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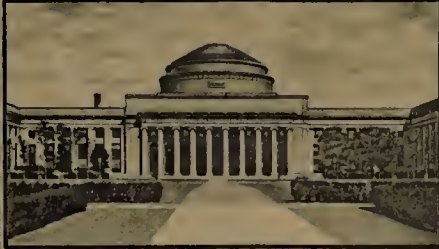
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REPORT
of the
CITY PLANNING BUREAU
of
ROCHESTER, N. Y.

1918 - 1922

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STUDY FOR NEW RIDGE ROAD BRIDGE
- CITY PLANNING BUREAU -
W. H. CASSEBEER, ARCHT.

W. H. C. DEL. BEITZ

THE ROCHESTER CITY PLAN

A Report of the
Organization and Operation of the City Planning Bureau
of
Rochester, N. Y.
for
1918--1922



Compliments of
Edwin A. Fisher,
Consulting Engineer
to the City of Rochester

By
EDWIN A. FISHER
Superintendent of City Planning

Edited by
EDWARD HUNGERFORD

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Department of Engineering
Rochester, N. Y.

January 1, 1923

HON. CLARENCE D. VAN ZANDT,
Mayor.

Dear Sir:—

I take pleasure in transmitting herewith the report of the City Planning Bureau, covering the period from its organization as a Bureau in the Department of Engineering to January 1, 1923.

Respectfully submitted,

C. ARTHUR POOLE,
City Engineer.

City Planning Bureau
Rochester, N. Y.

December 31, 1922

MR. C. ARTHUR POOLE,
City Engineer.

Dear Sir:—

The Superintendent of City Planning is also Consulting Engineer to the City of Rochester. These duties so overlap that a report as Superintendent of City Planning will also cover many subjects with which the writer has to do as Consulting Engineer to the City.

In order to make this report the more readable to the citizens of Rochester, who have shown a constant and unflagging interest in the development of the city plan for their community, I have taken the liberty of placing it in a narrative form. For the same reason I have employed Mr. Edward Hungerford, a well known writer and author, to edit this report. Specifically it becomes a chronological narrative of the development of the City of Rochester, as well as some of its problems, and a forecast of the possibilities of its future.

The report is herewith immediately appended.

Respectfully submitted,

EDWIN A. FISHER,
Superintendent of City Planning.

City Officers and Members, Past and Present, of the City Planning Bureau

*HON. HIRAM H. EDGERTON, Mayor.....	1918-1921
*HON. CLARENCE D. VANZANDT, Mayor.....	1922
C. ARTHUR POOLE, City Engineer.....	1918-1922
EDWIN A. FISHER, Consulting Engineer to the City of Rochester <i>Superintendent of City Planning</i>	1918-1922

Members of the Advisory Board

*JAMES G. CUTLER, President.....	1918-1922
*GEORGE L. HERDLE.....	1918-1919
*JAMES S. WATSON.....	1918-1922
*GEORGE W. ALDRIDGE.....	1918-1921
FRANK W. LOVEJOY.....	1920-1922
EUGENE RAINES.....	1922
BENJAMIN B. CUNNINGHAM, Corporation Counsel, Ex-officio.....	1918-1920
CHARLES L. PIERCE, Corporation Counsel, Ex-officio.....	1920-1922

EDWIN A. FISHER.....Superintendent of City Planning
Secretary of the Advisory Board

* Member of Art Commission of Rochester.

Superintendent's Staff and Consultants

- ARTHUR L. VEDDER.....Superintendent of Surveys
Deputy Superintendent of City Planning
- C. N. MUNGER.....Special Assistant to the Superintendent
- WALTER H. CASSEBEER.....Architect and Landscape Architect
Zoning Expert
- B. ANTRIM HALDEMAN.....Chief of Division of City Planning, Harrisburg, Pa.
Consultant
- LEGRAND BROWN.....Deputy City Engineer
Expert Engineer on Plans for Rapid Transit and Industrial Railway
- GEORGE F. SWAIN, LL. D.....*Consultant, General Plans for Rapid Transit and Industrial Railway*
- GORDON & KAELBER,.....Architects
Consultants, Architectural Features for Superstructure of Aqueduct, and Designs for the New Ridge Road Bridge
- B. H. DAVIS, C. E.,.....*Consultant, Location and General Design for the New Ridge Road Bridge*

I

What Is a City Plan?

DESPITE a general popular opinion to the contrary and a widespread feeling that our cities and towns here in the United States have grown up chiefly helter-skelter and without any definite plans whatsoever for their development, there are, in actual fact, but few American communities that have been developed without a more or less well-fixed or concrete plan for their continual growth. In the fundamental idea of a city plan there is nothing new. Even the smaller towns and the villages across the land have been planned almost invariably—to some small degree at least. The four-corners of yesteryear—one country road crossing another country road—is touched by the fortune hand of circumstance and presently it is a town! The intersecting country roads become the main streets or arteries of the newborn community and upon them arise its principal building developments. Here is a town plan—likely to become a city plan as the small town grows in size and in importance.

The original city plan of Boston is asserted to have been accomplished by laying out the first streets of that old town upon the paths worn by the cows of its earliest settlers. But Boston, largely because of the peculiar conformation of its central site, is most unusual. Hemmed tightly in on every side by the arms of the sea, it always has found its development greatly retarded by the very waterways that gave it its first excuse for being—an important seaport.

With a few exceptions, the other early Colonial cities of America were laid upon definite city plans. Philadelphia was in all probability the first of these to be so designed. The care with which William Penn labored to prepare a definite plan for his beloved city needs no retelling now. The exquisitely regular pattern of the streets and squares of downtown Philadelphia, to this day bespeaks the minute attention which its founder gave to this most important provision for its development. . . . Savannah was another Colonial city planned from its very beginning with both care and great foresight. Much of the present charm of this oldtime Southern city is due to the fact that its plentiful squares—large and small—and its broad, regular streets are entirely the result of the vision of the men who first located and planned the town.

New York worried along for more than a century and a half without any definite city plan. Like Boston, it found itself tremendously circumscribed on every side by broad and well-nigh impassable waterways. For 150 years it grew, vaguely, indefinitely, badly. Then, sometime about the beginning of the past century, feeling the tremendous need of a city plan, it adopted one; the present scheme of rectangular city blocks which today dominates the upper portions of the island of Manhattan and across which only Broadway itself has the audacity to strike at irregular angles. Today this century-old city plan of Manhattan is regarded as a monumental mistake. The prime need of the city for many broad traffic avenues extending north and south, the long direction of the narrow island,

was completely overlooked by the makers of its city plan. With the result that New York today possesses almost a superfluity of cross-town streets, and a tremendous paucity of up-and-down avenues.

It took the courage, the brilliancy and the vision of Major Charles Pierre L'Enfant to create in the United States not only a well-planned city, but a magnificently-planned one. Washington today is regarded as a world model in city planning. L'Enfant's striking conception of taking a block or rectangular plan—very similar to that of Manhattan—and superimposing upon it a design of broad radial avenues, striking here and there and everywhere, from various focal points or hubs, of which the Capitol and the White House are perhaps the most conspicuous, is today recognized as in all probability the finest city plan ever laid down. And even though today, Washington has grown far beyond the area and the population of even the long-visioned L'Enfant, his scheme for it has been closely adhered to; in practice as originally laid down by him in the older portions of the city, and in principle in those portions of it quite outside of his original mappings for it.

Washington has furnished the inspiration for the orderly design of other considerable American cities—of which Indianapolis, Detroit, and our own neighboring community of Buffalo are perhaps the most striking examples.

Rochester can hardly be said to have shared any of the inspiration of the L'Enfant design for Washington. Yet, from its very beginnings—as a small village at a wondrous millsite by the falls of the Genesee—Rochester has had, more than once, fairly definite city planning by which to proceed. The various steps of this planning now present themselves for consideration. In another chapter and under another heading, we shall tell how, one by one, they have led to the making of our Rochester of today.

II

The Gradual Development of Rochester

WITH the beginning of its Main Street, the story of the planned development of Rochester begins. For ever since that very early day, Main Street has been the undisputed backbone of the entire plan of the community.

The first highway across the western portion of the State of New York—the so-called Genesee turnpike from Syracuse to Buffalo—did not pass through what is now Rochester but through Avon, nineteen miles to the south. The earliest pioneers of the Western New York country hesitated at even attempting to bridge the difficult lower reaches of the Genesee. Avon seemed to offer to them the best available opportunity to throw a crude structure across it; and that opportunity they took.

The time came a few years later, however, when the hard task of attempting to bridge the river at what was then known as Indian Allen's Mill, just above its upper falls, finally was attempted. A bridge was thrust across it upon the line of the Main Street of the Rochester of today. It connected a new road to Niagara and Lewiston—the present Ridge Road—with a similar new thoroughfare to Canandaigua where it joined the great Genesee turnpike. Road and bridge together were completed in 1812. The bridge was a crude affair of wood and eventually it fell to pieces; to be finally replaced by the present stout stone structure, which is unique among all large bridges in America in the fact that it carries rows of full-height business buildings across the river with it, all set firmly upon its strong shoulders.

With the first bridge come into full use, and through travel beginning to pass through its very heart, Rochester began its remarkable growth, which has continued unbroken from that day until this. Incorporated as Rochesterville in 1817, the name was shortened to the present designation in 1822, while the city of Rochester, itself, was incorporated in 1834. By that time it had become a busy manufacturing town of more than 12,000 inhabitants.

The first real impetus to the growth of Rochester came at the very beginning of the nineteenth century when three gentlemen from Maryland—Colonel Nathaniel Rochester, Colonel William Fitzhugh and Major Charles Carroll rode north into the Genesee valley and, upon the western edge of the upper falls, purchased a town site of one hundred acres. They were much impressed by the ultimate, as well as the immediate possibilities of the development of power at the falls of the Genesee. And they planned definitely a mill-town which should combine in its plan both dignity and beauty and great efficiency.

Rochester bequeathed his name to the town; and Fitzhugh and Carroll theirs to two of its chief streets. The state road to Lockport and Lewiston—the Ridge Road route to Buffalo and Niagara as well—as it ran through the Hundred-Acre Tract, received the name of Carroll—the parallel street just to the west, that of Fitzhugh. . . . At a later time the town authorities quarreled bitterly with Carroll; and as a gesture of their impatience with him, removed his name from the street which presently became State Street because it led to the State Road to the west . . . a name which has continued with it from that day to this.

The planners of the Hundred-Acre Tract realized the necessity of making proper provision for the various public buildings for the future town, and to this

day the Court House and the City Hall of Rochester, as well as the Municipal Building—for many years the Rochester Free Academy—and St. Luke's Episcopal Church stand upon sites which were donated by Messrs. Rochester, Fitzhugh and Carroll for civic, educational and religious purposes. In the entire history of this town, this civic center has remained unmoved and but little changed.

The commercial success that immediately attended the opening of the first bridge across the Genesee at its falls spurred a group of folk living two miles further down the river—at what was then known as the village of Carthage—to build a bridge for themselves at that point. The deep gorge of the river apparently had no terrors for them. For in 1819, they completed what was then one of the most remarkable bridges in all the world—a huge timber arch more than 350 feet in span and with its top 150 feet above the level of the water. This structure, which was designed to make the village of Carthage immeasurably superior to the rival Rochesterville, stood for just one year and three months, and then it dropped to the bottom of the gorge, for a reason which has never been precisely ascertained. Two other unsuccessful bridges replaced it before the present Driving Park Avenue Bridge—a graceful iron arch—came to span the gorge of the Genesee at this point.

In Carthage's brief hour of high prosperity a road was cut from it through to Main Street at the east end of the Rochesterville bridge. (It is worthy of note that this highway also furnished a right-of-way for the earliest attempt at building a railroad in the entire Western New York country; a crude affair operated with horses as motive-power which continued in service, however, for a considerable number of years). Because of the ambitions of Carthage and its great desire to deflect through traffic from the Rochesterville bridge to its own weird structure, it caused what is today known as Franklin Street to be cut from St. Paul Street, near the present crossing of the New York Central tracks through to the junction of Main Street and East Avenue and so unwittingly gave great help to the problem of the Rochester plan of this day. . . . It was not until more than twenty years after that Main Street was cut through an intervening lumber yard at the corner of East Avenue and joined to its easterly reaches—and so made the real backbone of the present city of Rochester.

A city map of 1820 gives full credit to the growing pretensions of the colony on the east side of the Genesee River. No longer did that stream separate two different counties—Genesee and Ontario. From them was being carved out the county of Monroe with Rochester designated as its shiretown and principal place of business. The Hundred-Acre Tract was becoming but a portion of the city plan. A straggling settlement to the north of it, known for a time as Frankfort, was annexed to the original tract, while upon the east side of the river—known as the Johnson and Seymour Tract—streets and lots were being definitely platted—up to and including the east side of Clinton Street. Jones Square and Washington Square had both made their appearance upon the city plan. With the single exception of the cutting of Main Street through the lumber yard at its junction with East Avenue, downtown Rochester was assuming much of its present aspect. . . . A second bridge—a toll affair—had been thrust across the river at a point not far south of the present Central Avenue Bridge and a street—Bridge Street—put through to connect it with St. Paul and State Streets. Both this bridge and its connecting streets passed completely out of existence many years ago.



ROCHESTER PUBLIC MARKET

The next great change that came to the city plan of early Rochester was in the putting through, in the decade of the 'twenties, of that vastly important enterprise, the Eric Canal. Not only did its construction through Rochester involve the building of a great stone aqueduct over the Genesee—in its day and generation rated as one of the seven wonders of the world—but the canal itself cut through the very heart of the Hundred-Acre Tract. No zoning regulation could have segregated the high-class residential district of the Third Ward more completely than did DeWitt Clinton's ditch. It arrested business at its edge and so helped give birth to that which for many, many years was one of the most charming and exclusive residential districts to be found in any city in America.

Likewise the canal, although for a long time greatly stimulating the industrial growth of Rochester, eventually served as a deal of a barrier in the physical development of the city toward the west. The location and construction of the new Barge Canal has greatly added to the industrial opportunities upon the west side of the town. In addition to which it has given to the community a fine new street and river bridge in its heart, to say nothing of a very wonderful four-track subway. Of all of which, more will be said later.

For the telling of the details of the city's growth east and west and north and south through the past century, this report has not the space. Suffice it to say, that it has always been a very real task to keep the planning of Rochester well ahead of its actual growth. Not merely laying down the design of its streets, but formulating its building provisions as well. The finding of sites and the planning of the buildings for its government has always been, of itself, an unceasing problem. Three County Court Houses, of successively increasing size, have stood upon the West Main Street site, and the third is already considerably outgrown. The huge old-fashioned City Hall many years ago was found utterly inadequate. City departments have overflowed into surrounding buildings. . . . Yet there always has been effort to relieve these conditions. . . . Take twenty years or so ago, when Rochester made up its mind that the public market, held each morning in the streets surrounding the so-called Liberty Pole, had become a good deal of a public nuisance. The necessity for that market was unmistakable. Yet there did not seem to be any necessity for making a public nuisance out of it.

So, against a deal of opposition at the time, the city sold some of its stock holdings in the old Genesee Valley Railroad and converted the proceeds toward building the modern and generous-sized market on the north side of the New York Central tracks, which already has so outgrown its facilities as to be ready for radical enlargement. . . . The Liberty Pole section—today the very heart of the city's smartest retail shopping district—rid of its cluttered old market, was cleaned up at once and Rochester breathed a sigh of real relief.

The important additions to the city waterworks, including the Cobb's Hill Reservoir, and the handsome police precinct stations of this town—of a uniform type and style of architecture—stand forth as a monument to Mayor James G. Cutler's administration. . . . In future years one may be able to trace the Rochester civic administrations by their monuments. One of Mayor Edgerton's certainly will be the remarkable enterprises at Exposition Park*, by which an ugly

* EXPOSITION PARK—Upon recommendation of His Honor, Mayor VanZandt, and by resolution of the Common Council adopted August 22, 1922, the name of Exposition Park was changed to Edgerton Park, in memory of the name and out of respect to the late Mayor, Hiram H. Edgerton.

eyesore of a stone-walled penal institution was removed and one of the loveliest fair grounds in all America substituted in its place. Another assuredly would be the creation of the Ontario Beach Park. Mayor VanZandt can point with pride to the Subway and the new business street and bridge through the very heart of Rochester.

The frank recognition, by a group of the prominent citizens of this community, of the importance of the entire problem of Rochester's growth led to the appointment, in 1911, through the Chamber of Commerce, of the Rochester Civic Improvement Committee, of which Hon. James G. Cutler was Chairman, the late Charles Mulford Robinson, Secretary, and Hiram W. Sibley, Treasurer. This Civic Improvement Committee financed itself entirely. It proceeded to employ Messrs. Arnold W. Brunner, Frederick Law Olmsted and Bion J. Arnold as a sub-committee to prepare a definite and detailed report on a city plan for Rochester. The qualifications of these men for their task were easily to be recognized. Mr. Brunner as an architect, Mr. Olmsted as a landscape architect and engineer, and Mr. Arnold as a transportation engineer were of national reputation as experts in these things. Between them, they formed a city planning committee of rare experience and worth.

The report which they prepared, after a careful survey of the city and its problems, was recognized quickly as a real masterpiece of its sort. That so little has been done in a decade in putting its provisions into effect is no reflection upon that document; it simply is an evidence of the difficulty which the average American city today—even as wealthy a town as Rochester—has in making its finances meet its most pressing emergency needs.

Yet Rochester has not neglected this most important problem of providing today against her needs of tomorrow. No longer is she content to meet this problem in hit-or-miss fashion; to trust even to the fine civic impulses of her best citizenry to bring it to a head from time to time. A means has been found to keep the problem of the Rochester city plan constantly in the forefront of city activities.

There are two opinions in general as to how a city planning commission should be constituted. One opinion is that it should be composed of citizens not connected with the municipal government. The Rochester Civic Improvement Committee was an illustration of this kind of a committee. The other opinion is that it should be composed of members of the municipal administration. Mr. Robert H. Whitten, one-time Secretary of the City Planning Committee of the Board of Estimate and Apportionment of New York City, said at a meeting of the Seventh National Conference of City Planning:

“The typical city planning commission in America is made up of a number of citizens who are not city officials and who serve without pay.

“A commission thus organized, appointed solely for city planning purposes, will devote itself unreservedly to that work. * * All this presupposes that the commission is given adequate appropriation. A citizen commission of this kind has serious drawbacks when it comes to the final adoption in carrying out a comprehensive plan. The city plan affects so continuously, vitally and broadly the administration of the city government that it does not seem consistent to delegate such far-reaching power to an appointive committee of citizens. Moreover, a number of the city's departments and officials are necessarily at work planning the city's physical development in so far as particular functions are concerned. Any

comprehensive plan will lose much in practical efficiency, and will result in much duplication of effort, unless worked out in close touch with these departments and officials.

“ * * * The city plan office may be an executive department in one city and a bureau of the Board of Estimate or Government Commission in another city. The city plan office may have associated with it an advisory commission of citizens, or of citizens and officials.”

The present act, passed in 1917, provides for a combination in Rochester of the two ideas relative to city plans, as recommended by Mr. Whitten. The present law also recognizes the fact that city planning is essentially an engineering problem as emphasized by Mr. Nelson P. Lewis in his valuable work on city planning.

It further recognizes the fact that the ground work of a comprehensive city plan must be laid by the regular employees of the Engineering Department of the city of Rochester with the aid of special expert advisers.

The act provides that the City Planning Bureau shall be in the Department of Engineering, and further provides that the initiative in all matters shall be in the hands of the Superintendent of City Planning, an executive officer of the city. In order that there may be a continuous policy, his action, however, is not final until approved by a city planning advisory board, consisting of the Corporation Counsel and four citizens.

City planning was formerly spoken of most sentimentally as “City Beautiful,” and related very largely to questions of art, while modern city planning embraces more definitely both the science and art of city planning. Mayor Edgerton, in considering appointments to the Advisory Board, desired to recognize both the science and the art of city planning, and for that reason he sought a legislative act permitting the appointment of members of the Art Commission in Rochester on the City Planning Advisory Board.

The act referred to became a law on May 7, 1917, and provided, among other things, that the same person may hold the offices of Art Commissioner and member of the City Planning Advisory Board, and that the same person may hold the office of Superintendent of City Planning and any other office or position under the government of the city, and provided that in such instance, and in all other instances, a person may receive salary or compensation for only one office or position. The members of the City Planning Advisory Board and the Art Commission serve without salary.

In 1918, the City Planning Bureau of Rochester, together with its constituent City Planning Advisory Board, came into existence through legislative enactment. For the members of this Board, Mayor Edgerton appointed former Mayor James G. Cutler and Messrs. George L. Herdle, James S. Watson and George W. Aldridge with Benjamin B. Cunningham, Corporation Counsel, as a member *ex officio*. The Board immediately elected Mr. Cutler as its president. There have been a few changes in its personnel since that time, and the Board now stands with Mr. Cutler still as its President, and Messrs. Frank W. Lovejoy, James S. Watson, Eugene Raines and Charles L. Pierce (Corporation Counsel, *ex officio*) as its associate members.

Mr. Edwin A. Fisher, for many years the City Engineer of Rochester, now Consulting Engineer to the city, was appointed Superintendent of City Planning at the outset, in which capacity he has since served.

The organization of the Superintendent's office was as follows:

Mr. C. N. Munger was appointed Special Assistant to the Superintendent of City Planning, in charge of the preparation of maps and plans connected with the work.¹

Mr. B. A. Haldeman, of Harrisburg, Pennsylvania, was employed as Consultant in city planning and zoning, and with special reference to street lay-outs, extensions, widening, etc.²

Mr. Walter H. Cassebeer, Architect and Landscape Architect, was employed as Zoning Expert.³

Mr. LeGrand Brown, an engineer of experience in electric railway construction and operation, was employed as special expert on plans for the Rapid Transit and Industrial Railway. Mr. Brown was subsequently appointed Deputy City Engineer.

Dr. George F. Swain, LL.D., now and for many years Professor of Civil Engineering in Harvard University, a member of the Boston Transit Commission during its entire existence of more than 25 years, was Consultant with reference to the general plans for the Rapid Transit and Industrial Railway.⁴

City planning is a continuous performance. Changes in zone, and exceptions in zoning by the Advisory Board are absolutely necessary to the proper functioning of a City Planning Board. Mr. Cassebeer has been continued as an expert while the services of Mr. Haldeman have been furnished at such times as the Superintendent has deemed necessary.

Mr. Arthur L. Vedder, Superintendent of Surveys in the Engineering Department of Rochester, was appointed Special Deputy, having charge under the Superintendent of all matters pertaining to the location of streets, the changes in streets, the acceptance of subdivisions, and any other matters relating to land development.⁵

The effort has been at all times to use, in so far as possible, the existing personnel and facilities of the Engineering Department of Rochester.

The office of the Superintendent is in the Engineering Department, and Mrs. Emma P. Clarke, Secretary to the City Engineer, has acted as Secretary to the Superintendent of City Planning. The stenographer in the Engineering Department, Miss Larena A. Butler, has acted as stenographer at the meetings of the Advisory Board.

This report assumes not only to tell the story of the City Planning Bureau of Rochester, but also of the orderly development, under proper control, of the city itself since the establishment of the Bureau. Together with the more or less correlated Art Commission, it has striven not merely to make a roomier and a more efficient Rochester, but an even more beautiful one. To the great advantages of a superb natural site for a city is being added the experience, the long vision and the enthusiasm of trained city planners, in the hope that the Rochester of tomorrow may be as superior physically to the Rochester of today, as the Rochester of this day is superior to the Rochester of yesterday.

¹ For detailed report see Appendix, p. 78.

² For detailed report see Appendix, p. 42.

³ For detailed report see Appendix, p. 53.

⁴ For detailed report see Appendix, p. 80.

⁵ For detailed report see Appendix, p. 68.

III

The Orderly Development of the Modern American City

FOR the orderly development of almost any American city there can and should be well-defined method and plan. Towns that, like Topsy, have "just grow'd," have no permanent place in an efficient and a beautiful America. Cities and villages that follow far-visioned and carefully-made plans for their development are almost always not only beautiful to the eye, but most comfortable and delightful in which to live and to work.

A distinguished citizen of Rochester has said that there are six pillars upholding the structure of the modern city—Health, Employment, Communication, Recreation, Education and Spiritual Development. Each of these qualities Rochester today possesses, in good measure. Rochester folk live very well indeed. This is one of the healthiest cities in the land. Its methods of employment are clean cut, varied and attractive. Its streets—as we shall see presently, its arteries of communication—are many of them broad and beautiful. The city has fine parks and theaters—recreational facilities of every sort. And it has moved forward steadily all these years in the development of intellectual and spiritual force.

For the moment forget Rochester, if you will, and think in the terms of the American city, *sui generis*. Take these pillars of our own town and apply them to the general structural problem of the average community, here in the United States, at least. . . . From them we may hope to evolve a more detailed structure of its real necessities. . . . Gradually there will form for it unmistakably these great component parts of its well-being; the fundamentals of any city plan:

Communication.

Transportation.

Zoning (Housing).

Water Supply—Fire Protection—Police Protection.

Sewage Disposal—Garbage Disposal.

Education.

Recreation.

Some of these essentials to the proper plan and government of the American city—such as Water Supply, Fire Protection, Police Protection and Education—not falling entirely within the purview of the City Planning Bureau of Rochester, will not be considered at any great length in this report. . . . Yet they cannot be entirely ignored when one comes to state the entire structure of the organization of a modern city.

The above structure must serve as the proper one for the consideration of the city plan of Rochester. Under these headings will that scheme be taken up. Yet before we come to the especial application of this structural plan to Rochester's own particular case, we first must give some attention to the peculiar physical problems that this city presents; problems, in no large degree at least, common to other cities; and yet problems that cannot be ignored in the planning of the Rochester of tomorrow. Which, of themselves, form a chapter in this report.

IV

The Rochester Plan for the Orderly Development of the City

AT first glance, nature seemingly designed the location of Rochester as a mill-site rather than the building-place of a great city. On more mature consideration, it will be seen, however, that the site of Rochester is a rare one indeed; for the upbuilding of an efficient and beautiful American city. The great plateau on either side of the mouth of the Genesee, as it debouches into Lake Ontario, forms an almost ideal plain for the development of a model community. The glacial drift to the southeast of the center of the Rochester of today—known locally as Cobb's Hill, the Pinnacle Hill and Mount Hope—gives the needed accent to this broad *campagna*. It is the only range of hills within fifteen miles of the Rochester Four Corners, and as such, it possesses great possibilities, part of them already realized, for the development of the city's park structure. . . . Similar possibilities exist also in the rare beauties of the nearby Irondequoit Bay and in the deep gorge of the lower Genesee.

That same deep gorge of the Genesee presents real problems against the city's growth, as well as great opportunities for further beautifying it. We also shall see, later, how specifically these problems relate to the question of bridges over the deep-set river; both new structures and the enlargement or the replacement of existing ones. The Genesee is both the industrial impetus that gave Rochester its first excuse for coming into being and, until time itself shall cease to be, a deal of barrier against the growth of the very community to which it gave birth. Yet a barrier by no means impassable. And a barrier, as we shall see presently, capable of being made a rare addition to the city's long list of beauty spots.

Similarly, Rochester finds other barriers roundabout her in the form of both canals and busy railroads. For while the original Erie, passing through the heart of the town, with its endless and almost infinite delays to its street traffic, has now happily been eradicated from it, its successor, the New York State Barge Canal, hems in Rochester rather effectively both to the south and the west. The problem of this barrier is to be solved by the erection of many bridges over it; these to be constantly increased as the growth of the city itself increases.

The many railroads that sweep around Rochester, while contributing greatly to its growth and to its prosperity, are nevertheless in fact to be reckoned as further barriers to it; particularly when the growing problem of our rapidly increasing street traffic comes into the reckoning. . . . As in the case of the Barge Canal, however, the solution of this particular problem is by bridges—either bridges by which the highways are carried over the railways or those in which the railways go over the highways. The choice between these two solutions depends, of course, upon the exact contour and other conditions that immediately surround each particular grade crossing to be eliminated.

Against these problems of the well-set barriers of Rochester—both natural and artificial—is the unending pressure of her constant growth. . . . Expressed in the first instance, in the terms of her population, Rochester, when first she was made a city in 1834, had some 12,000 folk resident within her boundaries; today, she has approximately 315,000. The United States Census of 1920 gave her a population of 295,750. Conservative estimates have added another 20,000 folk to this total, in the three years elapsed since the taking of that census.

The table inserted¹ shows the population of the city from 1820 to 1920 inclusive—the remarkable growth of an even century. It compares this growth with those of our important neighboring cities, to the east and to the west of us—Syracuse in the one instance, and Buffalo in the other. Rochester has nothing to suffer by such a comparison.

This same table also shows the estimated population for Rochester in 1930, in 1940 and in 1950, based mechanically upon the extension of the so-called “curve of population,” which, after one hundred years of reckoning, would seem to be pretty well established. . . . Of course, no one would affirm that even so carefully prepared a curve would be infallible. Cities, like humans, sometimes experience strange phenomena in their tides of affairs. Who, twenty years ago, could have forecasted the remarkable growth and development of Detroit under the most unexpected stimulus of the manufacture of motor-cars? All “curves of population” were shattered completely, as Detroit fairly shot ahead to be a city of a million folk, the fourth in size in the entire land. . . . Similarly Los Angeles today is defying curves—by her recent swift growth.

Yet the “population curve,” after all, does give something of a definite basis for prophecy. And it is astounding how cities that have experienced rapid and unexpected periods of growth eventually bend back to its measurements. In ten years, or twenty, a Detroit or a Los Angeles may defy a “population curve.” The real test of the accuracy of the “curve” may not come for fifty or sixty or even eighty years.

In area, Rochester had, on December 31, 1922, approximately 21,000 acres as compared with the original Hundred-Acre Tract of Rochester and Carroll and Fitzhugh. . . . Yet, great as these dimensions are when placed beside the original little Rochesterville by the west bank of the Genesee, they are as nothing compared with the area of the Rochester of the future if the present plans are adopted.

With the approval of the Mayor and the members of the Advisory Board, the Superintendent of City Planning has recommended that in the rather near future, at least, the entire townships of Irondequoit and Brighton, as well as a goodly portion of that of Greece, should be annexed to and become a part of the present city of Rochester.

Such annexations, if made today, would probably not add more than 20,000 folk to the city's present population. But whether made today or tomorrow, they will bring enough new terrain to Rochester to make it a city approximately six miles wide and ten miles deep, measured upon the Ontario shore—some sixty square miles. . . . Such a move would not only place upon the shoulders of the folk who live close to the present city limits, and enjoy the greater part of city advantages of every sort, their own fair share of the burden of city administration, but it would also give Rochester the additional elbow room of which she stands today so very greatly in need.

¹ See p. 90 of the Appendix

V

Communication and Transportation

THE first problem that confronts the city planner is that of his streets; of his avenues of communication, if you please. Just as the original city plan of the average American community probably was that of two highroads—or streets—and of the hamlet springing up at their intersection, so is the final development of that plan, even its most intricate form, very largely the problem of the street plan. Other problems will come to vex him; breaking down barriers, natural and artificial, by the use of bridges or of tunnels, the grouping and the placing of the important buildings of the community, as well as the grouping and the placing of its comparatively unimportant ones, its water supply, its sewage disposal, but all of these are more or less secondary to and dependent upon the street plan.

We have seen already the development of the street plan of Rochester—much of hit-or-miss—in the earlier years of this community. And those of us who know our Rochester of today with any degree of familiarity are acquainted with at least its principal highways, as well as its secondary ones. For in any sizeable city the streets—the arteries of its communication—must, of necessity, divide themselves rather definitely into main street and side streets. Beyond these limits, into boulevards upon the one hand, and into alleys upon the other. These classifications will arise quite naturally from the type and volume of vehicular traffic that is to be accorded to them—and this, in turn, will be both traffic that originates or terminates within the community, as well as that which enters or which leaves it. For a city's street plan in reality is rarely ever bounded by the political limits of the community; it has an intimate relationship to the main and the branch highways of the countryside for many miles roundabout. This is why today we are beginning to speak of the regional plan of American cities.

All of these questions and problems have been but intensified by the coming of the motor vehicle; greatly more intensified by the tremendously increased use of that vehicle within the past four or five years even. The streets of Rochester, even of the newer portions, were never designed for anything like the 50,000 automobiles that are now owned within it (to say nothing of the many cars that come to it each day from out of town, both near and far).

