

MASTER PLAN
BOROUGH OF CARTERET
MIDDLESEX COUNTY, NEW JERSEY
May, 1973

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EXISTING LAND USE

The Borough of Carteret contains 2,880 acres, or about 4.5 square miles. Of this total, 2,266.5 acres, or 78.8 percent of the land area, are developed or utilized for public, semi-public or private purposes. In addition, approximately 146 acres, or 5 percent of the total area of the Borough, is in the water areas of the Rahway River and Arthur Kill. Therefore, the amount of vacant and unutilized land within the Borough is 467.3 acres, or about 16.2 percent of the area of Carteret.

For the purpose of analyzing the existing land use within Carteret, nine major land use categories have been established. These include seven categories for developed land, which are: residential, commercial, industrial, public buildings and schools, parks and playgrounds, semi-public uses and transportation, and two categories for undeveloped areas.

Plate No. 1, "Existing Land Use Areas", gives a tabulation of the amount and percent of land utilized for each category, and Plate No. 2, "Existing Land Use Map", shows the areas devoted to specific uses within the Township. On both Plates Nos. 1 and 2 the seven categories for developed land are further broken down to more specifically identify the use of land.

The land uses shown on the Existing Land Use Map and tabulated on Plate No. 1 are based on a field survey conducted in June, 1970.

RESIDENTIAL

Land utilized for residential purposes accounts for 663.8 acres, or 29.3 percent of the developed land and 23.1 percent of the total area of Carteret. Since 1963 the amount of land utilized for residential purposes has increased by about 27 acres.

Most of the new residential development in Carteret since 1963 has been multifamily construction which includes the garden apartments adjacent to the St. Joseph's Parochial School Annex, the Public Housing for the Elderly on Noe Street and the 221 (d)(3) garden apartments in the Chrome Urban Renewal Project. The entire area of the new garden apartments in the Chrome area were considered as multi-family land use since it was under construction, although not completed, in June, 1970. The only major single family development that has occurred since 1963 is on the site of the swim club that was previously located adjacent to the Shore Crest Playground off Sycamore Street.

PLATE NO. 1
EXISTING LAND USE AREAS

Carteret, New Jersey

<u>LAND USE</u>	<u>Acreage</u>	<u>Percent of Developed Area</u>	<u>Percent of Total Area</u>
<u>Developed Land</u>			
One and Two Family Residential	593.3	26.2	20.6
Multi-family Residential	45.9	2.0	1.6
Trailer Camp	24.6	1.1	.9
Commercial	56.5	2.5	1.9
Light & Medium Industry	229.4	10.1	8.0
Heavy Industry	589.3	26.0	20.5
Public Buildings & Schools	25.9	1.2	.9
Parks and Playgrounds	36.1	1.6	1.2
Semi-Public Buildings	22.2	.9	.8
Public Service Rights-of-way	19.1	.9	.7
Railroad Rights-of-way	59.6	2.6	2.1
Street Rights-of-way	564.6	24.9	19.6
<u>Total Developed Land</u>	2,266.5	100.0	78.8
<u>Undeveloped Land</u>			
Vacant Land	467.3		16.2
Water Areas	146.2		5.0
TOTAL AREA	2,880.0		100.0

The preparation of this map was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

The remainder has been financed by local funds and by an appropriation of the State of New Jersey to the Department of Community Affairs as part of the Cooperative Governmental Planning Program.

UNION

COUNTY

RAHWAY

RIVER

ARTHUR

- Light & Medium Industry
- Heavy Industry
- Parks & Recreation
- Public Buildings & Schools
- Semi - Public Buildings
- Public Service Right-of-Way
- Vacant

MASTER PLAN

BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY
2400 1600 800 0 1600 2400 FT.

KEHAYAS ASSOCIATES, INC. SOMERSET, NEW JERSEY

SOURCE: Field Survey

EXISTING LAND USE

PLATE NO.

2

JUNE 1970

Of the 663.8 acres utilized for residential purposes in the Borough, 593.3 acres are used for one and two family homes, 45.9 acres for multi-family structures, and 24.6 acres are located in the trailer camps located in West Carteret off Roosevelt Avenue and Blair Road.

There is very little land remaining in Carteret which is suitable for residential construction. Since large tracts of vacant residential land no longer exist in the Borough, it can be expected that most future residential construction will involve the acquisition of existing buildings to assemble tracts of land large enough for development purposes. A limited amount of construction of individual homes on existing vacant residential lots can also be anticipated in the future.

