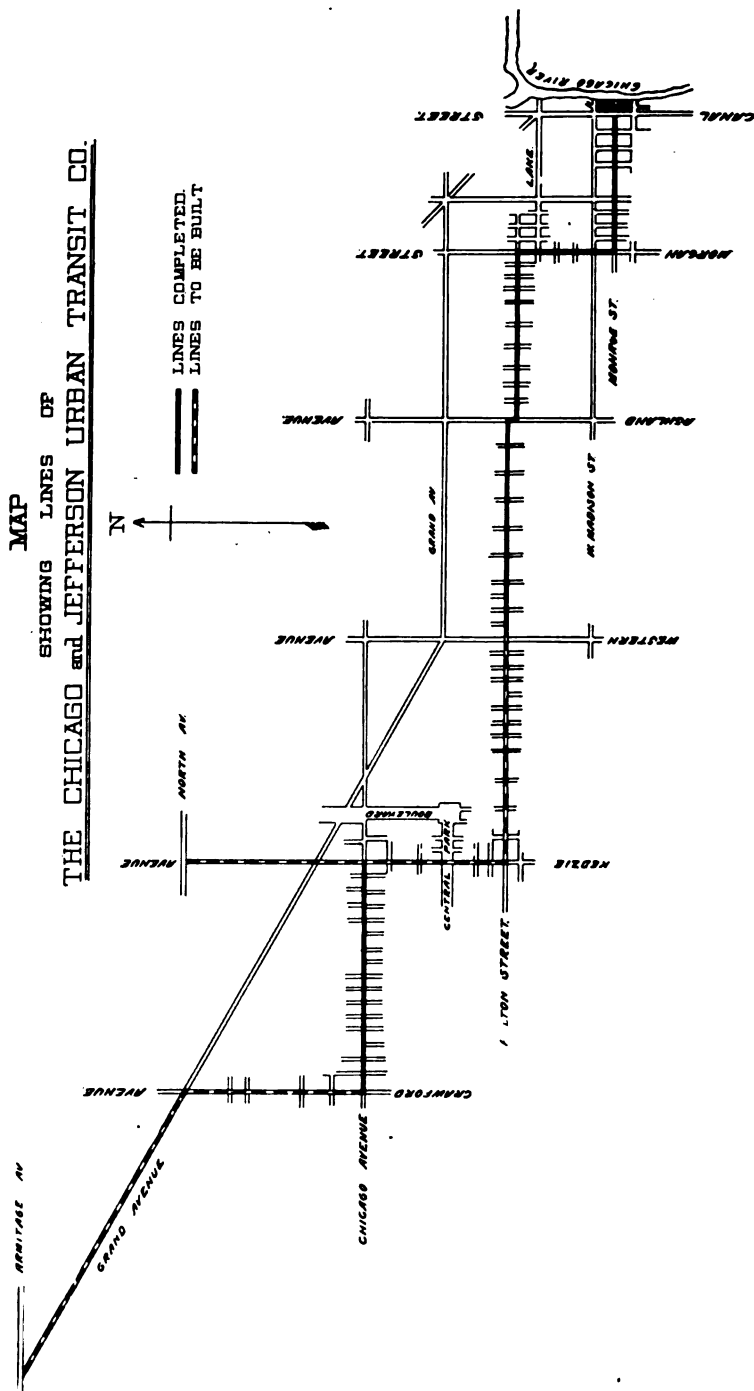
CHICAGO AND JEFFERSON URBAN TRANSIT COMPANY.

(See Map, Page 376.)

Street railway on Monroe street, from Canal street to Morgan street, on Morgan to Fulton, and on Fulton to Western avenue. To pay the City \$7,143 per mile, for the twenty-year privilege, for each mile of railway permitted. Passed April 11, 1892; twenty years.

Same: Railway on Fulton street, between Western and Kedzie avenues; Kedzie avenue, between Fulton street and North avenue; Chicago avenue, between Kedzie avenue and Crawford avenues; Crawford avenue, between Chicago avenue and Grand avenue, and on Grand avenue between Crawford avenue and Armitage avenue. Passed July 14, 1892; twenty years.

Same: Passed February 18, 1895; amending ordinance of April 11, 1892, by changing mode of propulsion to electricity.



CHICAGO WEST DIVISION RAILWAY COMPANY.

(See Map, Page 378.)

Incorporated February 21, 1861. Tracks on Halsted street, from Lake street to Milwaukee avenue, in lieu of railway on Desplaines street. Passed March 28, 1864; no time limit.

Same: By ordinance passed June 30, 1883 (as amended August 6, 1883), this company is granted twenty years extension of franchise upon all existing street railway lines. (Sec. 2902, M. C. of 1890.)

Same: On Clinton street, from Madison street to Twelfth street (double track to Harrison street and single to Twelfth street). Passed August 17, 1864; no limit.

Same: Meagher street, from Canal street to Jefferson street. Passed August 17, 1864; no limit.

Same: On Chicago avenue, from the river west to present or future City limits. Passed August 17, 1864; no limit.

Same: On Indiana street, from Milwaukee avenue to present or future west City limits. Passed August 17, 1864; no limit.

Same: On Indiana street, same as above. Passed August 9 and 11, 1875; twenty years.

Same: On Catherine street, from Blue Island avenue to Robey street. Passed August 17, 1864; no limit.

Same: On Polk street, from Canal to Jefferson street. Passed August 17, 1864; no limit.

Same: On Desplaines street, from Van Buren to Sebor street. Passed August 17, 1864; no limit.

Same: On Sebor street, from Desplaines street to Halsted street. Passed August 17, 1864; no limit.

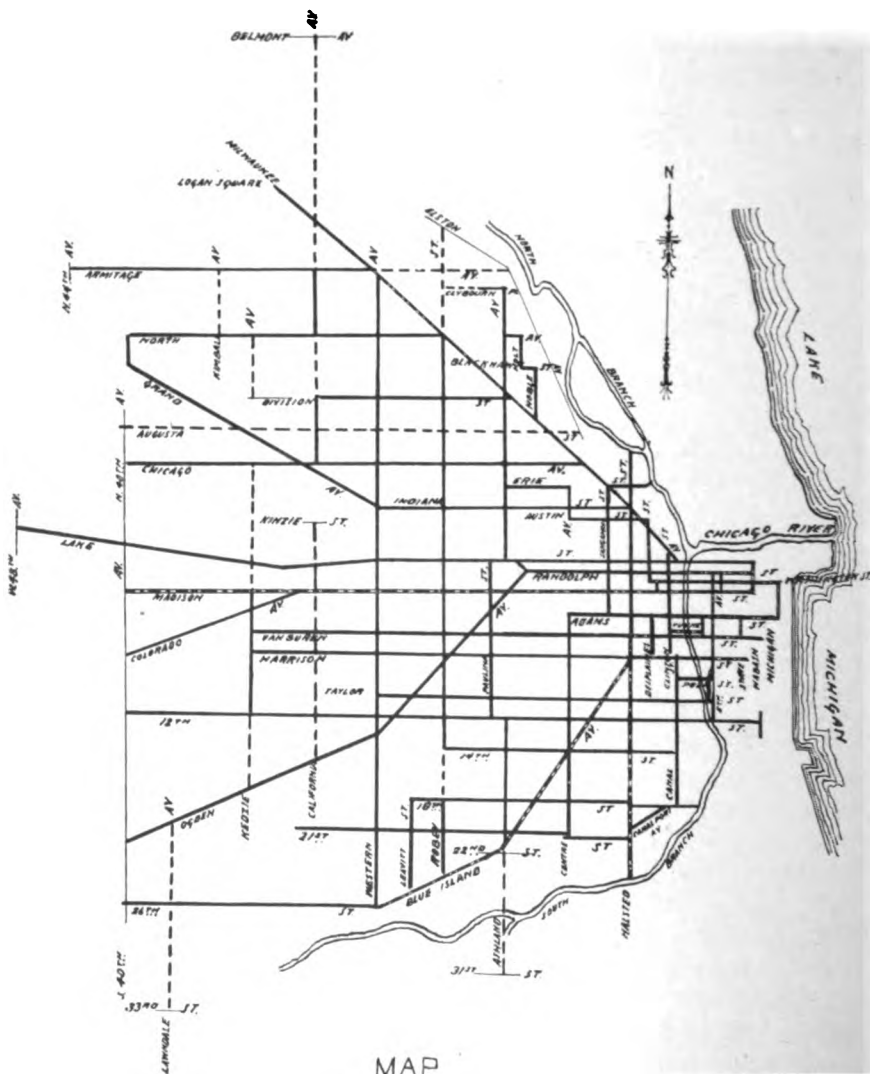
Same: On Halsted street, from Harrison street south to the river. Passed August 17, 1864.

Same: On Van Buren street, from Ogden avenue to Western avenue. Passed November 13, 1871; no limit.

Same: On Madison street, permit to extend on Madison street from Rockwell street to Central park, instead of on Lake street, if the Company wish. Passed April 9, 1872, and June 24, 1878; twenty years, or until sold to other parties.

Same: On North avenue, from Milwaukee avenue to present or future City limits. Passed March 8, 1875; amended April 19, 1875; franchise to October 1, 1894, and until City buys it.

Same: On Blue Island avenue, from Rebecca street to Twenty-second street. Passed February 28, 1876; for twenty years and until the City buys it.



MAP
SHOWING LINES OF THE
WEST CHICAGO STREET R.R.

INDEX

—————	CABLE LINES
—————	MOTOR CAR LINES
—————	ELECTRIC LINES
—————	PROPOSED LINES TO BE BUILT

Same: On Ogden avenue, from Madison street to Western avenue. Passed February 28, 1876; twenty years.

Same: On Halsted street, from Harrison street south to the river. Passed September 25, 1876; twenty years, and until the City Council shall elect to grant the privileges to some other party to purchase this franchise.

Same: On O'Neil street, from Halsted street to its car house. Passed November 27, 1896; no limit.

Same: On Harrison street, from Clinton street to Canal street. Passed March 26, 1877; for twenty years, and until sold to other parties.

Same: On Canal street, from Harrison street to Canalport avenue. Passed March 26, 1877; twenty years and until sold to other parties.

Same: On Canalport avenue, from Canal street to Halsted street. Passed March 26, 1877; twenty years, and until sold to other parties.

Same: On Twelfth street, from Canal street to Ashland avenue. Passed March 26, 1877; twenty years, and until sold to other parties.

Same: On Lake street, from present tracks (Western avenue or Rockwell street), to Central park (now Garfield park). Passed April 9, 1877.

Same: On Twelfth street, from Ashland avenue to Ogden avenue. Passed August 26, 1878; twenty years.

Same: On Blue Island avenue, from present terminus (Twenty-second street) to Western avenue. Passed October 14, 1876; twenty years.

Same: On Western avenue, from Van Buren street to Madison street, and to connect with car house on Western avenue at Washington street. Passed December 23, 1878; twenty years, or until sold to other parties.

Same: On Chicago avenue, from Milwaukee avenue to Western avenue. Passed October 20, 1879; twenty years, and until franchise is sold to other parties.

Same: On Lake street, from Rockwell street to Central Park, and from Union Park east and over Lake street bridge to State street, and from State street, a single track to Wabash avenue. Passed November 29, 1880; twenty years; Company to pay one-half cost of new bridge at Lake street, and pay \$1,000 annually to maintain, etc.

Same: On Milwaukee avenue, to make connection at Clinton and Lake streets. Passed November 29, 1880; twenty years.

Same : On Leavitt street, from Chicago avenue to Indiana street. Passed July 17, 1882 ; twenty years.

Same : On Ogden avenue, from Western avenue to west City limits. Passed February 7, 1881 ; twenty years.

Same on North avenue, from Holt street to Ashland avenue. Passed May 11, 1885 ; twenty years.

Same : On Division street, from Milwaukee avenue to 200 feet west of California avenue. Passed December 7, 1885 ; twenty years.

Same : On Van Buren street, from Western avenue to Kedzie avenue. Passed December 7, 1885 ; twenty years.

Same : On Ogden avenue, from Madison street to Randolph street. Passed December 9, 1885 ; twenty years.

Same : Authorized by ordinance of March 30, 1888. Company to pay one-half costs of new Lake street bridge and \$1,000 to maintain.

Same : For removal of tracks on Twelfth street from centre of street, and lay tracks on each side of street. Passed September 3, 1888.

CHICAGO PASSENGER RAILWAY COMPANY.

For railway on Harrison street, from Desplaines street east to State street, over Harrison street bridge. Company to pay all damages to abutting property owners. Passed December 31, 1885 ; twenty years.

Same : Center avenue line on Adams street, from Desplaines street to Center avenue, on Center avenue from Adams street to Twenty-first street, and on Twenty-first street, from Center avenue to Western avenue. Passed January 11, 1876 ; twenty years.

Same : On North Ashland avenue, from North avenue to Erie street ; Erie street, from Ashland to Center avenues ; Center avenue, from Erie street to Austin avenue ; Washington street, from Desplaines street to Michigan avenue, and through the Washington street tunnel, etc. Passed February 1, 1886 ; twenty years. Amended *in re* care and improvement of the Washington street tunnel. February 8, 1886.

Same : Michigan avenue, from Adams to Washington street. Passed February 1, 1886 ; twenty years.

Same : On Austin avenue, from Center avenue to Desplaines street ; Desplaines street, from Austin avenue to Adams street ; Franklin street, from Harrison street to Washington street. Passed February 1, 1886 ; twenty years.

Same : On Adams street, from Clark street to Michigan avenue. Passed April 8, 1886 ; twenty years.

Same : On Sangamon street, between Austin avenue and Adams street. Passed March 22, 1886 ; twenty years.

Same : Cable power authorized, and use of Washington street tunnel, the latter to be repaired and maintained, construct roadway, light, ventilate, free from water, keep walls whitened, keep so vehicles may pass through, speed no greater than four miles per hour, etc., all this at company's expense. Passed March 30, 1888. Time limit governed by prior ordinances.

Same : Franchise granted the Chicago Horse and Dummy Railway Company, changed to "Chicago Passenger Railway Company," confirmed by ordinance passed March 21, 1887.

CHICAGO HORSE AND DUMMY RAILWAY COMPANY.

Changed to the "Chicago Passenger Railway Company," and change confirmed by ordinance. Passed March 31, 1887.

CHICAGO PASSENGER RAILWAY COMPANY.