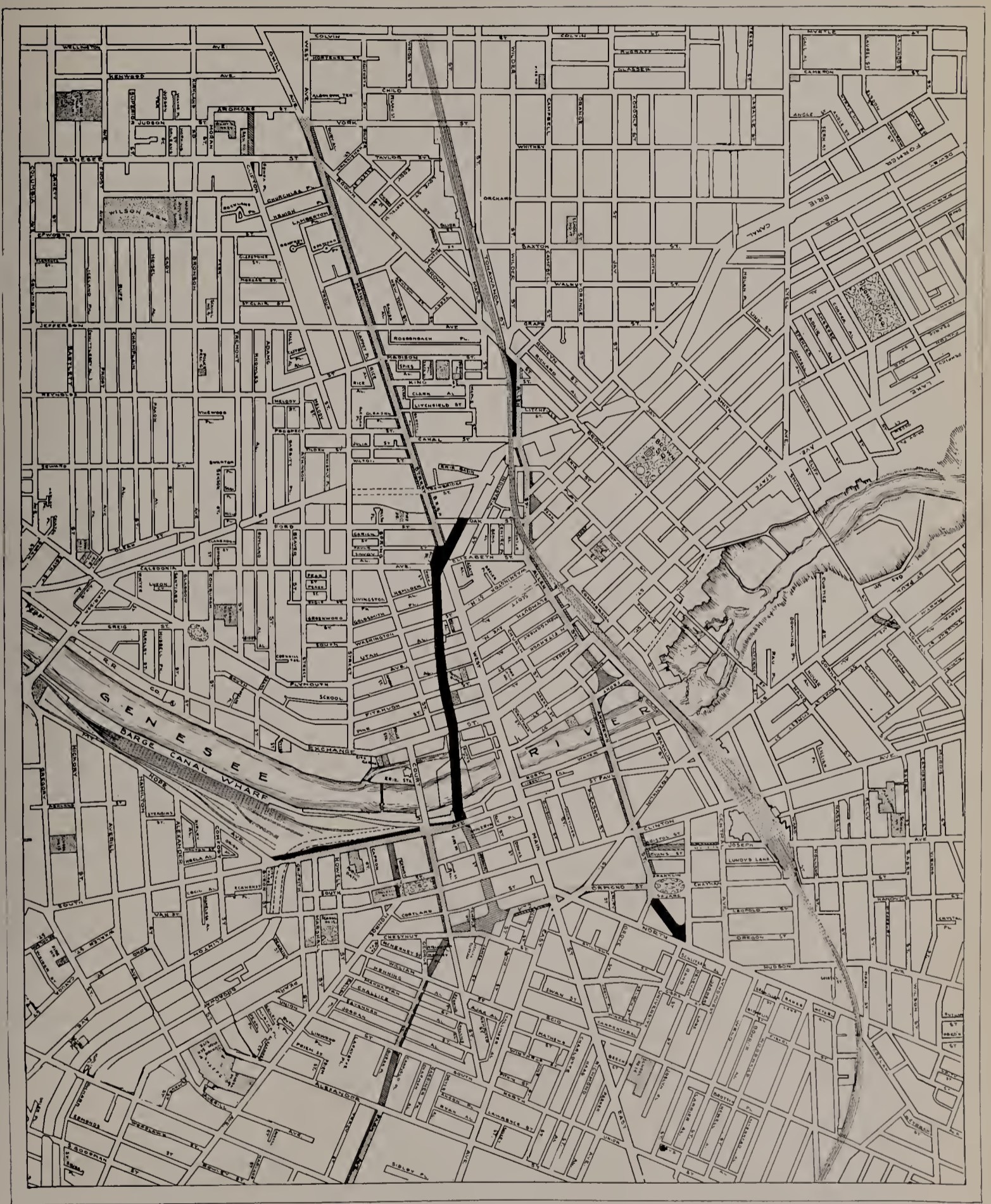
The growth of this motor-car traffic Mr. Cassebeer shows in a detailed and highly interesting form in his own report in the Appendix of this volume.¹ That report shows conclusively why Rochester streets have become all but completely inadequate for the handling of this traffic; why immediate and radical steps for their relief are so vitally necessary.

Rochester has not been asleep to this critical situation.

The general policy of the Superintendent of City Planning, concurred in by the Advisory Board, has been, first, to prepare a general comprehensive plan of such street changes and additions as might be required primarily to make the city's main thoroughfares thoroughly available for the demands to be put upon them; and second, to present to the Common Council for immediate action only such portions of this plan as, in the judgment of the Superintendent and the Board, could be carried out without delay. A piece-meal process, perhaps, but one which has proved most effective. For instance:

¹ See p. 53 of the Appendix.

PROPOSED STREET CHANGES ACCOUNT OF SWAY STREET, ALSO CHANGES REQUIRED FOR PARALLEL STREET NORTH OF MAIN STREET



LEGEND

- Main Thoroughfares
- Openings & Extensions for which ordinances have been passed
- - - Dedications accepted
- - - Widening for which ordinances have been passed
- - - Proposed Openings and Extensions
- - - Proposed Widening
- Railway & Subway in abandoned Erie Canal



One of the largest street relief schemes upon the present plan is the creation of a main thoroughfare, paralleling Main Street upon the north and greatly relieving it. This street is to be accomplished by uniting University Avenue with Andrews Street; Andrews Street with Allen Street; Allen Street with Tonawanda Street; and Tonawanda Street with Maple Street. . . . It needs but a single glance at the city map to show that by these steps there is created a fine new thoroughfare, east and west across Rochester, reasonably straight, and enjoying excellent interchange facilities with each of the streets that it intersects. The result of the completion of such a street would be not only to afford a definite and perceptible relief to Main Street, but to several other overcrowded thoroughfares in downtown Rochester.

The expense of completing this street, unfortunately, is not inconsiderable. Yet to defer even the beginnings of it until a later day would be, to put it mildly, a mistake. Its completion involves the connection of University Avenue with Andrews Street by a new direct-link street, the widening of Andrews Street, the connection of Andrews with Allen by another direct-link and the widening of Allen Street. It was seen that it would be impossible, because of the cost, to carry out this entire program at once. The point of greatest immediate necessity upon it was sought out. And this having proved to be the link between University Avenue and Andrews Street, recommendation was made for this to the Common Council, which gave its prompt approval, with the result that this very large step toward the instant relief of Rochester's traffic congestion is already under way. . . . Within a few months the direct-link street will be opened, paved, and made ready for traffic.

This is not haphazard work. It is a definite preliminary step in a highly definite program.

Neither has the reconstruction of the historic aqueduct which carried the former Erie Canal over the Genesee been a haphazard proceeding. To the building of the new subway in the bed of the old canal, we shall come in good time. Suffice it now to say that the widening and reconstruction of the stout old Aqueduct gave an opportunity for the building of a highway upon its upper level that was not neglected. In fact, a fine wide street over the new subway has just crept in upon the city plan, through the heart of Rochester, all the way from Oak Street upon the West Side to South Avenue upon the East Side. . . . This street, possibly to be known as Aqueduct Way, will be opened, in large part at least, within the next year.

Yet South Avenue is not to be its ultimate eastern terminus. The city plan is more farseeing than that.

Eventually Aqueduct Way, or whatever the new street through the business heart of Rochester finally is called, will be cut east from South Avenue, through the site of the present Osburn House, up to a point near the intersection of James and Chestnut Streets. The relief that this new street would give would more than justify even the considerable expense of creating it. Not only would it afford a vastly needed outlet for street vehicular traffic, but it would also enable a direct under-level connection to be made, by which the Park Avenue surface-cars could be brought into and through the new Rochester subway. . . .

Other street changes in the immediate neighborhood vie with this in importance. One of the earliest and most needed of these is the widening of Court Street, all the way from South Avenue to Union Street. Whether Court Street shall eventually be extended still farther east—in a straight line through to University Avenue and so creating still another main east-and-west thoroughfare in Rochester

—remains to be seen. While not upon the present map of the city plan, it nevertheless is one of the traffic relief possibilities of the future.

Each of these projects affects what may be known as main commercial streets of the Rochester city plan. . . . The secondary commercial streets are hardly less deserving of attention.

Of plans for the relief and the development of the main residential streets, or the secondary residential streets of Rochester, little is to be said at this time. The city charter provides very definitely these days for the platting and the opening of these arteries of the Rochester of tomorrow. This entire process is under constant observation, suggestion and direction by the Superintendent of City Planning, aided by the Advisory Board. . . . Parkways, including boulevards, both encircling the community and those radiating out from it, are to be discussed when we come to the general topic of the city's parks and the provisions for their future development.¹

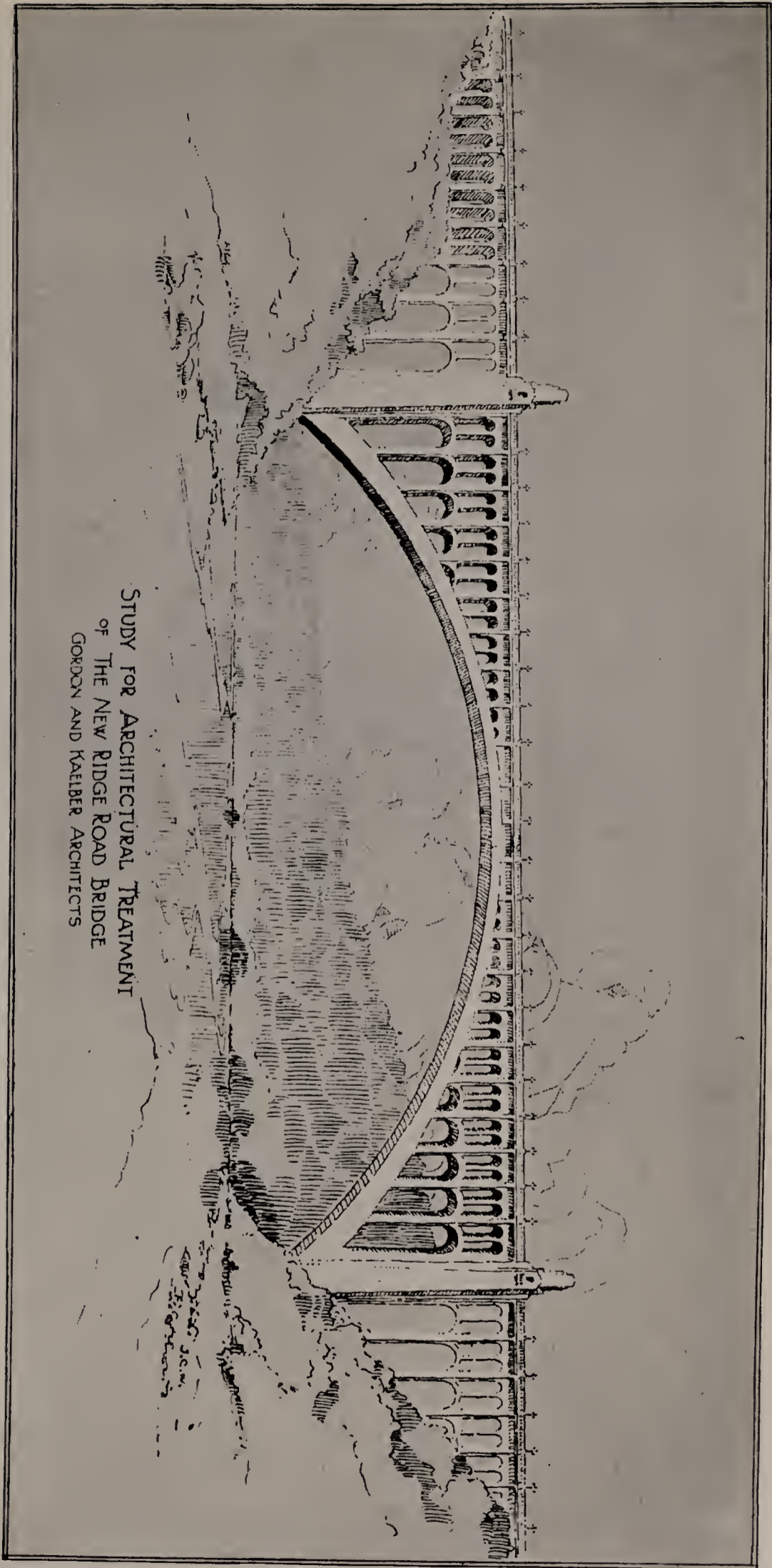
As a final form of city street—the city bridge that carries the city street. . . . Already we have discussed the eternal problem of the Genesee; the difficulties which the city's chief servant presents against its growth. These difficulties, as we have already intimated, are to be overcome almost solely by the steady multiplication of bridges against the steady growth of the community. . . . Main Street bridge was, of course, the earliest of our transpontine structures. Almost as much as the fine water-power to be developed was it responsible for the very beginnings of Rochesterville.

Other bridges came gradually to join and to relieve it; the long-since-forgotten toll structure just south of the present Central Avenue bridge; Court Street bridge, Andrews Street, Clarissa Street (at the outset built very largely to afford an approach to Mount Hope Cemetery), and then Central Avenue, Platt Street and Smith Street bridges. In an earlier chapter we have shown the desperate efforts of the one-time village of Carthage to erect a high single-span bridge over the deep gorge of the Genesee just below the lower falls. For a good many years now that lower gorge has been successfully spanned by the wrought-iron, single-arched Driving Park Avenue bridge, which has stood faithfully under the tremendous burdens placed upon it by the recent rapid growth of the north portions of the city of Rochester. Even today, while the width of the bridge would not permit the trolley tracks being placed upon it, there is about to be begun the operation of the so-called "trackless trolley" over it—a very great compliment to the thorough way in which its builders originally erected it.

For more than a dozen years now, there has been a highway bridge almost at the very mouth of the Genesee—a long-anticipated and much-needed convenience at that point. . . . Yet neither this bridge nor the somewhat narrow and overcrowded Driving Park Avenue structure is adequate today for the cross-river traffic of the north side of the town. . . .

So, because the business of a city planning bureau is always the business of anticipation, plans have been drawn and the work of acquiring the necessary realty for the building of a really magnificent high-level concrete arch bridge which will join the historic Ridge Road within the city limits (nominally Lewiston Avenue),

¹ See map plate



STUDY FOR ARCHITECTURAL TREATMENT
OF THE NEW RIDGE ROAD BRIDGE
GORDON AND KAELBER ARCHITECTS

west of the Genesee, with the Ridge Road that continues to the east of that great gorge. . . . For years this bridge has been the bright particular dream of those Rochesterians who have held a particularly abiding faith in a brilliant future for their community. . . . Now the dream is about to be realized. The reproductions of the architects' drawings of the elevation of this bridge show how truly a monumental structure has been planned for the fulfillment of it. A great, high level bridge, 800 feet in length, 82 feet in width, and with its floor 170 feet above the level of the waters of the Genesee, truly will deserve to be reckoned among the fine monuments of Rochester.

The actual construction of this bridge, it is hoped, will be begun in the very near future.

One other bridge across the Genesee will demand fairly immediate consideration. The approaching completion of the new College of Medicine of the University of Rochester and its affiliated hospitals in Elmwood Avenue, as well as the plans for the construction of the new Men's College of the University upon the site of the present Oak Hill Country Club, renders the replacement of the present Elmwood Avenue bridge by a heavier and more permanent structure almost an imminent necessity. . . . Smith Street bridge is another structure demanding replacement in the not distant future.

Crowding closely upon the heels of this problem of communication in the modern city, is the allied one of its transportation. In the one instance, we give consideration primarily to those who walk or drive, themselves, when they will and where they will; in the other there comes the providing of public vehicles in which the citizen may ride—for a fee, and subject to the conditions of the companies that may operate them. . . .

In Rochester this last service is still performed chiefly by surface trolley-cars, although the motor-omnibus has already made a definite stand here; a beginning which is apt to be greatly increased rather than decreased.

The trolley-cars of Rochester divide themselves at once into two major classifications; those that perform service chiefly or wholly within the limits of the city, and those that run out from it to neighboring communities. Among these latter that are reached by the so-called interurban trolleys are Syracuse (84 miles distant), Buffalo (by connection, via Lockport, 80 miles distant), Geneva (50 miles), and Sodus (30 miles).

Up to the present time these interurban trolleys have always used the surface-car tracks of the city railway system (New York State Railways, Rochester Lines). That they have added greatly to the congestion, both upon these tracks and in the city streets generally, is not to be denied. Not only are some of these interurban lines fairly frequent in their operation, but the large size and bulk of the trains or single cars that they operate makes them a very considerable burden to the city streets, with resulting delays not only to their own patrons, but to those of the patrons of the city trolleys, as well as all other users of the city streets.

Rochester has recently found her own solution for this particular problem; one in which she has great hope and an abiding faith. . . . The solution came through a possibility not open to many other American cities.

We spoke, when considering the early days of Rochester, of the coming of the Eric Canal in the eighteen-twenties—of how it thrust itself across the very heart

of the growing young city and, like the Genesee, was at one and the same time a great barrier and a great incentive to its growth. . . . For nearly a hundred years the Erie Canal held to its original course through the heart of the city. Then, upon the completion of the important New York State Barge Canal, which was carried around the southerly and the westerly edges of the city, the old Erie was abandoned.

The question of what was best to do with a valuable hundred-foot right-of-way through almost the very center of a city of 300,000 folk, was settled by the decision to use it first as the location of a rapid-transit railroad, to be placed in an underground subway, and second, as that of a new main commercial street, to be constructed on the roof of that subway as it passed through the central portions of the city. Accordingly, under the provisions of a statute especially passed for the purpose, the city of Rochester purchased the abandoned Erie Canal through its own limits, as well as through a portion of the adjoining townships of Brighton and of Greece—some 13½ miles in all—for a round \$1,500,000.¹

It was immediately decided that the new rapid-transit railroad from east to west across the city would be used not only for most of the interurban electric lines radiating from it, as well, perhaps, as certain lines operating entirely within the limits of Rochester, but that it would also serve as an industrial or "belt-line" route for connecting each of the steam railroads entering the city, for both interchange freight service and the service of industries already located or to be located upon it.

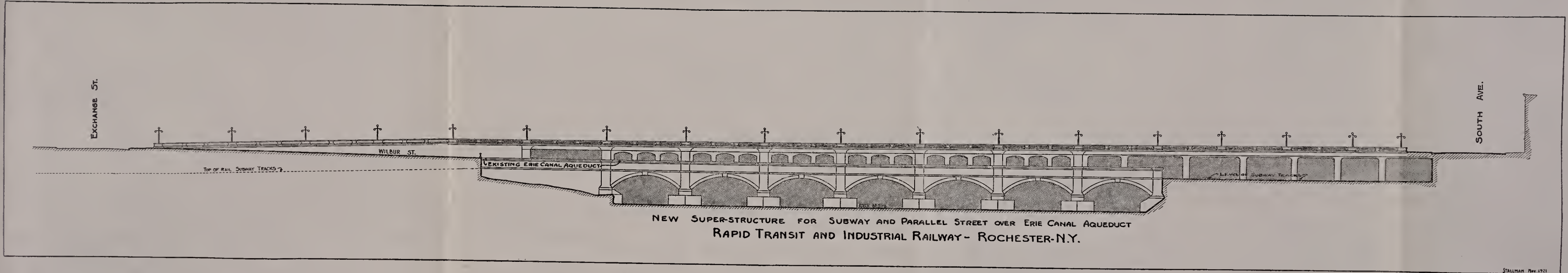
A contract providing for the excavation of this subway and street from its junction with the tracks of the Buffalo, Rochester & Pittsburgh Railroad, just west of Oak Street, through to its junction with the Lehigh Valley Railroad, just south of Court Street, was awarded to Scott Brothers of Rome, N. Y., late in 1921. In the following spring actual work began.

The work covered by this preliminary contract for the construction of the central portion of this new traffic route was the excavation of the old canal bed to a depth and width to provide for four main tracks, of standard railroad type and size, and also to provide, of course, for the new street—Aqueduct Way—from Oak Street to South Avenue. The width of this new surface thoroughfare from Oak Street to Exchange, was to be approximately 100 feet, affording a roadway sixty feet in width, and two sidewalks, each 20 feet wide. The clearance in the subway underneath is extremely high, 17 feet, and provides for the safe operation of standard steam-railroad freight equipment through it.

From Exchange Street to South Avenue, Aqueduct Way is carried upon a new upper level of the historic Aqueduct, now eighty years old, from which it derives its name. The clearance in the lower level of this bridge over the Genesee is retained the same as that of the subway to the west of it; the roadway atop being 52 feet wide, with sidewalks 14 feet wide on either side.

The cost of this key portion of the great work is estimated at about \$1,800,000; that of the entire enterprise, aside from the price paid for the old canal, should not greatly exceed \$4,500,000. The total work comprises a railroad about 8½ miles in length, four-tracked through the main central portion of the city, and with either two or three tracks all the rest of the way. It provides for a connection with

¹ For a detailed statement of the proposed uses of the Erie Canal lands, the reader is referred to the reports of Dr. George F. Swain, of Harvard, to be found on p. 80 of the Appendix.





ENTRANCE TO COVERED SECTION OF SUBWAY AT OAK STREET



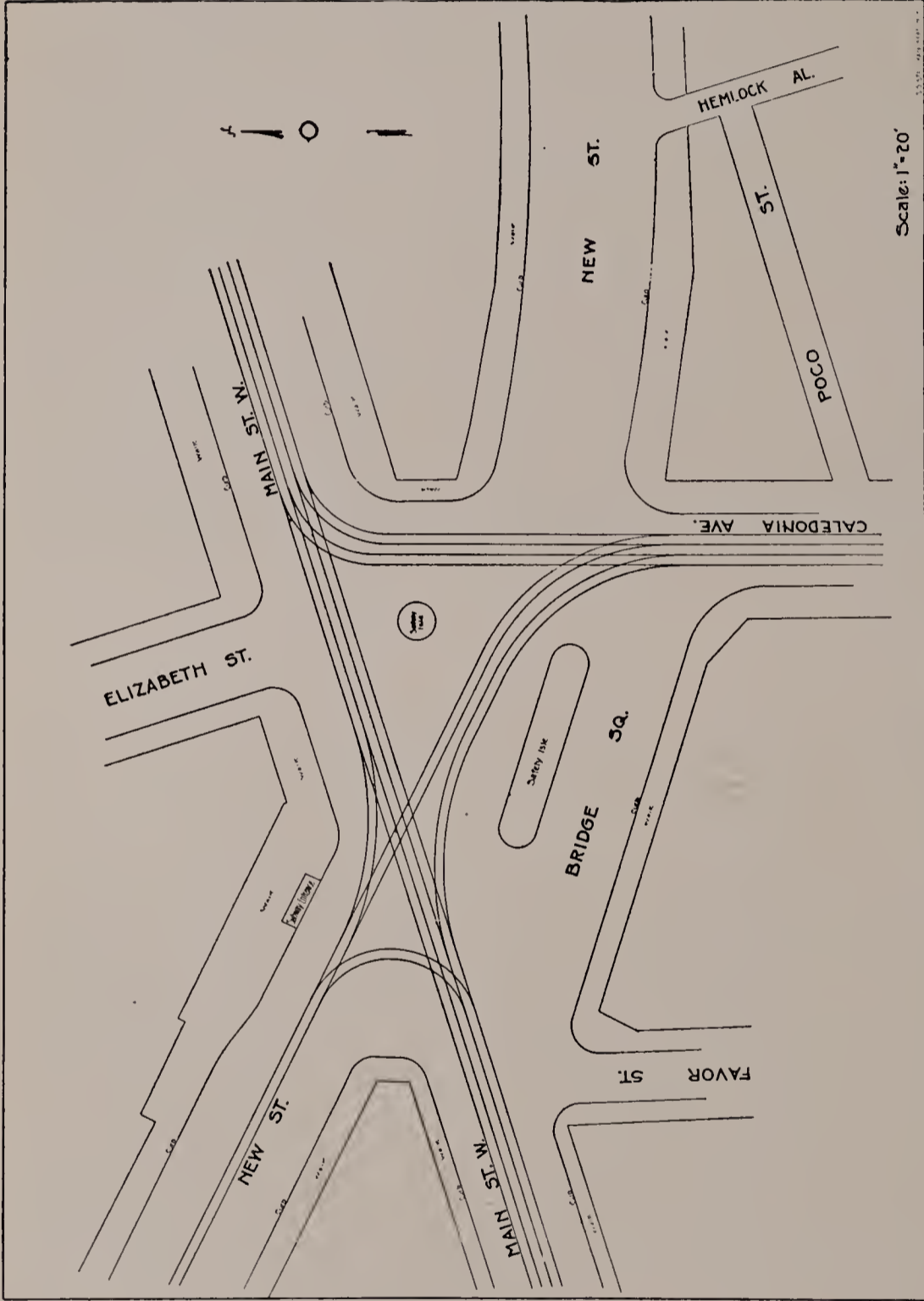
INTERIOR VIEW OF SUBWAY EAST OF OAK STREET



CALEDONIA AVENUE AND MAIN STREET W. BRIDGES OVER ERIE CANAL, BEFORE CONSTRUCTION OF SUBWAY



MAIN STREET W AND CALEDONIA AVENUE BRIDGES REMOVED—SHOWING NEW SUBWAY STREET CONSTRUCTION



MAP SHOWING CONNECTION BETWEEN MAIN STREET W. AND NEW SUBWAY STREET

the Rochester & Eastern Railroad (the high-speed interurban line to Canandaigua and Geneva) at its crossing of the old canal near Monroe Avenue; with the Rochester & Syracuse, just east of Winton Road; and with the Rochester, Lockport & Buffalo, at Lyell Avenue. Each of these lines operates frequent high-speed suburban trolley service. It has been suggested that the high-speed suburban trolley service of the Erie Railroad up the valley of the Genesee to Avon and Mount Morris be brought into and through the new subway.

The whole future effect of this remarkable new subway enterprise upon the growth and development of Rochester is hard to estimate at this time. For, in addition to handling the passengers of the interurban lines, it is certain that some of the city lines of the Rochester trolley system will be diverted to its tracks. (Already we have seen one possibility for bringing the Park Avenue line into it, at James and Chestnut streets). Not alone is there to result an almost instant traffic relief to the overcrowded streets of Rochester, but the time-saving to the users of the subway will be no inconsiderable item into the reckoning. It is estimated that electric cars and trains will go from Winton Road to the City Hall in 13 minutes, as against a present actual schedule of from 22 to 24 minutes. The new subway will carry one to the Rochester & Eastern Junction at Monroe Avenue in 19 minutes; the trolleys now take 37 minutes for that run.

It has been further suggested that one of the comparatively little-used steam railroads from downtown Rochester to Lake Ontario—either the branch lines of the New York Central or of the Buffalo, Rochester & Pittsburgh—be electrified and brought into quick direct-track connection with the new subway. In this way a present running time, under the best conditions, of 40 minutes from the Four Corners to Ontario Beach Park would easily be reduced to less than 25 minutes—and again great street relief obtained. Such a line would also afford access to the great works at Kodak Park and the two huge cemeteries just beyond that point.

But whether these things are done or not, the fact remains that Rochester has just acquired a great new backbone for her transport—whose effect upon her development should be felt for many and many a year. There will be three main passenger stations upon this backbone—one to be located on South Avenue, between Court Street and Aqueduct Way; one between Exchange and Fitzhugh Streets, to be known as the City Hall Station, and the third, between Main Street West and Oak Street. These will serve the various portions of downtown Rochester. Outlying stations, in the “open-cut” portions of the new subway, will be located wherever traffic conditions may warrant. They will involve comparatively little expense in their construction.

Rochester's new backbone of her transport is to serve, as has already been indicated, her freight traffic necessities as well as those of passenger traffic. The permanent connections between it and the tracks of the Lehigh Valley, the Buffalo, Rochester & Pittsburgh railroads and the New York State Barge Canal Terminal have already been made. There are to be several connections with the various branches of the New York Central that radiate from the city; between East Avenue and Highland Avenue; at Lyell Avenue, and again at Lexington Avenue. . . . A connection may be had, at any time that it is advisable to bring it about, with the Pennsylvania Railroad through the abandoned bed of the old Genesee Valley Canal, and direct with the Erie Railroad at such a time as the Carroll-Fitzhugh millrace may be finally abandoned. In the meantime, the Lehigh Valley permits of connection with the Erie, and the B. R. & P. with the Pennsylvania. . . .

Electric locomotives of the most modern type, operating through the new subway, will handle long strings of freight-cars between these roads and the many industries along the new subway with great facility. . . . After many years of patient waiting, Rochester has at last an industrial interchange railroad that she long has needed.

Take the single question of the motor omnibus—already recognized as one of the highly efficient agents in the mass transportation of the modern city. For more than a year, Rochester has had a well-established service of motor-busses, through East Avenue from Main Street to Pittsford, 8 miles distant, at the outer rim of the suburban area. Other motor-bus routes are just now being established as feeders to the city trolleys, out into the township of Greece and at other points. . . . It would be entirely practicable to establish cross-town routes through important arteries of the residential section—such as Culver Road and Winton Road—in direct connection with the new subway. In this way the great northeastern section of the city could gain a definite advantage from the construction of its new transport backbone.

For these northeastern sections, growing quite as rapidly as any other portion of the Rochester of today, and gradually spreading themselves farther and farther out over the famous truck-farms of Irondequoit, the immediate traffic relief has seemed to rest largely in extensions to the present street railway system. Yet there are many folk wise in transport lore who doubt very much if the future is to see any considerable additions to the street railway services of our American cities.

An interesting experiment is about to be inaugurated in Rochester, where a much-needed crosstown service across the entire north side of the town is to take the form of the trackless trolley. The fact that this new route will have to cross the Genesee on the high and narrow Driving Park Avenue Bridge will, as we have seen, almost necessitate the use of a vehicle not confined to heavy steel tracks. The suspension of overhead trolley wires over the entire length of the new route permits the use of a vehicle considerably lighter and more economical in its operation than the motor-bus. . . . At the least, this is an interesting experiment. If it proves to be a successful one it is more than likely that the trackless trolley will be introduced elsewhere within the city of Rochester.

The many crossings and recrossings of the city's arteries of communication and of transportation—taking the definite form of streets and of high-speed railroads operating over their private rights-of-way—offer many problems to the city planner.

Rochester moved far ahead of most of her sister cities of America in the question of grade crossing removal. As far back as 1882, she was busily engaged in raising the busy main line of the New York Central Railroad, which passes almost through her very heart, from its many busy grade crossings with her main thoroughfares. In that day, this was as important an enterprise as the new subway is in this, and seemingly as difficult; and to certain nervous folk at least, seemingly as chimerical. But after forty years proven to be one of the most forward steps ever taken by this forward-looking American city.

To this policy she has remained steadfast. Against great difficulties at times, she has persisted in steadily removing her grade crossings, until today there are but few of these remaining, of an importance to be reckoned as really dangerous.¹

¹ See Map, p. 25.



MAP SHOWING RAILROAD CROSSINGS

One of these last is at Winton Road, and steps are already in progress for the raising of the New York Central tracks over this street of rapidly-growing importance to provide an under-crossing for it.

There are other railroad grade-crossings in Rochester that also need more or less immediate removal, in the western portions of the city at Lyell and at Chili avenues and several in the southern portions of the community. The rather dangerous double crossing of the Erie and the Lehigh Valley over Elmwood Avenue close by the entrance to Genesee Valley Park, is to be eliminated in the very near future, by the changing of the location of Elmwood Avenue and bringing it through a subway 100 feet in width, under the tracks of both railroads, right into the park itself. . . . The Pennsylvania's line on the other bank of the Genesee at this point offers some rather perplexing grade-crossing problems—the comparative lightness of its traffic has alone served to minimize these. Yet as Rochester develops—and in this immediate vicinity it may be expected to develop very rapidly in the near future, because of the huge developments of the University of Rochester on either side of Elmwood Avenue—these grade-crossings will assume a new importance.

One form of transportation still remains for briefest consideration here—water transport. . . . The opening of the New York State Barge Canal has given to Rochester a new water pathway to the sea, which, when fully developed and completed, should be of much value to the industrial side of the community. Of the details of this work, including the elaborate inner harbor of Rochester that is part and parcel of it, the State Engineer has written exhaustively from time to time.¹

Yet Rochester is by no means dependent upon this pathway through the valleys of the Mohawk and the Hudson for reaching the open sea. The magnificent natural waterway of Lake Ontario and the St. Lawrence is orever hers. The Federal government has created a fine outer harbor at the mouth of the Genesee—at what was once Charlotte, but is now the Twenty-sixth Ward of the city of Rochester. Here are pier facilities, some of which are owned by the city, which are coming steadily into increased use.

When the possibilities of the mouth of the Genesee shall have been entirely utilized, there will remain those of the Irondequoit Bay, six miles to the east and forming the easterly boundary of the Greater Rochester.

¹ See illustrations following.



GENESEE VALLEY PARK—NEAR VIEW OF FOOT BRIDGES OVER BARGE CANAL



GENESEE VALLEY PARK—MAIN ROADWAY BRIDGE OVER BARGE CANAL



CLARISSA STREET BRIDGE OVER GENESEE RIVER—ROCHESTER HARBOR



BARGE CANAL—COURT STREET DAM—ROCHESTER HARBOR

VI

Zoning

OF an importance second only to that of the street plan of the modern city—and in actual fact, hardly second even to that—is the problem of the proper regulation of the use of lands and buildings, more generally known as Zoning; which, being translated, really means more than the mere civic control of building construction—either new or reconstruction—but means the proper segregations and allotments of the land itself for specified uses.

For a long time the gravity of this civic problem here in the United States was recognized by the inability or the unwillingness of the average city or town to even approach it remotely; let alone really to grapple with it. . . . Whenever the topic was broached a great deal was prated about the sacred vested rights of property; probably upon the assumption that these vested rights applied only to the protection of the man who wanted to carry forth some particular sort of development with his own property; and did not apply, to any degree whatsoever, to the protection of the surrounding property which might, and probably would be, damaged by his developments. . . . For an astoundingly long time this extremely one-sided theory held sway. While the average property holder of an American city, who felt that his holdings were admirably protected by his city government from danger by thieves or by fire or by pestilence, knew that if his neighbor chose to erect close beside him a highly objectionable piece of building construction, he was all but absolutely helpless in the matter.

