

REGIONAL PLAN BULLETIN

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National Defense in the New York Region In Relation to City and Regional Planning

The Industrial Defense Effort . . . Civilian Protection . . . Defense and Planning
Boards . . . Regional Problems . . . Available Regional Data

The national defense effort reaches into every constructive activity which is carried on throughout the nation. A discussion of national defense in any complete fashion would constitute a review of all phases of our national life. In this discussion of defense and the New York Region the topic is limited to two general categories, the *industrial defense effort* to build the "arsenal of democracy" and planning for *civilian protection*. The principal purpose of this Bulletin is to point out effective contributions which local and regional planning can make to defense. As a basis for this it was found desirable to appraise the industrial defense spending in the Region, and to indicate the organizations which are currently working on problems of civilian protection.

I. THE INDUSTRIAL DEFENSE EFFORT

"Defense Money" Areas in the Region

As a first step in an appraisal of the effects of the industrial defense effort, the Association attempted to find out how much money is being spent in the towns, cities and counties of the Region. The fact is, however, that no definitive figures are as yet available to indicate where defense dollars are actually being spent. Contracts let to head offices of large firms result in apparently huge allocations to New York City. Much of this money may be spent in factories outside of the city and even outside the Region. The practice of subcontracting makes it impossible for any statistical agency in Washington or elsewhere to know how much of the money paid to an airplane company on Long Island, for example, will be spent locally and how much will be allocated to subcontractors in New England. Finally, to United States Government spending must be added British contracts and private financing of plant expansion with respect to which no detailed figures are yet available.

Figures which give at least an indication of the trends of defense spending have been collected, however, from published data of the Office of Government Reports, the National Defense Advisory Commission, and information supplied by the Bureau of Labor Statistics and the Office of the Defense Housing Coordinator. The map on page 3 indicates the estimated defense spending through January, 1941, in the cities and towns of the Region in which more than \$500,000 of contracts have been allocated. The table on page 2 indicates total defense contracts and defense dollars per capita in the counties of the Region as of the same date. It will be noted that in the graphic presentation New York City has been arbitrarily broken into three parts, consisting of Manhattan and The Bronx, Brooklyn and Queens, and the Borough of Richmond.

Effects of the Industrial Efforts on Localities

One of the immediate effects of stimulated industrial activity in any community is an increase of worker population, resulting (with the possible exception of most parts of New York City) in either a housing or a transportation problem, or both. The problems which new population brings to a community are discussed in some detail on page 5. While many defense employees in the Region will commute to their new jobs from their regular residences by established transit facilities, many will need new homes and many will commute by automobile on already congested highways. Estimates of additional employment in cities and towns of the Region which are being currently gathered by the New Jersey State Employment Service (Trenton, New Jersey), the Division of Placement and Unemployment Insurance, New York State Department of Labor (342 Madison Avenue, New York City), the Connecticut State Employment Service (305 Broad Street, Hartford), and the Bureau of Labor Sta-

tistics, Department of Labor (Washington, D. C.), warrant serious consideration by the planning boards of the communities involved. A recent survey undertaken by the Department of Housing, Works and Facilities of the New Jersey Defense Council indicated serious anticipated housing shortages in a number of northern New Jersey cities. The Division of Defense Housing Coordinator (1600 Eye Street, N. W., Washington, D. C.) is collecting similar data for the entire New York Region.

DEFENSE CONTRACTS* IN RELATION TO POPULATION IN THE COUNTIES OF THE REGION, AS OF JANUARY 31, 1941

County	Defense money, dollars	Population, 1940	Dollars per capita
NEW YORK STATE			
New York City (5 counties).....	\$474,356,260	7,454,995	\$63.6
†Dutchess.....	1,251,170	120,542	10.3
Nassau.....	113,912,617	406,748	280.6
†Orange.....	1,066,561	140,113	7.6
Putnam.....	(none reported)	16,555	0.0
Rockland.....	272,358	74,261	3.7
Suffolk.....	903,403	197,355	4.6
Westchester.....	5,360,257	573,558	9.4
Total, New York State.....	597,122,626	8,984,127	66.7
NEW JERSEY			
Bergen.....	117,458,577	409,646	287.0
Essex.....	18,691,784	837,340	22.4
Hudson.....	378,108,173	652,040	579.0
Middlesex.....	5,301,730	217,077	24.4
†Monmouth.....	4,741,521	161,238	29.4
Morris.....	8,147,000	125,732	64.7
Passaic.....	285,598,014	309,353	923.0
Somerset.....	70,843	74,390	0.9
Union.....	23,013,069	328,344	70.2
Total, New Jersey State.....	841,130,711	3,115,160	270.0
CONNECTICUT			
†Fairfield.....	232,791,573	418,384	557.0
Total, all Counties in Region.....	\$1,671,044,910	12,517,671	\$133.5

* Compiled from available official data which are subject to revision. Figures for New York City do not include \$251,583,994 of contracts in New York City where location of work had not been determined.

† Only parts of Dutchess, Orange, Monmouth and Fairfield counties are in the New York Region, whereas these figures are based on entire county areas. The only contracts outside of the Region in these counties, however, are in Shelton and Stratford in Fairfield County, in Poughkeepsie in Dutchess County and in Chester in Orange County.

Defense Spending and the New York Region

Looking at the Region as a whole, the figures indicate that over one and a half billion dollars out of the twelve and a half billions of dollars of defense contracts allocated through January, 1941, will be spent in northern New Jersey, southern New York and Fairfield County, Connecticut. For the country as a whole, it has been estimated that approximately 62 per cent of defense funds in the first six months of defense spending were allocated to the eastern seaboard (with major concentration from Boston to Newport News), 18 per cent to the west coast and 20 per cent to the rest of the

country. These figures may approach the high point of percentage of spending in the more vulnerable coastal areas. At the ground-breaking ceremony for a new bomber plant in Kansas City, held March 8, 1941, Chester C. Davis, member of the National Defense Advisory Commission, said:

"So you see there were many reasons why we sought to lay down the principle that, while there should be no sacrifice of speed, the new defense industries should be placed, where possible, outside the areas of industrial concentration. It was agreed that they would be placed where, so far as possible, they would tap into the great labor reserves of the West and South. It was agreed that this defense effort should not reinforce the industrial concentration which was, in part, the legacy of the Civil War and the First World War."

It seems probable that as a national program of plant location is developed, the seaboard regions may, except for ship construction, receive relatively fewer funds for new plants than the areas considered less open to attack.

II. CIVILIAN PROTECTION

As in the case of the industrial defense effort, civilian protection involves almost every activity of civil life. There is probably no organization in the Region that will not be called upon to play its part in its particular field. The civilian defense activities briefly outlined below are limited to those which have a direct bearing on planning for the development of the New York-New Jersey-Connecticut Metropolitan Region.

Defense Councils in the Region

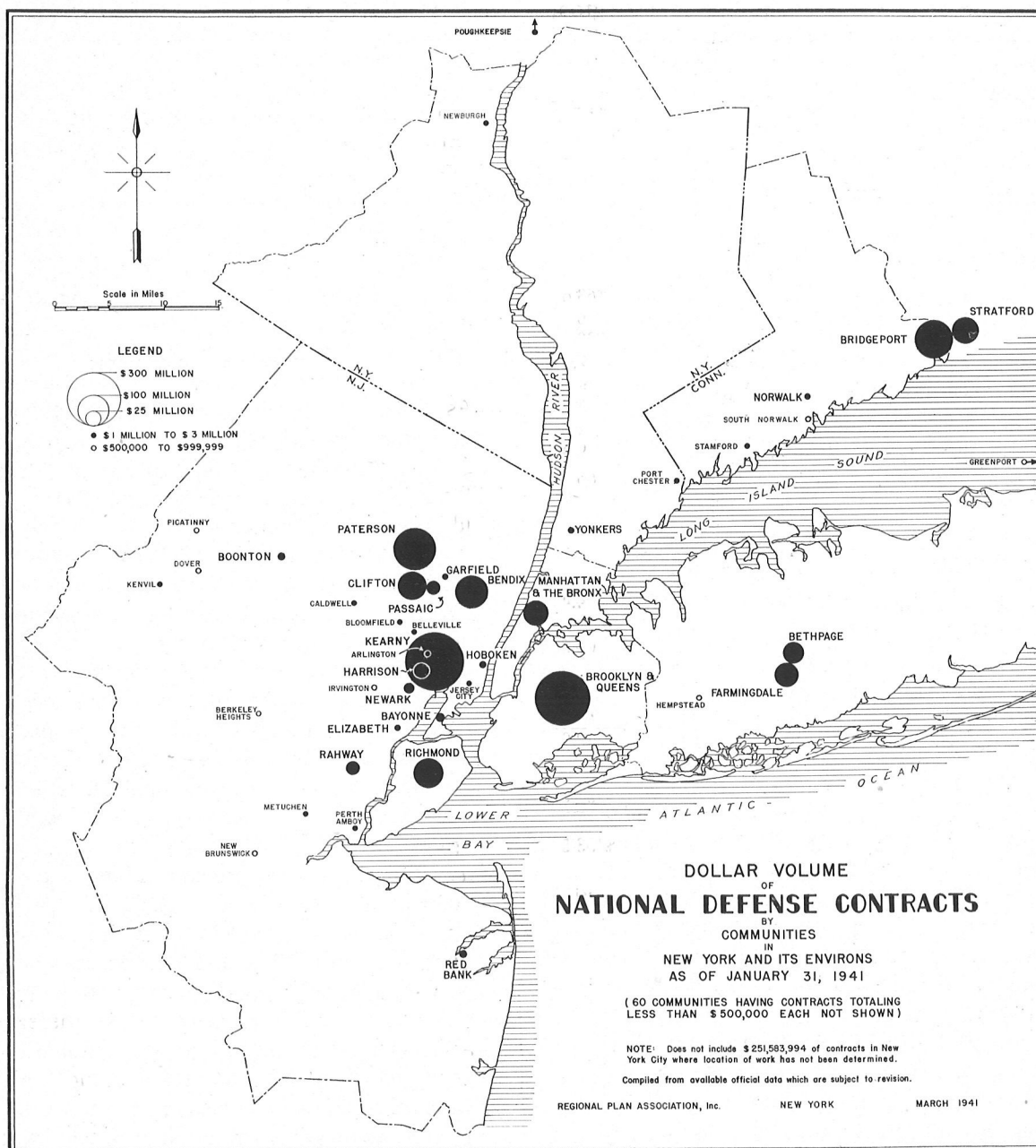
The defense councils include the two state defense councils of New York and New Jersey and the Connecticut Joint Executive Defense Committee. As of March 15, 1941, there were over 100 subsidiary county and municipal defense councils and committees. Names of members of these councils are listed in an Appendix on pages 11 and 12.