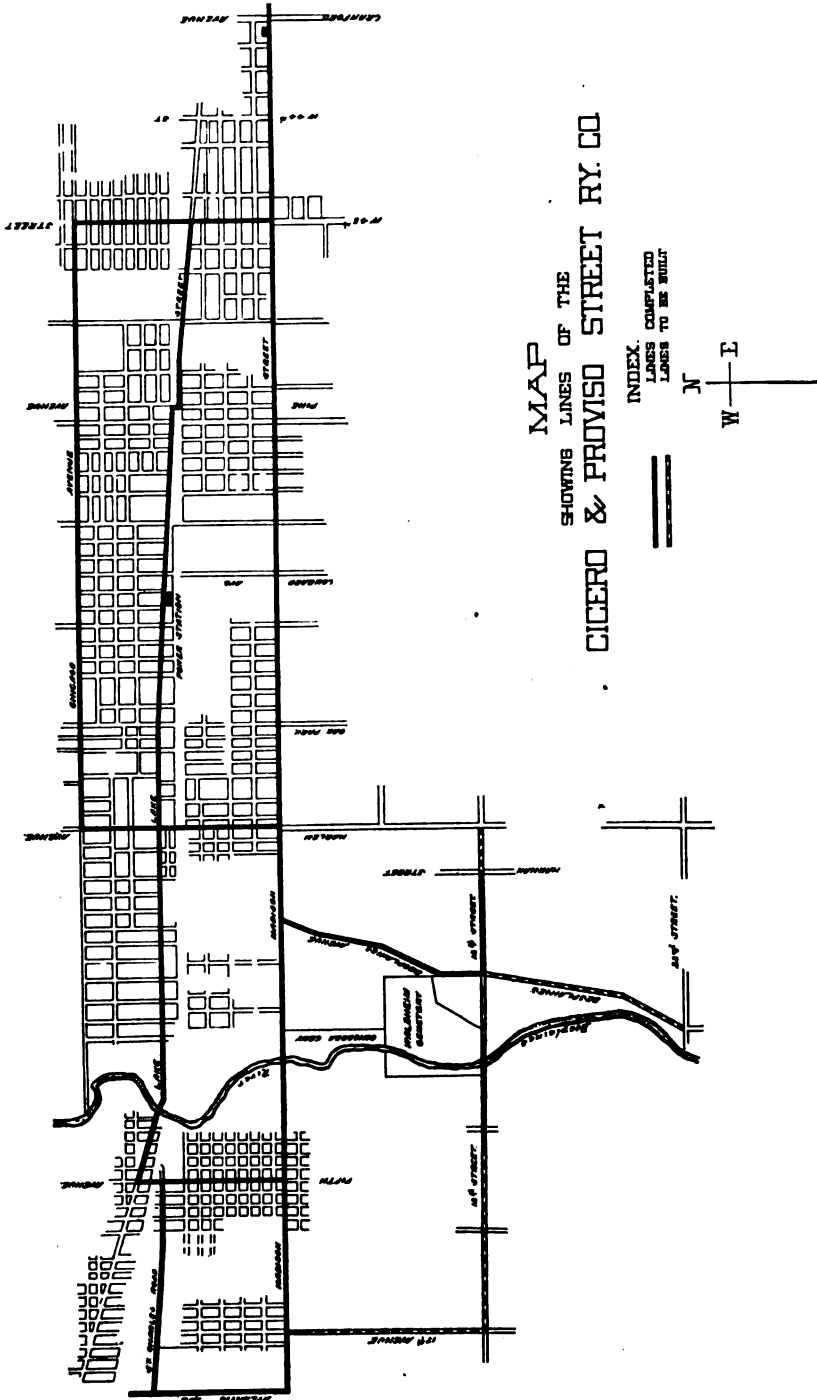
(Chicago Horse and Dummy Railway Company.)

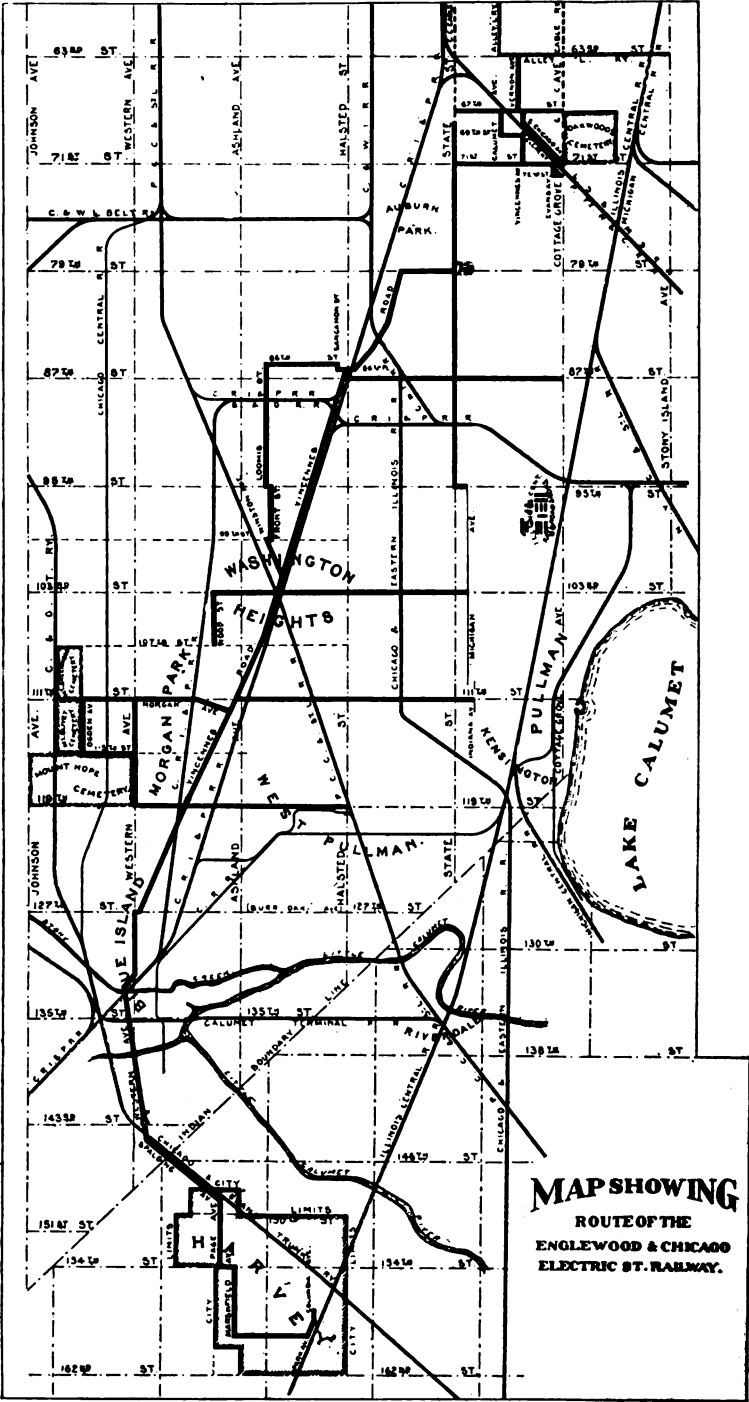
For street railway on Adams street, from Clark street to Desplaines ; Desplaines street, from Adams to Harrison ; Harrison street, from Desplaines to Western avenue ; Western avenue, from Harrison street to Twelfth street ; Twelfth street, from Western avenue to Crawford avenue ; for new bridge at Adams street, Street Railway Company to pay one-half of all costs for same, including piers, abutments, machinery, etc., and to pay \$1,000 annually for maintenance, etc., to pay cost of widening or building new viaduct at Adams street. Passed April 21, 1884 ; twenty years.

Same : Use of Washington street tunnel and cable authorized. Passed March 30, 1888.

CHICAGO PASSENGER TRACTION COMPANY.

On Fullerton avenue (commencing at intersection of Milwaukee avenue), Central avenue, Maynard avenue and Tanner road. Passed June 20, 1895 ; twenty years.





CHICAGO & SOUTH SIDE RAPID TRANSIT R. R. COMPANY.

("Alley L.")

(See Map, Page 382.)

Franchise for elevated railroad commencing at the north side of Van Buren street, south between Dearborn street and Wabash avenue to Thirty-ninth street, east to Forest avenue; right of way not to exceed thirty feet, except at curves, etc.; not more than three tracks allowed; locomotive or other engines or motors and cars allowed; for passenger traffic and mails only; City may regulate speed; City may erect viaducts, change grades, etc., with liability to the railway; \$50.00 car license fee. Passed March 26, 1888; fifty years.

Same: Above ordinance is amended April 2, 1891, permitting extension of the line south from Thirty-ninth street; east to Jackson Park; west to a point between Wentworth avenue and Wallace street, and south to Seventy-first street; also to pay \$4,000 per mile, annually, for the part of the road in the alley, from Congress street to Twelfth street.

Same: An ordinance amending ordinance of March 26, 1888, and for extension on Sixty-third street. Passed April 7, 1892.

CICERO & PROVISIO STREET RY. COMPANY.

(See Map, Page 383.)

Along West Forty-eighth street, from West Lake street to West Chicago avenue, and on West Chicago avenue, from Forty-eighth to Forty-second street. Passed July 23, 1894; twenty years.

ENGLEWOOD AND CHICAGO ELECTRIC STREET RAILWAY.

(See Map, Page 384.)

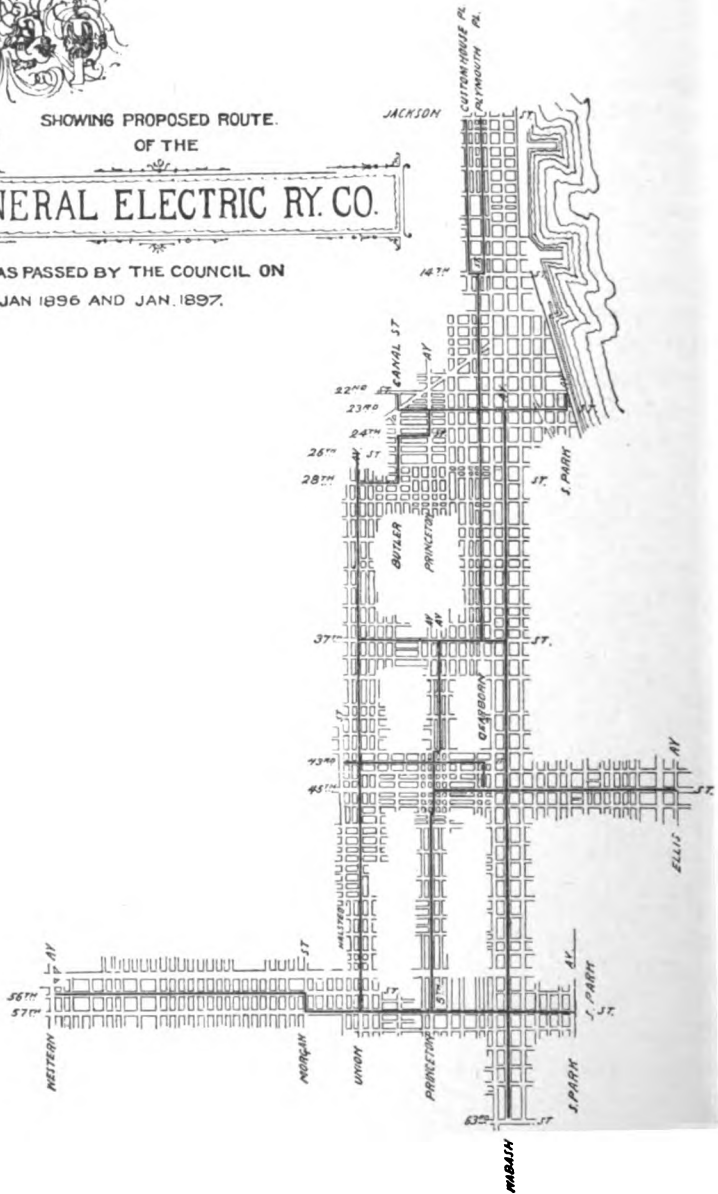
For street railway on Vernon avenue, Sixty-seventh street Vincennes avenue, South Chicago avenue, Keefe avenue, Sixty-ninth street, Calumet avenue, Clement avenue, Seventy-first street, Evans avenue, Seventy-second street, Cottage Grove avenue, State Street, Ninety-fifth street, Seventy-ninth street, Vincennes road, Eighty-seventh street, Eighty-sixth place, Sangamon street, Eighty-sixth street, Loomis street, Ninety-fifth street, Front street, Ninety-ninth street, Winston avenue, One Hundred and Third street (Tracy avenue), Wood street, and One Hundred and Eleventh street. Passed (over veto) May 2, 1895; twenty years.



SHOWING PROPOSED ROUTE.
OF THE

GENERAL ELECTRIC RY. CO.

AS PASSED BY THE COUNCIL ON
JAN 1896 AND JAN. 1897.



GENERAL ELECTRIC RAILWAY COMPANY.

(See Map, Page 386.)

Beginning at Twenty-third street and Dearborn street, north on Dearborn street to Fourteenth street, east on Fourteenth street to Plymouth place, north on Plymouth place to Jackson street; also on Custom House place from Jackson street to Fourteenth street; east on Fourteenth street from Custom House place to Dearborn street; also beginning at Twenty-third street and Dearborn street, south on Dearborn street to Thirty-seventh street; west on Thirty-seventh street to Fifth avenue (formerly Atlantic street); south on Fifth avenue to Forty-third street; west on Forty-third street to Princeton avenue, south on Princeton avenue to Forty-seventh street; also beginning at Wabash avenue and Fifty-seventh street, west on Fifty-seventh street to Morgan street, north on Morgan street to Fifty-sixth street, west on Fifty-sixth street to Western avenue, with right to connect, etc. With right for a viaduct at Twelfth street. Passed January 13, 1896; twenty years.

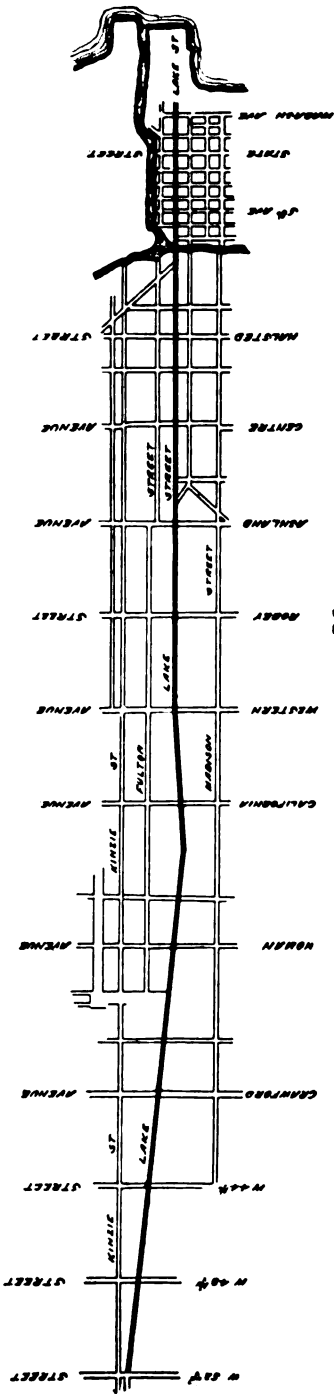
Same: Ordinance passed January 25, 1897, p. 1501. Twenty-third street, from South Park avenue to Canal street; Canal street, from Twenty-second to Twenty-third street; Princeton avenue, from Twenty-third to Twenty-fourth street; Twenty-fourth street, from Princeton avenue to Butler street; Butler street, from Twenty-fourth street to Twenty-eighth street; Union avenue, from Twenty-sixth street to Fifty-seventh street; Thirty-seventh street, from Wabash avenue to Dearborn street; Thirty-seventh street, from Fifth avenue to Union avenue; Forty-third street, from Princeton avenue to Halsted street; Fifty-seventh street, from Wabash avenue to South Park avenue; Wabash avenue, from Twenty-third to Sixty-third street; South Park avenue, from Twenty-second to Twenty-third street; Forty-third street, from Dearborn street to Fifth avenue; Dearborn street, from Forty-third street to Forty-fifth street; Forty-fifth street, from Princeton avenue to Ellis avenue.

GRAND CROSSING & WINDSOR PARK RAILWAY COMPANY.

For street railway on Seventy-fifth street, from the Illinois Central Railroad to Railroad avenue. Passed July 14, 1892; twenty years.

JEFFERSON STREET RAILWAY COMPANY.

For street railway on Elston avenue, Belmont avenue, Crawford avenue, Peterson avenue, Lawrence avenue, Montrose boulevard, Stewart avenue, Jefferson avenue, Irving Park boulevard, Warner avenue, Ridgeland avenue, Western avenue, and California avenue. Passed April 4, 1893; twenty years. See Chicago Electric Transit Co.



MAP

SHOWING LINES OF THE
LAKE STREET ELEVATED R.R. CO.

LAKE STREET ELEVATED RAILROAD COMPANY.

(See Map, Page 388.)

For "L" road on Lake street, from Canal street to west City limits. Exclusive grant to this company, and not transferable. Passed December 28, 1888; grant twenty-five years, and until the City may purchase.