Within the past fifteen years—almost, in fact, within the confines of a single decade—the American municipality, generally speaking, at least, has made remarkable progress along these lines. In most of our important cities, as well as in many lesser towns, zoning laws and plans have come into effect, have generally stood the test of legal attack and have become almost a part of the organic law of the community. It is hard to conceive of a community here in the United States which has given them any sort of a fair test, wishing to revert to the old disorderly condition of affairs.

The authority conferred upon the City Planning Bureau of the City of Rochester by the Legislature of the State of New York, in 1917, which brought it into its being, refers to zoning for use only. (See charter provisions relating to City Planning in Appendix, page 88). This represents the full legal powers of the Bureau in the matter of zoning in this city. It came into existence after consideration of every possible phase of the problem. Up to the present time it has met admirably all needs of the situation.

Zoning for use requires from time to time corrections and exceptions. There are very few rules of any sort that are not improved by the proper sort of exceptions. In the opinion of the Superintendent of City Planning, any system of zoning that is in its nature permanent and absolutely rigid, without any provision whatsoever for modification, would be highly detrimental to the City of Rochester. And so, right here in Rochester, we have not hesitated to apply exceptions when the City Planning Advisory Board felt that they were for the best practical and immediate interests of the city; where they wrought no real damage to the surrounding property and where they interfered in no way whatsoever with the entire broad scope of the city plan in creating the highest type of a Rochester of tomorrow.

This portion of the report will give no attention to the details of these exceptions. They are covered fully, as well as many other details of the problem, in the report of Walter H. Cassebeer,¹ who has been employed for some time past as a zoning expert in the preparation of zoning plans and whose services have been continued steadily on account of the constant attention required in them.

The act under which Rochester is proceeding in the development of her city plan was not put into actual operation until the summer of 1919. It is a fairly comprehensive statute, even though it will be remembered that it empowers the Superintendent of City Planning to zone for the use of property only.

Although the act does not specifically include anything having to do with the height and area of structures in this community, a great deal of attention has been given, nevertheless, to detailed regulations and instructions covering the height and area of buildings to be erected in the City of Rochester.

The Charter of the City of Rochester specifically gives the Common Council power to zone the city for height and bulk of buildings, but restricts such authority to such regulations as may be approved by the Superintendent of City Planning.

An ordinance for zoning for height and bulk of buildings has been prepared by the Superintendent in co-operation with the Law Committee of the Council. This ordinance has been introduced in the Council, referred to the Law Committee and several public hearings held. It is expected that final action will be taken in the near future.

The general control of buildings and building construction—in Rochester, it will be remembered, through the primary direct control of the land upon which they are to be erected—divides itself at the outset, roughly at least, into some sort of a classification of the different sorts of buildings to be erected in the community. For almost any American city, this classification might take something of the following form:

INDUSTRIAL BUILDINGS—

Factories, warehouses and the like

MERCHANDISING BUILDINGS—

Wholesale

Retail

DWELLINGS—

Hotels, apartment-houses and tenements

Two-family houses

Single houses

PUBLIC BUILDINGS—

Individual structures

City Hall

Court House

Post Office and Federal Court House

Central Public Library

Civic Auditorium

Public Market

Armories

¹ See Appendix, p. 60.

GENERIC STRUCTURES—

Hospitals
Schools
Branch Libraries
Fire Stations
Police Stations

In zoning as applied to privately-owned and operated structures of every sort (as embraced within the first three of the foregoing groups of classifications)—Rochester is not lagging. Not only has she building laws, today rigidly enforced, to assure the proper protection of life and limb of human beings, whether at work or play or sound asleep within their community, but the addition of the zoning laws has constantly assured the full permanent protection to the property—surrounding property as well—that the modern sense of complete justice to all demands. Zoning is the last fine supplement to state and municipal fire-laws and building-laws of every sort. It has come to fill the one remaining gap in civic protection to the property owner.

With this basic principle fully stated, this portion of this report will give no more consideration to the zoning problems as they apply to the future construction or reconstruction of private buildings in Rochester. The zoning map¹ of the city shows the general building zones of a section of the community more minutely and more lucidly than almost any amount of text might ever hope to accomplish.

VII

The Location of Public Buildings

Of public buildings in Rochester, it may be stated that the City Planning Bureau, in consideration of the generic groups, as above set forth, aims always to guide rather than to direct. In other words, working in the fullest sense of co-operation, it seeks primarily to meet the necessities and the wishes of the city department that is putting up the particular building under consideration—be it hospital or school or library or fire station or police station. . . . In each of these types of structure, Rochester has set a distinct standard so forward-looking that our City Hall is continually in receipt of requests from other municipalities for the loan of its plans, photographs and the like. . . . In the construction of our schools—to make a single instance—we have achieved a certain sort of distinction, here in the East at least, in the development of the one-story schoolhouse; affording a maximum of facility in operation as well as of comfort and safety at the same time. . . . The Rochester one-story school already is quite famous.

Of the seven public buildings, of single type, set down above, Rochester today possesses all save one—a Central Public Library. This sole omission bids fair to be supplied; at a time in the not-distant future. Agitation is now in progress for the establishment and building of a huge Central Library in the town and the City Planning Bureau stands ready to offer its services in finding a location for this structure that shall not only be of the largest advantage to all the citizens of the community who make use of it, but which, as a monumental building, of commanding architectural aspect, shall be so placed as to contribute in the largest measure to the beauty of the Rochester of tomorrow.

It is hardly conceivable that Rochester will have a new Federal Building—post office, custom house and court house—at any time within the immediate future. The present building, with the additions that have been made to it, still is quite well adapted to its necessities. Similarly, the Monroe County Court House—after thirty years still one of the most beautiful structures of its type within the United States—probably will remain as it is (with the possible addition of one or more stories) for many, many years to come. While the Public Market is so well established and so popular an institution today, plans are in rapid progress for increasing its size, upon its present ample and accessible site.

The Civic Auditorium—facing Washington Square and remodeled from the old Armory; in turn replaced by two fine modern Armories, in Main Street East and in Culver Road—it will be readily admitted leaves something to be desired. Some fine day it will be replaced, undoubtedly, by a great auditorium that, planned and constructed definitely for its chief uses, will challenge admiration. Such a structure would almost of necessity be builded upon the present site. It would be hard to conceive one in Rochester better adapted by every condition to the location of a great public auditorium. With streets upon its every side, unusual opportunity is offered for the proper handling of the heavy motor vehicle traffic that arises these days in the assembling and dispersing of large audiences. This is a consequential factor that is not overlooked by the City Planning Bureau.

The important public building of which Rochester stands perhaps most vitally in need at this moment is a new City Hall. The present fortress-like

structure of grey stone, first completed in 1873, was found inadequate almost within a decade of its completion. Since then the important business of administering the City of Rochester has steadily been more and more sprinkled into outlying buildings ranged round about it; all of this working to a degree of confusion and against the highest standards of efficiency. Some day there must be a new City Hall here; and while that day may not yet be reckoned as of the immediate future, it is the business of the city plan to anticipate its coming. Studies have already been made of possible sites for such a new City Hall.

VIII

Water Supply—Fire Protection

This subject, as indicated in a former chapter, while essential to a proper city plan, does not come entirely within the purview of the City Planning Bureau, and will therefore be briefly considered.

The Act, however, creating the City Planning Bureau recognized the extension of suitable water mains and sewers as a necessary part of city planning.

Fifty years ago the newly created Board of Water Commissioners, acting upon the advice of their Chief Engineer, J. Nelson Tubbs, and backed by the enlightened sentiment of the community with a wise foresight, selected Hemlock and Canadice lakes, about 30 miles south of, and nearly 400 feet above, the city, as the source of a domestic water supply.

The works then constructed have been enlarged from time to time, to keep pace with the growth of the city, and have given the city a domestic water supply not excelled in the country.

The Commissioners constructed additional works for fire protection in the central part of the city, supplied with water pumped from the Genesee River. This system was the first separate water system for fire protection built in this country, and with some enlargements, is in use at the present time.

Future Supply

The City Planning Bureau, while not charged with the duty of selecting the source of an additional supply, the need of which is imminent, is, however, vitally interested that the quality of the supply selected shall be equal to that furnished from the present source of Hemlock and Canadice lakes.

IX

Sewage Disposal—Garbage Disposal

This subject, for the reasons given under the heading of Water Supply and Fire Protection, will be treated briefly.

The sewers in the older portion of the city are of the combined system, and until the completion of the main sewage disposal plant with its intercepting sewer in 1916, mostly discharged directly into the Genesee River.

The annexed portions of the city on the east and on the north not directly tributary to the main disposal plant, were generally of the separate system.

No attempt to treat the sewage was made until a report on the subject was made by the late Emil Kuichling in 1907. This report, concurred in by Messrs. George H. Benzenberg and Rudolph Hering, related to the treatment of the sewage from the main portion of the city then discharging into the Genesee River.

A plant consisting of Riensch-Wurl fine screens and Imhoff tanks was constructed in Irondequoit, about a half a mile south of the lake shore and two miles east of the Genesee River. The effluent from these works is discharged into Lake Ontario at a point about 7,000 feet from shore in 50 feet of water.

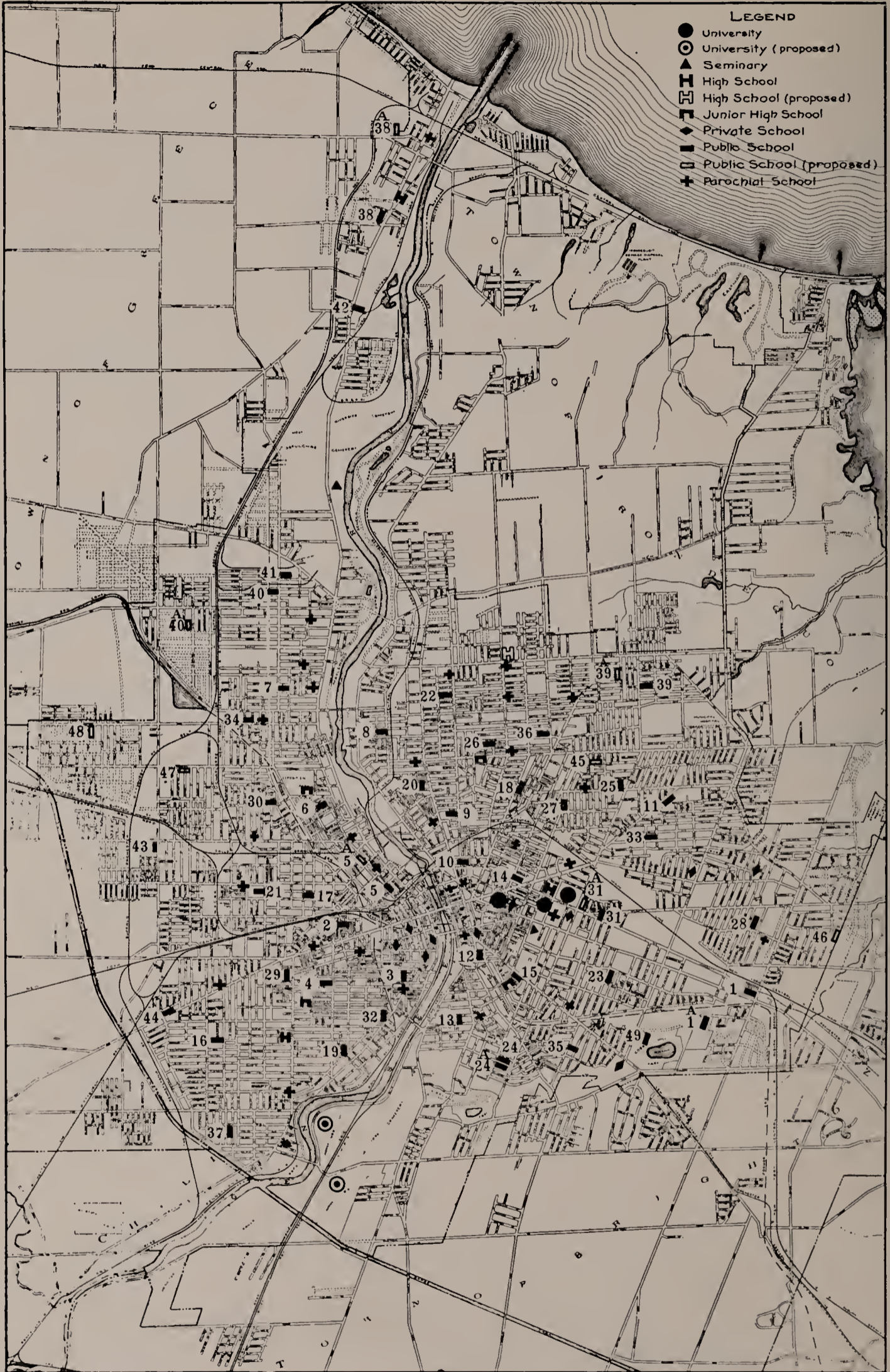
The sewers in the annexed district in the eastern part of the city and in the northern portion, the former village of Charlotte, are of the separate system, and in the eastern or Brighton district, the sewage is treated in a disposal plant consisting of an Imhoff tank and sprinkling filters, the effluent from which discharges into the Irondequoit Creek at the head of the Bay of the same name. The sewage in the Charlotte district is treated in Imhoff tanks and the effluent discharges directly into the Genesee River near its mouth.

The Irondequoit, or main plant, was designed by the late Emil Kuichling, and the other plants referred to, by Mr. John F. Skinner, now Deputy City Engineer. These plants, since their completion, have operated successfully and are generally acknowledged to be the best operating plants built in this country.

The constantly expanding population is rapidly covering the surrounding territory at present beyond the municipal boundaries. Especially is this true to the east in the Town of Brighton, and to the north, in the Town of Irondequoit.

Brighton has already taken up the matter of sewage disposal and has located a plant at the site suggested for outside territory in former municipal reports, and Irondequoit is at present studying the situation in close conjunction with the city authorities to the end that their work shall harmonize with the city's present and future plans.

The garbage is now collected directly by the City and disposed of in the most modern type of a reduction plant located near the central part of the city. The rubbish is also collected directly by the City and taken to an incinerator plant where the paper and other material of any value are sorted out and the residue burned.



MAP SHOWING EDUCATIONAL BUILDINGS

X

Education as Part of the City Plan

In Rochester education has always gone hand in hand with the development of the community—from its very beginnings. As far back as 1813 a school-house was opened in the struggling little settlement by the falls of the Genesee, then known as Rochesterville. Huldah M. Strong was the teacher and the school itself was first held in Enos Stone's barn. Shortly afterwards it was removed to the upper floor of a clothing-store very near the present Four Corners. There it continued to thrive—even though it was a private institution, supported by the individual folk of the village.

A public school came quickly upon its heels. Messrs. Fitzhugh, Carroll and Rochester, the proprietors of the Hundred Acre Tract, site of the village that was to bear the name of the last of this adventuring triumvirate, set aside within their plat lots for a church, a school-house, a court-house and a jail. The first three of these have since continued to bear the structures for which they originally were set aside. The Monroe County Court House in three successive edifices has never occupied but the one site—at the corner of Fitzhugh Street and of Main Street West. St. Luke's Protestant Episcopal church in South Fitzhugh Street—the most venerable church edifice within the city—still occupies the original site donated to it by the first proprietors of Rochester. While adjoining it upon the north stands what was formerly the Rochester Free Academy and is now the headquarters of the Board of Education. In compliance with its deed of gift this last plat of land has always held a building devoted to educational purposes. Upon it was built—in the fall of 1813—the first free school of Rochester, District School No. 1, which was repeatedly enlarged and improved before it was replaced by the Free Academy. The present structure upon the site dates back to 1873.

Of the swift and sure development of Rochester schools—of Rochester education generally—this report has not the space for the telling. It is enough here and now to say that by 1837 Rochester had a High School—already ten years old and with 562 pupils enrolled. By 1851 Rochester had a University; which bore her name and which has grown in size and in strength from that day until this when it is proposed to take its entire Men's College of Arts and Science and build it anew on a splendid site of more than eighty acres at the bend of the Genesee now occupied by the Oak Hill Country Club. Not only has the University grown, and grown greatly, in the size of its enrollment, but within the past few years there have come radical additions to its size and plan in the development of great special schools—of Music and of Medicine and Dentistry.

The first of these is known as the Eastman School of Music and, together with the superb theater which is George Eastman's gift to the city of Rochester, stands in Gibbs Street, almost completely filling the block between East Avenue and Main Street East. The theater, like the School of Music, is held in trust by the University of Rochester and both are operated by it, for the enrichment of life within the community.

The School of Medicine, and its allied Strong Memorial Hospital, as well as the adjoining Municipal Hospital—to have between them some 480 beds for the relief of the sick and the injured—are being builded in the southern part of the city, facing the new Crittenden Boulevard between Mount Hope Avenue and the Genesee Valley Park. These buildings, with their adjacent Nurses' Home, Physicians'

Residence, Laboratories, and the like, will form a notable addition to the city's architectural groups—an admirable foil to the new University buildings about to arise upon the near-by Oak Hill site.

It would seem, with the full development of these and some other rather large plans, that ample provision was being made for the higher educational needs of the Rochester of tomorrow. Of her more general ones there has been no lack. In her public school system—as distinguished from her private or her parochial schools—she now has nearly 1,700 teachers and more than 51,000 pupils enrolled. These boys and girls go to school each day in nearly half a hundred school buildings—at the top of which stand three senior high schools, four junior high schools and a City Normal School—this last in University Avenue.

Roughly speaking, the public school system of Rochester is divided into seven important units of work: the elementary school unit, consisting of the kindergarten and the first six grades, or years, of school work; the junior high school unit, comprising the seventh, eighth and ninth grades; the senior high school unit, consisting of the tenth, eleventh and twelfth grades; the City Normal School, or teacher training unit, with a two-year course beyond the high schools, for the special training of teachers; the special education unit, designed for those who vary so much from the normal child as to require special treatment; the “part-time” or continuation-school unit, for all between 14 and 18 years of age who have withdrawn from the full-time day schools and gone to work; and the unit for adult education, consisting of the so-called Americanization work done by adults, as well as the entire evening school system. . . . The Rochester plan for free education is nothing if not thoroughly comprehensive.

It is the first four of these groups, however, that require the provision of modern school-houses—fire-resisting structures in which the factor of safety is raised to its highest possible point—here and there and everywhere within the town. The City Planning Bureau's direct interest in the educational phases of the largest aspect of the city plan is in the placing of the school-houses. As in the case of the Fire Department and the Police Department, the Bureau does not seek to intrude itself upon the technical development of a highly important part of the entire plan for the Rochester of the future. It merely proffers its aid in finding the proper location for the new schools.

So has it assisted generally in finding the location of the newest high school about to be erected in Rochester—and the first which under one roof will combine both senior high and junior high organizations. For lack of a better name at the moment, this huge new building—to accommodate some 3,000 students—will be called the Northeast High and it will be erected at the northeast corner of Hudson Avenue and Norton Street. . . . Another important new school building in which the City Planning Bureau has had at least the interest of a good citizen, is a large new grade-school that is about to arise in North Goodman Street—in one of the most rapidly growing sections of the city of Rochester.

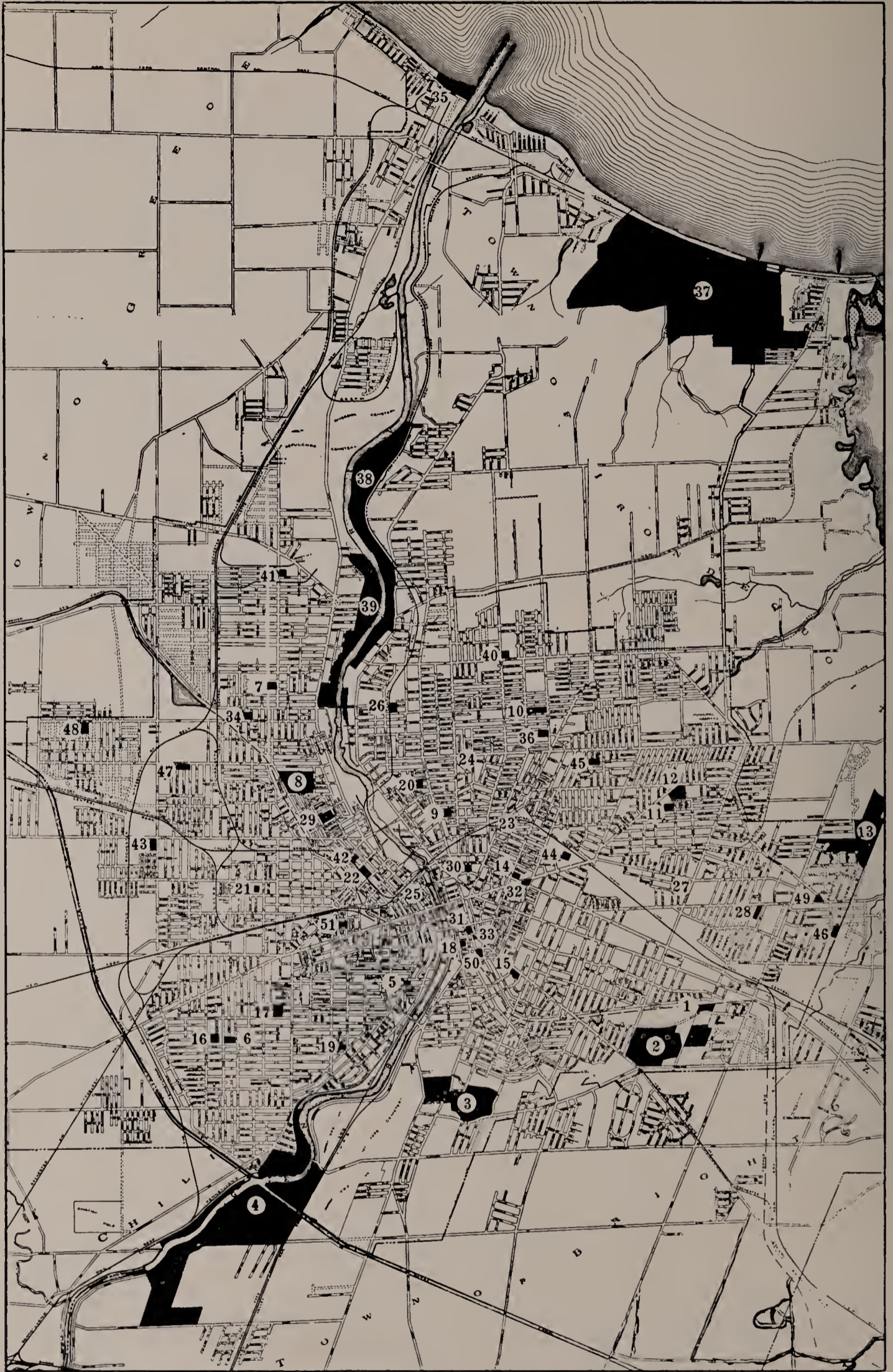
The Board of Education can be counted upon to continue the policy which long ago gave the community one of the foremost free school systems of the land; the University of Rochester's tremendous program for its development and growth within the comparatively near future is now definitely laid down and generally understood; there are, in addition, plans a'plenty for development of various private and parochial schools within the boundaries of the town. The civic sense of Rochester is not neglecting the importance of education in the planning of the city of tomorrow.



ANOTHER VIEW OF PIKE'S QUARRY IN 1905, NOW WILSON PARK AND SITE OF MADISON JUNIOR HIGH SCHOOL



MADISON JUNIOR HIGH SCHOOL, WILSON PARK, FORMERLY PIKE'S QUARRY



MAP SHOWING LOCATION OF PARKS AND PLAYGROUNDS

XI

Recreational Facilities

Of the lighter phase of community existence—that phase that finds its fullest expression in its recreational desires—Rochester has a plenitude. . . . From the point of view of the city plan the recreational facilities of any town take the most important form in its parks and parkways. These afford not merely opportunity for the recreation of mind and of body—but from a consideration of their sheer beauty—for recreation of the eye as well. In our modern city the human eye would seem to be entitled to its own fair need of rest and recreation. . . . It is for it that we make our parks and our boulevards beautiful as well as efficient. Which is a point not to be forgotten.

All in all, then, consider if you will the park system, both in the form of especially designated parks and squares, as well as in boulevards and boulevarded streets, as one of the most important phases of the modern plan of any organized American community, no matter what its size. In the boulevards artistry will be found taking no mean place beside efficiency—the rendering of such a street of largest use to the communication and the transportation needs of the community alone precedes its direct beautification. . . .

We begin with the formal parks and squares of Rochester.

If we find that this community had the beginning of its schools—its first steps toward an educational efficiency—before the beginnings of its parks, we may merely put that down as logical and quite in keeping with those times in which our Rochester was born. And yet in the next breath we find that it was in those early days that the four downtown squares in which we have a greater or a lesser pride today—Jones Square, Brown Square, Washington Square and Franklin Square—were first laid out and set aside as fundamental parts of the first civic plans of this community. Rochester, having made this highly creditable start, promptly proceeded to forget all about it. For the past eighty or ninety years she has deigned to set aside comparatively few small squares—despite the fact that long since these were found not only agreeable additions to the city's eye but welcome breaks in any pattern of mere city streets.

Indeed it was for many, many years that she worried along without making any increase whatsoever to these four original squares within her civic heart. It was not until about 1888, when Rochester had already attained a population of some 125,000 folk, that a group of citizens, led by the late Dr. Edward Mott Moore, moved so definitely in favor of a park system for a town which already had begun to experience some ingrowing pains, that a tract of several hundred acres along the Genesee at the south edge of the city was first acquired, as the nucleus of the present Genesee Valley Park. Within forty years Rochester has had good cause to thank the forethought and the civic spirit of this group of men. Genesee Valley Park alone represents an asset to her, not easily expressed in dollars and cents.

The first step having been taken in the creation of a park system for the town, others followed, quite logically and far more easily. They came in fairly quick succession—Rochester saw and saw definitely the vast natural benefits that were to accrue to her from these new acquisitions—until today the park system of the city comprises seven major parks (including Edgerton Park) with some 1,649 acres all told. These are the Genesee Valley Park of 540 acres; the Durand-Eastman Park

of 484 acres; Seneca Park of 216 acres; Maplewood Park of 145 acres, and the relatively small Highland Park and Cobbs Hill Park, to which reference has already been made, and the recently opened Ontario Beach Park. Of all of these Highland Park, though the smallest, is perhaps the most distinctive. In it is located the famous Rochester arboretum, whose fame already has traveled almost as far as that of the city itself. Of this arboretum, the great, single distinctive feature is the pinetum, which presents a collection of pines and evergreens quite unsurpassed anywhere. . . .

In addition to the parks and the formal squares of the town there are 22 playgrounds for the younger generations of the community, in which from early spring until autumn organized play is carried forth, under the direction of trained attendants. . . . In Seneca, Genesee Valley and Edgerton parks there are also swimming pools, operated during the summer months. In addition to which there are the city's official bathing beaches upon the shore of Lake Ontario; both at Durand-Eastman Park and at the foot of Lake Avenue, in what was once the village of Charlotte and now is the Twenty-third Ward of the city of Rochester.

It would seem as if Rochester, despite her comparatively late start in the matter, had not finally neglected providing herself with a complete park system, well rounded out in all of its details.

And yet the Rochester park system is by no means fully completed even today. The Pinnacle Hills and territory surrounding Irondequoit Bay offers abundant opportunities for future park extensions.

Of parked boulevards it may be said that these, in general, divide themselves into two great classes; those leading from the heart of a city out into its surrounding country—like the spokes of a great wheel, radiating out from its hub—and those that are ringed about the town—like the tire of the wheel. . . . The city plan of Rochester has not neglected either of these types of boulevard. For the radiating type it has been compelled to make large use of existing main streets or highroads leading out from the center of the town. Widenings and building restrictions must go hand in hand in the development of these thoroughfares; the community must look forward to the day when the traffic on these great streets will be more than doubled or even tripled beyond even its present large volume.

For a ringed boulevard, or parkway, around Rochester, a good start has already been made. The gradually winding Genesee Park Boulevard extending more than two miles from the northwest corner of the Genesee Valley Park through to Chili Avenue with a continuation through Mount Read Boulevard northerly from the New York Central tracks to the northerly City line more than three miles is one of these beginnings. The widening of Elmwood Avenue south of the town is another link to the ring. This last street is to be bended and brought under the railway tracks of the Erie and the Lehigh Valley systems at the easterly edge of the Genesee Valley Park and widened all the way through to the easterly City line.

Rochester should also confront quite frankly the oncoming necessity of a boulevard or parked drive along the shore of Lake Ontario. Beginnings have been made in the so-called Lake Shore Boulevard and the shore drive through Durand-Eastman Park which will connect Irondequoit Bay and territory to the east with the mouth of the Genesee. Westerly of the Genesee plans have been made extending Beach Avenue as far as Dewey Avenue. The connecting link between these being the Stutson Street River Bridge and approaches.

XII

The Rochester of the Future

To even attempt prophecy as to the Rochester of the future—or, for that matter, of any other wide-awake American city—is an extremely hazardous business upon which any one may venture and upon which very few wise folk will. In earlier chapters of this report we have given “population curves”—diagrammatic lines, carefully platted, according to years and to population statistics—which show how not merely Rochester, but her neighboring communities of Syracuse and Buffalo, have found their population growth, in the first hundred years of their existence, conforming quite definitely toward a precise geometric curve. Yet, as we then said, the fact that these curves have seemingly attained, in the course of a century, a certain stability, is no guarantee whatsoever that this curve-ratio will be maintained—even in a general way. The pathway of cities is far too fraught with the unexpected. The rule of the ratio-curve is, if anything, proved by the unforeseen—the thing which may, and which frequently does, come to upset all precedents and rules.

That Rochester will have some 380,000 folk in 1930, is the prediction of the Rochester Telephone Corporation, which has had some sort of skill and reputation in prophecies of this sort. The Telephone Company prophesies not as a form of idle amusement; but as a very definite sort of necessity in anticipation of its building program to meet the needs of a swift-growing community. . . . Its estimate seems fair, and reasonably conservative. . . . Beyond 1930, the reader of these pages is privileged to do his own guessing.

One thing, however, does stand out—rather sharply. More and more we shall come to talk less of the city plan of Rochester and more of the regional plan of the Rochester metropolitan district. Already we have seen how the plans for streets and transport and drainage and water service of large and growing communities immediately surrounding and adjoining the present city of Rochester, with its legal limits as defined by the statutes of the state, yet entirely separate from it in a legal sense, gravely concern the central community. If it be recognized as inevitable that the entire townships of Brighton and Irondequoit, as well as portions, at least, of that of Greece, are to become part and portion of the legal municipality of Rochester, it should be merely good-sensed foresight that their problems, particularly as they intimately affect the future of the major community, should come under the eye, if not the actual supervision of the City Planning Bureau. There can be little contention in regard to this statement.

Yet the problems of the city plan are not limited even to the larger Rochesterian limits of Brighton and Irondequoit and Greece—the civic problems of even more distant townships such as Pittsford and Webster, and, in the case of the water service, some of the towns of Livingston county as well, one of large concern to it. In truth the Rochester city plan is not a city plan. It is a regional plan. This is the way that these things are now being faced elsewhere. The important industrial city of Manchester, England—a community in many ways analogous to Rochester—has had to extend its regional plan over a vast number of separate corporations and some ten million folk who reside within fifty miles of the Manchester Town Hall. Boston is faced with a similar problem. Although technically Boston is

ranked as but the sixth or seventh city of the land in population—being outranked by Chicago, Philadelphia, Detroit, Cleveland and St. Louis—yet as a matter of fact more folk live within a radius of fifty miles of the gilded dome of the Massachusetts State House than anywhere else within a similar territory in the United States—save within fifty miles of the New York City Hall. Boston has had to think regionally—of her metropolitan area—for a long time past. New York, in the recent contemplation of her regional plan—just now coming into its being—has considered the interrelated problems and needs of some nine hundred separate communities. Indeed the city plan idea has been outgrown; we now think in terms of the regional plan.

And when we think of Rochester—of the Rochester of tomorrow, if you will—in terms of the regional plan we must think of at least one-half the area of Monroe County; as well—as has just been indicated—of a goodly portion of Livingston County. In fact, many of the problems of Rochester are the problems of the entire Genesee valley. Water supply and water power must come to the growing city from its hinterland, just as comes its food and much of its trade. This last brings to the fore, as a matter for the regional plan, adequate highway provision beyond the city's limits—the far-seeing vision that shall see to it that Rochester is at all times amply supplied with these avenues of transport radiating far out from her heart.

Rochester's subway, to be of largest value, must not merely serve the city, within its corporate limits, but, as suggested in an earlier chapter, the entire valley of the Genesee. . . . Similarly the problems of the towns of the valley are, in no small measure, the problems of Rochester. . . . Rochester should seek to make them her problems; by suggestion, or advice, or even definite help, should aid in their solution—in her own selfish interest, if for no finer motives.

The greater Rochester of tomorrow is not merely to be expressed in population totals or in mere civic areas; it is to be rather the cooperative and the coordinated progress and development of the entire Rochester region. To look at the problem in any way than this is to look at it as through the small end of a telescope.

The present City Charter authorizes the Superintendent of City Planning to extend the city plan of streets for one mile outside the city boundaries, and as much farther as he deems proper.

Recent legislation has permitted towns adjacent to cities of the first class to provide themselves with Planning Boards having similar authority to such Boards in cities. The towns of Brighton and Irondequoit adjacent to the city of Rochester have such Boards which work in close cooperation with the Rochester City Planning Bureau.

