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A MASTER PLAN

for the

PHYSICAL DEVELOPMENT OF THE CITY

Richmond. City planning Commission.



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CITY PLANNING COMMISSION
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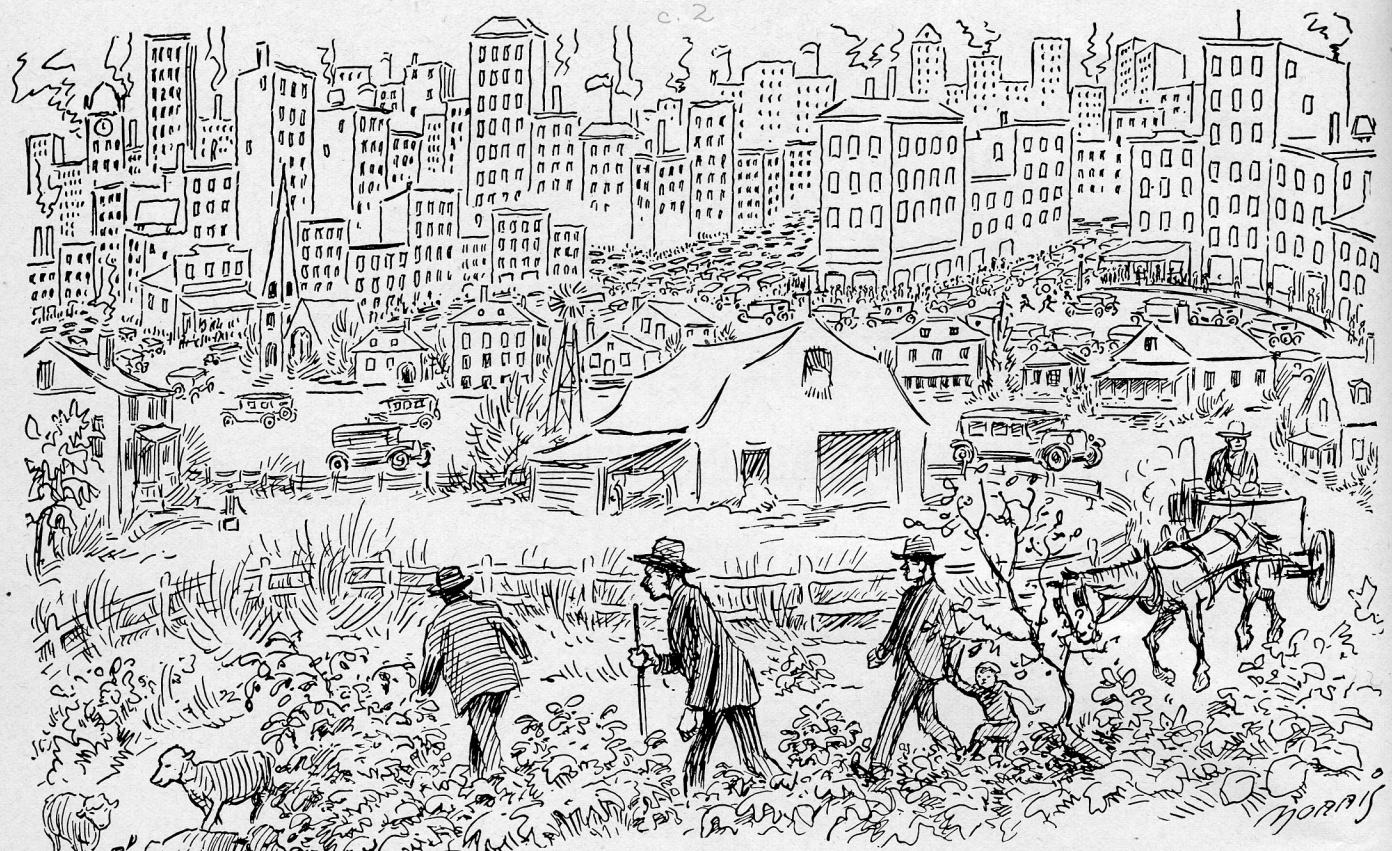



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The Calf-Path

By SAM WALTER FOSS

I

One day through the primeval wood
A calf walked home as good calves should;
But made a trail all bent askew,
A crooked trail as all calves do.
Since then three hundred years have fled,
And I infer the calf is dead.

II

But still he left behind his trail,
And thereby hangs my moral tale.
The trail was taken up next day
By a lone dog that passed that way;
And then a wise bell-wether sheep
Pursued the trail o'er vale and steep,
And drew the flock behind him, too,
As good bell-wethers always do.
And from that day, o'er hill and glade,
Through those old woods a path was made.

III

And many men wound in and out,
And dodged and turned and bent about,
And uttered words of righteous wrath
Because 'twas such a crooked path;
But still they followed—do not laugh—
The first migrations of that calf,
And through this winding wood-way stalked
Because he wobbled when he walked.

IV

This forest path became a lane,
That bent and turned and turned again;
This crooked lane became a road,
Where many a poor horse with his load
Toiled on beneath the burning sun,
And traveled some three miles in one.
And thus a century and a half,
They trod the footsteps of that calf.

V

The years passed on in swiftness fleet
The road became a village street;
And this, before men were aware,
A city's crowded thoroughfare.
And soon the central street was this
Of a renowned metropolis;
And men two centuries and a half
Trod in the footsteps of that calf.

VI

Each day a hundred thousand rout
Followed this zig-zag calf about
And o'er his crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuries dead.
They followed still his crooked way,
And lost one hundred years a day;
For thus such reverence is lent
To well-established precedent.

VII

A moral lesson this might teach
Were I ordained and called to preach;
For men are prone to go it blind
Along the calf-paths of the mind,
And work away from sun to sun
To do what other men have done.
They follow in the beaten track,
And out and in, and forth and back,
And still their devious course pursue,
To keep the path that others do.
But how the wise old wood-gods laugh,
Who saw the first primeval calf.
Ah, many things this tale might teach—
But I am not ordained to preach.

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A MASTER PLAN

FOR THE PHYSICAL DEVELOPMENT OF THE CITY

PRESENTED TO

THE HONORABLE MAYOR AND CITY COUNCIL

BY THE

CITY PLANNING COMMISSION

RICHMOND, VIRGINIA

CITY OF RICHMOND

RICHMOND, VIRGINIA

CITY PLANNING COMMISSION
217 GOVERNOR STREET
ZONE 19

November 29, 1945

HONORABLE MAYOR AND CITY COUNCIL,
Richmond, Virginia.

GENTLEMEN:

At a regular meeting of the City Planning Commission held on Monday, November 12, 1945, at which there were present six of the seven members constituting the Commission, a Master Plan for the physical development of the City was adopted unanimously, and ordered forwarded to your honorable body with recommendation for adoption and approval, in the following language:

WHEREAS, pursuant to the provisions of an ordinance approved July 12, 1940 concerning the City Planning Commission, the Commission has caused to be prepared a Master Plan for the physical development of the City of Richmond together with accompanying maps, plates and descriptive matter intended to form parts of the plan; and

WHEREAS, the Commission has complied fully with all requirements of the ordinance aforesaid with reference to the holding of public hearings after due publication in a newspaper of general circulation of time and place set for such public hearings; and,

WHEREAS, the Commission elected to hold separate public hearings on each of seven separate sections of the plan instead of the one public hearing on the plan as a whole, made a minimum requirement by the ordinance previously referred to, and in addition through sub-committees of the Commission held 114 special hearings and round table discussions with thirty-five organizations and governmental agencies, including technicians and facility user groups, federal, state and city agencies, civic groups and commercial group organizations, resulting in many revisions and improvements over the original and preliminary drafts all of which revisions and improvements are incorporated in the Master Plan;

NOW THEREFORE BE IT RESOLVED, that the City Planning Commission hereby officially adopts the said Master Plan for the physical development of the city, sometimes referred to therein as the Comprehensive Plan, and orders the same printed and an attested copy of the said plan to be certified to the City Council with the Commission's recommendation for adoption and approval and an attested copy certified to both the clerk of the Chancery Court of the City of Richmond and the clerk of the Hustings Court, Part 2 of the City of Richmond.

Respectfully submitted.

CHARLES L. REED, *Chairman*

JB:KP
Attested:
JAMES BOLTON, *Secretary*

65181

To the Citizens of the Past

who made Richmond a city of beauty, rich in accomplishments

this plan is gratefully dedicated

—— and ——

to the Citizens of Today

who are responsible for its economic growth and growing beauty

this plan is respectfully presented

MAYOR AND PERSONNEL COMPOSING CITY COUNCIL

HONORABLE WILLIAM C. HERBERT, *Mayor*

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P. L. TRAVIS
E. D. TURNER, JR.
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CITY PLANNING COMMISSION

MEMBERS APPOINTED BY THE MAYOR

Mr. Chas. L. Reed, *Industrialist*
Mrs. Frederic R. Scott, *Civic Interests*
Mr. L. G. Chewning, *Real Estate Agent*
Mr. F. T. Bates, Jr., *Retail Merchant*
Mr. A. O. Budina, *Architect*

MEMBER ELECTED BY THE CITY COUNCIL

Mr. J. Vernon Rice, *Bakers and Confectioners Supplies and Equipment*

MEMBER EX-OFFICIO

Mr. G. M. Bowers, *Director of Public Works*

OFFICERS

Mr. Chas. L. Reed, *Chairman*
Mrs. Frederic R. Scott, *Vice-Chairman*

For purposes of coordination one member is required by ordinance to be a citizen member of the Board of Zoning Appeals. Mr. A. O. Budina, *Chairman of the Board*, serves in that capacity.

James Bolton,
Secretary

Harland Bartholomew & Associates,
Consultant

Charter members of the Commission who were prevented from continuing in service to the date of completion of the report on account of pressure of other business in most cases connected with the war effort are:

Mr. E. M. Hastings, *Transportation*,
Chairman, January 1941 to September 1944.

Mr. Webster S. Rhoads, Jr., *Retail Merchant*,
Member, January 1941 to May 1942.

Mr. D. Tennant Bryan, *Publisher*,
Member, January 1941 to August 1941.

ACKNOWLEDGMENTS

The Commission acknowledges with grateful appreciation the splendid cooperation received from representatives and committees of governmental agencies, civic organizations, and historical societies specially appointed to work with the Commission and especially to those individuals composing this representation, who gave so generously of their time in reviewing the original reports in manuscript form, and in round table discussion with committees of the Commission.

The value of the many helpful suggestions received from this group of volunteer workers cannot be too highly appraised, for without this aid it would have been totally impractical for so small a group as compose the Commission to fit the modern technic of City Planning to the practical considerations of local customs, background and financial limitations.

The agencies, groups and associations that thus aided the Commission are as follows:

Federal Public Roads Administration
The Federal Housing Administration
The Federal Civil Aeronautics Administration
The Virginia State Department of Highways
The Aeronautical Division of the Virginia Corporation Commission
The Adjutant General
The Virginia State Planning Board
The Medical College of Virginia
The officials of Henrico and Chesterfield Counties
Transportation Interests, including rail, air, and water
Eastern Air Lines
Virginia Electric & Power Company
Virginia Highway Users Association
Richmond Waterfront Terminals, Inc.
City Departments of Utilities, Safety, Health, Welfare, Finance, Law, School Board, Board of Assessors, Public Works
The City Board of Zoning Appeals
The Richmond Chamber of Commerce
The Richmond Real Estate Exchange
The Builders Exchange
Community Recreation Association
Community Council
The Sheltering Arms Hospital
Wm. Byrd Chapter of Association for the Preservation of Virginia Antiquities
The Valentine Museum
The Richmond First Club
The Housing Authority of the City of Richmond
The Leigh Street Civic Association

FOREWORD

This is A MASTER PLAN, not A DREAM.

If you hastily consider it as such, without carefully reading its contents, you are doomed to disappointment. If after you have studied the text, and the dream idea still persists you will agree that it is only a dream in that practical, experienced, civic-minded individuals and organizations have looked into the future with all the skill and unselfishness that is humanly possible. They have had one single thought—To create and to project A MASTER PLAN that will make their beloved city a pattern of utility, beauty and efficiency in the interest of not one or two but of all its citizens; a pattern which will survive the hasty dreams and plans of the inexperienced and self-minded; a pattern of patterns, built upon the sound foundation that foresight is progress; that while traditions are glorious they often consort with self-complacency.

Traditions are for the most part static, but progress is dynamic. Traditions often lead us to the state of mind of being "penny-wise and pound foolish."

So, Citizens of Richmond, when you read this MASTER PLAN, read it with an open mind, a mind that is on the march. Think of generations unborn who are to reap what it is wished to sow through this MASTER PLAN. Think of those unborn citizens, who at some future day, if this plan comes to fruition, can proudly say as St. Paul once said "I am a citizen of no mean city".

A CITIZEN.

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INTRODUCTION

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INTRODUCTION

The Richmond City Plan must have several objectives. These include:

1. A well balanced unified development of the whole city.

   (Slums, blighted districts and excessive decentralization are by-products of unbalanced design of the city.)

2. Sound and stable property values in all parts of the city.

   (High taxes and rapid depreciation of individual property values are the inevitable result of unwarranted speculation in city real estate.)

3. Protection of large single family dwelling areas.

   (Individual home ownership is the best guarantee of good citizenship. It is also the principal source of revenue with which to operate the city government.)

4. Good environment for rental housing areas.

   (This is a much neglected phase of city life. Slum clearance federal subsidy of low rental housing is only one small part of the problem. Good housing standards should be established and enforced for all population groups.)

5. Relief of traffic congestion.

   (Proper design of the street system will accomplish as much or more than extensive traffic control.)

6. Good mass transportation facilities.

   (A well designed street system is necessary for expeditious local transportation.)

7. Adequate public recreational areas.

   (A few parks will not meet this need. There should be a full and complete plan of playgrounds, athletic fields, neighborhood parks, large parks, boulevards and parkways.)

8. A complete system of public services.

   (These cannot be furnished at reasonable cost where growth is scattered and unplanned.)

9. Attractive design of streets and public open spaces.

   (Beauty is the adaptation of form to function. It is not merely a veneer. It is just as important in a modern city as in the design of an automobile or the cut of a woman's dress.)

PAST PRACTICES IN CITY PLANNING IN AMERICA

While European cities once afforded examples of good city planning, there were few attempts to adopt well designed plans for the early American cities. The early plans of Washington, Savannah and Philadelphia were notable exceptions to the general practice. Furthermore, our cities grew so slowly during much of the nineteenth century that their need for planning was not realized. So much energy was consumed in the pioneer development of a vast new continent that planning for the growth of large cities probably seemed too visionary for much consideration.

At the close of the century, however, cities were growing at such a pace that the results of haphazard growth were most apparent. The unattractiveness of our cities as compared with those of Europe became a topic of popular discussion. Lecturers appeared on the public platforms frequent-

ly showing stereopticon views of European cities and contrasting these with our lack of good design and appropriate setting of public buildings and our streets littered with poles, wires and blatant billboards. Soon there developed a vigorous "City Beautiful" movement. Large volumes, attractively printed and illustrated, proposing City Plans for San Francisco, St. Louis and Chicago appeared between 1904 and 1909.

Studies less pretentious, but similar in character, were made in thirty or forty other cities. This was the beginning of a city planning movement that has grown continually to the present day.

By 1910, however, a reaction set in against the so-called "City Beautiful" movement as being too narrow in its scope. Traffic problems were developing on city streets and there was serious congestion in the railroad terminals of the largest cities. Here were problems that could not be solved by mere "city beautification." A national conference on city planning was formed to deal with these more practical matters and the "city beautiful" movement became absorbed as an element of a broader movement known as city planning.

In justice to some of those who pioneered this field, however, it should be noted that each of the three large city planning volumes previously mentioned envisioned not merely cities of great beauty, but there were incorporated also in them broad schemes for the street traffic and railroad terminal problems, the Chicago Plan particularly having since been followed with great advantage to that city.

It was unfortunate that such great public interest in the betterment of American cities was partially destroyed by overemphasis of city beautification. The momentum was reduced rather than destroyed, however. While certain cities, such as Cleveland, Denver and San Francisco, have salvaged great civic centers from this early effort, and a few cities enlarged their park and recreation systems, most cities soon turned their attention to the more immediate problems of street traffic and transportation problems. Numerous cities soon made studies and published plans for dealing with these matters. Many of these plans looked well into the future and frequently were used as a guide for all immediate construction work. St. Louis coordinated its plans for physical improvements with its capital expenditure program, thus substantially improving the design of the city with minimum cost.

Subsequently, zoning became the vogue and virtually swept the country in the course of ten or fifteen years. Between 1500 and 2000 cities, towns and villages and a few urban counties now have zoning ordinances and plans. It is estimated that from 75 per cent to 80 per cent of the total urban population now live in zoned communities.

In the past ten years, 1932-1941, our cities have engaged in extensive housing studies and in the construction of large housing projects financed largely with the aid of the Federal Government authorized by the Congress. Housing is still probably the chief civic activity in many American cities.

COMPREHENSIVE CITY PLANS

This very brief resumé of the dominant activities in city planning in American cities is thus described to show that the work has all too frequently been special in character and that comprehensive plans for the full control of city growth have not been accorded a position of first magnitude. The broader long-time view was too frequently subordinated to matters of seemingly immediate importance. This is not to say that cities have not benefited by these activities, or that we have not had some comprehensive city plans. We have had such plans and in many instances they have been used most advantageously. On the other hand, it can be said with accuracy perhaps that for every city that made a zoning plan and ordinance as an integral part of the comprehensive city plan, there were ten cities where zoning was adopted for reasons of expediency and not as an

integral part of a well considered city design.

Throughout these past forty years of rapid and turbulent city growth there has been endless discussion of comprehensive city plans. Today, however, there are comparatively few American cities that have consistently followed a genuinely comprehensive city plan over a period of ten years or more. Hundreds of city plans have been drawn, but they have not been used effectively to control growth as it should be controlled. There are two chief reasons for this. The first is that we lack vision. We usually place expediency above all other considerations. If we had greater civic interest, greater confidence in our cities and more courageous leadership we would have much better cities. The second is that we have been slow to devise and use effectively the appropriate governmental procedures with which to adopt and enforce a city plan.

EXPEDIENCY A DETERRENT TO EFFECTIVE PLANNING

Previously it was shown that for more than a century our cities grew without much thought of plans and the need for control of urban growth. At first, growth was slow and there was no apparent need for plans. Then as the tempo of growth accelerated, we became more interested in growth than in the ultimate character of the cities we were building. Many of the pioneers who laid out the original plots of cities had considerable vision. Frequently the plans they drew had unity, good character and comprehensiveness when we consider the small areas that were plotted. Subsequently, these areas were expanded ten-fold and a hundred-fold without so much as a single subsequent over-all plan. The early sites have been so completely overshadowed by the multitudinous "additions" that our municipalities today are a helter-skelter of "additions" rather than unified, well-ordered cities.

Now it appears that we are facing virtual stabilization of population in our cities, and yet we are loath to curtail new subdivision development at the outskirts of the city because the subdivision process is somehow associated in our minds with "progress." Most cities have as many vacant subdivided lots as there are lots occupied by buildings and yet we are unwilling to face the issue squarely and limit or prevent further land subdivision. This policy of expediency, this unwillingness to face facts and to take the action so obviously necessary is one of the principal reasons we do not plan better cities.

CITY PLANNING PROCEDURE

The prevailing psychology of expediency, of encouraging growth for growth's sake, has hampered the development of governmental organization and procedure for effectively carrying out city plans. We have allowed our urban areas to split up into a multiplicity of governmental agencies. This leads inevitably to conflict and to waste. Only through unity of government and of physical design and construction can there be genuine economy, orderliness and efficiency in cities. A special committee appointed by the U. S. Department of Commerce published a Standard City Planning Act in 1928 which offers the only known practical method of carrying out a city plan over a long period of years. This act has been passed in about twenty states, including Virginia. It provides that a city plan commission may prepare and adopt a master plan for the city. After adoption no land is to be acquired nor any building, structure or other public work undertaken until the project proposed has been submitted to the city plan commission for a report as to whether or not it is in harmony with the master plan. The commission is given sixty days to make its report. If the commission reports that the project is in harmony with the master plan, the work proceeds as usual. If the commission's report is unfavorable, the project can be revised or the report of the commission can be overruled by a two-thirds vote of the city council. Such a procedure

is democratic in spirit and, in the hands of competent officials, will make possible the control of growth according to a comprehensive city plan. Some of the cities that have followed such a procedure for a considerable period of years are Cincinnati, Pittsburgh, Louisville, Memphis, Des Moines and Milwaukee. This procedure is the antithesis of expediency. It is not difficult to do. It causes no hardships in these other cities. Its adoption depends entirely upon whether there is the will to plan.

A CITY PLAN FOR RICHMOND

For nearly 200 years the city we know as Richmond has been in process of development. It is an old city as American cities go, rich in its historical traditions and a city of unusual distinction. For well over a century Richmond grew slowly in total population and in area. In more recent years growth has been rapid, so rapid that it spread well beyond the official corporate limits until authority was recently obtained to embrace the new growth by annexation. In the Annexation Decree the following significant statement was made: "With the advent of changes in motor transportation and the desire of people for larger building lots with more light and air, the inhabitants of a large city are no longer content to build their homes in congested areas. Consequently, if suitable locations are not available in the city, the population inevitably spreads beyond the city limits into the surrounding country. This has been Richmond's experience."

Richmond first appointed a city planning commission in 1918. This was composed entirely of officials. Subsequently, a second commission, composed of four citizens and the Director of Public Works, was appointed in 1932. Much valuable data and preliminary plans have been prepared from time to time which have been used to determine the character and location of public work. However, no comprehensive plan was prepared and published and officially adopted. In 1927 a zoning ordinance was passed which has been of much benefit to the city and yet it cannot be said to have been an integral part of a comprehensive city plan. On May 19, 1943, a new zoning ordinance was approved which was prepared as a part of the Richmond City Plan and is in scale with present and future needs.

Recently (1940) Richmond has appointed a new city planning commission which has now completed the preparation of a comprehensive city plan. It is intended to adopt the plan as the official master plan of Richmond and thereafter to attempt to control all growth in such a way and to such extent that by 1980 Richmond will be in reality a far more economical, well ordered and attractive city. As the plan is gradually executed, measures will be put into effect that will insure the preservation of the many shrines and buildings that link the modern city to its historic past. We hope through the city plan to avoid a policy of *laissez faire*, to substitute for expediency a positive program of action so far as control of growth is concerned, which we are firmly convinced is the only sound procedure.

Lest there be concern by some that this program may invite large increased public expenditures, we hasten to say that such will not be the case. To plan is to save. The burdensome public debts and the high property taxes of many cities are the most tangible evidence of no planning or of bad planning. A comprehensive city plan, systematically followed, will prevent expenditures for inadvisable or useless projects. It will produce the greatest benefit from the dollars expended for capital improvements. It will mean building projects that are most needed in the right places at the most appropriate times.

WHAT IS THE CITY PLAN?

We have heard much about city planning and yet seldom do we see a single description of a city plan. We might say that a city is composed of land, buildings, people, utilities and transportation, and that

the city plan is the scheme of arrangement. That is rather abstract. More specifically, the city plan consists of coordinated plans for water supply, sewerage, major streets, including bridges, transit and bus lines, air, water and rail transportation terminals and rights-of-way, park and recreation facilities, schools, zoning, housing, public buildings and civic art (using the term in the broad sense to include all those things that will enhance the appearance of the city).

The following program was adopted by the City Planning Commission and was used in preparing Richmond's city plan:

1. *Character of the City*
   - History of Growth
   - Physical Characteristics of the Site
   - Social Characteristics of the Population
   - Effect of Administrative Policies and Practices Upon Development.

2. *Scope of the City Plan*
   - Objectives
   - Past Practices
   - Area of Urbanization
   - Composition and Implementation

3. *Population*
   - Past Trends—National, State, County and City
   - Significance of Recent Trends
   - Estimated Future Trends
   - Estimated Future Distribution and Density of Urban Population

4. *Land Use*
   - Present Pattern and Character
   - Quantitative Relationship between Urban Land Use and Population
   - Estimated Character and Extent of Future Urban Land Use
   - Coordination of Urban Land Use Pattern and Adjoining Rural Land Use Policy

5. *Zoning*
   - Effect of Present Zoning Plan on Urban Land Use Pattern
   - Deficiencies of Present Zoning Plan
   - Proposed Land Use Pattern
   - Proposed New Zoning Ordinance and District Map
   - Future Administrative Policy As to Amendments of Zoning Plan
   - Future Administrative Policy of Board of Appeals
   - Suggestions Regarding County Zoning

6. *Housing*
   - Analysis of Present Housing Facilities
   - Major Defects in Present Housing Supply
   - Significance of Current Housing Trends
   - Extent of Slum Areas
   - Future Policy with Respect to Slum Areas
   - Extent of Blighted Districts
   - Future Policy with Respect to Blighted Districts
   - Suggested Plan of Neighborhood Districts
   - Future Policy with Respect to Neighborhood Districts

7. *Major Street Plan*
   - Character and Extent of Present Main Thoroughfares
   - Traffic Flow
   - Traffic Control
   - Proposed Major Street Plan
   - Coordination with State and County Highway Plans
   - Effect of Past Land Subdivision Control
   - Proposed Future Land Subdivision Control
   - Land Subdivision Regulations

8. *Transportation—Rail, Water and Air*
   - Existing Terminals and Rights-of-Way
   - History of Development
   - Character and Extent of Present Traffic
   - Significance of Current Trends in Traffic

Suggested Changes in Location of Terminals or Rights-of-Way
Grade Crossing Elimination Program

9. *Local Transit Facilities*

History of Development
Character and Extent of Present Service
Estimated Future Needs
Proposed Routes and Service

10. *Park, Playground and Recreational Facilities, and Public Schools*

Location of Present Public Schools
Present Elementary School Population
Proposed Public School Plan
Present Park and Playground Facilities
Proposed Playground Plan
Proposed Plan for Large Parks, Parkways and Other Recreational Areas

11. *Public Buildings and Publicly-Owned Lands*

Present Location of Public Buildings
Proposed Location of Public Buildings
Proposed Civic Center

12. *The City's Appearance*

Present Practice and Suggested Future Policy with Respect to Planting of Street Trees
Regulation of Poles and Wires
Regulation of Billboards
Regulation of Advertising Signs
Street Lighting
Street Name Signs
Street Numbering System
Small Ornamental Parks
Treatment of Important Street Intersections

13. *Administrative Policy and Practice*

Functional Planning Practice
Provisions of the City Planning Act
Relation of City Planning Commission to Various Departments of City Government
Relation of City Planning Commission to County Planning Commission
Relation of City Planning Commission to Other Agencies of Government—Regional, State and National

14. *Capital Expenditure Program*

Past Policies in Financing Public Works
Present Status of City's Bonded Debt
Relation of Capital Expenditures to Annual Maintenance and Operating Costs
Public Improvements Most Needed in Immediate Future
Future Capital Expenditure Program

PROCEDURE

Preliminary reports on the above subjects were prepared by the consultants and submitted to the Commission as follows:

No. 1—The Scope of the City Plan, June 1941.

No. 2—The Background and Character of the City, July 1941.

No. 3—Past, Present and Probable Future Population, August 1941.

No. 4—Land Use and Zoning, April 1942.

No. 5—Housing Conditions and Policies, June 1942.

No. 6—The Major Street Plan, September 1942.

No. 7—Transportation Facilities, December 1942.

No. 8—Transit Facilities, January 1943.

No. 9—Parks and Schools, June 1943.

No. 10—Proposed Civic Center and the City's Appearance, September 1943.

No. 11—Capital Expenditure Program and Administrative Policy and Practice, October 1943.

Each of these reports was reviewed by special committees appointed from the membership of the Commission, who sought the advice of others, both technicians and laymen, having special knowledge of the subject under consideration before reaching their final conclusions and making their recommendation to the whole Commission. The report on each subject as revised or rewritten by the committee was then submitted to the full Commission with the recommendation that it be printed in preliminary form and released for public information and consideration prior to the holding of public hearings. Final revision of all of the reports followed, after which they were edited and combined to produce the Comprehensive or Master Plan here submitted.

In this way it is expected to have an effective and workable city plan, a plan which is well known to all citizens and officials. Experience elsewhere has shown that all those who make improvements welcome the existence of a well established city plan. It will become a guide for private builders and private enterprise fully as much as for public officials and bodies.

AREA OF URBANIZATION

In common with other American cities, Richmond has always grown by outward expansion and extension of the areas of urbanization, rather than by any appreciable amount of reconstruction. The development of the modern low priced automobile greatly expanded the potential area of urbanization. This area is now approximately ten times greater than in the days of street car transportation. This phenomenal change has occurred at a time, paradoxically enough, when we seem to be approaching stabilization of national population and but minor growth of urban population. No industry would expand its physical plant 100 per cent or 1000 per cent where there was insufficient basic demand to justify the expense involved. Richmond and many other American cities are now faced with this specific problem. Unfortunately, public business and public policy is not as quickly changed as is private business or industry. Since American cities have grown only by expansion from the date of establishment, a change of policy in this respect will be an innovation, to say the least. Such a change of policy is imperative, however, if cities are to avoid profound economic difficulties.

To cite another analogy from the field of private business or industry, it goes without saying that a concern whose business was not increasing in volume, but which was fairly stable, would have to adopt a policy of keeping its physical plant in modern condition. This would be accomplished by gradual processes of reconstruction and not by merely making additions to an original building, which was obsolete. There is the alternative for industry of constructing a new building in a new location, but cities cannot do this. Any City Plan for control of the future development of Richmond must be designed with this principle in mind. While Richmond is continuing to grow in total population, the rate of this growth is diminishing. Population experts have predicted that the population of the United States will become stabilized within the next twenty-five or thirty years, if the present trends are continued. We cannot look forward to extraordinarily large increases in population in American cities, Richmond included. A City Plan for Richmond which anticipated large increases in population on the outskirts of the city would be valueless in the light of present conditions. A City Plan which will be of greatest value to Richmond will be designed, (1) in accord with total population which can be expected, (2) with respect to modern standards of total amount of land needed for each different class of urban land use, and (3) with respect to a pattern of land use and population distribution and density which will conserve and protect existing property values and, conversely, prevent speculative practices which merely create new values by forced depreciation of existing values.

More specifically, the comprehensive City Plan of Richmond recognizes the fact that the present area of urbanization is already sufficiently large to accommodate a very large proportion of the total anticipated future population. A wider dispersal of population would result in unduly high public service costs. There are a few vacant areas within the 1914 corporate boundaries that can be used and there are still greater vacant areas within the new city boundaries established by the 1941 annexation proceedings.

In almost two centuries of existence the city limits of Richmond have been extended ten times. In most cases these annexations have been comprehensive in character. It would be unfortunate if, in the face of stabilizing urban population, we were so to plan the extension of water mains, sewers, highways and numerous other public services that it would cause further decentralization and creation of more slums and wider blighted areas in the central city and which would also have the effect of gradually changing the character of newly annexed areas, from pleasant home neighborhoods to more densely populated "city" areas. The present time is appropriate for the formulation of definite policies in a public works program based on sound city planning principles. This is a most fortunate time and occasion for a new City Plan for Richmond.

Basic principles and policies will be discussed in much greater detail in subsequent chapters of this report. Broadly speaking, it is the belief of this Commission that the best interests of the city will be served by a city plan which conserves the character and values of the present "city," by the preservation of the character and values of the existing suburban areas, most of which have been recently annexed, and by fostering and encouraging definite rural character in the other areas adjoining the new city limits. Any other policies leading either to gradual or to rapid decentralization will result only in accelerated disintegration and to economic problems of incalculable magnitude. These, in turn, will lead, in the course of ten or fifteen years, to new annexation proceedings with endless conflicts of administrative policies, as between the city and the county. Here is a vicious circle in city growth that can be controlled only by broad planning firmly administered.

In furtherance of these policies we believe that certain new legislation would be of special advantage. To this end we suggest:

1. Improved control of land subdivision through formulation, adoption and publication of rules and regulations, establishing modern standards of design and procedure and including minimum requirements for installation of water mains, sewers, grading of propery, grading of streets and alleys, paving and certain other improvements, to be installed and paid for prior to offer of lots for sale; this control to be exerted both within the City of Richmond and in all areas within five miles of the city limits.

The Director of Public Works now must approve all subdivision plats within the city limits and, together with the County Board of Supervisors or County Engineer of Roads, must approve all plats within five miles of the city limits. Before this control may be exercised, a plan of thoroughfares serving the subdivision control area must be on file. It is generally considered to be an appropriate function of planning to place such control in the City Planning Commission in the manner provided in the Standard City Planning Enabling Act. It is suggested that consideration be given to amending the present legislation to accomplish this purpose, including more adequate authority for control of the design of subdivisions, the minimum sizes of lots and minimum standards for installation of improvements.

The ability of the modern automobile to disperse population over wide areas has created demands for public services and facilities in scattered suburban areas, resulting in costly expenditures for the extension of these improvements, the necessity of which

might have been avoided through the application of reasonable foresight. Much past subdivision has been highly speculative in character, resulting in sporadic and poorly serviced neighborhoods. It is essential, therefore, that the city take proper steps to protect the taxpayers from a repetition of these costly and unnecessary mistakes by insisting on reasonable standards of minimum public improvements and design. Compliance with these requirements will discourage unwarranted real estate speculation, and will arrest decentralization and dispersion of population by limiting the area of urbanization so that it can be economically serviced. Through application of the principles of good residential design, established neighborhoods can be preserved and supplied with new amenities so essential to stable community life.

2. Legislation similar to that of the "Urban Redevelopment Corporation Law," recently passed in the State of New York, for the purpose of bringing about large scale, good standard, moderate priced housing accommodations to be undertaken by private initiative in the older centrally located areas of the city.

Publicly subsidized low-rental housing developments have been undertaken to provide decent accommodations for that part of our population which cannot pay an economic rent. It is obvious, however, that a complete solution to the problems of slums and depreciated urban areas can only be reached by devising practical means for employment of private capital in rebuilding these areas and restoring them to economic usefulness. The suggested legislation has as one of its main provisions the granting of the power of eminent domain in the assembly of large tracts of land. This power would be extended only to limited dividend housing companies, whose financial status and operations would be subject to supervision by the fiscal authorities of the city. The locations of the projects as well as the character of the design, would be subject to approval by the City Planning Commission.