Same: For "L" road on Lake street, from Canal street to Crawford avenue, with like terms and conditions, except that the franchise is for forty years and may be sold or assigned, or that the City may purchase the road after twenty-five years. Passed November 24, 1890.

Same: For "L" road on Lake street (west end of) from Crawford avenue to west City limits; and on Lake street and over the Lake street bridge to Market street. Passed November 24, 1890; forty years, or City may purchase the road after twenty-five years.

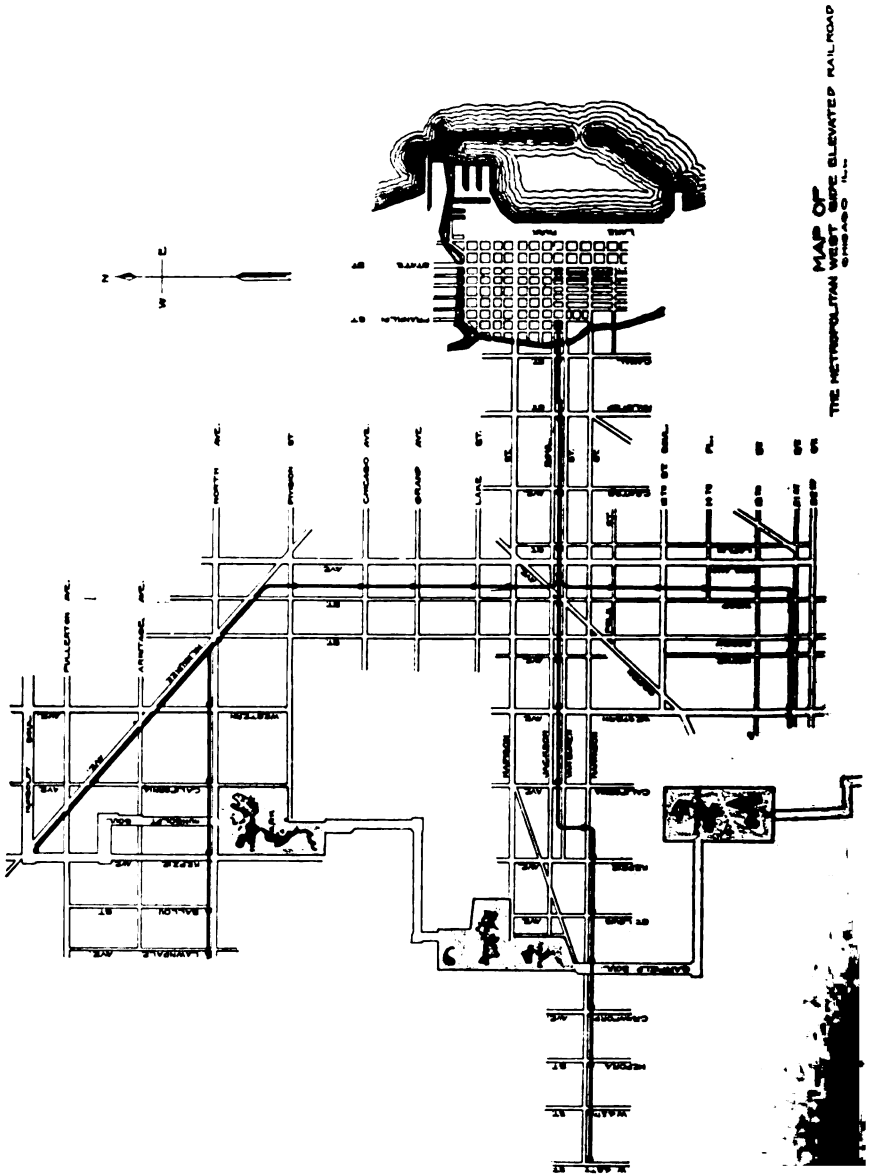
Same: Ordinance to return to the railway company \$100,000 deposit. Passed November 30, 1891.

Same: Ordinance confirming transfer of the Lake Street Elevated Railway Company to the Lake Street Elevated Railroad Company. Passed December 19, 1892.

Same: For additional lines of "L" road as follows: From the main line on Lake street at a point between La Salle street and Jefferson street north of Fullerton avenue, between Sheffield avenue and Larrabee street, and thence northerly to City limits; also a branch on Market street, from Lake street to Madison street; also a line from main line on Lake street to Canal street, east and across the viaduct and bridge to Market street; also a line commencing at the main line near Halsted street, thence southerly to the City limits; also a line commencing on the main line, Lake street, at a point between Hamlin avenue and West Forty-first street, thence south to Madison street; also a line commencing at the main line, Lake street, at a point between Rockwell street and California avenue, thence north to Diversey street and northwesterly to City limits. Passed May 15, 1893; fifty years. (See change of route of this last named line by ordinance, passed November 27, 1893.)

Same: Ordinance *in re* use of streets, change of car license fee, etc. Passed May 22, 1893.

Same: Ordinance changing the northerly and northwesterly route as named in ordinance of May 15, 1893, so that the route shall be from a point on Lake street, between Western and California avenues, north to a point between Chicago avenue and Potomac



avenue, thence west to a point between Rockwell street and California avenue, thence north to near Diversey street and thence northwesterly to City limits. Passed November 27, 1893.

Same: For "L" road on East Lake street, from Market street to Wabash avenue. Passed October 1, 1894; fifty years.

METROPOLITAN CITY RAILWAY COMPANY.

(See Map, Page 390.)

Franchise for Lake street, from Michigan avenue to Canal street; Canal street, from Lake street to Fourteenth street; Fourteenth street, from Canal street to California avenue. Passed April 30, 1895; to 1900, or until sold to other parties.

METROPOLITAN WEST SIDE ELEVATED R. R. COMPANY.

Ordinance passed April 7, 1892; fifty years.

NORTH CHICAGO CITY RAILWAY COMPANY.

(See Map, Page 392.)

Corporation recognized and franchise and powers conferred upon it by an Act of Legislature. Approved February 14, 1859. (See Sec. 2939, M. C. of 1890.)

Same: By ordinance passed July 30, 1883 (as amended August 6, 1883), this company is granted twenty years extension of franchises upon all existing street railway lines. (Sec. 2902, M. C. of 1890.)

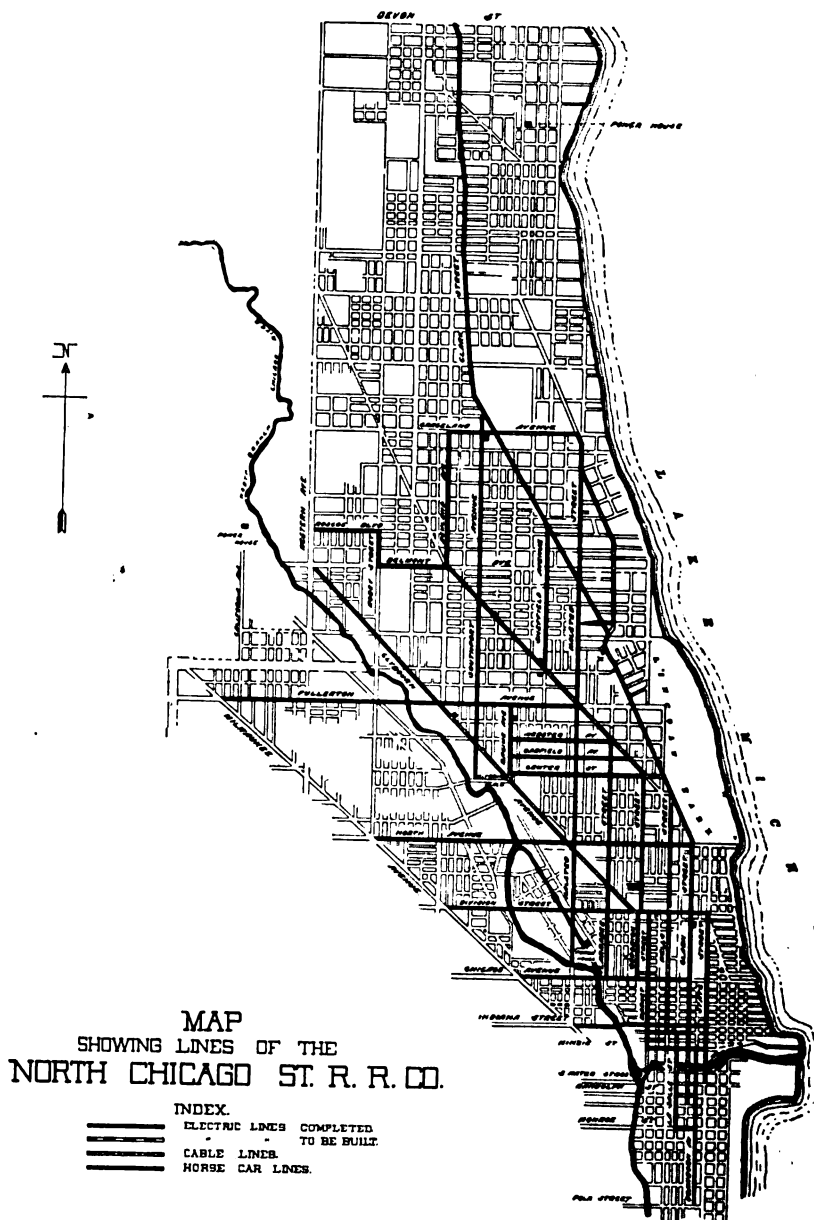
Same: Street railway on Clark street, from North Water street to Green Bay road, and thence in Green Bay road to present or future City limits.

On Division street, from Clark street to Clybourn avenue, thence in Clybourn avenue to Racine road, and thence in same direct line to northern City limits.

On Michigan street, from Canal street to Rush street, thence north on Rush street to Chicago avenue, hence on Green Bay road to Wolcott street, thence on Wolcott street to Elm street, and thence on Elm street to Clark street.

On Wells street, from North Water street to Division street, thence west on Division street to Sedgwick street, and thence north on Sedgwick street to Green Bay road.

On Chicago avenue, from Rush street west to the Chicago river. Passed May 23, 1859; twenty-five years.



Same : For railway on Wolcott street, from Michigan street to center of the Chicago river, to connect with the Chicago City railway. Passed January 18, 1864.

Same : Railway on Larrabee street, from Chicago avenue to Little Fort road, and thence on Little Fort road to present or future City limits.

On Linden street and Eugenie street, from Larrabee street to Wells street, and thence on any street that may be laid out later, to Green Bay road. Passed August 11, 1864.

Same : Railway on Center street, from Clark street to Lincoln avenue, and thence on said avenue to present or future City limits. Passed May 8, 1871.

Same : Railway on Clark street, from North Water street to the center of the river, to connect with the Chicago City railway. Passed November 20, 1871.

Same : Railway on Fifth avenue, from Randolph street north, over and across the Wells street bridge, thence north to Illinois street and east to Clark street. Passed October 26, 1874. Granted until October 1, 1894, and until the City may purchase.

Same : Railway on Division street, from Clark street to State street, thence north on State street to Michigan street. Passed March 22, 1880 ; twenty years.

Same : Railway on Sedgwick street, from Division street to Chicago avenue. Passed October 26, 1881 ; twenty years.

Same : Railway on Fullerton avenue, from Lincoln avenue to Racine avenue, and thence on Racine avenue to Webster avenue. Passed April 21, 1884 ; twenty years.

Same : Railway on Halsted street, from Clybourn avenue to Fullerton avenue. Passed December 9, 1885 ; twenty years.

Same : Railway on North Halsted street, from Clybourn avenue to centre of the North branch of the Chicago river, to connect with the Chicago West Division Railway Company's tracks. Transfers required from either of these companies, if necessary, for continuous trip from North Halsted street south, or from South Halsted street north. Passed March 1, 1886 ; twenty years.

Same : Railway on Market street, from Chicago avenue to Illinois street, and a single track from Illinois street to Michigan street ; thence on Michigan street to Wells street ; also a single track on Illinois street, from Market to Wells street. Passed March 15, 1886 ; twenty years.

Same : Cable power authorized by ordinance passed June 7, 1886.

Same : Must have consent of property owners for cable on Division street, between Clark and State streets, and on State street, between Division street and Kinzie street. Passed June 14, 1886.

NORTH CHICAGO STREET R. R. COMPANY.

Railway on Illinois street, between Clark and Wells streets, and on La Salle avenue, through La Salle street tunnel, and on La Salle street, from Illinois street to Jackson street. Cable permitted. The company to pay \$25,000 per year for the use of the tunnel, or in lieu construct and maintain new four-track iron bridges at Wells street, and at Clark street (as amended by ordinance passed October 5, 1888.) Passed July 19, 1886 ; twenty years.

Same : Railway on Division street, from Clybourn avenue to Milwaukee avenue. Restricted to single track only, over Division street bridges and approaches. If new bridges are built, the railway company to pay one-half of cost of construction and maintenance. Passed December 20, 1886 ; 20 years.

Same : Company granted use of Dearborn street bridge in connection with their Dearborn street line to Polk street, and to pay the cost of removing the old Wells street bridge to Dearborn street. Passed March 14, 1887.

Same : Providing for a single track only on La Salle street from Randolph street to Monroe street, and to postpone laying of tracks south of Monroe street, but confirming in the company their rights under ordinance above, for double track from Randolph street to Jackson street. Passed July 6, 1887.

Same : Railway on Monroe street, from La Salle street to Dearborn street. Single track.

On Randolph street, from La Salle street to Dearborn street. Single track.

On Dearborn street and Dearborn avenue, from Polk street to Michigan street.

On Fourth avenue, from a point 100 feet to a point 350 feet north of Polk street. Single track.

On Market street, from Illinois street to Michigan street (single track), and connecting with double track from Michigan street to Kinzie street.

On Kinzie street, from Market street to State street. Double track.

On Division street, from Clybourn avenue to Milwaukee avenue. Single track only across the bridges at the river or at the North branch canal.

On North avenue, from Clark street to Milwaukee avenue. Single track only over bridge and approaches. The company to pay after ten years from the acceptance of this ordinance, one-half of the cost of bridges at Division street and at North avenue, and to pay annually \$250 each for maintenance of above bridges. Passed March 14, 1887; twenty years.

Same: Ordinance construing the two above ordinances of March 14, 1887; *in re* the Wells street bridge removal to Dearborn street, etc. Passed March 1, 1887.

Same: Permit for cable on Clybourn avenue, from Fullerton avenue to Belmont avenue. Passed June 26, 1890.

Same: Permit to extend railway on Chicago avenue, from Larrabee street to Milwaukee avenue. Shall pay \$500 annually for Chicago avenue bridge. Passed March 16, 1891; extends to July 30, 1903.

Same: Authorizing use of any motor or motive power they may wish. Ordinance passed March 21, 1892, April 30, 1894.

Same: Railway on Southport avenue, between Clark street and Clybourn avenue. Amended May 14, 1894, striking out "U. S. Letter Carriers free." Passed May 7, 1894; twenty years.