XIII

Acknowledgment

In closing this narrative report its author is impelled to render heartfelt acknowledgment of the great help that has been given since first he assumed the then-new post of Superintendent of City Planning of the City of Rochester. The citizenry of the community in general—organizations and individuals and the Press, alike—have cooperated with him to the fullest possible extent, to make his work successful. His thanks to all of these cannot easily be placed in mere words or phrases.

He desires particularly to reiterate his expression of gratitude to the very practical cooperation that he has had at all times from the Municipal Art Commission. At no time has this help come in a more needed fashion than in the creation of the new street over the Rochester Subway and the Aqueduct.

From the beginning it was the firm desire of the City Planning Bureau to construct a permanent highway bridge that would not detract from Rochester's familiar picture of the historic and world-famed Aqueduct, but that would actually enhance its appearance, as well as serve every practical purpose for both Subway underneath and street overhead. With this end in view the Art Commission was asked, at the outset, to make such suggestions and recommendations as it thought advisable, before the completion of the reconstructed bridge. In compliance with which, it passed, on September 12, 1921, the following resolution:

(Copy from minutes of the Municipal Art Commission in reference to the Subway Bridge and Aqueduct, September 12, 1921.)

By Mr. Watson:—

“Resolved, That the construction of a bridge over the river extending from Exchange Street to South Avenue, using the Aqueduct as a part of the structure, is now about to be designed and its construction by the City commenced. The Art Commission, feeling that this is a necessary preliminary to the final approval of the design when presented to the Commission, respectfully requests that a model of the proposed structure, including Aqueduct, at a scale of eight feet to the inch, shall be made and submitted for the action of the Art Commission.”

Adopted—All Ayes.

A plaster model showing one arch for the foregoing proposed structure, with three interchangeable balustrades was submitted and marked Design Model No. 1.

By Mr. Herdle:—

“Resolved, That design Model No. 1 be approved subject to further consideration of detail in the complete model.”

Adopted—All Ayes.

If a personal note may be again brought into this report—at its very close—the author would like, particularly, to bespeak his appreciation of the strong helpfulness that has been given both the City Planning Bureau of Rochester and to himself personally, by the Hon. James G. Cutler, late Mayor of Rochester. From the time that it was first determined to construct an accurate scaled model of the new Aqueduct Bridge, Mr. Cutler gave generously, both of his time and of his large

store of practical experience to its fabrication. . . . The model, once completed, as has been just stated, received the approval of the Commission, through Mr. Cutler, and served as the absolute basis for the engineers and the architects who designed and built the finished structure.

To the members of the City Planning Advisory Board the Author also desires to render acknowledgment. Busy men all of them, they have not hesitated to give generously of their time and energy to the City's service. They have worked ungrudgingly for the city plan and contributed largely to its success from the outset.

Especial acknowledgement is due to His Honor the Mayor, and the Common Council, for constructive legislation making it possible to inaugurate and carry into effect recommendations of the Bureau.

He also wishes to acknowledge the effective assistance of the members of his staff, the Consultants, the City Engineer, members of the Department of Engineering, members of the Board of Estimate and Apportionment, and other city officials.

He also wishes to acknowledge the cheerful cooperation of the Town Boards and the Planning Boards of the towns adjacent to the city with the City Planning Bureau in the approval of subdivisions and the laying out of streets and highways adjacent to the city.

EDWIN A. FISHER,
Superintendent of City Planning.



MODEL OF BRIDGE OVER AQUEDUCT MADE FOR THE ART COMMISSION

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The Improvement of the Street System of Rochester

By B. Antrim Haldeman, Consultant.

Rochester is one of that all too slowly growing class of American cities in which the benefits and advantages of systematic and orderly city planning practice have come to be understood and appreciated by the municipal authorities, and where the official machinery has been organized for conducting the work in a practical and effective manner.

In many, if not in most, cities where better and more efficient methods for the control and direction of city development have become a really live issue, little progress has been made beyond the educational and propagandist work of civic and business organizations; neither the official mind, nor the general public mind, has fully awakened to the importance of thinking and planning far in advance of those large constructive enterprises which every city must undertake if it is to keep in step with the march of modern progress.

But Rochester seems to have gotten beyond this stage in the evolution of city planning progress and the official mind at least, has a clearer vision of official responsibility for the city's future and has started the wheels of progress forward by organizing, equipping and supporting a City Planning Bureau in its Department of Engineering, and if this Bureau shall continue to fulfil its duties and responsibilities with the same degree of ability, judgment and fidelity that has characterized the first four years of its work, the city may look confidently forward to the removal of many of the obstacles to economic progress which have been inherited from that period when the laws provided for only a vague or limited public control of urban development, and to the wise and practical solution of those problems of constructive public enterprise which are involved in the extension and improvement of a city and which contribute to the progress and prosperity of it and its people.

The City Planning Bureau has very properly concentrated its greatest efforts upon two of the basic elements of city planning:—the street system, upon which the economy and efficiency of all local transportation and circulation depends, and a zoning code, which aims to set up and maintain standards of normal, stable and healthy growth.

Nothing is more vitally necessary to good city development, and nothing concerns the people in their daily activities more directly, than the street system, yet it has probably been less subject to intelligent public control than any other class of public improvements. It has generally been assumed in the past that anyone, particularly anyone who owned a piece of land, was competent to lay out streets. The street has been considered only an adjunct to the development of land, and its adaptability as a medium of transportation and circulation has received little or no consideration. Street systems have therefore invariably failed to satisfactorily meet the traffic requirements of modern cities and nothing is more difficult or costly to reorganize and reconstruct. Among the heaviest taxes paid by the ordinary busy citizen are those indirect ones due to the time wasted in traveling over indirect and congested routes and the higher cost of construction and service of all public utilities. If the citizen were required to pay a direct tax instead of an indirect one to cover this waste, there would be a sudden end to amateur and irresponsible street planning.

Very much, and probably most, of the city planning of recent years has had to deal directly with the replanning of streets. Adequate and convenient highway

facilities are just as essential to modern pleasure as to modern business. The rapid development and wide use of the motor driven vehicle has greatly increased the public demand for better streets and more convenient routes of travel. This demand has become so insistent that it can not be denied and the cost of satisfying it is so great that the work can no longer be left to chance or to inexperienced hands.

Prior to the establishment of the City Planning Bureau, two reports upon needed city improvements had been made by specialists retained by civic and business organizations. One of these, made in 1911,¹ was a general study covering the more important elements of a city plan and making many specific recommendations; the other, made in 1916,² was confined to the problems of better methods of street railway routing and operation; both necessarily treated at considerable length of the advantages and disadvantages of the street system in its relation to the general transportation needs of the city and suggested many changes and improvements. The conclusions reached and recommendations made in these reports, so far as they relate to the street system, appear to be well reasoned and sound; many of the minor improvements recommended have been completed and the larger ones are being carefully studied by the City Planning Bureau.

The carrying out of any comprehensive scheme of street planning or replanning, no matter how well conceived and admirable it may be, involves problems of engineering, legislation and finance which require much time and skill in their solution. If the work is to be accomplished economically and insure the maximum of public benefit and service, it will require constant and continuous effort on the part of an able and well equipped organization. Changes and revisions to meet new conditions are inevitable and the organization charged with the responsibilities of carrying out a comprehensive program should be a permanent one.

Rochester is peculiarly fortunate in possessing a great number of streets which may be classed as main thoroughfares which are so distributed that they may be readily linked together to form a very efficient main thoroughfare system by opening comparatively short local connections and widenings.

East of the river there is an excellent system of radial thoroughfares which, as almost invariably occurs where the street system is the result of chance rather than design, concentrates traffic in a limited area in the business centre where the street area is either too restricted or too poorly distributed to properly accommodate it. In this particular case, there appears to be sufficient street area, but the secondary streets which should take care of the distribution of traffic are poorly connected and have many jogs and offsets which seriously interfere with the free and expeditious movement of traffic; the only way to satisfactorily overcome these obstacles is to open certain new sections of street and widen some existing ones; in almost all cases the length of street affected is quite short. The extension of these radial thoroughfares outward through new territory beyond their present termini along the fringe of the built up area is only a problem of good judgment, skillful planning and firm control in preparing for future development.

There are also a considerable number of cross-town streets, both north-south and east-west on this side of the river which only require a few local connections and the exercise of good judgment and firm control in planning their extension into undeveloped territory to assure a satisfactory and thoroughly efficient main thoroughfare system.

¹ A City Plan for Rochester, prepared for the Rochester Civic Improvement Committee, 1911.

² Report on Car Operation and Routing, by Bion J. Arnold, 1916.

West of the river, existing conditions are not so favorable, there being fewer direct and unobstructed through routes; but even here there appears to be sufficient street area and generally adequate widths; here again the chief obstacles are jogs and offsets and the remedy is naturally new local connections, most of which are comparatively short and should not be difficult to accomplish.

The lack of direct and convenient connections across the river is perhaps the most unfortunate feature of the entire street system. Of the nine highway bridges, only one is upon a direct, through route, all the others have indirect and confusing approaches upon one or both sides of the river and the approaches to these should all be improved in such manner that they may lie directly in the route of one or another main cross-town thoroughfare.

Jogs and offsets are everywhere the principal obstacles in the way of direct and convenient main traffic routes. They are not particularly serious obstacles where traffic is light, but have the effect of a dam where traffic is heavy.

A direct route need not necessarily be a straight one but it should be such an one as traffic can follow naturally without being compelled to make confusing turns or detours. In the great majority of cases reasonably direct, through routes can be obtained without resorting to measures involving great cost for property damages. None of the work of creating a through route by connecting up existing streets should be undertaken until the location of the entire route has been determined and approved and a continuing program of improvement assured; otherwise, money may be wasted on what may be an improvement of only local value or of no real value at all. The cost of consistently well planned improvements of this kind should readily be recouped from the increase of taxable land values, and the larger the area favorably affected the greater will be both the public and private benefits.

Changes in the street system in built up areas, and particularly in the central area of high property values, naturally involve large expense and should only be made after a thorough and painstaking study of the probable cost and resulting benefits. Where alternate locations are practicable, the one which promises the greatest future public benefit and service should be selected unless the difference in cost is out of any reasonable proportion with the advantages of such benefit and service.

During the period of my association as consultant with the City Planning Bureau, a general study of the entire street system of the city has been made with a view of determining what changes, revisions and extensions are necessary to improve existing conditions and establish a system of main traffic thoroughfares which shall be adequate to the future requirements of urban transportation and circulation so far as such requirements can be forecast at this time. This study has now progressed to the stage where there is general agreement that the changes, revisions and extensions listed below are necessary and that their accomplishment as a continuing program is well within the ability and resources of the city and will result in public and private benefits of a most substantial and permanent nature. The projects are not listed in the order of either their importance or the sequence in which they should be carried out as these are matters which may be subject to change from time to time as the work proceeds and as necessity may develop.

Conversion of the Bed of the Old Erie Canal

The abandonment of the old Erie Canal for purposes of navigation, gave the city an opportunity, which it has embraced by acquiring title to the canal property, to convert this old waterway to modern transportation uses. The old channel will be occupied by four railroad tracks, two for interurban passenger service and two for freight, and an eighty foot wide street will be built above the tracks on the section from South Avenue to Oak Street.

The location of the old canal is practically ideal for the purposes for which it is to be used, as it extends entirely across the city from southeast to northwest, passes through the business and industrial centres and crosses or comes in contact with the terminals of every steam railroad which enters the city. Had the canal not existed, it would undoubtedly have been beyond the ability of the city to ever finance an undertaking of such magnitude and far reaching importance and benefit.

This improvement, for which plans have been completed and approved and for part of which contracts have been let and construction work is well advanced, will permit suburban and interurban electric lines to enter and pass through the city and directly reach the central area without crossing any streets at grade and give a service which can be obtained in other cities only by the construction of subways or elevated lines at a cost many times greater than is here involved.

The movement and delivery of local freights will also be simplified and expedited as the opportunity will be given to connect with all railroads for transfer and delivery purposes, a convenience which does not now exist as all the railroads entering the city, except one, are now handicapped in their service by stub end terminals. The direct and convenient contact set up between rail lines, producing and distributing points within the city will stimulate industry and trade and encourage new enterprises.

While the new street which is to be built immediately over the old canal location from South Avenue to Oak Street may be expected to greatly relieve traffic conditions on Main Street and Court Street at and in the vicinity of the river, and therefore be a great boon to the traveling public, the full measure of this relief can not be realized until more direct and adequate street connections on the east side of the river are provided.

Improved Connections for the Canal Route East of the River

To enable the new street on the line of the canal to achieve its greatest usefulness and maximum of service, to avoid the congestion and confusion certain to occur in the vicinity of the intersection of South Avenue and Court Street, and to improve the general traffic facilities in a section of the city where conditions are now almost intolerable, the widening of South Avenue upon the west side southward from the new canal route to Mt. Hope Avenue is contemplated and has been authorized as far south as the point where the old canal crossed South Avenue, and it is recommended that a new street approximately eighty feet wide be opened as an extension of the new canal route eastward from South Avenue along a line approximately parallel with Main Street to a connection with a new north-south route herein recommended to be laid out by directly connecting Chestnut, Elm and

Ormond streets. Traffic from the canal route extension would be distributed northward and southward to the main radial streets through this new north-south connection and eastward through James Street to Court Street and thence to Union Street and East Avenue. Union Street should be widened on the west side between Court Street and East Avenue to permit better traffic movement and control at that point.

Park Avenue Widening and Extension

The opening of an extension of Park Avenue westward from its present terminus at Alexander Street is an improvement that should be accomplished at the earliest possible date; it should, in fact, have been done years ago, as the existing conditions impose a very real hardship upon a great number of people. The avenue serves a large, completely built up residential area. Throughout the greater part of its length it is sixty feet wide and is occupied by a double track street railway. From Goodman Street to Alexander Street it is only fifty feet wide with a single street railway track. At Alexander Street the avenue ends and the street railway wanders on to the centre of the city over a route that suggests a very badly bent corkscrew. The time which has been wasted by car riders and others forced to use this route, if capitalized at its actual value, would undoubtedly have more than paid the cost of the improvement long ago.

The avenue should be widened to the width of eighty feet from Goodman Street to Alexander Street and extended thence of the same width to Union Street at George Street, widening the latter on the north side to William Street and extending thence to the intersection of Chestnut Street and Court Street. This would give the avenue a direct connection westward across the river by way of Court Street and northward through the recommended Chestnut-Elm-Ormond Street route. Court Street should be widened on the south side to the width of eighty feet from Chestnut Street to South Avenue.

The Chestnut-Elm-Ormond Street Connection

One of the most essential aids to better circulation through the business section east of the river is the opening of a street not less than eighty feet wide from the intersection of Court and Chestnut streets and the Park Avenue extension in a direct line through Elm Street and the intersection of Main, North and Franklin streets to the intersection of Franklin and Ormond streets. This connection would greatly relieve traffic conditions on Clinton Avenue northward from Monroe Avenue to the New York Central Railroad by intercepting traffic from Monroe Avenue and the Park Avenue extension and carrying it to the new canal route extension for points west of the river and also to points north of Main Street. Clinton Avenue between Monroe Avenue and Franklin Street is one of the busiest streets in the city and the passing of traffic through it will become an exceedingly slow and difficult process unless this recommended by-pass is provided.

Main Street Widening

It has been fortunate for Rochester that Main Street as originally laid out through the business centre is approximately one hundred feet wide, but some one with a pessimistic view of the city's future greatly reduced the width westward from the point where it crosses the old Erie Canal. The need for widening west of

the canal seems to have been in the public mind for a long time and this need will become imperative with the completion of the proposed canal improvement which will tend to concentrate a constantly increasing volume of traffic in the vicinity of Main and Caledonia Streets for which a more adequate outlet westward must be provided. That part of Main Street between Caledonia Avenue and the forks of Main and Brown streets should be widened to at least eighty-six feet, and to the width of one hundred feet if the cost of obtaining the latter width is not found to be prohibitive.

The short section of street between the forks of Main and Brown streets and the forks of Chili and West avenues, and where Genesee and York streets enter, should be carefully studied and enlarged in such manner that the conflicting currents of traffic which will flow through this intersection in great volume in the future may be properly regulated and controlled; unless this is done there will be great difficulty and confusion in getting traffic from the many converging streets through at this place.

West Avenue Improvement

In order that a thoroughly adequate and satisfactory through route westward by way of West Avenue and the Buffalo Road may be provided, West Avenue should be opened beneath the tracks of the New York Central Railroad in the vicinity of Mt. Read Boulevard. This will probably require the use of reverse curves of as long radii as possible west of Lincoln Avenue to reduce the length of the subway beneath the railroad tracks and to connect properly with the Buffalo Road. Traffic will never reconcile itself to the present subway connection between West Avenue and the Buffalo Road and the only way that public condemnation and complaint can ever be avoided is to open a route which traffic can follow without being forced to make a series of abrupt turns. There will always be too few routes to the west across the barge canal and this particular one should be made as direct and convenient as possible.

The University-Andrews-Allen-Maple Streets Through Route

Main Street and its connections now forms the only continuous east-west route across the city, and while the canal improvement will help to improve existing conditions, the relief will be only local and temporary at best. There is urgent need for another east-west through route which will relieve the pressure of traffic through the business centre and at the same time give additional service to and from that centre. The route which seems to offer the greatest promise of fulfilling these requirements is one formed by connecting University, Andrews, Allen and Maple streets. In comparison with its possibilities of future service this route involves few changes and little expense, as the greater part of it is already open and in use.

Two short sections of new street are required; one from the intersection of North Street and University Avenue westward to Andrews Street at the south end of Franklin Square, already authorized, and the other the extension of Allen Street eastward from State Street to Front Street with branches connecting with the Andrews Street and Central Avenue bridges across the river. Allen Street will need to be widened from State Street westward to Brown Street where it will con-

nect directly through Tonawanda Street to Maple Street, and also with Campbell Street, both of which extend westward; connections will also be made through Brown Street with Chili and West avenues, extending westward, and with Jefferson Avenue and Genesee Street extending southward; connections to Lyell Avenue and the northward will be made through Oak Street and through Grape and Magne streets. Oak Street will become an important thoroughfare as it is the western terminus of the proposed canal improvement.

None of the street improvements contemplated or recommended is likely to have a larger influence than this one upon property values or more quickly return its cost to the public treasury through increased taxes.

Arnett Boulevard-Bartlett Street

The eastern approach to the Clarissa Street bridge was greatly improved at the time of the reconstruction of the bridge and as direct a connection as may be possible should be made from the western end of the bridge to Bartlett Street. Bartlett Street should be directly connected with Arnett Boulevard by a widening of the latter eastward from Genesee Street to Florence Street. These improvements would provide a very convenient and useful connection from Clinton Avenue through Gregory, Clarissa and Bartlett streets and Arnett Boulevard to Lincoln Avenue and the Genesee Park Boulevard, directly serving a large residential area.

Court Street Extension

The dead-ending of Court Street at Exchange Street is one of the most unfortunate conditions existing in the entire street system. The completion of the proposed canal improvement will take some of the traffic from this point, but the relief will be only temporary and Court Street will continue to be such an important unit in the main thoroughfare system that it should have a direct outlet to the westward. This can be most effectively accomplished by opening an extension from Exchange Street southwestward to the intersection of Troup Street and Plymouth Avenue, both of which are important thoroughfares. Clifton Street should be extended directly into Troup Street at Tilden Street, thus forming a continuous route from Union Street through Court, Troup and Clifton streets to Genesee Street. This route should be extended into Chili Avenue in as direct and convenient a location as may be found.

Platt Street Bridge Connections

The usefulness of the Platt Street bridge can be greatly increased by improving the approaches to it from the east. This can be done by opening a more direct connection between Platt and Hand streets, by extending Hand Street directly across Clinton Avenue into Kelly Street and by removing the jog in the line of Kelly and Nash streets at Hudson Avenue. Portland, North, Hudson, Joseph and Clinton avenues would then have a direct connection to the bridge and a further study of the traffic value of this connection may show it to be desirable to widen some or all the streets which form it. There is a direct approach to the bridge on the west side through Platt Street which it may be found desirable to widen in the future as it connects with the proposed Allen Street through route.

Smith Street Bridge Connections

The western approaches to the Smith Street bridge are generally adequate and satisfactory. Lyell Avenue connects directly from the west and Smith Street from the southwest. The latter should be extended in a direct line across Magne Street into Grape Street, thereby establishing a direct connection through Grape Street with the main thoroughfare system of the entire southwestern section of the city.

An eastern approach to this bridge should be made in as direct a line as is economically feasible from the intersection of Bay Street and Portland Avenue. This would provide a new through route of great importance entirely across the city from east to west by way of Bay Street, the Smith Street bridge and Lyell Avenue. In view of the strategic location of this route as a great cross-town thoroughfare, the connecting link from Bay Street to the bridge should be as direct as the physical obstacles to be overcome will permit and should preferably be in a line from Bay Street east of Portland Avenue through Merrimae Street to the intersection of Thomas and Herman streets, thence through Herman Street produced to Clinton Avenue at Lowell Street, thence through Lowell Street to Martin Street and thence by a cut-off to the intersection of St. Paul and Smith Streets. The connecting link should be at least eighty feet wide.

Eastern Approach to Driving Park Avenue Bridge

A new winding approach should be opened from Avenue D, at its intersection with St. Paul Street, to the eastern end of Driving Park Avenue Bridge, and Avenue D should be widened and connected through Lux Street from North Street to the intersection of Sixth Street and Northland Avenue. This will provide another continuous east and west thoroughfare across the city which will be needed for traffic in the near future.

New Bridges and Their Connections

The construction of at least three additional bridges across the Genesee River should be anticipated and provided for in planning street improvements and extensions; one connecting Alexander and Glasgow streets, which would require little change in street lines except the widening of Glasgow Street and the improvement of its connection with Bronson Avenue at Caledonia Avenue; another connecting either Clifford Avenue or Serantom Street with Bloss Street and requiring no changes in street lines, except the widening of Serantom Street and those contingent upon the construction of the bridge to complete another continuous east and west main thoroughfare across the city; and the third connecting the Ridge Road on the east with Lewiston and Ridgeway avenues on the west. The latter is the most urgent and would be of the greatest immediate service. It should be erected upon a line extending approximately from the intersection of the Ridge Road and St. Paul Street to the intersection of the line of Maplewood Terrace with the western boundary line of Maplewood Park and curving widely into Maplewood Terrace which should be widened to a point east of Lake Avenue, and in the line of Lewiston Avenue, produced. From this point, connections should be made directly into both Lewiston and Ridgeway avenues at Lake Avenue. A connection should also be made with Clinton Avenue on the east side by the most direct and convenient line which may be found practicable.

The Genesee Street-Dewey Avenue Route

West of the river there is no direct main north and south thoroughfare extending across the city if the Exchange-State-Lake Avenue one is excepted. There are several important ones extending southward from the line of Main Street and Chili Avenue, but none extending northward continuously for any considerable distance. Plymouth, Caledonia and Jefferson avenues are of considerable value and importance in their connections northward and southward, but west of Jefferson there is no through route which does not present obstacles to traffic in the nature of numerous jogs, offsets and detours. The opening of as direct a connection as may be practicable from Genesee Street at Main Street to Dewey Avenue at Bloss Street, would seem to offer the best opportunity creating a new continuous through route. Such a connection could be made by opening a new section of street from Genesee and Main streets to Danforth and Child streets, thence along Child Street extended from Lyell Avenue to Sherman and Otis streets and through Felix Street to the intersection of Dewey Avenue and Bloss Street. An equally satisfactory line may be discovered by further study, but Child Street seems to fall naturally into such a project. This route should also be extended from the intersection of Otis and Sherman streets through Sherman Street and along the southwest side of the old Erie Canal right-of-way to Lexington Avenue.

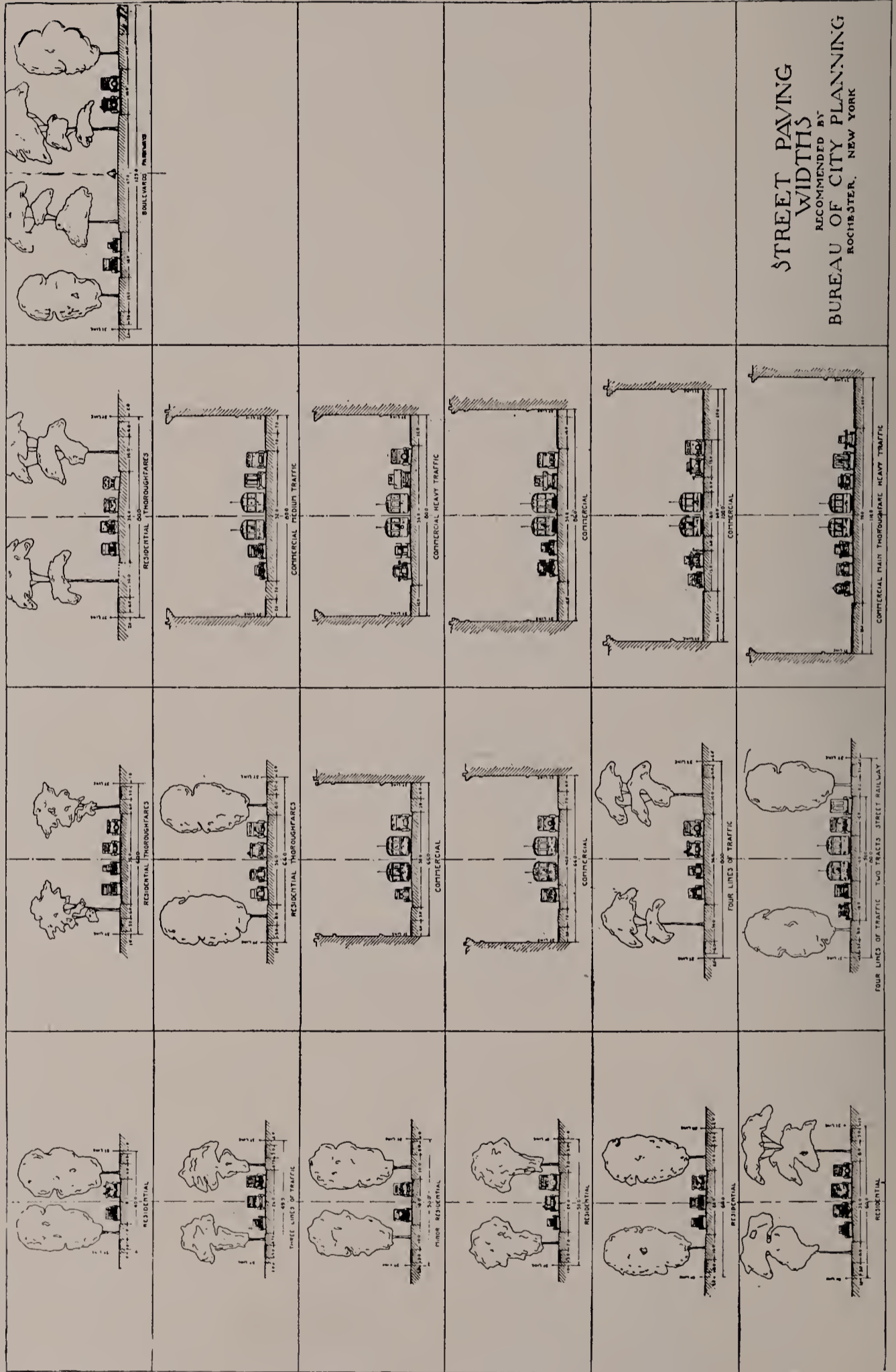
Genesee Park---Mt. Read Boulevard Route

The next location available for a through route west of the Genesee-Dewey line, is along the lines of Genesee Park Boulevard, Lincoln Avenue and Mt. Read Boulevard. This route should be so laid out and connected as to form part of a boulevard driving circuit around the city. An improved connection should be made from Genesee Park Boulevard to Lincoln Avenue through Arnett Boulevard and Westgate Terrace. The extension of West Avenue beneath the tracks of the New York Central to a connection with Mt. Read Boulevard and the Buffalo Road is a necessary link in this route which time will surely develop into one of the most useful and heavily traveled thoroughfares, inasmuch as it is the only one which can be made a continuous route around the southern and western sides of the city. Provision has already been made for making Mt. Read Boulevard eighty feet wide. Genesee Park Boulevard connects with Elmwood Avenue, south of the city, which has been made one hundred feet wide eastward to the city line and diverted at the crossing of the Erie and Lehigh Valley railroads to avoid a grade crossing at that point and to provide for the more convenient and effective grouping of the buildings of the Medical School and Hospital of the University of Rochester and the Municipal Hospital.

General Improvement of the Street System

In addition to the foregoing recommendations which refer to the improvement and extension of main thoroughfares, many street changes and improvements of a local or minor character but highly important to convenient traffic service should be made. They would serve chiefly as connections between important traffic routes and as most of them are in or near the business centre, would increase the street area to more adequately meet the needs of growing business traffic.

The new street to be built above the tracks occupying the bed of the old Erie Canal will end at Oak Street, and ELIZABETH, OAK and INDUSTRIAL streets



STREET PAVING
 WIDTHS
 RECOMMENDED BY
 BUREAU OF CITY PLANNING
 ROCHESTER, NEW YORK

should be widened and improved to provide adequate connections from the new street and Main Street to the proposed University-Andrews-Allen-Maple streets through route.

CHURCH Street should be extended to the width of eighty feet from Plymouth Avenue to Elizabeth Street and PLYMOUTH Avenue should be widened equally upon each side to the width of eighty feet from Allen Street to Church Street and upon the west side only from Church Street to Main Street to improve the traffic facilities and promote the better development of that section of the city.

Extend JOSEPH Avenue (Hyde Park) southward from CUMBERLAND Street to Andrews Street, cut back the south line of Cumberland Street at North Street by extending the south line of University Avenue directly into Cumberland Street, extend LYNDHURST Street eastward from Union Street into Main Street and extend CHATHAM Street northward from Baden Street to the proposed connection from Bay Street to the Smith Street bridge. These changes all involve short sections of street, but will be important in their influence upon traffic circulation, particularly with respect to traffic moving through the area in the vicinity of the New York Central Station.

Street Widths

In the laying out and improvement of the streets herein recommended as main thoroughfares, or as parts of main thoroughfares, the widths should in no case be less than eighty feet, and eighty-six feet would be better, where it can be obtained without extraordinary or unreasonable increase of cost. The roadways should not be less than fifty-two feet, nor more than fifty-four feet even in a street eighty-six feet wide. In some instances, as in the Genesee Park- Mt. Read Boulevard, it may be practicable, and certainly will be desirable, to obtain greater widths and establish park or parkway effects.

Rochester has many very handsome and dignified streets which have contributed much to her reputation as a city of comfort, beauty and charm and of which she can be justly proud. The attractiveness of her streets is due largely to the absence of fixed and uniform standards, to the liberality with which they have been laid out and the skill with which they have been improved. The same liberality, skill and judgment should, and no doubt will, be exercised in making further improvements and extensions.

In Conclusion

The completion of the projects herein enumerated and recommended will require time, patience and persistent effort, but the result should be a street system which will be adequate and convenient for all the ordinary uses of transportation and circulation. Changes, extensions and additions will probably be found necessary as the city grows and its activities increase. There is an admitted deficiency in the system of circumferential thoroughfares which may have to be corrected in the future, but it does not seem wise to overload the present program with projects which do not seem to be immediately urgent although they would admittedly provide increased facilities and convenience for traffic movement.

The problem of extending the street system into undeveloped territory, is one that may well be left at this time to be worked out in detail by the City Planning

Bureau as a part of its routine work, and under its control and direction, it should be possible to avoid the defects and errors which affect the present street system.

The city has so many handsome, park-like streets that an effort should be made to link them together as a parkway system, by selecting the streets making the most convenient connections between them and marking the entire route with attractive and distinctive signs so that visitors may conveniently find and enjoy these beauty spots of the city.

The City Planning Bureau should address itself to the task of locating a parkway encircling the city and providing a pleasant and convenient route for reaching all the larger parks. Every city that has determinedly undertaken to solve its city planning problems has a project of this kind in hand, and nowhere does such a project seem more in keeping with the spirit of progress and accomplishment than in Rochester.