COMMERCIAL

Commercial land uses in Carteret comprise 56.5 acres, or 2.5 percent of the developed land and 1.9 percent of the total area of the Borough.

Although small commercial enterprises are scattered throughout the older residential neighborhoods, the greatest concentration of commercial activity is:

1. On the south side of Roosevelt Avenue in West Carteret;
2. In the Carteret Shopping Center off the south side of Roosevelt Avenue near the Turnpike entrance;
3. On Roosevelt Avenue in the Hill Section between Christopher and Lafayette Streets;
4. On Roosevelt Avenue in the Chrome Area;
5. On Washington Avenue at Cooke Avenue and Atlantic Street;
6. On Washington Avenue between Cypress and Whittier Streets.

The land use survey conducted in June, 1970, indicated that there has been an increase of approximately 5 acres of land devoted to commercial uses since 1963. These new commercial uses in the Borough are primarily businesses and offices erected on small parcels of land or the conversion of residential buildings to business use. There have been very few new major commercial buildings constructed within Carteret since 1963. However, a building permit has been issued for the construction of a new 120-unit motel within the Borough adjacent to the Turnpike entrance.

Since the access between Carteret and other nearby municipalities is limited to Roosevelt Avenue, which is a relatively low speed, low capacity artery which becomes congested at peak hours, it is doubtful that large scale commercial activities which depend upon a regional market can be attracted to the Borough.

INDUSTRIAL

Industrial uses comprise 818.7 acres, or approximately 36.1 percent of the developed land and 28.5 percent of the total area of the Borough. This represents the largest major land use category in the Borough.

Based on the land use survey in June, 1970, the industrial uses were categorized into 589.3 acres of land in Heavy Industry and 229.4 acres of land in Light and Medium Industries. The heavy industrial uses are principally located in East Carteret along the Arthur Kill and on the northern side of Roosevelt Avenue between the Turnpike entrance and Hayward Avenue. Although there are some light and medium industrial uses scattered in the portion of Carteret east of the Turnpike, most of the light industrial uses in the Borough are located in West Carteret south of Cornell Estates. Several smaller light industrial plants have recently been constructed on Grant and Hayward Avenues near the Grant Avenue Playground.

The 1963 Land Use Survey indicated that there were approximately 847 acres of land devoted to industrial uses, or approximately 28 acres more land than indicated by the recent survey in June, 1970. However, the 1963 survey classified approximately 60 acres of railroad rights-of-way as industrial uses, while in the recent survey and in this section, these railroad rights-of-way are classified under Transportation. Also the 1963 survey classified the entire WOR tract in West Carteret as Industrial, while the June, 1970, survey classified only that portion of the tract utilized by the buildings and tower as industrial.

Therefore, the actual amount of land utilized for industrial purposes has increased since 1963. This increase is primarily represented by new light and medium industrial plants constructed in West Carteret and along Grant and Hayward Avenues.

PUBLIC BUILDINGS AND SCHOOLS

The public buildings and public schools in Carteret occupy 25.9 acres, or approximately 1.2 percent of the developed land and .9 percent of the total area in the Borough.

Since the 1963 survey, the only additions to land utilized for public buildings or schools has been represented by the construction of a new firehouse in West Carteret, the construction of the new municipal garage, and the expansion of the Borough Hall property. Although additional land was not involved, there were also school additions constructed in 1965 at Carteret High School, Minue, Lincoln and Columbus Schools. The public housing units constructed since 1963 are classified under Residential (multi-family) land uses.

PARKS AND PLAYGROUNDS

The land devoted to parks and playgrounds in Carteret comprises approximately 36.1 acres, or 1.6 percent of the developed land and 1.2 percent of the total area of the Borough. Approximately one-half of the present recreation land in the Borough is located in Carteret Park (18.1 acres).

Since the 1963 survey there has been an increase of about 7 acres in land utilized for park and playground purposes. This increase is principally represented by the expansion of Liberty Park and the U.S. Metals Playground areas and the newer John Street, Bernard Avenue, Cornell Estates and Liebig Field playground areas.