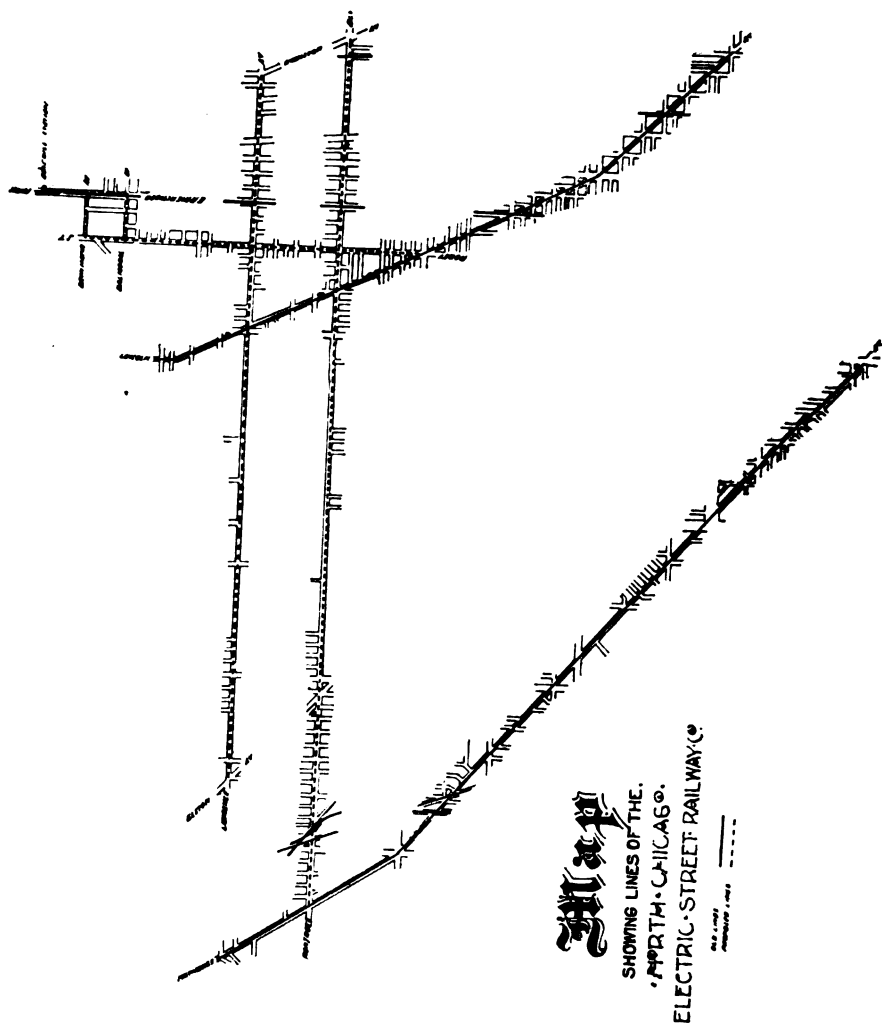
Same: Railway on Fullerton avenue, from Lincoln avenue to Milwaukee avenue. Passed May 11, 1894; twenty years.

Same: In Southport avenue, between Lincoln avenue and Clybourn place. Passed March 11, 1895; twenty years from May 21, 1894.

Same: On Indiana street, from State street across Indiana street bridge to west side of Chicago river (North branch) on Grand avenue west, thence to Halsted street. Passed February 4, 1895; twenty years.

Same: Pipe Line. Ordinance expiring when present franchise of said railway expires. For pipe two inches in diameter in Larrabee street, or in alley near thereto, thence north to Fullerton avenue, to Orchard street, to Wrightwood avenue, etc., for lighting with gas the street cars of said company. Passed October 15, 1894.

Same: A single or double track (loop) on and on part of public alley lying west of Clark street, between Clark and Orchard streets, and where same alley runs northerly from Sherman place and intersects, at its north end, another alley which runs westerly, etc. Passed February 24, 1896; twenty years.



NORTH CHICAGO ELECTRIC RAILWAY.

(See Map, Page 396.)

Street railway on Lincoln avenue, between Wrightwood avenue and North Fifty-ninth street, and on Milwaukee avenue, between Armitage avenue and Lawrence avenue. Passed November 12, 1894; twenty years.

Same: Robey street, from Lincoln avenue and Irving Park boulevard to Bryn Mawr avenue; Bryn Mawr avenue, from Robey street to East Ravenswood Park avenue; East Ravenswood Park avenue, from Bryn Mawr avenue to Rosehill station; Balmoral avenue, from Robey street to East Ravenswood Park avenue; East Ravenswood Park, from Balmoral avenue to Bryn Mawr avenue; Lawrence avenue, from Evanston avenue to Milwaukee avenue; Montrose boulevard, from Evanston avenue to Milwaukee avenue. Passed July 23, 1896, page 762; and again passed under amended ordinance July 27, 1896, page 767.

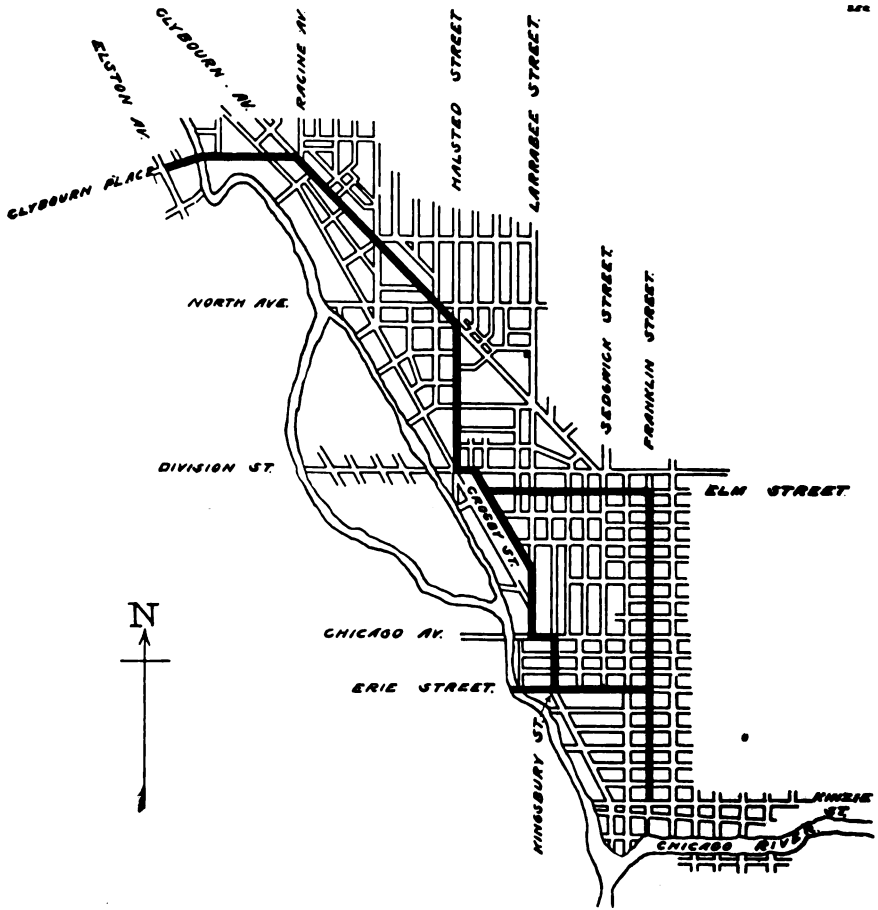
NORTHERN ELECTRIC RAILWAY.

On West Forty-seventh street, from Lake street to Thomas street; on Thomas street, from West Forty-seventh street to Forty-eighth street; on West Forty-eighth street, from Thomas street to North avenue; on Jefferson avenue, from North avenue to Armitage avenue; on North avenue, from West Forty-eighth street to Central avenue; on Central avenue, from North avenue to Grand avenue; on Leyden avenue, from Grand avenue to Belden avenue; on Belden avenue, from Leyden avenue to Poland avenue; on Poland avenue, from Grand avenue to Belden avenue. Passed July 23, 1894; twenty years.

NORTH SIDE ELECTRIC STREET RAILWAY COMPANY.

(See Map, Page 398.)

Beginning at south line of Kinzie street, at intersection of Franklin street, thence north along Franklin street to north line of Division street; also commencing at intersection of Erie street and Franklin street, thence westerly on Erie street to west line of North branch of Chicago river; also commencing at intersection of Elm and Franklin streets, thence west on Elm street to west line of Crosby street; also commencing at intersection of Kingsbury and Erie streets, thence north on Kingsbury street to intersection of Wesson



____ MAP ____
 ____ Showing Lines of the ____
NORTH SIDE ELECTRIC ST. RY. CO.

street and Chicago avenue; also commencing at intersection of Wesson street and Chicago avenue, thence north on Wesson street to 200 feet south of Oak street; also commencing at Wesson street at not less than 200 feet south of Oak street, thence west and across north and south alley lying between Wesson and Larrabee streets to east line of Larrabee; thence northwesterly along Crosby street, from the west line of Larrabee street to intersection of Grace street with Division street; also commencing at south line of Division street at intersection of Grace street, thence north on Grace street to Vedder street, thence northerly across Gardner street and east and west alleys lying between Vedder and Gardner streets, and between Gardner and Rees streets, to north line of Rees street to point 300 feet east of Halsted street; on Rees street west to Dayton street; on Dayton street to Weed street; on Weed street to Sheffield avenue; on Sheffield avenue to Mary street; on Mary street to Clybourn place; on Clybourn place easterly to Elston avenue. Passed July 16, 1894; twenty years.

Same: On Clybourn place, from Marcy street to Clybourn avenue, relinquishing all rights under ordinance of July 16, 1895. Passed October 21, 1895; 20 years.

NORTHWESTERN ELEVATED RAILROAD COMPANY.

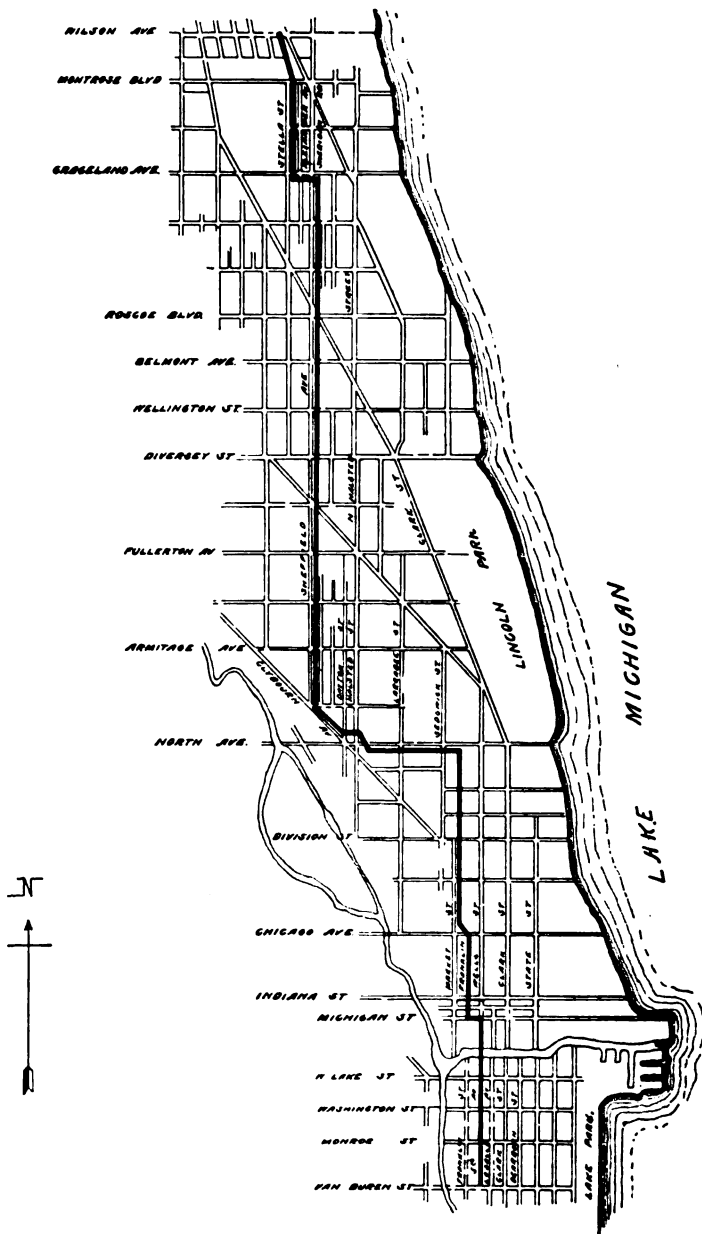
(See Map, Page 400.)

Franchise for "L" road, with acceptance of ordinance, etc. Passed January 8, 1894; 50 years.

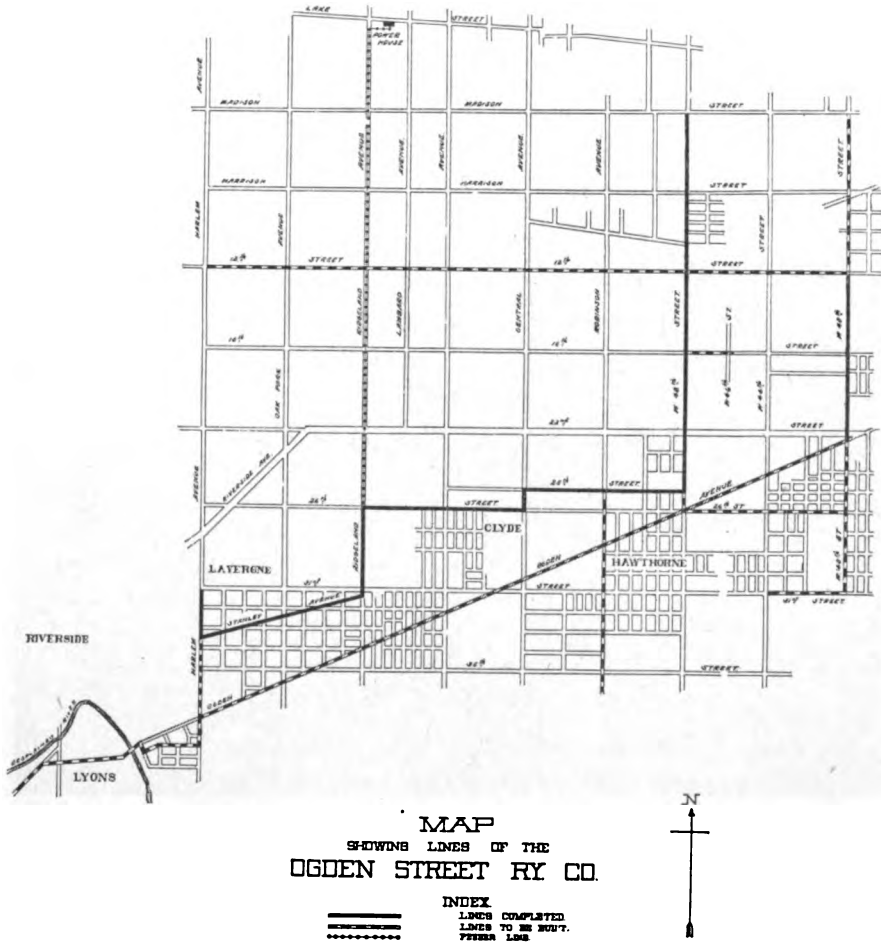
Same: (Amending ordinance of January 8, 1894.) Amending Clause 1 of Sec. 1. The route for that portion of the main line of said railroad south of north line of Institute place, shall be as follows: Beginning at a point on Institute place, between Market and North Franklin streets, thence southeast to Chicago avenue, to North Franklin street, to Michigan street; thence east to Wells street, over and across Chicago river, thence southerly on Fifth avenue to north line of Harrison street, etc. Passed June 24, 1895.