The New York State Defense Council was appointed by Governor Lehman on August 1, 1940. Subsequently, on February 20, 1941, the legislature enacted a Defense Council Act which in effect confirmed the executive action previously taken by the Governor. The act appropriated \$100,000 to pay the expenses of the Council. Activities initiated by the Council include: coordination of the various police units of the state to meet possible emergencies; survey of health resources, including hospital, medical and nursing services; organization of an emergency agricultural defense committee; enlistment of state vocational schools to provide trade extension courses for defense workers; surveys of idle plants and available labor, classified by skills (through the Division of State Planning of the Executive Department); organization of local defense councils.

The New Jersey State Defense Council was organ-

ized in September, 1939, by Governor Moore and its personnel has been continued by Governor Edison. Activities initiated by this council include: development of a "municipal plan of defense" under which local defense councils throughout the state have organized; development of a "community defense service council" program for the coordination of health and

the overall organization for civilian defense in Connecticut¹ and consists of three members of the Connecticut defense council (composed of private citizens), and three members of the Governor's defense cabinet (composed of officials). Activities initiated by this committee include: vocational training for defense workers; inventories of industrial sites and plant fa-



recreation activities; development of a "civilian defense area plan." Under this plan (prepared under the direction of Colonel Kimberling) the state has been divided into three areas, each with a regional coordinator for the organization of police, fire and ambulance facilities.

The Connecticut State Joint Executive Committee is

cilities for defense manufacturers and transportation facilities; housing of defense workers and establishment of vacant homes registries in the larger cities, such as Bridgeport, in cooperation with the federal Coordinator of Defense Housing; organization of a com-

¹ A bill for a state-wide defense system in Connecticut headed by a full-time director is in preparation.

Planning Boards and Civilian Protection

While many defense agencies are being formed to give consideration to civilian protection, the local planning board is in a position to make as effective a contribution to this phase of the defense effort as to the industrial defense program. Several county and municipal planning boards in the Region expect to cooperate with defense agencies, both civil and military. Some are to be commended for anticipating this cooperation by getting information in shape and making studies that will be needed in a planned program for civilian protection.

The supplying of information is one of the primary ways planning boards can be of immediate help. In their normal process of making an inventory of their jurisdictional areas as a basis for making a master plan for future development, the planning boards have assembled and analyzed a mass of factual data. This information, where it has been properly organized and graphically presented, is in a readily usable form, a fact that is peculiarly significant in view of the time element in a defense program.

Perhaps the most useful type of information is that in relation to highways: their location; pavement types; pavement widths; status of repair; shoulder widths; bridge capacities; clearance of overhead crossings; traffic flow; and storage of gasoline along their alignments. Highway studies should show alternative routes for normal traffic if an emergency should require military use of the major routes to the exclusion of civil traffic, routes and procedures to be followed in case of evacuation from populous areas and temporary rerouting in case of emergency repairs.

An illustration of the way in which such information and plans might be used is afforded by the powder plant explosion near Dover, New Jersey, in the latter part of 1940. The highway plan for Morris County proved of assistance in keeping open for quick police, fire and other emergency transportation certain roads that led directly to the scene of the disaster, closing roads that might cause interference, discomfort and delay, and in effectively handling the unusual traffic demands. In cooperation with the Morris County Planning Board and with the aid of a relief map of the county, reproduced from a section of the Regional Plan Association's relief model of the Graphic Regional Plan, local officials have prepared programs for dealing with traffic in case of another similar emergency or even the lesser problem presented by peace time maneuvers of motorized troops, which may utilize as much as seventy road miles necessarily causing serious disruption to normal road traffic.

In Bergen County, a map of existing highway and street conditions prepared by the County Planning

Board should prove of exceptional value in planning for an emergency.

The Orange County Planning Board is cooperating with the County Defense Council, the Board of Supervisors and certain civic groups in a survey of the highways of the county. The important phases of this will be the selection of parallel secondary routes to serve civilian traffic in case military operations require exclusive use of main highways, and the organization of a system of traffic control points.

Other types of studies related to defense include population, land uses, water supply, sewerage, public property, schools and vacant shelter.

Long Range Plan

The occurrence of a second World War so soon after the first and the increasing importance of attack and defense from the air have brought many people to think in terms of organizing the permanent industrial and residential developments occasioned by the defense program in a manner that would incorporate principles of defense. Modern defense principles tend to reinforce in many ways the conclusions that urban planners long ago reached in theory but have not been able as yet to realize on a broad scale. This support which defense technique brings to planning theory consists principally of the fact that the spacious type of dwelling layout coincides with the principles of community building for safety against air raids. An unexpected support for the requirement of larger lots, through zoning, may thus be in the process of evolution.

The "Journal" of the Town Planning Institute of England (November-December 1940) lists the following points as agreed upon by the Air Raids Precautions Department of the Home Office and the Town Planning Division of the Ministry of Health:¹

"1. Segregation of industrial and residential zones by belts of open land.

"2. Grouped communities, kept relatively small, should be planned on an open pattern, interspersed by small parks, playing fields, parkways and, where necessary, allotments.

"3. As regards road communications, through routes should be provided clear of building development, but all centers of population should keep commodious ways open, giving easy access to the outside and connecting with these through routes.

"4. The space about buildings must be increased and site coverage kept down to specified maxima, varying according to the use to which the buildings would be put. The minimum distance between residential buildings, or blocks of buildings, should not be less than 30 feet, kept free of all obstructions such as off-shoots or sheds, and with regard to industrial buildings, the minimum distance should be 40 feet.

"5. Concentration of family units in blocks of flats should be discouraged, but if unavoidable, then such flats should be surrounded by wide open spaces and a strict limit to their height imposed to avoid blocking roads or footpaths by debris resulting from possible collapse.

¹ Quoted from "American City," March 1941, page 58.

"6. Deep building lines should, wherever possible, be prescribed for the same reasons.

"7. The value of the preservation of trees and the planting of groups of trees as a screen from observation from the air should not be overlooked."

The last point of the list above comes under the heading of camouflage. Such protection of industrial plants could properly be a subject of research and experimentation by planning boards in collaboration with professional groups related to the fine arts, particularly the landscape architects.

IV. DEFENSE AND REGIONAL PLANNING

Industrial Expansion Creates Regional Problems

The area included in the New York Region is composed of parts of three states and extends over twenty-two counties; in addition to New York City, it includes five other cities of more than 100,000 population. The increased tempo of industry in this area is producing, and will continue to produce, problems which are regional in scope. The multiplicity of municipal, county and state governments, local planning boards and defense councils indicates the need for a unified regional approach to certain problems which, although they present local manifestations, are region-wide in scope.

The transportation problem, for example, requires and to some extent is receiving attention on a regional basis. The Association of American Railroads in conjunction with Ralph Budd, Commissioner of Transportation, National Defense Advisory Commission, is keeping in close touch with rail operations to and from the Port of New York; the U. S. Maritime Commission has created a Division of Emergency Shipping to handle all emergency shipping problems.

Highway construction and control of over-the-road trucking and base operations to and from the Port of New York should be planned with regard to regional and national needs. The Port of New York Authority has estimated, for example, that, excluding trucks registered in the states of New York and New Jersey, there are in the neighborhood of 1,500 trucks a day from other states using the five major highways in New Jersey approaching the center of the port district. In addition, there are a number of New England trucks entering the port area from the northeast. Over-the-road movement is thus already of major importance, and it may be assumed that as the defense program develops the railroads will be so busy that an increasingly large percentage of both military and civilian commerce will be diverted to the highways. Unless sound plans are made for regulating and controlling this over-the-road traffic, there is likely to be more congestion around the piers and wharves from combined traffic from roads and rails than there was in the last war from the rails.