SEMI-PUBLIC USES

Land devoted to Semi-Public Uses in Carteret comprises 41.3 acres, or 1.8 percent of the developed land and 1.5 percent of the total area of the Borough. The land devoted to semi-public uses is further broken down on Plate No. 1, "Existing Land Use Areas", into 22.2 acres devoted to semi-public buildings and 19.1 acres devoted to the Public Service right-of-way for transmission lines which parallel the New Jersey Turnpike in West Carteret.

Uses classified as semi-public buildings include churches, parochial schools, and fraternal and civic organizations. Among the newer semi-public buildings constructed in Carteret are the Rescue Squad Building on Pershing Avenue and Sharot Street, the Union Hall and the Elks Club constructed at Roosevelt Avenue and Irving Street, and the new church on McKinley Avenue. There have also been several commercial structures converted to storefront churches in the Chrome Area since the 1963 survey.

TRANSPORTATION

Land devoted to transportation uses comprises 624.2 acres, or 27.5 percent of the developed land and 21.7 percent of the total area of Carteret. Plate No. 1, "Existing Land Use Areas", further classifies the land devoted to Transportation into 564.6 acres in street rights-of-way and 59.6 acres in railroad rights-of-way.

The area shown for street rights-of-way includes the County and local roads within the Borough as well as the entire right-of-way owned by the New Jersey Turnpike Authority. The area shown for railroad rights-of-way includes all major railroad lines in the Borough, but does not include spur lines into industrial plants which are not on rights-of-way owned by the railroad.

VACANT LAND

The vacant, unutilized land in Carteret comprises 467.3 acres, or 16.2 percent of the entire area of the Borough. Well over half of the vacant land is located on tidal marsh areas in the northern part of the Borough between the Rahway River and the tracks of the Central Railroad of New Jersey. In order for these areas to be suitably utilized for development it is necessary that they be filled to raise the level of the land and give greater stability to the soil.

The vacant areas in West Carteret south of Roosevelt Avenue have been developing, and are likely to continue developing, in light and medium industrial uses. The vacant areas in West Carteret north of Roosevelt Avenue are located in low areas along the Rahway River which have been proposed for development as a County park which would encompass 75 acres of land within Carteret.

Other large tracts of vacant land in the eastern portion of Carteret include the 15 acre site of the proposed Noe Street Park, for which a Federal Open Space grant has been approved, and several sites adjacent to the heavy industrial uses along the Arthur Kill. Vacant land within the residential areas of the Borough is limited to scattered, small parcels of land.

WATER AREAS

The water areas of Carteret located within the Rahway River and the Arthur Kill comprise approximately 146.2 acres, or 5.0 percent of the total area of the Borough.

POPULATION

Of prime importance in planning for the development of the community is an understanding of the size and character of the present and anticipated population. The extent and type of population growth will have a significant effect on development patterns, since it is the population which is the basic determinant of the Borough's facilities and service needs, housing and other particular land uses.

REGIONAL AND STATE INFLUENCES

Carteret and Middlesex County have been influenced by the post-World War II trend of migration from the cities to the suburbs. The population growth in Carteret and Middlesex County as a whole since 1950 has been at a much faster rate than for either the State of New Jersey or the United States. For example, between 1950 and 1970 the population in Carteret rose from 13,030 to 23,137, or 77.6 percent, and the population of Middlesex County grew 120.4 percent, as compared to an increase for the State of only 48.2 percent.

The primary cause of population growth in the Middlesex County area is the migration of people from the core of the New York Metropolitan area. During the 1950's and the 1960's, this migration into Middlesex County was concentrated more in the northern part of the County than in the southern sections of the County. During this period the larger communities in the northern portion of the County, with large undeveloped areas, received a major portion of the migrating population. For example, of the total 113,858 estimated net population migration into Middlesex County between 1950 and 1960, 69,713, or over half of the migration, was into the Townships of Woodbridge, Edison and Madison. Between 1960 and 1970 the population of these three municipalities increased by 68,362, or approximately 45 percent of the total population increase for Middlesex County of 149,957. It should, of course, be noted that the availability of major highway access to these communities, in addition to their proximity to the Newark-New York City area, was a large factor in their development. The importance of accessibility cannot be over-emphasized since Carteret rapidly developed its vacant residential areas only after the completion of the Turnpike Interchange.

Prior to the opening of the Turnpike Interchange in the 1950's Carteret's population remained fairly constant. In the 40 years prior to 1950 the Borough's

population fluctuated between 11,000 and 14,000. Prior to 1950 the Borough of Carteret was mostly populated by families whose livelihood was directly related to the industrial uses along the Arthur Kill.