Chapter I

THE BACKGROUND AND CHARACTER OF THE CITY

Chapter I

THE BACKGROUND AND CHARACTER OF THE CITY

The modern American metropolis has had a rather hurried evolution from the comparatively simple life and structure of the horse-and-buggy community to the complex organism of the present day. In the metamorphosis of the nation from an agricultural to an industrial economy many forces, historic, economic and social, have interacted to direct the growth and mould the character of the new municipality. As a guide to intelligent city planning, we must have some understanding of these forces, of their role in the past development of the community, and of their probable influence on future growth. Any sound improvement program for the city must take cognizance not only of the requirements of its inhabitants for a satisfactory standard of civic life, but also of the financial ability of the community to meet past obligations and to assume new debts. The scale and extent of these physical needs are conditioned not only by the city's general growth but by the cultural interests and social relationships of its inhabitants as well, and these factors in turn are dependent in large degree on the economic welfare of the entire metropolis. The city's ability to finance the program is ultimately measured by the aggregate income of its citizens.

This chapter will consider these numerous economic and social factors as they have guided the past development of the city, and, hazardous as it may be to predict their future influence in our rapidly changing economy, and attempt to envisage from this analysis the probable future community, its character, and extent, and growth.

As an aid in reviewing these past trends in the City of Richmond, and in evaluating their influence on its future outlook, a group of five cities having approximately the same total population was selected as representative of municipalities in widely separated sections of the country having varied economic and social backgrounds. It should be emphasized that this comparison is intended to enable the reader to judge the character of the problems discussed rather than as an exhaustive statistical analysis. In the East, Providence, R. I., has been chosen as a typical large manufacturing center of the eastern seaboard. Memphis, Tennessee, a large wholesale market, is typical of the South and comparable to Richmond in the racial composition of its population. Dayton, Ohio and San Diego, California, are communities representative of the Middle West and West Coast, respectively, while Oklahoma City, the State Capital of Oklahoma, is an industrial and commercial center of the Southwest. All of these cities are independent, self-contained municipalities, centers of somewhat larger metropolitan areas. The metropolitan population of Providence is unusually large for a city in this class because of the proximity of Fall River, New Bedford and several smaller communities.

The chapter is divided into three sections. The first division is concerned with the economic factors as they relate to the growth of the city and its ability to provide public improvements. Available statistics on population, occupational distribution, manufacturing, wholesale and retail trade, income, banking, and other similar matters are discussed. The second division has to do with the financial condition of the city itself, with its assessed valuation, rate of taxation, revenues and expenditures, and indebtedness. The third section is a comparison of social standards and improvements, reviewing such criteria as housing, public parks and recreation, school attendance, and related data. Final-

ly, the broad trends and conditions are summarized, and in their light, conclusions are drawn as to the probable outlook for Richmond.

HISTORY AND GENERAL GROWTH

Founded in 1737 by Colonel William Byrd, ancestor of the present prominent Virginia family, the City of Richmond is situated on the James River, some ninety miles from the sea. Its past history is filled with the tradition and heroic action of the early colonies, with the Revolution and the later strife of the War Between the States. All of these have left the city a heritage of many old buildings and land-marks now preserved as shrines of these historic periods.

From earliest records, the site of Richmond invited and attracted settlement. As early as 1607 an exploring party from Jamestown sailed up the river to the site of the present city and planted a cross on one of the small islands. Two years later, Captain John Smith founded a settlement in this vicinity on land purchased from the Indians, and still later, in 1645, Fort Charles was built as a frontier defense at the falls. By grant in 1675 and 1687 Colonel William Byrd, father of the founder, acquired lands in this district, and in 1737, on the younger Byrd's instructions, Major William Mayo laid out the town. It was called Richmond, probably because of similarity of the site to that of the English Richmond on the Thames River.

Richmond was incorporated as a town in 1742. In 1777 threat of British armies in the vicinity of Williamsburg forced transfer of public records here from that city, and in May, 1779, it became the Capital of the Commonwealth.

During and following the Revolution Richmond played a prominent role as the chief city of the South. It was here in St. John's Church that Patrick Henry made his famous speech in 1775, and in the same building thirteen years later that a Convention met to ratify the Federal Constitution for Virginia. Near the end of the war a small British army under Benedict Arnold harassed the city, finally destroying public buildings, warehouses and a large quantity of tobacco.

In 1861, when the South withdrew from the Union and Virginia formally adopted the Act of Secession, Richmond became the Capital of the Confederacy. At this time the city was a growing commercial center of some 38,000 population. Because of its position and importance, it became at once the objective of Federal armies, and many pitched battles and skirmishes were fought in the environs. Traces still remain of the old fortifications which encircled the city, stretching in a crescent from the river and along the heights outside Richmond.

In 1865 Petersburg fell, and occupation of Richmond by Federal forces became imminent. Evacuation was ordered, and once more bridges, warehouses and tobacco were destroyed, now, however, at the Confederacy's hands to prevent Federal confiscation. On the morning of April 3, a serious conflagration was under way in the heart of the business sections, which left in ruins nearly a third of the entire city.

Since those eventful days, Richmond has not only recovered but has steadily grown both in size and in commercial and industrial importance. From a population of 38,710 and an area of 4.9 square miles in 1867, the city had developed by 1940 into a community of 193,042 and an area of 22.96 square miles. The Supreme Court of Appeals of Virginia, in a decision handed down on June 9, 1941, upheld a previous decision of a Special Annexation Court granting the city the right to annex approximately 9.6 square miles of adjacent suburban territory from Henrico County. On November 6, 1941, another Special Annexation Court similarly granted the city the right to annex approximately 7.3 square miles from Chesterfield County. Effective December 31, 1941, these decrees added more than 20,000 population to the city.

The more than 300 industries in Richmond embrace a wide variety of manufac-

GENERAL SUMMARY

The present is a most propitious time for the inception of comprehensive city planning in Richmond. The rapid economic development of the community during the past decade, the prospect of stabilized population within a few decades in this and other American municipalities, the large areas of old and obsolete buildings in the central sections of the city, and the many problems inherent in unbalanced urban growth, challenge the city to rebuild and reshape the community into a fitting environment for the commercial and industrial metropolis into which the present city has grown.

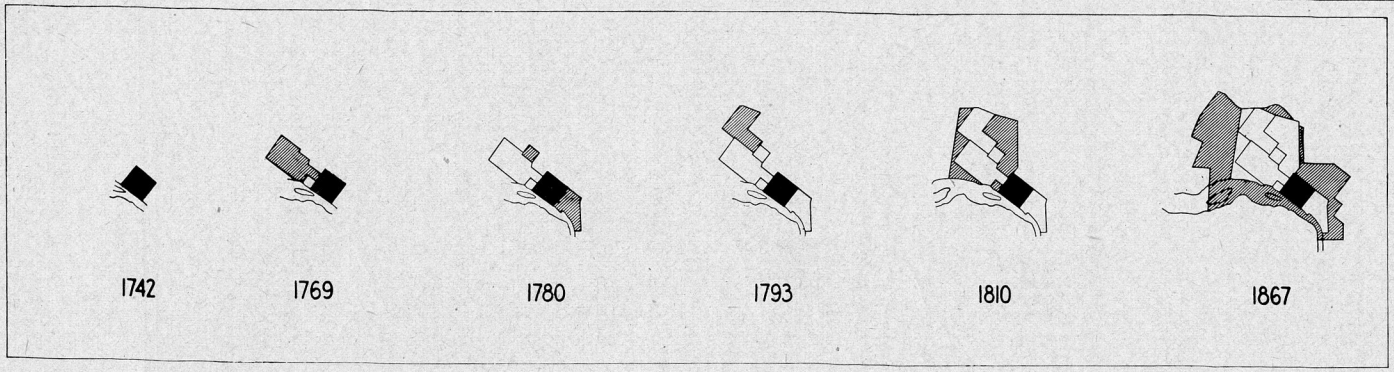
The past ten years in Richmond have witnessed a remarkable expansion of both industry and trade, which weathered the depression with comparative ease. The diversification of manufactures among tobacco products, paper and printing, iron and machinery, and a wide variety of other products, gives promise of future economic health and reasonable resistance to business recession.

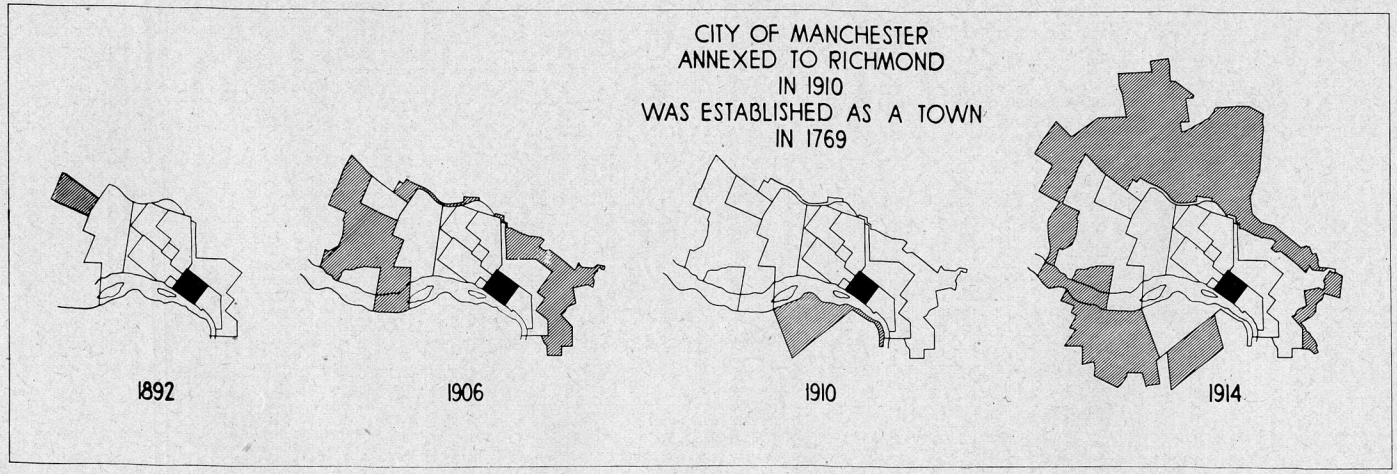
Employment is distributed principally among manufacturing, trade, domestic and clerical occupations, no one of which is of sufficient preponderance to unbalance the economic structure. The general rise in the so-called "white collar" groups engaged in trade and office occupations, the decline of domestic employment and the present industrial expansion give promise of future improvement in wage scales throughout the city.

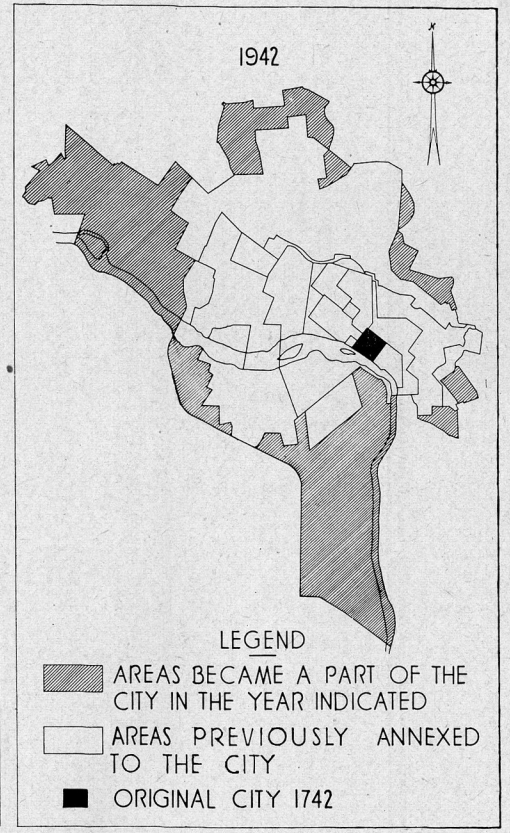
In common with that of other large American communities, the metropolitan growth of Richmond has been rapid in past decades and may be expected to proceed at a somewhat slower pace in the future until eventual stability is reached. The large Negro population creates many social and economic problems, incidental to their low-income characteristics, but this condition may improve in the future. The present large slum areas throughout the older central sections of the city are expensive because of the heavy social and public welfare costs which they entail. Housing facilities in general in Richmond and other southern communities are somewhat below the standards in other sections of the country, and the city should offer every encouragement to both public and private enterprise to rebuild these old areas and to provide better housing accommodations.

The relatively great industrial and commercial development in Richmond during the past decade is indicative of the potential financial resources of the city. While the present tax base (total assessed valuation) is considerably below the 1930 figure, the per capita value is higher than in any of the other cities except Providence. The generally sound condition of the city's bonded indebtedness is attested by the high rating given its obligations in Moody's Index. In short, the city is well prepared financially to carry out a long range program of public improvements within the framework of the City Plan.

While Richmond shares some of the social inadequacies of other southern communities, particularly in housing and home ownership, much progress has been made in the past. While the median value of homes in Richmond is comparatively high, a concerted attack on the entire housing problem as it relates to general community reclamation is essential to real improvement.







JULY, 1941
SCALE IN MILES
0 ½ 1 2

GROWTH OF RICHMOND, VA.

CITY PLANNING COMMISSION
RICHMOND, VIRGINIA

PLATE NUMBER 7

square miles and 20,000 persons from Henrico and Chesterfield Counties. The growth of Richmond in area and population is shown in Table Number 25.

Growth of Metropolitan Richmond

Because of the rapid spread of urban population into suburban territory and the lag in expansion of municipal boundaries to include the full extent of this urban expansion, the Census Bureau has established what are known as Metropolitan Districts in some 96 cities. In determining the boundaries of Metropolitan Districts, the Bureau has used unit political areas such as townships, magisterial districts, and counties, covering a sufficient area to embrace all the urban growth. Consequently, some rural population has been enumerated in this metropolitan area as well as small urban communities somewhat removed from the central city. However, the proportion of such population is small, and for the Richmond district probably does not exceed 5%.

It is apparent from a comparison of the population trends within the City of Richmond and within the Richmond Metropolitan Area that the latter is more truly representative of the actual growth of the urban community than is the somewhat limited area bounded by the corporate limits of the City of Richmond. As previously shown, population growth within the city has been very irregular, being comparatively rapid in decennial periods when annexation took place and comparatively small in other decades. On the other hand, population increases in the Richmond Metropolitan Area have been relatively steady, varying between 28.5% in 1880 and 11.4% for the 1940 decennial census, and have corresponded rather closely with increases in the total population of the United States. For the sixty-year period ending in 1940 national population expanded approximately 162% and that of the Richmond Metropolitan District 168%. During the past decade Metropolitan Richmond grew at a more rapid rate than the nation as a whole, increasing in population 11.4% as compared with 7.2% for the entire United States.

PAST AND PRESENT DISTRIBUTION OF POPULATION

An investigation of the past and present distribution of population in Richmond is important in pointing out trends and in indicating the probable direction of future growth. It is not possible to plan public improvements to serve this future population without some knowledge of where the new population will be located. To forestall undesirable trends and to prevent the wasteful scattering of urban population, steps should be taken to develop more adequate controls and administrative procedures. These controls should include modern subdivision regulations, establish-

TABLE No. 25

DATE AND AREA OF ANNEXATIONS TO RICHMOND

DATE	Population Original City	Area Annexed Square Miles	Total Area After Annexation
1742	250	0.20	0.20
1769	574	0.54	0.74
1780	684	0.34	1.08
1793	4,384	0.41	1.49
1810	9,785	0.91	2.40
1867	38,710	2.50	4.90
1892	83,000	0.38	5.28
1906	105,000	4.45	9.73
1910	127,628	1.02	10.75
1914	145,244	12.21	22.96
1942	208,039	16.93	39.89

ing minimum requirements for the installation of public improvements by the subdivider, and a more realistic policy with respect to the future extension of publicly provided facilities, such as water and sewers, which should be definitely limited to the desirable area of urbanization.

Factors Influencing Past Distribution of Population

There are several major factors which have influenced the present population pattern of Richmond. These factors may be grouped broadly as follows:

1. *Topography and Physical Characteristics.* The general physical character of Richmond's site has had a very marked effect on the city's development. The James River, Shockoe Valley, Gillies Creek, and the railroad and industrial development which followed these natural locations, imposed serious barriers to early expansion. As a result, heavy concentrations of population accumulated in the older sections of the city, bringing about the present unbalanced distribution which contrasts the old and new developments.

For many years the James River has impeded southward expansion. While the City of Manchester developed on its south banks and was absorbed by annexation to Richmond in 1910, growth in this area was comparatively slow in the absence of adequate toll-free communication with the sections of the city north of the James. Gillies Creek and Shockoe Valley imposed barriers to eastward growth. Here the physical conditions were aggravated by the establishment of railroad lines and concomitant industrial development which found the valley a natural location, and consequently, residential development was still further retarded. The Bacon's Quarter Branch and railroad and industrial development also constituted a barrier to northward expansion, which has been only partly overcome in recent years by the establishment of a limited number of cross thoroughfares, principally four: Fifth Street Viaduct, First Street Viaduct, Chamberlayne Avenue, ar Lombardy Street. It is apparent from Pla 8 that large compact bodies of land sui able for residential use have been found on to the west and north, which in the absenc of physical barriers in the western sectio of the city alone, stimulated and encou aged the unusual westward expansion o the original community.

2. *Methods of Development and Adap tation to Site.* Prevailing subdivision prac tices in the past and methods of develop ment and adaptation to the conditions im posed by Richmond's unusual topography as indicated by the present plan of the cit have exerted considerable influence on th distribution of population. For exampl while the city was still comparatively sma in area, two large and very attractive tract of ground on the north bank of the Jame River were set aside for park and cemeter use, preempting what would probably hav become the city's most attractive residentia section. As a result, this growth has bee forced westward into and beyond th Windsor Farms area, while the sections o the city north of the cemeteries have largel been absorbed by Negro development.

Areas inhabited by Negroes have the ef fect of forcing new residential developmen around and beyond them. These areas ar principally in the central and eastern sec tions of the city where serious physical bar riers to expansion already exist, and as consequence growth to the west and nort has been given further impetus.

It was formerly the custom to pla property in much smaller lots than has bee the case in the past thirty years, and con sequently, the older sections of the city ar much more closely built than the new areas This is particularly true in certain ol neighborhoods where row houses pre dominate.

3. *Residential Character.* The care with which a subdivision is designed and th general appearance of its streets and home greatly influence its attraction for futur population. This attraction may be in

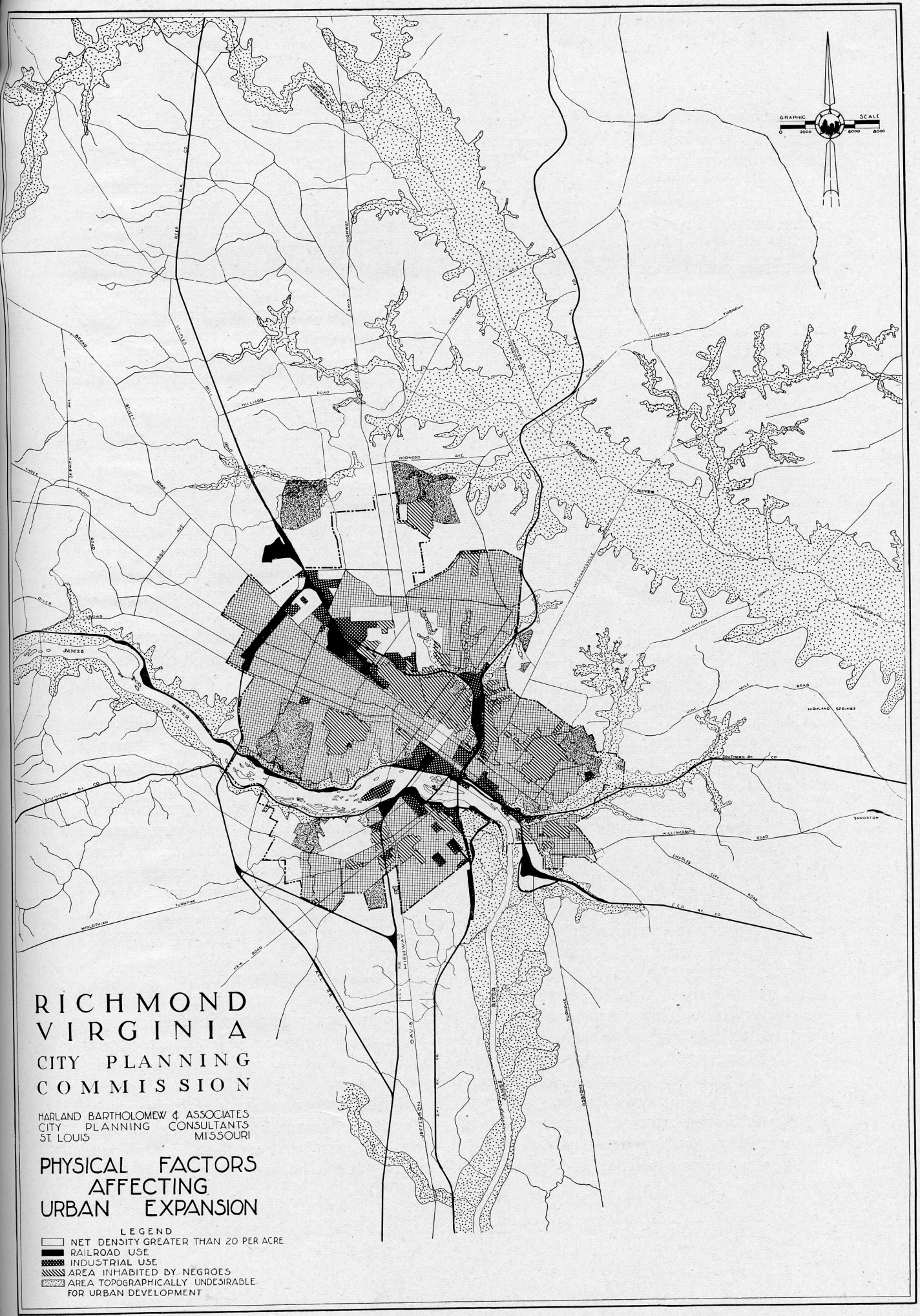


PLATE NUMBER 8

creased through strong real estate promotion and "sales appeal". Eventually other similar developments are drawn to the section and it becomes "the place to live". As a result, population is siphoned from older sections of the city and the pattern of growth may become unbalanced. To counteract such tendencies in Richmond, it is essential that community action be encouraged to restore or protect the attractiveness of present residential sections. By keeping present buildings in good repair, improving the street system, gradually eliminating harmful non-residential uses, creating additional recreational facilities, and generally improving residential amenities, the attractiveness of many of these older sections can be restored and preserved far into the future.

4. *Municipal Facilities.* Population distribution in the past has been greatly influenced by the provision of various public facilities such as paved streets, transit, sewers and water, parks and playgrounds, schools, etc. Development has generally followed the major traffic arteries and sewers, water, gas and other facilities have been extended into the new areas, often at a considerable distance from the city. Prior to the present automobile era, street car transportation was in extensive use, and development usually paralleled the transit lines, particularly during the decade 1910-1920.

Past Distribution of Population

Past trends since 1910 in the distribution of population in different sections of Richmond are shown on Plate Number 9. Prior to the past census, when a reversal took place, very nearly all the older areas of the city had lost population since 1920 and had remained relatively static between 1910 and 1920. This is especially noticeable in the areas inhabited by Negroes. However, during the 1930-40 period most of these tracts gained population, and there are very few areas which lost any substantial population during the past decade. The principal losses since 1930 were sustained in the general area extending between Bacon's Quarter Branch and the river from First to Ninth Streets, where some commercial and industrial absorption took place. Considerable increase has occurred since 1930 in the Negro population of Richmond, which, in view of the shortage of available housing facilities for this population, has forced large numbers back into previously discarded quarters. These trends are notable in the central and eastern sections of the city. It is apparent, however, that while increases have occurred since 1930, the general trend over the past three decades in practically all of these older sections has been downward.

Midtown areas, such as the district between Randolph and Rowland Streets, experienced population growth during the first two decades of the present century, but approached stabilization by 1930. Areas in the eastern section, except near the present city limits, have exhibited either static or declining population characteristics since 1910, as have the older sections in the original community of Manchester south of the river.

In sharp contrast with these trends, the outlying areas of the city have shown a most rapid increase of population during the past decade. This is true of all sections lying north of the Bacon's Quarter Branch Valley as well as of the western sections of the city both north and south of the James River. Outlying areas in the eastern section of the city, although they have shown a gradual increase since 1910, have not enjoyed as rapid growth as the west and north.

Unfortunately, past census enumerations were not taken in such manner as to permit of ready comparisons in the parcels to be annexed to the city by court decrees effective January 1, 1942. The 1940 population, however, is available and is shown on Plate Number 13 along with the present city areas. Unquestionably, growth within most of these parcels has been rapid and steady during the past decade.


RICHMOND
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POPULATION TRENDS
BY CENSUS TRACTS
1910-1920-1930-1940
POPULATION SCALE
8000
6000
4000
2000
0
1910
1920
1930
1940
BOUNDARY OF PRESENT CITY
BOUNDARY OF AREAS TO BE ANNEXED
BY DECREE OF VIRGINIA SUPREME COURT
GRAPHIC
SCALE
0
1000
5000
6000
JAMES
RIVER

Location of New Dwellings

Plate Number 10 shows the location of the new buildings erected in Richmond from 1926 to 1930, inclusive. During this period it is evident that the greatest amount of new construction occurred close to the city boundaries. This is particularly noticeable to the northeast in the vicinity of Brookland Park Boulevard and beyond; to the north beyond Westwood Avenue; to the west beyond the Boulevard; and in lesser degree, in the eastern and southern sections of the city. There was also a relatively large number of residences erected during this period in the area between Chamberlayne Avenue, Roberts Street, Brook Road and Brookland Park Boulevard. New building construction in the central sections of the city was principally commercial and industrial in character.

From 1931 to 1935 building construction was materially affected by the depression. Plate Number 11 shows the distribution of buildings erected during this period. It is apparent again that most of the new residential construction in Richmond took place just within the city boundaries, new construction in the older sections of the city being very sporadic.

Since 1935 building construction has revived to some extent. However, it is apparent from Plate Number 12 that the number of new residences constructed within the city of Richmond is not a true reflection of the extent of the revival in the building industry.

Within the eighteen months from January 1, 1940, to June 20, 1941, 1,694 dwellings were erected in areas outside Richmond in Henrico County alone, while during the same period only 949 dwellings were erected within the corporate limits of the City of Richmond. It is evident, therefore, that nearly two-thirds of the new construction within the Richmond area is taking place outside the present corporate limits. While some of this new development occurred in the annexation parcels, it is apparent from Plate Number 12 that considerable new construction has taken place in widely scattered areas, particularly to the north and west.

Present Distribution of Population

Plate Number 13 shows the present distribution of Richmond's population. The irregularity of this population pattern and the striking contrast in distribution between the old and newer areas of the city have previously been mentioned in the discussion of topographical influence on past growth. It is apparent from Plate Number 13 that very unusual concentrations exist in the older sections of the city, extending westward as far as Roseneath Road. This area is hemmed in by physical barriers such as the river, Bacon's Quarter Branch Valley, railroad and industrial development, parks and cemeteries. There is also a large concentration of population in the older eastern section of the city between the Shockoe Valley and Gillies Creek.

The almost complete separation of the older areas of the City from those portions of the City annexed since 1910 is nowhere so clearly shown as on Plate Number 13. Of particular significance is the striking difference in the population patterns in the older areas of the City and these later developments. The older sections of the city were much more closely built than has been the custom in the past thirty years.

It is evident that considerable peripheral development has taken place, particularly in the areas that were annexed to the City January 1, 1942. Development in these sections is generally much more spacious than elsewhere in the city.

Negro Population

Plate Number 14 shows the distribution of Negro population in Richmond in 1934. In common with other southern communities Richmond has always had a large Negro population, which constituted 29% of the total population in 1930. Prior to the 1930-1940 decennial period, the proportion of Negroes within the city had de-


GRAPHIC SCALE
0
2000
6000
8000
HILLIARD ROAD
JUANITA AVE.
DUMBARTON ROAD
BRYAN PARK AVE.
NORWOOD AVE.
WESTBROOK AVE.
BELLEVUE AVE.
LABURNUM AVE.
WESTWOOD AVE.
BROOKLAND PKWY.
BROOKLAND PARK BLVD.
DUNTREATH ROAD
MONUMENT
PATTERSON
GROVE AVE.
RIVER ROAD
CARY STREET ROAD
WESTMORELAND
HAMILTON
ROSENEATH
BLANTON AVE.
BOULEVARD
LOMBARDY
BROOK
CHAMBERLAYNE
HERMITAGE
STONELEIGH
LAKESIDE
STATE HIGHWAY NO. 2
U.S. NO 1
RICHMOND & HENRICO TPK.
MEADOW BRIDGE
DILL AVE.
TURNPIKE
CABELL LANE
CREIGHTON ROAD
MECHANICSVILLE
FAIRMOUNT
NINE MILE ROAD
JEFFERSON
OAKWOOD AVE.
MILL ROAD
WESTHAM OR RIVER ROAD
JAMES
C.&O. R.Y.
S.A.L. R.Y.
R.F.&P. R.R.
BROAD STREET ROAD
STAPLES MILL ROAD
MAIN ST.
5TH ST.
BELVIDERE
BRIDGE



RICHMOND VIRGINIA

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ST LOUIS MISSOURI

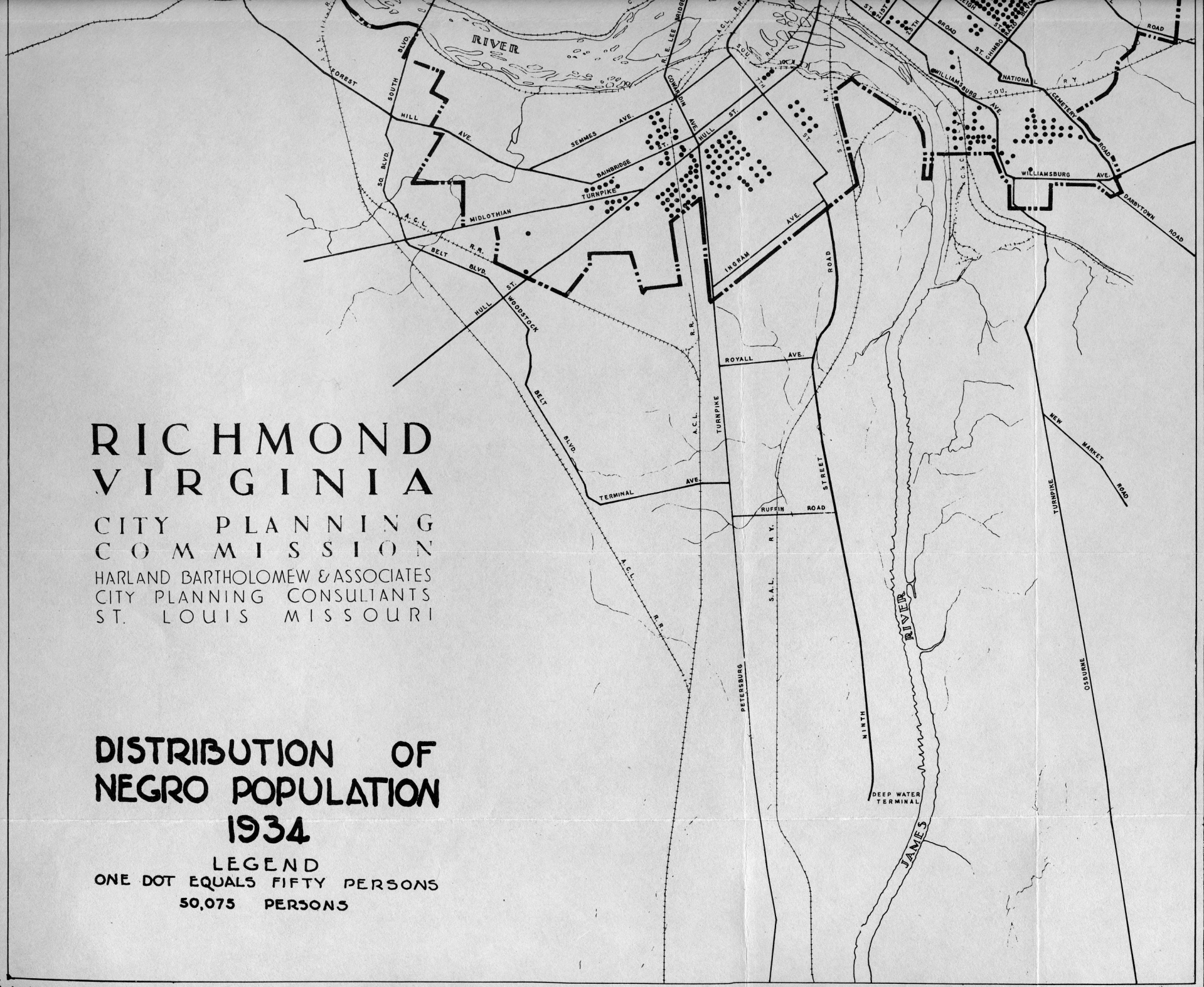
DISTRIBUTION OF POPULATION 1940

L E G E N D

ONE DOT EQUALS 25 PERSONS

PLATE 13


GRAPHIC SCALE
0 2000 6000 8000
HILLIARD ROAD
JUANITA AVE.
DUMBARTON ROAD
BRYAN PARK AVE
WESTBROOK AVE.
BELLEVUE AVE
LABURNUM AVE.
WESTWOOD AVE.
BROOKLAND PKWY
BROOKLAND PARK BLVD.
NORWOOD AVE.
RICHMOND & HENRICO TPK.
STATE HIGHWAY NO. 2
U.S. NO. 1
STAPLES MILL ROAD
BROAD STREET ROAD
DUNTREATH ROAD
MONUMENT AVE.
PATTERSON AVE.
THREE CHOPT ROAD
LIBBIE AVE.
GROVE AVE.
RIVER ROAD
CARY STREET ROAD
WESTMORELAND ST.
MALVERN AVE.
HAMILTON AVE.
ROSENEATH ROAD
BOULEVARD
HERMITAGE ROAD
CHAMBERLAYNE ROAD
BROOK ROAD
MEADOW BRIDGE RD
DILL AVE.
NORTH AVE.
POE
FOURTH AVE.
TURNPIKE
CABELL LANE
CREIGHTON ROAD
MECHANICSVILLE
FAIRMOUNT AVE.
NINE MILE ROAD
JEFFERSON
OAKWOOD AVE.
MILL ROAD
LOMBARDY ST.
FRANKLIN ST.
BROAD ST.
LEIGH ST.
2ND ST.
ADAMS ST.
9TH ST.
MAIN ST.
CARY ST.
BELVIDERE ST.
BLANTON AVE.
BOULEVARD
C.&O. R.Y.
JAMES
WESTHAM OR RIVER ROAD
R.F.&P. R.R.
S.A.L. R.Y.
C.&O. R.Y.