Allocation of port terminal facilities needed by government agencies and private industry presents problems which should be decided with regard to service requirements, rather than as a matter of competition between localities or agencies. Similarly, industrial site location for new defense plants should be made on a basis of relationship to regional transportation facilities, labor supply and other site advantages related to the functioning of the Region as an industrial area. Housing, which first appears as a local problem, will in some cases become closely associated with regional transportation facilities as laborers become commuters.

As the industrial defense effort intensifies, decisions as to water supply, electric power supply and waste disposal will of necessity have to be made on the basis of coordinated local plans to permit defense industry in the Region to function as an efficient unit.

Finally, there will be a need for planning on a region-wide basis of post emergency civil works to cushion the change from a war to a peace economy. The war effort will of necessity slow up the long range peace-time development of the Region. The Association intends to continue to present an orderly program for regional development based upon the "Regional Plan of New York and Its Environs," as revised, looking ahead to the time when spending for defense gives way to spending for civil works and private investment.

Regional Problems of Civilian Protection

Most problems of civilian protection in the first instance require local solution by municipal officials. Police, fire, medical, public utility and transportation services, bomb shelters, maintenance of vital services and repair of damages are—as indicated by reports from England on the "Fourth Defense Service"—usually handled by each municipality, with financial aid from the central government. In some instances, such as provision of gas masks, ambulances, sand bags, and fire fighting apparatus, the central government supplies equipment directly to municipalities. Inter-city and interstate cooperation for mutual assistance will become necessary, however, depending upon the extent of destruction of enemy attack or successful sabotage. Planning for regional coordination of municipal defense activities is clearly needed.

Many elements of the Region's physical plant should be coordinated for defense purposes. The planning of alternative through highways, of emergency rail, electric power, water supply and telephone connections requires a regional approach. British experience indicates that the most vulnerable points of factories are their water supply, sewage and electric supply facilities. Problems of more than local significance include, for example, the advisability of a freight tunnel connecting Jersey City and Brooklyn, of power connections

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A Master Plan for Fort Lee A Sample Procedure for Rehabilitation of a Community

The attention of officials, planners and land developers in the New York Region has been drawn to the Borough of Fort Lee, New Jersey. Although strategically situated at a main entrance to New York City (see map on following page), this community was recently plunged into financial difficulties. It now has the distinction of being the only municipality in the country operating under a rehabilitation act whereby a portion of its indebtedness and the disposition of its tax and assessment defaulted lands have been placed for fifteen years in the hands of three business men appointed by and responsible to the Federal Court.

These men, designated the Board of Liquidation for the Borough of Fort Lee, became convinced that the lack of scientific planning and the fact that its zoning ordinance was based on inflated ideas of future growth were at the heart of the Borough's difficulties. They therefore asked the Regional Plan Association to undertake the planning and rezoning of the Borough. In view of the challenge which the conditions presented, the Association undertook the task as a special and unusual assignment on a cost basis similar to that under which it has been supplying advisory technical services to the planning commissions of Bergen, Westchester, Rockland and Morris counties.

Believing that it will be of general interest to our members and subscribers, this number of the Regional Plan Bulletin is devoted to a description of the Master Plan of Fort Lee developed in the detail felt essential for a revision of its zoning regulations. It is illustrated with maps showing both plan and survey data. A new zoning ordinance and map, also prepared by the Association, is now under consideration by the Borough authorities.

The task of replanning Fort Lee involved a thorough examination of its two and a half square miles of rugged terrain, including its residential and business areas, its streets, utilities, schools, playgrounds and parks. As a basic element in replanning the Borough, an estimate of its future population was necessary. Having analyzed the Borough as it stands today and gauged its possibilities for future growth, the next step was to replan the area so as to develop its potentialities and release it from the shackles of unwise zoning.

Among the outstanding proposals is a new boulevard overlooking the Hudson River, running along the cliff on the east side of the Borough. An abandoned trolley right-of-way, hitherto regarded as a community liability, is capitalized to make a ribbon park and pedestrian way running through the center of the Borough. Another section of trolley right-of-way, also abandoned, would be used for a new major highway, bypassing a residential neighborhood. The proposals include a 57-acre park in the westerly part of the Borough and a junior high school site in the south central part. Other features of the Master Plan are described in detail in this report.

It is hoped that this report may provide a standard for the application of planning and zoning techniques to a specific problem. The proposals look to the development of Fort Lee not only as a well-planned community within itself, but as a part of the larger plan for the Region of New York and Its Environs. Through the example of Fort Lee, other communities in the Region may be stimulated to liquidate their legacies of unwise development, review their assets and replan effectively for the future.

INTRODUCTION

The Borough of Fort Lee in Bergen County, New Jersey, is unique among the suburbs of the metropolis in that, although only a few minutes from Manhattan, it has received a disproportionate share of the commuting population. From the top of the Palisades, it looks down on the east upon Upper Manhattan Island and on the west it looks across the valley of Overpeck

of the Palisades, past which Hudson Terrace leads down to the Borough of Edgewater. South of this point the Palisades continue, set back further from the river.

As a consequence of the real estate boom in anticipation of the opening of the George Washington Bridge, Fort Lee was rezoned in 1930 on the assumption that it would be rapidly converted from a community of one-family homes to one made up almost entirely of apartments and with extensive business

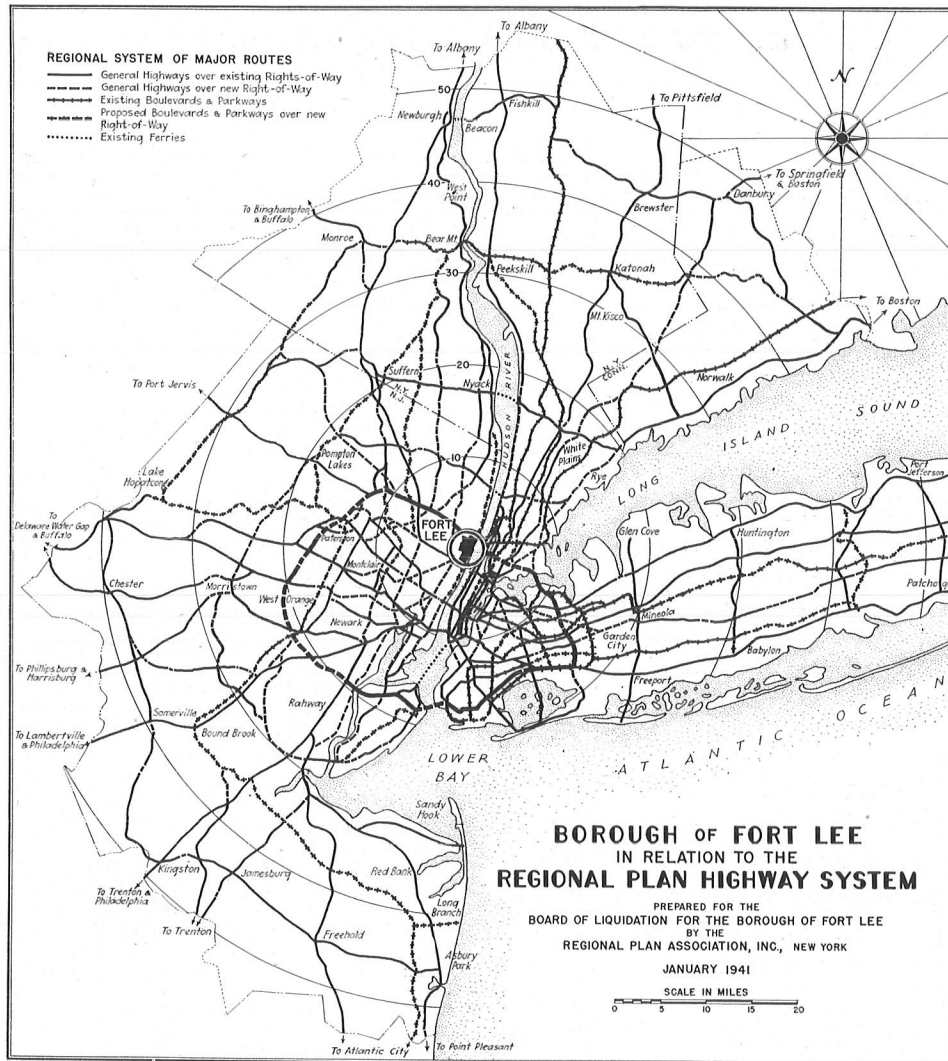


FIGURE 1

Creek, a main tributary of the Hackensack River. A landmark in the campaign of George Washington's Army following the Battle of Long Island, parts of it still appear much as they did in those days, largely because of their relative inaccessibility until the opening of the George Washington Bridge in 1931.

With no railroad crossing its boundaries, it is essentially a residential community. Its area is small, only about two and a half square miles, and is largely undeveloped. It includes the lower end of the main part

areas. Lots were laid out by the hundreds and improvements installed. Then came the depression, which greatly emphasized the deflation that probably would have followed in any event. Practically none of the expected building took place, many property owners defaulted on their taxes and large areas came back into the hands of the municipality. The Board of Liquidation for the Borough of Fort Lee,¹ composed of Judge

¹ Appointed under Section 77 of the Federal Municipal Bankruptcy Act, supplemented by Chapter 56, New Jersey Laws of 1939.