VEHICULAR TRAFFIC STREAMS

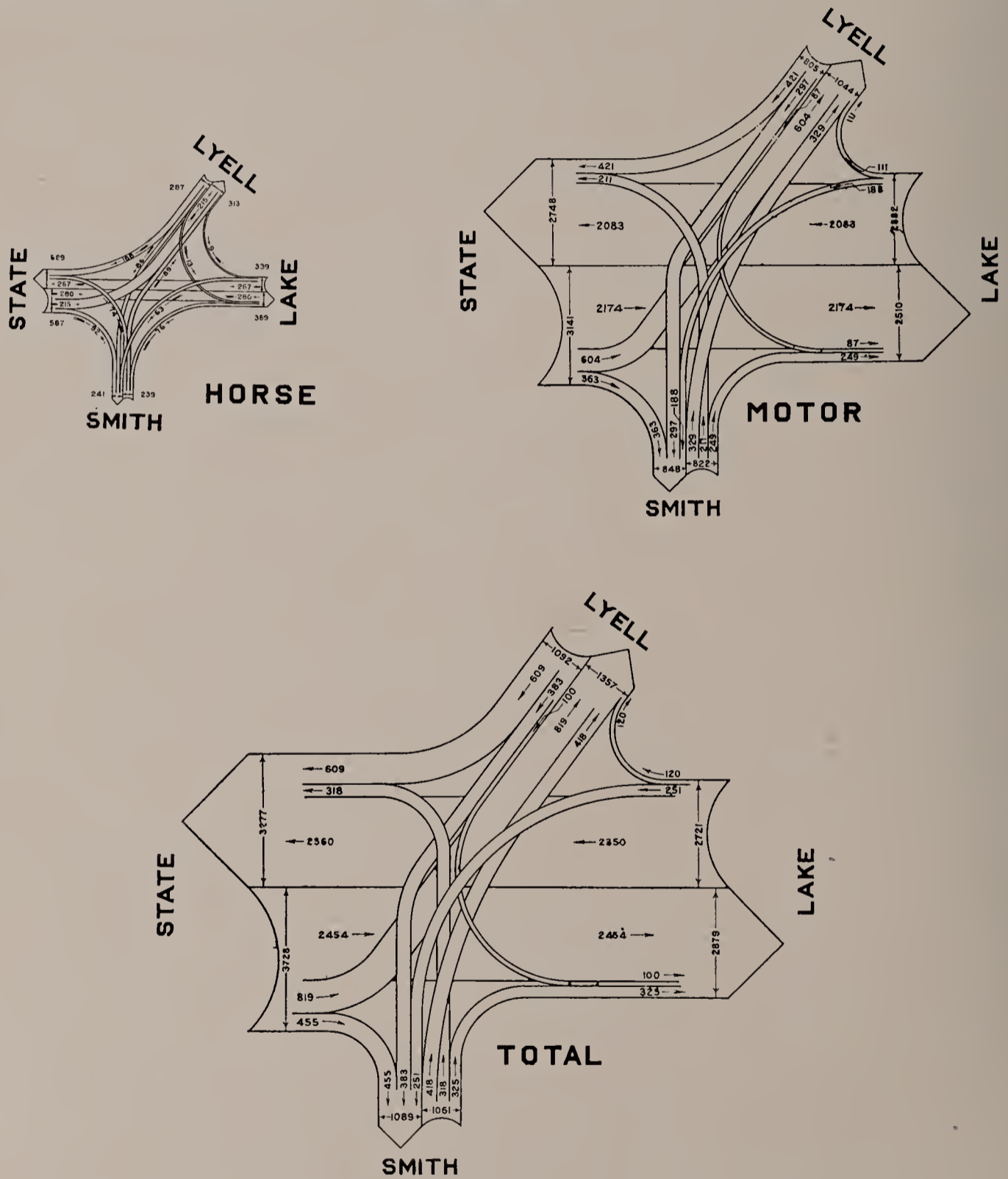
STATE LAKE SMITH LYELL

8 AM 7 PM - JULY 1919

AVERAGE OF 3 DAYS

SCALE VEHICLES

500 1000 2000 3000



Street Traffic Problem with Reference to Number of Vehicles

By Walter H. Cassebeer, Zoning Expert

Due to the continually increasing volume of traffic and the demand for wider and more direct streets, the problem of traffic congestion and its influence on the street plan is one most difficult of proper solution.

The City Engineer took counts of all traffic for a fifteen hour period on river bridges in 1910. For purposes of comparison, the figures are considered sufficient to estimate the volume and proportions of various kinds of traffic in the city as a whole at the time of taking the count.

The intensive commercial and industrial development which has taken place during the last century, has entirely revolutionized modes of transportation, placing new means at general command. The street car, bicycle, motorcycle and automobile have made the problem of control of transportation increasingly difficult.

It is not surprising that the needs of modern transportation were not anticipated in the early planning of our streets; and had the needs been understood, it is doubtful if provision would have been made for any such conditions as exist today, not only in Rochester, but in every rapidly growing city in our country.

Some of the principal streets of Boston were established for certain purposes over three hundred years ago, and were then believed adequate for future needs. The visitor to Boston is impressed by the complexity of the situation, and today Boston is planning to spend millions in much needed improvements.

Rochester was more fortunate in her street layout, but increasing numbers of vehicles have today made a number of them inadequate. Because of this, traffic regulations are devised and put into effect, new streets are opened and others widened or extended.

The results of counts taken by the City Engineer in 1910 are included in Tables I and II.

These figures are for traffic on Smith, Andrews, Main Street East, Court and Clarissa Street bridges, and are given for an eleven hour period, although the count was taken for fifteen-hour periods beginning at 6:00 a. m. The figures given are deemed to be sufficiently indicative of the volume of vehicular traffic throughout the city at that time. When compared with the figures shown on Tables III and IV for the 1919 traffic, the total average daily traffic shows an increase of 65 per cent over that of 1910. The population increase for that period is approximately 36 per cent. This increase is due not only to the prosperity of the city, but also to the growth of the automobile industry in the United States, which showed an upward trend of 400 per cent during the years of 1914 to 1919.

This means that in 1919, there was one motor vehicle to every fourteen persons in the United States, or a total of 7,558,848 registered vehicles for that year. New York showed the largest state registration, a total of 566,511 vehicles, or one motor vehicle for every 19 persons. The registration for Rochester is estimated at 15,000 or one vehicle for every 19 persons.

Statistics for 1922, as compiled by the B. F. Goodrich Rubber Company, gives a total of 12,281,445 registered vehicles in this country. This is an increase of 62.4

per cent over 1919 figures. New York State which has the largest state registration shows an increase of 80.1 per cent, a total of 1,002,293 automobiles, or one vehicle for every 10.3 persons. Monroe County registration for 1922 was 51,925 motor vehicles of which Rochester is estimated to have approximately 31,155 vehicles, or one vehicle for 9.7 persons.

An examination of the figures for 1910 traffic shows the predominance of horse-drawn vehicles. It did not seem necessary at that time to separate the motor traffic into pleasure and business vehicles because of the fact that the motor traffic was mostly pleasure cars, trucking and hauling being generally done by horse-drawn vehicles. Nineteen-nineteen figures show that 73.4 per cent of the heavy trucking is done by motor vehicles.

In 1919, the City Planning Bureau undertook a traffic count extending through a period of ten weeks, from July 1, to September 15. The count was taken on all river bridges, and at 40 other points where a study of the congestion and flow of traffic was desirable.

VEHICULAR TRAFFIC STREAMS

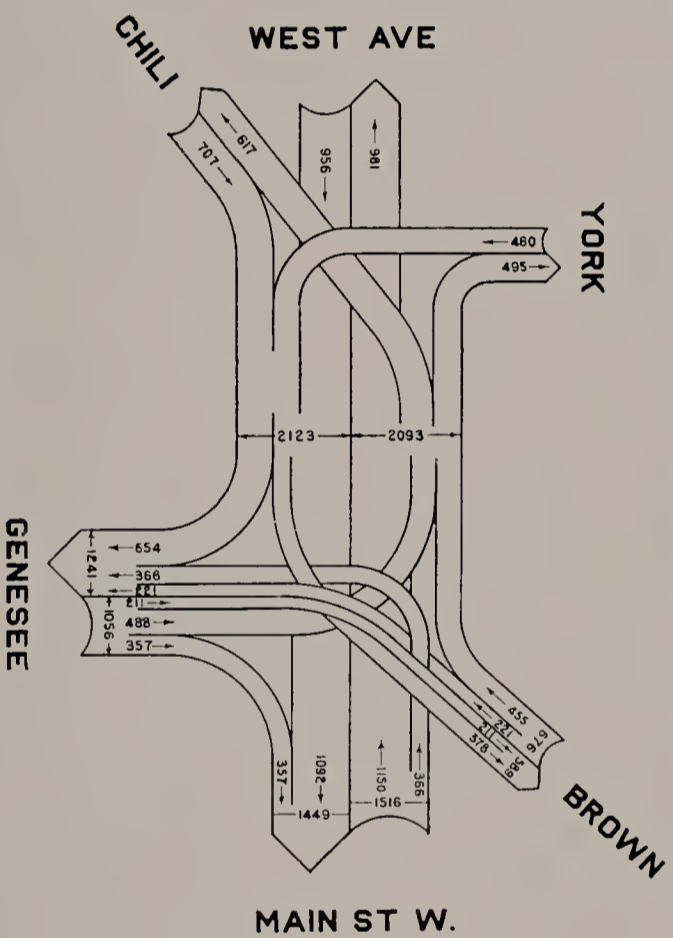
WEST GENESEE BROWN CHILI

8 AM 7 PM - JULY 1919

AVERAGE OF 3 DAYS

SCALE VEHICLES

500 1000 2000 3000



A List of the Principal Locations Taken in 1919 is Herewith Included

Allen Street at Fitzhugh Street
Andrews Street at State Street and River Bridge
Brooks Avenue at Barge Canal and Genesee Park Boulevard
Caledonia Avenue at Plymouth Avenue
Central Avenue at State Street
Clifford Avenue at Portland Avenue
Clinton Avenue N. at Lowell Street
Court Street at River Bridge
Culver Road at Erie Canal Bridge and Canterbury Road
Culver Road at East Avenue
Culver Road at Parsells Avenue
Dewey Avenue at Lewiston Avenue
Dewey Avenue at Lyell Avenue
Driving Park Avenue at River Bridge
East Avenue at Main Street East
East Avenue at Alexander Street
East Avenue at Goodman Street North
East Avenue at Culver Road
Exchange Street at Erie Canal Bridge
Exchange Street at Spring Street
Exchange Street at Court Street
Exchange Street at Troup Street
Field Road at Lyell Road
Field Road at Buffalo Road
Genesee Street at Main Street West
Genesee Street at Brooks Avenue
Goodman Street North at Webster Avenue
Lake Avenue at Lyell Avenue
Lake Avenue at Driving Park
Lake Avenue at Lewiston Avenue
Lake Avenue at Stutson Street
Lewiston Avenue at Dewey Avenue
Lewiston Avenue at Lake Avenue
Lyell Avenue at Lake Avenue
Lyell Avenue at Dewey Avenue
Lyell Avenue at Field Road
Main Street East at Front Street
Main Street East at River Bridge
Main Street East at Goodman Street North
Main Street West at Caledonia Avenue
Main Street West at Genesee Street
Main Street West at Chili Avenue
Monroe Avenue at Alexander Street
Monroe Avenue at Highland Avenue
Mt. Hope Avenue at East and West Henrietta Roads
Ridge Road at Woodman Road
Ridge Road at St. Paul Street

St. Paul Street at Central Avenue
St. Paul Street at Smith and Lowell Streets
St. Paul Street at Avenue D. and Driving Park Avenue
St. Paul Street at Ridge Road
Smith Street at River Bridge
State Street at Andrews Street
State Street at Central Avenue
State Street at Lake Avenue and Lyell Avenue
Stutson Street at River Bridge

Referring to Tables III and IV for 1919, it will be noted that the volume of traffic constantly fluctuates, though the flow of traffic on different bridges is surprisingly constant between the hours of 8:00 a. m. and 7:00 p. m. In general, the traffic volume on bridges per maximum hour exceeds the average flow per hour by 19 per cent. The traffic flow on bridges for the minimum hour shows a decrease of 28 per cent below the average hour. Traffic on Main Street bridge in the maximum hour exceeds the average flow per hour on all bridges by 161 per cent. The minimum hour on Main Street East bridge exceeds the average per hour on all bridges by 35 per cent. The total number of vehicles on Main Street East bridge exceeds the total average per bridge by 120 per cent, or more than double the average flow per bridge.

It will be seen that the greater volume of traffic passes through Main Street. On Court Street it is a little over 78 per cent of the Main Street traffic, or 170 per cent of the average traffic per bridge. The traffic at Andrews Street bridge is 25.5 per cent of Main Street traffic, or 42 per cent of the average traffic per bridge.

In passing, it is interesting to know how the 1919 traffic count on Main Street bridge compared with counts in other cities for similar periods. The traffic on Main Street bridge during the maximum hour was a little more than half of the total vehicular traffic for the heaviest hour at Fifth Avenue at Forty-second Street, New York City. It was as great as the heaviest hour in Cincinnati, a city a third larger than Rochester. Pittsburgh's busy artery at Bigelow Boulevard and Smith Avenue was but little more than Rochester's total on Main Street bridge. The second heaviest traffic on Pittsburgh streets was lower than Court Street bridge traffic. The busiest hour on Main Street (11:00-12:00 m.) was but 68 per cent of Pittsburgh's heaviest hour.

The construction of the new street over the Aqueduct from Main Street West to South Avenue will take a great part of the east bound traffic off of Main Street. When the connection at the east end is made extending from South Avenue to Chestnut Street, this new street will take practically all the non-stop through east and west traffic now accommodated by Main and Court streets. It will mean that the volume of through traffic now congesting Main Street will be removed and therefore not inconvenience the traffic seeking to reach the Main Street stores.

When Andrews Street and University Avenue are connected as shown on the general city map, through easterly and westerly traffic to the north of Main Street will follow this route as more rapid and direct. It will mean an increase of traffic on Andrews Street bridge and streets joining therewith. In other words both streets, as now being undertaken, will prove a considerable advantage to business locations on Main Street rather than a detriment, and this advantage will be attained mainly through betterment of the traffic situation on that street, to say nothing of other advantages accomplished by such necessary improvements.

As mentioned elsewhere, the traffic increase on certain bridges from 1910 to 1919, was 65 per cent. During the last three years there has been a gradual falling off in rate of increase but there was, however, an increase of 31 per cent over 1919 totals.

Table V shows the total hourly vehicular traffic on bridges for the year 1922.

Table VI shows total number of all kinds of vehicles on bridges for the year 1922.

The increase in population will increase the number of car owners. This means an increase in street congestion. A doubling of population means a doubling of freight tonnage that must be handled to and from railway freight terminals. The number of vehicles crossing river bridges compared with number of families in the city is about .38 vehicles per family, or one vehicle for every 2.6 families. This figure is based on United States census report of 68,247 families in Rochester in the year 1920. Similar tallies have been made in Springfield, Mass., where the figure was .98 vehicles per family. In Pittsburgh, the vehicles which daily crossed Pittsburgh Point bridge amounts to .50 vehicles per family within a radius of five miles of the river. In Portland, Oregon, the corresponding figure is .75 vehicles per family per day for the population within a radius of four miles of the river. Differences in numbers of vehicles per family may be explained by the fact that the larger the radius, the less would be the vehicles per family per day. To provide for the increase in traffic, streets should be designed to take care of two cars per family per day for the average year round traffic.

Of the street intersections at which counts were taken, the most congested appears to be the corner of Lake and Lyell avenues. The total number of vehicles at this intersection in 1919 was 8,416 for an eleven-hour day. This is about 90 per cent of the total Main Street bridge traffic for the same season. During the winter season traffic at the intersection of Lake and Lyell avenues is estimated at 50 per cent of Main Street bridge traffic. Diagrams showing traffic divided into the directional flow and volume of horse-drawn and motor vehicles at two locations where counts have been taken are portrayed by the width of the bands showing the flow. The total traffic at Smith and St. Paul streets is 5,685 vehicles for a similar period; an interesting comparison.

The traffic on Driving Park Avenue bridge totals 4,591 with the Lyell Avenue and Lake Avenue traffic and at the intersection of St. Paul Street and Avenue E 4,848 vehicles. Another point where there is considerable congestion is at the intersection of Genesee Street and Main Street West. The average traffic is 5,432 vehicles for the eleven-hour period, or about 60 per cent of Main Street bridge traffic.

In 1922, traffic counts were taken on seven river bridges and at sixteen other locations. See Tables V and VI. These locations in many instances are the same as previously taken and the counts can therefore be compared with previous ones.

The count on Court Street bridge for 1922 shows an increase of 15 per cent over 1919. Platt Street and Driving Park Avenue bridges show an increase of 122.7 per cent and 76 per cent respectively. On the other hand, Main Street and Smith Street bridges show slight decreases. These decreases are due to traffic regulations and street pavement conditions. In the Fall of 1919, Clarissa Street bridge was opened to traffic and already this bridge with its well paved approaching and connecting streets shows an average traffic of 5,270 vehicles during the summer season

for an eleven-hour day. This is an increase of 500 per cent over 1910 traffic. This traffic ranks next to Main and Court streets in volume.

Elmwood Avenue day traffic on the bridge is a little over 2,000 vehicles for an eleven-hour day. Night traffic during the summer season more than doubles in the four hours of early evening. The same can be said of Driving Park Avenue bridge. Counts taken on St. Paul Street at a point south of the bridge during summer nights, show as many as 1,600 vehicles from 8:00 p. m. to 9:00 p. m. Lake Avenue count north of Driving Park Avenue reduces this figure to an average of 1,000 vehicles for the same hour. The St. Paul Street volume is due primarily to the excellent condition of streets and roads throughout the territory northeast of the city which encourages pleasure motor vehiculists to use the Summerville Boulevard and adjoining roads.

The increasing volume of East Avenue traffic has caused some concern by its constant flow during the day period. The heaviest hour, which is from 5:00 p. m. to 6:00 p. m., shows a figure of 1,347 vehicles at a point just west of Alexander Street. The total for 1919 at this point was 10,271, or 898 more vehicles than over Main Street bridge per eleven-hour day. This figure was the largest on any street in 1919. In 1922 it increased 17.4 per cent over 1919, totaling 12,055 for the same period. The maximum hour in 1922, as in 1919, was 5:00 p. m. to 6:00 p. m. with an increase of about 9.8 per cent or 1,479 vehicles.

TABLE I—TOTAL HOURLY VEHICULAR TRAFFIC ON BRIDGES OVER GENESEE RIVER IN 1910

1910	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	Tot. Veh.
Smith St.....	105	97	99	108	144	108	102	93	100	190	95	1,241
Andrews St.....	205	186	253	243	206	158	135	139	223	149	114	2,012
Main St. East.....	575	558	653	741	576	427	563	562	549	600	422	6,226
Clarissa St.....	87	80	104	102	117	83	86	108	91	134	80	1,072
Court St.....	337	395	398	404	360	382	309	303	342	358	237	3,825
Total.....	1,309	1,316	1,507	1,598	1,403	1,158	1,195	1,205	1,305	1,431	948	14,376
Av. per Bridge..	261.8	263.2	301.4	319.6	280.6	231.6	239.	241.	261.	286.2	189.6	2,875

TABLE II—TOTAL VEHICULAR TRAFFIC BY KINDS ON GENESEE RIVER BRIDGES IN 1910

1910	Bicycles	Motorcycles	Automobiles	Horse Drawn	Horse Drawn	Horse Drawn	Total
				Pass.	Light	Heavy	
Smith St.....	375	12	56	63	282	453	1,241
Andrews St.....	405	109	365	166	438	529	2,012
Main St. East.....	1,692	230	1,734	441	1,031	1,099	6,226
Clarissa St.....	290	37	155	125	191	274	1,072
Court St.....	850	180	731	290	597	1,176	3,825
Total.....	3,612	568	3,041	1,085	2,539	3,531	14,376
Average per Bridge.....	711.4	113.6	608.2	217.0	507.8	706.2	2,875.0

TABLE III—TOTAL HOURLY VEHICULAR TRAFFIC ON BRIDGES OVER THE
GENESEE RIVER FOR THE YEAR 1919

Bridges	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	Total
Stutson St.....	14	43	37	65	52	40	53	145	169	182	142	942
Driving Pk. Ave....	208	200	175	216	241	255	233	265	270	332	215	2,610
Smith St.....	303	262	297	314	551	209	163	158	176	436	92	2,961
Andrews St.....	195	235	275	293	225	194	199	219	188	223	146	2,392
Main St.....	671	843	955	1,012	873	929	960	905	845	856	525	9,374
Court St.....	512	660	705	719	735	710	648	643	644	733	538	7,247
Totals.....	1,903	2,243	2,444	2,619	2,677	2,337	2,256	2,335	2,292	2,762	1,658	25,526
Averages.....	317.1	373.8	407.3	436.5	446.2	389.5	376.0	389.1	382.2	460.3	276.3	4,254.33

TABLE IV—TOTAL NUMBER OF ALL KINDS OF VEHICLES ON THE BRIDGES
FOR THE YEAR 1919

Bridges	Mot. Pas.	Mot. Cy.	Mot. Trade	Hor. Pas.	Hor. Trade	Totals
Stutson St.....	853	39	38	5	7	942
Driving Pk. Ave....	1,461	424	493	13	219	2,610
Smith St.....	931	708	770	16	536	2,961
Andrews St.....	1,331	153	562	18	328	2,392
Main St.....	6,573	987	1,308	31	475	9,374
Court St.....	4,461	561	1,531	37	657	7,247
Totals.....	15,610	2,872	4,702	120	2,222	25,526
Averages.....	2,601.67	478.67	783.67	20.0	370.33	4,254.33

TABLE V—TOTAL HOURLY VEHICULAR TRAFFIC ON BRIDGES OVER THE
GENESEE RIVER FOR THE YEAR 1922

Bridges	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	Total
Elmwood Ave..	118	116	100	130	146	162	171	230	260	336	341	2,110
Clarissa St.....	422	366	376	428	489	476	486	450	515	717	538	5,263
Court St.....	770	818	841	860	690	712	812	753	723	853	512	8,344
Main St.....	711	948	882	771	750	858	1,061	806	721	794	598	8,900
Smith St.....	179	188	187	204	217	194	187	193	227	257	132	2,165
Totals.....	2,200	2,436	2,386	2,393	2,292	2,402	2,717	2,432	2,446	2,957	2,121	26,782
Averages..	440.0	487.2	477.2	478.6	458.4	480.4	543.4	486.4	489.2	591.4	424.2	5,356.4

TABLE VI—TOTAL NUMBER OF ALL KINDS OF VEHICLES ON THE BRIDGES
FOR THE YEAR 1922

Bridges	Mot. Pas.	Mot. Cy.	Mot. Trade	Hor. Pas.	Hor. Trade	Totals
Elmwood Ave.....	1,787	75	208	15	25	2,110
Clarissa St.....	3,944	108	1,008	9	194	5,263
Court St.....	6,125	203	1,631	9	376	8,344
Main St.....	6,817	519	1,368	8	188	8,900
Smith St.....	1,172	43	595	3	352	2,165
Totals.....	19,845	948	4,810	44	1,135	26,782
Averages.....	3,969.0	189.6	962.0	8.8	227.0	5,356.4

Zoning and Its Operation In Rochester

By Walter H. Cassebeer, Zoning Expert

The problem of zoning the city of Rochester, the formulation and operation of zoning rules, and the division of the city into districts has been, and still is, one of the most important functions of the City Planning Bureau.

An understanding as to what zoning is, and what it attempts to do, may well be stated here.

Zoning is the division of a city into districts, regulating the use to which land and buildings may be put, as well as the height to which structures may be erected, and the area or portion of the lot which structures may occupy, in each of the various districts.

Zoning is an exercise, not of the power of eminent domain, but of the police power of the state, and is designed "to promote the health of the public, the safety and welfare of the inhabitants of the city, and securing the proper development and upbuilding of the city."

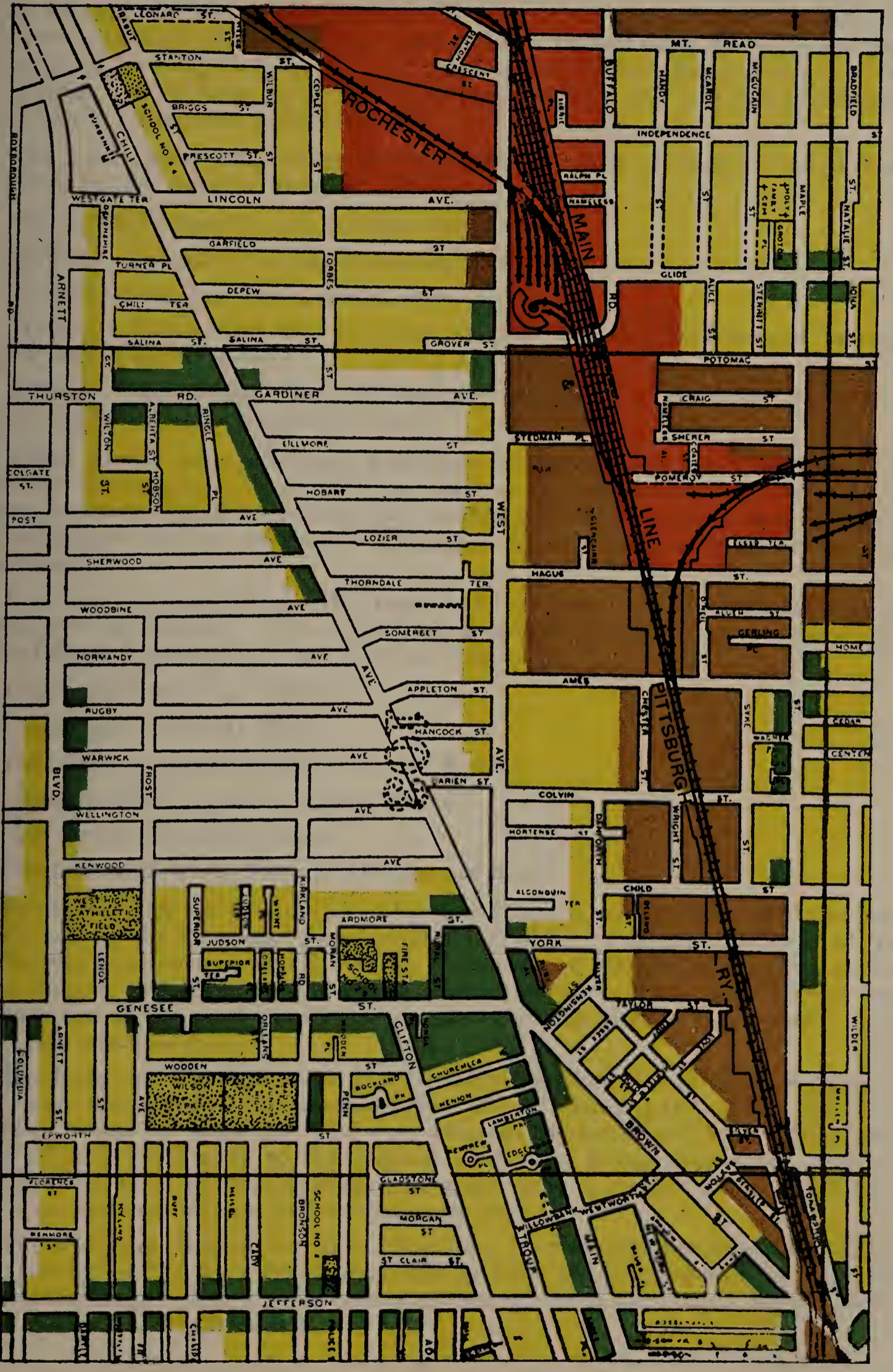
Broadly speaking, the purpose of zoning is to secure as far as practicable, uniform development of properties in each district as well as uniform or specified uses in such districts, thereby discouraging exploitation of property values or the improper development of one piece of property to the detriment of neighboring property. All owners are benefited by regulations of this sort made in the interest of the community. Each owner, to some extent, is compelled so to use his own as not to injure another. He therefore cannot complain as long as this community power is exercised reasonably, impartially and without confiscation.

The act under which Rochester is proceeding was not put into operation until the summer of 1919. It empowers the Superintendent of City Planning to zone for the Use of property only. Although the act does not include anything having to do with the height and area of structures, a great deal of attention has been given to regulations and restrictions of this equally important part of a comprehensive zoning plan. Rules and regulations governing Height and Area were drafted and submitted to the Common Council under date of November 23, 1920. After having been received, filed, and published, these regulations were referred to the Committee on Law of the Council for report. Since that date, they have undergone some slight revision and a few additions and are now ready for re-consideration.

The steps taken for developing the Use District Maps and the Use Rules and Regulations of the City Planning Bureau, zoning for use, as now in effect may be of interest.

Considerable work of a preliminary nature had to be done before general zoning districts could be established. In order to do this, it was first necessary to have a complete survey of all existing uses to which property was put throughout the entire city.¹ This was done by making a survey of each and every piece of property in the city and recording the results of that survey upon maps on file in this office. Ten inspectors were used in securing the data and recording the results of that investigation upon separate sheets of the new 1918 City Atlas published by the G. M. Hopkins Company of Philadelphia. Those maps act as the basic survey

¹ Attention is called to the report of C. N. Munger, Special Assistant to the Superintendent of City Planning, with reference to the mapping required in zoning. See Appendix, p. 78.



TYPICAL SECTION OF OFFICIAL USE DISTRICT ZONING MAP

- Red—Unrestricted Districts
- Brown—Industrial or Manufacturing Districts
- Yellow—Residential Districts, Class D
- Green—Commercial or Business Districts
- White—Residential Districts, Class E



PLAN OF THE CITY OF PHOENIX, ARIZONA, SHOWING THE LOTS AND BLOCKS OF THE CITY.

THE CITY OF PHOENIX, ARIZONA, SHOWING THE LOTS AND BLOCKS OF THE CITY.

map of uses existing in September, 1919. In addition to our investigations and the information already on the Hopkins Company's maps, a great deal of valuable data were obtained from so called "Insurance Maps" published by the Sanborn Map Company of Newark, New Jersey. A complete set of these maps is kept on file in this office. Both Atlas and Maps are corrected twice a year and are continually referred to in connection with this work.

The basic survey thus made shows clearly the then existing uses on various properties by the colors as follows:

(Red)—Objectionable and nuisance uses.

(Brown)—Industrial or manufacturing uses.

(Green)—Business or commercial uses.

(Yellow)—Residential uses by three or more families, as tenement houses, lodging and boarding houses.

(Orange)—Residential uses or property occupied by not more than two families, including schools, churches, etc.

These survey maps also show territories extensively developed by uses of an industrial or manufacturing nature, as well as the less intensively built up or residential areas. Small territories where commercial development exists in otherwise residential sections are shown by an area of green surrounded by orange and yellow areas.

It is through the data on this map that the districts into which the city is divided were determined. The six districts and their respective color designations on the Official District Maps are shown as follows:

Unclassified districts (White).

Unrestricted districts (Red).

Industrial or manufacturing districts (Brown).

Commercial or business districts (Green).

Residential districts (Orange).

Residential districts, Class E (Orange and Blue).

In establishing the boundaries of the Use Districts and drafting of Rules and Regulations for the Districts, the Superintendent of City Planning was fortunate in securing the assistance of Mr. B. Antrim Haldeman, of Harrisburg, Pa., who is one of the pioneer advocates of the zoning system in this country, and through his guidance one of the most practical examples of zoning laws in this country was finally put into operation.

The Rules and Regulations for Use Districts, together with the Official District Maps, were submitted by the Superintendent of City Planning to the City Planning Advisory Board for approval, and were adopted September 22, 1919. Only one minor addition was made to the original Rules and Regulations under date of November 26, 1919, when they were again approved and marked for identification. They were subsequently printed for public distribution.

The Rules and Regulations as in effect have been designed in such a way as to be reasonable and so as to bring about the greatest public good and the least individual hardship. With this in view, a section of eleven paragraphs of exceptions to the general rules is included.

The general rules permit in each district certain uses, and prohibit others therefrom. A greater restricted use is permitted in a less restricted district; as for example, a residence may occupy a commercial site but a commercial use may not be established in a Residential District. The same may be said of the more and the less restricted classes of use. Exceptions, however, may be granted to some uses, as mentioned above. Through such exceptions, gasoline stations and public garages have been permitted in higher class districts. It might be pertinent to state that these uses are prohibited from Commercial and Residential districts for purposes of control and when permitted through exception, are granted tolerance because of the control exercised.

These two uses have probably done more than any other to bring about the enactment of zoning laws in this country. The constantly growing number of automobiles has not only increased the death rate through carelessness of driver as well as pedestrian, but has also brought loss in property values through the location of gasoline stations and public garages in territory better adapted to other purposes though possibly desirable for the location of such uses. Numerous instances can be cited, not only in Rochester but in other cities as well, showing that control of these uses not only helps avoid lamentable depreciation in property values, but puts the gasoline station and the garage in locations better adapted to their particular purpose, thereby increasing its own revenue and efficiency, and also giving protection to surrounding property, reserving the originally desired location for higher classes of use.

Gasoline stations in too close proximity to one another tend to lessen returns to the operators and make neither location as desirable from a financial point of view. Through another department of city government, Rochester in general prohibits the proximity of gasoline stations to one-eighth of a mile and also requires that usually all pumps be located at least 35 feet from street lines. These rules, though severe, have been generally adhered to. Some exceptions have been made where it seemed desirable to do so.

The City Zoning Regulations have recently (November 27, 1922) been amended so that it is now necessary in a Commercial District that the applicant for a gasoline station or public garage give "notification to the owners of frontage on both sides of any street to which said garage, station or stable is to have vehicular access for a distance of 200 feet of the lot on which said use is proposed." The regulations go on further to state, by way of protection, "provided that whenever a written protest against such garage, station or stable, duly signed and acknowledged by the owners of 20 per cent of the frontage herein specified has been presented," the same shall be acted upon by the Advisory Board within a period of 60 days. In these cases a public hearing is generally held, at which time opportunity is given both parties to present their cases before any definite action is taken.

An amendment, of the same date, to the Zoning Regulations affecting applications for public gasoline stations and public garages in Residential Districts requires written consent of the owners of not less than seventy-five (75) per cent of the frontage of all real property within 200 feet of the lot. It, however, leaves the authority of all cases in the hands of the Superintendent of City Planning and the Advisory Board.