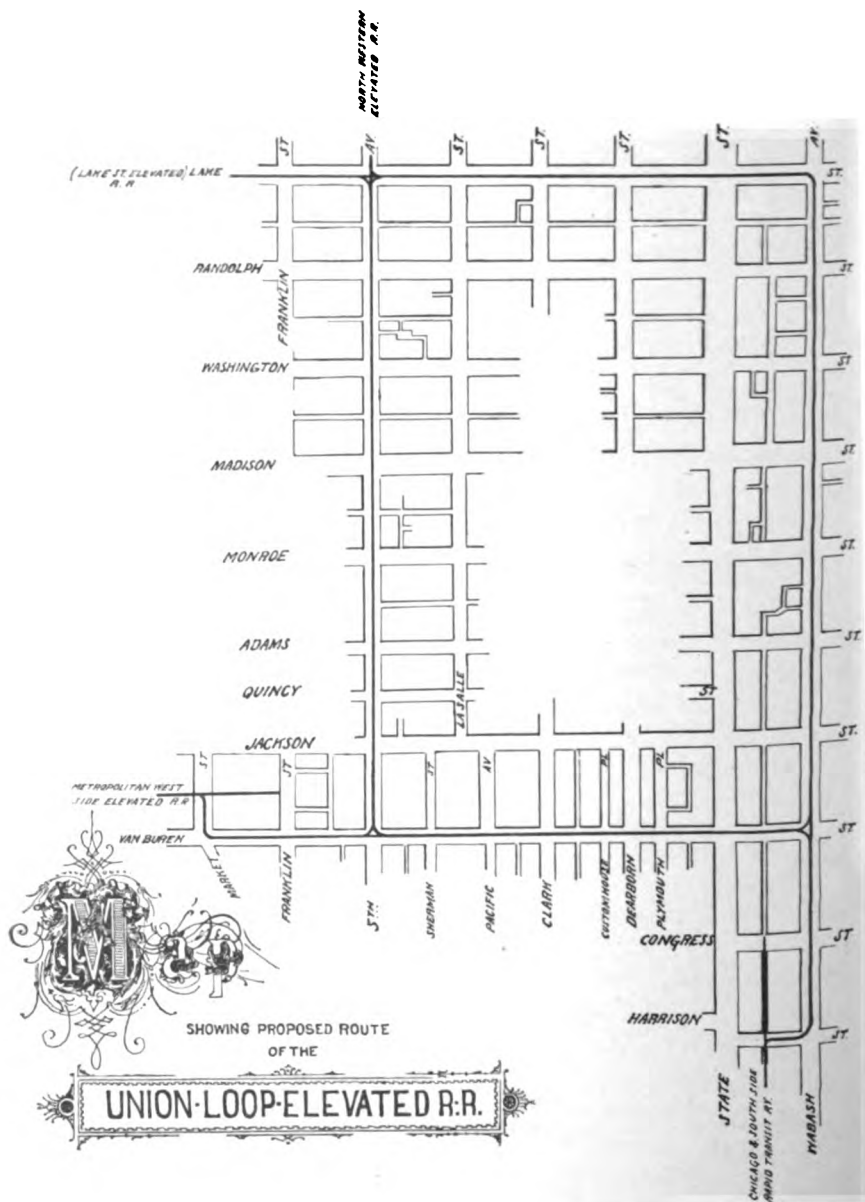
NORTHERN RAILROAD COMPANY.

For railway in Southport avenue, Jones avenue, Hawthorne avenue, Larrabee street, Robert street and Kingsbury street to Kinzie street. Passed February 5, 1866; no time limit.



MAP
SHOWING ROUTE OF
NORTHWESTERN ELEVATED R. R. CO





OGDEN STREET RAILWAY COMPANY.

(See Map, Page 401.)

For street railway on West Forty-eighth street (Hyman avenue), from Madison street to Twelfth street; on West Twelfth street, from West Fortieth street (Crawford avenue) to West Forty-eighth street on Ogden avenue, from West Fortieth street to West Forty-sixth street; on West Twenty-sixth street, from West Fortieth street to West Forty-sixth street; on Thirty-first street, from West Fortieth street to West Forty-sixth street. Passed February 18, 1895; twenty years.

UNION ELEVATED R. R. CO.

(See Map, Page 402.)

For elevated railway on Wabash avenue, from Lake street to Harrison street. Passed October 14, 1895; 50 years.

UNION CONSOLIDATED ELEVATED RAILWAY COMPANY.

On Van Buren street, from Wabash avenue to a point about 200 feet east of Halsted street; also on Market street, from Van Buren street to right-of-way of the Metropolitan West Side Elevated Company. Ordinance granted for a period of 50 years from October 7, 1895. Passed June 29, 1896. P. 579.

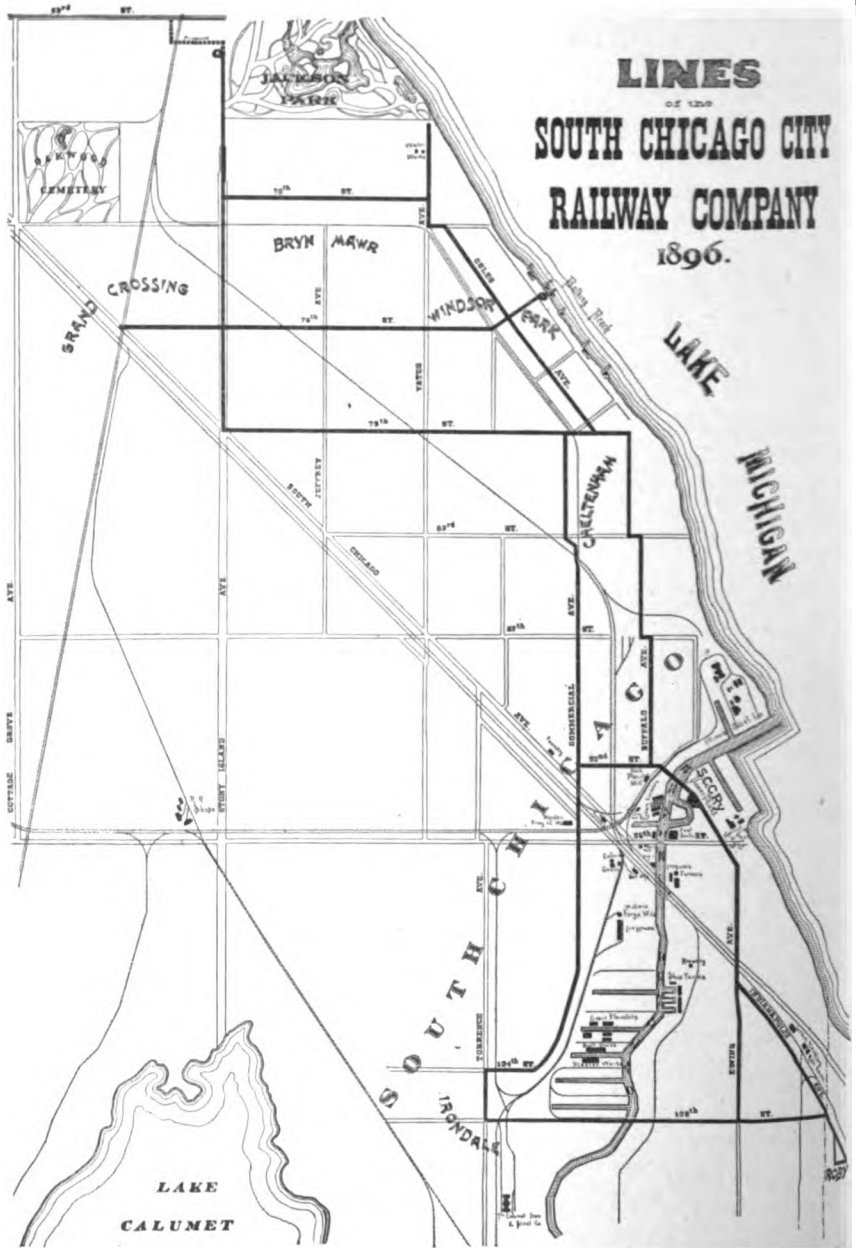
SOUTH CHICAGO CITY RAILWAY COMPANY.

(See Map, Page 404.)

For street railway on Commercial avenue, Seventy-ninth street, Cheltenham place, Buffalo avenue, Eighty-seventh street, Superior avenue, Eighty-third street, Ontario avenue, Coles avenue, Seventy-first street, Eighth avenue and One Hundred and Sixth street. Passed November 2, 1891; twenty years.

Same: On Seventieth street, Addison avenue, Seventy-first street, Seventy-fifth street, Ninety-fifth street, Indiana boulevard, Avenue K, Torrence avenue, One Hundred and Fourteenth street, Sheridan avenue, Chittenden road, South Chicago avenue and Howard avenue. Passed March 4, 1895; twenty years.

Same: On Sixty-fourth street, from Stony Island avenue to Madison avenue; Madison avenue, Sixty-fourth street to Sixty-third street. Passed June 8, 1896, page 387, and amended June 29, 1896, page 557; twenty years, dating from October 10, 1892.



SOUTHWEST CHICAGO RAPID TRANSIT COMPANY.

For street railway on Sixty-third street, from Ashland avenue to Central Park avenue. Passed July 20, 1891; twenty years. Another ordinance for same thing, passed March 20, 1893; twenty years, and re-enacted June 19, 1893.

Same: An amendatory ordinance, passed February 24, 1896, permitting overhead trolley; also permitting sale, lease or transfer of the franchise, and eliminating the requirements for carrying United States letter carriers free, etc.

WEST CHICAGO RAPID TRANSIT COMPANY.

For an elevated railroad in the West Division of the City. Passed February 17, 1890; twenty years.

WEST CHICAGO STREET RAILWAY COMPANY.

Also lessee of the Chicago West Division Railway Company.

(See Map, Page 378.)

For extensions of street railway on Fifth avenue, from Polk street to Taylor street; on Polk street, between Fifth avenue and Canal street; and on Twelfth street, from State street to the east end of the approach to the Twelfth street viaduct. Passed June 11, 1888.

Same: On West North avenue, between California avenue and Kedzie avenue, and from Kedzie avenue to the Chicago, Milwaukee & St. Paul railway right of way. Passed July 2, 1888; fifteen years.

Same: On West Chicago avenue, between Leavitt street and California avenue, and on California avenue between West Chicago avenue and Division street. Passed July 2, 1888, and May 13, 1889; fifteen years from first named date.

Same: On Milwaukee avenue, from Armitage avenue to Fullerton avenue (as an extension of the Chicago West Division railway on Milwaukee avenue). Passed February 4, 1889; fifteen years.

Same: On West Twelfth street, from Ogden avenue to Western avenue, as an extension of the Chicago West Division railway on Twelfth street east of Ogden avenue, under ordinance of August 26, 1878. Passed May 27, 1889; to August 26, 1898.

Same: Required to pave between tracks the Twelfth street line, from Ashland avenue to Ogden avenue, and the Ogden avenue line, from Twelfth street to California avenue. Passed July 25, 1889.

Same: Taylor street, between Fifth avenue and Western avenue. The Company to relinquish all claims to the Adams street bridge, and to pay to the City \$100,000 towards the construction of piers, abutments, etc., at Taylor street, and removal of the present Adams street bridge to Taylor street, such portion of the \$100,000, if any, remaining unexpended for the above, to be returned to the street railway company (as per Ordinance of January 20, 1890). Passed December 23, 1889; twenty years.

Same: On Armitage avenue, between California avenue and Kedzie avenue (or Simons avenue). Passed January 20, 1890; twenty years.

Same: On Western avenue, between Lake street and Milwaukee avenue, and between Twelfth street and Twenty-sixth street. Passed April 3, 1890; twenty years.

Same: On Lawndale avenue, between Ogden avenue and Thirty-third street. Passed November 17, 1890; twenty years.

Same: On West North avenue, between California avenue and Crawford avenue (West Fortieth street); to pay annual mileage charge of \$800 per mile from and after the first Tuesday of December, 1893, in addition to the \$50 car license fee. Passed April 9, 1891; twenty years.

Same: A later ordinance passed for the above, September 28, 1891, and expiring July 30, 1911, omitting the \$800 mileage charge.

Same: On Lake street, from Crawford avenue to West Forty-eighth street. Passed December 28, 1891; twenty years. Ordinance passed January 11, 1892, eliminating "letter carriers free."

Same: On Milwaukee avenue, from Armitage avenue to Lawrence avenue. Passed February 29, 1892; twenty years.

Same: On Ashland avenue, between Blue Island avenue and Twelfth street, and between Lake street and Erie street; on Paulina street, between Twelfth street and Lake street (the Company to pay cost of setting curbs four feet back on each side between Madison and Polk streets); on Robey street, between Blue Island avenue and Milwaukee avenue; on Western avenue, between Twelfth street and Twenty-sixth street, and between Harrison street and Van Buren street, and between Lake street and Milwaukee avenue; on Milwaukee avenue, between Armitage avenue and Lawrence avenue; on Kedzie avenue, between Madison street and Twelfth street; on Colorado avenue, between Madison and West Forty-eighth street; on West Chicago avenue, between California avenue and Grand avenue; on

Grand avenue, between Chicago avenue and Crawford avenue, and between Indiana street and Chicago avenue; on Eighteenth street, between State street and Halsted street; on Fourteenth street, between Canal street and Robey street; on State street, between Madison and Washington streets; on Dearborn street, between Adams and Van Buren streets; repeals part of section 1 of an ordinance of March 14, 1887, requiring them to grant use of Dearborn street tracks to the Chicago City Railway Company. Passed March 14, 1892; twenty years. Another ordinance passed March 21, 1892, for twenty years, covering all the above streets, permitting a single track on Robey street, or a double track, if they pay for setting the curb back four feet, etc., prohibiting more than two tracks on Dearborn street; also an agreement supplemental to the above ordinance by the Company, where, on any of the above streets of a thirty-foot improved roadway, they lay two tracks, they will set back the curbs four feet on each side and pay for all improvements of the added space, etc.

Same: On Crawford avenue (West Fortieth street), from North avenue to Grand avenue. Passed July 21, 1892; twenty years.

Same: On Armitage avenue, from California avenue to Kimball avenue. Passed September 12, 1892; twenty years. Another ordinance for above passed May 14, 1894; twenty years.

Same: (Together with the North Chicago Street Railroad Company.) By ordinance passed March 21, 1892, permitting use of "Belgian compressed air, gas, electricity or any other motive power they shall see fit to adopt" on their several respective lines of railroads owned or leased by them, providing that the electric power shall be placed underground. Above ordinance amended April 30, 1894, by striking out the "Belgian pattern" and "gas," and permitting "overhead trolley," in lieu of the underground requirement. In consideration of the above, the railway companies to pay the City \$10,000 at expiration of the first year, \$15,000 the second year, \$20,000 the third year, and \$25,000 yearly thereafter. Such sums to be used for extending the electric light system; the North Chicago Street Railroad Company further agreeing to pay the City the amount of certain judgments for damages against the City arising out of the Dearborn street bridge and viaduct, etc. Above ordinance amended May 7, 1894 (two ordinances), *in re* City police and firemen, and striking out the prohibition against trolley wires under elevated railroads.

Same : On Harrison street, between Western avenue and Kedzie avenue ; on Twenty-sixth street, between Blue Island avenue and Crawford avenue ; on Wood street, between Blue Island avenue and Milwaukee avenue ; on Lincoln street to Western avenue ; on Laurel street, between Thirty-first street and Thirty-ninth street, from Laurel to Main street ; on Main street, northeasterly from Thirty-fifth street to (over the bridge) Throop street ; on Throop street, between Twenty-first street and Taylor street ; on private property, from the south end of Throop street to a connection at Twenty-first street and Main street ; on Sangamon street, between Austin avenue and Erie street ; on Erie street, from Sangamon street to the east bank of the North branch of the Chicago river ; on Twenty-first street, between Western avenue and Douglas boulevard, and between Center avenue and Halsted street. Passed February 4, 1895 ; twenty years.

Same : On West Chicago avenue, between Grand avenue and Kedzie avenue. Passed May 6, 1895 ; twenty years.

Same : On Western avenue, from Milwaukee avenue to Belmont avenue. Passed October 21, 1895 ; twenty years.