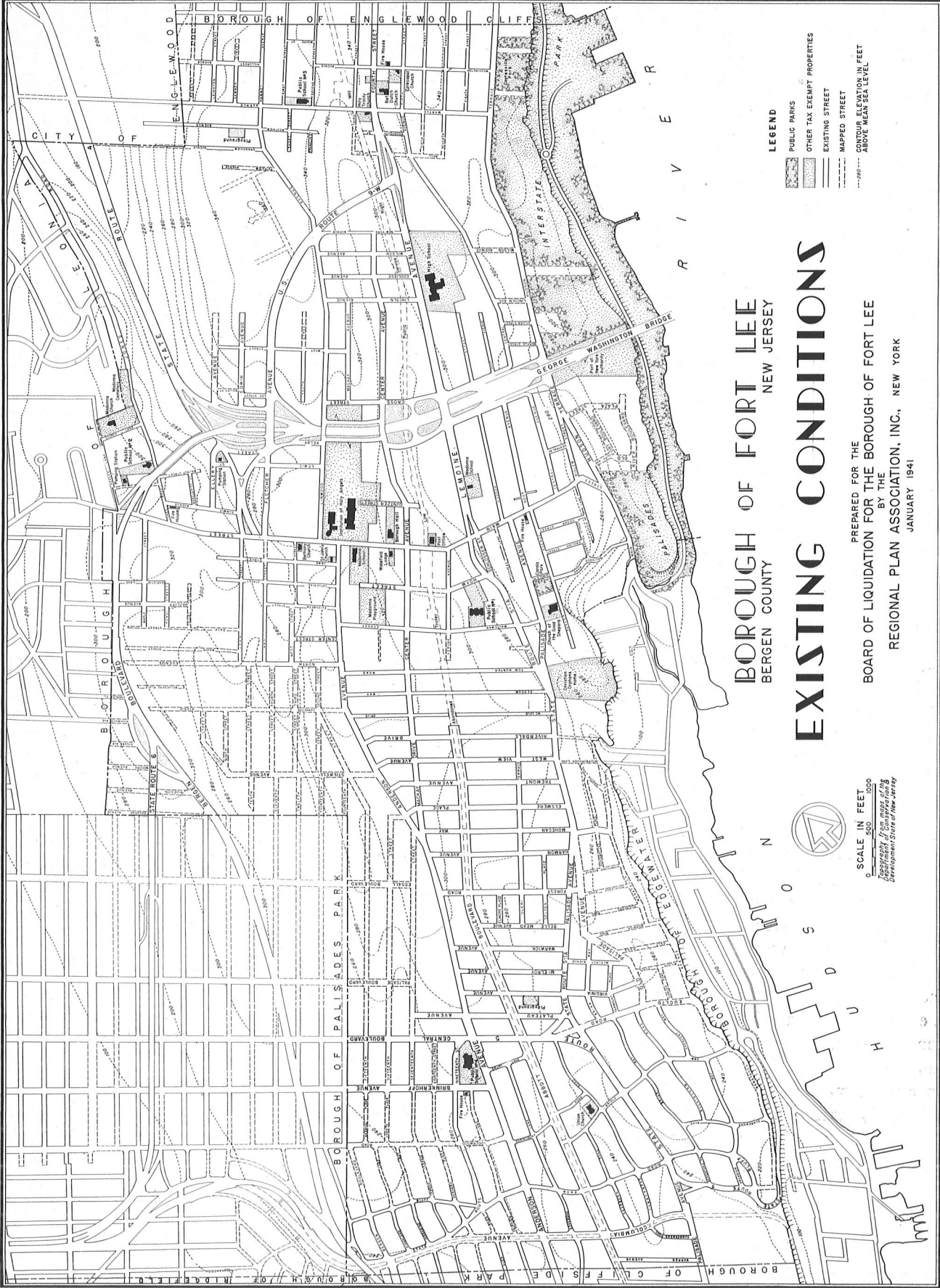


FIGURE 2

William M. Seufert, Chairman, Josiah M. Hewitt and Lawrence A. Cavinato, wisely concluded that it was imperative to bring the zoning up to date and in line with a reasonable estimate of future growth and to base the rezoning on a Master Plan for the borough.

As a basis for the plan, it was necessary to make a comprehensive survey of existing conditions, briefly described herein, and to prepare base maps adequate for showing both these facts and the proposals. The parts of a Master Plan that were essential for the purpose of rezoning included highways, parks and playgrounds, and school sites. Proposals for these have been shown on a single map (Figure 6) which has been adopted by the Board of Liquidation as a basis for its policy in disposing of the lands under their control and in dealing with public officials. The description of these proposals forms the main part of this Bulletin. In addition, some comments are made on the transportation problems facing the borough.

EXISTING CONDITIONS

Topography has played an important part in the existing layout of the borough. The steep slopes, stone outcroppings and wooded areas have a direct bearing on the type of development that is appropriate in different sections of the borough. It was found necessary to prepare a new street map differentiating between streets actually on the ground and those mapped streets which have been laid out only on subdivision plats, but along which many lots have been sold. Topographic contours, at 20-foot intervals, were added from the atlas maps of the New Jersey Department of Conservation and Development.

To complete a map of existing conditions (Figure 2), there were then shown, in a distinctive pattern, all existing public park areas; and, as stippled areas, all other tax exempt properties, which include public playgrounds, sites of public schools, the Municipal Building, fire houses, private schools, churches, and miscellaneous institutions. Each is named on the map and where buildings are involved, the building is also indicated. The malls and other landscaped areas included in the state highway system, particularly as a part of the network of approach highways to the George Washington Bridge, are, of course, also tax exempt and are included in the stippled areas.

An outline map at a scale of 600 feet to the inch showing only state highways was also prepared for the presentation of some of the factual data.

Present Land Uses

A field survey was made to determine how the land and buildings are used at present. These were classified as single-family, two-family and multi-family residences and also as to the type of business and industry.

The results of this field survey are shown graphically in the four maps in Figure 3 (facing this page). One of these shows single-family occupancy; one shows, together, two-family and multi-family use; one non-residential use classified as business and industry; and one vacant land classified as that still in acreage and that laid out in building lots.

It was found that Fort Lee's 2.5 square miles of land area may be broken down as follows:

Streets, existing or mapped.....	24.8 per cent
Public parks and playgrounds, mostly within the lands of the Palisades Interstate Park Commission.....	7.2 " "
Balance of buildable areas, developed and undeveloped.....	68.0 " "
Total.....	100 " "

It is clearly shown on these four maps that Fort Lee is actually made up of three separate communities (old Palisades, Fort Lee and Coytesville) with extensive gaps of open areas lying between them. The extent of the vacant properties and the degree to which the borough is still a community of one-family homes is revealed in a striking way. An analysis of the uses of developed private properties, by number of parcels, is as follows:

Present use	Number of Parcels	Per cent of total number
One-family dwellings	1,437	75.2
Two-family dwellings.....	198	10.4
Dwellings for more than two families..	62	3.2
Business uses.....	184	9.6
Industrial uses.....	31	1.6
Total developed private parcels.....	1,912	100.0

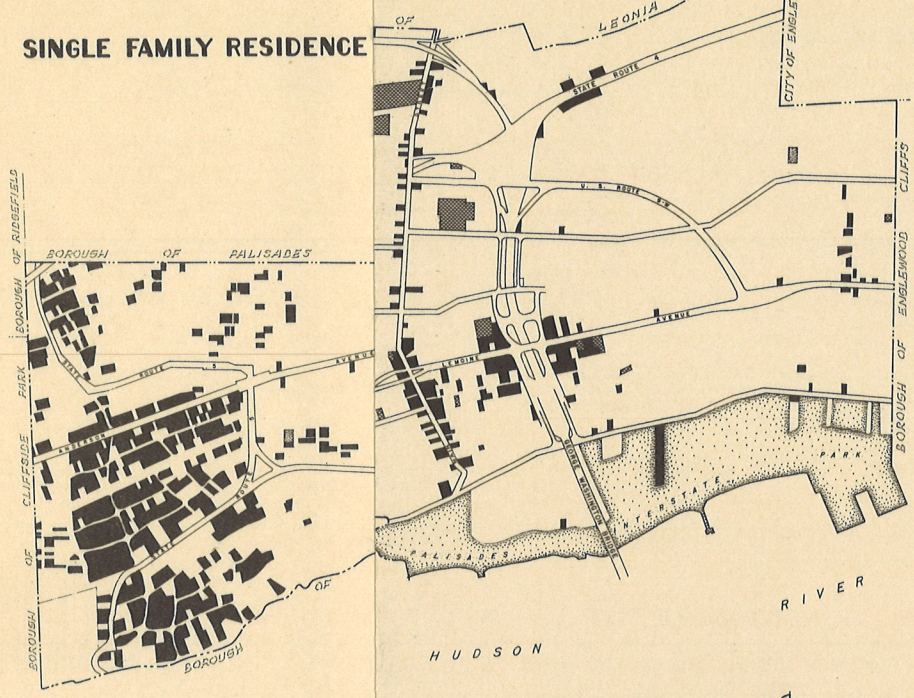
Available Public Utilities

The immediate availability for building development of the extensive vacant areas in the borough is determined largely by the extent to which they are now served by sewers and water mains. Data on this were, therefore, collected and are presented in map form in Figure 4. The areas left blank are supplied with both these facilities. Those shown with a double hatching have neither sewers nor water mains, while those with a single hatching have one, but not the other. The facility with which they are supplied, is indicated by the direction of the hatching, as given in the legend.