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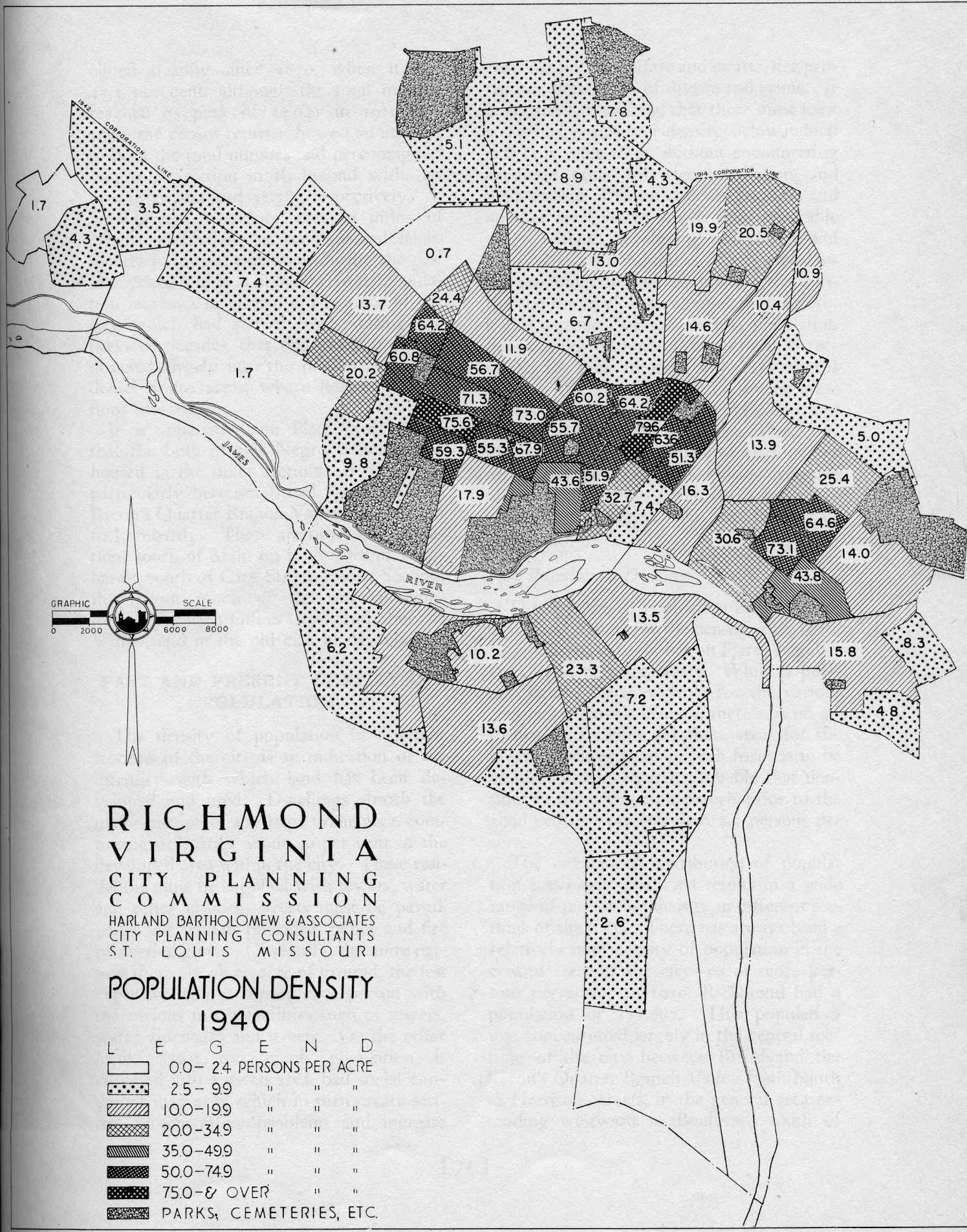
DISTRIBUTION OF NEGRO POPULATION 1934

LEGEND

ONE DOT EQUALS FIFTY PERSONS

50,075 PERSONS

PLATE 14



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POPULATION DENSITY 1940

L E G E N D

- 0.0 – 2.4 PERSONS PER ACRE
- 2.5 – 9.9 " " "
- 10.0 – 19.9 " " "
- 20.0 – 34.9 " " "
- 35.0 – 49.9 " " "
- 50.0 – 74.9 " " "
- 75.0 – & OVER " "
- PARKS, CEMETERIES, ETC.

PLATE 1

clined steadily since 1870, when it was 45.3 per cent, although the total number reached its peak of 54,041 in 1920. In 1940, the census returns showed an increase in both the total number and percentage of Negro population in Richmond with figures of 61,251 and 31.7% respectively. It would seem, therefore, that an influx of Negro population has accompanied Richmond's industrial expansion during the past few years, and it is apparent from population increases in certain old sections of the city which had shown losses during the previous decades, that this influx has been directed largely into the present relatively dense Negro areas, where housing conditions are worst.

It is apparent from Plate Number 14 that the bulk of this Negro population is housed in the older sections of the city, particularly between Broad Street and the Bacon's Quarter Branch Valley from Ninth to Lombardy. There are other concentrations south of Main on both sides of Lombardy, south of Cary Street, east of Second, throughout much of the original community between Gillies Creek and Shockoe Valley, and in the old city of Manchester.

PAST AND PRESENT DENSITY OF POPULATION

The density of population in different sections of the city is an indication of the intensity with which land has been developed and used. Dwellings absorb the major portion of any large urban area, comprising ordinarily about 40 per cent of the developed area within the city. These residences must be supplied with sewers, water and other utilities; streets must be paved, parks and schools provided, police and fire protection given. Obviously, the more persons there are on an acre of ground, the less expensive it is to supply each person with the various urban facilities such as sewers, water, sidewalks and streets. On the other hand, when too much population is crowded into a given area, bad social conditions may arise which in turn create serious administrative problems and increase costs for public welfare and courts, fire protection, prevention of disease and crime. It is apparent, therefore, that there must exist a level of population density below which it is impossible to go without encountering excessive costs for the installation and maintenance of essential urban facilities and another level above which it is impossible to go without developing undesirable and harmful social conditions. These two limits, economic and social, provide the controls on the city's future population pattern.

For purposes of this report, population densities in Richmond have been determined for each of the forty-seven census tracts within the city and the several areas annexed to Richmond from Henrico and Chesterfield Counties in 1942. These figures represent the numbers of persons per net acre of land within the blocks, exclusive of streets and alleys, large parks and playgrounds, cemeteries, and the State Fair Grounds.

Past Population Densities

The densities of population in Richmond by Census Tracts for the census years 1920, 1930 and 1940 are shown on Plates Number 15, 16 and 17 respectively. While population figures were available for the various annexation parcels in 1940, there was no information available for these areas for the previous census years in such form as to be usable. However, it is probable that densities in the annexation parcels prior to the 1940 census were less than 2.5 persons per acre.

The unbalanced distribution of population previously described results in a wide range of population density in different sections of the City. There has always been a relatively high density of population in the central areas of the city—50 or more persons per acre. In 1920, Richmond had a population of 171,667. This population was concentrated largely in the central sections of the city between Broad and the Bacon's Quarter Branch Valley from Ninth to Harrison Streets, in the general area extending westward to Boulevard south of

Broad and in a part of the original settlement between Shockoe Valley and Gillies Creek. The highest population densities—75 or more persons per acre—were found in a small portion of the original community and in the area bounded by Fifth, Broad, Henry and Bacon's Quarter Branch Valley. Densities in other sections of Richmond were relatively low, a large portion of the city having a density of less than 10 persons per acre and most of the remaining tracts lying in the classification between 10 and 20 persons per acre. In the sections of Manchester, south of the James, more than half the community had a density of less than 10 persons per acre.

By 1930, a very noticeable change had occurred. While in 1920 at least four tracts had densities of 75 or more persons per acre and three others densities greater than 70, all of these areas had lost population in the intervening decade, and the area of highest density had spread westward to the section bounded by Parkwood, Meadow, Floyd and the Boulevard. It is apparent from Plate Number 16 that a marked decline characterized both the Negro area between Broad and the Valley and the original community north of Gillies Creek, formerly sections of highest density in Richmond, and that considerable population had moved into the general area extending from Harrison to Boulevard north of Byrd Park and the Cemeteries. It is also apparent that sections of the city to the north and west experienced considerable growth, many of these areas having doubled their population in the decennial period. While increases were also noted south of the river, they were less marked than in other sections.

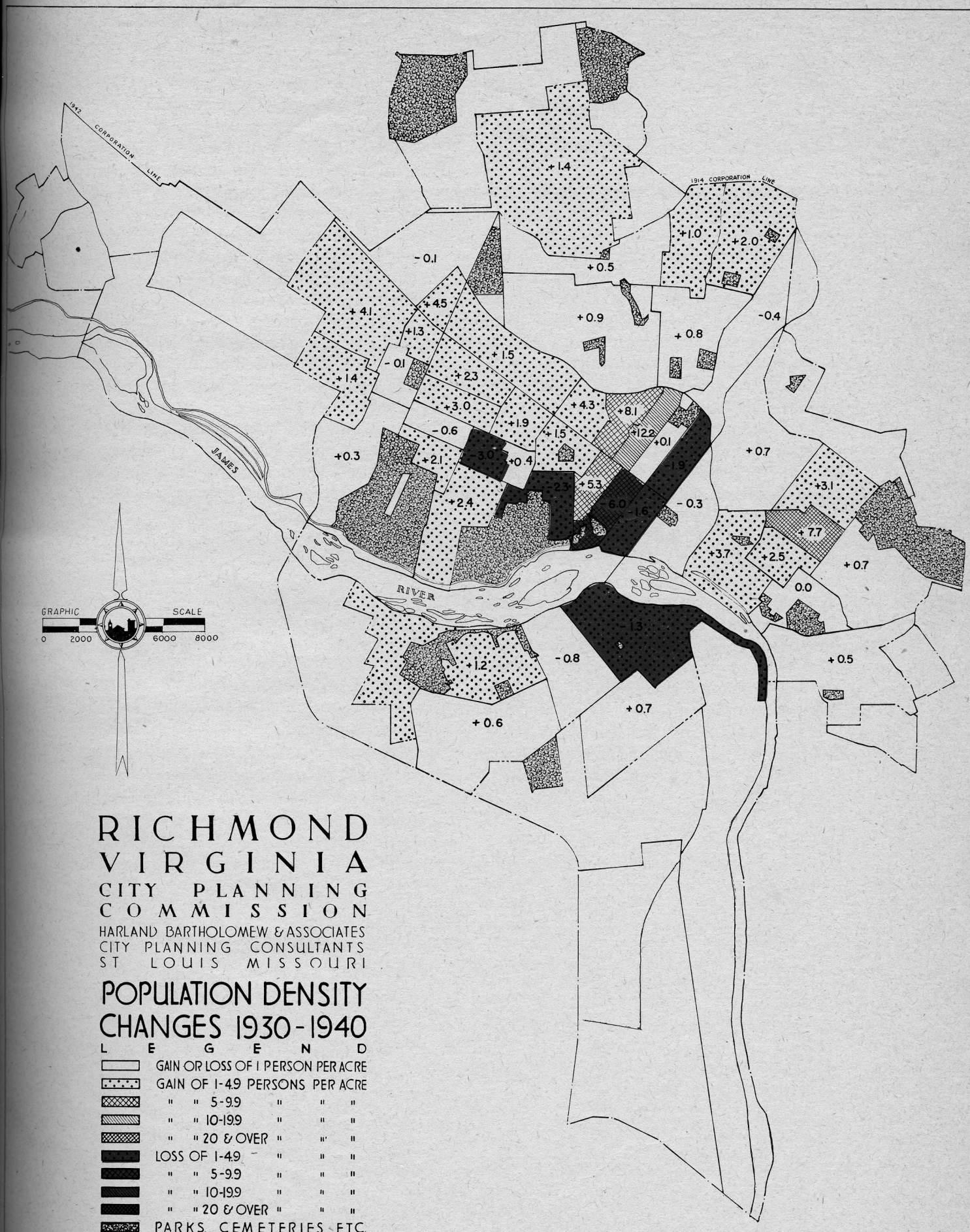
Since the population of Richmond increased only some 10,100 during the past decade, the unusual reversal of population trends in the older sections of the City, which had experienced marked losses for at least one and in some instances several decades, seems at first glance rather remarkable. However, an examination of the map showing these changes reveals the fact that in practically every case they define areas of large Negro population. The preliminary tabulations of the 1940 census indicated an increase both in the number and proportion of the Negro population in Richmond. It is apparent, therefore, that the large migration of Negroes which has accompanied the industrial expansion of the city has moved principally into these old neighborhoods of poor housing. Plate Number 17 also indicates that much of the new development has taken place in outlying areas to the north and west, all of these sections showing substantial gains over the 1920-30 decade.

Changes in Density

Changes in population density for the forty-seven census tracts comprising Richmond are shown for the decades 1920-30 and 1930-40 on Plates Number 18 and 19 respectively.

It is apparent from these plates that population changes were much more marked prior to 1930 than during the past decade. During the decennial period 1920-1930, a very large portion of Richmond decreased in population, almost all of the older sections of the city both north and south of the James River showing losses in this period. Losses in the Negro areas were particularly heavy and the entire area bounded by Broad Street, Lombardy and the Bacon's Quarter Branch Valley declined materially in population. Practically all of the original settlement northwest of Gillies Creek and approximately half of Manchester decreased in population although the Manchester losses averaged only slightly more than one person per acre.

On the other hand, these population losses were offset by considerable gains in other divisions of the city, especially in the areas to the west on both sides of Boulevard. Two of these tracts increased in population by more than 35 persons per acre and another by 27.7. The largest gains in the area north of Bacon's Quarter Branch Valley occurred in the sections adjoining the northern city limits and extending westwardly.



RICHMOND VIRGINIA

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POPULATION DENSITY CHANGES 1930-1940

LEGEND

- GAIN OR LOSS OF 1 PERSON PER ACRE
- GAIN OF 1-4.9 PERSONS PER ACRE
- " " 5-9.9 " " "
- " " 10-19.9 " " "
- " " 20 & OVER " " "
- LOSS OF 1-4.9 " " "
- " " 5-9.9 " " "
- " " 10-19.9 " " "
- " " 20 & OVER " " "
- PARKS, CEMETERIES ETC.

The past decade was characterized by relatively little change in the population pattern of Richmond as compared with past years. It is evident from Plate Number 19 that, strangely enough, the areas of greatest growth in density are those sections of the city which experienced the largest losses in the previous decade, notably those tracts housing large Negro populations in the two areas between Broad and the Bacon's Quarter Branch Valley and between Shockoe Valley and Gillies Creek. The apparent causes of this phenomenon have previously been noted. Examination of Plate Number 19 indicates that a very large area of the city experienced a population change of less than 2 persons per acre, and with the exception of the two sections of the city mentioned above, the remainder of Richmond experienced changes of less than 5 persons per acre.

Areas Which Lost Population

As previously stated, the decade 1920-1930 in Richmond witnessed comparatively great changes in the distribution and density of population throughout the city. Of forty-seven census tracts in Richmond, twenty-four showed population losses and of these, eight lost more than 10 persons per acre. These areas lay in the older sections of Richmond, principally in the general area extending eastwardly from Harrison between Bacon's Quarter Branch Valley and the James River and between Shockoe Valley and Gillies Creek. The greatest losses occurred in the area between Ninth and Harrison Streets.

On the other hand, during the past decade little decline in population took place in any part of Richmond, six of the forty-seven census areas experiencing decreases which exceeded one person per acre. However, all of these areas had previously lost population in the 1920-30 decade. The greatest loss in 1940 was experienced by the section between Broad and the river, Fifth and First Streets, where some commercial and industrial absorption has taken place. It is apparent, however, from a general study of the broad trends since 1900 in the City of Richmond that the changes during the decennial period ending in 1930 are more indicative of long range population shifts within the city than the unusual reversals of the past decade due to the relatively large migration of colored and other population. It is apparent, too, that these older areas which had experienced population losses for several decades are the areas of poor and inferior housing. Unless definite and constructive action be taken to rehabilitate and rebuild these sections, population will continue to drain to other parts of the city, leaving in its wake disintegration and collapse of present property. Many of these neighborhoods are strategically located to serve for many years as desirable residential sections.

Areal Extent of Population Densities

Table Number 26 has been prepared to show the amounts of land (by census tracts

TABLE No. 26

TOTAL CITY AREA IN VARIOUS DENSITY CLASSIFICATIONS

PERSONS PER NET ACRE	Acres 1920	Acres 1930	Acres 1940
0 to 2.4	661.43	317.92	317.92
2.5 to 9.9	3,798.59	2,805.69	1,995.41
10 to 19.9	2,598.63	4,046.05	4,410.84
20 to 34.9	661.81	569.14	1,098.79
35 to 49.9	512.11	376.70	229.44
50 to 74.9	778.76	1,126.74	1,121.66
75 and over	286.96	56.05	124.23
Total	9,298.29	9,298.29	9,298.29

in the 1940 city) within each of the different density classifications for the years 1920, 1930 and 1940.

It is apparent that considerable change has occurred since 1920 both in the areas of high density and in the lower groups. Of 661 acres of land in the lowest classification in 1920, only 318 acres were left in 1930 and 1940, all of which lay in a generally industrial section. There has also been a steady decline of property in the next classification (2.5-10 persons per acre) from 3,799 acres in 1920 to 1,995 acres in 1940. The amount of land in the density classification of 10 to 19.9 persons per acre increased rapidly between 1920 and 1930 and somewhat less rapidly from 1930 to 1940. A little less than half of the total area of the city is now contained in this classification. There has also been an increase in the next highest group of 20 to 34.9 persons per acre from 662 acres of land in 1920 to 1,099 acres in 1940. On the other hand, a decrease is noted in the highest density classification (75 or more persons per acre), which in 1940 was less than half the 1920 area. It would appear that the peak of population density has been reached and that in the future densities exceeding 75 persons per acre will be comparatively rare in Richmond. Table Number 26 also indicates a gradual decline in the total area of the city in the density classifications exceeding 35 persons per acre. It should be noted that the above figures do not include the new areas which were annexed to the City from Henrico and Chesterfield Counties in 1942. A little more than half of these areas are now in the two lowest density groups (less than 10 persons per acre.) However, more than a third of the total area now has a density of from 10 to 19.9 persons per acre, and as additional development of these sections takes place, it would appear that these outlying districts will stabilize at about this figure.

FUTURE GROWTH OF RICHMOND

As previously mentioned in this chapter in the section on national population trends, the population of the United States is approaching stability in the comparatively near future. The cessation of foreign immigration, the rapid urbanization of the nation during the past seventy years and the low fertility and birth rates which are characteristic of urban communities, the changing age distribution of the population and approaching coincidence of births and deaths, all are indicative of striking changes in our national growth.

While American cities have grown rapidly since 1880, this growth has depended almost entirely on the influx of new population from rural areas and from foreign countries. Recent restrictions on foreign immigration have been such that we can no longer look to this source for replenishment of our urban population. The decline in births throughout the nation has been so pronounced that it is apparent that cities in the future can no longer expect large increments of population from rural areas.

In an exhaustive study of the subject, "The Problems of a Changing Population", published by the National Resources Committee in May, 1938, a number of estimates are given of the probable maximum total population in the United States to be reached sometime between 1960 and 1980. The maximum estimate, based on medium fertility and mortality, and with a total annual foreign immigration of 100,000 persons is 158,335,000. The minimum estimate, based on low fertility, medium mortality, and no immigration, anticipates a maximum population of 139,457,000 in 1960 and a decline thereafter to 133,993,000 persons in 1980. An intermediate estimate, based on medium fertility and mortality, no immigration, is 153,022,000. While birth rates have been abnormally low during the depression years, it is questionable whether the birth rate will return to even this "medium" level. Although these population estimates were given wide publicity in newspapers and magazines throughout the nation, few persons have recognized their full significance either to the individual or to our cities.

Estimated Future Population of Richmond

Assuming that the population of the United States will grow according to the intermediate estimate of the National Resources Committee report, based on medium fertility and mortality and no immigration, and that the population of the Richmond Metropolitan District will maintain its 1930-1940 ratio to the total population of the United States, there would be a total population of 284,000 in the Richmond Metropolitan District in 1960. (See Table Number 27.) Of this total only about 4.3%, or 12,100, would consist of farm population and other urban population outside the Richmond area of urbanization, thus giving a true estimated population for the Richmond urban community in 1960 of 271,900. The relatively large immigration of Negro and other population which has accompanied the increased industrial expansion of the city reversed in some instances trends of the two preceding decennial periods.

The manner in which present population is divided between the city, annexation areas and the remainder of the Metropolitan District, and the way in which it would be divided between these units in 1960, are shown in Table Number 28. While it is estimated that the Richmond urban area will increase in population by 38,326 from 1940 to 1960, only 16,958 of this will find accommodation within the 1940 city limits, while there will be an increase of 21,368 immediately outside the city (13,480 in the new annexation areas and 7,888 in adjoining areas).

FUTURE DISTRIBUTION OF POPULATION

Plate Number 20 shows the estimated future (1960) population of the Richmond

TABLE No. 28

DIVISION OF TOTAL RICHMOND METROPOLITAN DISTRICT

1940 AND 1960

	1940	Per Cent	1960	Per Cent
Total population Richmond Metropolitan District	245,674	100.0	284,000	100.0
Total population city of Richmond (1940 Area)	193,042	78.5	210,000	73.9
Total population excluding city of Richmond	52,632	21.5	74,000	26.1
Total population in Annexation parcels	20,270	8.3	33,750	11.9
Remainder of Richmond Metropolitan District	32,362	13.2	40,250	14.2
Rural and other urban areas	11,797	4.8	12,100	4.3
Balance in Richmond urban areas	20,565	8.4	28,150	9.9

POPULATION GROWTH 1940 TO 1960

	Population	Per Cent of 1940
Richmond Metropolitan District	38,326	15.6
City of Richmond (1940 area)	16,958	8.8
Annexation parcels	13,480	66.4
Richmond urban area (excluding city of Richmond)	21,368	40.5
Rural and other urban areas	303	2.6

community as this population would be distributed throughout the different sections of the 1940 city, the area annexed to Richmond in 1942, and the larger area of urbanization. This distribution is necessarily general in scope and no attempt is made at this time to designate areas which may be developed in the future as parks, schools, or other public open spaces.

Methods of Urban Growth

In estimating the future growth and probable distribution of Richmond's population, two separate and distinct methods of procedure may be followed. First, it may be assumed that the general trends and characteristics of past growth, resulting from haphazard development and inadequate controls, will continue to direct and dictate future growth; in other words, that expediency and a policy of *laissez faire* will determine the extent and location of future development. On the other hand, it may be assumed that the City of Richmond is now prepared to take the initiative in the control and direction of the future community and to substitute for expediency the conscious following of a definite plan, which will result in a well balanced and efficient urban community. The by-products of the first method of growth are slums, blighted neighborhoods and the wasteful scattering of urban population. The results of the second "controlled" mode of development, are efficiency in city administration, sound and stable property values throughout the community, and maximum economy in urban services.

The accompanying Table Number 29 has been prepared to show the distribution of Richmond's future population likely to re-

TABLE No. 29

PRESENT AND PROBABLE FUTURE DISTRIBUTION AND DENSITY OF POPULATION WITHIN RICHMOND IN ACCORDANCE WITH MANNER OF FUTURE GROWTH

GROUP	Net Area of Tract in Acres	Estimated Vacant and Und. Area Suitable for Res.	1940 Population	1940 Density	Uncontrolled Growth		Balanced Growth	
					1960 Population	1960 Density	1960 Population	1960 Density
A. N-1	82.07	0	4,213	51.3	.....	.....	.....	.....
N-2	60.65	0	3,857	63.6	.....	.....	.....	.....
N-3	68.18	0	5,427	79.6	.....	.....	.....	.....
N-6	85.75	0	5,504	64.2	.....	.....	.....	.....
N-7	75.39	0	4,537	60.2	.....	.....	.....	.....
N-8	273.58	0	3,257	11.9	.....	.....	.....	.....
Total A	645.62	0	26,795	40.5	19,600	30.4	21,600	33.5
B. N-13	50.57	0	1,235	24.4	.....	.....	.....	.....
N-14	317.92	0	224	0.7	.....	.....	.....	.....
Total B	368.49	0	1,459	4.0	700	1.9	800	2.2
C. N-4	259.47	58.1	3,786	14.6	4,700	18.1	4,900	18.9
D. N-5	342.78	23.3	3,554	10.4	4,850	14.2	4,250	12.4
E. N-11	189.37	45.6	3,770	19.9	.....	.....	.....	.....
N-12	238.07	47.5	4,884	20.5	.....	.....	.....	.....
Total E	427.44	93.1	8,654	20.2	11,700	27.4	10,600	24.8
F. N-10	289.35	97.5	3,765	13.0	6,000	20.7	5,800	20.1
G. N-9	560.68	101.0	3,776	6.7	5,750	10.3	5,750	10.3
H. N-15	727.45	183.5	6,494	8.9	9,550	13.1	9,400	12.9

sult from either of these two modes of future growth. It is to be noted that without appreciable control of future development, past and present trends would indicate little increase in the population within the 1940 city limits, increases in the limited vacant and undeveloped areas being offset by losses in the older central sections of the city. The further withdrawal of large groups of population from the central city can only result in eventual disintegration of these old areas, increased blight and instability in surrounding property and serious social, economic and administrative problems.

On the other hand, the city is now adopting the more realistic policy of future control, and hopes to enlist the cooperation of officials and citizens alike in observing and enforcing sound community development in accordance with the presently evolving Comprehensive City Plan for Richmond. It is estimated in Table Number 29 that a balanced population pattern for the Richmond of 1960 should anticipate a further population within the 1940 corporate limits of approximately 17,000 persons. While there are certain sections, particularly in the Negro areas, which are presently over-populated, the comparatively small losses in these sections will be more than offset by the more compact development at the edges of the city. Midtown areas may be expected to retain their present population with slight increases in a few instances.

Future Distribution

The distribution of future population on Plate Number 20 has been made in accordance with the estimates in Table Number 29 for a balanced population pattern in the present city and in accordance with additional studies in the environs of Richmond. It is apparent that the densest population is spread around the downtown business district and, broadly speaking, grades outward from these areas to the more spacious development in outlying sections. No substantial changes are contemplated in the areas extending as far west as the Boulevard and beyond, where the population is expected to level off at about the present density. While peripheral development is naturally more spacious, every effort should be exerted to bring about a reasonably compact extension of the present community in accordance with actual needs rather than the scattered and sporadic growth characteristic of much past development.

It may be noted that no consideration is given in this chapter to the future development of the "flivver" plane and its possible effects on population distribution in Richmond and other cities within the next twenty years. While it is recognized that the war has greatly stimulated the development of air facilities, which will undoubtedly result in their increased importance within the next few years, there are at least two deterrents to such immediate use of private air transportation to effect an entirely new form of urban population pattern. First, the present number of privately owned planes is negligible in comparison with the great number of private automobiles in the United States. Even with the development and mass production of the so-called "flivver" plane, it would be very difficult to get into general use within the next few years a sufficient number of these planes to materially change present population groupings. Second, new and vastly improved terminal facilities must be developed before the modern airplane can be effective in satisfying the requirements of individual passenger transportation. While the automobile era has been in existence for more than twenty years, the larger American cities have not yet found a satisfactory solution to the terminal problems incidental to its parking and service. It is unlikely, therefore, that any easy solution lies ahead for the much larger problems inherent in modern aerial transportation.

FUTURE DENSITY OF POPULATION

Plate Number 21 shows the future densities of population throughout the Richmond urban community which would pre-

vail in accordance with the distribution and division of the future population discussed in the previous section. Many of the past trends in the population growth of Richmond will undoubtedly continue into the future. However, it is essential that proper guidance be given this growth in order that a desirable population pattern may result so that population will be neither too sparse to permit of economical and efficient urban services nor so dense as to bring about harmful social conditions.

An examination of Plate Number 21 indicates that the densest sections of the future city will be in three general areas: in the central portion of the original community between Shockoe Valley and Gillies Creek; in the area between Broad and the Valley north of the downtown business district; and in the area south of Broad extending westward to Boulevard and beyond. These are sections of Richmond where relatively high densities have prevailed for many years, and while many of these densities have exceeded 75 persons per acre in past decades, particularly in the Negro area north of Broad, a better balanced community would result from a distribution of some of the population in other areas. It is assumed, therefore, that the older central sections of the city will lose some of their present population, stabilizing at a density of less than 75 persons per acre. It should be noted that either stability or slight increase is contemplated in each of the other midtown areas of Richmond.

On the other hand, it is apparent from a comparison of Plate Number 21 and Plate Number 17, showing 1940 densities, that a much more compact development in 1960 is anticipated in the outlying sections of Richmond. There is no reason why these sections which still contain limited amounts of vacant and undeveloped property suitable for residence purposes, should not absorb additional population. The compact and well balanced pattern of population within the future city would result in considerable economies both in administration of the city and in the provision of various urban facilities. It should be noted that most of these outlying areas would have a population density in 1960 of from 10 to 19.9 persons per acre.

Development beyond the 1940 limits of Richmond in the annexation parcels and beyond will naturally be more spacious. This is particularly true of residential development in the Windsor Farms area. Most of these sections will lie in a general density classification of from 2.5 to 9.9 persons per acre.

Table Number 30 was prepared for comparison of the areas within the city in the various density classifications in 1940 and 1960.

It is evident that almost half of the present area of Richmond would be developed with a population density of from 10 to 20 persons per acre in 1960 and that most of the remainder would have a density of less than 35 persons per acre, which is a substantial increase over the area so developed at the

TABLE No. 30

NET AREA OF VARIOUS POPULATION DENSITIES WITHIN RICHMOND

PERSONS PER NET ACRE	1940 Acres	1960 Acres
0 – 2.4	317.92	378.42
2.5– 9.9	1,995.41	175.93
10 –19.9	4,410.84	4,454.10
20 –34.5	1,098.79	2,709.41
35 –49.9	229.44	613.70
50 –74.9	1,121.66	966.73
75 and over	124.23	0
Total net area	9,298.29	9,298.29

present time and indicates a compact and efficient arrangement of the 1960 community. Sections of the city containing fewer than 2.5 persons per net acre are principally industrial in character. While approximately 614 acres will be developed at a density of 35 to 50 persons per net acre and some 967 acres at a density of 50 or more, these sections are located either around or within easy access of the downtown business district and there is no evidence that these densities will result either in congestion or undesirable social conditions.

Area of Urbanization

Assuming that there will be a total population of 271,900 persons within the true urban community of Richmond in 1960, we may now proceed to determine the total area of land that would normally be needed for its accommodation. The average land area found within the city limits of sixteen self-contained cities is 8.175 acres per hundred persons.*

If we use that figure as a norm for the Richmond community, the total area of urbanization in 1960 would be 22,250 acres or 34.8 square miles. It should be noted that the total area of the parcels recently annexed to Richmond from Henrico and Chesterfield Counties is 10,835 acres or 16.93 square miles. The city comprises 39.89 square miles, which is about 5 square miles more than the figure determined above (from the average in 16 other cities) for 1960.

On Plate Number 21 is shown the probable future density of population in the Richmond urban community in 1960. All areas having a density of more than 2.5 persons per acre are considered within this area of urbanization. While a density of one person per acre, which is approximately 320 persons per square mile, cannot be regarded as rural farm land, such areas would be most difficult to provide with certain municipal services, and for the purposes of this report are omitted from the true area of urbanization. The true area of urbanization today as shown by Table Number 31, is approximately 33.7 square miles which, interestingly enough, is only 1.1 square miles less than the future figure arrived at by using the existing standard of city area in other cities from the "Urban Land Uses".

*Urban Land Uses, Harvard University Press, 1932.

TABLE No. 31

GROSS AREA OF VARIOUS POPULATION DENSITIES IN RICHMOND URBAN COMMUNITY

1940 and 1960

PERSONS PER ACRE	1940		
	Acres	Sq. Miles	Cumulative Sq. Miles
City of Richmond (1940 limits)	14,694.4	22.96	22.96
10.0 to 19.9	502.4	0.79	23.75
2.5 to 9.9	6,335.5	9.90	33.65
1.0 to 2.4	8,381.6	13.10	46.75
Parks, cemeteries, and playgrounds	736.2	1.15	47.90
	1960		
City of Richmond (1940 limits)	14,694.4	22.96	22.96
10.0 to 19.9	3,111.3	4.86	27.82
2.5 to 9.9	7,962.9	12.44	40.26
1.0 to 2.4	13,924.6	21.76	62.02
Parks, cemeteries and playgrounds	736.2	1.15	63.17

It is apparent from this table that the present area of urbanization is already sufficiently large to accommodate a very large portion of the probable future growth and every effort should be made to limit development in the immediate future to these particular areas. However, some additional development beyond these limits is anticipated such that the city would eventually have an area of approximately 40.26 square miles, which is less than one square mile greater than the 1942 area of Richmond.

In the face of eventual slowing down of urban growth and modern tendencies toward decentralization and dispersion of urban population, it becomes imperative that the City of Richmond take proper steps to restrict all future development beyond the area of urbanization as outlined on Plate Number 21. Specifically, it is recommended that the City of Richmond confine all future extension of municipal facilities such as water mains, sewers, streets and other public services to this area of 40.26 square miles. Thus by discouraging future dispersion of the present population through the control of new growth beyond the present city, by encouraging community action toward retention and restoration of present urban values, and by rebuilding and reclaiming the older central areas, the present community can be moulded into an efficient, economical and attractive municipality.

Chapter III

LAND USE AND ZONING

Chapter III

LAND USE AND ZONING

As American cities go, Richmond is a relatively old community. Over a period of two centuries the city has grown from a pioneer settlement into a metropolis of more than 200,000 persons, and, with annexation of the new areas from Henrico and Chesterfield Counties, an area of 39.89 square miles. In common with that of other large American cities, this growth has been largely dictated by the needs of the moment, land speculation and individual interests taking precedence over the community welfare. The evolution of the present city, therefore, has resulted in much haphazard and misdirected development, in the intermingling of heterogeneous and incompatible uses such as stores and industries in residential neighborhoods and scattered residences in industrial sections.

This failure of American cities to coordinate and control the various elements comprising the urban community has brought about not only depreciated and unsatisfactory home nieghborhoods but increased difficulty and waste in the provision of essential urban services. Thus, population has spread to the suburbs, seeking both relief from increasing taxes and better home environment, frequently only to find in a few years a repetition of the same inimical conditions from which they fled. Recently completed population studies have shown that a very substantial portion of Richmond lost population during the 1920-30 decade and despite the relatively large influx of Negro population into many of these sections during the past ten years, a portion of the city continued to lose population.