A comparative table of "Exceptions Granted to Gasoline Stations and Garages" is submitted:

	Sept. 1919	1920	1921	1922
GASOLINE STATIONS IN				
	Jan. 1920			
Commercial Districts.....	2	24	35	20
Residential Districts.....	..	..	4	4
Residential Districts, Class E	..	..	..	..
PUBLIC GARAGES IN				
Commercial Districts.....	3	18	27	28
Residential Districts.....	2	4	4	8
Residential Districts, Class E	..	1	..	3

One other industry of importance to the welfare of the city and its citizens, to which exceptions have generally been granted, is the clothing industry. It had been found through the basic survey that this industry had spread itself over the northeastern section of the city and had found accommodation in one story tailor shops wherein coats, pants and vests were manufactured by female employees who could often devote only part time to their labor, giving the rest to the care of the home. In order not to interfere with an occupation of such direct benefit to home owners in this section of the city, exceptions have been granted in Residential Districts and in Commercial Districts as follows:

	Sept. 1919	1920	1921	1922
TAILOR SHOPS IN				
	Jan. 1920			
Commercial Districts.....	4	4	4	2
Residential Districts.....	4	16	8	2
Residential Districts, Class E	..	..	..	6

The establishing of zones by law requires that the zones be made so as to give permanence to the districts established. On the other hand changes are from time to time desirable and the provisions for such changes have been made through two methods: first, upon motion by the Superintendent of City Planning, and second, upon petition of the owners of fifty per cent or more of the frontage, requesting an amendment, supplement, change or repeal of the Regulations.

Of the changes thus made the greater number necessarily took place the year following the adoption of the Rules and Regulations, and it might be added that changes in the district boundary lines are continually being made to a greater or less degree. Any plan which does not allow of these changes as time goes on is worse than none and might better not be enacted. They should be made, however, only after the most careful investigation and study, and by the proper authorities.

Such changes in zone, while appearing numerous, in general, affect only small territories. If these were estimated in areas, it is doubtful if they would cover one-half of one per cent of the area within the city. Some only affect single lots, and in such cases they are extensions of zones already established and are hardly worthy of mention in the list. In other cases, both sides of a street were changed to meet the growing demand for commercial zones along portions of a car line street. The changes to industrial districts are made to provide for factory sites, generally along railroads or in territory having shown tendencies in that direction.

A list of such changes is here tabulated according to zones from which changed:

	Sept. 1919 Jan. 1920	1920	1921	1922
RESIDENTIAL, CLASS E TO				
Residential.....	1	2	1	2
Commercial.....	..	3	2	3
Industrial.....	..	..	2	..
Unrestricted.....	..	..	..	..
RESIDENTIAL TO				
Commercial.....	15	54	21	30
Industrial.....	9	26	4	2
Unrestricted.....	..	..	..	..
COMMERCIAL TO				
Industrial.....	2	11	..	..
Unrestricted.....	..	..	..	..
INDUSTRIAL TO				
Unrestricted.....	..	1	1	..

A comparative table of changes to a higher classification is hereto added:

	Sept. 1919 Jan. 1920	1920	1921	1922
UNRESTRICTED TO				
Commercial.....	..	..	..	..
Industrial.....	..	..	..	..
Residential.....	..	..	..	..
Residential, Class E.....	..	..	..	..
INDUSTRIAL TO				
Commercial.....	1	3	2	..
Residential.....	1	1	2	2
Residential, Class E.....	..	..	1	..
COMMERCIAL TO				
Residential.....	..	2	2	2
Residential, Class E.....	..	2	1	..
RESIDENTIAL TO				
Residential, Class E.....	1	..	4	3

It can readily be noted that though the number of changes showing increasing restrictions is much smaller, it is increasing as compared to the decreasing number of relaxing restrictions. The public has long felt the need of some sort of regulation such as the zoning law. There is a continued expression of opinion on the part of the public to the effect that it is to be regretted that such regulations did not exist twenty-five years ago. The experience of the City Planning Bureau is that there are more and more appeals for protection and higher restriction than put on the territory when first zoned. This is as it should be, and follows in the wake of what has developed in other cities such as St. Louis, Newark, Syracuse and New York City.

While many amendments have been made in the zoning ordinances of some cities, there have been but five amendments in the Rochester regulations, and one of these was made to facilitate the operation of the exception to gasoline stations and public garages by not requiring the signatures of tenants on petitions in any Residential District.

Another amendment made after the zoning plan had been in effect over two years is the limiting of the number of automobiles which might be kept on lots in Residential Districts. Previous to September 26, 1921, five motor vehicles could be kept in any private garage used as an accessory to a dwelling in a Residential District. A few exceptions for a greater number of vehicles have been granted upon petition of property owners, but during the two years of operation of the five-car limitation there have been so many complaints, as well as numerous appeals for more stringent restrictions in the number of vehicles allowed, that the Superintendent of City Planning and the Advisory Board felt the necessity of amending the rules so as to allow three vehicles only on lots in any residential districts. This does not imply, however, that exceptions cannot be made to this rule, where, upon petition signed by property owners, it is desirable and would not depreciate the value of property or change the character of the neighborhood. Since that amendment, the regulations were again amended November 23, 1922, increasing the number of vehicles to four.

Zoning for Height and Area

Mention has been made above to Regulations affecting Height and Area of Structures which have been referred to the Committee on Law of the Common Council. These regulations have been drafted as an amendment to the Building Code, which is now in course of revision by the Bureau of Building. The special sections will be made a part of the Building Code under separate articles, namely, Article XX, Height Districts, and Article XXI, Area Districts.

The purpose of this ordinance is to assure adequate courts and open spaces for ventilation and light to structures erected. Districts are established and the area or portion of lot which may be occupied is regulated and determined dependent upon the use designed for the district. The minimum sizes of yards, courts and open spaces as well as the height to which structures may be erected are regulated in each district. The width of said courts and open spaces is in turn dependent upon the heights surrounding them and are regulated accordingly.

An outline of this ordinance known as the "Height and Area Ordinance of the Building Code," is herewith given:

SECTION 1. Application of Code.

SEC. 3. Construction.

SEC. 4. Definitions.

ARTICLE XX—HEIGHT DISTRICTS

SEC. 415. Classification of Height Districts.

Class I. Thirty-five Foot Districts

Class II. Fifty Foot Districts

Class III. Eighty Foot Districts

Class IV. One Hundred Foot Districts

Class V. One Hundred Twenty-five Foot Districts

SEC. 416. Height Exceptions.

- Subd. (a) Provision for height of street wall dependent upon width of street
- Subd. (b) Erection of towers, etc., to height of 200 feet
- Subd. (c) Structures on terraces
- Subd. (d) Provision for additional height for residences to 45 feet on wide lots
- Subd. (e) Exceptions for cornices in residential districts
- Subd. (f) Exceptions for different heights on opposite sides of street

ARTICLE XXI—AREA DISTRICTS

SEC. 425. Classification of Area Districts.

- Subd. (a) A District
- Subd. (b) B District
- Subd. (c) C District
- Subd. (d) D District
- Subd. (e) E District

SEC. 427. General Area Exceptions.

- Subd. (1) Existing buildings
- Subd. (2) Several structures on one lot
- Subd. (3) Reduction of area of lots
- Subd. (4) Courts, yards, etc., open to sky
- Subd. (5) Fire escapes
- Subd. (6) Chimneys
- Subd. (7) Corners of yards and courts cut off
- Subd. (8) Offsets of yards and courts
- Subd. (9) Additional stories
- Subd. (10) Lowest level yards and courts
- Subd. (11) Lowest level yards and courts in Residential Districts
- Subd. (12) Level of yards and courts of structures on terraces
- Subd. (13) Ventilation for rooms
- Subd. (14) Rear yards
- Subd. (15) Rear yards on shallow lots
- Subd. (16) Area of structures on through lots of 100 feet or less in depth
- Subd. (17) Rear yards on corner lots
- Subd. (18) Yards between structures on same
- Subd. (19) Extension of district boundary lines
- Subd. (20) Recreational building

SEC. 430. Amendments.

SEC. 431. Validity of ordinances.

SEC. 434. Penalties.

The classification of the Area Districts permits of the following percentage occupation in the various districts:

- A. 100% of lot
- B. 100% of lot for first floor; 90% of corner lots and 80% of interior lots above a height of 18 feet above the curb level
- C. 100% of lot for first floor; 90% of corner lots and 75% of interior lots above height of 18 feet above the curb level
- D. 70% of corner lots; 50% of interior lots
- E. 35% of corner and interior lots

The benefits derived from regulations such as proposed in this ordinance are far reaching, and it is through the adoption of such an ordinance that these benefits will assert themselves. In Rochester today, too many examples exist of property which was designed for one purpose and occupied by entirely different businesses of a less remunerative nature, mainly because of too intensive occupation of the lots, thereby not providing proper light and air for the uses for which the structures were designed, or designed at a time when the abutting properties were not built upon. For example, windows are generally erected on lot lines, and when a building on an adjoining lot is erected these windows are usually blanketed, making the rooms of the first building useless for almost any purpose except storage. Mill Street is a very good example of this condition. Other properties in the near vicinity are equally affected by too intensive development and the abominable living conditions in some tenements are generally the result of insufficient or improper regulations of the essential features providing light and air for the purpose for which the building was designed and as long as it may be structurally suitable for occupancy.

By this kind of zoning, we can make the city grow as it should grow, along orderly lines. Home or residential districts are assured continual light and air, no tall or bulky structures being permitted to arise in such districts cutting off light, air and sunshine. This helps to maintain uniform fire insurance rates for the district which might otherwise be increased. What happens in one locality can now happen in another. No property is immune from the aggression of more energetic neighbors, each and all of them generally within his rights, but no one being willing to give what his neighbor might not give because the law does not require it of him. An ordinance governing height and area will bring about conditions which owners have for years desired, namely, protection and security against detrimental development of neighboring property, as well as permanent light and air to serve the needs of people using the property.

In short, this ordinance is co-part of the Use Regulations, and is a further method of promoting the health of the public, the safety and welfare of the inhabitants and securing the proper development and upbuilding of the city.

Subdivision and Street Expansion

Rochester, N. Y.,

January 1, 1923.

Mr. E. A. Fisher, Superintendent of City Planning,
Rochester, N. Y.

Dear Sir—In accordance with your request, I am submitting a report of the activities of this branch of your department. The following number of streets was opened, widened, extended, offered for dedication or closed:

During the year 1917.....	7
During the year 1918.....	8
During the year 1919.....	23
During the year 1920.....	47
During the year 1921.....	64
During the year 1922.....	63

For a detailed report of these streets see *Table A*.

Beginning with the formation of the Bureau, a large number of plans have been made, not only in the city, but in the territory adjacent. Twenty-two subdivisions were approved, previous to June 1, 1921, including the street lay-outs, which totaled 23.29 miles of streets, as shown on *Table B—1921*.

Since June 1, 1921, we have been required to approve of all subdivisions within the city before they could be filed in the County Clerk's office. Since that time two hundred and eighty-six subdivisions have been approved. The new street lay-outs included in these total 20.59 miles, as shown on *Table C*.

In order to approve of these subdivisions it has been necessary to make a detailed study in each case and many times the subdivisions were changed to conform to the suggestions made. Other studies have been made that have not been enumerated, but which will be used in the future.

Subdivisions offered for approval are now checked for violations of existing city laws and, if found, the map so offered is not accepted until corrected. This is the first opportunity the City has had to check this condition and prevent the recording of a map in the County Clerk's office that does not conform to the laws of the city.

Attention is called to the fact that all subdivisions have been changed to conform to the rules of the Bureau.

Six blue prints of all subdivisions have been made. One is given to the City Assessors, two for the files of the Planning Bureau, one to the Water Works, and two retained for use in the Survey Department. Since June, 1922, a Van Dyke print has been made of each subdivision approved.

Respectfully submitted,

A. L. VEDDER,

Superintendent of Surveys, and
Deputy Superintendent of City Planning

TABLE A—STREETS OPENED, CLOSED, WIDENED OR EXTENDED, 1917-1922
1917

PROCEEDINGS OF THE COMMON COUNCIL										
Street	Opening Closing Widening Extension	Limits	Length Feet	Date accepted	Dedication or First Ordinance		Final Ordinance		Report of Sup't of City Planning	
					Date	Page	Date	Page	Date	Page
Alley.....	Opening.....	Stone St. easterly.....	114	.....	April 24, 1917	182	May 22, 1917	227	May 8, 1917	199
Atlantic Ave.....	Widening.....	Winton Rd. to City Line.....	1,903	.....	{April 24, 1917	187	May 8, 1917	211}	May 8, 1917	200
Blossom Rd.....	Widening.....	Winton Rd. to Colby St.....	1,880	.....	Oct. 23, 1917	367	Nov. 13, 1917	378}	May 22, 1917	220
Blossom Rd.....	Closing.....	N. Y. C. R. R. Co. to University Ave.....	368	.....	May 8, 1917	204	May 22, 1917	225	May 22, 1917	220
Colby St.....	Extension.....	N. Y. C. R. R. Co. to Blossom Rd.....	380	.....	May 8, 1917	204	June 12, 1917	228	May 22, 1917	220
Colby St.....	Extension.....	N. Y. C. R. R. Co. to East Ave.....	718	.....	May 8, 1917	205	May 22, 1917	226	May 22, 1917	220
Maplewood Ter.....	Extension.....	End of street to Seneca Pkwy.....	218	.....	Jan. 9, 1917	17	Jan. 30, 1917	34	Jan. 9, 1917	13
University Ave.....	Extension.....	Blossom Rd. to Winton Rd.....	3,740	.....	May 8, 1917	206	{May 22, 1917	225}	May 22, 1917	220
							June 22, 1917	228}		

1918

PROCEEDINGS OF THE COMMON COUNCIL		PROCEEDINGS OF THE CITY PLANNING BUREAU		Length Feet	Limits	Opening Closing Widening Extension	Dedication or First Ordinance		Final Ordinance		Report of Sup't of City Planning	
Street	Approval of the Sup't. of City Planning and Advisory Board	Date	Page				Date	Page	Date	Page	Date	Page
Canterbury Rd.....	Oct. 21, 1918	Aug. 27, 1918	272	At Culver Rd.....	Widening.....	Oct. 22, 1918	268	Oct. 22, 1918	319			
Furlong St.....	Sept. 23, 1918	June 25, 1918	238	End of street to Chippewa St.....	Extension.....	.....	.....	.....	.....
Gardiner Ave.....	Oct. 21, 1918	July 23, 1918	261	Front of Loomis Prop.....	Widening.....	.....	.....	.....	.....
Lyman Pl.....	Oct. 21, 1918	July 23, 1918	250	Industrial St. to Moore Al.....	Closing.....	.....	.....	.....	.....
Minnesota St.....	July 8, 1918	June 25, 1918	238	Main St. East to Atlantic Ave.....	Widening.....	.....	.....	.....	.....
Sheldon St.....	July 22, 1918	July 23, 1918	260	Thurston Rd. to Stanfield Ter.....	Opening.....	.....	.....	.....	.....
Stanfield Ter.....	July 22, 1918	May 25, 1915	271	Brooks Ave. northerly.....	Opening.....	.....	.....	.....	.....
Stanfield Ter.....	July 22, 1918	July 23, 1918	260	End of street to Dunbar St.....	Extension.....	.....	.....	.....	.....
Wisconsin St.....	.....	June 25, 1918	239	Atlantic Ave. to Main St.....	Widening.....	.....	.....	.....	.....

1919

PROCEEDINGS OF THE CITY PLANNING BUREAU		PROCEEDINGS OF THE COMMON COUNCIL									
Street	Opening Closing Widening Extension	Limits	Length Feet	Approval of the Sup't. of City Planning and Advisory Board		Dedication or First Ordinance		Final Ordinance		Report of Sup't of City Planning	
				Date	Page	Date	Page	Date	Page	Date	Page
Alberta St.	Wid. and Ext.	Thurston Rd. to Wilton Ter.	509	June 19, 1919	May 25, 1919	176	June 10, 1919	195	June 10, 1919	June 10, 1919	188
Anthony St.	Extension	End of street to Woodbine Ave.	230	June 9, 1919	May 25, 1919	177	June 10, 1919	194	June 10, 1919	{ May 25, 1919 June 10, 1919	171 188
Bengal Ter.	Opening	Nunda Blvd. southerly.	841	Sept. 8, 1919	Received and de- dicated		Sept. 9, 1919	258	Sept. 9, 1919	Sept. 9, 1919	258
Castlebar Rd.	Opening	Winton Rd. to Bengal Ter.	1,141	Sept. 8, 1919	Received and de- dicated		Sept. 9, 1919	258	Sept. 9, 1919	Sept. 9, 1919	258
Cliff St.	Opening	Spencer St. to Ambrose St.	282	Dec. 23, 1918	Sept. 24, 1918	307	Mar. 25, 1919	108	Mar. 25, 1919	Jan. 28, 1919	19
Cliff St.	Closing	Spencer St. to Ambrose St.	282	Dec. 23, 1918	Mar. 11, 1919	92	Mar. 25, 1919	108	Mar. 25, 1919	Jan. 28, 1919	19
Cork St.	Closing	South End.	48		April 22, 1919	121	May 13, 1919	144	May 13, 1919	Jan. 28, 1919	19
Culver Rd.	Widening	Clifford Ave. to Norton St.	6,015	June 9, 1919	{ July 22, 1919 Oct. 11, 1919	224 279	Aug. 26, 1919	245	Aug. 26, 1919	June 10, 1919	188
Ferris St.	Extension	End of street to McKinster St.	130	Aug. 25, 1919	Aug. 26, 1919	239	Sept. 9, 1919	260	Sept. 9, 1919	Aug. 26, 1919	235
Handy St.	Extension	End of street to Kossuth St.	462	June 9, 1919	June 10, 1919	193	June 24, 1919	214	June 24, 1919	June 10, 1919	188
Highland Ave.	Widening	South Ave. to Goodman St.	2,394	{ June 9, 1919 Aug. 25, 1919	Adopted in 1920					Aug. 26, 1919	235
Keeler St.	Opening	Clinton Ave. to Joseph Ave.	1,034	Aug. 25, 1919	Received and de- dicated		July 22, 1919	217	July 22, 1919	July 22, 1919	217
Marmion St.	Opening	Marlborough Rd. to Arnett Blvd.	900	June 9, 1919	May 25, 1919	178	June 10, 1919	198	June 10, 1919	June 10, 1919	188
McArdle St.	Extension	End of street to Kossuth St.	462	June 10, 1919	June 10, 1919	192	June 24, 1919	213	June 24, 1919	June 10, 1919	188
McGuckin St.	Extension	End of street to Kossuth St.	465	June 10, 1919	June 10, 1919	192	June 24, 1919	214	June 24, 1919	June 10, 1919	188
Merchants Rd.	Widening	At Atlantic Ave.	75	Aug. 25, 1919	Received and de- dicated		Aug. 26, 1919	235	Aug. 26, 1919	Aug. 26, 1919	235
Meredith St.	Opening	Clifford Ave. to Culver Rd.	853	Jan. 27, 1919	Received and de- dicated		Jan. 28, 1919	19	Jan. 28, 1919	Jan. 28, 1919	19
Nunda Blvd.	Opening	Winton Rd. to City property.	1,507	Sept. 8, 1919	Received and de- dicated		Sept. 9, 1919	257	Sept. 9, 1919	Sept. 9, 1919	257
Plymouth Ave.	Widening	South of Barton St. southerly.	309	June 9, 1919	Received and de- dicated		May 29, 1919	182	May 29, 1919	Aug. 26, 1919	235
Rosewood Ter.	Widening	Berwyn St. easterly.	58	Aug. 25, 1919	May 13, 1919	161	Sept. 9, 1919	182	Sept. 9, 1919	Sept. 9, 1919	257
Rosgrey Ter.	Opening	North of land of J. and A. Gleason to south line of Brighton Ter. W. sub.	773	Sept. 8, 1919	Aug. 26, 1919	240	Sept. 9, 1919	261	Sept. 9, 1919	Aug. 26, 1919	235
Wisconsin St.	Widening	Atlantic Ave. northerly.	550	Jan. 27, 1919	Received and de- dicated		Sept. 9, 1919	257	Sept. 9, 1919	Sept. 9, 1919	257
Wray's Al.	Closing	Lowell St. to Hartel Al.	752		Jan. 28, 1919	24	{ April 22, 1919 May 13, 1919	{ 141 165	{ April 22, 1919 May 13, 1919	Jan. 28, 1919	19

PROCEEDINGS OF THE COMMON COUNCIL

Street	Opening Closing Widening Extension	Limits	Length Feet	PROCEEDINGS OF THE CITY PLANNING BUREAU			Dedication or First Ordinance		Final Ordinance		Report of Sup't of City Planning	
				Approval of the Sup't. of City Planning and Advisory Board		Date	Page	Date	Page	Date	Page	
Alcazar St.	Opening	Clinton Ave. N. to Rutledge Dr.	496	April 1, 1920	Received and dedicated	April 1, 1920	139	April 1, 1920	139	April 1, 1920	139	
Argonne St.	Opening	Versailles Rd. to Ridge Rd.	516	April 1, 1920	Received and dedicated	April 1, 1920	138	April 1, 1920	138	April 1, 1920	138	
Astoria St.	Extension	End of street to Fisher St.	102	Oct. 25, 1920	386	Dec. 28, 1920	471	Oct. 26, 1920	375	Oct. 26, 1920	375	
Bannian St. (Backman St.)	Extension	End of street to Weaver St.	206	Sept. 13, 1920	276	Aug. 24, 1920	307	Aug. 24, 1920	295	Aug. 24, 1920	295	
Bennett Ave. (old Rushford St.)	Opening	Norton St. to City Line.	150	Feb. 24, 1920	87	Mar. 9, 1920	111	Feb. 24, 1920	80	Feb. 24, 1920	80	
Boat Al.	Closing	Brown St. to Oak St.	292	May 10, 1920	171	June 8, 1920	208	May 11, 1920	171	May 11, 1920	171	
Bock St.	Extension	End of street to Rocket St.	100	April 1, 1920		{Nov. 23, 1920 {Aug. 24, 1920	410 309}					
Bonaldi St.	Opening	Beach Ave. southerly	1,320	Jan. 27, 1919	278	July 27, 1920						
Bonner Pl.	Extension	End of street to Maxson St.	120		131	Mar. 23, 1920	142					
Bricker St.	Extension	End of street to Traver Cir.	100	Oct. 25, 1920	384	Oct. 26, 1920	407	Oct. 26, 1920	375	Oct. 26, 1920	375	
Chili Ter.	Extension	End of street to Devonshire Ct.	40	Feb. 24, 1920	89	Feb. 24, 1920	108	Feb. 24, 1920	80	Feb. 24, 1920	80	
Clark Ave. (old Urbana St.)	Opening	Norton St. to City Line.	150	Feb. 24, 1920	89	Feb. 24, 1920	109	Feb. 24, 1920	80	Feb. 24, 1920	80	
Clifton St.	Extension	To Troup St.		{Sept. 27, 1920 {July 21, 1920								
Clinton Ave. N.	Opening	Ridge Rd. to Long Acre Rd.	1,650	April 1, 1920		Received and de		April 1, 1920	137	April 1, 1920	137	
Cobb St.	Closing	East end.	385					Feb. 10, 1920	31			
Collingwood Dr.	Opening	St. Paul St. to Joseph Ave.	1,274	April 1, 1920		Received and de		April 1, 1920	137	April 1, 1920	137	
Collingwood Dr.	Extension	Across R. W. & O. R. R. tracks.	72	April 1, 1920	259	July 27, 1920	287	April 1, 1920	137	April 1, 1920	137	
Cooper St.	Opening	Lyceum St. to Traver Cir.	450	Oct. 25, 1920	385	Oct. 26, 1920	408	Oct. 26, 1920	375	Oct. 26, 1920	375	
Corwin St.	Extension	Newcastle Rd. easterly	150	Jan. 5, 1920		Received and de		Jan. 13, 1920	14	Jan. 13, 1920	14	
Court St.	Widening	South Ave. to Erie Canal.	63	May 10, 1920	170	May 11, 1920	190	May 25, 1920	171	May 11, 1920	171	
Dentinger St.	Opening	Portland Ave. to Aurora St.	1,191		179	May 11, 1920		Dedication		May 11, 1920	171	
DePotter St.	Opening	Blossom Rd. northerly	1,104	May 10, 1920	170	May 11, 1920		Mar. 9, 1920	107	Feb. 24, 1920	80	
Devonshire Ct.	Opening	End of street to Thurston Rd.	712	Feb. 24, 1920	86	Feb. 24, 1920	14	Jan. 13, 1920	14	Jan. 13, 1920	14	
Dorchester Rd.	Extension	Newcastle Rd. easterly	150	Jan. 5, 1920		Received and de		Jan. 13, 1920		Jan. 13, 1920		
Dorset St.	Extension	End of street to Rocket St.	100	April 1, 1920								
Dove St.	Extension	End of street to Augustine St.	135	Aug. 25, 1920	197	{June 24, 1920 {Aug. 26, 1920	318 192}	Nov. 25, 1920 May 25, 1920	235	Aug. 26, 1920	235	
Emerson St.	Widening	N. Y. C. R. R. to Lee Rd.	8,478	May 24, 1920	238	{June 22, 1920 {July 27, 1920	284	Jan. 13, 1920	14	Jan. 13, 1920	14	
Exeter St.	Extension	Dorchester Rd. southerly	137	Jan. 5, 1920	262	Received and de		Sept. 4, 1920	314	July 27, 1920	262	
Falls St.	Closing	East end.	449	July 21, 1920		{June 22, 1920 {July 27, 1920						
Field Rd.	Widening	Lexington Ave. to Lewiston Ave.	8,944	May 24, 1920	281	July 27, 1920	305	Aug. 24, 1920				
Field Rd.	Widening	Lexington Ave. to N. Y. C. R. R.	10,464	May 24, 1920	281	July 27, 1920	311	Aug. 24, 1920				
Fisher St.	Opening	Lexington Ave. to Emerson St.	2,891	Oct. 25, 1920	387	Oct. 26, 1920	474	Dec. 28, 1920	375	Oct. 26, 1920	375	
Forester St.	Extension	End of street to Mona St.	117	Oct. 25, 1920	379	Oct. 26, 1920	404	Nov. 9, 1920	375	Oct. 26, 1920	375	
Goodman St. N.	Extension	Norton St. to City Line.	150	Feb. 24, 1920	89	Feb. 24, 1920	109	Mar. 9, 1920	80	Feb. 24, 1920	80	
Gray St.	Extension	End of street to Traver Cir.	100	Oct. 25, 1920	382	Oct. 26, 1920	406	Nov. 9, 1920	375	Oct. 26, 1920	375	
Grover St.	Opening	Chili Ave. to Devonshire Ct.	620	Feb. 24, 1920	88	Feb. 24, 1920	107	Mar. 9, 1920	80	Feb. 24, 1920	80	
Hall St.	Opening	Main St. E. to Macbeth St.	559		130	Mar. 23, 1920	142	April 1, 1920				
Hargrave St.	Opening	Versailles Rd. to Ridge Rd.	412	April 1, 1920		Received and de		April 1, 1920	137	April 1, 1920	137	
Highland Ave.	Widening	South Ave. easterly	2,303	Aug. 25, 1919	144	April 13, 1920	144	April 13, 1920				
Hinsdale St.	Extension	Belmont St. to Culver Rd.	575	May 10, 1920				April 1, 1920	137	April 1, 1920	137	
Joseph Ave.	Extension	Ridge Rd. to Long Acre Rd.	1,379	April 1, 1920	44	Received and de		Mar. 23, 1920	135	Mar. 9, 1920	95	
Joseph Ave.	Closing	Ridge Rd. to German Rifle Lot Assn.	600 x 53	Mar. 8, 1920		Feb. 24, 1920		Mar. 9, 1920	110	Feb. 24, 1920	80	
Kuapp Ave.	Opening	Norton St. to City Line.	150	Feb. 24, 1920	90	Feb. 24, 1920		Mar. 9, 1920		Feb. 24, 1920		

		PROCEEDINGS OF THE COMMON COUNCIL					Report of Sup't of City Planning					
Street	Opening Closing Widening Extension	Limits	Length Feet	Approval of the Sup't. of City Planning and Advisory Board		Dedication or First Ordinance		Final Ordinance		Page	Date	Page
				Date	Page	Date	Page	Date	Page			
Leicestershire Rd.	Opening	Norton St. to City Line	150	Feb. 24, 1920	91	Feb. 24, 1920	91	April 13, 1920	110	110	Feb. 24, 1920	80
Lewiston Ave.	Extension	Lake Ave. to Maplewood Pk.	1,205	Nov. 26, 1920	14	Jan. 13, 1920	14	Mar. 9, 1920	.....	.....	Jan. 13, 1920	14
Lexington Ave.	Widening	N. Y. C. R. R. to Lee Rd.	7,423	May 24, 1920	224	July 27, 1920	224	Aug. 24, 1920	312	312	Mar. 23, 1920	123
Liberty St.	Closing	Mortimer St. northerly	92	Mar. 8, 1920	113	June 22, 1920	113	April 1, 1920	.....	.....	April 1, 1920	137
Long Acre Rd.	Opening	St. Paul St. to E. line of Sibley tract	2,262	April 1, 1920	dedicated	Received and dedicated	dedicated	Sept. 14, 1920	345	345	Aug. 24, 1920	295
Ludwig Pk.	Extension	End of street to Herbert St.	80	Sept. 13, 1920	302	Aug. 24, 1920	302	April 1, 1920	.....	.....	.....	.....
Maxson St.	Opening	Hall St. to Bonner St.	513	.....	129	Mar. 23, 1920	129	April 1, 1920	143	143	.....	.....
Mayo St.	Opening	Main St. E. to Maxson St.	343	.....	130	Mar. 23, 1920	130	April 1, 1920	142	142	.....	.....
Meisenzahl St.	Opening	Portland Ave. to Aurora St.	.....	.....	179	May 11, 1920	179	.....	.....	.....	.....	.....
Merchants Rd.	Widening	At Atlantic Ave.	.....	Aug. 25, 1919	210	June 22, 1920	210	Oct. 26, 1920	377	377	Sept. 28, 1920	349
Monarch St.	Opening	Portland Ave. to Aurora St.	888	.....	.....	May 11, 1920	.....	.....	.....	.....	.....	.....
Morton St.	Opening	Traver Cir. to Northland Ave.	992	Oct. 25, 1920	382	Oct. 26, 1920	382	Nov. 9, 1920	405	405	Oct. 26, 1920	375
Navarre Rd.	Opening	St. Paul St. to Joseph Ave.	1,290	April 1, 1920	dedicated	Received and dedicated	dedicated	April 1, 1920	137	137	April 1, 1920	137
Navarre Rd.	Extension	Across R. W. & O. R. R. tracks	72	April 1, 1920	259	July 27, 1920	259	July 27, 1920	288	288	April 1, 1920	137
Newcastle Rd.	Extension	Atlantic Ave. northerly	250	Nov. 8, 1920	dedicated	Received and dedicated	dedicated	Nov. 9, 1920	393	393	Nov. 9, 1920	393
Otis St.	Extension	Across N. Y. C. R. R. tracks	66	.....	373	Oct. 26, 1920	373	.....	.....	.....	.....	.....
Polaris St.	Opening	Emerson St. to Lexington Ave.	2,890	Oct. 25, 1920	.....	.....	.....	Oct. 26, 1920	389	389	Oct. 26, 1920	375
Pool St.	Closing	Jay St. to Campbell St.	664	Mar. 8, 1920	95	Mar. 9, 1920	95	Mar. 23, 1920	135	135	Mar. 9, 1920	95
Richter St.	Opening	Fisher St. to Polaris St.	508	et. 25, 1920	387	Oct. 26, 1920	387	Dec. 28, 1920	473	473	Oct. 26, 1920	375
Rocket St.	Opening	Culver Rd. to Robert St.	3,300	Sept. 13, 1920	368	Oct. 13, 1920	368	Oct. 26, 1920	391	391	Aug. 24, 1920	295
Rutledge Dr.	Opening	Ridge Rd. to Collingwood Dr.	1,250	April 1, 1920	dedicated	Received and dedicated	dedicated	April 1, 1920	138	138	April 1, 1920	138
Sabina St. (old Grover St.)	Opening	Chili Ave. to Devonshire Ct.	620	Feb. 24, 1920	88	Feb. 24, 1920	88	Mar. 9, 1920	107	107	Feb. 24, 1920	80
Sanford St.	Widening	At Mt. Hope Ave.	54	May 10, 1920	.....	May 10, 1920	.....	May 11, 1920	171	171	May 11, 1920	171
Silver St.	Widening	At Kensington St.	81	Sept. 13, 1920	304	Aug. 24, 1920	304	Sept. 14, 1920	345	345	.....	.....
Smith St.	Extension	St. Paul St. to Lowell St.	215	Jan. 5, 1920	337	Sept. 14, 1920	337	.....	.....	.....	.....	.....
Sneek Ave.	Opening	Norton St. to City Line	150	Feb. 24, 1920	91	Feb. 24, 1920	91	Mar. 9, 1920	111	111	Sept. 14, 1920	318
Stratford Pk.	Extension	End of street to Elgin St.	548	June 28, 1920	277	July 27, 1920	277	Aug. 24, 1920	308	308	Feb. 24, 1920	80
Suter St.	Opening	Lycuem St. to Traver Cir.	550	May 10, 1920	161	April 27, 1920	161	May 11, 1920	181	181	July 27, 1920	263
Taft Ave.	Opening	Norton St. to City Line	150	Oct. 25, 1920	384	Oct. 26, 1920	384	Nov. 9, 1920	408	408	Oct. 26, 1920	375
Times St.	Opening	Emerson St. to Lexington Ave.	2,890	Feb. 24, 1920	90	Feb. 24, 1920	90	Mar. 9, 1920	110	110	Feb. 14, 1920	80
Traver Cir.	Opening	Goodman St. to Waring Rd.	2,095	Oct. 25, 1920	388	Oct. 26, 1920	388	Dec. 28, 1920	472	472	Oct. 26, 1920	375
Turner St.	Opening	Chili Ave. to Arnett Blvd.	721	Feb. 24, 1920	87	Feb. 24, 1920	87	Nov. 9, 1920	406	406	Oct. 26, 1920	375
University Ave.	Extension	North St. to Andrews St.	590	.....	380	Oct. 26, 1920	380	.....	.....	.....	.....	.....
Versailles Rd.	Opening	St. Paul St. to Clinton Ave. N.	1,358	April 1, 1920	dedicated	Received and dedicated	dedicated	April 1, 1920	138	138	April 1, 1920	138
Versailles Rd.	Extension	Across R. W. & O. R. R. tracks	72	.....	259	July 27, 1920	259	July 27, 1920	287	287	.....	.....
Vesta St.	Extension	End of street to Fisher St.	102	Oct. 25, 1920	387	Oct. 26, 1920	387	Dec. 28, 1920	473	473	Oct. 26, 1920	376
Vinal St.	Opening	Norton St. to City Line	150	Feb. 24, 1920	88	Feb. 24, 1920	88	Mar. 9, 1920	111	111	Feb. 24, 1920	80
Washington St.	Lines estblishd.	Main St. W. to Allen St.	858	.....	85	Feb. 24, 1920	85	Mar. 9, 1920	106	106	.....	.....
Weyrich St.	Extension	Syracuse St. northerly	100	May 10, 1920	166	May 4, 1920	166	.....	.....	.....	.....	.....
Wickford Rd.	Opening	Atlantic Ave. northerly	220	Nov. 8, 1920	dedicated	Received and dedicated	dedicated	Nov. 8, 1920	393	393	May 11, 1920	171
Windmere Rd.	Extension	Newcastle Rd. easterly	150	Jan. 5, 1920	dedicated	Received and dedicated	dedicated	Jan. 13, 1920	14	14	Nov. 8, 1920	383
Wisconsin St.	Wid. and Ext.	Main St. E. to Merchants Rd.	1,620	Jan. 27, 1919	239	June 25, 1918	239	Jan. 28, 1919	165	165	Jan. 28, 1919	19
Yarmouth St.	Opening	Dorchester Rd. to Blossom Rd.	2,590	Nov. 8, 1920	31	Jan. 5, 1920	31	.....	.....	.....	.....	.....
Yates St.	Extension	End of street to Traver Circle	125	Oct. 25, 1920	383	Oct. 26, 1920	383	Nov. 9, 1920	407	407	Oct. 26, 1920	375