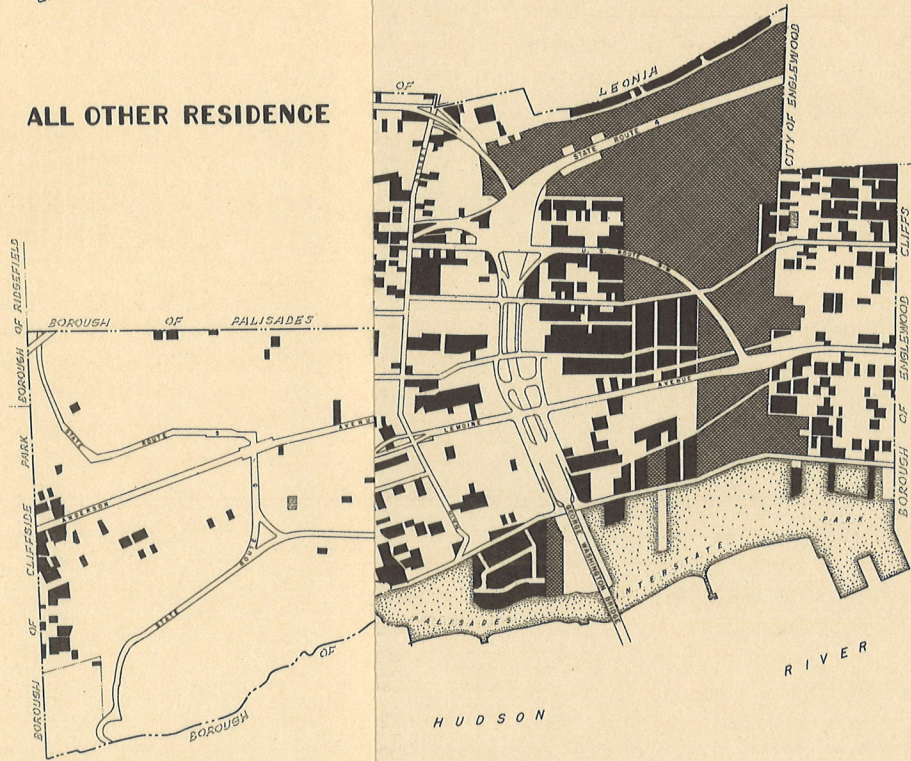
It will be seen that there are extensive areas along the western edge of the borough and small areas on the eastern edge in back of the Palisades, which will require the installation of such facilities before they can be developed. By comparing this map with that of vacant areas available for building in Figure 3, it appears that there are substantial areas in the southern half of the borough, in which these utilities have already been provided. In addition, they are fully equipped with pavements, curbs and sidewalks.

Fort Lee is supplied with water through the Hackensack Water Company and has no local problems in

SINGLE FAMILY RESIDENCE



ALL OTHER RESIDENCE



PREPARED FOR THE
BOARD OF LIQUIDATION FOR
THE BOROUGH OF FORT LEE
BY THE
REGIONAL PLAN ASSOCIATION, INC
NEW YORK

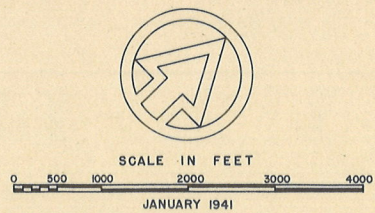


FIGURE 3

SINGLE FAMILY RESIDENCE

ALL OTHER RESIDENCE

INDEXING PLAN
FOR THE BOROUGH OF FORT LEE
BERGEN COUNTY
NEW JERSEY

PREPARED FOR THE
BOARD OF LIQUIDATION FOR
THE BOROUGH OF FORT LEE
BY THE
REGIONAL PLAN ASSOCIATION, INC.
NEW YORK

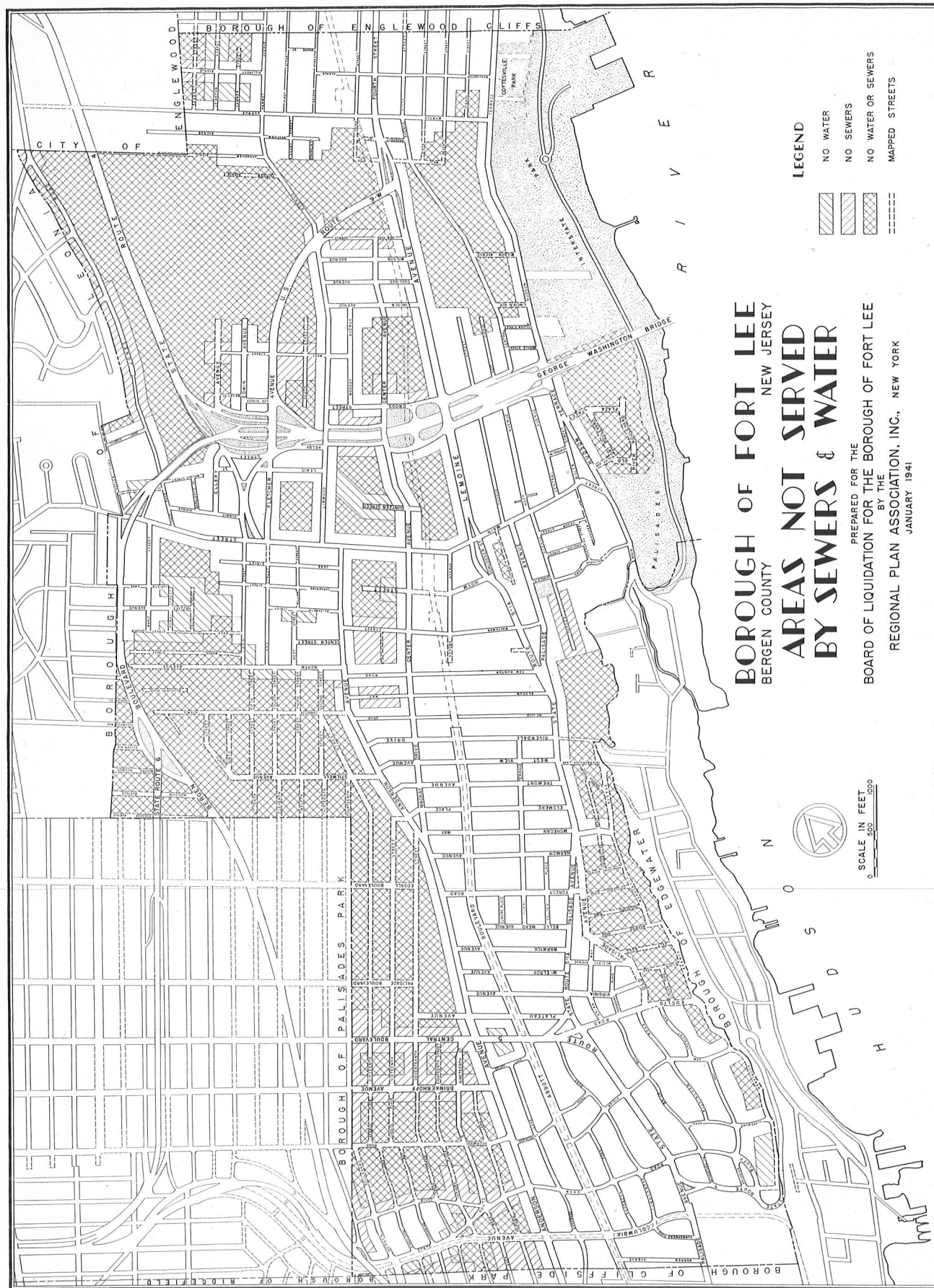


FIGURE 4

connection with additional supplies. It has, however, a real problem in connection with the disposal of its sewage, which must be faced and solved in the near future. The borough drains toward the Hudson River, with the exception of a small area on the west side from which the sewage is now pumped into the main sewers in the other parts of the borough. All its sewage, therefore, is now discharged into the Hudson River via trunk sewers passing through the Borough of Edgewater and is not subjected to any method of treatment.

Standards established by the Interstate Sanitation Commission in cooperation with the State of New Jersey, will not permit this continued discharge of raw sewage into the waters of the harbor. With its small land area and in view of the fact that its sewage is carried across adjoining municipalities to reach a point of discharge, the best solution for the Borough of Fort Lee will be to cooperate with one or more of its neighboring municipalities in a joint treatment of sewage in order to meet the established standards of purity for the waterways into which the borough drains.

POPULATION TRENDS

For the last three decades the population growth of Fort Lee has varied greatly, as is shown by the figures in Table I.

TABLE I.—POPULATION GROWTH IN FORT LEE COMPARED WITH THAT IN BERGEN COUNTY

Year	Fort Lee population			Bergen County percentage increase
	Persons	Increase in preceding decade		
		Number	per cent	
1900	2,612			
1910	4,472	1,860	71.2	75.9
1920	5,761	1,289	28.8	52.7
1930	8,759	2,998	52.0	73.2
1940	9,450*	691	7.3	11.7

* Preliminary census figure.

Throughout this period the growth of Fort Lee has lagged behind that of Bergen County as a whole in spite of its nearness to Manhattan and the extent of its undeveloped areas. The high value at which land has been held undoubtedly was a factor in this situation.