It is essential to the economic and civic welfare of Richmond that steps be taken now to reverse these past trends and to reshape the present community into a well-balanced and efficient urban structure. With completion of the population studies, a broad pattern of future growth and population distribution was prepared. The various phases of the Comprehensive City Plan must be designed to provide the physical setting and necessary controls for effecting an efficient and harmonious relationship between this population and essential community facilities. One of the first and most important steps toward bringing about this relationship is the coordination of various urban uses such as residences, commerce, and industries through the preparation and adoption of an up-to-date zoning ordinance in scale with present and future community requirements. This has recently been accomplished through adoption and approval of the new zoning ordinance on May 19, 1943.

Zoning is concerned with regulating the use of buildings and land, the heights of buildings, the density of population, and the amount of open space around structures. *It cannot be used to control the architecture or appearance of individual buildings and the cost and materials of construction, nor can it be used for racial segregation.* Richmond's ordinance is based on the Virginia zoning enabling act, which reads in part as follows:

> "Such regulations shall be made in accordance with a comprehensive plan, and designed to lessen congestion in the streets, to secure safety from fire, panic and other dangers, to promote health and the general welfare; to provide adequate light and air; to prevent the over-crowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements.

> "Such regulations shall be made with reasonable consideration, among other things, to the character of the district and its peculiar suitability for particular uses, and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the city or town."

The first consideration mentioned above as a basis for these regulations is that they "shall be made in accordance with a comprehensive plan," that they shall be related to the structure of the entire city and the facilities to serve it. Piecemeal and so-called "spot" zoning are not only unsound in principle but also a violation of the statute under which the city is granted its authority. The whole philosophy of zoning is based on the sound principles that property which is similarly situated, that is, in respect to streets, sewers, schools, and other physical facilities and its relationship to other property, shall be similarly zoned.

It is obvious that any exercise of the police power, whether for the regulation of buildings or the regulation of conduct, must be reasonable. The second paragraph quoted above, therefore, sets out certain considerations which will tend to prevent arbitrariness or unreasonable treatment of existing property by giving due consideration both to the character of existing development and "the peculiar suitability of the area for particular uses." It should be kept in mind, however, that the city must also be viewed as a whole and the interest of the individual balanced against the public interest so as to accomplish the greatest good for the greatest number, public welfare taking precedence over individual profit. Among the purposes of zoning are the conservation of the value of buildings and not increase in value—stability rather than speculation, and "encouraging the most appropriate use of land throughout the city or town."

Before any sound zoning regulations can be prepared, therefore, it is necessary to make an analysis of existing conditions and past trends throughout the city as well as a determination of probable future needs. It is the purpose of this chapter to analyze the pattern and character of existing development in Richmond, to determine the quantitative relationship between the different types of development and the city's population, and thereby to estimate the character and extent of the city's future land requirements.

EXISTING LAND USES

The Land Use Survey

In order to analyze land use conditions in Richmond, it was necessary to make a field inspection of every parcel of land in the old city and the areas annexed from Henrico and Chesterfield Counties at the beginning of 1942. From this field information maps were prepared on a suitable scale to show the use of all property within this area, as well as building heights and present densities in lot area per family throughout the city. Additional maps were prepared to show the location of light and heavy industries. Computations were made of the areas devoted to each use as well as the frontage of stores and other commercial property and the lot area per family in all residential development. These computations were then assembled by blocks and by census tracts in the 1941 city and by annexation parcels in the new areas.

In making the field check of land use in Richmond, several preliminary operations were necessary. Since there were in existence no maps suitable for the graphic presentation in color of these data, the Department of Public Works made available blank tracings of maps in their files on a 400′ scale and detailed a draftsman to insert the street names on these twenty-five sheets comprising the total area of the 1942 city. In the meantime, block maps were secured showing each parcel of property in the old city, and these maps were carefully checked against existing records such as the insurance atlas and city directory and the use of each lot indicated thereon in color. These maps were then

direct control over the location of public buildings and property, the various public agencies are required by law to submit all such proposals to the Planning Commission for review before they are finally located. Whenever they are placed in residential districts, proper consideration should be given their location and treatment so as to mitigate any adverse affects they may have on surrounding residential development.

8. *Height of Buildings.* Maps have been prepared showing the height and location of all buildings containing three or more stories. It is apparent from these maps that there are relatively few tall buildings in Richmond and nearly all of these are found in and around the central business district. There is no reason why unusually high buildings should be permitted in Richmond, even in the central business district. The best modern practice encourages horizontal rather than vertical expansion since this permits more property to be absorbed by high value buildings and prevents unduly large concentrations of population in a particular location.

Outside the central business district there are very few buildings of more than three stories, and these principally hospitals and schools. In the future such buildings should be required to provide sufficient area to permit the maintenance of larger setbacks for the protection of surrounding property.

Summary of Major Land Use Problems

1. *Intermingling of Uses.* As previously noted, there has been widespread scattering of commerce, industry and apartments throughout the city. These intensive uses are very injurious to single-family residences, and a great many homes in Richmond have been adversely affected. It is essential that the city take steps toward gradual and final removal of business and industry from logically residential areas and that apartments and commerce be concentrated in locations where they can be properly developed and where less intensive residential districts will not be harmed.

2. *Blighted Areas.* This intermingling of incompatible urban uses is a strong factor in the deterioration of environmental values in the older areas of the city. The gradual depreciation of neighborhoods in the present city is driving population ever outward in search of more attractive neighborhoods, newer buildings and freedom from objectionable uses. At the same time that existing improvements and services are being abandoned, paved streets, sewers, water, schools and other facilities must be provided in the new subdivisions. To continue this practice of abandoning existing capital investments and to make new investments in these outlying sections is extravagant waste and if carried to its conclusion will eventually bankrupt the urban community. Most of these older areas are well-suited to some type of residential development and should be given adequate protection against further intrusion of obnoxious and incompatible uses.

3. *The Scale of the City.* It was formerly assumed that commerce and industry would continue to expand at a very rapid rate, along with the population, and that most of the areas of aging structures abandoned as homes, particularly surrounding the central business district, would eventually be absorbed by these more intensive uses. It is apparent now, however, that all American cities are faced with eventual stabilization or near stabilization of population. It is apparent, too, that this anticipated business expansion will never be realized and that many of these central sections, if they be utilized at all, must be devoted to some type of residential development. With the accumulation of data from American cities over a period of many years, it can now be shown that a definite relation exists between urban population and the land which it will absorb for various urban purposes. It is important, therefore, that the areas of the zoning districts be properly related to the city's future land use requirements;

that is, that the new ordinance be in scale with community needs, rather than with hopes and speculations which can never be realized.

FUTURE LAND USE REQUIREMENTS

The population studies indicated that Richmond will probably have a future population of 243,750 persons within the 1942 city limits. Assuming that the ratio between population and land area will remain very nearly constant, it is possible to estimate the amount of land which will be needed for various urban purposes by this future population.

These estimates are shown in Table No. 34, which is based on the ratios of existing areas per 100 persons determined by the land use survey. It is apparent from the total of 6.92 acres of developed land per 100 persons in Richmond that the present city is very compact. Comparison of the areas in Richmond with averages found in the 22 other cities reveals some variation, particularly in the dwelling areas and streets. However, the ratio of park development is exactly the same and the total areas devoted to combined railroad and industrial purposes are quite similar. While Richmond has larger ratios of areas used for public and semi-public development and for commerce, the proportion of streets per 100 persons here is considerably lower than the average of these 22 cities.

In making these estimates of future land use requirements, it was assumed that all areas would increase in proportion to the population with two exceptions. An accepted standard for park and playground facilities in the American community is one acre per 100 persons, and it was, therefore, assumed that the city should anticipate meeting this standard through the future acquisition of 1,408 acres properly distributed to satisfy future recreational requirements. It was also assumed that the present railroad development was sufficient in area and that no increase would be necessary in the future. The present water area of the city has been kept constant in all computations.

It is estimated that an additional 3,178 acres will be needed to accommodate Richmond's future population. With annexation of the parcels at the beginning of 1942, the city now has an area of 39.89 square miles or 25,528 acres, including river area. Of the total city area 8,738 acres are now vacant. While a portion of this vacant area is not susceptible to any type

TABLE No. 34

EXISTING AND PROBABLE FUTURE LAND USE NEEDS, RICHMOND, VIRGINIA

USE	Existing Acres Per 100 Persons Richmond	Average of 22 Cities	Existing Area Acres	Amount Needed for Future Population	Amount To Be Absorbed
Single-family residence	2.09	2.94	4,487.8	5,094	606
Two-family residence	0.28	0.14	604.0	683	79
Multiple dwelling	0.16	0.07	337.6	390	52
Commerce	0.19	0.18	412.4	463	51
Light industry	0.30	0.24	648.5	731	83
Heavy industry	0.23	0.22	501.2	561	60
Railroads	0.34	0.46	738.7	739	.....
Public and semi-public	0.96	0.62	2,064.7	2,340	275
Parks and playgrounds	0.48	0.48	1,029.7	2,438	1,408
Streets	1.94	2.82	4,165.0	4,729	564
	6.92	8.23	14,989.6	18,168	3,178

Total city area	25,528 acres
Now vacant	8,738 acres
Estimated vacant or farm land in future	5,560 acres

NOTE—1942 population estimated at 215,000; future population at 243,750.

it, is more than 25 years old. At its inception, cities were necessarily cautious in adopting regulations which might appear stringent or unreasonable in the absence of favorable court decisions and consequently it was not attempted to make the early ordinances retroactive; that is, to provide for early or eventual elimination of non-conforming uses. It was further believed that the restrictions against repairs and enlargement of non-conforming uses would gradually force their retirement over a period of years. However, experience has now shown that this is not the case and that instead of gradual elimination, these uses have in many instances become more firmly entrenched, frequently enjoying the advantages of a monopoly. Many residential sections have been blighted by their presence. If the shifting and decentralization of urban populations are to be controlled and confined within the limits of a reasonable area which can be efficiently and economically serviced by the future city, it is essential that the less intensive residential districts be revitalized by the gradual elimination of these non-conforming uses.

Accordingly a section has been included in the new ordinance which requires the discontinuance of the use of land for a non-conforming purpose at the end of one year, and the discontinuance of the non-conforming use of a building (commercial or industrial) in the "A", "B" or "C" Single-Family Districts at the end of 40 years. The past twenty-five years have witnessed the accumulation of a vast array of court opinions and decisions in the support and gradual extension of the zoning principle, in keeping with public interest and support of community improvement, and it is believed that the courts are now ready to support any reasonable application of this principle in the elimination of the more obnoxious forms of non-conforming uses.

Off-Street Parking

The development of the modern automobile has created many problems for American cities. It has facilitated the decentralization and dispersion of urban population. It has brought about congested and overburdened thoroughfares, necessitating expensive street widening and revamping of the "horse and buggy" community. It has created endless problems in the development of satisfactory terminal facilities. In the solution of these problems, it is apparent that the community must take more realistic cognizance of the automobile age, particularly, in the adoption of measures designed to expedite the movement of traffic throughout the city and to provide more adequate and properly located terminal facilities.

The principal purpose of all major thoroughfares is this movement of traffic throughout the city and it should not be made subservient to the parking of vehicles or the unloading of goods which frequently obstruct the normal traffic flow in certain sections of Richmond. Furthermore, all-night parking in residential districts seriously interferes with the proper cleaning of city streets. The new ordinance, therefore, has included regulations which will require all multiple dwellings hereafter erected to provide garage or other off-street parking space sufficient to accommodate one and a half motor cars for each two dwelling units. In the "G" Local Business District every building hereafter erected is required to provide an off-street parking space having an area not less than the ground floor area of the building. While it might not seem reasonable to require such facilities in the close-in commercial centers, already developed in the "H" and "I" Districts, there is no reason why parking space should not be provided in the newer developments in these out-lying sections. It has been the experience of properly designed shopping centers which have provided off-street parking that the increased attraction of these facilities is a very definite advantage, far outweighing the cost of provision. The new ordinance also requires the establishment of adequate off-street facilities for the loading

and unloading of merchandise so as not to obstruct freedom of traffic movement on the street or alley.

ADMINISTRATION OF THE ORDINANCE

No zoning ordinance, however well drawn, can be more effective than its administration and enforcement. In the enlistment of public support for the new ordinance—and public support is quite essential to the success of zoning and other planning in Richmond—every effort should be made to bring about a wide public understanding of the various regulations and the reasons therefor, as well as to inspire confidence in its administration through the strict and impartial enforcement of every provision.

During the period when the 1927 zoning ordinance was in effect more than eighty changes were made, many for speculative purposes out of harmony with the general community welfare. Haphazard, easily gained amendments for purely selfish reasons not only brings about a spirit of public indifference and apathy to the success of comprehensive planning, but they also generate more numerous and frivolous requests for further breakdown of the law. While a community may change and conditions sometimes arise which could not have been prevented or foreseen, necessitating change in the district boundaries or regulations, the city should be very careful to permit such amendment only after a thorough investigation and examination of all aspects of the change, keeping in mind that the plan is a comprehensive plan for the benefit of the entire city and that in any conflict with individual interests, the public welfare should be paramount.

Richmond has been fortunate in the appointment of a conscientious and thoroughly interested Board of Zoning Appeals. There have been relatively few changes in the personnel of this Board since its inception in 1927, and this continuity of the Board has been of material value in its understanding and administration of matters before it. Prior to the passage of the new zoning ordinance this Board also assumed the functions of a zoning commission, all requests for changes in the ordinance having been referred by Council to the Board for report and recommendations. This procedure is not in accord with modern zoning administration and the new ordinance provides that these petitions be referred to the City Planning Commission for study and examination as a part of the Comprehensive City Plan. The quasi-judicial functions of the Board in interpreting and applying the ordinance to individual properties under exceptional conditions should not be confused with questions of broad application where a knowledge of the city's design and the Comprehensive City Plan are of paramount importance.

The recently enacted ordinance is the result of a thorough and painstaking examination of land use problems in Richmond. It was prepared in accordance with a comprehensive plan designed to protect existing values and to bring about a more harmonious relationship between the various types of urban development and the facilities which serve them. In the face of increasing administrative expense and near stabilization of population, the city must take steps now to prevent the constant shifting and dispersion of its population and the depreciation of once desirable homes. As the city plan progresses other elements of the urban structure will be designed to conform and relate to the broad community pattern as now determined by the population and land use reports.

In the administration of any law for the common good, there must be some sacrifice of selfish interest to the broad considerations of general public welfare. It is inevitable that the city will be importuned from time to time to permit changes in individual properties designed to alleviate a fancied wrong or to extend some special privilege. Much of the future success of planning in Richmond is dependent on its resistance to these unwarranted requests and its strict adherence to a policy of conscientious and impartial enforcement.

Chapter IV

HOUSING CONDITIONS AND POLICIES

Chapter IV

HOUSING CONDITIONS AND POLICIES

It is obvious from an examination of the physical development of the municipality that housing is an important part of the urban structure. Streets, parks, playgrounds and other public or semi-public uses occupy a little more than one-fourth of the total city area. Of the remaining three-quarters, privately owned or developed, including vacant land, non-residential building can never absorb more than a relatively small portion, and housing will always occupy a greater acreage than any other urban land use. At the present time residential property constitutes nearly two-fifths of the developed area of Richmond, including streets and other public property, and more than two-thirds of the city's private development. The city plan, therefore, must concern itself with the proper location and protection of the residential sections of the community as well as the arrangement and coordination of the various facilities to serve them, such as sewers and water, streets, transit and transportation lines, public buildings, parks and other urban services.

From a physical standpoint, also, housing conditions throughout the city have a very considerable influence on its economic stability. Tax on real estate is a major source of revenue for operation of the multifarious municipal services, and more than half of the city's income from this source is derived from residential property. Moreover, areas of bad housing and slums are an economic drain on the entire community, necessitating large additional outlays for hospitalization, relief, public health clinics, policing and fire fighting. In these areas tax delinquency is high, and depreciation is rapid, further increasing the disparity between income and the cost of services. The protection and rehabilitation of its residential neighborhoods, therefore, is of the utmost importance to the city, both to maintain and increase its revenue and to diminish the heavy costs of the urban slum.

Studies of land use and the population characteristics of Richmond revealed that the population was constantly shifting, moving from the older central area to the suburbs. Many factors have contributed to this exodus of urban population. As the community evolved from the original settlement into the present metropolis, and successive accretions to the older city were built, it was customary to move into these new areas, abandoning the close-in houses either to commercial and industrial expansion or to those of more limited means. These movements took place for many years, and during the period of rapid expansion presented no serious problems to the growing city. Furthermore, until the advent of the modern automobile, no tremendous dispersion of the urban population was at all possible. In later years, however, the widespread use of automotive transportation, the unsatisfactory character of residential neighborhoods, the fashions of the times, and the desire to evade increasing taxes, all tending further to unbalance the urban structure, and conversely, to increase the city's tax load, have accelerated these movements and created problems of incalculable magnitude.

This evolution of the American city has brought about a condition of housing characterized by at least three broad classes of residential development. New homes have always been constructed on and beyond the periphery of the existing city, with no appreciable rebuilding of the central areas. Consequently, these inlying sections have gradually depreciated into the badly obsolescent and substandard housing which constitutes the present-day slum. Extend-

ing outward between the slum and the newer and better residences in the outskirts lie areas of old and variously conditioned homes, in which blight is usually in some incipient stage.

The dispersion of population and the concomitant lack of balance in the urban structure have made increasingly more difficult and more expensive the establishment of essential community facilities. Residential neighborhoods require schools and playgrounds. They require an adequate system of parks and recreational facilities. They must be properly related to the general design of the city, the arrangement of major streets and transit lines. Obviously, the most valuable and effective city plan will be one which looks toward both the general arrangement of housing in the urban structure and the future stability and preservation of those neighborhoods.

Much of Present Housing Generally Unsatisfactory

For many years the inimical social and economic effects of urban housing policies received little recognition. The past decade, however, has witnessed a growing consciousness of these problems, especially as they relate to social decadence in the slum. Numerous investigations have been conducted of housing conditions in widely separated cities throughout the United States, including Richmond. These studies have revealed that a surprising number of homes are lacking in one or more of the minimum essentials to any reasonable housing standard. Many dwellings are in bad condition and overcrowded. Many are without running water and sanitary facilities. Others are crowded on narrow lots with inadequate light and air and sunshine.

Furthermore, few large residential areas possess the cohesion and homogeneity essential to the preservation of home neighborhoods. The intrusion of stores, industries, and apartments in single-family developments has frequently destroyed values and blighted whole districts, forcing the abandonment of good neighborhoods long before the ordinary appearance of obsolescence. Parks, schools and playgrounds are insufficient in size or poorly located to serve the community. The street system fails to provide adequately for the movement of traffic on principal thoroughfares, often forcing large numbers of vehicles into these neighborhoods and destroying their privacy. Smoke, dust and noise are far too prevalent.

Minimum Standards for Urban Housing

What are the essentials to more satisfactory housing in Richmond? By what standards shall individual homes be judged? What are the neighborhood amenities necessary to the protection and preservation of the whole community structure? The answers to these questions provide a norm for evaluating present housing conditions in Richmond as well as a goal for their future improvement. Obviously, certain minimum requirements must be met for the maintenance of the health and welfare of every citizen of the city. These minimum standards for every dwelling unit might be summarized as follows:

1. Each unit should be structurally safe and in a good state of repair.
2. Each unit should be provided with running water and a private inside toilet.
3. Every room should be supplied with adequate natural light and ventilation.
4. Each unit should be of sufficient size in relation to the family group to prevent overcrowding, or more than one person per room.
5. Each unit should be supplied with the means of proper heating and with adequate lighting and cooking facilities.

For the protection and preservation of large residential neighborhoods, certain minimum standards or essential features might also be listed, such as the following:

1. The neighborhood should be homogeneous in character and of sufficient size to maintain and protect its own

environment; for example, the area ordinarily tributary to an elementary school.

2. The neighborhood should be provided with all utilities and essential community facilities, including a school and community center and properly located shopping districts.
3. Adequate park and other recreational facilities should be supplied. Ordinarily, 10% of the total area of the neighborhood is a satisfactory standard for this use.
4. The neighborhood should be bounded or otherwise protected by a system of arterial highways of a capacity and design to provide for all through traffic around and not through the development.

Community Responsibility for Condition of Housing

As previously noted, the present conditions of urban housing are the direct result of past methods of community growth and the failure of cities to adopt definite policies either for the control or improvement of these conditions. For many years the older central areas have been losing population. Many buildings have been abandoned, some torn down. Depreciation and obsolescence have grown steadily worse. Crime, disease and social deterioration have taken a heavy toll. At best, hope of absorption of such large areas for commercial and industrial expansion was somewhat remote; in the face of eventual stabilization of urban population, it is inconceivable.

Obviously, caught in this maelstrom of adverse environmental factors, the individual property is helpless. Any expenditure for its improvement without general improvement of the entire neighborhood is likely to prove a short-lived and wasteful palliative. The problem must be attacked at its origin, and its origin lies both in the past practices of expediency and *laissez faire* city development and in the failure of the community to realize or to accept its responsibilities for these conditions.

General improvement of housing conditions in Richmond is the responsibility of the entire community and can be effected only through its concerted action toward the improvement of neighborhood amenities as well as individual homes.

Necessity for a General Policy

Previous chapters have repeatedly stressed the serious problems created by large-scale urban decentralization. Bad housing with its great social deterioration and heavy economic costs to the entire municipality is one of its by-products. It is imperative that steps be taken now to arrest the constant shifting of the city's population with its expensive and unnecessary expansion of the city plant and concomitant abandonment of well-serviced areas. The way to do this is to increase and to preserve the attraction of residential districts throughout the present city and to exert a reasonable control over future growth designed to prevent unwarranted and poorly-conceived development. This improvement cannot be effected by individuals, working independently. It must enlist the cooperation and support of every citizen of the city. A prerequisite is the adoption of a general housing policy, designed to effect the gradual elimination of substandard homes in Richmond, to encourage and protect good residential neighborhoods, and eventually to rebuild or rehabilitate slums and blighted districts throughout the city.

Scope and Objectives of This Chapter

There are many ramifications of the housing problem in Richmond. It is the purpose of the present chapter to discuss certain aspects of this problem as it relates to the community structure and the Comprehensive City Plan. The first part deals with the history and development of housing in Richmond, its physical, social and economic effects on the present city. On the basis of available information from the 1940 census of housing, a broad evaluation is made of present

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facilities. The comprehensive housing plan and policy which follow include a recommended division of the entire city into well-defined residential neighborhoods. Only by adopting and conscientiously following such a program can substantial and permanent improvement be effected in the city's housing. Failure to adopt a definite policy and further neglect can only lead to greater slums, increased blight, higher taxes and eventual jeopardization of real estate values throughout the city.

HISTORY OF HOUSING DEVELOPMENT IN RICHMOND

As previously described, early development in Richmond was very compact. The combination of physical barriers to expansion in the north, east and south and the prevailing practices of land subdivision into narrow lots encouraged close building and brought about a pattern of density in the older central areas which contrasts markedly with newer sections of the city.

There have been three distinct stages in the development of the present city, each characterized and brought about by a different type of urban transportation. Prior to 1870, the horse and buggy or foot transportation provided the only means of circulation within the community, and the area which could be thus encompassed was necessarily limited, usually to a radius of not more than two miles. Most of the population lived within walking distance of their work and houses were built very closely. The resulting single-family density was, of course, relatively high.

After 1870, mass transportation began to come into general use, first the horse-drawn, and finally about 1890, the electric street car. The effective radius of the city was expanded. The growing industrialization of the nation was accompanied by a heavy influx of rural population, and the rapidity of urban growth was phenomenal. Residences in the older districts were abandoned for new homes in the wider area of urbanization made possible by the new transportation, and the old homes were converted to accommodate the growing demands for workmen's quarters. As a result, two distinct levels of population density developed, the newer single-family areas contrasting with the multiple housing which surrounded the central core.

In later years, still a third change has been brought about by the widespread use of modern automotive transportation. The far greater area of urbanization made possible by the increased speed and flexibility of the present-day automobile has facilitated the spread and dispersion of large numbers into the countryside. The sporadic and more spacious character of this growth has created a new suburban density, often so low as to render economical urban service impossible. Consequently, the present community is characterized by relatively heavy densities in the central sections of the city, more open but still fairly compact development surrounding these areas and extending out to the suburbs, and relatively low-density, scattered growth on the periphery of the present city.

Past Policies and Growth

The past history of housing in Richmond, as in other American communities, has been the continuous building of new homes on the periphery of the existing city. While urban growth was at its peak, the influx of new population and the expansion of commerce and industry probably balanced the withdrawal of residents from older districts into the new homes and no serious problems were immediately created.

Now, however, this same procedure has been followed for many years. The phenomenal growth of American cities began to decrease by 1930. Recent studies of the future course of American population made by the National Resources Committee have indicated that the nation may expect eventual stabilization within the next forty years and consequently, future growth of our urban communities can occur only in limited degree. Yet the practice of build-

ing new homes in the suburbs of the city has continued unabated. With the cessation of large increments of population from rural areas, this new growth can occur only at the expense of the central city. That is exactly what has happened in Richmond. Large areas in the old city lost population between 1920 and 1930, and while these trends were less pronounced in the past decade because of certain unusual conditions discussed in the chapter on population, some of these sections continued to decrease during the past census period.

Furthermore, the values created by new construction in the hinterland are no longer sufficient to balance the heavy costs of abandoning the central city. In these latter areas, tax delinquency is increasing; property has depreciated; mortgages frequently exceed the equity involved. Yet the maintenance of streets and utilities must be continued as before.

While there has been much criticism of the haphazard and heterogeneous development in the original community, many of these errors are being repeated in the peripheral growth. Little or no coordination exists in the relationship between individual subdivisions or between the subdivision and the parent community. Examination of the land use maps and of the subdivision maps for the areas annexed to Richmond at the beginning of 1942 indicates the considerable vacancy and scattered development in many of these sections as well as the lack of continuity in streets and neighborhoods. There is great disparity in lot sizes, density and the quality of development. The unsatisfactory character of present neighborhoods, therefore, is being extended and perpetuated in the form of premature, poorly conceived, or inadequately controlled suburban growth.

The provision of physical improvements is one of the first essentials to a good neighborhood. One of the principal causes of early neighborhood blight has been the failure to supply paved streets, sewers, water and all utilities at the inception of the development. Much premature and poorly planned platting could have been forestalled by forcing the subdivider to make the initial expenditure for these services. Richmond's past procedure and policy in this respect has been the exact opposite. In the absence of adequate statutory authority for the assessment of public improvements against the benefited property and more adequate subdivision control, the city has for many years been financing its own undoing through the extension of urban facilities at great expense to the entire municipality in order to serve in some new area a population largely being drawn from and abandoning other sections of the community. With little or no investment outside the value of raw acreage, the land speculator has been able to reap heavy profits from this procedure, and speculation is, therefore, fostered and encouraged rather than forestalled.

The provision of various urban improvements, particularly streets and transportation, has considerable influence on the direction and extent of urban growth. For example, during the era of street-car transportation, new housing tended to follow the extension of these routes, and later homes have followed and paralleled the development of major highways. The intensity of development is closely related to the cost of physical improvements and the manner of provision. When improvements are left to the entire city or future owners to supply—and sooner or later all urban improvements will be demanded—development is likely to be much more sporadic and little incentive is given for efficient and well integrated design of large areas related to existing facilities. For this reason, many gaps and vacant sections now exist between the older portions of the city and widely separated new development.

Past subdivision, too, has been left almost entirely to the vagaries of land promotion and exploitation. No conscious direction has ever been given this development, either toward meeting the different needs of different population groups or toward controlling and coordinating the physical design and location of this growth. Con-

sequently, present housing is a patchwork of individual projects, bearing little relation to cohesive, unified and homogeneous neighborhoods or to a logical community structure.

Effect of the Automobile on Housing

With the advent of the modern, low-priced automobile, which began to enjoy widespread popularity about 1920, strong new forces were brought into play on the existing city. It was no longer necessary to live within easy walking distance of the source of employment or near a street-car line. While the use of mass transportation had extended the effective radius of the city from two to approximately five miles, the automobile now increased this distance to ten and even fifteen miles. Consequently, vast new areas were made available far beyond existing development, increasing the potential area of urbanization from 300 per cent to 800 per cent.

For many years the surge of rural population into the community had been building up densities and absorbing vacancies created by the mobile urban populace, and for many years, this natural expansion of the city and the creation of new values on the periphery were sufficient to offset losses which occur in certain central areas. Moreover, during the street-car era, these losses were still relatively small in a compact and rapidly growing community.

Now, however, these conditions have changed. By 1930 the slowing down of urban growth was quite apparent, and succeeding years have accentuated this trend. Paradoxically, at the very time when the community was witnessing a transition from rapid to limited growth, the great potentialities of automotive transportation for urban decentralization were coming into greater and greater use. Since the automobile made it possible to live at a considerable distance from factory or shop, large numbers of people began migration to the suburbs, and large areas of the central city lost population. Buildings were eventually vacated, some removed, and the land frequently remained unused. These movements have taken place for many years with abandonment of the older central areas and gradual depreciation of values to such proportions as to create an economic problem of great concern to every citizen and taxpayer of the city.

Furthermore, the decentralizing proclivities of the present-day motor car have had a dual effect on the community, starting a vast expansion of the urban structure which has necessitated the costly extension of streets, sewers, water and other utilities over an ever widening area at the same time that these facilities were being abandoned in other sections of the city. To serve these new areas, expenditures must be increased at a time when values in the older city are rapidly being depreciated, resulting in higher rates of taxation and greater burdens on the entire municipality. To escape these burdens, other population withdraws to the hinterland, creating a vicious circle of further expansion and further depreciation.

For many years these movements have been accepted as the necessary concomitants of a growing city. As a matter of fact, the idea of growth and widespread expansion as symbols of progress has become so inextricably forged in the public mind that it is difficult to realize the tremendous costs inherent in this policy.

While the automobile came into extensive public use only some twenty-five years ago, its popularity has increased with each succeeding year. However, economic conditions during the past depression caused some reversal in the processes of decentralization which have revived with gradual business improvement. The far-reaching effects of the recent war on tire and gasoline rationing brought about a temporary decline both in automotive transportation and decentralization. It remains to be seen what influence, if any, this will have on the long-term trends.

Federal Government Controlling Factor in Recent Years

As a result of the increased attention directed on the economic situation in the

United States during the past depression, and particularly on the construction industry and housing, the Federal Government began to interest itself in these conditions, first, to resuscitate construction and repair of buildings as a part of economic recovery and later to bring about a general improvement in slums and socially deleterious urban housing. The first direct governmental participation in this field took the form of public construction and slum clearance under the housing division of the Public Works Administration, and no projects of this type were erected in Richmond.

With the passage of a new public housing act in 1937 and organization of the United States Housing Authority, the Federal Government undertook a program of financial assistance to local Housing Authorities for these same purposes of slum elimination and low-rental housing. However, the projects are now built and managed by the local authority under the general supervision and guidance of the United States Housing Authority which, in 1942 was superseded by the Federal Public Housing Authority. Federal subsidies are provided by annual cash payments to the local group, and the city contributes its share through the medium of tax exemptions, etc. While this program has been under way for several years, Gilpin Court, located in the neighborhod of Chamberlayne and Calhoun, is the only project so far erected in Richmond. This project is designed to rehouse 301 Negro families. Two other projects, previously approved, have been temporarily abandoned because of the exigencies of National Defense housing.

While the Federal slum-clearance program has been valuable in pioneering and showing the way in this important field, its effect on the general situation has been very limited. Obviously, it is impossible for the Federal Government to clear all the slums in our large American municipalities. These areas have been growing and deteriorating and affecting surrounding property for so many years that vast sections must be rebuilt, frequently comprising areas of several square miles in the larger communities. The problem is one which now challenges the initiative and resources of the entire city, and while governmental participation has been of assistance, the enlistment of private capital is essential to an effective large-scale attack on the whole problem.

Another Federal agency which has played an important role in the improvement of urban housing during the past few years is the Home Owners Loan Corporation. This organization has confined its activities largely to the field of repair and rehabilitation of existing property, lending money at low interest rates to individual owners for this purpose. In several cities, large scale projects involving community participation and cooperation have been fostered as pioneering essays to improve neighborhood amenities and to arrest initial blight.

The Federal Housing Administration is a third governmental agency which has exerted far-reaching influence on home construction and the general community pattern during the past seven years. The vast majority of new homes constructed during this period have been dependent on F. H. A. approval and insurance. (This agency does not make direct loans but rather insures loans made by private institutions.) Since the Federal Housing Administration has considerable power in the approval and supervision of these projects, it, of all governmental organizations engaged in the housing field, has been in a position to influence and control the direction and extent of urban growth.

Unfortunately, past policies of the F. H. A. have done little to foster the logical and efficient development of the central city. In fact, they have turned in exactly the opposite direction, and these new homes have been encouraged to develop in relatively small and sporadic areas throughout the suburbs, particularly to the east and north of the present city. While considerable improvement has been brought about in the individual subdivisions through

the establishment of good standards of design as well as technical advice and assistance on particular lay-outs, past emphasis on their location in the outskirts of the city, frequently removed from all other urban development, has done much to further the decentralization and dispersion of the present community.

Recent Trends

The following tables have been prepared from information on permits filed in the Building Inspector's office during the ten year period 1932-41.

It is apparent from Table Number 36 that the greatest residential construction in Richmond has occurred in the $2,500-$4,000 price range, particularly during the last four years of this period. During the depression some very low priced homes were erected, twenty of these being less than $1,000 in value, and others in the range of $1,000 to $2,500. During this period, too, building activity was at its lowest, fewer homes having been erected during the entire five year period 1932-36 than in the year 1941. Slightly more than one-third of all the homes constructed in Richmond during this ten year period have been valued at $4,000 and over.

Table Number 37 indicates the type of dwellings built. The vast majority of these structures have been single family homes,

TABLE No. 36

DWELLING UNITS CONSTRUCTED BY YEARS AND COST—1932-1941

YEAR	UNIT COST OF CONSTRUCTION					
	Less Than $1,000	$1,000 to $2,500	$2,500 to $4,000	$4,000 to $6,000	$6,000 and Over	Total Units
1932	3	37	33	34	7	114
1933	3	26	28	21	8	86
1934	3	18	10	23	10	64
1935	7	31	27	28	22	115
1936	4	77	53	61	29	224
1937	.....	98	94	87	45	324
1938	.....	53	353	106	40	552
1939	.....	46	171	87	48	352
1940	.....	193	233	131	58	615
1941	.....	122	307*	157	61	647
	20	701	1,309	735	328	3,093

*Federal Housing Project (Gilpin Court—301 units) not included.