Same : Ashland avenue, from Blue Island avenue to Thirty-first street ; California avenue, from Ogden avenue to Kinzie street ; California avenue, from Division street to North avenue ; California avenue, from Armitage avenue to Belmont avenue ; Kedzie avenue from Madison street to Chicago avenue ; Kedzie avenue, from Ogden avenue to Twelfth street ; Armitage avenue, from Elston avenue to Milwaukee avenue ; Augusta street, from Elston avenue to North Fortieth avenue ; Roby street, from North avenue to Elston avenue. Original ordinance passed July 20, 1896, page 737, and vetoed by the Mayor July 27, page 791, and passed as amended July 27, 1896, page 792 ; twenty years.

Same : Armitage avenue, from North Forty-fourth avenue to Grand avenue ; Grand avenue, from Armitage avenue to Central avenue. Ordinance passed November 9, 1896 ; page 1080.

NORTH CHICAGO STREET RAILWAY COMPANY AND WEST CHICAGO STREET RAILWAY COMPANY.

. Ordinance for operating their respective railway lines with electricity as a motive power, in and along each and all of the streets and avenues in the South division of the City of Chicago. Passed July 20, 1896, page 742 ; vetoed by the Mayor, July 27, 1896, page 795 ; and again passed under amended ordinance July 27, 1896, page 796.

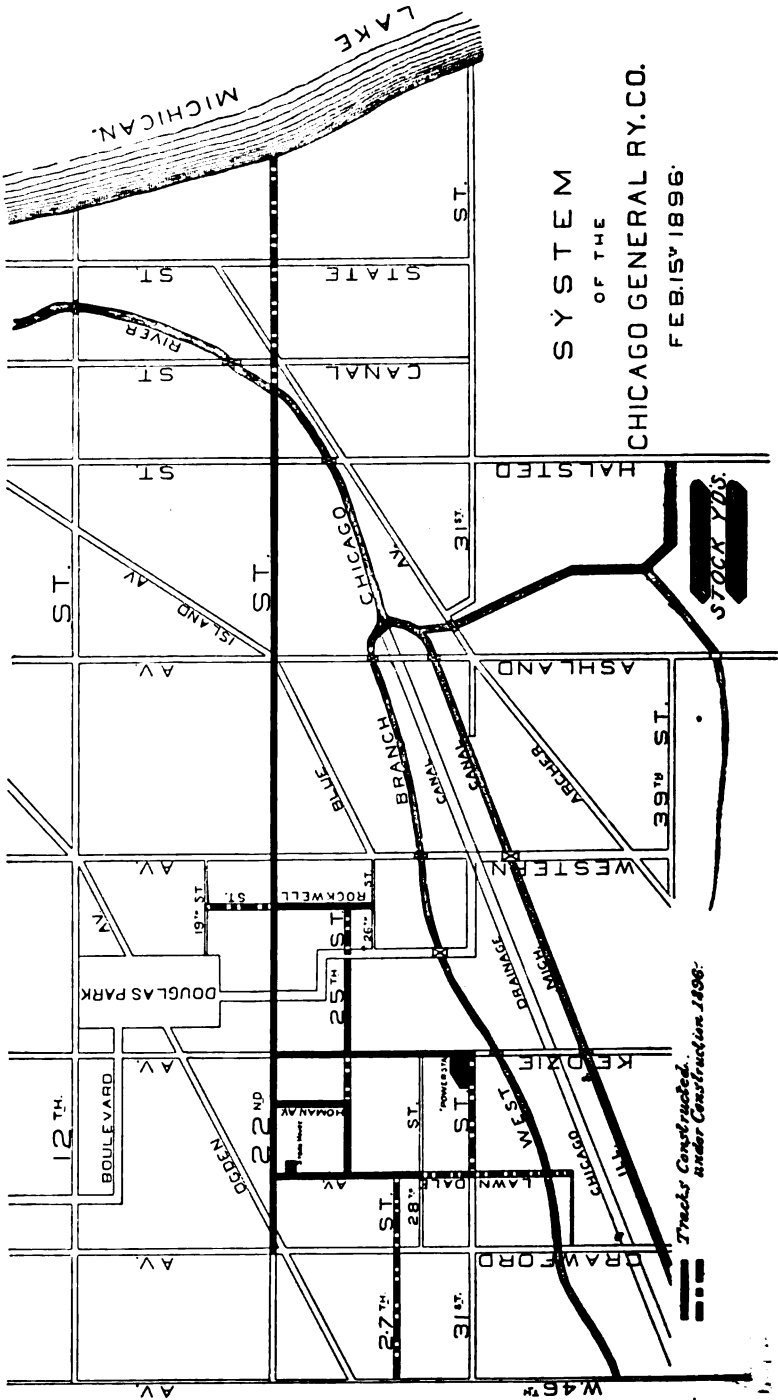
WEST AND SOUTH TOWN HORSE RAILWAY COMPANY, WEST AND
SOUTH TOWN STREET RAILWAY COMPANY, CHICAGO
GENERAL RAILWAY COMPANY.

(See Map, Page 410.)

Street railway on Twenty-second street, from Grove street to Johnson street, and from May street to Crawford avenue, and for a connecting line over private property between Johnson street and May street; also on Lawndale avenue, from Twenty-second street to Thirty-fifth street. To pay in addition to a \$50 car license, \$500 annually per mile after December 1, 1895. Passed February 8, 1892; twenty years.

Same: (West and South Towns Street Railway Company.) On Twenty-fifth street, from Lawndale avenue to Rockwell street; on Kedzie avenue, from Twenty-second street to Thirty-first street; on Homan avenue, from Twenty-second street to Twenty-third street; \$500 mileage not required under this ordinance. Passed April 5, 1893; to February 8, 1912.

Same: (Chicago General Railway Company.) On Homan avenue, from Twenty-third to Twenty-fifth streets. Passed December 10, 1894; to February 8, 1912.



SYSTEM
OF THE
CHICAGO GENERAL RY. CO.
FEB. 15th 1896.

Tracks Constructed
and under Construction 1896.

INDEX TO MAPS.

	PAGE
Calumet Electric Street Railway, The	364
Chicago and Jefferson Urban Transit Co., The.....	376
Chicago & South Side Rapid Transit Railway.....	382
Chicago City Railway Co	366
Chicago Electric Transit Co	372
Chicago General Railway Co	410
Chicago North Shore Street Railway Co	374
Cicero & Proviso Street Railway Co	383
Englewood & Chicago Electric Street Railway.....	384
General Electric Railway Co.....	386
Lake Street Elevated R. R. Co.....	388
Metropolitan West Side Elevated R. R., The.....	390
North Chicago Electric Street Railway Co	396
North Chicago Street R. R. Co	392
North Side Electric Street Railway Co.....	398
Northwestern Elevated R. R. Co	400
Ogden Street Railway Co.....	401
South Chicago City Railway Co	404
Union Loop Elevated R. R	402
West Chicago Street R. R	378

INDEX TO STREETS OCCUPIED BY STREET CAR LINES.

Adams st.....	Center to Michigan ave.....	W. Chi. St. Ry. Co.
Addison ave.....	Western ave. to N. 64th st.....	Chi. Elec. Trans. Co.
Armitage ave....	Elston ave. to N. 44th st.....	W. Chi. St. Ry. Co.
Archer ave.....	State to S. 44th st.....	Chi. City Ry. Co.
Ashland ave.....	Graceland to Belmont ave.....	N. Chi. St. Ry. Co.
Ashland ave.....	Clybourn pl. to Lake st.....	W. Chi. St. Ry. Co.
Ashland ave.....	12th to 31st st.....	W. Chi. St. Ry. Co.
Ashland ave.....	31st to 69th st.....	Chi. City Ry. Co.
Augusta st.....	Elston to N. 40th ave.....	W. Chi. St. Ry. Co.
Austin ave.....	Desplaines st. to Center ave....	W. Chi. St. Ry. Co.
Avenue F.....	103d to 108th st.....	Calumet Elec. St. Ry.
Avenue K.....	Ewing ave. to 108th st.....	S. Chi. City Ry. Co.
Avenue L.....	98th to 108th st.....	Calumet Elec. St. Ry.
Avenue N.....	95th to 98th st.....	Calumet Elec. St. Ry.
Balmoral ave.....	Robey st. to E. Ravenswood Pk	N. Chi. Elec. St. Ry.
Baltimore ave.....	83d st. to Erie ave.....	Calumet Elec. St. Ry.
Belmont ave.....	Ashland av. to Robey st.....	N. Chi. St. Ry. Co.
Belmont ave.....	Halsted st. to Milwaukee ave	Chi. Elec. Trans. Co.
Blackhawk st.....	Noble to Holt st.....	W. Chi. St. Ry. Co.
Blue Island ave	Halsted st. to Western ave.....	W. Chi. St. Ry. Co.
Bond ave.....	83d st. to Cheltenham pl.	Calumet Elec. St. Ry.
Bryn Mawr ave....	Robey st. to E. Ravenswood Pk...	N. Chi. Elec. St. Ry.
Buffalo ave.....	87th to 92d st.....	S. Chi. City Ry. Co.
Butler st.....	24th to 28th st.....	General Elec. Ry.
Canal st.....	18th to Harrison st.....	W. Chi. St. Ry. Co.
Canal st.....	22d to 23d st.....	Gen. Elec. St. Ry. Co.
Canal st.....	Archer ave. to 29th st.....	Chi. City Ry. Co.
Canalport ave.....	Halsted to 18th st.....	W. Chi. St. Ry. Co.
California ave.....	Belmont to Chicago ave.....	W. Chi. St. Ry. Co.
California ave.....	Kinzie st. to Ogden ave.....	W. Chi. St. Ry. Co.
Calumet ave.....	67th to 69th st.....	Englewood & C. E. St.
Center st.....	Clark st. to Racine ave.....	N. Chi. St. Ry. Co.
Center ave.....	21st to Adams st.....	W. Chi. St. Ry. Co.
Center ave.....	Erie st. to Austin ave.....	W. Chi. St. Ry. Co.
Center ave.....	31st to 35th st.....	Chi. City Ry. Co.
Center ave.....	47th to 63d st....	Chi. City Ry. Co.
Cheltenham pl.....	Bond to Lake ave.....	Cal. Elec. St. Ry.
Chicago ave.....	Clark st. to Milwaukee ave.....	N. Chi. St. Ry. Co.
Chicago ave.....	Milwaukee ave. to N. 40th st.	W. Chi. St. Ry. Co.
Chicago ave.....	Crosby to Erie st.....	N. S. Elec. St. Ry. Co.
Chicago ave.....	N. 40th to Kedzie ave.....	C. & J. U. Trans. Co.
Chicago ave.....	N. 48th to N. 52d ave.....	Cic. & Pro. St. Ry.

Clemens ave. 71st to 72d st. E. & Chi. Elec. St. Ry.
 Clark st. Washington to 22d st. Chi. City St. Ry. Co.
 Clark st. Washington to Devon st. N. Chi. St. Ry. Co.
 Clinton st. Harrison st. to Milwaukee ave. W. Chi. St. Ry. Co.
 Clybourn ave. Clybourn pl. to Halsted st. N. S. Elec. St. Ry. Co.
 Clybourn ave. Division st. to Western ave. N. Chi. St. R. R. Co.
 Clybourn pl. Robey st. to Elston ave. N. Chi. St. R. R. Co.
 Clybourn pl. Elston to Clybourn ave. N. S. Elec. St. Ry. Co.
 Colorado ave. Madison st. to W. 40th ave. W. Chi. St. R. R. Co.
 Coles ave. 71st to 79th st. S. Chi. St. R. R. Co.
 Commercial ave. 79th to 104th st. S. Chi. St. R. R. Co.
 Cottage Grove ave. 22d to S. Chicago ave. Chi. City St. Ry. Co.
 Crawford ave. Chicago to Grand ave. Chi. & J. U. Trans. Co.
 Crosby ave. Division to Larrabee st. N. S. Elec. St. Ry. Co.
 Custom House pl. Jackson to 14th st. General Electric.

Dearborn st. 43d to 45th st. General Electric.
 Dearborn ave and st. Kinzie to Polk st. N. Chi. St. Ry. Co.
 Dearborn st. Van Buren to Adams st. N. Chi. St. Ry. Co.
 Dearborn st. 20th to 21st st. Chicago City Ry.
 Dearborn st. 14th to 37th st. General Electric.
 Devon ave. Evanston ave. to Clark st. Chi. N. S. St. Ry. Co.
 Desplaines st. Harrison to Adams st. W. Chi. St. Ry. Co.
 Desplaines st. Madison st. to Austin ave. W. Chi. St. Ry. Co.
 Division st. Milwaukee to California ave. W. Chi. St. Ry. Co.
 Division st. Halsted to Crosby st. N. S. Elec. St. Ry. Co.
 Division st. State st. to Milwaukee ave. N. Chi. St. Ry. Co.

83d st. S. Chicago to Bond ave. Calumet Electric.
 83d st. Ontario to Superior st. S. Chi. City Ry. Co.
 18th st. Leavitt to River st. W. Chi. St. Ry. Co.
 18th st. Indiana to Wabash ave. W. Chi. St. Ry. Co.
 86th st. Sangamon to Loomis st. Eng. & Chi. Elec. St. Ry.
 86th pl.
 87th st. Cottage Grove ave. to Vincennes rd. Eng. & Chi. Elec. St. Ry.
 87th st. Superior ave. to Buffalo st. S. Chi. City Ry. Co.
 87th st. Stony Island to Cottage Grove ave. Calumet Electric.
 89th st. The Strand to Mackinaw ave. Calumet Electric.
 Elston ave. Milwaukee to Chi. ave. City limits. Chi. Elec. Trans. Co.
 Elm st. Crosby to Franklin st. N. S. Elec. St. Ry. Co.
 Erie ave. Baltimore to S. Chi. ave. Calumet Electric.
 Erie st. Center to Ashland ave. W. Chi. St. Ry. Co.
 Erie st. River to Franklin st. N. S. Elec. St. Ry. Co.
 Escanaba ave. 78th to 83d st. Calumet Electric.
 Evans ave. 71st to 72d st. Eng. & Chi. Elec. St. Ry.
 Evanston ave. Clark st. to Graceland ave. N. Chi. St. Ry.
 Evanston ave. Graceland & Halsted to Devon ave. C. N. Shore St. Ry.
 Ewing ave. 92d to. S. Chi. City Ry.

Fifth ave.....	Twelfth to Randolph st.....	W. Chi. St. Ry. Co.
Fifth ave.....	Lake to Van Buren st	Union Loop.
Fifth ave.....	37th to 43d st.....	General Electric.
51st st.	Grand blvd. to Western ave.....	Chi. City Ry. Co.
55th st.....	Cottage Grove to Lake ave.....	Chi. City Ry. Co.
56th st.....	Morgan st. to Western ave.....	General Electric.
57th st.....	Wabash ave. to Morgan st.....	General Electric.
57th st.....	Wabash to S. Park ave	General Electric.
59th st.....	State st. to Western ave	Chi. City Ry. Co.
14th st.....	Canal to Robey st.....	W. Chi. St. Ry. Co.
14th st.....	Plymouth to Custom House pl	General Electric.
S. 40th ave.....	Madison to 31st st.....	Ogden St. Ry. Co.
40th st.....	Alley E. of State to alley E. of Prairie	C. & S. S. Rapid T. Co.
N. 40th ave.....	Irving Pk. blvd. to Peterson ave...	Chi. Elec. Trans. Co.
43d st.....	State st. to the Lake.....	Chi. City Ry. Co.
43d st.....	Fifth to Princeton ave.....	General Electric.
45th st.....	Princeton to Ellis ave	General Electric.
46th ct.....	Montrose to.....	Chi. Elec. Trans. Co.
47th st.....	The Lake to Archer ave	Chi. City Ry. Co.
S. 48th ave.....	Madison to 26th st	Ogden St. Ry. Co.
48th ave.....	Warren ave.....	Chi. Elec. Trans. Co.
48th ave.....	Madison st. to Chicago ave.....	Cicero & Proviso St. Ry.
Franklin st.....	Elm to Kinzie st.....	N. W. Elec. St. Ry. Co.
Front st.....	95th to 99th st.....	Eng. & Chi. Elec. St. Ry.
Fulton st.....	Morgan st. to Kedzie ave	Chi. & Jeff. U. T. Co.
Fullerton ave	Halsted st to Milwaukee ave.	N. Chi. St. Ry. Co.