PROCEEDINGS OF THE COMMON COUNCIL		PROCEEDINGS OF THE CITY PLANNING BUREAU		Limits	Length Feet	Dedication or First Ordinance		Final Ordinance		Report of Sup't of City Planning	
Street	Opening Closing Widening Extension	Approval of the Sup't. of City Planning and Advisory Board	Date			Page	Date	Page	Date	Page	
Allen St.	Extension	East end to Mill St.	Tentative Plan Jan. 10, 1921								
Allen St.	Widening	Mill St. to Brown St.	Tentative Plan Jan. 10, 1921								
Allen St.	Widening	State St. to Brown St.	July 7, 1921								
Andrews St.	Extension	Franklin Sq. to North St.	Jan. 10, 1921			108	Mar. 22, 1921	April 12, 1921	Jan. 11, 1921	10	
Andrews St.	Widening	Franklin Sq. to Franklin St.	Jan. 10, 1921			19	Jan. 11, 1921				
Andrews St.	Widening	Clinton Ave. to Genesee River Bridge.	Tentative Plan Jan. 10, 1921								
Arvine Pk.	Opening	Genesee St. easterly	Dec. 24, 1921	389		461	Nov. 9, 1921	Nov. 22, 1921	Dec. 27, 1921	549	
Atlantic Ave.	Blvdg. Line	Brownroft to City Line.									473
Beresford Rd.	Opening	Dorechester Rd. to Blossom Rd.		1,820					April 1, 1921	135	
Beresford Rd.	Opening	Revised.	Dec. 24, 1921	515		30	Jan. 25, 1921	Feb. 8, 1921	Dec. 27, 1921	548	
Bonaldi St.	Opening	S. line Lot 20 to N. line Lot 16 Town 2-3 Div.									
Bonner Pl.	Extension	Main St. to Maxson St.	April 11, 1921	520		167	April 12, 1921	April 26, 1921	April 12, 1921	156	
Bricker St.	Extension	South line Waring tract to Northland Ave.	June 27, 1921	857		296	June 28, 1921	July 12, 1921	June 28, 1921	283	
Campbell St.	Closing	N. Y. C. R. R. to Fromm St.	Nov. 22, 1921	665		391	Sept. 27, 1921	Oct. 23, 1921			
Campbell St.	Widening	Colvin St.	Nov. 21, 1921	166		479	Nov. 22, 1921	Dec. 13, 1921	Nov. 22, 1921	472	
Canal Terminal.		Genesee River	July 7, 1921			450	Nov. 9, 1921	Aug. 23, 1921	July 12, 1921	303	
Canal Lands.		Oak St. to Court St.	Tentative Plan Dec. 24, 1921					Nov. 22, 1921	Nov. 9, 1921	450	
Carlisle Rd.	Opening	Brown-Zorsch property.		640					Dec. 28, 1921	549	
Central Ave. and Andrews St.	Widening	Connection with Allen St. extension.	Jan. 10, 1921								
Caroline St.	Extension	Easterly to Henrietta St.	Aug. 22, 1921			480	Nov. 22, 1921	Dec. 13, 1921			
Chambers St.	Extension	Martin and Beach tract									
Chestnut St.	Widening	Court St.	July 7, 1921								
Cherry St.	Ext. and Wid.	Lake Ave. to Burleigh Rd.	Aug. 22, 1921	2,000		359	Aug. 22, 1921	Sept. 23, 1921	Aug. 23, 1921	351	
Cherry St.	Opening	Lake Ave. easterly	Dec. 24, 1921	440					Dec. 27, 1921	549	
Cleveland Pl.	Extension	Westerly to Lill St.	Nov. 21, 1921	880		477	Nov. 22, 1921	Dec. 13, 1921	Nov. 22, 1921	472	
Clinton Ave. N.	Opening	Longacre Rd. to Ridge Rd.		1,343		225	Correction of proceedings May 10, 1921	April 1, 1920	Mar. 8, 1921	82	
Corinthian St.	Widening	State St. to Front St.	April 11, 1921	350					April 12, 1921	156	
Court St.	Widening	South Ave.	July 7, 1921								
Crossfield.	Opening		Dec. 5, 1921	2,592		535	Dec. 13, 1921	Dec. 27, 1921	Dec. 13, 1921	500	
Culver Rd.—East Ave.	Widg. of Pavt						Referred to Public Works	Committee	June 14, 1921	269	
Culver Rd.	Widening	East Ave. to Blossom Rd.	May 22, 1921			479	Nov. 22, 1921	Dec. 27, 1921			
Devonshire Ct.	Open. and Ext.	Thurston Rd. to Turner St., Turner St. W.	Mar. 28, 1921	{ Ex. 138 }		120	Mar. 22, 1921	April 1, 1921	Mar. 22, 1921	107	
Dunbar St.	Opening	Thurston Rd. to Post Ave.	Sept. 12, 1921	{ O. 712 }					Sept. 13, 1921	372	
Elk St.	Extension	Westerly end to La Grange Ave.	Sept. 26, 1921	755		442	Oct. 26, 1921	Nov. 9, 1921	Sept. 27, 1921	394	
Elm St.	Extension		July 7, 1921	135							
Elmwood Ave.	Widening	Mt. Hope Ave. easterly				306	July 12, 1921	July 26, 1921	June 14, 1921	269	
Elmwood Ave.	Crossings	Subway at Lehigh Valley R. R.									
Elmwood Ave.	Opening	Near L. V. R. R.		3,200							
Elmwood Ave.	Closing	Erie R. R. westerly		350							
Farrington Pl.	Opening	East Ave. to Rochester Tennis Club	Jan. 10, 1921	225							10
Fallesen Rd.	Opening	Cherry St. to North line Buy-a-home tract.	Dec. 24, 1921	457					Dec. 27, 1921	550	
Fallesen Rd.	Open and Ext.	Northerly to Boxart St.	Aug. 22, 1921	950					Aug. 23, 1921	351	
Field Rd.	Widening	Correction of Assessment.				340	July 26, 1921	Aug. 26, 1921			
Flouerton St.	Opening	Humboldt St. to Blossom Rd.		1,470					May 10, 1921		
									Mar. 22, 1921	211	
									May 10, 1921	115	

1921—Continued

PROCEEDINGS OF THE COMMON COUNCIL											
Street	Opening Closing Widening Extension	Limits	Length Feet	PROCEEDINGS OF THE CITY PLANNING BUREAU		Dedication or First Ordinance		Final Ordinance		Report of Sup't of City Planning	
				Approval of the Sup't. of City Planning and Advisory Board		Date		Date		Date	
				Date	Page	Date	Page	Date	Page		
Forester St.	Extension.	Westerly to Mona St.	117		April 26, 1921	194	May 10, 1921		236		
Genesee Pk. Blvd.	Closing.	South of Brooks Ave.	607				Oct. 11, 1921		414		
Genesee River Bridge.	Widening.	South side of Andrews St.									
Gordon Pk.	Extension.	Ward St. to Hand St.	130								
Gilman St.	Extension.	Westerly to Midland Ave.	100		May 24, 1921	258	June 14, 1921		277		
Hampden Rd.	Extension.	Humboldt St. to Atlantic Ave.	1,100								
Hartsen St.	Closing.	Triangle St., corner of Norris St.	73		Nov. 22, 1921	480	Mar. 22, 1921		102	Mar. 22, 1921	106
Henley St.	Extension.	Martin and Beach tract									
Hillside Ave.	Extension.	1 ft. strip at Westerly end	1								
Holden St.	Opening.	Lake Ave. westerly	660								
Hopper Ter.	Opening.	Cherry St. to N. line of Buy-a-home tract.	420								
Humboldt St.	Extension.	Westerly to Culver Rd.	550		June 28, 1921	297					
Hyde Pk.	Extension.	Cumberland St.			Jan. 11, 1921	19	Jan. 27, 1921		42	Jan. 11, 1921	10
Kansas St.	Extension.	Atlantic Ave. to Humboldt St.	1,100								
Keehl St.	Widening.	Lot 1—W. H. MacLean sub.	145		Aug. 23, 1921	356	Sept. 23, 1921		388	Aug. 13, 1921	351
Keeler St.	Widening.	Clinton Ave. to Joseph Ave.									
Kenton St.	Opening.	Clifford Ave. northerly	1,041		Dec. 13, 1921	535	Dec. 27, 1921		582	Dec. 13, 1921	500
Knowles Al.	Extension.	West end to Adams St.			Mar. 22, 1921	117	April 1, 1921		140	Mar. 22, 1921	107
Laurelton Rd.	Opening.	Culver Rd. to Suffolk St.	1,174								
La Grange Ave.	Open. Sec. 1.	Driving Pk. Ave. to Ridgeway Ave.									
La Grange Ave.	Open. Sec. 2.	Ridgeway Ave. northerly	5,200		Oct. 26, 1921	441	Nov. 9, 1921		463	Sept. 27, 1921	394
Leander St.		Fallesen Rd. to Copper Rd.	730		Oct. 26, 1921	440	Nov. 9, 1921		464	Sept. 27, 1921	394
Lydia St.	Opening.	Latta Rd. to Holden St.	650								
Minnesota St.	Extension.	Atlantic Ave. to Humboldt St.	1,100		April 12, 1921	169	April 26, 1921		203	April 12, 1921	155
Molinari St.	Closing.	N. Goodman St. easterly	310		July 25, 1921		Sept. 13, 1921		390	June 28, 1921	283
Marne St.	Opening.	Lyceum St. to N. Goodman St.	1,992		June 27, 1921	298	July 12, 1921		322	June 28, 1921	283
Naples St.	Opening.	Lyceum St. to N. Goodman St.	1,968		June 27, 1921	299	July 12, 1921		322	June 28, 1921	283
Newenstle Rd.	Opening.	Blossom Rd. to Dorchester Rd.	1,931		June 28, 1921						
Northland Ave.	Opening.	Goodman St. to Lyceum St.	1,996		June 28, 1921	295	July 12, 1921		320	June 28, 1921	283
Northland Ave.	Extension.	Lyceum St. to Waring Rd.	1,106		Dec. 13, 1921	534	Dec. 27, 1921		582	Dec. 13, 1921	500
Oak Hill View	Opening.	Genesee St. easterly	576								
Otis St.	Opening.	N. Y. C. R. R. Co.	66		Dec. 24, 1921						
Park Dr.	Fixing Lines	Hanford Landing Rd. to Lauderdale Pk.	280		May 6, 1921		Nov. 11, 1921		6-9	May 10, 1921	211
Peters Pl.	Fixing Lines	Hebard St. to East end of Peters Pl.	275		Oct. 10, 1921		Oct. 11, 1921		416	Oct. 11, 1921	419
Plymouth Ave.	Widening.	Commercial St. to Church St.			July 7, 1921	193	May 26, 1921		236		
Roseview Ave.	Opening.	Clifford Ave. southerly	885		July 7, 1921						
Roxborough Rd.	Opening.	Arnett Blvd. to Westfield St.	973		Dec. 24, 1921						
South Ave.	Widening.	Court St. southerly			Sept. 12, 1921	273	Dec. 27, 1921		584	Sept. 13, 1921	372
Tonawanda St.	Closing.	Wilder St. to Maple St.			June 6, 1921		Oct. 26, 1921		429	June 14, 1921	269
Tonawanda St.	Extension.	Brown St. to King St.			Sept. 12, 1921		{ July 12, 1921		316	Sept. 13, 1921	371
University Ave.	Extension.	West end to Cumberland St.			June 27, 1921	291	Amended		429	June 28, 1921	283
Venice St.	Opening.	N. Goodman St. to Lyceum St.	1,992		Jan. 10, 1921	108	Oct. 26, 1921		429	Jan. 11, 1921	10
Water St.	Widening.	Andrews St. to Mortimer St.	525		June 28, 1921	298	July 12, 1921		322	June 28, 1921	283
Webb St.	Opening.	Grand Ave. to Garson Ave.	250		Mar. 28, 1921						
Westfield St.	Opening.	Chili Ave. to W. line of Roxborough Rd.	575		July 26, 1921	338					
West Main St.	Opening.	Canal westerly									
Wheatland Ave.	Opening.	Mt. Read Blvd. to B. R. & P. R. R.	2,646								
Yarmouth Rd.	Opening.	Dorchester Rd. to Blossom Rd.	1,850		Oct. 26, 1921	441	Nov. 9, 1921		463		

		PROCEEDINGS OF THE COMMON COUNCIL			PROCEEDINGS OF THE CITY PLANNING BUREAU				
Street	Opening Closing Widening Extension Dedication	Limits	Length Feet	Dedication or First Ordinance		Final Ordinance		Report of Sup't of City Planning	
				Date	Page	Date	Page	Date	Page
Almira St.	Extension	Northerly end to Oakman St.	145	Aug. 22, 1922	470	Sept. 12, 1922	508	Nov. 14, 1922	584
Alvord St.	Extension	Southerly end to Federal St.	135	April 11, 1922	218	April 25, 1922	260	April 11, 1922	208
Arbordale Ave.	Extension	Lot 56—Brownroft.	88	Sept. 26, 1922	528			Oct. 10, 1922	543
Arbordale Ave.	Extension	Lot 194, 57A—Brownroft.	88	Dec. 26, 1922	640			Oct. 10, 1922	544
Arbordale Ave.	Dedication	Northerly end through Brownroft.	250					Nov. 14, 1922	584
Arnett Boulevard	Dedication	Genesee Park Blvd. to Westfield St.	1,040	June 12, 1922				June 27, 1922	385
Augustine St. Exten.	Dedication	B. R. & P. R. R. to Driving Park Ave.	2,070	Dec. 11, 1922				Dec. 12, 1922	620
Bleacker Road	Dedication	Norton St. southerly.	365	May 22, 1922	291	Nov. 14, 1922	597	May 23, 1922	307
Bott Pl. and Fromm Pl.	Extension	Southerly ends to Central Pk.		May 9, 1922					
Brentwick Road	Dedication	Culver Rd. easterly.						Oct. 9, 1922	544
Bridge Approach Easterly	Extension	St. Paul St. to City Line.							
Bridge Approach Easterly	Extension	St. Paul St. to City Line.							
Brighton Ter.	Dedication	River to Lake Ave.	280	May 23, 1922	323	June 13, 1922	372	Feb. 14, 1922	58
Burkhard Pl.	Dedication	Winton Rd. easterly.	540					May 23, 1922	319
Carr St.	Opening	South Ave. easterly.	200					April 11, 1922	208
Caroline St.	Closing	Burrows St. easterly.	70						
Chili Ave.	Extension	Lots 1-2, Peter Paul Sub.	1,056	Jan. 24, 1922	32	Feb. 28, 1922	95	Feb. 14, 1922	58
Church St.	Dedication	Genesee Pk. Blvd. to Railroad.							
Church St.	Extension	Plymouth Ave. to Elizabeth St.	570	Mar. 14, 1922	128	Feb. 14, 1922	81	July 27, 1922	385
Clayton St.	Dedication	Hewitt St. north and south.							
Costich Rd.	Dedication	Culver Rd to Bleaker Rd.	610	June 22, 1921					
Clifton St.	Extension	South Ave. to Clinton Ave.		May 22, 1922	364			May 23, 1922	307
Court St.	Widening	Clinton Ave. to Chestnut St.	1,020	June 23, 1922	321			June 26, 1922	327
Court St.	Widening	Dorchester Rd.		May 23, 1922				May 23, 1922	321
Croydon Rd.	Dedication	Park Ave. to East Ave.							
Douglas Rd.	Dedication	B. R. & P. R. R. to Mt. Read Blvd.						Feb. 14, 1922	58
Driving Park Ave.	Widening	Alexander St. to Colby St.	1,302	Jan. 10, 1922	20	April 11, 1922	232	Jan. 24, 1922	21
East Ave.	Bldg. Line	Winton Rd. westerly.	390	Mar. 28, 1922	180			Oct. 10, 1922	544
Elam Pkwy.	Opening	Waring Rd. to Bleaker Rd.						Jan. 10, 1922	11
Elbert St.	Dedication	Mt. Read Blvd. to Lee Acres No. 2						Mar. 28, 1922	152
Emerson St.	Bldg. Line	N. Y. C. R. R. to Lee Rd.		Feb. 14, 1922	77-97	Feb. 28, 1922	113	May 23, 1922	307
Emerson St.	Widening	Lyceum St. to Culver Rd.		Feb. 14, 1922	78	Feb. 28, 1922	111		
Ferrowood Ave.	Extension	N. Y. C. R. R. to Lexington Ave.	1,946	Mar. 28, 1922	182	April 11, 1922	233	Mar. 28, 1922	152
Field Road—24 Ward.	Amend. Wid.	Highland Ave. to Mt. Hope Ave.	607	July 25, 1922	439	Aug. 22, 1922	487		
Furman Cres.	Dedication	Lot 12, Sec. N., Frost sub.						June 13, 1922	347
Genesee Park Blvd.	Widening	Highland Pkwy easterly.		Mar. 14, 1922	143	April 1, 1922	207	Mar. 28, 1922	152
and Genesee St.	Widening	Humboldt St. to Atlantic Ave.	1,035						
Greenview Dr.	Dedication	Culver Rd. to Waldo Ave. N. Half.	1,109	Sept. 12, 1922	502	Sept. 26, 1922	539	April 11, 1922	209
Hampden Rd.	Extension	Culver Rd. easterly S. Half.	421						
Harwick St.	Dedication	Lake Ave. to Clayton St.						Feb. 28, 1922	93
Harwick St.	Dedication	Goodman St. to Clinton Ave.	1,402					Oct. 10, 1922	544
Highland Pkwy.	Dedication	Belmont St. to Culver Rd.	615	May 22, 1922				May 23, 1922	307
Hinsdale St.	Extension	Lots 233-234 Winans Ter.		April 10, 1922				April 11, 1922	209
Holcomb St.	Dedication	Genesee Park Blvd. to Westfield St.	860						
Inglewood Dr.	Dedication	Arbordale St. to Yarmouth Rd.	640	June 12, 1922	76			Dec. 12, 1922	620
Juniper St.	Extension							July 27, 1922	385

Mapping for City Planning

Rochester, N. Y., December 31, 1922

Mr. E. A. Fisher,

Consulting Engineer and Superintendent of City Planning.

Dear Sir:—

In compliance with your request for a general outline of the work accomplished by the drafting and mapping branch of the City Planning Bureau since its organization in January, 1919, permit me to respectfully submit the following report:

On February 1, 1919, the fitting out of this branch of the new office at the City Hall for service and city planning work was begun. This office includes a drafting room, with equipment for map making, as well as a suitable room for filing maps, drawings and records, so that these may be accessible for convenient dealing with the public.

Inasmuch as we found no map of the entire city and adjacent area sufficiently correct or complete for city planning purposes, the compiling of a complete network of "Traverses" was a first necessity in order to control and hold all later plotting to a reasonable accuracy. This feature alone required from four to five months.

With this map structure completed, the next task was to plot all streets, towns, roads, streams, railroads and promiscuous topography of the entire Rochester region, together with numerous corrections of street names and the like, from various sources and widely varying scales of completeness, accuracy and reliability. This task required no small amount of verification, checking and correcting. It all necessitated much time and labor.

The original "base map" having been thus provided, on a scale of 400 ft., photographic reductions were made to a 1,000-foot scale. These later received general summary plottings of each of three different zoning districts, viz.—Use, Height and Area, as well as street widenings, extensions, changes, new streets, etc. We also provided general wall maps for other city planning activities.

The next step was to prepare 1,000-foot scale plates covering the entire city—and immediately adjacent area, suitable to later receive the zone district designations for producing "Use Zone Maps" in book form, for distribution.

Commencing with a complete set of uncolored and unbound "Hopkins" City Atlas Maps, there was added to these a complete rendering, by color, showing the *existing* "Use" occupancy of each lot on each street in the city.

Over these sheets was attached, at the left hand edge, a sheet of similarly sized tracing cloth—to receive the new "Use" zoning (expressed also in a color code similar to the one used on above-described atlas sheets, showing existing use occupancy) which tracing cloth maps became the original and Official Use District Maps.

When these official use district maps had been so completed and approved by the Superintendent of City Planning and by the Advisory Board, accurate copies were made of them in color, and bids for printing were solicited.

Inasmuch as this occurred at a time when the printing trade was overloaded with wartime work, the only bid secured was so excessive that it was decided to forego the luxury of showing the various use zones in color, and a scheme in plain black and white was substituted, necessitating the use of conventional emblems, and so resulting in much delay, as well as extra labor in the drafting room to produce a new "copy" for the printer.

This work was finally finished by Wm. P. Munger on May 19, 1921. He furnished all photographic work, plates, and printed sheets and covers for 300 use zoning books, and also 300 plain wall maps (with zoning omitted) mounted complete.

Since that time new street indexes have been compiled and kept up to date, numerous detailed study maps have been drawn for various vicinities where changes were under consideration, and a large amount of miscellaneous work has been executed by this Bureau, such as numerous traffic counts, etc., tentative plans for the new Ridge Road Bridge and the street extensions at Ridge Road; exhaustive preliminary plans pertaining to the acquisition of the abandoned canal lands and the possibilities of a railroad therein, with connections and kindred matters.

Much consideration has been given to drafting and survey detail work pertaining to street changes, extensions, widenings and subdivisions, as well as an effort to influence the proper laying out of street and subdivision projects just outside the city, involving numerous study maps, etc., etc.

Within the past year there have also been provided (for general study purposes) several various-scaled large maps of large sections, as well as others covering the whole of the city. These have been found well worth their cost in facilitating general planning work.

In closing it might be mentioned that the original new first "Base Map" of the city and adjacent territory—covering the area from Lake Ontario to south of the West Shore Railroad, and from the east side of Irondequoit Bay and the village of Pittsford on the east to the junction of the Barge Canal and the Erie Canal on the west—has been found of great value in many ways, and extensively copied by several of the city departments, such as Fire, Water Works, Police and School, as well as private interests, such as the Rochester Gas and Electric Corporation, the Rochester Telephone Corporation, and the New York State Railways (Rochester Lines). There is now nearly ready for publication a 2,000-foot scale revised-to-date copy of the above "Base Map."

Also, within the past year, there have been provided and made available to the public, colored zoning books at \$3 each.

Yours respectfully,

C. N. MUNGER,

Special Assistant to the Superintendent of City Planning

The Rapid Transit and Industrial Railway

By George F. Swain, Consultant

Cambridge, Massachusetts.

August 23, 1921.

Mr. Edwin A. Fisher, Superintendent of City Planning,
Rochester, N. Y.

My dear Sir—At your request, I have made a careful study of the plans which you have prepared for utilizing the abandoned Erie Canal through your city for a line of transportation. I have also visited your city, gone over the entire line, acquainted myself with the local conditions, and fixed the situation in my mind. As a result of this study, I submit the following report on your plan. It may be considered a preliminary report, as I have studied the project in a general way, not going into all the details, many of which will have to be worked out more carefully if the work is entered upon. I have, however, gone into details sufficiently to justify me in forming an opinion upon the general subject.

Briefly stated, your plan proposes that the city shall purchase the abandoned Erie Canal, and after reconstructing it for the purpose, shall utilize it as a transportation line with four tracks; the two northerly tracks to be used for passenger transportation, the two southerly tracks for steam tracks to connect lines entering the city with industries along the old canal and with each other. Your plan, therefore, converts the old canal property into a rapid transit and industrial railway line, and also uses it in part as a new street.

The length of the canal which the state purposes to abandon, or has abandoned, is about 13 miles long, extending from the northwest to the southeast through the heart of the city, and crossing the Genesee River on a stone aqueduct. It has four locks east of the river. The width of the property is from 100 to 150 feet and the width of the prism is 70 feet, or ample for four tracks. The streets cross over the canal; east of the Genesee River on fixed bridges, and west of the river on lift or bascule bridges.

Your purpose is to construct tracks from the Western Wide Waters to the junction of the Rochester and Eastern Railway on the east, a total distance of 8.4 miles, this distance to be adapted to passenger and freight service. A freight track can be extended 2.2 miles farther towards the east from the Rochester and Eastern Railway junction to the barge canal. From the Western Wide Waters to Brighton, $6\frac{1}{2}$ miles, four tracks are proposed, and from Brighton to the Rochester and Eastern Railway junction, two tracks to be used for both passenger and freight traffic. On the west, an extension can be built from Western Wide Waters to the plant of the Eastman Kodak Company, a distance of 1.12 miles.

On the western part of the line, from Lexington Avenue to Exchange Street, where the bridges are movable, the bottom of the canal will have to be depressed. East of Exchange Street, where the bridges are fixed, little deepening will be required. At the locks and at some streets there will be necessary grade adjustments, and the grade of some of the streets will be very much improved, as at Oak Street. Retaining walls and slope walls will have to be built at various points, and some pipes and sewers will have to be changed, but the magnitude of pipe changes will be very small in comparison with what is usually necessary in a city subway. On the whole, your plan will improve the street grades.

Your plan also contemplates constructing a new street over this transportation line from South Avenue to Oak Street, thus providing a new street through the heart of the city, which can be extended in the future as may be found necessary or desirable.

Your plan consists essentially of two parts:

- (1) A rapid transit passenger line for suburban and interurban cars;
- (2) An industrial railway connecting the various steam railways and the industries along the canal.

(1) Suburban and interurban lines can be connected with this rapid transit line at convenient points, and the traffic from the suburbs and from neighboring cities carried into and out of the city on the passenger tracks. The Rochester and Eastern Railway would be connected west of Brighton; the Rochester and Syracuse Railway at Winton Road, the suburban lines of the east and northeast at Colby Street, those at the southeast at the crossing of the canal and Monroc Avenue, those on the north and northwest at Emerson Street, those on the west and southwest at Lyell Avenue, and also at Lexington Avenue, the Lockport interurban line at Lyell Avenue; and further growth to the northwest may also be accommodated by a connection at the western end of the proposed line.

(2) The two southerly tracks will connect all the steam lines entering the city so that freight can be shipped in car-load lots from any point on the canal by any steam line, and also from one steam line to another if this should be desired.

In my opinion, this project, as worked out by you and Mr. Brown, is an altogether admirable one, and the city should without question take steps to acquire the abandoned canal as soon as practicable. I have found no difficulties in your plan which cannot, in my opinion, be easily met, and no flaws in it which make it in any way impracticable. On the contrary, it has been admirably worked out, all contingencies seem to have been foreseen, and I can find very little, if anything, to criticize about it, although I may have suggestions to make regarding some of the details when the time comes to study them.

The rapid transit question is one which is sure to confront a growing city. The congestion by autos and by street cars impedes traffic in the principal streets very greatly, and in some cases becomes an intolerable nuisance. In most large cities in this country and in Europe it has been found necessary to study and devise means of relieving this congestion of the streets.

There are three methods by which this congestion may be relieved:

- (1) By the construction of new streets;
- (2) By elevated railways;
- (3) By subways.

(1) This plan does not remove the traffic from the surface of the ground, but simply provides a greater number of arteries to carry it. It is very expensive and does not do away with grade crossings. Street car lines laid in a street whether new or old must cross intersecting streets at grade. The laying out of new streets is not in general a solution of the rapid transit problem, since rapid transit is impossible where grade crossings exist at short intervals; neither is it a solution of the problem of street congestion, except so far as it provides a greater number of arteries. However, new streets in some places are, of course, often desirable or necessary, and are frequently provided, sometimes on a somewhat extensive scale.

(2) Rapid transit may be provided and the streets may be left free for the use of ordinary vehicles if the street car lines are carried on elevated railway structures. This method of meeting the problem does provide rapid transit and relieves the congestion of streets, but it is unsightly, it damages adjoining property, it obstructs light, and it is noisy. It has been used in Paris and Berlin, and in New York, Chicago, Philadelphia, and Boston, but it is not the best solution. Where adopted, it has generally been on account of the small expense as compared with the other two solutions.

(3) Instead of placing the street car tracks on elevated structures, they may be placed in subways under the streets. This is the most modern solution of the problem, and has been adopted in Paris, Berlin, London, Budapest, and in Boston, New York, and Philadelphia. It has the advantage that it does not damage adjoining property, but rather increases its value. It does not obstruct the light and air or make any noise that is perceptible above ground. However, it is very expensive. The cost for a subway excavated under existing city streets, varies sometimes from \$1,000,000 to \$5,000,000 per mile, depending upon the number of tracks, the width of the streets, and other conditions. This great expense renders a subway impracticable except in large cities and where the traffic is very dense. Moreover, subways involve frequently extensive reconstruction of gas and water pipes and sewers, the cost of which adds very largely to the total expense.

In Rochester, the congestion on the main streets is already becoming serious. Even in cities of the size of Rochester, the rapid transit problem sometimes becomes an important one, as, for instance, in Providence, R. I., where subways have been studied but not built. By your plan an opportunity is offered for the City of Rochester to obtain a transportation line in the form of a subway, though open at the top, except where the new street is located, with no grade crossings of streets, the line passing directly through the heart of the city, and the cost being relatively extremely small. The line of the canal is in a location which is almost the ideal one that would be chosen for a rapid transit line through Rochester if the canal were not there. The plan offers an opportunity to bring in the interurban and suburban lines outside the congested district and to carry them through the city, or to the heart of the city, where they can be turned back. The cars entering from the east, may go to the center of the city and there be turned back if it is not desired to carry them through the city. The cars from the west can be treated in the same way, or cars can pass through the city from east to west connecting the suburbs on each side.

Moreover, instead of having one central distributing station at which all cars from east and west are looped back, your plan has the great advantage of offering three distributing stations, at South Avenue, the City Hall, and West Main Street, respectively.

The plan of having three distributing stations is very much better than the plan of having a single station. The latter soon becomes overcrowded, for it is recognized that if a city is growing fast it is very difficult to provide facilities sufficient to keep up with the growth. When the Boston subway system was built, a station was provided at Park Street where all, or almost all, the cars from the south and west were looped back, although provision was made for carrying some cars through the city to the north. This station soon became inadequate and had to be greatly enlarged. It is now very much congested at the rush hour. The station would be very much improved if there were several distributing stations. Every one now comes to Park Street to take his car, because that is the end of the

line and he is more sure of getting a seat there. Your City Hall station would correspond in location to Park Street, but as cars from the east could proceed to Main Street West before looping back, while cars from the west could proceed to South Avenue, no one station would become as overcrowded as a single terminal station would be. Moreover, the area and accommodations required for a single terminal station would be difficult to provide, while your plan provides good accommodations for many years to come at each of the several stations.