TABLE No. 37

RESIDENTIAL STRUCTURES BUILT BY YEARS AND TYPE—1932-1941

YEAR	Single Family	Two Family	Multi-Family Buildings	Total Structures
1932	90	4	2	96
1933	73	3	2	78
1934	50	7	.....	57
1935	93	9	1	103
1936	151	24	5	180
1937	184	52	1	237
1938	232	48	18	298
1939	274	39	.....	313
1940	473	54	6	533
1941	547	41	4*	592
Total	2,167	281	39	2,487

*Excluding 26 buildings (301 units) in Gilpin Court Project.

although revival of better business conditions has witnessed an increase in the erection of duplexes, which the recent land use survey revealed to be more popular in Richmond than in the average American city. With the exception of 1938, when eighteen structures were built to provide 224 units, apartment construction has declined in Richmond as in other communities. Maps in the section on population indicated that these new buildings had largely gravitated to the periphery of the 1940 community, particularly in the areas beyond Byrd Park and south of Cary, beyond the R. F. & P. Belt Line, in South Richmond adjoining Westover Hills and the general area south of Dinwiddie, and in certain sections along the northern limits.

It should be noted that these tables include only residential construction within the 1941 city of Richmond, exclusive of new building in the areas annexed January 1, 1942, as well as new residences in the larger metropolitan area. While complete information is not available covering the entire 10 year period on building activity in the two counties, studies prepared for the Annexation Report, showed that within the period from January 1, 1934, to November 30, 1938, 2144 dwellings were constructed in areas outside the city limits of Richmond, while during this same period only 792 dwellings were erected within the corporate limits of the city. Thus, more than 70 per cent of the new residential construction was taking place outside the corporate limits of the city.

Information on residential construction in the Richmond metropolitan area for the years 1940, 1941 and the first four months of 1942 was released by the Defense Housing Survey of the United States Bureau of Labor Statistics. These studies have been based on the new 1942 limits of the city, construction within the annexation areas for 1940 and 1941 being included with building permits for construction within the old corporate limits of Richmond. During this period there were 4,006 new living units constructed within the entire metropolitan area, of which 2,043 lay within the present city limits of Richmond and 1,963 were in the larger area comprising Henrico County and Manchester District of Chesterfield County. It is apparent, therefore, that even with the annexation of large areas to include within the city extensive suburban growth which has taken place for many years, almost half of the new dwelling construction is still occurring in Henrico and Chesterfield Counties. While some of these homes are rural in character, much of this development is urban, and should be carefully controlled, and every effort should be directed toward the improvement of present neighborhoods in the city to overcome the attraction of these outlying districts.

RESULTS OF PAST HOUSING DEVELOPMENT

Under sponsorship of the Department of Public Works, a survey of real property in Richmond was begun in 1934 by the Civil Works Administration (later F. E. R. A.) and completed as a W. P. A. project. The 1940 census enumeration also included considerable information on housing. From these statistics maps have been prepared to show certain broad characteristics of present housing facilities in Richmond by census tracts in the old city and by enumeration districts in the areas annexed January 1, 1942. It should be noted that in a few instances these enumeration districts extended beyond the new corporate limits of the city so that small portions of the county are included in the data. However, only non-farm homes have been used in the determination of housing characteristics in these sections. The areas affected by splitting of enumeration districts between the new city and the county are the Country Club district at the west of the present city, and certain areas annexed from Chesterfield County, notably, the section immediately south of Westover Hills and the three elongated districts south of Bellemeade and paralleling the James River.

Existing Housing—Its Condition and Character

Table Number 38 is a summary of the various types of dwelling facilities existing in Richmond as shown by the land use survey, made as a part of the zoning studies. It should be pointed out that these figures exclude dwelling units combined with commercial or industrial uses and consequently are low by the number of such structures.

Although the proportion of single family homes is lower in Richmond than in the average American city, this type of dwelling still predominates. Housing conditions in the single family neighborhood are generally more conducive to satisfactory urban living and this type of development should be offered every encouragement and protection.

The extent of home ownership throughout the city is shown on Plate Number 22. It is apparent that the lowest percentages are found in the older central sections of the city and in certain mixed industrial areas where heavy Negro population has gravitated. Much of the area immediately surrounding the central business district shows less than 15 per cent of the dwellings owner-occupied. The very low figure (less than 5 per cent) in census tract W-1 is caused by the paucity of dwellings in this tract. The large number of duplex and multiple-family buildings in much of the older city also lowers the proportion of owner-occupancy in these sections, as is indicated in the general areas both east and west of the Boulevard. Relatively higher ownership is evident in the single-family neighborhoods, particularly in those areas recently annexed to the city.

The proportion of owner-occupied homes is a good index to housing conditions in the community. New neighborhoods are generally characterized by a high ratio of home ownership and retain this characteristic so long as conditions are fairly satisfactory. When some blighting influence appears, these original owners begin to move out and to rent their property. They no longer maintain the building with the same interest and care, and a tenant is naturally even less interested in property which is not his own. Consequently, adjoining houses are gradually affected by those conditions and the entire neighborhood suffers blight and depreciation.

Units without Sanitary Facilities

Plate Number 23 shows the proportion of dwellings in different sections of the city without a private indoor water closet. Although prior to annexation of the new areas, the city was almost completely sewered, large numbers of buildings in certain slum districts occupied by the heavy Negro population are still provided only with outside toilets. Frequently, several units may be forced to share an indoor toilet where such facilities are available. Statistics from the 1934 Real Property Survey indicated that 31.5 per cent of all dwelling units in the city either had no inside toilet or were forced to share this facility with one or more other families. Data on baths has also been published by the Census Bureau for the 1940 city area. Out of a total of 50,917 dwelling units reporting, 17,887 or

TABLE No. 38

TYPES OF DWELLINGS IN RICHMOND—1942

TYPE	Number of Structures	Number of Dwelling Units	Per Cent of Dwelling Units
One-family dwelling	28,249	28,249	53.9
Two-family dwelling	5,999	11,998	22.9
Multiple-dwelling	2,712	12,160	23.2
	36,960	52,407	100.0

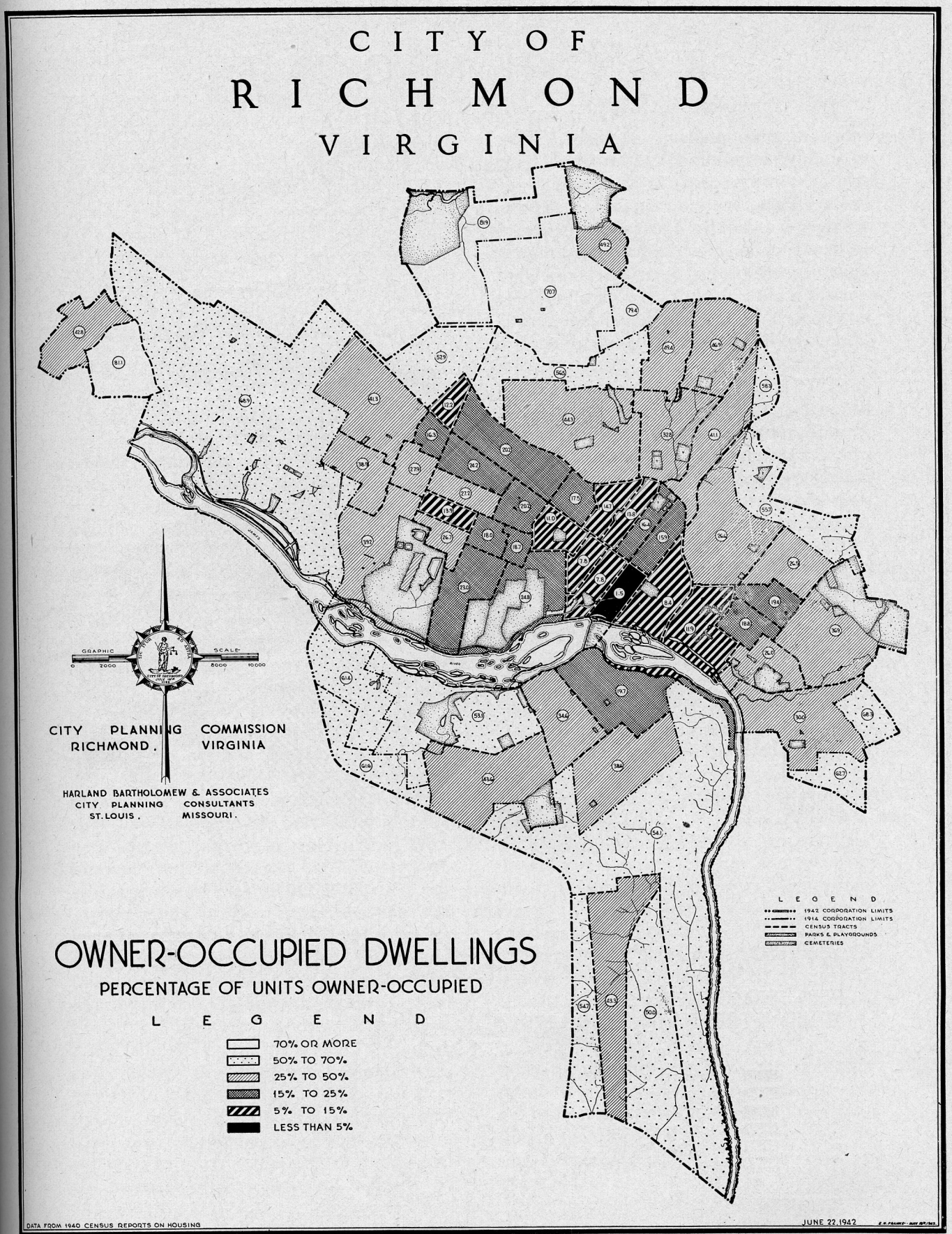
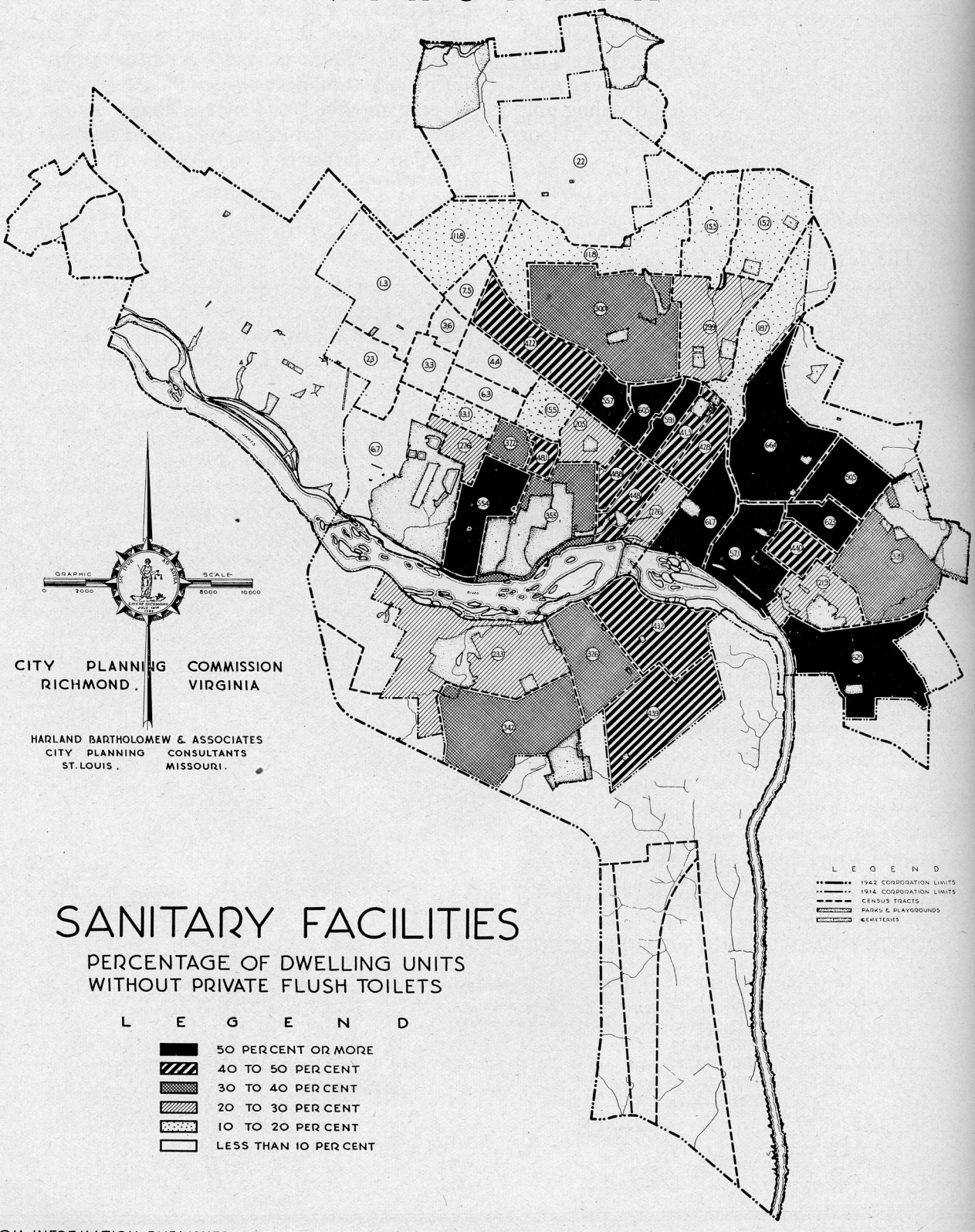


PLATE NUMBER 22

CITY OF RICHMOND VIRGINIA



SANITARY FACILITIES

PERCENTAGE OF DWELLING UNITS
WITHOUT PRIVATE FLUSH TOILETS

L E G E N D

- 50 PER CENT OR MORE
- 40 TO 50 PER CENT
- 30 TO 40 PER CENT
- 20 TO 30 PER CENT
- 10 TO 20 PER CENT
- LESS THAN 10 PER CENT

FROM INFORMATION PUBLISHED BY U.S. BUREAU OF CENSUS - 1940

JUNE 22, 1942

PLATE NUMBER 23

35.1 per cent have no private bath. Examination of these figures for individual census tracts indicates very close correlation between the buildings without water and sewers and the various Negro slum areas in the central city. Every effort should be made to force the gradual elimination of outside toilets in these sewered areas with the eventual provision in each dwelling unit of running water and a private indoor closet.

Overcrowded Dwelling Units

The degree of overcrowding (more than 1.5 persons per room) throughout the present city, including areas annexed in 1942, is shown on Plate Number 24. It is evident from this map that the areas of greatest overcrowding in Richmond are preponderantly Negro areas. It is evident, too, that these conditions are worst in the areas of mixed development surrounding industries and railroad property north of Broad Street between Harrison and Boulevard and extending eastward from 9th Street. While one section in south Richmond has a very high percentage (20 per cent) of overcrowded units, it should be noted that only ten families lived in the entire area, so that the two overcrowded units have undue weight and should be discounted. It is obvious that overcrowding is relatively high throughout most of the 1940 city and that the best conditions are very closely related to single-family sections of the community. While 1.5 persons per room is the standard used for overcrowding in the past census, the best conditions prevail when this ratio is not greater than one person per room, and this should be the norm for future housing improvement in Richmond. The 1934 Real Property Inventory indicated a total of 8,429 families or 18.5 per cent of the entire city living in dwellings which were crowded by the latter standard of one person per room. It should be further understood that the number of persons per room is based upon minimum sizes of rooms and that number of persons could logically be increased whenever larger rooms are constructed in a dwelling unit.

Units Needing Major Repairs

Of the 48,914 dwelling units in Richmond reported by condition in the 1940 census, 18,744 or 38.3 per cent needed major repairs. Enumerators were instructed to classify in this group all buildings which were in need of floor, roof, plaster, wall or foundation repairs or replacements which would impair their safety as a place of residence. It is apparent from an examination of Plate Number 25 showing these conditions by census tracts for the entire city, that these structures are located principally in the large area of Negro housing between Broad Street and Bacon's Quarter Branch, although relatively high percentages also prevail in most of the older eastern section of the city and in the mixed industrial area in South Richmond. The district extending between Harrison and Meadow Streets both north of Main and south of Cary, while small, is one of the worst in the city. The black area at the south of the present city is largely undeveloped, and it should be noted that only eight structures were reported, of which four were in bad condition. The Negro subdivision south of Pine Camp is also very bad, having 59 per cent of its dwellings in need of major repairs.

Age of Dwellings

Plate Number 26 shows the percentage of dwellings 40 years of age and older in different sections of the city. No information of this nature was published or released for the annexation areas. However, the majority of structures in these areas are relatively new, particularly in the parcels annexed from Henrico County. It is to be expected that the preponderance of old buildings would occur in the older sections of the city, such as the area surrounding the central business district and the eastern community. Census Tract W-1 shows in white on this map because the single dwelling therein is less than 40 years old.

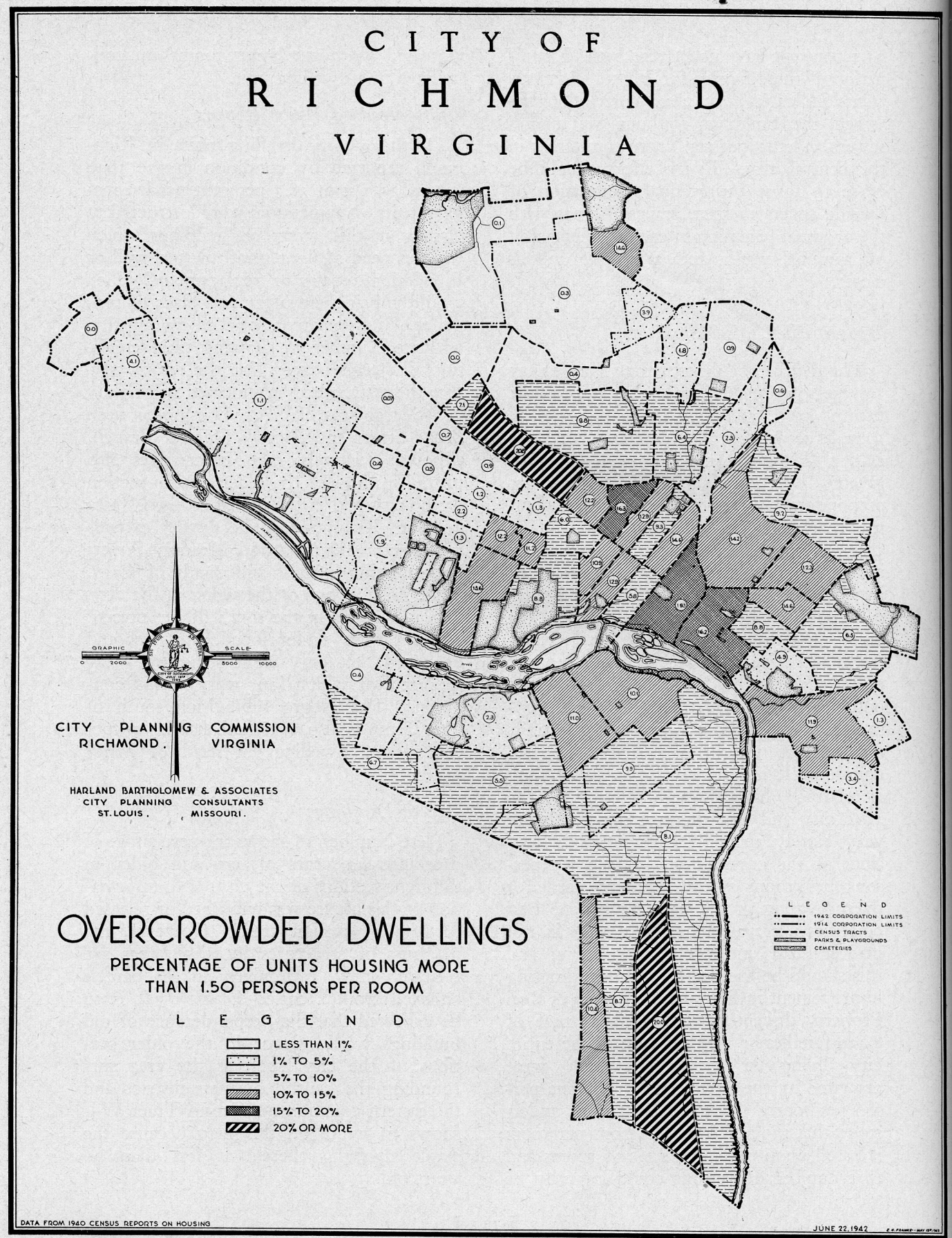
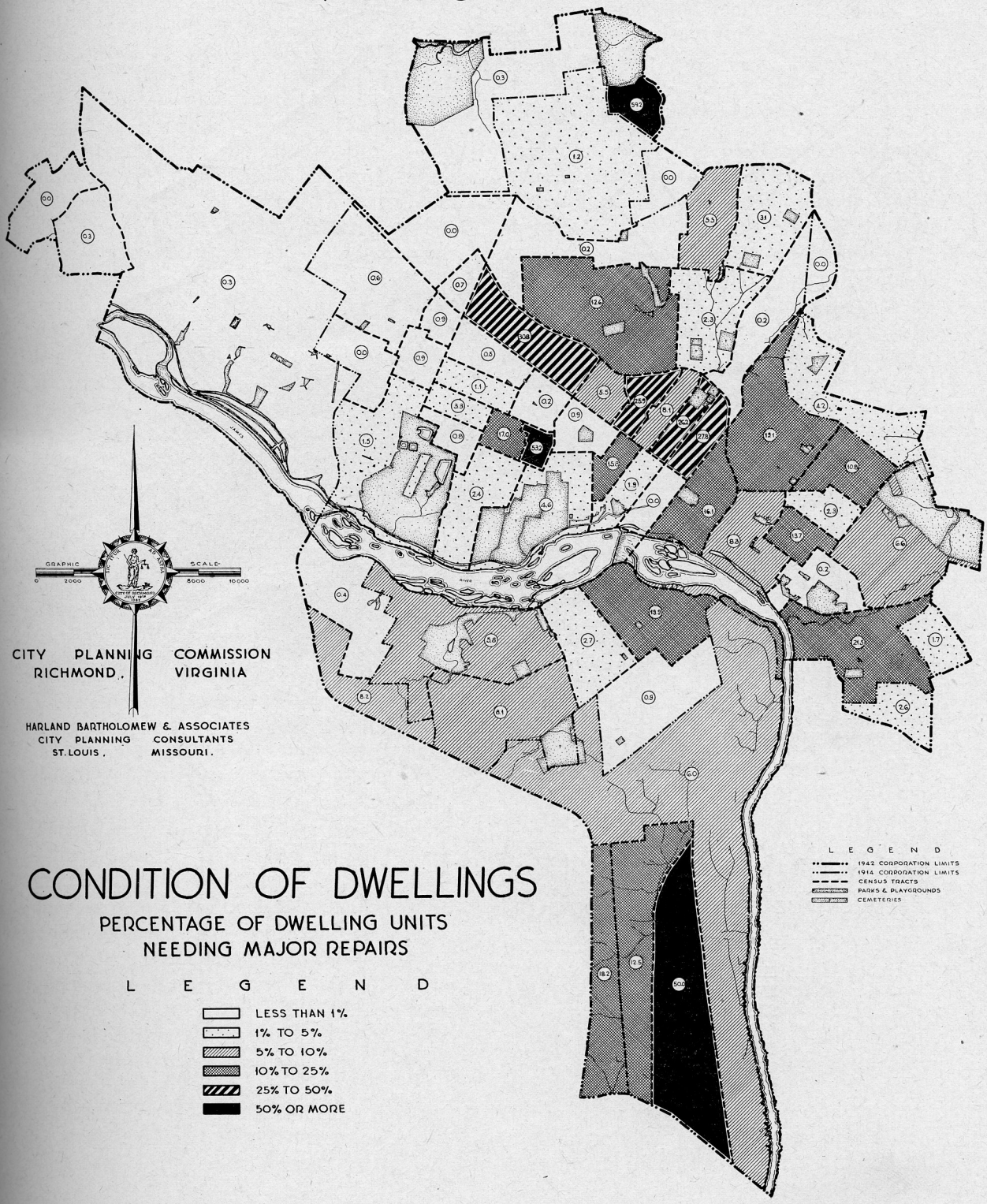


PLATE NUMBER 24

CITY OF RICHMOND VIRGINIA



CONDITION OF DWELLINGS

PERCENTAGE OF DWELLING UNITS NEEDING MAJOR REPAIRS

L E G E N D

- LESS THAN 1%
- 1% TO 5%
- 5% TO 10%
- 10% TO 25%
- 25% TO 50%
- 50% OR MORE

DATA FROM 1940 CENSUS REPORT ON HOUSING

JUNE 22, 1942

PLATE NUMBER 25

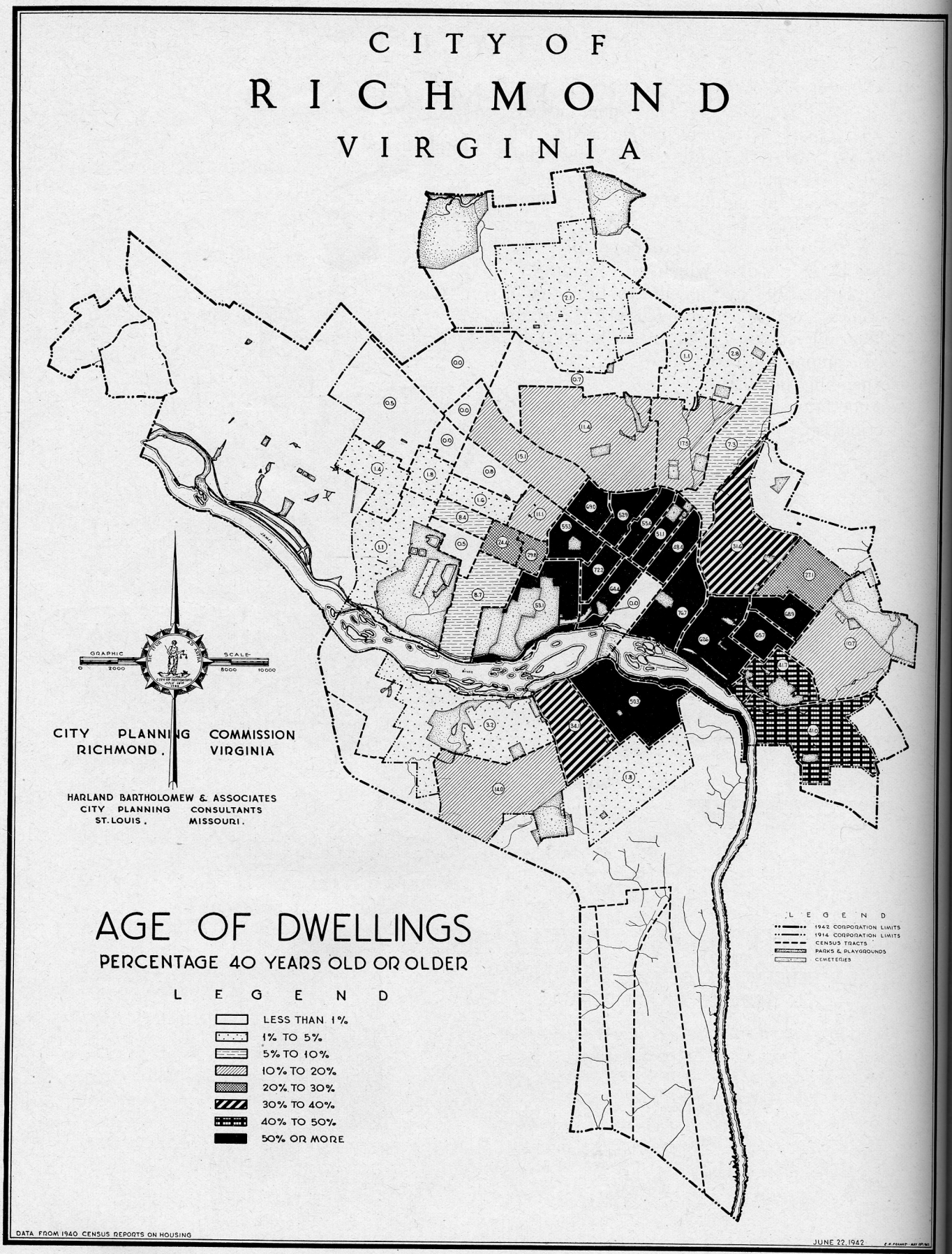


PLATE NUMBER 26

White and Negro Areas

It has previously been pointed out that the large Negro sections in Richmond are very closely related to the areas of old homes, unsanitary conditions, and generally bad or inadequate facilities. The extent of these areas throughout the city has been shown on Plate Number 27. With a very few exceptions, the Negro population has located in districts which are among the most accessible in the city to downtown business, which is to be expected since these districts are old and depreciated and were among the first to be deserted by the expanding population. The improvement of conditions for Negro housing is the most serious problem facing this community since the vast majority of slum and badly blighted areas in Richmond are occupied either entirely by Negroes or by mixed population. Negro dwellings are concentrated in the areas north of Broad between Lombardy and 9th Streets, between Harrison and Meadow north of the cemeteries, in the east between 26th and Chimborazo north of Leigh, and in South Richmond between Hull and Maury east of Petersburg Turnpike.

General Arrangement of Dwellings in Richmond

Early development in Richmond was very compact. The narrow lots and close building in all the other sections of the city have created bad conditions of lighting and ventilation, which detract materially from pleasant and salutary housing in neighborhoods where the buildings are otherwise in good condition structurally. This is particularly true in the so-called "fan" area east of Boulevard, which is one of the most densely populated sections of the city, and the same condition has extended in less degree west of Boulevard and in certain other sections of the community. The heavy intrusion of commercial and industrial uses in many residential districts, pointed out in the chapter on land uses, has blighted large areas and there are few large districts in which homogeneity exists in the character and quality of homes, size of lots, density, and type of development. While there are a number of large parks, such as Byrd, Forest Hill and Bryan Park, there are insufficient neighborhood facilities, especially in the Negro areas, and those which exist lack proper coordination.

Cause of Substandard Housing

One of the principal reasons for the present unsatisfactory and ephemeral character of residential neighborhoods is the method of providing this housing through small-scale, uncoordinated, individual operation. The haphazard and heterogeneous subdivision of land in Richmond has already been mentioned in a previous section of this report. This situation is aggravated by the sale of individual lots and the erection of individual homes on these lots by owners of widely differing tastes and widely differing ideas, so that unified development of large areas is practically impossible. Furthermore, the high pressure methods of land speculation, promoted and fostered in the past by provision of urban facilities at public expense, have frequently brought about premature and poorly conceived projects, which never develop properly but lie semi-vacant and tax-ridden for long periods of time. These areas are blighted at their inception. There is no reason why Richmond cannot have satisfactory and permanent neighborhoods of urban homes if it exercises sufficient care in the location and control of these projects. Present conditions are adequate proof that good neighborhoods will not develop from policies of *laissez faire*, individual initiative, individual houses and land speculation.