Garfield ave.....	Lincoln to Racine ave	N. Chi. St. Ry.
Graceland ave.....	Ashland ave. to River	Chi. Elec. Trans. Co.
Graceland ave.....	Evanston to Ashland ave.....	N. Chi. St. Ry. Co.
Grand ave.....	Western ave. to Halsted st.....	N. Chi. St. Ry. Co.
Grand ave.....	40th st. to Western ave	N. Chi. St. Ry. Co.
Grand ave.....	Crawford to Armitage ave.....	Chi. & Jeff. U. T. Co.

Halsted st.....	Archer ave. and River to 79th st ..	Chi. City Ry. Co.
Halsted st.....	Clybourn ave. to Division st	N. S. Elec. St. Ry. Co.
Halsted st.....	N. Branch to S. Branch.....	W. Chi. St. Ry. Co.
Halsted st.....	N. Branch to Graceland ave	N. Chi. St. Ry. Co.
Halsted st.....	119th to 121st st.....	Calumet Elec. St. Ry.
Harbor ave.....	93d to Makinaw ave.....	Calumet Elec. St. Ry.
Harrison st.....	Kedzie to Wabash ave	W. Chi. St. Ry. Co.
Holt st.....	Blackhawk to North ave.....	W. Chi. St. Ry. Co.
Homan ave.....	22d to 25th	Chi. Genl. Ry. Co.
Honore st	75th to 76th sts.....	Calumet Elec. St. Ry.

Indiana ave	18th to 51st st.....	Chi. City St. Ry. Co.
Indiana st.	Halsted st. to Grand ave.....	W. Chi. St. Ry. Co.
Indiana st.	Milwaukee ave and Halsted to State	N. Chi. St. Ry. Co.
Indianapolis ave ...	K to State line.....	S. Chi. City Ry. Co.
Irving Park blvd. ...	River to City Limits.....	Chi. Elec. Trans. Co.
Jefferson ave.		
Jefferson ave.	62d to 63d st	Chi. City Ry. Co.
Kedzie ave	Fulton st. to North ave	Chi. & Jeff. U. T. Co.
Kedzie ave	38th to 63d st	Chicago City Ry. Co.
Kedzie ave	22d to 31st st.....	Chi. Genl. Ry. Co.
Kedzie ave	Ogden to Chicago ave	N. Chi. St. Ry. Co.
Kedzie ave	Division st. to North ave.....	N. Chi. St. Ry. Co.
Kingsbury st.	Chicago ave. to Erie st	N. S. Elec. St. Ry. Co.
Kinzie st	Market or Orleans st. to Wells st...	N. Chi. St. Ry. Co.
Kimball ave.	North to Armitage ave	N. Chi. St. Ry. Co.
Lake ave.	78th st. to Cheltenham pl	Calumet Elec.
Lake ave	56th st. to alley S. of 55th st.....	Chi. City Ry.
Lake st.	N. 48th ave. to	W. Chi. St. Ry. Co.
Lake st.	Wabash ave. to 52d st.....	Lake St. Ele. Ry. Co.
Lake st.	Wabash ave. to State st.....	Chi. City Ry. Co.
Lake st.	48th to 52d ave	Cicero & Proviso St. Ry.
Lake st.	5th to Wabash ave.....	Union Loop.
Lake st.	5th to 52d ave.....	Lake St. Elevated.
La Salle st	Michigan ave. to Monroe st.....	N. Chi. St. Ry. Co.
La Salle st	Madison to Michigan st.....	N. Chi. St. Ry. Co.
Larrabee st	Chi. to Clybourn ave	N. Chi. St. Ry. Co.
Larrabee st	Crosby st. to Chicago ave....	N. S. Elec. St. Ry. Co.
Lawndale ave	Ogden ave. to 33d st.....	W. Chi. St. Ry. Co.
Lawndale ave	22d st. to S. of River	Chi. Genl. Ry. Co.
Lawrence ave	Elston to Evanston ave.....	N. C. Elec. St. Ry. Co.
Lawrence ave	Elston to Milwaukee ave	Chi. Elec. Trans. Co.
Leavitt st	18th st. to Blue Island ave	W. Chi. St. Ry. Co.
Lincoln ave	Belmont to Center ave.....	W. Chi. St. Ry. Co.
Lincoln ave		
Loomis st	86th to 95th st	Eng. & Chi. Elec. St. Ry.
Madison st.	State st. to Michigan ave.....	Chi. City Ry.
Madison st.	State st. to 40th ave.....	W. Chi. St. Ry. Co.
Madison st.	40th to 52d ave.....	Cicero & Prov. St. Ry.
Madison ave.	63d to 64th st.....	S. Chi. City Ry. Co.
Madison ave.	63d to 64th st.....	Chi. City Ry. Co.
Mackinaw ave.	Harbor ave. to 89th st	Calumet Electric.
Market st. (Orleans)	Kinzie to Division st.....	N. Chi. St. Ry. Co.
Market st. (Orleans)	Lake to Madison st.....	Lake St. Elevated.
Michigan ave.	Adams to Washington st.....	W. Chi. St. Ry. Co.
Michigan ave.	Madison to Randolph st.....	Chi. City Ry. Co.
Michigan ave.	95th to 124th st.....	Calumet Electric.

Michigan st.....	Market (Orleans) to Clark st.....	N. Chi. St. Ry. Co.
Milwaukee ave.....	Lake st. to Logan sq.....	N. Chi. St. Ry. Co.
Milwaukee ave.....		
Milwaukee ave.....	Lawrence to City limits	Chi. Elec. Trans. Co.
Monroe st.....	La Salle to Dearborn st.....	N. Chi. St. Ry.
Monroe st.....	Morgan to Canal st.....	Chi. & Jeff. U. T. Co.
Montrose blvd.....	Milwaukee to Evanston ave.....	N. Chi. Elec. St. Ry.
Morgan st.....	57th to 56th st.....	General Electric Ry.
Morgan st.....	Monroe to Fulton st.....	Chi. & Jeff. U. T. Co.

91st st.....	S. Chicago ave. to Mackinaw ave..	Calumet Electric.
91st st.....	Stony Island to Cottage Grove ave.	Calumet Electric.
92d st.....	Commercial to Ewing ave.....	S. Chi. City Ry. Co.
93d st.....	S. Chicago to Stony Island ave....	Calumet Electric.
93d st.....	S. Chicago to Harbor ave.....	Calumet Electric.
93d st.....	Washington to Cottage Grove ave..	Calumet Electric.
94th st.....	Stony Island to Washington ave..	Calumet Electric.
95th st.....	S. Chicago to Avenue N..	Calumet Electric.
95th st.....	Cottage Grove to Michigan ave....	Calumet Electric.
95th st.....	Loomis to Front st.....	Eng. & Chicago.
98th st.....	Avenue N to Avenue L	Calumet Electric.
99th st.....	Front to Winston st.....	Eng. & Chicago.
Noble ave.....	Blackhawk st. to Milwaukee ave ..	W. Chi. St. Ry. Co.
North ave.....	Milwaukee to 40th ave	W. Chi. St. Ry. Co.
North ave.....	Ashland to Holt ave.....	W. Chi. St. Ry. Co.
North ave.....	Milwaukee ave. to Clark st.....	N. Chi. St. Ry. Co.

Ogden ave.....	S. 40th to S. 48th ave.....	Ogden St. Ry. Co.
Ogden ave.....	Randolph to S. 40th st.....	W. Chi. St. Ry. Co.
103d st.....	Michigan ave. to Vincennes rd....	Calumet Electric.
103d st.....	Avenue L to Avenue F.....	Calumet Electric.
103d st.....	Michigan ave. to Wood st.....	Eng. & Chi. Elec. St.
104th st.....	Torrence to Commercial ave.....	S. Chi. City Ry. Co.
108th st.....	Torrence to Indianapolis ave.....	S. Chi. City Ry. Co.
108th st.....	Avenue L to Indiana State line....	Calumet Electric.
111th st.....	Indiana to Ashland ave.....	Eng. & Chi. Elec.
115th st.....	Michigan to Prairie ave.....	Calumet Elec. St. Ry.
116th st.....	Wentworth to Prairie ave.....	Calumet Elec. St. Ry.
119th st.....	Michigan ave. to Halsted st.....	Calumet Elec. St. Ry.
119th st.....	Halsted st. to Ashland ave.....	Eng. & Chi. Elec.
Ontario ave.....	79th to 83d st.....	S. Chi. City Ry. Co.
Orleans st. (Market)	Kinzie to Division st.....	N. Chi. St. Ry. Co.

Paulina st.....	Lake to 12th st.....	W. Chi. St. Ry. Co.
Peterson ave.....	Kedzie to N. 40th ave.....	Chi. Elec. Trans. Co.
Pitney ct.....	31st st. to Archer ave.....	Chi. City Ry. Co.
Plymouth pl	Jackson to 14th st.....	General Elec. Ry. Co.
Polk st.....	Canal st. to 5th ave.....	W. Chi. St. Ry. Co.

Prairie ave..... 115th to 116th st..... Calumet Elec. St. Ry.
 Princeton ave..... 23d to 24th st..... General Electric.
 Princeton ave..... 43d to 57th st..... General Electric.

Randolph st..... Wabash ave. to State st..... Chi. City Ry. Co.
 Randolph st..... Lake to State st W. Chi. St. Ry. Co.
 Randolph st..... La Salle to Dearborn st N. Chi. St. Ry. Co.
 E. Ravenswood prk. Balmoral to Rosehill station..... N. Chi. Elec. St. Ry.
 East Racine ave.... Center st. to Fullerton ave N. Chi. St. Ry.
 Railroad ave 73d to 78th st..... Calumet Electric.
 Rhodes ave..... 35th to 39th st..... Chi. City Ry.
 Robey st Lincoln to Bryn Mawr ave N. Chi. Elec. St. Ry.
 Robey st Elston to Blue Island ave..... W. Chi. St. Ry. Co.
 Robey st Belmont ave. to Roscoe st..... N. Chi. St. Ry.
 Rockwell st 19th to 26th st Chi. Genl. Ry. Co.
 Root st State to Halsted st Chi. City Ry. Co.
 Roscoe st..... Robey st. to Western ave N. Chi. St. Ry.

Sangamon st..... Erie to Adams st W. Chi. St. Ry. Co.
 Sangamon st..... 68th to 95th st Eng. and Chi. Elec.
 70th st Stony Island to Yates ave S. Chi. City Ry.
 71st st..... Yates to Coles ave..... S. Chi. City Ry.
 71st st..... State st. to Cottage Grove ave.... Calumet Elec.
 72d st Cottage Grove to Evans ave Calumet Elec.
 73d st Stony Island to Railroad ave Calumet Elec.
 75th st Stony Island ave. to Honore st Calumet Elec.
 75th st Illinois Cent. tracks to the Lake... S. Chi. City Ry.
 76th st Halsted to Honore st ... Calumet Elec.
 78th st Railroad ave. to the Lake..... Calumet Elec.
 79th st Stony Island to Ontario ave S. Chi. City Ry.
 79th st Vincennes rd. to Halsted st..... Chi. City Ry. Co.
 79th st Vincennes rd. to State st Eng. & Chi. Elec. Ry.
 61st st Washington to Wentworth ave ... Chi. City Ry. Co.
 62d st Stony Island to Jefferson ave..... Chi. City Ry. Co.
 63d st Stony Island to Ashland ave Chi. City Ry. Co.
 63d st Alley E. of Prairie to Stony Island. C. & S. S. R. Trans. Co.
 64th st..... Stony Island to Madison ave..... Chi. City Ry.
 64th st..... Stony Island to Madison ave..... S. Chi. City Ry.
 North 64th ave Addison ave. to Irving Park..... Chi. Elec. Trans. Co.
 North 66th st..... South Park to St. Lawrence ave... Calumet Elec.
 67th st..... Cottage Grove to Stony Island ave. Calumet Elec.
 67th st..... Cottage Grove ave. to State st Eng. & Chi. Elec.
 69th st..... Calumet to Vincennes ave Eng. & Chi. Elec.
 16th st..... South 46th ave. to South 48th st.... Ogden St. Ry.
 16th st..... State st. to Western ave Chi. City Ry. Co.
 Sedgwick st Chicago ave. to Center st N. Chi. St. Ry.
 Sheffield ave Lincoln ave. to Clark st N. Chi. St. Ry.
 Southport ave Clybourn pl. to Clark st N. Chi. St. Ry.

South Park ave	22d to 23d st	General Elec.
South Park ave	63d to 67th st	Calumet Elec.
South Chicago ave	Woodlawn ave. to 59th st	Calumet Elec.
South Chicago ave	Vincennes to Cottage Grove ave	Eng. & Chi. Elec.
South Chicago ave	Cottage Grove to Woodlawn ave	Chi. City Ry. Co.
State st	68th to 69th st	Eng. & Chi. Elec.
State st	Lake to Division st	N. Chi. St. Ry. Co.
State st	Lake to 69th st	Chi. City Ry.
State st	Madison to Lake st	W. Chi. St. Ry. Co.
Stony Island ave	62d to 64th st	Chi. City Ry. Co.
Stony Island ave	64th to 97th st	Calumet Elec.
Stony Island ave	64th to 79th st	S. Chi. City Ry. Co.
St. Lawrence ave	66th to 75th st	Calumet Elec.
Sunnyside ave	North 46th ct. to North 48th ave	Chi. Elec. Trans. Co.
Superior ave	83d to 87th st	S. Chi. City Ry. Co.

Taylor st	Western ave. to River	W. Chi. St. Ry.
Torrence ave	104th to 108th st	S. Chi. City Ry.
12th st	South 40th to South 48th ave	Ogden St. Ry. Co.
12th st	Wabash to South 40th ave	W. Chi. St. Ry. Co.
21st st	Halsted st. to California ave	W. Chi. St. Ry. Co.
22d st	River to Indiana ave	Chi. City Ry.
22d st	River to Ogden ave	Chi. Genl. Ry. Co.
23d st	Canal st. to S. Park ave	Genl. Elec. Co.
24th st	Princeton ave. to Butler st	Genl. Elec. Co.
25th st	Rockwell to Lawndale ave	Chi. Genl. Ry. Co.
26th st	Cottage Grove ave. to Halsted st	Chi. City Ry. Co.
26th st	S. 40th ave. to S. 48th ave	Ogden St. Ry. Co.
26th st	Western to S. 40th ave	W. Chi. St. Ry. Co.
27th st	Lawndale to S. 46th ave	Chi. Genl. Co.
28th st	Butler to Union st	Genl. Elec. Co.
29th st	Canal to Wallace st	Chi. City Ry. Co.
31st st	Pitney ct. to the Lake	Chi. City Ry. Co.
31st st	S. 40th to 44th ave	Ogden St. Ry. Co.
31st st	Kedzie to Lawndale ave	Chi. Genl. Co.
35th st	Cottage Grove to California ave	Chi. City Ry. Co.
37th st	Wabash to Union ave	Genl. Elec. Ry. Co.
38th st	Archer ave. to Central Park ave	Chi. City Ry. Co.
39th st	Halsted st. to Cottage Grove ave	Chi. City Ry. Co.

Union ave 26th to 57th st Genl. Elec. Ry. Co.