Your plan provides an almost ideal method of taking care of the traffic between the center of the city and the suburbs or over interurban lines. The following advantages which it offers may be enumerated:

- (1) There are no grade crossings of streets from one end of the line to the other.
- (2) There is no problem of ventilation, because your plan does not provide a subway, but simply places the tracks on the canal bed and is open on the top. The problem of ventilating a subway in a city is one of no small importance of magnitude, as those who are familiar with the New York subway well know.
- (3) It offers an opportunity to improve many of the street grades.
- (4) The number of pipe and sewer changes is very small.
- (5) There is comparatively little excavation. It is a very different problem to excavate a few feet in the bottom of your canal and to excavate the entire prism of a subway under an existing city street.
- (6) There will be practically no interference with traffic during construction.
- (7) Your plan will enable a considerable saving to be made in the running time between the center of the city and the suburbs and will therefore much facilitate the development and building up of your suburban districts.
- (8) On account of the various elements above mentioned, the cost which your plan involves for providing a rapid transit line for street car transportation will be very small in comparison with the cost of providing equivalent facilities in any other way.

The only objection that I can see to your plan, is the possible difficulty with snow, which may occur at times because the line will not be covered. I do not believe, however, that this will be serious. It must be taken care of by the usual methods. In addition, the connections between the surface and interurban lines and the canal line can easily be so arranged that in case of obstruction in the canal line, the cars could use the present surface lines, so that they would be no worse off, even in case of a heavy snow storm, than they are at the present time.

Your plan is a unique plan, and I know of nothing like it anywhere, the peculiarity being that you have at your hand a location already available in the abandoned canal. In Cincinnati an abandoned canal was utilized for a short distance for a similar purpose and a new suburb transportation line is under construction, but the relation of the canal to the project there is very minor compared with its relation in your case, where the abandoned canal forms the entire rapid transit line.

It is unnecessary for me to specify or for you to decide upon all the connections to be made with surface lines at the present time. Some of these, as, for instance, the connection with the surface tracks at Exchange St., need not be provided at first, though the work should be designed so that such a connection may be made later if found desirable. Neither is it necessary at the present time to go into all the details. Since I visited Rochester, you have succeeded in formulating a design

by which the loops where the cars are turned back are made without a grade crossing of the main tracks. After the general plan has been entered upon, these details can be studied and carefully worked out.

I believe, therefore, that the abandonment of the Erie Canal which might at first have seemed to some a detriment to your city, will, if your plan is adopted, prove to be an advantage. The industries along the old canal will be as well accommodated as they were before, or better. Indeed, they will then be able to ship goods direct by rail to their destinations. There has been much discussion with reference to the advantages of inland waterways, and of course, now that the barge canal has been constructed, everybody hopes that it will be a success and that the investment will be justified. The fact remains, however, that transportation by water generally involves transportation by rail between the end of the water line to the destination of the goods. Transportation by rail, however, affords the opportunity by means of sidings to carry goods without trans-shipment from their origin to their destination. Your city will have a barge canal with its advantages, and if your plan is adopted, the industries along the old canal, instead of shipping by water, will be able to ship by rail to any desired point.

Finally, your plan will provide for the future urban and suburban transportation requirements of Rochester for many years to come. It will allow of such routing of cars as may be found most convenient as the development of the plan progresses. It is ideally flexible and can be adapted to varying conditions in a way which I have never seen paralleled in any similar plan.

It seems to me that when the facts regarding your plan and the advantages that it offers to the city are made known to your public and to your city officials, those advantages will be so evident that there will be no hesitation in adopting your plan and in taking such steps as are necessary to put it in execution.

Also, I cannot refrain from stating that I hope the citizens of your city will realize the debt of gratitude which they owe to you for perceiving the opportunities which the abandoned old canal places within the reach of the city, and for formulating this plan by which those advantages may be secured and realized.

Very truly yours,

GEORGE F. SWAIN.

Cambridge, Massachusetts.

January 1, 1923.

Mr. E. A. Fisher, Superintendent of City Planning,
Rochester, N. Y.

Dear Sir—On August 23, 1921, I submitted a report to you regarding the acquisition of the abandoned Erie Canal by your city and its use for rapid transit for urban and interurban cars, and as a freight railway connection between the several railway stations. My report expressed emphatic approval of your plan for doing this.

Since that time, the city has acquired the abandoned canal, and the project is in the course of execution. Since my previous report, I have visited your city twice, once in January, 1922, and once later.

At the time of my visit a year ago, I became still further convinced of the correctness of the conclusions in my former report. You were at that time preparing

to let a contract for the central portion of the work, including the new street from South Avenue to Oak Street. We discussed matters relating to this contract, and it was let soon afterward.

At my recent visit, I examined the work which had been done, and discussed with you a number of matters of detail concerning the remainder of the project, and also, to some extent, the question of the financial return to be derived.

In my opinion, the work so far accomplished has been well done and calls for no adverse criticism. Your stations are excellently designed and will prove a great convenience to the public.

The work already let will, when completed, give the city a street improvement which will be of great benefit. You will have a new street along the line of the canal, which cannot fail to become an important thoroughfare, particularly when your other street improvements are completed. Property along this new street will be valuable, and it should be developed according to some consistent plan. The cost of this section of your subway, for the reason that it provides this new street, will be largely chargeable to General Street Improvements, and only a portion of the cost will be chargeable to the Subway Project.

When the remaining portion of the work is completed, so that interurban cars may be run into the new stations, I believe that large advantages will be gained by the city railway and by the interurban lines.

The city will have provided for it a means of rapid transit entirely crossing the City from east to west. There will be a saving of time, a decrease in danger of accident, unobstructed track without grade crossings, and central distributing stations most conveniently located in the business district.

The interurban lines, if diverted into the subway, will gain in running time, and therefore will diminish platform charges. There will be less danger of accident, and larger capacity for traffic to the very heart of the city. To run over the subway tracks, unobstructed by street crossings, with proper signals, and with a good track, will be a great improvement over the use of the tracks in the city streets.

The city lines will also gain, for they will be relieved of the delays and obstructions caused by the running of heavy interurban cars over their tracks, and the wear of those tracks, due to such use. The city lines will also gain in capacity for traffic as well as in speed and in earnings.

There will, therefore, undoubtedly be a gain to the public and to the city and interurban railway lines, not only in convenience and capacity, but in present and prospective earnings. The use of the subway should result in the increased development of suburban areas, and a largely increased traffic of those lines, and, therefore, larger earnings. I will not, however, attempt to make any estimate of what this increase should be; but I may say that in projects of this kind, the future must be kept in view, rather than the immediate present. Oftentimes, such projects do not result in immediate earnings large enough to pay a fair return on the cost, while in the course of time, the financial returns may be very large. Imagination, foresight, and vision must be used in considering projects of this sort. If immediate financial return had been demanded, probably none of our railroads would ever have been built. I believe that the construction of your subway will ultimately, and I trust in a very short time, be of immense advantage to your city, and will bring entirely adequate and satisfactory financial return.

The steam railway lines will also gain the opportunity to connect their stations with the industries along the route of the canal, and to connect their stations with each other, allowing an interchange of freight. I understand that there is available for factory sites along this route some 340 acres of land zoned as industrial territory only about 70 acres of which is occupied by about 30 separate industries, the balance being available for additional industries. I believe that these lands will be developed as soon as the advantages of your project become appreciated. With proper co-operation from the steam railways, this freight traffic should also bring adequate financial returns.

I have been pleased to note that there seems to be no disapproval or criticism of your project. I do not see, however, how there well could be any criticism. It seems to appeal to everybody, and to those who are familiar with problems of this kind in other cities, it is a unique opportunity, which the city has done well to take advantage of, and which, in my opinion, will in the future prove a valuable asset.

Very respectfully yours,

GEORGE F. SWAIN.

LeGrand Brown

To whose vision, enthusiasm and energy the Rochester Subway will ever be a monument!

Any reference to the Rochester Subway would be woefully incomplete without recording in eternal letters the name
LeGrand Brown

Mr. Brown literally gave his life to the planning of this project. He was employed in the City Planning Bureau February 1, 1919, as an expert on the Rapid Transit and Industrial Railway. The first of the following July he was appointed Deputy City Engineer, and was continued also as an expert in the preparation of plans for the use of the canal lands. To this work he contributed unsparingly of his vision, enthusiasm and energy.

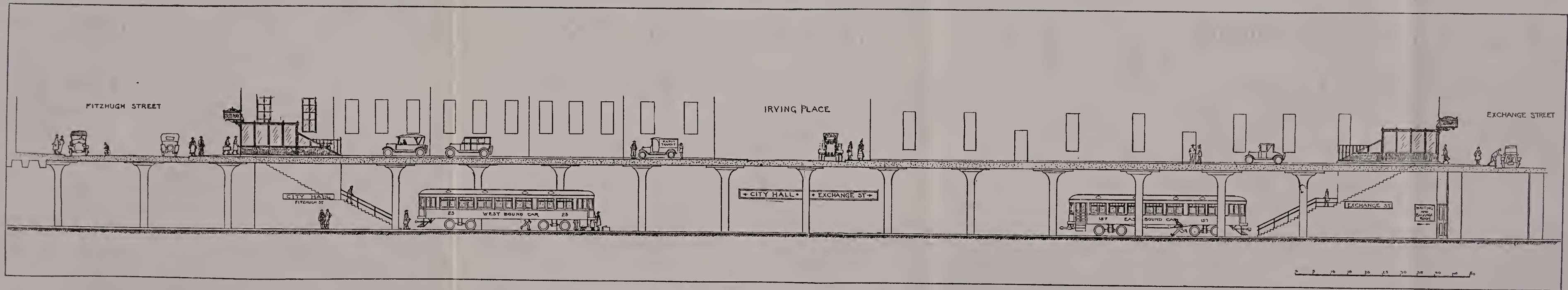
Mr. Brown came to his untimely death February 19, 1923.



ERIE CANAL AQUEDUCT PRIOR TO SUBWAY CONSTRUCTION



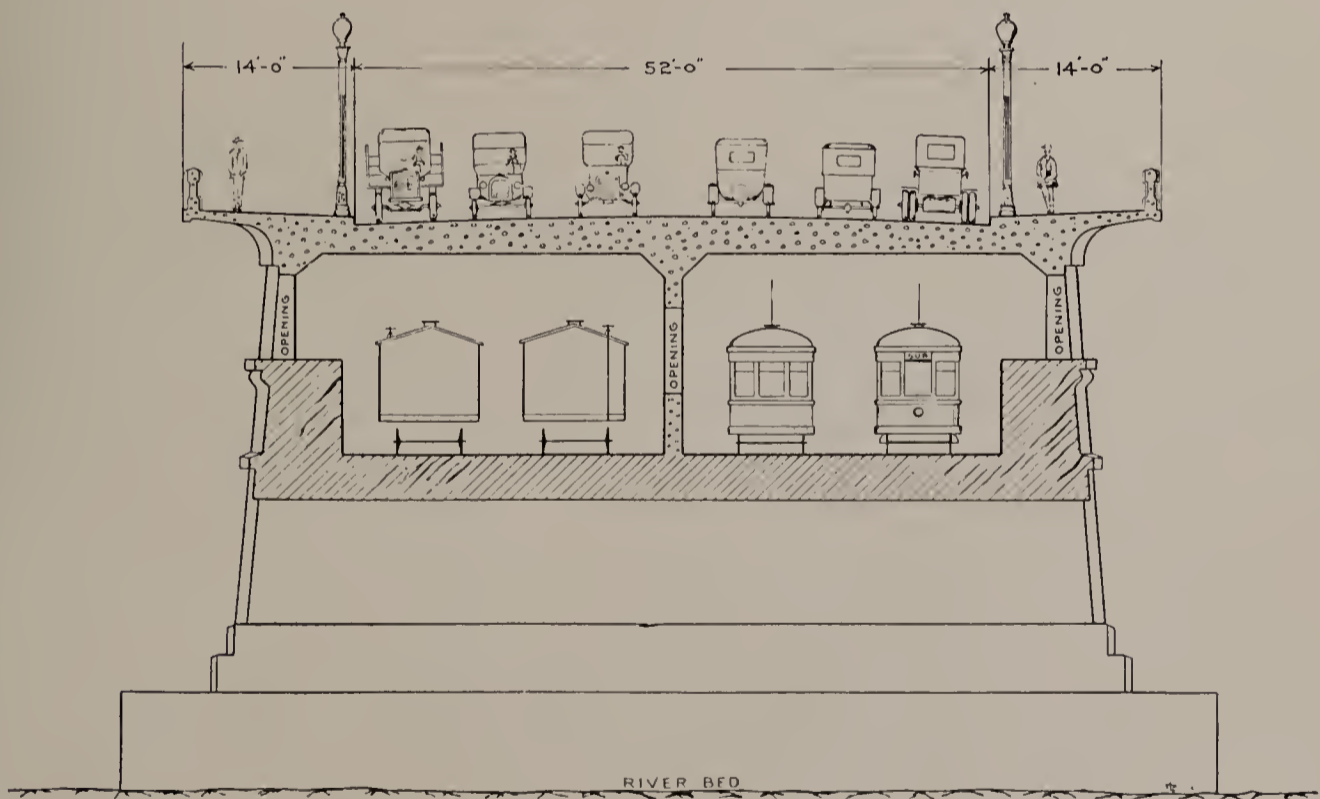
EXTENDING TWO EASTERLY ARCHES OF THE AQUEDUCT ACCOUNT OF SUBWAY CONSTRUCTION



ROCHESTER SUBWAY—CITY HALL STATION



CROSS SECTION AT CITY HALL STATION
LOOKING WEST



CROSS SECTION AT AQUEDUCT
LOOKING WEST



CARROLL AND FITZHUGH RACE LOWERED ACCOUNT OF SUBWAY CONSTRUCTION



PERMANENT CONNECTION OF SUBWAY WITH B. R. & P. R. R.

Charter Provisions Relating to City Planning

SECTION 290. City Planning Bureau. The City Planning Bureau is in the Department of Engineering, and the chief officer thereof is the Superintendent of City Planning, appointed by the City Engineer * * *

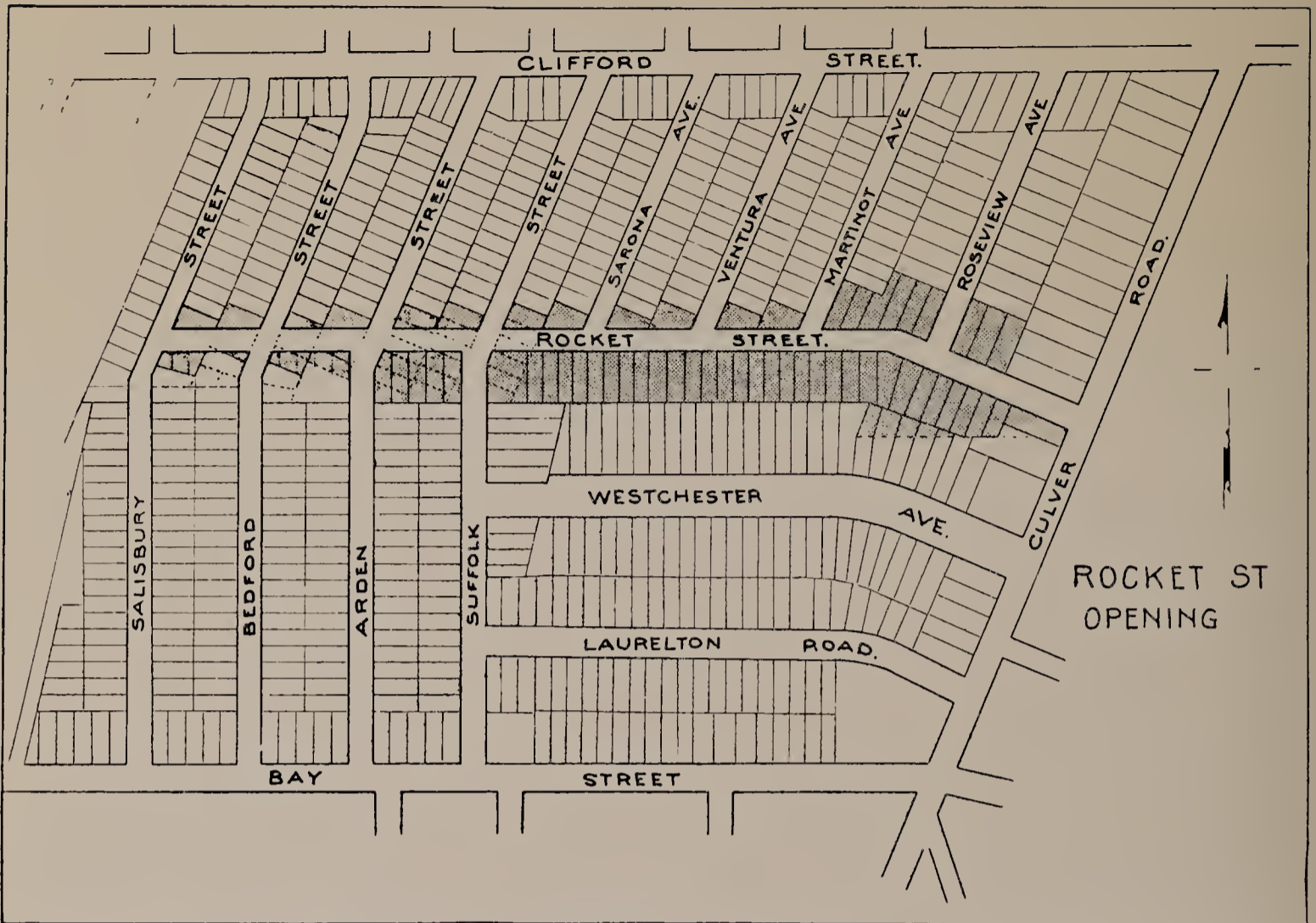
SEC. 291. The Superintendent of City Planning has power to accept streets offered for dedication, * * * and must each month report to the Common Council the names and descriptions of streets so accepted.

It is the duty of the Superintendent to pass upon all proposed plans for opening, widening, extending or discontinuing streets, or fixing the width of pavements or sidewalks, and an ordinance for any such purpose must not be adopted without his recommendation or approval. * * *

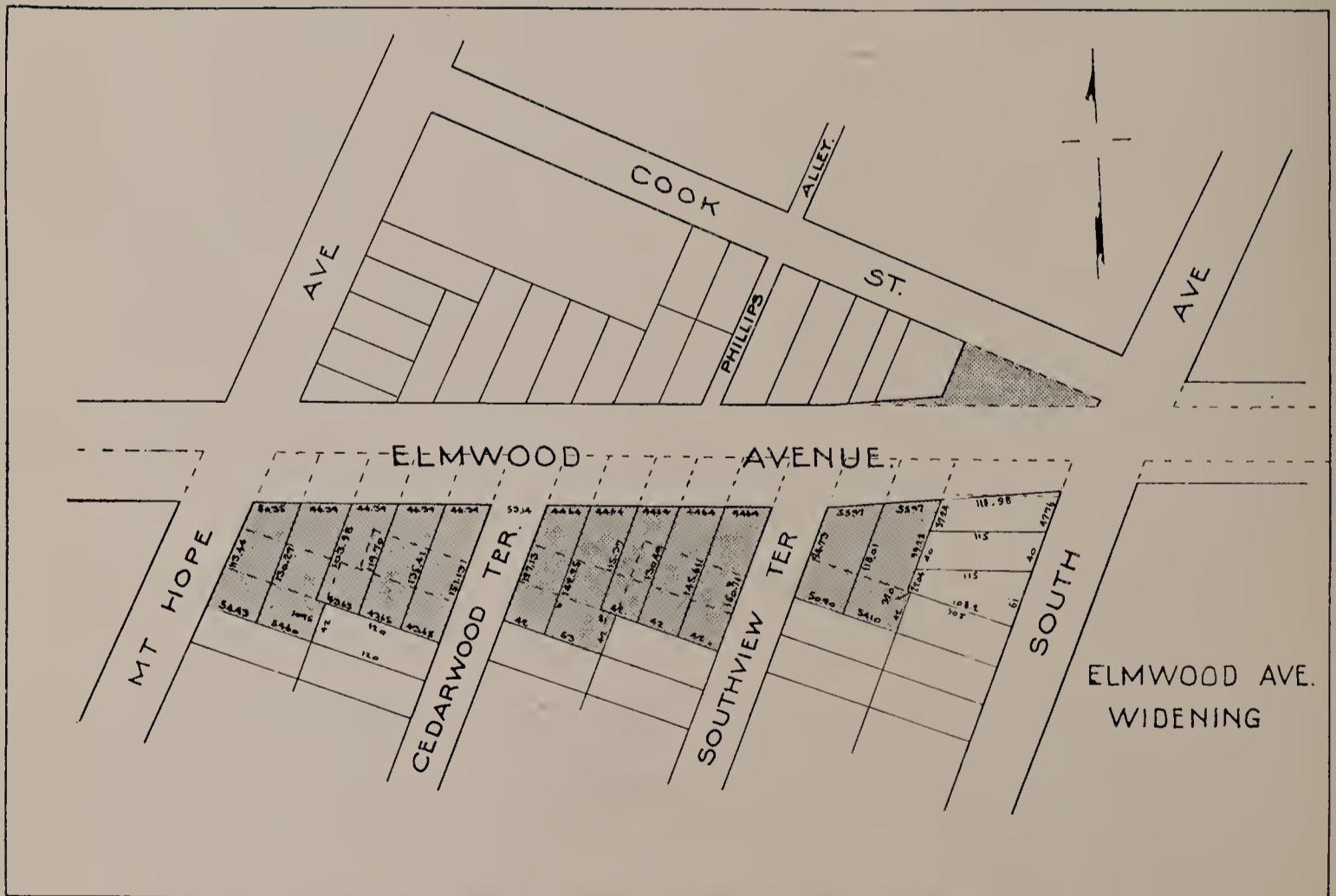
It is the duty of the Superintendent of City Planning to prepare a city plan and to set forth thereon streets which the proper development of the city requires to be opened, widened, extended or discontinued, and the width thereof, also the sewer systems necessary to be constructed or extended, and the water mains necessary to be laid or extended, and the locations of buildings, docks, parks, playgrounds, school houses and municipal buildings. Such plan shall cover the territory embraced within the boundaries of the City of Rochester and also all territory within one mile of such boundaries, and such further territory outside of the city as the Superintendent may deem proper. Such plan may be made in parts from time to time covering different portions of the city or territory outside of the city. Amendments, alterations and additions to said plan or plans may be made from time to time.

The Superintendent of City Planning has power to divide the city into districts and to regulate, restrict and prohibit the location of businesses, trades and industries, and the location or alteration of buildings or structures designed for specified uses or of a certain character or class in any such district. A portion of a street may form or be a part of any such district. Residence districts may be created in which shall be permitted only single-family dwelling houses or residences containing accommodations for such number of families as may be deemed proper. Specified businesses, trades or industries may be permitted in one district, and others excluded therefrom, and special regulations may be prescribed for the businesses, trades or industries so permitted in such district. Regulations, restrictions and prohibitions in one or more districts may differ from those of other districts. The use or occupation of a building or structure in any district must not be changed so as to be in violation of the regulations, restrictions and prohibitions applying to such district. Such regulations, restrictions and prohibitions shall be designed to promote the health of the public, for the safety and welfare of the inhabitants of the city, for the promotion of the growth and prosperity of the city, and to secure the proper development and upbuilding of the city.

SEC. 292. City Planning Advisory Board. The City Planning Advisory Board consists of the Corporation Counsel and the four members appointed by the Mayor, and it must annually elect one of its members president thereof, and has power to adopt rules and regulations for the transaction of its business, and to hold public hearings upon matters coming before it, and it must hold a public hearing upon the written request of two members. It is the duty of the Superintendent of City Planning to submit all fixations of the width of pavements and sidewalks and all proposed plans and the proposed formation of zoning districts and regulations



ROCKET STREET OPENING SHOWING EXCESS CONDEMNATION



ELMWOOD AVENUE WIDENING SHOWING EXCESS CONDEMNATION

in reference thereto, and proposed action with reference to accepting, opening, widening, extending and discontinuing streets, to the City Planning Advisory Board, and upon approval by the Board, the same become effective. In case any such matter so submitted is disapproved by the City Planning Advisory Board, the Superintendent may present the same to the Mayor, and the Mayor, after a public hearing, may approve the same, and it thereupon becomes effective.

SEC. 294. Restrictions as to Private Streets. A private street not accepted or opened by the city, must not be lighted, cleaned, swept or sprinkled at public expense; water mains must not be laid or extended into the same, sewers in such private street must not be permitted to be connected with city sewers, and the curb on the public street intersecting such private street, must not be removed and the private street and intersecting public street must not be connected.

SEC. 295. Violations, how punished. Any person violating any rules, regulations, restrictions or prohibitions made by the Superintendent of City Planning and duly approved, as provided in this article, shall be guilty of a misdemeanor, and on conviction thereof, shall be punishable by a fine not exceeding one hundred fifty dollars, or by imprisonment not exceeding one hundred fifty days, or by both such fine and imprisonment, or by a penalty of five hundred dollars to be recovered by the City of Rochester in a civil action.

SEC. 126. Injunctions to restrain violations of ordinances and certain rules and regulations. The City of Rochester may maintain actions in the Monroe County Court, the Supreme Court and other courts of record of competent jurisdiction to restrain violations of penal and other ordinances of the Common Council and of rules, regulations, restrictions and prohibitions made by the Superintendent of City Planning and duly approved.

Section 202 provides that maps of subdivisions of land, before being filed with the County Clerk of Monroe County, must be approved by the Bureau of City Planning, and a copy, or duplicate, delivered to the Assessors of the city.

Section 455, paragraph 1, provides that the city may acquire, under condemnation proceedings, negative easements or amenities, or impose any restrictions in the nature of covenants running with the land on any real estate within or without the limits of the city, which it is authorized by this Act to acquire. This provision allows the city to fix set-back lines on public streets.

Section 455, paragraph 2, provides for excess condemnation. The city may take more land and property than is needed for the actual construction in laying out, widening, extending or relocating parks, public places, highways or streets, providing, however, that the additional land and property so taken shall be no more than sufficient to form suitable building sites abutting on such park, public place or street.

Section 86 provides for regulating and limiting the height and bulk of buildings or structures through ordinance of the Common Council. An ordinance for any such purpose must not be adopted without the recommendation or approval of the Superintendent of City Planning.

Population

Some General Statistics

The area of the city on December 31, 1922, was 21,000 acres. The population by the U. S. census of 1920 was 295,750. On December 31, 1922, the estimated population is about 315,000.

The following table shows the population from 1820 to 1920 inclusive, as compared with the population of the City of Buffalo on the west and the City of Syracuse on the east. The table also shows the estimated population for the years 1930, 1940 and 1950 for the city of Rochester.

POPULATION OF ROCHESTER—TABULATED IN COMPARISON WITH BUFFALO AND SYRACUSE.
TOGETHER WITH MODIFIED CURVE AND ITS EQUATION
FOR THE FUTURE OF ROCHESTER TO 1950

Year	ROCHESTER		BUFFALO		SYRACUSE		ROCHESTER MODIFIED	
	Population	Rate of Increase	Population	Rate of Increase	Population	Rate of Increase	Population	Rate of Increase
1820	1,502		2,095		1,814		1,500	
1830	9,269	5.17	8,653	3.14	6,929	2.81	8,500	4.56
1840	20,191	1.18	18,213	1.10	11,014	.59	20,000	1.35
1850	36,403	.81	42,261	1.32	22,271	1.02	33,000	.65
1860	48,204	.32	81,129	.92	28,119	.26	48,500	.47
1870	62,386	.29	117,714	.45	43,051	.53	68,000	.40
1880	89,366	.43	155,137	.32	51,791	.20	94,000	.38
1890	133,896	.50	255,664	.65	88,143	.70	125,000	.33
1900	162,608	.22	352,387	.38	108,374	.23	166,000	.33
1910	218,149	.34	423,715	.20	137,249	.27	220,000	.33
1920	295,750	.35	506,775	.20	171,717	.25	295,000	.34
*1930							392,000	.33
*1940							518,000	.32
*1950							678,600	.31

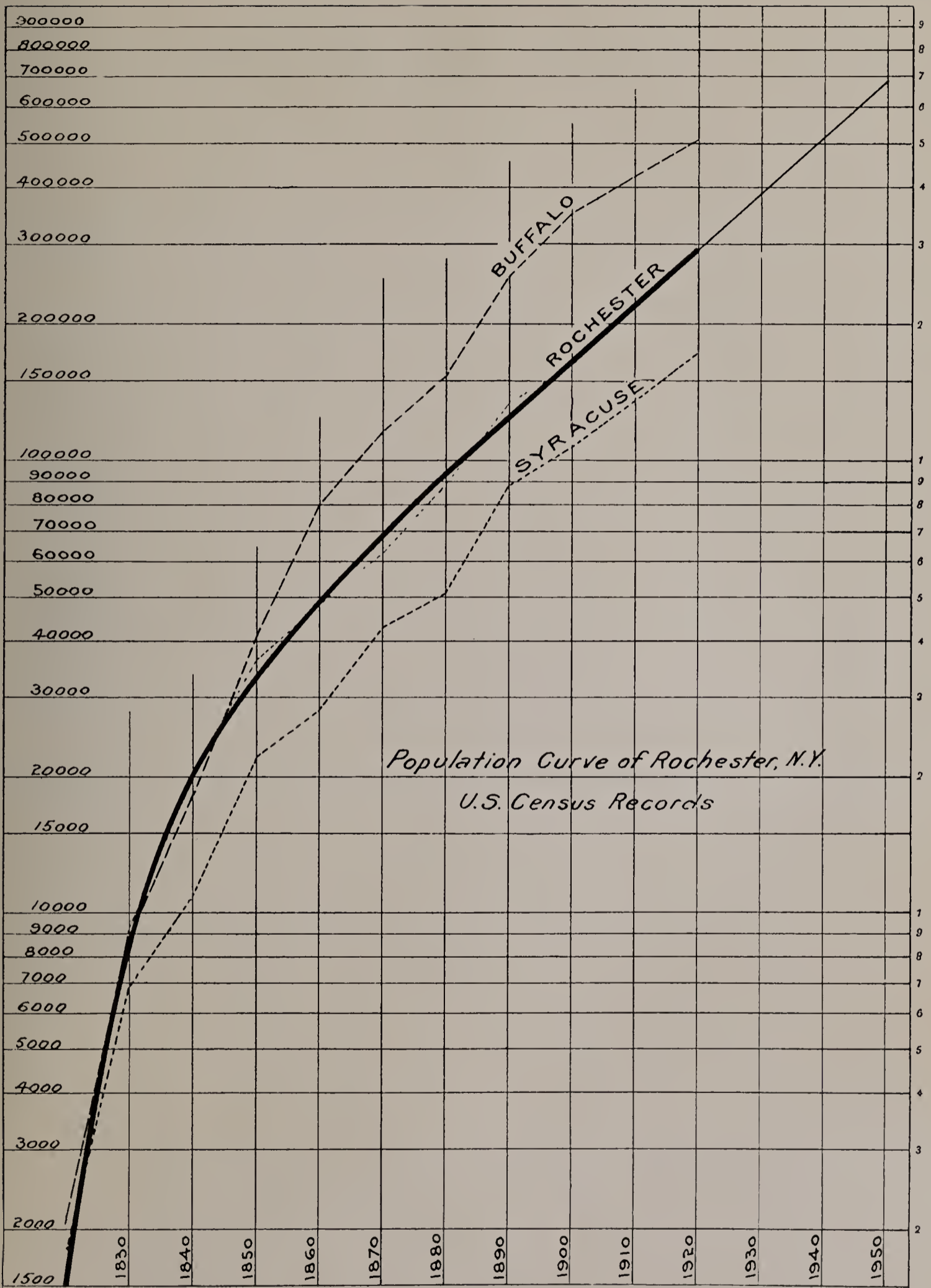
$$P_n = 220,000 \times 1.34 \times \left(1.34 - \frac{1}{100}\right)^n \times \dots \times \left(1.34 - \frac{N-1}{100}\right).$$

P = Population at any future 10 year census date.

n = Number of decades after 1910.

*—Estimated.

Table and Diagram by John F. Skinner, Deputy City Engineer



Resolution upon the Deaths of Hon. George W. Aldridge and Hon. Hiram H. Edgerton

The Hon. George W. Aldridge served as member of the Advisory Board from its organization in 1918 to Dec. 31, 1921. He died in New York City, June 13, 1922, while serving as Collector of the Port of New York.

The Hon. Hiram H. Edgerton was Mayor of Rochester for 14 years, from 1908 to 1921, inclusive. The inauguration of the City Planning Bureau was due to his wise foresight. He died in Rochester, June 18, 1922.

The following resolution was adopted by the Advisory Board on June 26, 1922.

RESOLUTION

"No city department or board sustained a greater loss in the death of Hon. George W. Aldridge and Hon. Hiram H. Edgerton, than the Bureau of City Planning. Mr. Aldridge, until the beginning of the present year, was a member of our Board, and all of the present members were appointed by Mr. Edgerton. We had become accustomed to the wise counsel and hearty co-operation of them both. They were City Planners for many years and City Builders as well. Be it therefore

"RESOLVED, That we, the members of the City Planning Advisory Board and the Superintendent of City Planning, do hereby join with all the people of the City of Rochester in sincere sorrow at the passing away of these two able men, and with all other loyal citizens we pledge our best efforts to the continuance of the work to which they gave so many of the years of their lives."

ROTGH

Rochester. City planning	
bureau	783.83g27
The Rochester city plan.	R58
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