Relation Between Income and Housing

The type of home which a family can afford is determined by their aggregate income. It is generally agreed that families in the lower brackets should not buy or build a home costing more than twice their annual income nor rent a dwelling at

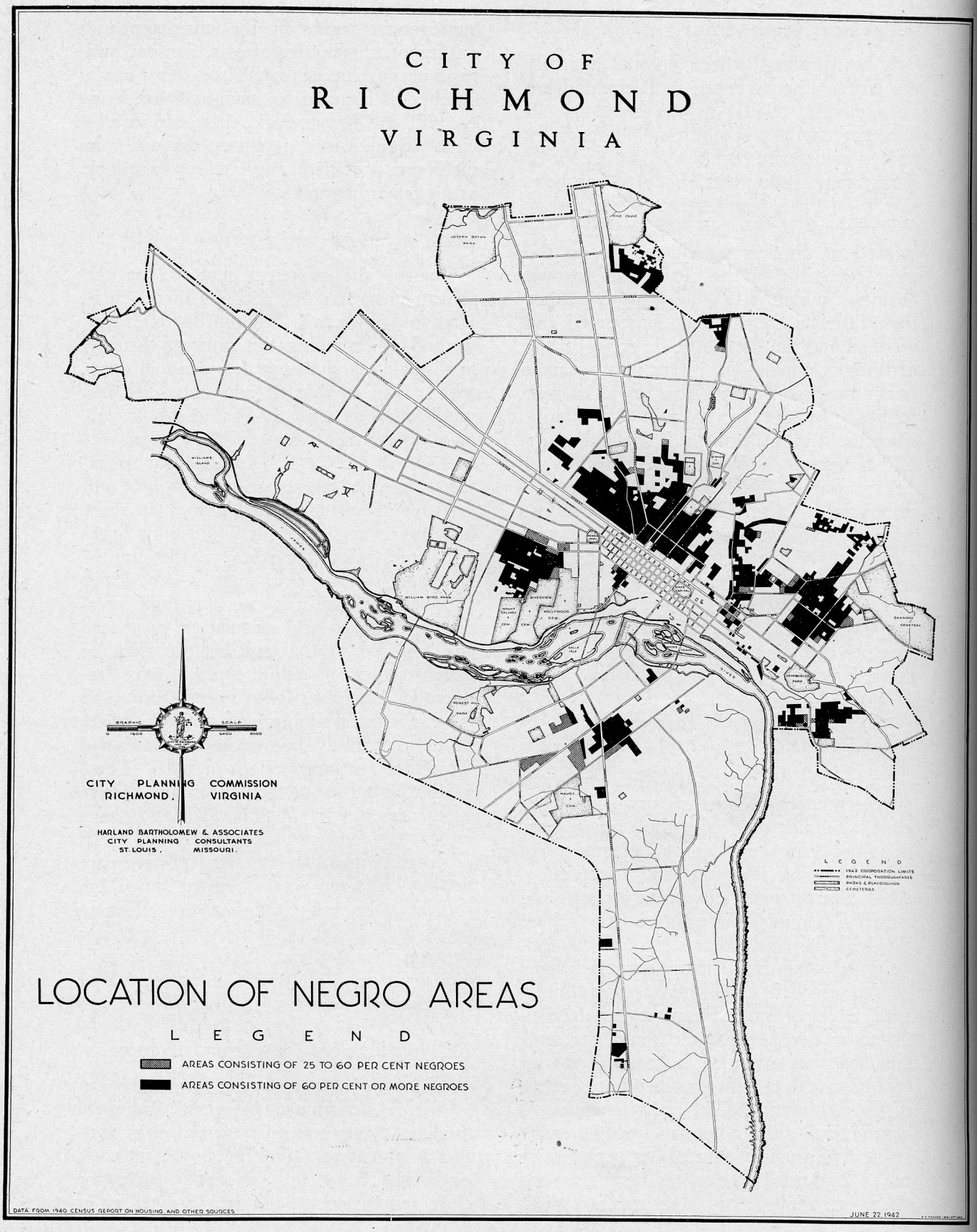


PLATE NUMBER 27

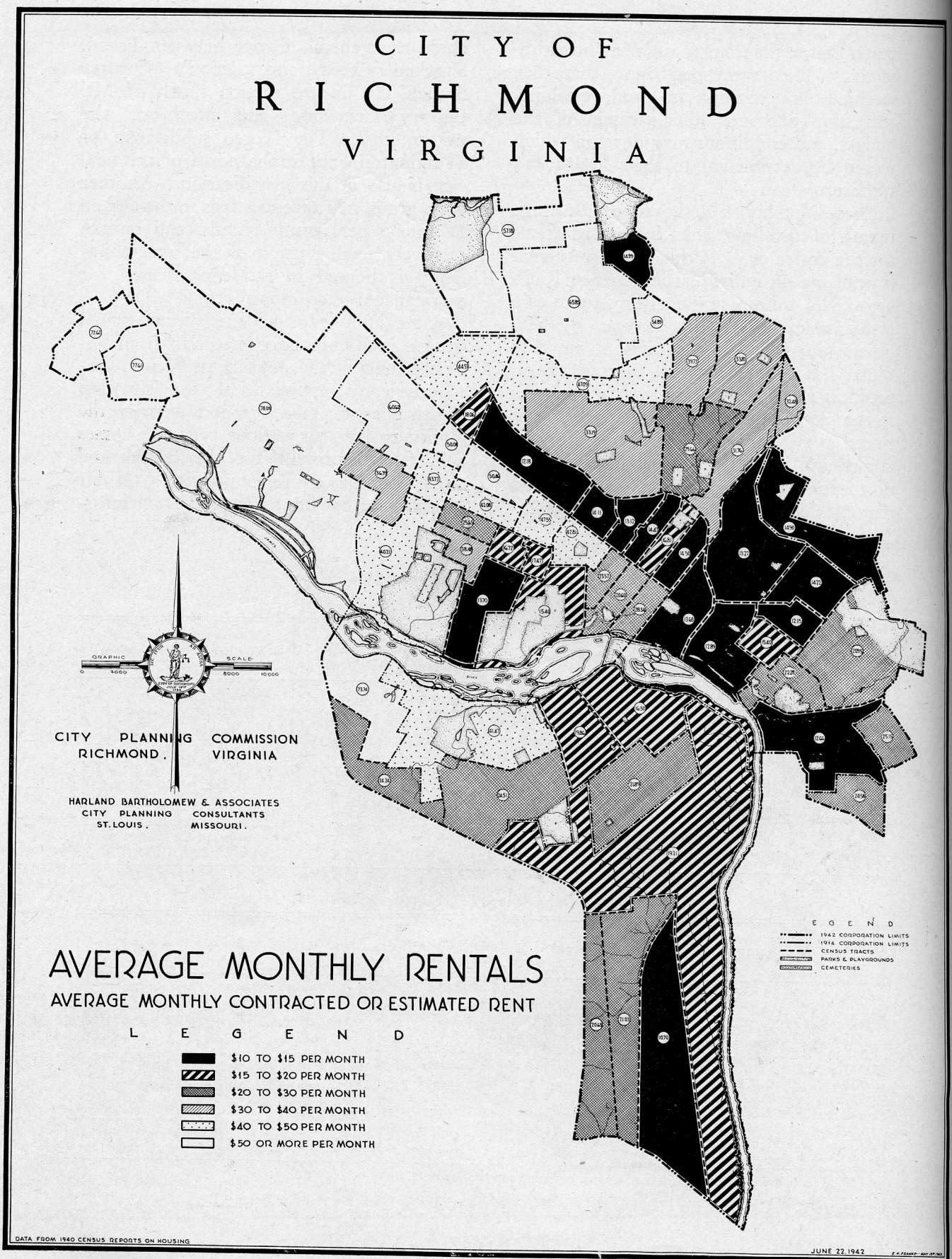
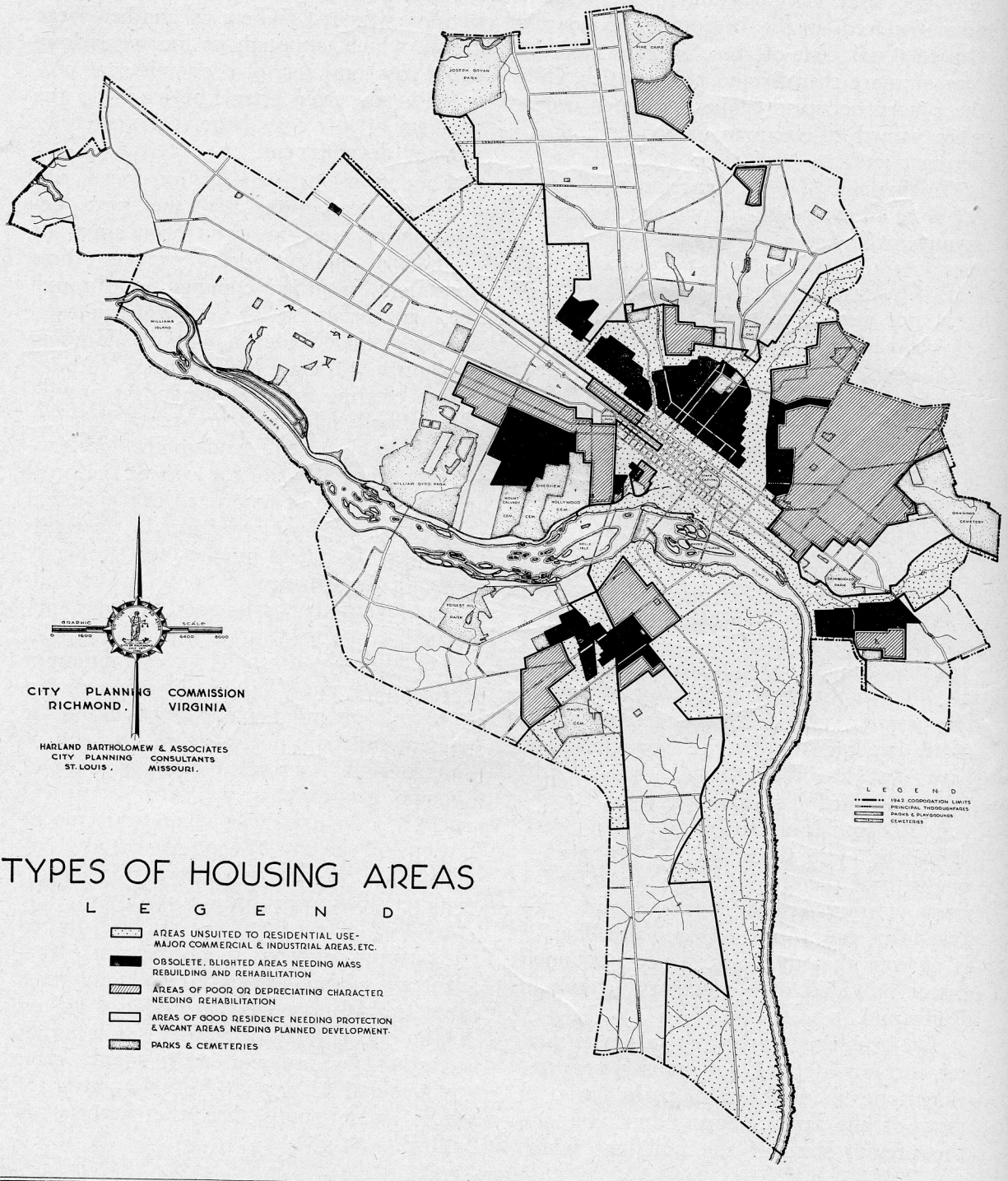


PLATE NUMBER 28

CITY OF RICHMOND VIRGINIA



TYPES OF HOUSING AREAS

LEGEND

- AREAS UNSUITED TO RESIDENTIAL USE- MAJOR COMMERCIAL & INDUSTRIAL AREAS, ETC.
- OBSOLETE, BLIGHTED AREAS NEEDING MASS REBUILDING AND REHABILITATION
- AREAS OF POOR OR DEPRECIATING CHARACTER NEEDING REHABILITATION
- AREAS OF GOOD RESIDENCE NEEDING PROTECTION & VACANT AREAS NEEDING PLANNED DEVELOPMENT
- PARKS & CEMETERIES

JUNE 22, 1942

PLATE NUMBER 29

It is also questionable whether low-rental housing should always be built in the central areas of the city to replace existing slums on relatively high-priced land or whether vacant areas in other sections of the city might be used and population gradually siphoned from the decadent areas. It is not necessarily true that all slums should be cleared for low-rental homes. The strategic location of many of these areas in the city's design may make their use more appropriate for down-town apartments for white-collar workers and other income groups or for some industrial or public purpose. Undue emphasis on land cost in slum areas has also caused unduly high population densities in many developments, frequently exceeding the number of families originally housed within the project boundaries. This type of development is perpetuating one of the principal factors creating original blight and every effort should be made to lower rather than increase this density in order to provide more openness, better recreation and a sound community pattern.

Location of Slums and Blighted Areas

In the discussion of housing in Richmond, reference has been made repeatedly to the "slums" and "blighted areas" which exist in the older sections of the community. Before attempting to define these areas as to their broad location in the city, perhaps it would be well to examine the connotation of these terms as they are applied to urban development. As used in this report, the word "slum" refers to a residential area in which the dwellings have become so obsolescent, dilapidated, overcrowded or lacking in ventilation, light, and sanitary facilities as to constitute a definite detriment to the safety, health and morals of the population so housed. A blighted area might be defined as an area in which normal development for its original or logical use is being retarded or depreciated by various unfavorable conditions so that the area begins to decline as compared with other similar sections of the community.

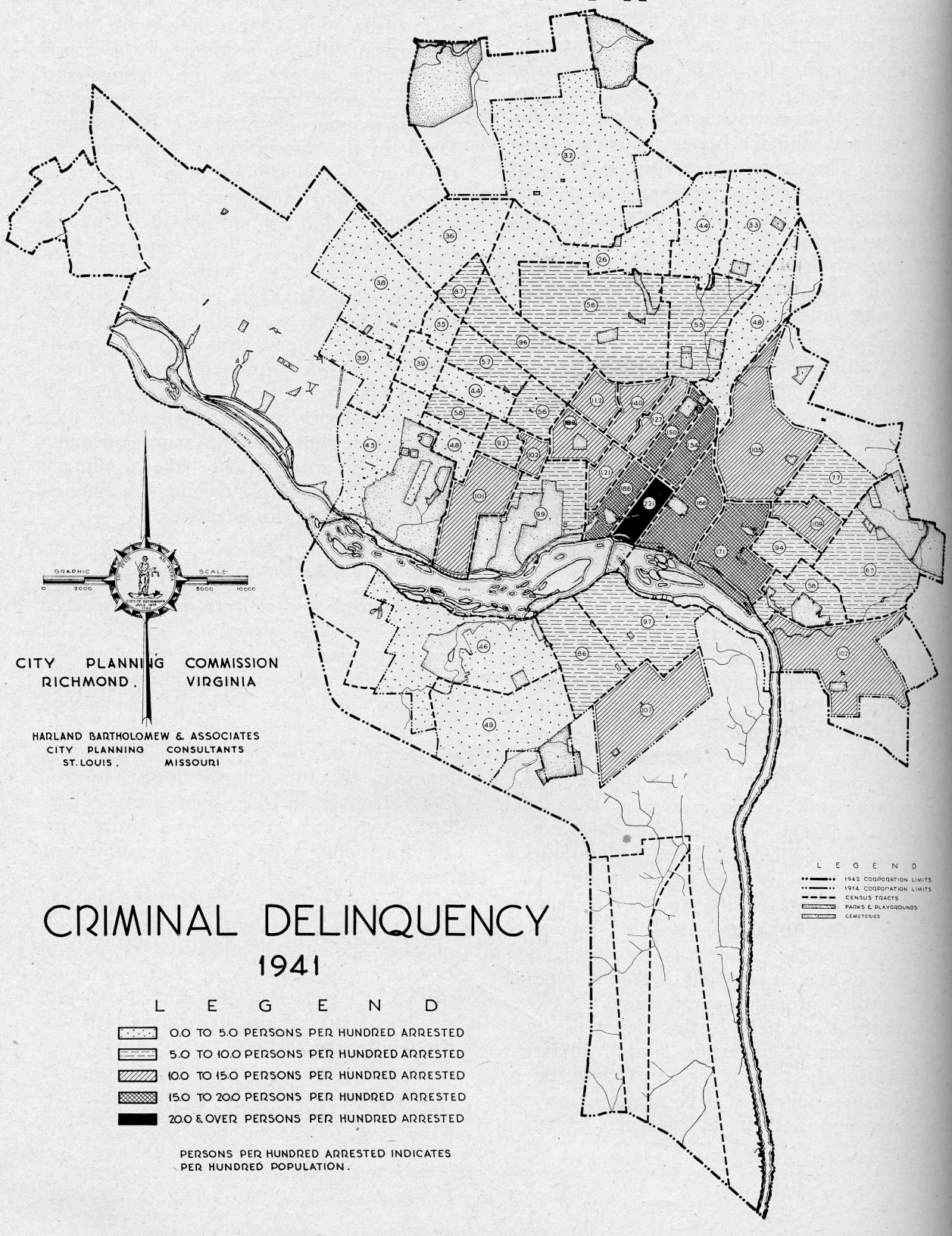
Plate Number 29 has been prepared to show the general location and extent of slums and blighted districts in Richmond. The dense Negro areas north of Broad Street are very bad and constitute one of the most pressing and immediate problems for the city. Every effort should be made to improve these conditions. The general district north of Mt. Calvary Cemetery is also characterized by badly substandard Negro homes, although development is much more sporadic and considerable vacancy exists. There are large areas in the old eastern section of the city which have depreciated for many years. The area shown at the north of the present city is Washington Park, a Negro subdivision. *The worst areas in South Richmond lie in* the general vicinity of Hull and Maury, both east and west of Petersburg Turnpike, and these are also largely Negro in character.

EFFECT OF PRESENT HOUSING UPON CITY

Tax on real estate is the principal source of revenue in Richmond. Residential property constitutes from one-half to two-thirds of the total value of this real estate. It is evident that any impairment of these values has far-reaching consequences on the entire financial structure of the community. Yet obsolescence and depreciation of property have been slowly eroding large areas surrounding down-town Richmond for many years. At the same time, the overcrowding of dwellings, insanitation, bad environment and general poverty have steadily increased the cost of urban services in these districts to a point where the disparity between the city's income and its expenditures in these areas have become an economic drain on the entire community.

In order to examine these conditions in some detail, the Department of Public Works of Richmond several years ago initiated a study of the detailed distribution of every expenditure and every source of revenue in the entire city. These costs and incomes were allocated over the city

CITY OF RICHMOND VIRGINIA



CRIMINAL DELINQUENCY
1941

L E G E N D

- 0.0 TO 5.0 PERSONS PER HUNDRED ARRESTED
- 5.0 TO 10.0 PERSONS PER HUNDRED ARRESTED
- 10.0 TO 15.0 PERSONS PER HUNDRED ARRESTED
- 15.0 TO 20.0 PERSONS PER HUNDRED ARRESTED
- 20.0 & OVER PERSONS PER HUNDRED ARRESTED

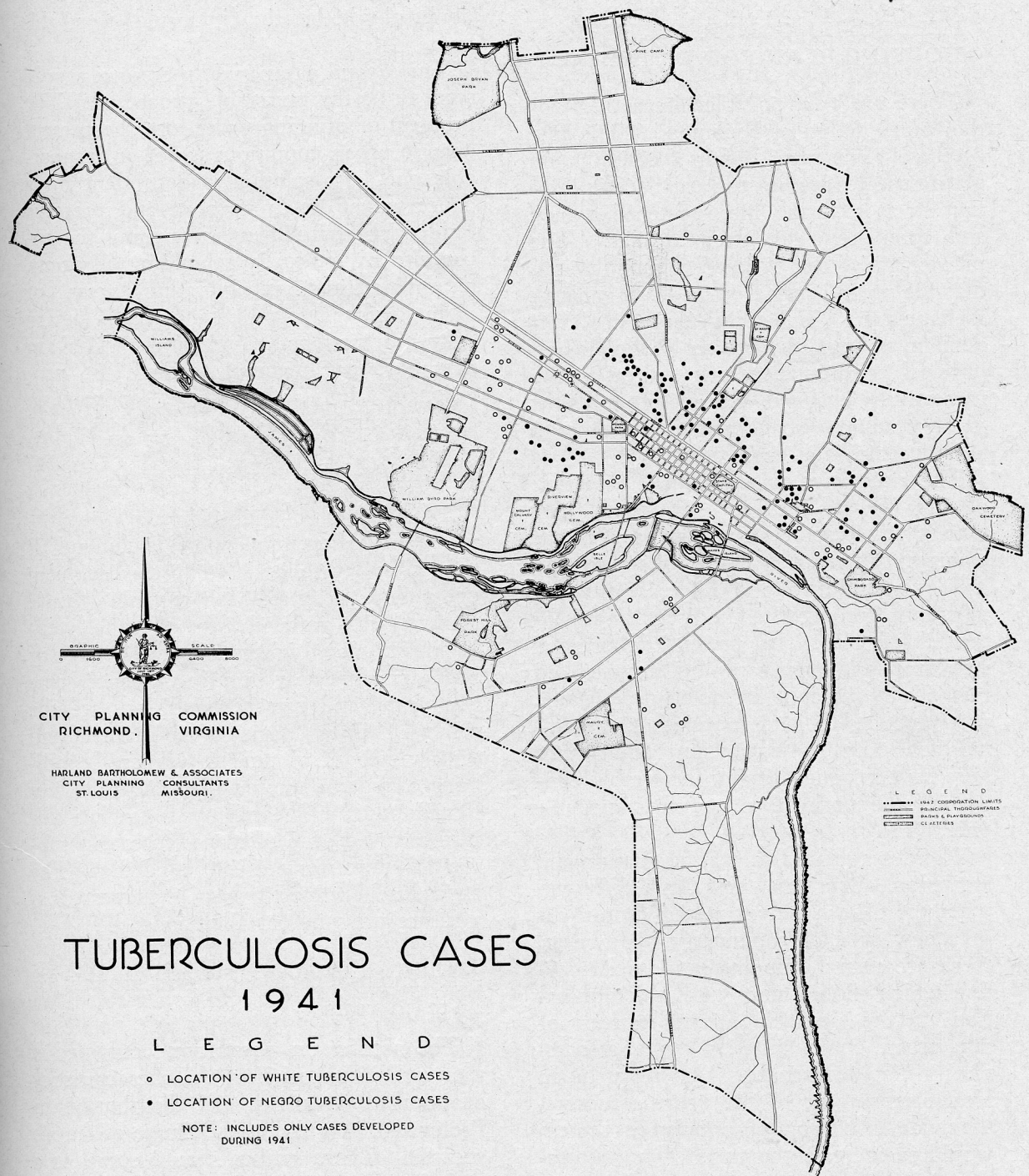
PERSONS PER HUNDRED ARRESTED INDICATES PER HUNDRED POPULATION.

DATA FROM POLICE DEPARTMENT RECORDS & RESEARCH BUREAU OF COMMUNITY COUNCIL

JUNE 22, 1942

PLATE NUMBER 31

CITY OF
RICHMOND
VIRGINIA



GRAPHIC SCALE
0 1600 3200 6400 9600

CITY PLANNING COMMISSION
RICHMOND, VIRGINIA

HARLAND BARTHOLOMEW & ASSOCIATES
CITY PLANNING CONSULTANTS
ST. LOUIS MISSOURI.

TUBERCULOSIS CASES
1941

L E G E N D

- ○ LOCATION OF WHITE TUBERCULOSIS CASES
- ● LOCATION OF NEGRO TUBERCULOSIS CASES

NOTE: INCLUDES ONLY CASES DEVELOPED DURING 1941

DATA FROM RECORDS OF THE NURSING DIVISION OF DEPARTMENT OF PUBLIC WELFARE.

JUNE 22, 1942

PLATE NUMBER 32

taxes on a low valuation. The discrepancy between existing values in the slum and the value of the land for its most appropriate economic development is a major obstacle to the clearance and redevelopment of these areas. Another and related factor is the cost of existing structures, however old or dilapidated, which must be acquired and removed. Enforcement of minimum housing standards would bring about the gradual elimination of many of these old and unhabitable buildings, thereby facilitating eventual public or private reconstruction.

It is recommended, therefore, that Richmond prepare and adopt a comprehensive housing ordinance or code along the lines described above, to be enforced through the Department of Health with the cooperation of the Commissioner of Buildings and the City's Housing Authority. As a program of enforcement, it is further suggested that an attack be made, first, on the areas of better housing, designed to eliminate small isolated substandard areas therein. This program could then be extended into other sections of the city and a procedure evolved which would gradually bring about full compliance with these minimum standards of every dwelling unit in Richmond. While such a program would necessarily require many years for its completion, its enforcement would insure the general improvement of existing housing throughout the city and greatly facilitate the preservation of neighborhoods, the removal of blight, and the eventual redevelopment of Richmond's old slums.

10. Revise Building Code.

Much justified criticism has been vented in recent years against the out-moded and inelastic regulations which prevail in the majority of city building codes. These ordinances have frequently been in force for fifteen, twenty, or even thirty years with little or no changes in the original code. Although many new materials and methods of construction have been devised to lower costs and to effect savings in time and labor, these changes may be at variance with the present building requirements. Obviously, these regulations have a material influence on the type and cost of new housing facilities. If adequate dwellings are to be provided for the majority of income groups in Richmond, it is essential that these costs be reduced to a minimum, and a careful examination should be made of Richmond's building code to ascertain whether present requirements are unduly strict and where modifications might be made without sacrifice of health and safety. Fortunately, a committee is now engaged in revising and modernizing the present code.

11. Revise tax policies to protect instead of penalize residential areas and to encourage rebuilding.

For many years urban tax policies have tended to promote rather than retard decentralization of the inner city. The desire to escape these taxes has been a strong factor in the withdrawal of a large portion of the population to the suburbs with abandonment of existing facilities and extension of new facilities into these new areas. As a result, the city's taxable valuation is slowly depreciated and revenues reduced, or taxes increased, at the same time that greater and greater expenditures are necessary to service the ever widening area of urbanization, and past development has been an endless process of greater taxes, further decentralization, and further depression of the central city. Richmond can no longer afford the vast expansion of its physical plant which this procedure entails. Ways and means must be found to prevent this endless dispersion and to preserve the present community.

It is suggested, therefore, that the city resurvey its present policies of taxation, particularly as they apply to residential areas. Certain old dwelling districts have always had a high valuation because of their proximity to downtown business and its possible expansion. Realistic appraisal of urban growth can no longer justify this optimism. If these areas be used at all, they must be developed for some residen-

tial purpose and they should be valued in accordance with this use. High assessments have had considerable weight in influencing the present high cost of clearing urban slums. Appraisals should be based on present and not potential values of these districts. By this means, gradual deflation may be brought to a point where economical redevelopment may be possible.

CONCLUSION

The City of Richmond is now two hundred years old. During this period it has evolved from a pioneer community into a metropolis of more than two hundred thousand persons. The direction and character of this growth has been dictated by the needs of the moment, by land speculation and individual promotion. Present housing in the city is the direct result of this haphazard, piecemeal and uncontrolled development.

It is no wonder, then, that much of this present housing is unsatisfactory in character and inimical to the development and preservation of good neighborhood environment. Many homes are insanitary, overcrowded and in a bad state of repair. Large areas are old and dilapidated. No substantial rebuilding of the present city has ever occurred. Yet large sections are being abandoned by the shifting population to spread and disperse over an ever widening area.

These conditions have created endless economic and social problems of great moment to every citizen of the city. Slums and poverty breed disease and crime. The vast depreciation of the central city and the continual dispersion of urban population have impaired values and increased taxes. The time has come when the community must make realistic appraisal of its situation and adopt measures to control its growth.

The recommendations and suggestions contained in this chapter are the minimum essentials to the improvement of present housing and home neighborhoods in Richmond. Slum areas must be rebuilt, good districts protected, blighted areas restored. Future development within and outside the present city must be controlled. The city can no longer afford the vast processes of abandonment and decay, of speculation and dispersion, which have produced its present chaotic situation.

Public ownership is not essential to the program proposed. That good results can be achieved through the cooperation and coordination of individual effort is the thesis of this report. Speculative and piecemeal practices must be curbed. The ownership of slums must be made unprofitable, large-scale operations encouraged. Present practices of Federal agencies in conflict with sound urban development must be reconsidered and future policies clearly stated. Proper use of governmental funds would be of material assistance in the future development and redevelopment of the community and the betterment of conditions for the poor.

With the conclusion of the recent war, a vast opportunity awaits the American city. Great industrial resources and manpower will be released. Some field must be found to absorb this surplus. The redevelopment of the urban community has been deferred for many years. No more useful social or economic purpose could be served by the conversion of these resources than the proper rebuilding and development of the American city.

Chapter V

THE MAJOR STREET PLAN

Chapter V

THE MAJOR STREET PLAN

A system of thoroughfares which will expedite the flow of traffic in all sections of the city is of the utmost importance to *Rich*mond. The function of streets in the urban structure is somewhat similar to that of the circulatory system in the human body. Just as the arteries, veins and other parts of the human system facilitate the flow of blood to different sections and in different degree throughout the body, so does a properly designed and integrated system of streets make possible the flow of transportation and distribution of people and goods throughout the community in accordance with the requirements of population density and the intensity of use of land in different districts. All sections of the city should be accessible without undue inconvenience or delay, otherwise the city will grow in an unbalanced manner with too rapid expansion in some areas and under-development in others. Inadequate provision for the movement of traffic to and within downtown areas in American cities has been a strong factor in the shifting of business from one location to another, with depreciation and loss of values.

In the evolution of the present-day city, there have been at least two major deterrents to the development of a satisfactory and efficient system of streets. One of these factors is the haphazard and piecemeal fashion in which the city has grown for many years through the accretion of small individual subdivisions. As a consequence of this unguided, *laissez faire* development, the city is a patchwork of additions, each laid out to accord with the ideas and interests of individual platters, without proper consideration of its effect on other property and frequently with little or no regard to the topography of the site. Dead-end streets, jogs, and discontinuity are the inevitable results of these past practices. Another major factor in the evolution of the present system is the change in function of existing thoroughfares brought about by the metamorphosis from a "horse and buggy" to an "automobile" community. Narrow, winding lanes which satisfied early transportation requirements are no longer sufficient to meet the exigencies of modern automotive transportation, and consequently, both the location and width of many streets in Richmond are at variance with a safe, convenient and efficient system of thoroughfares.

The rise of the modern automobile has had far-reaching impact on the urban community. The early attempts of American cities to solve their growing problems of traffic congestion and to facilitate vehicular movement characterized one of the major stages in the development of comprehensive city planning. By opening up vast new areas beyond the periphery of the existing city, automotive transportation has both facilitated the spread of population into these areas and increased the demand for street extensions and improvements to serve this new development. Thus, at a time when the parent city is faced with an ever increasing financial burden to maintain essential community services, the automobile has aided and encouraged the further withdrawal of large portions of the population into the suburbs where they may enjoy all the advantages of urban life without sharing the cost of maintenance of the central city. Furthermore, with the congestion and inadequacy of terminal facilities in downtown districts, decentralization of business is following this movement of population to the suburbs, so that demoralization of values in the central area is inevitable unless effective measures are

taken to increase the accessibility, ease of movement, and parking facilities in these downtown centers.

In addition to the movement of traffic throughout the community, the city's streets have numerous other functions. They provide access to abutting property and light and air for the buildings facing them. They may serve as a setting or focal point for important buildings. Their arrangement and alignment in relation to the topography have considerable influence on the community's appearance. They provide space for the installation of various utilities such as sewer and water mains. All of these functions must be given consideration in the design and improvement of Richmond's street system. The properly designed street plan is important to the city not only to secure the safe, convenient and efficient flow of traffic in all sections but also to effect the maximum economy in the improvement and maintenance of streets. Since minor streets are in the majority and carry relatively light traffic, they need not be as wide nor as heavily paved as more important thoroughfares.

Because of the past growth of the city by piecemeal, *laissez faire* methods and because of changes in the use of streets brought about by automotive transportation, there is a lack of balance in the present system. Since existing thoroughfares are inadequate in width and capacity, traffic inevitably flows on many logically minor streets with the result that these pavements must be wider and heavier than would otherwise be necessary. Consequently, there are too many streets which serve as traffic ways rather than as minor access roads, thus creating problems of traffic control and regulation as well as maintenance. Furthermore, the use of minor streets to carry large volumes of traffic has destroyed the privacy of many residential neighborhoods, contributing to the blight and depreciation of values in these districts.

It is apparent from population studies of Richmond and of numerous other American cities that these communities cannot expand indefinitely. The time has come when we must rebuild the obsolete central areas of the city, and perhaps we will see relatively little suburban expansion hereafter. Such replanning of the city will be of a new order, designed to develop and preserve coordinated neighborhoods, and more and more traffic will be thrown on the major thoroughfares since the areas between them will no longer contain parallel or relief streets. In this program of redevelopment, therefore, the major street plan has added significance. It should be carefully designed and conscientiously followed so as to facilitate rather than deter the reclamation of the central city.

Objectives of Plan

The present street pattern of Richmond is the result of the city's evolution over a period of two centuries. Many of these streets are adequate in width and properly located to serve the present community. Some are utterly inadequate. It is the purpose of this chapter to examine and appraise the pattern in its relation to other components of the city structure and to traffic needs throughout the community, and to make suggestions and recommendations for a well integrated system of streets adequate to meet both present and future needs. In some instances, new streets or connections may be recommended; in others, extension or widening of existing facilities.

The easiest way to avoid repetition of past errors and secure needed extensions or connections in outlying areas is through the careful enforcement of up-to-date land subdivision regulations.

Some protection should also be afforded the proposed system of major streets within the developed areas of the city by requiring new buildings to provide for the ultimate widening or extension of these streets. It would be desirable to obtain new legislative authority for this purpose.

Parkways are always desirable parts of a city's system of traffic thoroughfares, but, as a rule, are supplementary to basic traffic movements. Being primarily designed for pleasure and recreation, they are more properly a part of the Recreation Plan. The study of parkways, therefore, will be considered in conjunction with the design of a park and recreation system for the city.

The program which follows is a long-term plan designed to accomplish substantial improvement in present thoroughfares over a period of twenty or thirty years. During this period considerable local, state and Federal funds will be expended in the Richmond region for this purpose, and it is essential to have a guide for the most efficient and appropriate use of these funds. The plan can also serve as a guide in the vast program of public works to be undertaken by the Federal and local governments as a part of our post-war economy.

EXISTING CONDITIONS

Effects of Topography

The unusual and diverse topography of the Richmond region has exerted a very material influence on the present pattern of streets in the city. Gillies Creek, Shockoe Valley, Bacon's Quarter Branch and the James River are formidable barriers to free circulation which is now maintained over only a limited number of bridges and viaducts. This situation is further complicated by the establishment of railroads, which found natural locations in these valleys, as additional barriers to street extension, particularly in the area north of Broad Street. Traffic from the older, eastern section of the city is restricted in its entrance to the central business district, principally to the Marshall Street viaduct and Broad Street. The steep slopes along the banks of the James and the monopolization of large areas by the cemeteries and Byrd Park have made very difficult the establishment of adequate through traffic arteries south of Cary Street, although excellent use has been made of the south bank through the construction of an attractive drive. While the comparatively flat land to the west of the central city has permitted the establishment of a number of radial streets such as Broad, Monument, Patterson, Grove and Cary, the majority of these streets are either inadequate in width or lack proper entrance into the downtown district.

The failure of past developers of the city to adjust their layouts to the physical conditions of the land is apparent in the number of dead-end and steep streets in certain sections. For example, the general area between Shockoe Valley and Mechanicsville Turnpike, north of Broad, where the topography is unusually rugged, has been subdivided with rectangular, straight-sheet patterns, badly coordinated with each other as well as with the topography. The large amount of vacancy in this section is evidence of the unsatisfactory character of such development. In spite of the rather steep ground slopes in many sections of the city, practically all of Richmond has been laid out in a rectangular pattern, only occasionally modified to meet existing grades. There are many advantages in a more functional type of street plan on such topography. Grading costs can be reduced to a minimum, better circulation provided, and the natural beauty and setting of individual sites retained and amplified by the more interesting vistas presented on curving streets.