As a part of the survey of land uses already referred to, a count was made of the number of families housed in Fort Lee today. On the basis of 1940 Census figures, this indicated an average of 3.6 persons per family unit. On the basis of this ratio, a graphic picture of the present population distribution in the borough was made, using a dot for each family. The results of this are shown in Figure 5. This again brings out the fact that Fort Lee is still three rather separate communities, as was pointed out in the analysis of the maps in Figure 3.

The population is fairly evenly distributed on the developed areas grouped around Main Street and the

George Washington Bridge approach. The southerly part of the borough, which has the biggest concentration of one-family homes, shows a more scattered distribution of families, except for the concentration at the extreme southern boundary along the abandoned trolley right-of-way, which led to the ferry between Edgewater and 125th Street, Manhattan.

It is difficult to estimate the future population of Fort Lee, but it appears from a study of past trends that this will be controlled far more by the initiative of the Board of Liquidation and the Borough Council in promoting a better planned community and in solving its present financial problems than from any general trend of growth over larger areas. In Bergen County as a whole, and in the entire Region, the total increase in population will probably be much less during the next few decades than it was in the first thirty years of the present century.

In any event no such population can be expected as was apparently contemplated by the zoning ordinance adopted in 1930. Assuming that the area which this placed in a multi-family zone were developed only with an average density such as is contemplated in the garden apartment proposed in the northerly part of the borough and known as the "Washington Village" project, and that the single-family and business zones were built up with types of developments now found in those zones, a total of about 60,000 persons could be accommodated in the borough. If larger apartments were built, as were permitted under the 1930 ordinance, several times this population could be accommodated.

Certainly zoning must be brought more nearly in line with what is likely to happen. It would seem practical for Fort Lee to assume that its population might double its present figure, or reach approximately 20,000, provided it can be made attractive to home owners and developers. This would seem a reasonable figure to keep in mind in considering both the planning and rezoning of the borough.

HIGHWAY SYSTEM

The pattern of highways proposed to provide for through traffic is given in Figure 6. Three types of such routes are shown: major highways, to take most of the traffic passing through, or having origin or destination outside of, the borough; secondary highways, to facilitate travel between different sections of the borough; and important local streets that are significant in organizing local traffic within or surrounding the neighborhoods.

Major Routes

Only one new alignment is suggested for a major highway; it extends east and west and is located near the southern boundary of the borough. In place of the

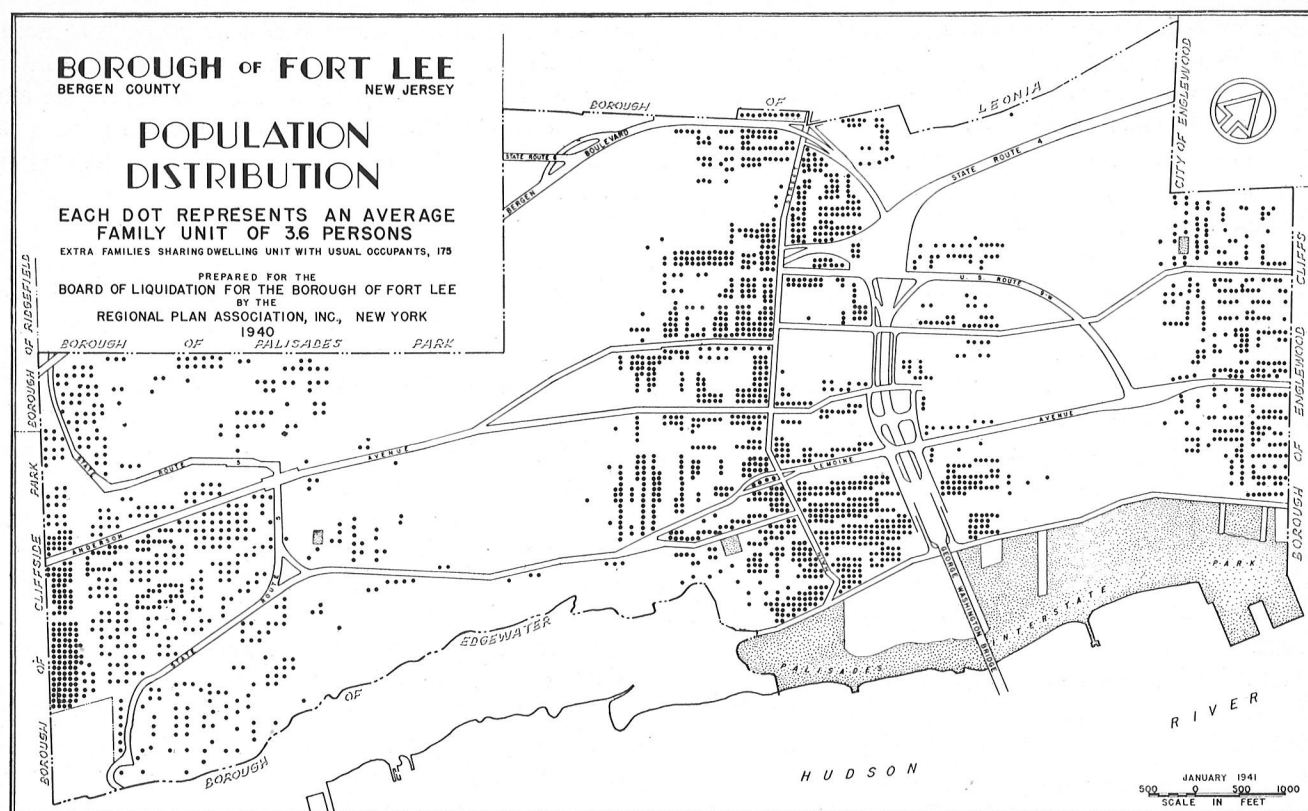


FIGURE 5

present approach to the ferry at Edgewater, which winds around on State Highway No. 5 along 19th Street, Central Boulevard and Palisade Avenue, it is proposed to utilize the right-of-way of the discontinued trolley line which extends entirely across the borough. It is possible to keep some of the right-of-way as a central dividing strip. The grade on the proposed alignment is not difficult and the new routing will permit organization of the residential areas into neighborhood units, around which the principal traffic to the ferry is bypassed. This alignment will improve considerably the usefulness of the school site at the intersection of Anderson Avenue and Central Boulevard.

The other major east-west highway is the approach to the George Washington Bridge to the point where it forks into State Highways No. 4 and No. 6.

Of the two major north-south routes, one consists of Palisade and Lemoine avenues and Fourth Street, supplemented by a diagonal connection between Fletcher Avenue and Lemoine Avenue, forming part of U.S. Route 9-W. The other consists of parts of State Highways No. 4 and No. 6 along the westerly boundary of Fort Lee and joining in the overpass at Fletcher Avenue.

Secondary Routes

North-South Routes.—The most striking new proposal for the highway system is a secondary boulevard along the edge of the cliff for over half the length of the

borough. Beginning at State Highway No. 5 at its intersection with Bluff Road and utilizing Brook Lane, the boulevard would follow along the top of the cliff as far as the northerly boundary of the Borough of Edgewater, using for part of the way a mapped street of varying width called Manatauck Avenue. Most of this street would require widening so that a promenade could be constructed on its easterly, outside edge. The area at the top of the cliff east of the proposed highway should be a public park and steps should be taken to induce the Borough of Edgewater to set aside the adjoining face and talus of the cliff as a public park. North of the Borough of Edgewater the route would connect with Kapfer Lane which would have to be widened; thence it follows along Bigler Street to and along Hudson Terrace.

Another secondary highway is proposed on the west side of the borough; beginning at Columbia Avenue at the Cliffside Park boundary, it continues for about a block along Bergen Boulevard, cutting over to approximately Keswick Place and 15th Street; thence it winds along the valley, passing through West Street, and finally connects with a spur of the George Washington Bridge approach which has been constructed southerly as far as Main Street. There is a natural site for an underpass beneath Main Street. The existing spur connects with State Highway No. 4 and with Fletcher Avenue, which is a part of U.S. Route 9-W, north of the

bridge approach. Such a route, with a connection to Anderson Avenue, would afford access to the southerly part of the borough from State Highway No. 4, taking traffic from Anderson Avenue north of Mohegan Way. It would also constitute an effective bypass of the Main Street business area and the bridge plaza with their traffic and parking problems.

Another north-south secondary route is Jones Road, extending from Main Street northerly to the City of Englewood. While topographically and geographically it is somewhat removed from the center of Fort Lee, it serves a section of the borough cut off from the rest by State Highways No. 4 and No. 6, and is important to adjoining municipalities. At least the southerly portion of the right-of-way of Jones Road will require widening.

Mackay Drive and Center Avenue as far as the bridge approach will continue to be of secondary importance as a feeder to the bridge from Anderson Avenue.

Henry Hudson Drive at the foot of the cliff in the Palisades Interstate Park is shown as a secondary route. Its dominant function will continue as a scenic drive rather than a general traffic route.

East-West Routes.—The other secondary routes are east-west connections across the borough. The most southerly one is Central Boulevard, with an extension along Euclid Road to the proposed riverside drive. While the location of Central Boulevard is unfortunate to some extent in the way it cuts across the contour of the land, it is nevertheless well established and is freed from the worst cross traffic by a grade separation at State Highway No. 6 in the Borough of Palisades Park.