Van Buren st	Wabash ave. to a point between Union ave. and Halsted st	Union Con. Loop Co.
Van Buren st	Kedzie ave. to State st	W. Chi. St. Ry. Co.
Vernon ave	63d to 67th st	Eng. & Chi. Elec. Co.
Vincennes ave	67th to 71st st	Eng. & Chi. Elec. Co.

Vincennes rd.....	State to 79th st	Chi. City Ry. Co.
Vincennes rd.....	79th st. to City limits	Eng. & Chi. Elec. Co.
Wabash ave.....	Lake to 22d st	Chi. City Ry. Co.
Wabash ave.....	23d to 63d st	Genl. Elec. Co.
Wabash ave.....	Lake to Harrison st	Union Loop Co.
Wallace st.....	29th to Root st.....	Chi. City Ry. Co.
Washington ave....	60th to 61st st.....	Chi. City Ry. Co.
Washington ave....	Michigan ave. to Tunnel.....	W. Chi. St. Ry. Co.
Washington ave....	Desplaines st. to Tunnel.....	W. Chi. St. Ry. Co.
Webster ave.....	Racine to Lincoln ave	N. Chi. St. Ry. Co.
Wells st	Michigan to Clark st	N. Chi. St. Ry. Co.
Wentworth ave.....	116th to 119th st	Calumet Elec. Co.
Wentworth ave.....	Archer ave. to Vincennes rd	Chi. City Ry. Co.
Western ave.....	Archer ave. to 71st st	Chi. City Ry. Co.
Western ave.....	Armitage ave. to 26th st.....	W. Chi. St. Ry. Co.
Western ave	Elston ave. to Church rd.....	Chi. Elec. Trans. Co.
Wood st	103d to 107th st.....	Eng. & Chi. Elec. Co.
Yates ave	68th to 71st st.....	S. Chi. City Ry.

MISCELLANEOUS DATA.

Population of the City	1,800,000
Total bonded City indebtedness	\$ 17,078,950 00
Equalized valuation of real and personal property	\$244,357,286 00
Assessed valuation of real and personal property	\$206,441,393 00
Recorded transfers of real estate, amount of	\$103,970,720 00
Number of buildings erected in Chicago in 1896	6,444
Estimated cost of buildings erected	\$ 22,730,615 00
Number of buildings in Chicago over ten stories high	37
Number of electric lights used for City purposes	1,124
Number of miles of streets in Chicago	2,570
Number of miles of paved streets in Chicago	1,183.64
Number of miles of sidewalks	4,863.10
Number of miles of sewers	1,306
Number of miles of water mains	1,692
Number of miles of water tunnels in use	22
Number of miles of water tunnels under construction	13
Number of traffic tunnels under Chicago river	3
Number of bridges over the Chicago river	54
Number of bridges over the Calumet river	4
Number of bridges over the Illinois and Michigan canal	6
Number of viaducts over railroad tracks	39
Number of street lamps in the City	51,143
Number of miles of river frontage	41
Number of vessels arriving during the year 1896	8,447
Number of vessels departing during the year 1896	8,552
Representing a tonnage of	12,965,812
Number of towing tugs on the Chicago river	27
Number of school buildings owned by the City	264
Number of schools opened during the year 1896	27
Increased capacity for scholars	21,222
Number of rented buildings used for school purposes	146
Total number of scholars enrolled during the year 1896	213,825
Number of night schools	33
Total enrollment of night schools	9,581
Average number of children attending public schools	177,710
Value of school buildings, lots and furniture	\$ 20,000,000 00
Number of teachers in public schools	4,700
Number of railroad systems entering Chicago	34
Number of street car companies	18
Number of miles of streets covered by tracks	342.21
Number of miles of cable railway in Chicago	41.95
Number of miles of electric railway in Chicago	255.64
Number of miles of horse car railway in Chicago	18.46
Number of miles of elevated railway in Chicago	26.00
Increase over 1889 in street railways, miles ...	251.96

Total capital of Chicago city banks, latest report	\$ 34,474,500 00
Total deposits at Chicago city banks, latest report	\$ 186,947,320 00
Surplus and profits	\$ 20,039,698 00
Bank clearings for the year 1896.....	\$4,413,054,108 00
Receipts from cards, stamps and envelopes at Chicago post office.	\$ 5,258,704 06
Money orders, amount received and disbursed at Chicago post office.....	\$ 34,122,841 28
Registry of mails.....	3,403,939
Number of pieces of mail handled at Chicago post office.....	800,000,000
Number of mail wagons collecting from boxes	111
Number of clerks employed in Chicago post office	1,319
Number of carriers employed by Chicago post office.....	1,096
Number of fire engines in Chicago	89
Number of engine and hook and ladder houses.....	109
Number of fire-boats on Chicago and Calumet rivers	4
Number of hook and ladder trucks.....	33
Number of chemical fire engines	27
Number of men employed on Chicago fire department.....	1,133
Number of horses used by Chicago fire department.....	447
Number of police and fire alarm boxes.....	2,543
Number of police stations in Chicago.....	40
Number of police patrol barns.....	38
Number of horses in use by police department	250
Number of patrol wagons.....	38
Number of ambulances	7
Number of men on police force in Chicago.....	3,250
Number of bushels of grain received in Chicago, 1896.....	242,408,156
Number of barrels of flour received in Chicago, 1896.....	2,531,995
Number of hogs received in Chicago market in 1896.....	7,659,472
Number of cattle received in Chicago in 1896.....	2,600,476
Number of sheep received in Chicago in 1896.....	3,590,655
Number of horses received in Chicago in 1896.....	105,978
Number of pounds of cured meats and dressed beef.....	271,678,601
Number of pounds of lard received.....	67,191,567
Number of pounds of lard shipped.....	413,447,968
Number of tons of anthracite and bituminous coal received....	6,322,773
Number of feet of lumber received.....	1,286,643,000
Number of feet of lumber shipped	599,920,000
Number of breweries in Chicago.....	56
Output of Chicago breweries for 1896, barrels.....	3,198,222
Increase in output over 1895, barrels....	550,000
Number of malt houses in Chicago	21

Of the fifty-four leading items of our trade by the lake, the following principal ones are selected :

SHIPPED FROM CHICAGO BY LAKE.

Flour, barrels.....	1,736,935 as against	1,148,489 in 1895
Grain, bushels	110,952,258 as against	80,420,296 in 1895
Packages of miscellaneous merchandise	2,415,236 as against	1,967,209 in 1895

RECEIVED AT CHICAGO BY LAKE.

Coal, tons.....	1,360,300 as against	1,268,564 in 1895
Lumber, laths and shingles, feet of..	940,116,000 as against	1,277,527,000 in 1895
Grain, bushels.....	127,821 as against	1,507,610 in 1895
Packages of miscellaneous merchandise.....	13,230,269 as against	9,702,381 in 1895

Comparative statement of entrances and clearances for the fiscal year ending June 30, 1896, from the supervising agent of the Treasury Department:

Baltimore, Md.....	Entrances, 1,810	Clearances, 2,683	Total, 4,493
Boston, Mass.....	Entrances, 3,019	Clearances, 3,243	Total, 6,262
New Orleans, La.....	Entrances, 1,212	Clearances, 1,189	Total, 2,401
Philadelphia, Pa.....	Entrances, 1,846	Clearances, 2,064	Total, 3,910
San Francisco, Cal.....	Entrances, 1,105	Clearances, 1,395	Total, 2,500
Totals.....	Entrances, 8,922	Clearances, 10,575	Total, 19,566
New York, N. Y.....	Entrances, 7,174	Clearances, 6,788	Total, 13,962
Chicago, Ill.....	Entrances, 9,263	Clearances, 9,424	Total, 18,687
Chicago less than the total for Baltimore, Boston, New Orleans, Philadelphia and San Francisco.....			879
Chicago more than New York..			4,725

Tonnage of the Principal American and European ports, year 1894, from report of Chief of the Bureau of Statistics, Treasury Department, Washington, D. C.:

	Tons.		Tons.
London	14,433,580	Antwerp	10,083,228
Chicago	10,284,172	Hamburg	12,447,706
Liverpool	10,489,578	Bremen	4,325,487
Cardiff	10,478,394	New York	15,333,398
Hull.....	3,933,123	Boston	3,403,682
Tyne ports	8,655,115	Philadelphia	3,173,031
Glasgow.....	2,760,274	Baltimore	2,727,486
Havre	4,562,692	New Orleans	2,230,692
Bordeaux.....	2,168,472	San Francisco.....	3,528,291
Dunkirk.....	2,381,588	Puget Sound	3,654,929
Marseilles	7,374,591	Chicago, 1896.....	12,965,812

INDEX.

	PAGE
MAYOR SWIFT'S MESSAGE.....	iii
Bureau of Streets.....	xvi
Conclusion.....	xlvi
Finance	vi
Fire Department.....	xxxiii
Health Department.....	xxv
House of Correction	xl
Lake Front.....	xl
Law Department	xxxi
New City Charter.....	xlvi
Pay Rolls.....	xxxviii
Police Department.....	xxviii
Public Baths	xl
Public Lighting	xxiii
Public Works.....	xiv
Receipts from Street Railways.....	xxxv
Special Assessments.....	xx
Special Privileges	xxxiv
Street Car Transfers	xl
Street Cleaning.....	xvii
Track Elevation	xliv
Water Office.....	xix
 MAYOR HARRISON'S INAUGURAL ADDRESS.....	 liii

DEPARTMENT OF PUBLIC WORKS.

	PAGE
Names of Officers.....	1
Names of Past Officers.....	2
North Pumping Station.....	3
 COMMISSIONER'S REPORT.....	 5
Amount of Water Pumped Annually from 1858 to 1896.....	22
Assessments Prepared.....	29
Buildings Erected.....	27
Bonded Debt of Water Works.....	43
Bridge and Viaduct Maintenance.....	13
Conclusion.....	45
Contracts.....	19
Electric Lighting.....	32
Expense of Lighting.....	31
Extension of the Water Pipe System.....	14
Financial.....	16
Financial Receipts.....	37
Harbors of Chicago.....	13
House Moving.....	28
Maintenance of Sewers.....	24
Maps and Plats Made.....	29
Miscellaneous Improvements.....	18
Parks.....	27
Sewerage.....	23
Sidewalks.....	26
Streets.....	8
Street and Alley Improvements.....	15
Street Improvements.....	18
Street Lamps.....	30
Street Paving.....	25
Summary of Electrical Inspection.....	36
The City Electric Light System.....	34
Total Cost of Sewers.....	24
Track Elevation.....	45
Tunnel and Crib Construction.....	11
Water Meters and Hydraulic Elevators.....	15
Water Office Collections.....	16
Water Supply System.....	9
Water Works Receipts and Expenditures.....	39

	PAGE
CITY ENGINEER'S REPORT	49
Bridge and Viaduct Maintenance.....	107
Commerce by Lake	132
Cribs and Intakes.....	54
Daily Precipitation	150
Daily Temperature	147
Date and Cost of Constructing Bridges and Viaducts with Names of Contractors.....	112
Division of Architecture	157
Division of Bridge and Viaduct Construction	103
Harbors of the City of Chicago	126
Maximum Daily Pressure.....	144
Monthly Pumpage in Gallons.....	59
North Side Shops	63
Precipitation at Chicago.....	142
Pumping Stations	54
Table of Meteorological Data for Chicago	143
Table of Temperature by Months.....	141
Track Elevation	152
Tunnel and Crib Construction	65
Vessel Movements in Chicago River	138
Water Pipe Extension	75
Water Supply System—Water Tunnels	50

WATER OFFICE.

Assessors and Permit Department.....	168
Balance Sheet	193
Cash Collected during the Year.....	195
Collections	163
Comparison of Rates	167
Expenses	164
General Assessment for Years 1895 and 1896	200
Inspection Department	172
Leak, Waste and Shut-off Departments.....	173
Meter Mechanical Department.....	169
Meter Mechanical Department.....	187
Meter Mechanical Department, Income Account	192
Permit Department.....	184
Report of the Accounting Department.....	190
Permit Department, Income Account	191
Water Service Pipes let and put in by Contract.....	174

BUREAU OF SEWERS.

	PAGE
Amount Expended for Repairs of Sewers, Man-holes, etc.....	219
Cost of Constructing Sewers and Catch-basins from 1855 to 1897	206
House Drains put in place under Special Assessments	221
Receipts in House Drain Department	221
Sewers and Catch-basins Cleaned	220
Sewers Constructed during the Year 1896.....	209
Size and Length of Sewers Constructed during 1896	205
Statement of Expenses of Bureau	203
Wing Sewers Constructed during the Year 1896.....	217

BUREAU OF STREETS.

Financial Statement.....	225
House Moving.....	250
Lamp Posts Erected ...	254
Lumber	245
Number Miles of Street Occupied by Railroads.....	260
Permits for Opening Streets.....	249
Permits for Use of Streets.....	250
Railroad Gates and Fences	256
Re-paving Streets	244
Sidewalks Constructed.....	246
Street and Alley Improvements.....	226
Street Lamps.....	253
Street Railways	257
Street Signs	254
Unimproved Streets	246

STREET AND ALLEY CLEANING.

Financial	263
-----------------	-----

BUREAU OF SPECIAL ASSESSMENTS.

Alleys Improved.....	273
Drains	282
Gas Lamps	293
Introduction	267
List of Assessments since 1861.....	300
Recapitulation	300
Sewers	280

BUREAU OF SPECIAL ASSESSMENTS—Continued.

	PAGE
Sidewalks	285
Streets Improved	368
Summary	298
Water Service Pipes	277
Water Supply Pipes	274

BUREAU OF MAPS AND PLATS.

Area of the City	307
Introduction, and Number Plats Prepared	305
Mileage of Streets and Alleys	308
Park and Boulevard System of the City	316
Parks and Public Squares	321
Recapitulation	322
The Growth of Chicago, with Map	309

BOOK-KEEPER'S STATEMENT.

Appropriation Fund	341
Sewerage Fund	339
Special Deposit Fund	358
Trial Balance, Ledger Department	359
Water Fund	326

APPENDIX.

Franchises Granted by the City to Street R. R. Companies	363
Calumet Electric Railway Co	363
Chicago & Evanston Electric Railway Co	375
Chicago & Jefferson Urban Transit Co	375
Chicago & South Side Rapid Transit R. R. Co	385
Chicago City Railway Co	367
Chicago Electric Transit Company	373
Chicago Horse & Dummy Railway Co	381
Chicago North Shore Street Railway Co	375
Chicago Passenger Railway Co	380
Chicago Passenger Traction Co	381
Chicago West Division Railway Co	377
Cicero & Proviso Street Ry. Co	385
Englewood & Chicago Electric Street Railway	385
General Electric Railway Co	387
Grand Crossing and Windsor Park Railway Co	387

APPENDIX—Continued.

	PAGE
Index to Maps	411
Index to Streets Occupied by Street Car Lines.....	412
Lake Street Elevated Railroad Co.....	389
Metropolitan City Railway Co.....	391
Metropolitan West Side Elevated R. R. Co.....	391
North Chicago City Railway Co.....	391
North Chicago Electric Railway	397
North Chicago Street R. R. Co.....	394
North Chicago Street Railway Co. and West Chicago Street R. W. Co.	408
Northern Electric Railway	397
North Side Electric Street Railway Co.....	397
Northwestern Elevated Railroad Co.....	399
Northern Railroad Co.....	399
Ogden Street Railway Co.....	403
South Chicago City Railway Co.....	403
Southwest Chicago Rapid Transit Co.....	405
Union Elevated R. R. Co.....	403
Union Consolidated Elevated Railway Co	403
West Chicago Street Railway Co.....	405
West and South Town Horse Railway Co., West and South Town Street Railway Co., Chicago General Railway Co.....	409
West Chicago Street R. W. Co. and North Chicago Street Railway Co.	408
MISCELLANEOUS DATA.....	421