Existing Street Widths

Plate Number 34 has been prepared to show the existing widths of every street in Richmond, including those areas annexed at the beginning of 1942. The haphazard and uncoordinated development of the present system is strikingly shown on this map. The few wide streets in Richmond are located largely in the north and west sections of the present city and are notably absent in the east. While Hermitage and Boulevard are wide thoroughfares, Boulevard ends at Byrd Park and traffic is, there-

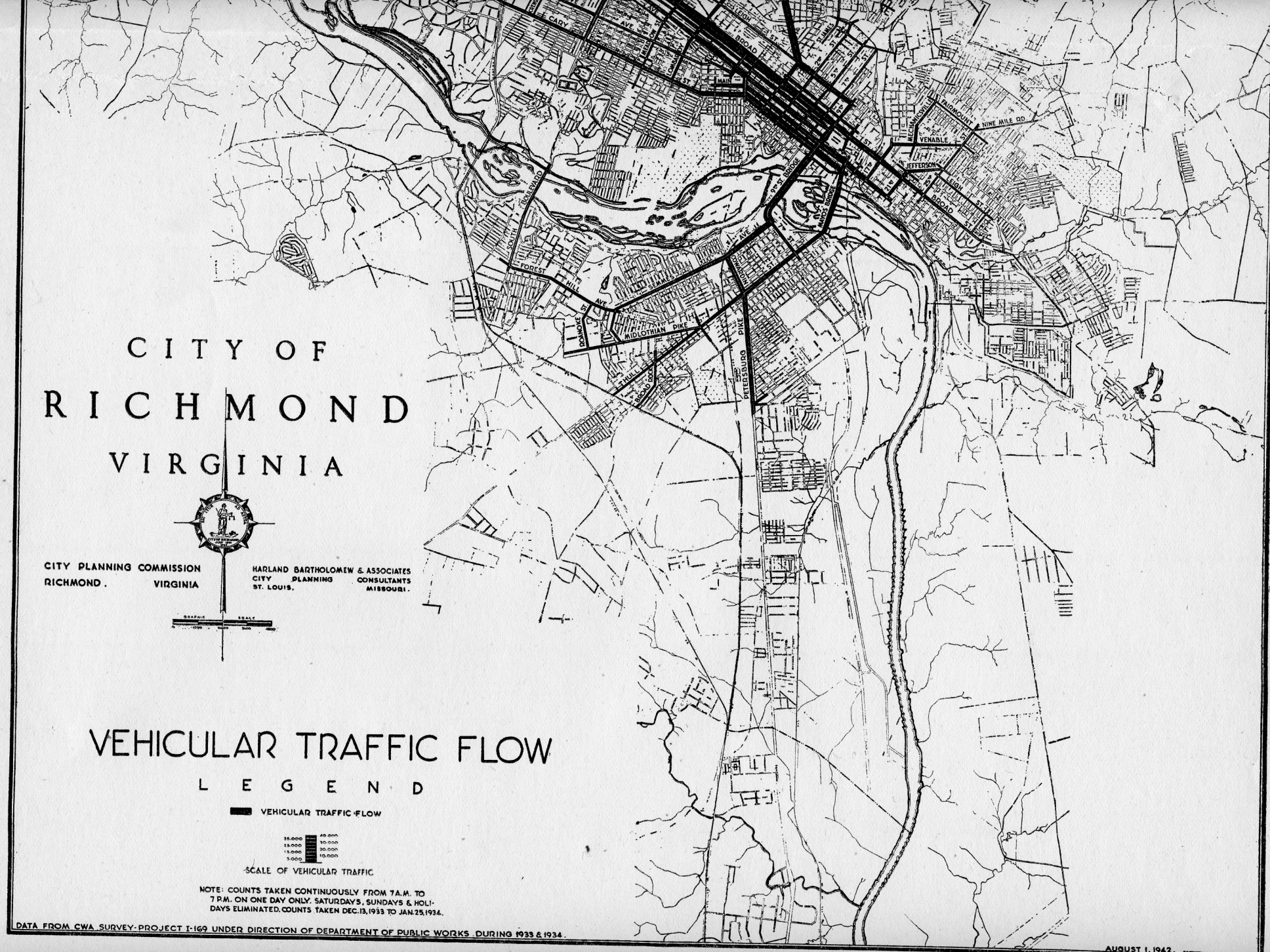
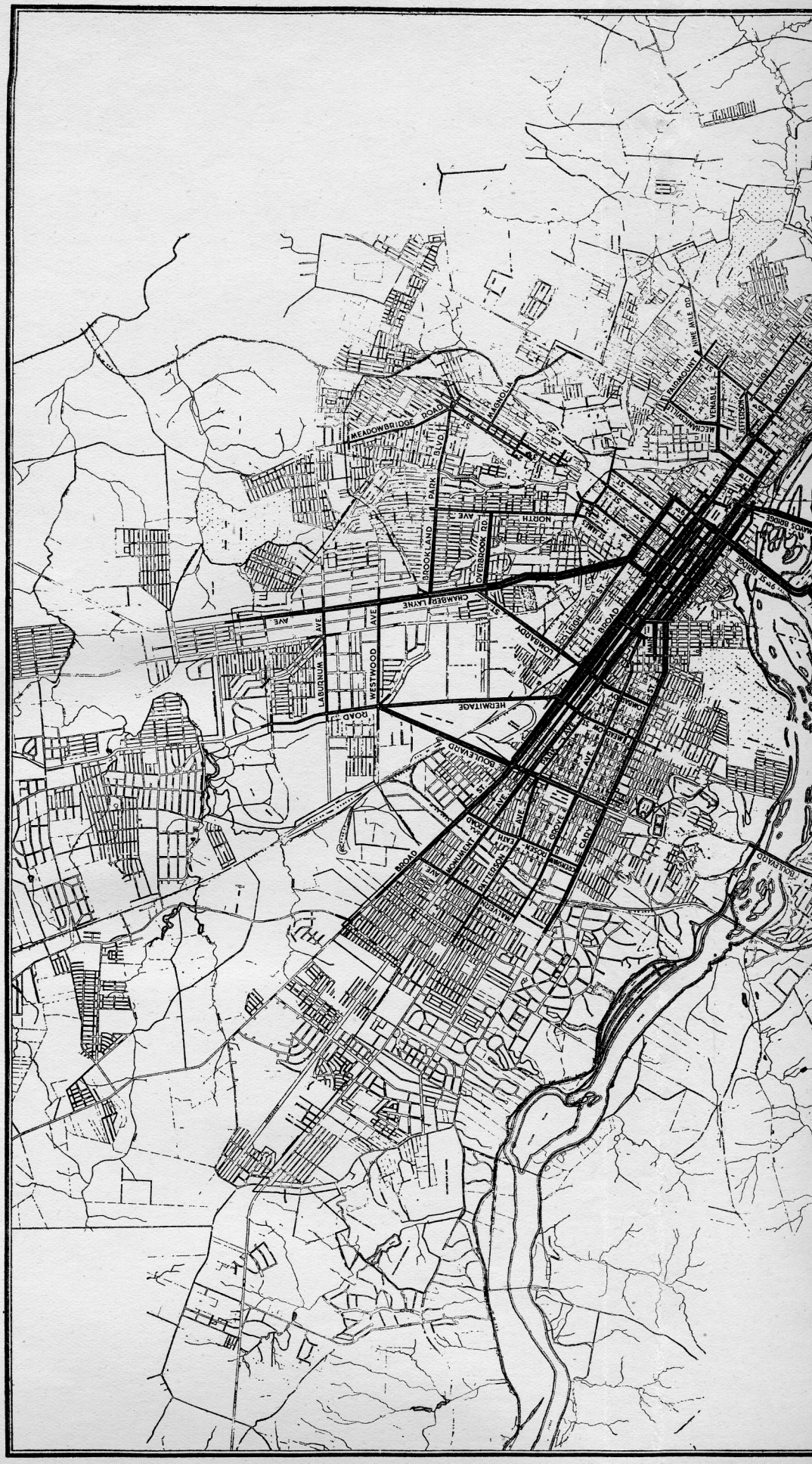


PLATE NUMBER 36


MEADOWBRIDGE ROAD
MAGNOLIA
PARK BLVD
BROOKLAND
OVERBROOK RD
NORTH AVE
CHAMBER LANE
LABURNUM AVE
WESTWOOD AVE
HERMITAGE ROAD
LOMBARDY ST
LEIGH ST
BROAD
BOULEVARD
MONUMENT AVE
PATTERSON
MALVERN
CARY
GROVE
FAIRMOUNT
VENABLE
NINE MILE RD
JEFFERSON
MAYO'S BRIDGE
9TH ST BRIDGE

fares is followed by tremendous increases in the flow of traffic on these streets. Since both street construction and street maintenance entail heavy public expenditures, it is to the city's advantage to make the best possible use of these facilities both as to the character, and extent and location of pavements. Roadways which are unnecessarily wide or which serve vacant or sparsely developed districts are unduly expensive. The most economical and efficient system of streets is one which best correlates the volume of traffic, the arrangement of streets to facilitate its movement, and the width and character of pavement needed.

Traffic Flow

Plate Number 36 shows the volume of vehicular traffic on main thoroughfares in Richmond as determined by a C. W. A. traffic survey made under the direction of the Department of Public Works several years ago. While some changes have occurred in the present street system since this count was made and the number of automobiles in the Richmond area undoubtedly increased until recent restrictions were imposed by exigencies of the war, it is believed that the 1933-34 survey is the best information now available and more representative of actual conditions than any counts which might be made of the greatly diminished flow in 1942. The widths of the lines on this map indicate the relative volumes of flow on the selected streets for a twelve-hour day (7:00 a. m. to 7:00 p. m.). It should be pointed out that completion of the Robert E. Lee Bridge across the James since this survey was made has materially changed the vehicular flow to South Richmond as shown on the 9th Street Bridge in 1934.

Examination of Plate 36 indicates that the major portion of traffic in Richmond has been carried by a relatively few streets, notably, Chamberlayne Avenue from the north, Jefferson Davis Highway (or Petersburg Turnpike), Semmes and Hull in South Richmond, and Broad, Grace, Franklin, Main and Cary Streets in the central city. Despite its somewhat inadequate width, Cary, between Belvidere and 9th, carried more traffic than any other parallel street, with the single exception of Broad, and also served as the principal radial south of Broad. Traffic from the east entered downtown Richmond chiefly over Broad and Main Streets, and included out-of-town vehicles using Highway U. S. 60. Boulevard served as the principal cross-town route in the west, connecting this section with Hermitage Road and the north city with an average twelve-hour volume of from 6,000 to 7,000 vehicles.

The reasons for present congestion on 9th Street in the vicinity of Capitol Square are also evident in the diagram of traffic flow within the downtown district. Both Grace and Franklin Streets end at 9th, so that the considerable traffic which they carry must either continue to the north and south on this street or emerge along the offsets at Capitol and Bank. The complex system of traffic control at these intersections and the inadequate width of 9th make expeditious movement at peak hours along this street almost impossible. Present conditions could be improved by simplifying traffic control and regulations to eliminate some of the turning movements, especially at times of greatest vehicular traffic in the morning and evening.

The present inadequacy of radial streets from the east is also apparent from Plate 36. This condition has resulted in an unbalancing of traffic flow within the downtown section and in the failure of the eastern community to realize its potentialities for residential development. There is no reason why this area cannot be utilized as satisfactorily as other sections of the city. Topographically it is quite suitable, but the absence of adequate arteries to provide access to the central business district and better cross-town circulation has prevented its logical development.

PROPOSED MAJOR STREET PLAN

In the horse-and-buggy era there was no occasion to design a functional street plan. There were no serious congestion

problems, and a street width of 50 or 60 feet served all necessary purposes. This is no longer the case since the invention of the automobile has placed a huge number of these vehicles on the city's streets. Now there is a definite need for a well designed functional street plan. In this plan streets should be grouped into four major classifications:

1. Interregional highways.
2. Major streets.
3. Secondary streets.
4. Minor streets.

Interregional highways are designed to carry traffic from one large urban community to another and serve as connecting links between principal cities. Major streets are principal thoroughfares within the urban community which serve to connect peripheral areas with the downtown districts and different sections of the city with each other. Secondary streets are auxiliaries to the major streets, connecting different sections of the city, but on which the flow of traffic does not necessitate great widths. Minor streets distribute the traffic within areas bounded by major or secondary thoroughfares and serve as access roads to residences and other buildings.

Interregional Highways

The congestion and generally unsatisfactory conditions on important highways entering the larger cities have been increasingly aggravated in late years by the ever increasing flow of traffic over these routes. These conditions are created largely by the confluence of streams of local and suburban traffic over the same routes which accommodate the interurban and interregional movements so that in the absence of wide arteries and the difficulty of widening existing routes, the flow of all types of traffic has been greatly impeded. A study of the characteristics of this traffic has indicated that the majority of the vehicles, regardless of the origin of their movement, whether it be urban, suburban or interregional, have as their destination some point in the central city, and relatively few really constitute through traffic.

The remedy for these conditions would seem to be in the development of a new type of thoroughfare designed to convey such traffic directly into and through the central city without interruption from local streets and conflicting cross traffic. The interregional highway is such a thoroughfare. Its purpose is the direct conveyance of traffic between the larger cities in such a manner that conflict with local traffic is eliminated, easy access to the central business district and a few other focal points, such as trucking areas, is provided, and through traffic is allowed to continue across and beyond the city without interference from other vehicles.

It is essential in the design of this facility that local cross streets be avoided either by the creation of a depressed or elevated thoroughfare passing under or over these streets or by the creation of a free way to which such streets have no right of access and are physically prevented from entrance. Alignment should be as direct as possible and both curvature and grades should be kept to a minimum. The few intersections permitted with important cross streets and focal points in the downtown district should be separated and connections made by a clover-leaf type of structure. A width of at least 160 feet in the city and considerably more in open rural areas would be desirable.

The general location of interregional highways in Richmond as they relate to the proposed major street system has been shown diagrammatically on Plate Number 37. More specific features of these highways as to proposed alignment, connections, and other details are shown on Plate Number 38 along with the proposed major street plan.

There are two interregional highways which affect Richmond. One of these is the present U. S. Highway Number 1 which connects Richmond with Washington, D. C., and other large cities along the northern coast and extends south to Savannah, Jacksonville and Miami. The other

CITY OF
RICHMOND
VIRGINIA





DIAGRAMMATIC
MAJOR STREET PLAN

CITY PLANNING COMMISSION
RICHMOND, VIRGINIA

HARLAND BARTHOLOMEW & ASSOCIATES
CITY PLANNING CONSULTANTS
SAINT LOUIS, MISSOURI.

PLATE NUMBER 37

interregional highway is an east and west route traversing the city. The proposed interregional route for U. S. Highway No. 1 would begin at a point on the present highway about two miles north of the corporate limits in the vicinity of Solomon's Store and proceed in a southeasterly direction crossing Virginia State Highway No. 2, passing to the east of Forest Lawn Cemetery and thence in a southerly direction into the Cannon Branch Valley to Valley Road where it joins the proposed U. S. No. 60 Interregional from the east. South of Valley Road the route of U. S. No. 1 would follow the east side of the Shockoe Valley in the vicinity of 17th Street. Clover-leaf connections are proposed at Cary and Broad to permit traffic destined for the central business district to emerge at these points. Turpin Street extended would be carried over the interregional by means of a viaduct. This plan would necessitate a new bridge across the James River entering South Richmond near the foot of Maury Street. In South Richmond the interregional highway would follow the right-of-way of Ninth Street Road along its southern reaches and would join this highway at a point to be determined after detailed surveys are completed. It would eventually connect with the present U. S. Highway No. 1 (Jefferson Davis Highway or Petersburg Turnpike) at a point south of the DuPont property. Clover-leaf intersections are suggested at a point opposite Ingram to allow interchange with the south side industrial and warehouse development, at the proposed south side circumferential (Grove Street extended), and at the proposed intersection of Interregional No. 360 from the west.

As an alternate or industrial route there is suggested an interregional beginning at a point on the present U. S. Highway No. 1 approximately one mile north of the city limits and proceeding in a southwesterly direction, passing under Hermitage at Westbrook, to Westwood Avenue near the R. F. & P. R. R. From that point it would proceed eastwardly parallel to and north of the S. A. L. tracks to the Valley Road intersection with U. S. No. 60 mentioned above. Clover-leaf connections should be provided where this highway crosses Boulevard, and at Chamberlayne extended. This route would serve practically all industrial districts where truck traffic enters or leaves and would make it possible to keep such traffic from using Chamberlayne and other residential streets.

It is suggested that construction of this project along the east side of Shockoe Valley be combined with the eradication of slum property along 17th Street. This could be accomplished by condemnation and purchase of a strip one or more blocks in width along this street. The present character of this property is such that this clearance would not be unduly expensive. Since a portion of South Richmond is subject to inundation along the west bank of the James River at times of heavy flood, excellent use could be made of the proposed highway by its construction as a flood control and protection project as well as an interregional route.

The present U. S. No. 360 highway enters the city over Hull Street and Mayo's Bridge. It is proposed to re-route this thoroughfare as an interregional highway by providing a new, wide right-of-way branching off the present route at a point on Hull Street about one and one half miles west of the city limits, and thence proceeding on a practically straight line to its connection with U. S. No. 1 Interregional south of Arlington Avenue. No other connection with existing streets or highways would be necessary. Traffic over this route destined for points to the east of Richmond could proceed with little interference either to Cary or to the proposed interregional from the east which joins No. 1 at Valley Road. This arrangement would facilitate the interchange of vehicles destined for points either north or south of Richmond without forcing this traffic over crowded local thoroughfares and would enable traffic destined for Richmond to utilize the same connections provided for the north-south highway.

Early in 1944 the interregional highway committee in Washington favored routing traffic from the far west over U. S. 60 until it reaches U. S. 11 at Lexington, thence northwardly to Staunton, from which point it would proceed into Richmond over U. S. 250, or Broad Street Road. This would allow the interregional to leave Broad Street Road at a point about three miles west of the corporate limits where Bethlehem Road extended would intersect, and proceeding along the general line of this road cross the R. F. & P. at the northern end of the Acca Yards and join the industrial route of U. S. No. 1 Interregional at Westwood. This is shown as an alternate route on Plate No. 38.*

General Principles and Standards for a Major Street System

In the design of a system of major streets for Richmond, there are certain fundamental principles which must be followed. Each street in the city has its particular function as determined by the characteristics of traffic and its position in the urban structure. The functions of main thoroughfares may be considered as falling into the four general classifications of radial streets, distributor streets, cross-town or circumferential routes and by-pass routes. The general arrangement of these different types of thoroughfares in Richmond's major street system is shown diagrammatically on Plate Number 37.

*Subsequent to the release of this chapter of the report the Virginia State Department of Highways entered into a contract with R. Stuart Royer and Consoer, Townsend and Associates, Consulting Engineers, on October 30, 1944, to assemble tentative estimates of cost and other necessary data essential to the reaching of decisions on routings to be subsequently studied in detail. These studies, which are now in process (June 1945) embrace in general the routes proposed for the interregional highways through Richmond as set forth on Plates 37 and 38 of this report and in addition thereto a midtown route by way of Belvidere Street and the Robert E. Lee Bridge extending southwardly to a connection with the interregional highway as proposed through the James River basin.

The most important thoroughfares in the city are the radial streets, which carry traffic from outlying sections to the downtown area and are, therefore, somewhat analogous to the spokes in a wheel of which the central business district is the hub. Since this is the principal focal point in the community, these streets must carry considerable vehicular loads and should be of adequate width to perform this function safely and expeditiously.

Distributor streets are wide thoroughfares which surround the central business district and facilitate the distribution of traffic from the principal radials throughout this area. Their function is to reduce congestion on streets within the business district. A considerable volume of traffic will frequently accumulate on these streets and, to minimize delays from the numerous turning movements, eight to ten lanes are usually necessary.

Cross-town or circumferential streets connect the various radial thoroughfares and join different sections of the city with each other. These routes should be continuous and as direct as circumstances will permit. They are usually the most neglected element of the urban system so that great difficulty is encountered in providing adequate communication between different sections of the city without undue delay and inconvenience.

By-pass streets are used to carry traffic around the city and around congested areas, such as the central business district. They intercept traffic from the radial routes in such a way that slow-moving trucks and other vehicles may find an easy route around rather than through the point of congestion.

In general, the minimum width for major streets should be at least eighty feet between property lines. This would provide sufficient space for a 56 foot pavement and two 12 foot sidewalks. Since a 56 foot pavement would permit parking and two lanes of moving vehicles in each direction, considerable traffic could be handled on such a street provided it were not also used by street car or bus lines.

mainder of the route is already of sufficient width.

7. *Hermitage Road—Meadow Street.* This artery would facilitate communication between the general area lying east of Boulevard and the northern city as well as crosstown traffic in the compact "fan" district. Hermitage Road is quite narrow and will require widening and a better connection with Meadow Street north of Broad. The entire route should have a six lane capacity.

8. *Lombardy Street.* As previously discussed, this now serves as a part of U. S. Highway 1. With development of the interregional highways and direct connection between Chamberlayne Avenue and Belvidere, this function will no longer be necessary. However, the street will continue to serve as a cross-town and by-pass from Idlewood Avenue to Chamberlayne Avenue and should have a width of 80 feet, thus necessitating an ultimate widening from its existing width, which varies between 50 and 60 feet.

9. *The South Richmond Intermediate Circumferential.* The principal circumferential encompassing both south Richmond and the entire city north of the James River has been described. In order to provide good facilities for communication between all parts of south Richmond, another circumferential and cross-town route is proposed, this route to embrace the following streets: Forest Hill Avenue, Broad Rock Road, Holly Springs Avenue, an extension and connection to Grove Street, Grove Street, and Grove Street extended. This will provide a direct artery extending from Forest Hill and Semmes to Interregional Highway No. 1 near the Seaboard. A width of 80 feet will be required, which will necessitate widening of the majority of the streets comprising this route. Connection with the interregional highway would be permitted by means of a clover leaf intersection. A connection between this circumferential and the Belt Boulevard circumferential would be made as shown north of and parallel to the corporation line along the A. C. L. R. R., entering the Belt Boulevard at a point north of Hull Street.

The various thoroughfares described above comprise the proposed Major Street Plan for Richmond. In addition to these streets, certain secondary routes will be needed to supplement the main arteries. Most of these secondary streets are now of sufficient width to serve this purpose since only four lane streets will generally be required.

The street arrangement within and around the downtown business district has been given special consideration in this report and will be discussed in detail later in this chapter.

The Regional Highway Plan

The City of Richmond now has control jointly with the counties of all subdivision activity within five miles of the present corporate limits. For the proper exercise of this control it is essential to have a guide for the future development of these areas, particularly as to the location of future highways and extensions. While it is unnecessary and undesirable to extend a system of urban streets into this area, certain principal routes should be designated and correlated into a regional plan designed to provide convenient and direct communication between all sections of the city and counties. This system should also be coordinated with the principal county, state, and Federal highways.

Such a plan has been prepared for the Richmond region as shown on Plate 39. It will be noted that present primary highways have been used as the basis of this plan, supplemented by existing secondary roads, wherever possible, and with recommended connections and extensions to provide continuity and a reasonable degree of directness throughout the system.

It is apparent from Plate Number 39 that the Richmond region is well supplied with radial highways, although many of these routes are of inadequate width and, particu-

larly from the east, lack proper ingress into the central city. Remedies for this condition within the city have just been discussed. These radial routes should be interconnected by circumferential highways in the counties to provide accessibility throughout the region as suggested in this plan. However, it should be emphasized that a very few main thoroughfares will be adequate to serve this region. It is unduly expensive and unnecessary to provide the county with a system of urban streets. Future subdivision should be very carefully controlled within the logical urban area, as discussed in the population report, so that streets and utilities may be provided at reasonable cost.

It should be noted that no consideration is given to the location of subcenters and a more or less extensive decentralization plan for the city. While such a scheme might be followed, it would not seem advisable or desirable at this time. Richmond has now reached a stage in its development when it must begin the rebuilding of its obsolete central areas. This cannot be done by overexpanding its suburbs and encouraging large groups of population to leave the central city.

The regional highway plan is supplemented by inclusion of the proposed large park and pleasure drive system and by indicating the system of secondary highways proposed to be developed by Henrico County.

Street Cross Sections

Plate Number 40 has been prepared to show the relation between pavements, planting and sidewalks on streets of different widths. The character and width of pavements in Richmond should be determined only by considerations of traffic movement and parking. For example, minor residential streets used only by local traffic can be lightly paved and need have a roadway width no greater than 26 feet. For such a street a right-of-way of 50 feet can be used, although a 60 foot width is more satisfactory and provides a better neighborhood effect. Much past difficulty has been the result of multiple-function streets, especially in the use of logically minor ways to supplement main thoroughfares so that improvement and maintenance have been unduly expensive. By the designation of major streets and adherence to the standards shown on Plate Number 40, a more efficient and economical system can be provided.

With a few exceptions, the proposed major streets in Richmond would be either six or eight lane thoroughfares. For an eight lane pavement, a right-of-way of at least 100 feet is essential. This would provide for an ultimate roadway of from 72 to 76 feet and minimum sidewalks of 12 feet in business districts. Such a thoroughfare might be developed in stages. In the first stage through residential districts a 56 foot pavement could be constructed so as to provide 18 foot grass plots and 4 foot sidewalks on each side. When the increase in traffic necessitated additional roadway space, the curbs could be set back 10 feet on each side and the grass plot utilized for the new paving.

For major highways in outlying suburban districts wider rights-of-way may be required than in the urban area where traffic is slower and center strips are not provided. Since there are few intersections in the outlying areas and parking is not permitted, traffic moves much more rapidly and freely on such a highway, and the four lane divided roadway is capable of handling as much traffic as the eight lane thoroughfare in the central city. For considerations of safety, a central strip separating the opposing streams of traffic should always be provided. For highways of this type a minimum right-of-way of 150 feet is recommended. This will permit an initial development of two 22 foot roadways separated by a 49 foot park strip and with ample space on each side for planting and drainage. Should traffic so increase that additional lanes become necessary, the improvement can be made by taking 11 feet from each side of the central strip, thereby providing 33 foot pavements separated by 27 feet of planted area.

The suggested development of 80 foot major streets would permit an ultimate pavement of 56 feet or six lanes, which might be improved in its initial stage as shown on Plate Number 40. This would permit a 36 foot roadway with two moving and two parking lanes bounded on each side by 22 feet of sidewalk and planting space. Later, widening would utilize 10 feet of this strip, leaving 12 feet for sidewalk and landscaping. To facilitate this future widening, all trees and overhead utilities should be kept back of the future curb line.

A right-of-way of 60 feet is sufficient on secondary thoroughfares. This would permit a 36 foot pavement with 12 feet on each side for sidewalks and planting. In residential areas, a 4 foot walk would usually be sufficient, leaving an 8 foot strip for trees and grass. In business districts, a 40 foot pavement should be provided with 10 foot walks for pedestrians.

THE CENTRAL BUSINESS DISTRICT

Traffic Flow in Downtown Richmond

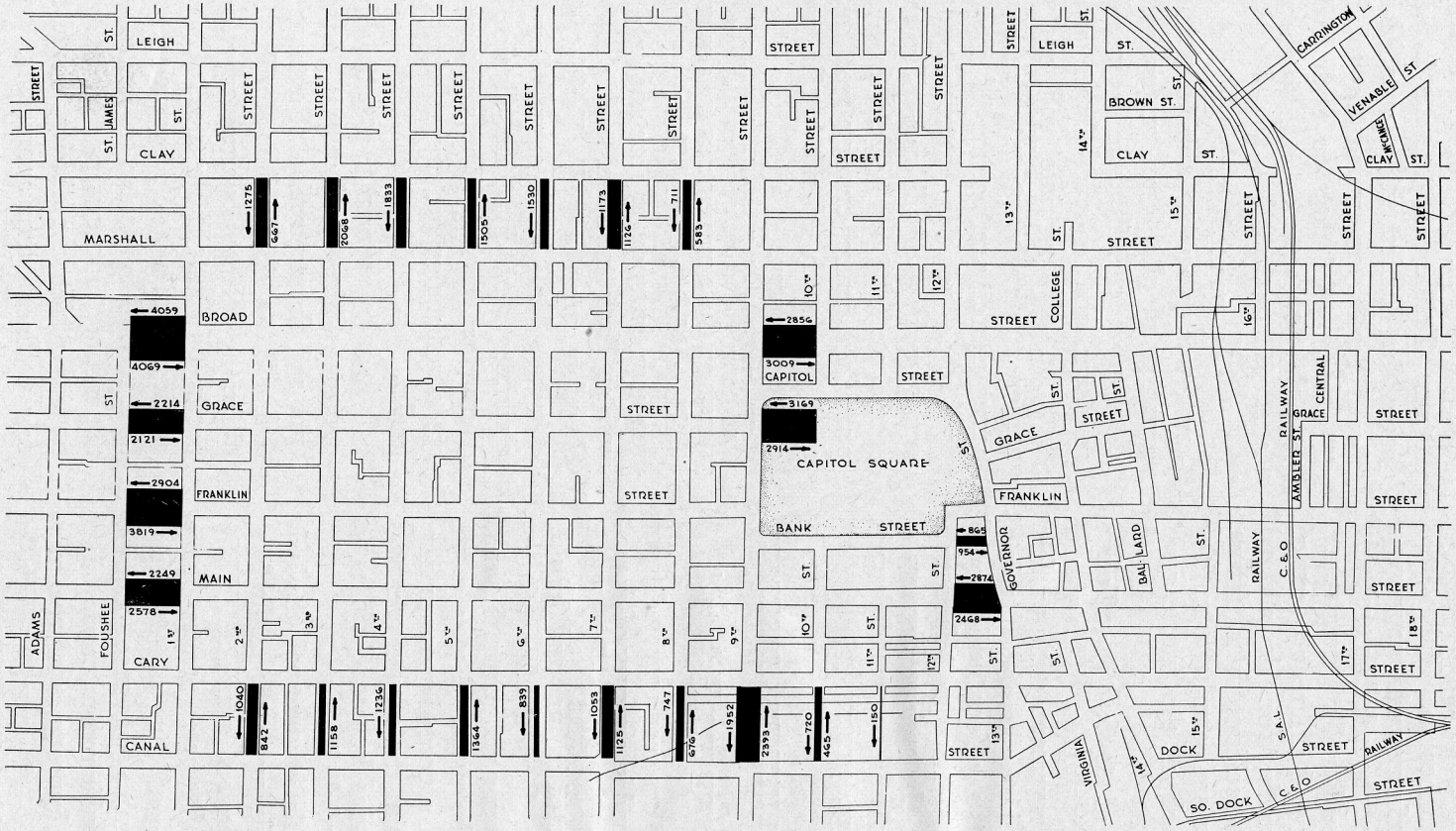
Plate Number 41 has been prepared from information contained in a survey of downtown Richmond which Morton G. Thalhimer, Inc., conducted in June and July of 1941. This diagram shows the flow of traffic entering and leaving the central business district between the hours of 7:45 a. m. and 6:00 p. m. on a normal summer day. In making this count, the cordon area was taken as that bounded by 1st, Cary, 12th, Bank, 9th and Marshall Streets.

Examination of this map reveals the lack of balance now existing in the traffic load on various downtown arteries. While practically all of these streets have the same width of 65 to 66 feet, there is considerable variance in the amount of traffic which they convey into the district. The importance of the four western entries is apparent. With a total of 10 lines of moving vehicles, these streets carried 12,587 vehicles into the district and 11,426 out. The northern entries, on the other hand, failed to realize their capacity, carrying only 6,522 vehicles in and 5,949 vehicles out on seven entry streets. Traffic from the east is forced to enter the district either over Main and Broad Streets or around Capitol Square. The volume of flow on both Main and Broad is relatively heavy, as is that which enters the district at 9th and Grace. It should be pointed out that the cordon count was somewhat ambiguous in its description of the latter station, and the diagram in this instance is intended to represent the volume, rather than the direction of flow into and out of the cordon area at this point. Vehicular flow across the eastern portion of the cordon was 9,764 vehicles entering and 9,345 emerging from this district. The southern entries carried 8,023 vehicles in and 7,737 out of the central business area, and more than one-fourth of this traffic used the 9th Street entry.

The effects of discontinuity and dead-end streets on these movements are also apparent in Plate Number 41. For example, the southern entrances at 10th and 11th Streets end at Bank or Main, and their use is, therefore, very limited. Traffic from the east over Bank Street must follow a very circuitous path into the district, which discourages its use. The southern entries are also handicapped by relatively heavy grades.

It is quite essential to a balanced development of the entire central business district and the protection of present values, that a better distribution of this vehicular traffic be effected, particularly from the north and south of the area. Greater use of these entries would permit more direct flow toward particular objectives, thereby minimizing unnecessary movement and turning within the district, would help to relieve the western approaches, and with proper connections would provide better entry into the district from the east.

RICHMOND
VIRGINIA



TRAFFIC FLOW
CENTRAL BUSINESS DISTRICT
DURING AVERAGE DAY - FROM 7:45 AM TO 6:00 PM

8000 6000 4000 2000
SCALE OF VEHICULAR TRAFFIC

CITY PLANNING COMMISSION
RICHMOND VIRGINIA

GRAPHIC SCALE 0 200 600 800

HARLAND BARTHOLOMEW & ASSOCIATES
CITY PLANNING CONSULTANTS
SAINT LOUIS MISSOURI

DATA FROM CORDON COUNT MADE BY MORTON THALHIMER INC. IN JUNE 1941.

AUGUST 1, 1942 C.H. CONRAD - E.H. FRANKE

PLATE NUMBER 41

Parking Facilities in Downtown Richmond

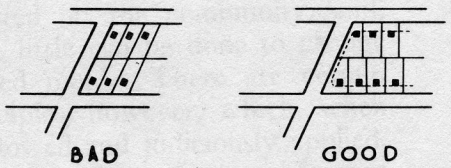
In the study of conditions affecting the movement of traffic in and around the central business district, special consideration has been given to the matter of parking, both as to existing regulations affecting curb parking and the extent of off-street facilities. Since information on neither of these phases of the parking problem was readily available, a special survey was made to determine the location and capacity of parking lots, garages, etc., as well as the parking regulations and the approximate number of parking spaces available within the cordon area previously described. From this information Plate Number 42 has been prepared showing the type, location, and capacity of off-street facilities, and the regulations affecting curb parking.

The cordon count of vehicular flow in the downtown district indicated that 36,896 vehicles entered this area during a ten-hour period. Some of this traffic, of course, consisted of motorists employed within the area, who were interested in securing space for all-day parking. However, shoppers and others desirous of transacting business within the district undoubtedly comprised a large proportion of such traffic. These motorists seek opportunities for parking close to the place where they wish to transact business, and they are reluctant to pay a fee for these accommodations unless they are within a short distance of their objectives. Rather than pay a fee, these persons will frequently drive around the district seeking curb facilities, thereby increasing the flow and impeding traffic on these inner streets.

The survey of present parking facilities in Richmond's downtown business district reveals that there are approximately 1,800 curb parking spaces in this area. If these spaces were cleared and filled regularly in accordance with present regulations, parking accommodations during an eight-hour day would be available for some 14,200 automobiles. Actually, however, these ideal conditions never prevail. Many motorists overstay their time. In certain parts of the district which are not as readily accessible to the stores, banks, and offices, vacancies may exist. While it is impossible to determine the actual use of these facilities without a very detailed and costly survey of the parking on these streets, it is doubtful whether there are as many as 10,000 spaces available during the entire business day. It is obvious that these curb accommodations, therefore, would not be sufficient to take care of the 36,896 vehicles entering this district, and that off-street facilities must be used.

Off-street parking lots and garages within and immediately adjacent to the cordon area have a total parking capacity of 3,425 vehicles. There are 74 lots and garages in the area, including 21 lots which provide free all-day parking, either as an appurtenance of the building or in connection with the sale of gasoline or other supplies. Assuming an average parking time of two hours per vehicle, theoretically a total of 13,700 automobiles could be taken care of during an eight-hour day. Actually, however, many of these spaces are occupied by all-day parkers employed in the downtown district, and the capacity is somewhat less than this number.

While an examination of Plate Number 42 would indicate that there are a considerable number of off-street parking facilities in downtown Richmond, it is apparent from the foregoing figures that the combined curb and off-street accommodations are less than two-thirds of the total number of cars entering the district. It is obvious, therefore, that consideration should be given to the establishment of additional parking areas in this district. Unless adequate facilities are provided, suitably located and at reasonable fees, shoppers eventually seek other centers where parking is available, and decentralization results. Suggestions along this line follow, along with other recommendations for improvements in the central business district.



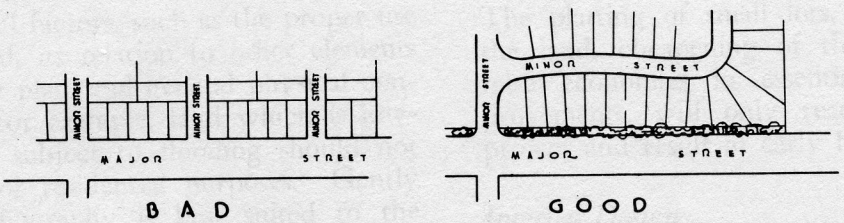
BAD GOOD

LOT LINES PERPINDICULAR TO THE STREET PERMIT REGULAR BUILDING LINES, HOUSES IN GOOD RELATION TO EACH OTHER & TO THE STREET & PREVENTS AN UNSIGHTLY, "SAW-TOOTH" EFFECT.