The next cross-borough route follows for the most part Mohegan Way. Beyond Anderson Avenue it continues westerly to join the proposed north-south secondary route in the westerly part of the borough. At its easterly end it would connect with the proposed riverside drive along the cliff tops.

Main Street will serve both as a business street and as a cross-borough secondary traffic route. To perform this dual function, the pavement will have to be widened throughout. Where business is located future buildings will have to be set back sufficiently to permit a widening of the pavement for the free movement of traffic and such curb parking as may be needed to supplement the off-street parking facilities that will be required under the proposed new zoning ordinance.

North of the bridge approach cross-borough movement is discouraged by topography. Myrtle Avenue, which extends from Hudson Terrace to the Englewood line and beyond, goes up and down steep hills at right angles to the contours, so that even if it were widened it would be unsatisfactory as a secondary route. As a partial secondary cross-borough connection, it is pro-

posed to extend U.S. Route 9-W easterly from Lemoine Avenue to Hudson Terrace. Westerly from the intersection of U.S. Route 9-W with Linwood Avenue any cross-borough traffic would utilize the local streets described below, which have been laid out to fit the unusual topography.

Local Streets

Linwood Avenue, Grandview Avenue and three proposed streets are listed as important local streets on the Master Plan. Linwood Avenue is the principal approach from much of the north central portion of the borough to Main Street and its business areas. At its intersection with U.S. Route 9-W a short connection is proposed to cut off the acute angle made by the present alignments; this will facilitate the use of Linwood Avenue above U.S. Route 9-W as a cross-borough connection. Between U.S. Route 9-W and Grandview Avenue, Linwood Avenue thus performs a dual role.

A proposed extension of Grandview Avenue continues its cross-borough function by extending it diagonally down the hill and paralleling State Highway No. 4 to Ellery Avenue. This will open up the western slope of the hill to development.

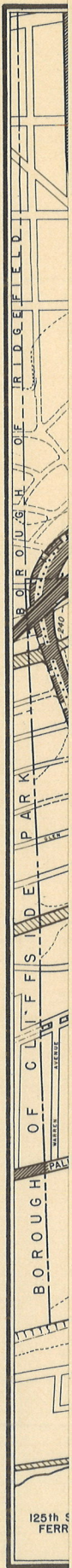
Another local street is proposed to connect Fletcher Avenue (a part of U.S. Route 9-W) with Edwin Avenue; it then turns slantingly down the hill into the City of Englewood where it eventually should connect with State Highway No. 4. Its alignment for the most part coincides with a proposed street in the projected "Washington Village" improvement.

Another proposed important local street consists of a realignment of Old Palisade Avenue to serve as a base for reorganizing mapped streets in that area and as a new district boundary on the building zone map.

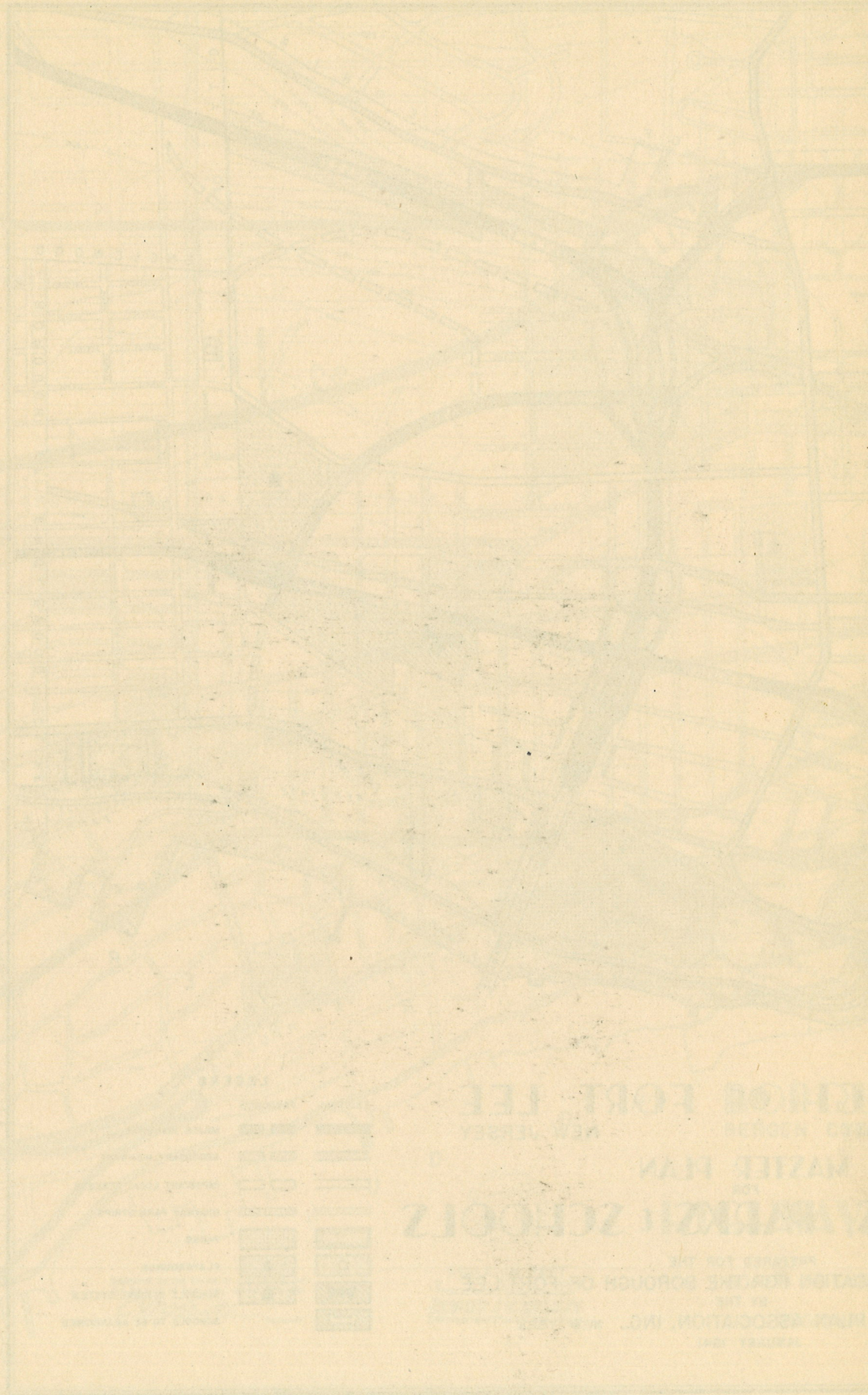
Areas Needing Replating.—Further study is recommended of several sections of the borough with a view to revising local streets so that they will be better adapted to modern development. In many of the sections still undeveloped by buildings, the street pattern has been fixed beyond recall by expensive pavement, sewer lines and water lines. Even in areas where these facilities have not been provided, the sale of lots on mapped streets makes it difficult to replat. The fact that some of these properties have been foreclosed or are distressed properties makes it worth while to study the possibilities.

Three principal sections in which streets have been mapped appear worthy of study from this point of view. One is the southwesterly part of the borough between Anderson Avenue and the Borough of Palisades Park. In this case a gridiron pattern is superimposed over an irregular topography.

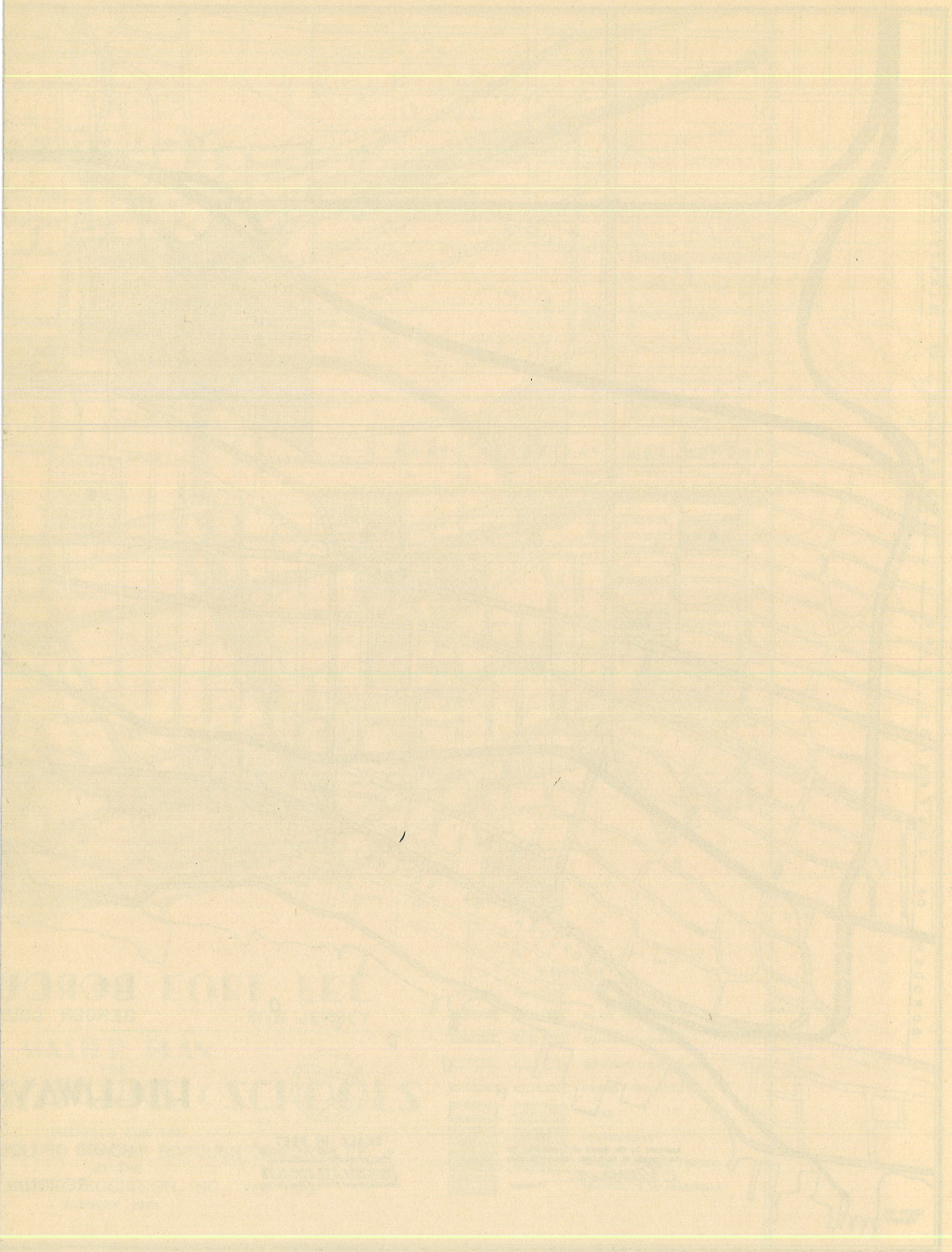
To the east of this and bordering on the cliff is an area between Euclid Road and Mohegan Way which



125th ST
FERR



CLIFFSIDE PARK
BOROUGH OF IRIDSEFIELD
125th ST
FERR



has an irregular pattern on a comparatively level site with wastefully small blocks.

In the west central part of the borough, south of Main Street and west of Anderson Avenue, a rearrangement of streets should be made to relate to the physical character of the land and to proposed parks and highways.

Land that is still in acreage, principally the properties of the Allison Estate, should be mapped with streets appropriate to modern development.

PARKS AND PLAYGROUNDS

Three outstanding park proposals are included on the Master Plan. One is a virtual continuation of the Palisades Interstate Park on top of the cliff, which now terminates at the Borough of Edgewater. It is planned in connection with the riverside drive described above; this will cling to the cliff top through much of its length, but at some points will be back as much as 300 feet. It is proposed to develop the land between the roadway and the cliff as a park and to negotiate with the Borough of Edgewater with a view to having the face of the cliff also developed as a public park. At the point where Euclid Road meets the riverside drive, a neighborhood park of approximately 5.5 acres is proposed. It includes the highest point near the Palisades in that section of the borough.

The second proposal would capitalize the unique opportunity to utilize as a ribbon park the abandoned trolley right-of-way running north and south through the borough. Considerable expense was incurred in the Town of Radburn to provide pedestrian ways which are free from major traffic streams, so that school children might not be subjected to unnecessary dangers. The alignment of the abandoned trolley, passing as it does through the center of the borough, is so located that it could serve as an approach to most of the school sites, described later. In addition to walking, the ribbon park could be developed for bicycling, roller skating and, in places, as a bridle path.

The third major proposal is a large park of over 50 acres in the west central portion of the borough on a site that does not readily lend itself to development in other ways. Among the recreation facilities that could be provided in this area are football and baseball fields, a running track and other features of an athletic field. A ribbon park is proposed to extend from this area along the traffic route that underpasses Main Street and connects with State Highway No. 4. Along the latter, park strips are proposed except in places that have already been developed.

A summary of all the proposed parks appears in Table II, from which it may be seen that other parks and playgrounds are contemplated. It appears quite logical that the remainder of the land above the cliff

and east of Hudson Terrace and its extension to the Borough of Edgewater line, should be part of the Palisades Interstate Park and it is so indicated on the Master Plan.

There are 129.4 acres (or 8 per cent of the borough) of parks existing in the borough, including 110.7 acres in the Palisades Interstate Park and 13.6 acres left open in connection with the bridge approach and highway overpasses. As the dominant function of the Palisades Interstate Park is the protection of the Palisades, only passive recreation will be provided for on the cliff top. The land used in connection with the overpasses of highways is not available for active recreation. This leaves only about five acres of existing local parks and playgrounds in the borough, which is wholly inadequate.

TABLE II.—PROPOSED PARK AND PLAYGROUND SYSTEM

Name or location	Area in acres		
	Existing	Proposed	Total
Palisades Interstate Park.....	110.7	29.6	140.3
Coytesville Park	3.4	..	3.4
Carola Park	0.8	..	0.8
Virginia Ave. Playground.....	0.4	..	0.4
Westview Ave. Playground.....	0.5	..	0.5
Park, Abbot Blvd. and Forest Rd.	..	4.0	4.0
Park, Euclid Rd. and Old			
Palisade Ave. ....	..	5.7	5.7
Pedestrian Way (Abandoned			
Trolley) .....	..	10.4	10.4
Riverside Drive .....	..	22.5	22.5
Park Strips along State Highway			
No. 4 .....	..	14.7	14.7
Large Park bordering Bergen			
Blvd. ....	..	57.4	57.4
Ribbon Park (from above to			
State Highway No. 4) .....	..	5.8	5.8
Playground, Juanita Pl. and			
Deerwood Rd. ....	..	3.1	3.1
Highway Strips, etc.....	13.6	14.9	28.5
Total.....	129.4	168.1	297.5

A total of 297.5 acres, including existing acreage, is proposed to be reserved for public parks and playgrounds. This would mean that about 18.7 per cent of the land area of the borough would be in public park. About 140 acres of this total would be included in the interstate park and would, therefore, not have to be developed or maintained by the borough, but would be limited in use. School grounds would supply considerable additional area for organized play; of the 50 acres described later as proposed school sites, between a third and a half would ultimately be developed as intensive play areas.

One of the principles guiding the selection of parks is their relation to present and future population. For organized games older children will go as far as a mile to play. For local playgrounds, however, a younger child cannot be expected to walk more than a quarter of a mile and, if possible, should not cross a main traffic route. Land that does not readily lend itself to building development and which, if developed for that



Courtesy, Public Service Corporation of N. J.

TYPE OF DEVELOPMENT ENVISIONED BY GARDEN APARTMENT ZONING

plemented by a high barrier in the center of the main roadway to force pedestrians to use Lemoine Avenue to cross traffic lanes, would probably clear up much of the confusion and inconvenience now at the plaza.

Daily use of private cars for both long and short haul transportation of passengers has of recent years become an accepted mode of travel. Because of its location, Fort Lee serves as a terminal for a growing volume of this traffic. While parking accommodations are sufficient to store the present volume of traffic, they are in general a community eyesore and poorly located. The following figures show the use of off-street parking areas in Fort Lee in the vicinity of the George Washington Bridge plaza on a typical day in 1939 as compared with 1934:

	1934	1939
Parking lot capacity.....	1180	1730
Average daily car occupancy.....	600	1300
Average daily "car commuters," defined as those who parked at least three times weekly	525	880

Only the broader aspects of the problems of passenger transportation have been mentioned and no attempt is made at this time to recommend a detailed solution. Public interest, as well as that of the transit operators, will be best served, however, if all of the factors pertaining to transit in Fort Lee are considered in any future plan for handling traffic in the vicinity of the bridge plaza.

CARRYING OUT THE PLAN

The value of the Master Plan presented herein will depend upon the extent to which it is followed. It is not suggested that huge sums be raised to construct immediately all or any substantial number of the proposals included. The purpose of the plan is rather to be a guide or yardstick to measure the soundness of projects as they come up for consideration in the customary ways. To be sure that it will be used, instead of merely filed, the most urgent parts of it should be incorporated in the official map of the borough.

Further technical study has been indicated above as desirable in connection with replatting, subdivisions and street widths. From time to time the details of other projects, such as parks, playgrounds, school sites, civic centers and parking areas, will require further study. It is essential that these studies be consistent with the objectives of the plan.

Relation to Zoning

The limitations that are to be placed upon the use of privately owned land as a part of the plan for future development are implemented by the zoning ordinance.

Areas adjacent to parks have been placed in a more restricted district than the areas further away, by reason of the desirability of a park exposure. Restrictive zoning extended over a proposed park area tends to preserve it in an open type of development, until it can be acquired as a park. To cite one instance, the privately owned land east of Hudson Terrace has been placed in the most restricted district.

Zoning for business is intimately related to the highway system, in that the intersections of secondary routes are for many reasons the most suitable sites for neighborhood shopping areas.

In some instances topography has a pronounced effect upon the zoning as well as on the street and park systems. In the northwest corner of the borough the steep hillside east of State Highway No. 4 has been put in the most restricted residential district.

Ordinarily the planning board and the zoning board of appeals of a community have the major responsibility in implementing the master plan and the zoning ordinance respectively. The effectiveness of these types of governmental control is dependent largely on the broad policies of administration adopted by these bodies. It is essential that such policies be based upon facts and considered from a long range point of view as opposed to arbitrary actions or those based upon immediate expediency.