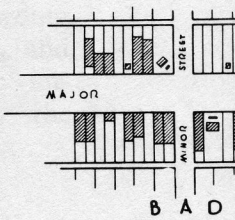
BAD GOOD

MINOR STREETS SHOULD ENTER MAJOR STREETS AT RIGHT ANGLES TO MINIMIZE TRAFFIC HAZARD. LOTS WITH DOUBLE FRONTAGE ARE UNECONOMICAL AND UNDESIREABLE AND SHOULD BE AVOIDED.



BAD GOOD

INTERSECTIONS OF MINOR STREETS WITH MAJOR STREETS SHOULD ALWAYS BE HELD TO THE MINIMUM AS NUMEROUS INTERSECTIONS CAUSE DELAY AND HAZARD. LESS THAN FIVE PERCENT OF HIGHWAY FRONTAGE IS NEEDED FOR COMMERCE. FRONTING OF LOTS ON MINOR STREETS AND PROVISION OF PLANTING SCREENS WILL PROTECT HOMES FROM TRAFFIC.



BAD

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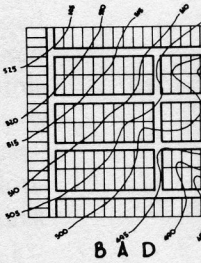
BAD GOOD

MODERN HOMES WITH ATTACHED GARAGES REQUIRE WIDE LOTS. GREAT DEPTH IN RESIDENTIAL LOTS IS WASTEFUL AND THE EXTRA LAND IN THE REAR OF THE LOT IS USELESS. LOTS 50 TO 60 FEET IN WIDTH SHOULD NOT GREATLY EXCEED 130 FEET IN DEPTH. LARGER LOTS SHOULD HAVE A SIMILAR PROPORTION.



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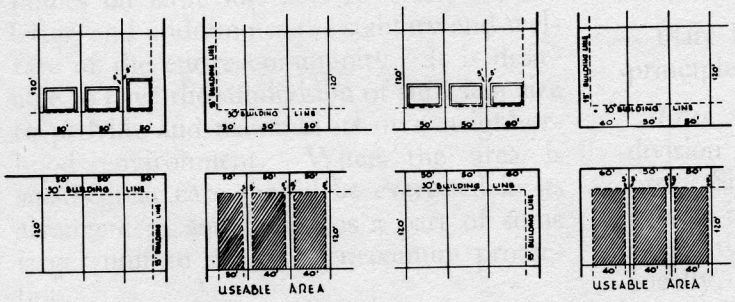
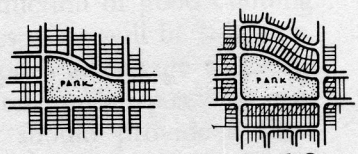


BAD GOOD

BUILDING LINES ARE ESSENTIAL ON ALL STREETS TO CREATE A SPACIOUS CHARACTER IN RESIDENCE AREAS. CORNER LOTS NEED EXTRA WIDTH TO PROVIDE BUILDING LINES ON BOTH STREETS AND ALLOW ADEQUATE BUILDING AREA.

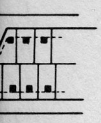


BAD GOOD

LOTS SHOULD BE ARRANGED TO OBTAIN MAXIMUM FRONTAGE ON OPEN SPACES, PARKS, AND VIEWS.

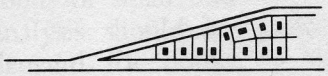
THE CITY PLANNING COMMISSION · I

HARLAND BARTHOLOMEW & ASSOCIA
CITY PLANNING ENGINEERS
SAINT LOUIS · MISSOURI



OOD

TREET PERMIT
O RELATION TO
AN UNSIGHTLY,

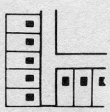


BAD



GOOD

MINOR STREETS SHOULD ENTER MAJOR STREETS AT RIGHT ANGLES TO MINIMIZE TRAFFIC HAZARD. LOTS WITH DOUBLE FRONTAGE ARE UNECONOMICAL AND UNDESIREABLE AND SHOULD BE AVOIDED.

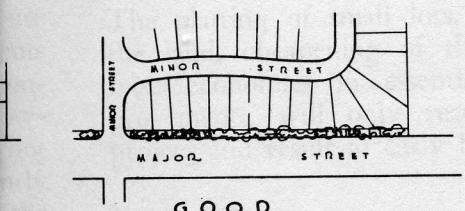


BAD



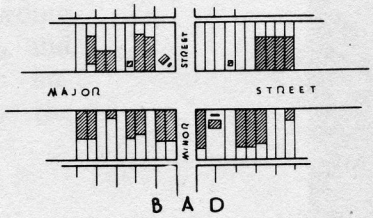
GOOD

DEAD END STREETS SHOULD BE AVOIDED. A MINIMUM AREA SHOULD BE IN STREETS AND THE LOTS ARRANGED TO PRODUCE ATTRACTIVE GROUPS OF HOMES.



GOOD

WITH MAJOR STREETS SHOULD ALWAYS BE HELD TO THE
LSE DELAY AND HAZARD. LESS THAN FIVE PERCENT OF
NCE. FRONTING OF LOTS ON MINOR STREETS AND PRO-
OTECT HOMES FROM TRAFFIC.



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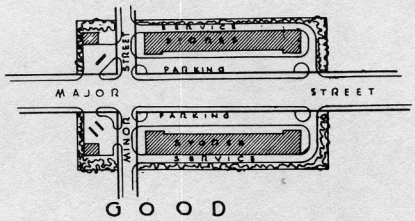
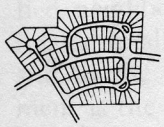


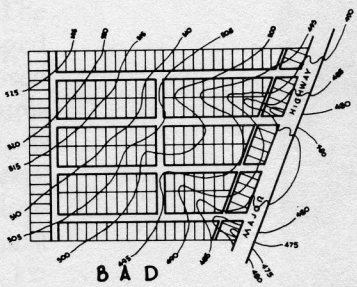
GOOD

COMMERCIAL AREAS SHOULD NOT BE DEVELOPED IN AN UNRELATED AND HAPHAZARD MANNER BUT SHOULD BE CONCENTRATED IN A GROUP AND PROVIDED WITH ADEQUATE OFF-STREET PARKING AND SERVICE AREAS.



GOOD

ACHED GARAGES REQUIRE WIDE LOTS.
S IS WASTEFUL AND THE EXTRA LAND IN
ELESS. LOTS 50 TO 60 FEET IN WIDTH
130 FEET IN DEPTH. LARGER LOTS SHOULD
NO



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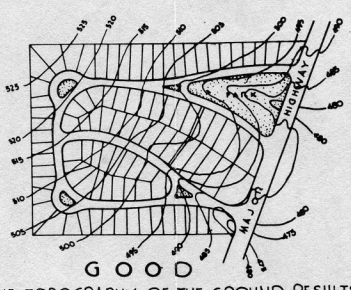
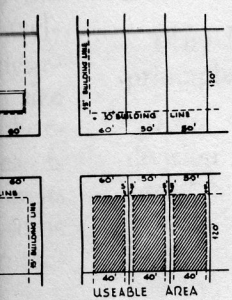


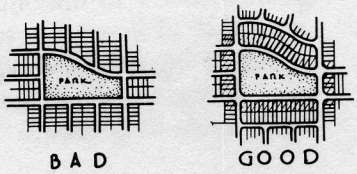
GOOD

ADJUSTMENT OF THE SUBDIVISION TO THE TOPOGRAPHY OF THE GROUND RESULTS IN BETTER STREET AND LOT GRADES, A MORE ECONOMICAL DEVELOPMENT WITH LESS GRADING, AND A PLEASANTER - MORE BEAUTIFUL PLACE IN WHICH TO LIVE. USE OF ROUGH GROUND - RAVINES, WATERCOURSES, ETC. - FOR PARK PURPOSES ENHANCES VALUES WITHIN THE SUBDIVISION.



GOOD

O CREATE A SPACIOUS
NEED EXTRA WIDTH TO
ALLOW ADEQUATE



BAD GOOD

LOTS SHOULD BE ARRANGED TO OBTAIN MAXIMUM FRONTAGE ON OPEN SPACES, PARKS, AND VIEWS.

ILLUSTRATIONS OF CERTAIN PRINCIPLES OF LAND SUBDIVISION

NOTE: MANY OF THESE EXAMPLES ARE TAKEN OR ADAPTED FROM FEDERAL HOUSING ADMINISTRATION TECHNICAL BULLETINS NO. 5 & NO. 7 AND FROM THE LAND SUBDIVISION MANUAL OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS.

LANNING COMMISSION · RICHMOND · VIRGINIA

HARLAND BARTHOLOMEW & ASSOCIATES
CITY PLANNING ENGINEERS
SAINT LOUIS · MISSOURI

AUGUST 1943.

Chapter VII

TRANSIT FACILITIES

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TRANSIT FACILITIES

One of the most important of the city's facilities is its system of local passenger transportation, or transit. While the past twenty years have witnessed a phenomenal increase in the use of the automobile, large numbers of people still depend on mass transportation, both street cars and buses, to travel from their homes to places of employment, shopping centers, theatres, and other objectives. Since these vehicles can carry many times as many passengers as the private automobile and do not require downtown terminal facilities, their maximum use should be encouraged to relieve traffic congestion and parking problems within the central areas of the city.

The influence of mass transportation on the evolution of the American city has been discussed in previous chapters including the one on population growth and on housing. For a period of some thirty years, beginning with the development of the electric street car about 1890, this form of transportation was a major influence in urban expansion. The surge of rural population into the cities was accompanied by the projection and rapid development of street car lines so that new housing and population followed and paralleled these routes. While the modern automobile with its vastly increased mobility has supplanted the street car as a controlling factor in urban expansion, often spreading the population so thin as to make economical mass transportation impossible, transit lines still exert considerable influence on community development, particularly in the larger cities where problems of traffic control, congestion and parking are most acute.

The city plan is concerned primarily with the location and extent of transit routes. Street car or bus lines should be readily accessible to all sections of the city and should lead directly from residental neighborhoods to business and industrial districts. The transit plan, therefore, must be coordinated with other phases of the comprehensive plan, such as the distribution and density of population, major streets, land use and zoning. In order to provide convenient and comfortable transportation throughout the city, it is essential both to know where and how much population must be served and to route these lines over wide, direct thoroughfares where they will encounter a minimum of interference from other traffic.

While it is not within the province of the present study to discuss the details of operation, such as the type of service as between street cars and buses, or fares, schedules, and similar matters, there are certain considerations in the physical layout and routing of these lines which do have a bearing both on the improvement of service and the reduction of operating costs. As previously indicated, the improvement of facilities for public transportation in Richmond and other American cities is intimately related to the improvement of circulation and the solution of problems of congestion, traffic control and parking within the downtown areas. It is to the interest of the operating company, to provide as frequent, cheap and satisfactory service as is economically possible in order to bring about greater use of these facilities and consequently increased revenues.

Since the proposed transit plan for Richmond must be carefully coordinated with the major street plan, as well as with population distribution and growth, it will naturally have to be developed over a period of many years. Suggestions and recommendations will be made for the elimination or rerouting of some existing lines which are of immediate importance and can

be accomplished at little or no expense. Other improvements may depend on the consummation of proposals in the major street plan for the development or extension of major thoroughfares, which may not be accomplished for many years. Consequently, the proposed plan will be presented in two parts. The changes embodied in the first plan could be put into effect immediately after the return of normal postwar conditions, and the second or future plan is designed for gradual execution over a period of fifteen to twenty-five years, depending upon population growth, street improvements, and changes in the types of transit facilities.

PAST GROWTH, CHARACTER AND EXTENT OF EXISTING FACILITIES

History of Past Development

The evolution of Richmond's present transit system is particularly interesting because of the city's role in the early development of the electric street railway. It is generally recognized that Richmond was the first city in the United States to operate successfully a commercial electric street railway system of the overhead trolley type. This system was installed in the face of considerable difficulties after pioneering experiments by Mr. Frank J. Sprague, sometimes called the father of the electric railway in the United States, and it was put in operation for regular service by May 4, 1888.

Richmond was also the first Virginia city to operate a street railway of any kind before the War Between the States. The first ordinance passed within the State of Virginia to permit horse-car operation was granted by the City Council to the Richmond Railway Company on March 29, 1860, and defined routes from Rocketts along Main Street to Jefferson or Madison Streets, along Broad Street west from 9th Street and along Leigh Street, together with certain cross-town lines connecting these tracks. During the war, this road was dismantled and the rails and other usable equipment converted into war implements. However, at the termination of the war, steps were taken to rebuild the road, and service was resumed in 1866.

The initial electric railway was started in Richmond under the most trying conditions. The city's narrow streets, its hilly character, and the lack of paving made operation most difficult, and it was frequently necessary for passengers to get out after derailment and assist in putting the cars back on the tracks. Total trackage of the lines was about twelve miles, extending from the center of the city to its principal sections and covering nearly nine miles of streets. About two miles in the central section were double-tracked, the remainder extending out on clay and other unpaved streets where horse cars would have been impossible. Some grades were as steep as eight to ten per cent. These early street car routes as they existed in 1888 are shown at the left of Plate Number 53.

As in other American cities, early passenger transportation in Richmond was characterized by the organization and operation of numerous competing lines, often offering duplicate services. As in other cities, too, development of the present system has been marked by a long series of organizations, reorganizations, mergers and consolidations.

The original Richmond Railway Company, after operating for twenty years, failed, and in 1881 its properties and franchises were taken over by the newly organized Richmond City Railway Company. Nine years later, in 1890, the Richmond Railway and Electric Company was organized, and consolidated all the railway and light companies in the city, including the Richmond Union Passenger Railway, the Richmond City Passenger Railway, which was a horse-car line organized in 1884, and three other companies.

Ten years later, the Richmond Railway and Electric Company, together with five other companies since organized, were absorbed by the Richmond Passenger and Power Company, a newly organized com-

pany which was chartered in 1899. In June, 1909, the Virginia Railway and Power Company was created and into this concern, which was controlled by Mr. Frank Jay Gould and his associates, were merged and consolidated the Richmond Passenger and Power Company, the Richmond Traction Company, and the Virginia Passenger and Power Company, thereby bringing under a single control some twenty-three traction, light and power companies then in operation.

The Virginia Railway and Power Company continued to operate the city's transportation system until July, 1925. At this time all properties of the concern passed into the control of Stone and Webster, Inc., and the company's name was changed to the Virginia Electric and Power Company.

After the reorganization in 1925, Richmond's entire street railway system was revamped and expanded in accordance with comprehensive studies made by the Department of Public Works and the Beeler Report. The system as it existed in 1925 is shown at the right of Plate Number 53. While no maps are available showing existing routes for intermediate years, the progress and improvement in transportation between the inception of the electric line in 1888 and the reorganization of 1925 are quite apparent in this plate. Since 1925 other lines have been added and extensions made.

In December 1944 the Virginia Transit Company acquired all of the local transit business of the Virginia Electric and Power Company. The new company, either alone or in affiliation with another company, operates transit systems in many cities.

At the present time the Richmond system comprises approximately 111 route miles of street cars and 145 route miles of bus lines. The two types of service are coordinated and transfers are interchangeable.

The trolley bus, a type of service intermediate between the gasoline bus and the rail trolley, has been recently used with excellent results in numerous communities. These conveyances are economical to operate, partake of the flexibility of the gasoline bus and the cost of installation is relatively low. A trial installation, the first in this country, was made here in 1916 but was soon discontinued.

General Principles of Transit Routing

There are certain general principles and standards which should be followed in the design and development of a comprehensive transit plan for Richmond. These principles may be briefly summarized as follows:

1. *Type of Service.* Richmond is not now and will not become a great metropolitan city. It will, thus, be spared the high costs of constructing rapid transit facilities. Richmond will be served by the usual form of street car, trolley buses and bus lines and by individual passenger automobile transportation. Street cars will probably be gradually displaced by trolley and gasoline buses. The latter now furnish approximately 60 per cent of total service based on route miles. The extent and efficiency of mass transportation service will depend not alone upon good operating ability, but upon certain community design and controls.

2. *Area of Service.* In an era of expanding economy, local transportation facilities follow population and may even precede it in certain instances. Where growth is relatively slow, as seems to be the probable future trend in most American cities, Richmond included, local transportation facilities cannot be unduly expanded without excessive cost or impairing the quality of service. The area of service should be determined by the pattern of population density. In Richmond the best service will be possible if transit lines are limited to areas having a population density of 10 to 15 persons or more per acre. In areas of less population density, individual automobiles should provide the major transportation service.

Chapter X

CAPITAL EXPENDITURE PROGRAM AND ADMINISTRATIVE POLICY AND PRACTICE

Chapter X

CAPITAL EXPENDITURE PROGRAM AND ADMINISTRATIVE POLICY AND PRACTICE

CAPITAL EXPENDITURE PROGRAM

INTRODUCTION

The Richmond City Plan discussed in preceding chapters contains numerous recommendations for physical improvements to be made over a long term of years. These proposals include those related to widening and opening major streets, the construction of bridges and grade separation structures, the acquisition and development of parks, playgrounds and airports, the construction of new schools and other public buildings, and the development of a civic center.

In addition to these improvements, there are many others involving expenditures of capital funds to keep pace with the needs of a growing community and to replace worn out or obsolete equipment that must be made each year in accordance with the needs and financial resources of the city. These public works projects include sewer construction, new street paving, grading, graveling, curb and guttering, sidewalks, improvements to existing city property such as parks, schools, cemeteries, etc., extensions and additions to the public utility systems, and many other improvements.

The City Plan provides a basis for coordinating these improvements, for eliminating duplication and for insuring that each improvement will be in scale with the requirements that are placed upon it. Having once determined upon a long range program that can be carried out within the financial limitations of the community, there devolves upon the Planning Commission the responsibility of developing a program of from four to six years and keeping it up to date by annual revisions in the light of conditions as they exist at that time.

A public works or capital expenditure program consists of a list of improvements in the order of their importance to the community as a whole. The Planning Commission is the logical agency to assemble and develop this information as it is an over-all agency, interested in all needed public improvements. In New York City the Plan Commission is charged by law with preparing an annual public works program, and no major improvement can be constructed in the city if it is not included in this program. Likewise, in Cincinnati the Plan Commission is the official programming agency. The work of the City Council Post-War Planning Board should be closely coordinated with that of the Planning Commission, as the post-war period will be one of great activity in the construction field.

It is the purpose of this chapter to assemble the various recommendations of the Comprehensive City Plan, and to estimate as nearly as practicable the ultimate cost of each proposal. To this list should be added the cost of recurrent capital improvements outside the scope of the city plan. After a determination is made of the future needs of the city, an examination will be made of the city's financial position and its ability to pay the cost of a large program of public works. After comparing the estimated cost of the improvement program with the amount of funds available in the future for financing capital improvements, a decision can be reached as to whether modification of the program is necessary, whether present sources of revenue should be supplemented by others, or whether the proposed pro-

gram can be carried out within the present and anticipated financial framework of the city.

Experience has shown that a public works program should be prepared for a relatively short number of years (four to ten years) and kept continuously up to date by annual revisions. From this program a detailed list of improvements can be fitted into the requirements of the budget annually.

ESTIMATED COST OF CARRYING OUT THE PROPOSALS OF THE RICHMOND CITY PLAN

The various improvements recommended to be made as part of the Richmond City Plan involve large expenditures. These improvements cannot all be made immediately or even within a few years, as the city's financial resources are insufficient to undertake such a large public works program in addition to the regular costs of operating the city. Consequently, the cost of making the capital improvements of the City Plan must be spread out over a long period of years in order to keep the annual debt service and maintenance charges within the limitations of the city's budget. Ordinarily, a city plan is designed to serve the needs of the community within the foreseeable future, or from thirty to forty years. One of several assumptions, therefore, to be made in this study will be that all of the proposals of the City Plan shall be carried out within a period of thirty-five years.

Many of the recommendations proposed in this report can be accomplished without cost to the city. The revised zoning ordinance is an example of this. Other recommendations have to do with agencies other than the city, such as the local transit company, the various railroads, air lines, etc. These agencies will bear all or part of the cost of carrying out improvements that affect their property.

The estimates made in this section of the report are approximate only and subject to change as opportunities arise to obtain more complete figures. The primary purpose of the estimates was to obtain an over-all picture of what might be the ultimate cost to the city of carrying out the City Plan and the other capital improvements that must be made from year to year. While the estimates for individual projects may vary widely from what they will actually cost, it is believed the total figure is reasonably accurate and can be used as a sound basis for an analysis of the city's financial structure in respect to its future capital expenditures.

Cost estimates were made for each project recommended in the City Plan and, where applicable, were divided into the proportion of the cost to be borne by the City, State and Federal Governments, and the railroads. In estimating the share of the cost of these improvements to be borne by agencies other than the city, certain assumptions were made:

1. On interregional highways the Federal Government will pay fifty per cent of the cost, the State of Virginia twenty-five per cent and the City of Richmond twenty-five percent.

2. Under existing state law the Highway Commission is authorized and may allow the sum of $500 per mile per year for street construction in the highway system. This may apply to one or more of the major streets proposed in the Major Street Plan. The City will be required to pay the cost of acquiring the right-of-way.

3. Proposed park drives and park areas beyond the city limits are not included in the tabulation of cost since much of the right-of-way may be obtained through the application of the provisions of the Plat Act, and further, their inclusion in the program must await a joint study and adoption on the part of the state, city, and county planning authorities working cooperatively.

4. The cost of grade separation structures for existing grade crossings will be borne equally by the railroad and the city.

TABLE No. 47

INVENTORY OF PROPOSED CAPITAL IMPROVEMENT PROJECTS

PROJECT	Total Estimated Cost Including Land	Distribution of Cost		
		Federal and State	Railroads	City
MAJOR STREETS:				
1. Interregional Highways	$ 22,000,000	$ 16,500,000		$ 5,500,000
2. Widen Clay, Adams to 9th ((Roadway only)	100,000			100,000
3. Widen Hermitage, Leigh to Broad	160,000			160,000
4. Widen Hamilton and Kelly, Cary to Brookland Parkway	825,000			825,000
5. Widen Broad, Commonwealth to Western Corporation Line	96,000			96,000
6. Widen Dill Avenue, Brookland Park Boulevard to Corporation Line	20,000			20,000
7. Widen Dock Street, 19th to Lester	336,000			336,000
8. Widen Lester and New Connection, Dock to Nicholson	67,000			67,000
9. Widen 35th Street, Nicholson to Orleans	50,000			50,000
10. Widen Idlewood, R. F. & P. to Belvidere	804,000	308,000		496,000
11. Widen Leigh, Hermitage to Brook	1,108,000			1,108,000
12. Widen Hermitage, Westwood to Leigh	554,000			554,000
13. Widen Decatur and Hull, Mayo's Bridge to Corporation Line	1,290,000			1,290,000
14. Boulevard—Brookland Park Connection through Fairgrounds	101,500			101,500
15. Widen Adams, Leigh to Broad	267,000			267,000
16. Widen Leigh, 22nd to Glenwood Avenue	207,000			207,000
17. Widen Broad, Ballard to Government Road	297,000			297,000
18. Widen Canal, Belvidere to 19th	2,500,000			2,500,000
19. Widen 2nd Street, Robert E. Lee Bridge to Clay Street	528,000			528,000
20. Widen Lombardy Street, Idlewood to Chamberlayne	613,000			613,000
21. Widen Cary Street Road, Lock Lane to Western Corporation Line	132,000			132,000
22. Leigh-Mechanicsville Connection	120,000			120,000
23. Carrington-Nine Mile Road Connection	96,000			96,000
24. New Street in Gillies Creek Valley	412,500			412,500
25. Other widening projects. (See Major Street Plan)	3,221,000			3,221,000
26. Acquisition of Downtown Parking Areas (two city blocks)	250,000			250,000
Total Major Streets	$ 36,155,000	$ 16,808,000		$ 19,347,000
BRIDGES:				
1. 9th Street Bridge	$ 1,764,000			$ 1,764,000
2. Boulevard Bridge over James River (Rebuild)	750,000			750,000
3. Miscellaneous Bridges	2,600,000			2,600,000
Total Bridges	$ 5,114,000			$ 5,114,000
GRADE SEPARATIONS:				
1. Idlewood at R. F. & P.	$ 75,000		$ 75,000	
2. Hamilton at R. F. & P.	150,000		150,000	
3. Boulevard at R. F. & P.	200,000		200,000	
4. Decatur Street at A. C. L.	185,000		185,000	
5. 9th Street Road at Seaboard	150,000		75,000	$ 75,000
6. Brook Road at Seaboard	160,000		75,000	85,000
7. Hermitage Road at Seaboard	160,000		75,000	85,000
8. Dock and Ash Streets	175,000		75,000	100,000
9. Decatur Street at Southern Ry	150,000		150,000	
10. Maury Street at A. C. L. Freight House Lead	210,000		100,000	110,000
11. Bell's Road at Seaboard	105,000		100,000	5,000
12. Terminal Road at Seaboard	130,000		125,000	5,000
13. 14th Street at Southern	250,000		200,000	50,000
14. Other grade separation projects	450,000		225,000	225,000
Total Grade Separations	$ 2,550,000		$ 1,810,000	$ 740,000

Conclusions

The foregoing estimates indicate that sufficient funds will be available during the period 1945 to 1980 to service an aggregate of $99,000,000 (Table Number 52) in new bond issues in addition to retiring previous issues. The estimated cost to the city of carrying out the city planning recommendations and the other necessary capital improvements during this same period is approximately $106,000,000 (Table Number 53), leaving an excess of cost over available funds of approximately $7,000,000.

The improvement program can, of course, be spread over a greater number of years or even be curtailed sufficiently to bring it within the city's ability to finance without increasing the tax burden. Before doing this, however, we think it would be desirable to examine the school tax levy and its insufficiency to meet this growing cost, a deficiency that is now being absorbed at the expense of other city services. In a letter dated August 7th, 1944 addressed to His Honor the Mayor and the Honorable City Council transmitting the 1943 financial report, the Comptroller had this to say:

"The ordinance which places our schools on a tax levy that is now inadequate, has the effect of budgeting only the estimated income from the school tax levy, when, as a matter of fact, the School Board's needs, as expressed for 1944, were $751,000.00 more than the budget carried as tax income."

A further part of the same letter stated:

"I cannot emphasize too strongly the need for an adequate tax levy or appropriation to meet the needs of our School Board; to do a substantial part of this financing by temporary loans and then hope for a surplus to absorb them is unsound from every point of view."

Eighteen per cent of the Capital Expenditure Program is for the construction of schools, and an additional four per cent for the purchase of school, park and recreation sites and facilities. It is therefore self-evident that an adjustment should be made in this part of either the expenditure or revenue program.

The State of Virginia contributes nothing towards financing capital improvements incident to education in Richmond and less than twenty per cent of the total operating expenses of the city's school system.

The Virginia Constitution in Section 129 provides:

"The General Assembly shall establish and maintain an efficient system of public free schools throughout the State."

There is a strong movement working for a more liberal policy on the part of the State towards financing the public free school system, and it is hoped that favorable results will be obtained.

State authorities are to be congratulated that the State is virtually debt free, and may justly point with pride to the great surplus being piled up annually. However, this is all the more reason why financial aid should be expected from the State in providing needed educational facilities in the City of Richmond, particularly in the light of the constitutional provision just quoted.

SUMMARY OF THE PROGRAM

This section of the report is primarily concerned with long-range programming as contrasted to year-by-year or short term programming of public works. The objective has been to obtain an over-all picture of the future physical needs and finances of the city, and to determine the best way to adjust the city's needs to its ability to pay.

The program presented herewith is to be considered only a general guide to follow in preparing future detailed public works programs such as that now under consideration by the Post-War Planning Board of the City Council.

Major Street Improvements

The projects selected for inclusion in the program presented herewith will serve all

parts of the community. They include the most important openings and connections designed to produce a coordinated system of main thoroughfares.

Grade Separations

The projects listed herewith include those in which the city bears a part of the expense. In addition, there are numerous structures to be financed 100 per cent by the railroads, some of which are listed in the program. This latter group includes the reconstruction or alteration of existing structures, and the construction of new separations made necessary by new street development.

Parks and Pleasure Drives

All improvements within the corporate limits proposed in the chapter on recreation are included in the program. Several large projects located beyond the city limits, such as Falling Creek Park and the Outer Park Drives, are omitted from the program of Capital Expenditures for later consideration with state and county planning authorities. Acquisition of land for park and pleasure drive purposes can be secured, in part at least, without cost to the city by application of the Plat Act. The cost of enlargement of school sites is included in the parks and playground section, as in all cases these enlargements are for the purpose of creating neighborhood parks or playgrounds.

School Buildings

The proposed program provides for the rebuilding of practically all schools in the present system, in addition to the new schools that will be needed in the future. Building costs only are included in the estimate, as land costs for school site enlargement are included in the program for parks and playgrounds. Buildings were assumed to have a service life of fifty years, after which they would be rebuilt.

Civic Center

Plans for a Civic Center have been coordinated with the Virginia State Planning Board and Medical College of Virginia authorities. Only the cost of the city's portion of the whole project is included in the program.

Airport

The cost of acquiring and developing a new major airport and one or more minor airports is included in the program. It is assumed the Federal Government will bear a substantial part of the cost.

Other Permanent Improvements

The inventory of needed public improvements prepared by the City Department of Public Works as a post-war program was used as a basis for the first period. Those projects of a city planning nature are included under their respective categories in that part of the program. The remainder of the proposed improvements were grouped together as shown, and no attempt was made to list individual projects under these classifications.

Following completion of the post-war program it will be necessary to expend a substantial amount annually to keep up with the growth of the city. These improvements include street paving, grading, curbing, and guttering; recreation facilities; extensions and additions to the municipal gas, water, and electrical plants; miscellaneous buildings and other improvements.

ADMINISTRATIVE POLICY AND PRACTICE

The initial stage of the City Planning Commission's work is completed. The preliminary reports have been reviewed by the different committees to which they have been assigned, and they have been adopted by the Commission. They have now been

combined into one volume and should next be approved by the City Council, which action will place the Comprehensive City Plan into official effect. This will mark the completion of plan-making and the beginning of that continuous process known as execution of the plan. The Commission must assume the responsibility of keeping the plan alive and adjusted to meet changing conditions; otherwise it may suffer the fate of many of the earlier plans which died because of lack of continuing interest and support.

MAKING THE PLAN OFFICIAL

The Virginia State planning law sets forth the procedure to be followed by the Planning Commission in making the plan official. This procedure has been incorporated in the ordinance which created the Planning Commission, and reads as follows:

"Sec. 10. The Commission may adopt the plan as a whole by a single resolution or may by successive resolutions adopt successive parts of the plan, said parts corresponding to major geographical sections or geographical or topographical divisions of the City or with functional subdivisions of the subject matter of the plan and may adopt any amendment or extension thereof or addition thereto. Before the adoption of the plan or any such part, amendment, extension or addition, the Commission shall hold at least one public hearing thereon, at least fifteen days' notice of the time and place of which shall be given by one publication in a newspaper of general circulation in the City. The adoption of the plan or of any such part or amendment or extension or addition shall be by resolution of the Commission carried by the affirmative vote of not less than a majority of the entire membership of the Commission. The resolution shall refer expressly to the maps and descriptive matter and other matter intended by the Commission to form the whole or part of the plan, and the action taken shall be recorded on the map and plan and descriptive matter by the identifying signature of the chairman of the Commission.* An attested copy of the plan or any adopted part thereof and every amendment, alteration, extension or addition thereto shall be certified to the Council and to the Clerk of the Chancery Court of the City of Richmond and the Clerk of the Hustings Court, Part 2, of the City of Richmond, who shall record and index the same in the manner in which deeds and plats are recorded."

LEGAL EFFECT OF ADOPTION OF OFFICIAL PLAN

Section 11 of the City Planning Ordinance reads as follows:

"Whenever the Commission shall have adopted a master plan for the City, or one or more parts, sections or divisions thereof and the master plan or part thereof shall have been approved by the Council of the City, and it has been filed with such court clerks, then and thereafter no street, square, park or other public way, ground or open space, nor public building or structure shall be constructed or authorized in the City or in the planned section or district thereof until and unless the general location, character and extent thereof has been submitted to and approved by the Commission; and no public utility, whether publicly or privately owned, which is not subject to zoning control as now provided by law, shall be constructed or authorized in the City, or in the planned section or district thereof until and unless the reasonable and general location, but not its character and extent, has been submitted to and approved by the Commission; provided that in case of disapproval the Commission shall communicate its reason to the Council which shall have the power to overrule such action by a recorded vote of not less

*Since no plan should be certified by the Planning Commission to the Council or the City Courts before being passed upon by the Council, the Enabling Act and the City Ordinance should be amended to bring this portion of section 10 and the first sentence of section 11 into agreement.

than two-thirds of its entire membership. The failure of the Commission to act within 60 days from and after the date of the official submission to it shall be deemed approval. The widening, extension, narrowing, enlargement, vacation or change in the use of streets and other public ways, grounds and places within the City, as well as the acquisition by the City or the public of any land within the City for public use or purposes or the sale of any land then held by the City shall be subject to similar approval and in case same is not approved it may be similarly overruled. The foregoing provisions of this section shall not be deemed to apply to the paving, repaving, reconstruction, improvement, drainage or other work of or in or upon any street or other public way, or any public building or utility unless same involves a change in the then location or extent thereof."

This simply means that no land is to be acquired, nor any building, structure, or other public work undertaken, until the project proposed has been submitted to the City Planning Commission for a report as to whether or not it is in harmony with the Master Plan. Even though the Commission's disapproval can be overruled by the City Council, the fact that the Commission must review the project before authorization will be an effective deterrent to expediency and hastily considered public construction.

Enforcement, or securing adherence to the plan, should not prove difficult. As improvements are proposed by the different municipal officials or by other bodies such as the School Board, the plans would be brought in to the Commission for review and report. If the improvement conforms to the Plan it will be approved and work can commence immediately. If, however, the project does not conform to the proposals of the Plan, the Commission can determine whether it is more desirable than the proposals of the master plan, or what changes and variations should be made to bring the improvement into conformity with the plan so that it can be properly coordinated and become an integral part of the future city. The Commission should submit a brief report upon such variations and changes to the proposing agency. In the majority of instances, the agency that is responsible for the proposal will realize the value of such changes because of the advantages that will be obtained for the entire city, and will revise the project accordingly so that it can be started immediately. If, however, the proposing authority still feels that the project is necessary and better adapted to the future welfare of the city than the recommendations of the Commission, it can proceed with the project after approval by a two-thirds vote of Council. Experience has shown that only a few such conditions would be encountered.