The newer residential areas of the Borough, developed after 1950, contain a population which does not primarily derive its livelihood from the industrial area along the Arthur Kill. To an extent, the residential areas of Carteret, developed after 1950, are a bedroom community for people whose employment is located outside the Borough, while the older residential sections of Carteret contain a population which still primarily depends on the industrial uses along the Arthur Kill for their employment.

The housing construction boom hit Carteret later than other municipalities which were not as ideally located in relationship to the New York-Newark area. The primary reason the housing boom did not develop in Carteret during the 1940's was that land with better construction characteristics was available in other areas almost as well located as Carteret, and good regional transportation access was not available to the Borough until the Turnpike Interchange was opened. After 1950, with the expansion of highways and increased automobile ownership, the need for additional housing areas increased, and almost all available vacant land in the suburbs, including land with poor physical characteristics, was considered prospective sites for housing.

During the 1940's and 1950's the migration of population from the New York Metropolitan core cities was characterized primarily by the construction of single-family housing. Starting in the late 1950's and through the 1960's the trend to migration from the central core areas continued, but was further characterized by the construction of garden apartments and the movement of industry from the cities to the suburbs.

The type of housing constructed in the County and in Carteret will have a significant effect on the age composition of the future population. New single-family housing is characterized by a high percentage of population between 0 and 20 years of age; while garden apartments are characterized by high percentages of population between the ages of 20 and 35 and over the age of 60 and low percentages of population between the ages of 9 and 20. Therefore, the relative number of new single-family and garden apartment developments will have a pronounced effect on school needs and other service needs in the Borough.

As the areas in the northern part of the County become built up, it can be expected that an increasing portion of the migration from the New York

Metropolitan area will be into the more southerly areas of the Borough. Since virtually all of the residential areas in Carteret have been developed, future population increases in the Borough will be smaller and will not reflect the large growth that occurred during the 1950's and 1960's.

CARTERET GROWTH TRENDS

The rate of population increases in the Borough reflects the trend of migration from the core cities of the New York Metropolitan area.

Plate No.3 , "Population Growth", shows the population of Carteret, the surrounding municipalities, Middlesex County and New Jersey for the years 1940, 1950, 1960 and 1970. The table also indicates the percentage change in population between these years.

Between 1940 and 1950 the population of Carteret rose at a lesser rate than in Middlesex County and the State although other municipalities surrounding Carteret experienced population increases at a greater rate than both Middlesex County and the State. While Carteret, unlike Perth Amboy and South Amboy, had land available for residential development in the 1940's, developers chose to select sites for new housing in municipalities such as Woodbridge, Edison and Linden where transportation access and construction characteristics of the land were better than in Carteret.

After the Turnpike Interchange opened in the early 1950's, Carteret was provided with good regional access, and the available vacant residential land in the Borough was quickly developed. Other municipalities and Middlesex County as a whole experienced greater growth rates than Carteret after 1950 primarily because the amount of residential land available for development in the Borough was limited as compared to other municipalities in the County.

Since little vacant residential land remains for development in Carteret, future population increases in the Borough will be small and reflect growth rates far less than other less developed municipalities in the County.

AGE-SEX COMPOSITION OF POPULATION

Plate No.4 , "Age and Sex Distribution of Population in 1970", shows the numerical and percentage distribution of the 1970 population in Carteret by age and sex. Plate No.5 , "Age and Sex Composition", graphically compares the age and sex distribution of Carteret population for the years 1960 and 1970.

PLATE NO. 3

POPULATION GROWTH

Carteret, Surrounding Municipalities
Middlesex County and New Jersey

GOVERNMENTAL UNIT	POPULATION				PERCENT CHANGE			
	1940	1950	1960	1970	1940-50	1950-60	1960-70	1950-70
Carteret	11,976	13,030	20,502	23,137	8.8	57.3	12.9	77.6
Woodbridge	27,191	35,758	78,846	98,944	31.5	120.5	25.5	176.7
Perth Amboy	41,242	41,330	38,007	38,798	.2	-8.0	2.1	-6.1
South Amboy	7,802	8,422	8,422	9,338	7.9	.0	10.9	10.9
Edison	11,470	16,348	44,799	67,120	42.5	174.0	49.8	310.6
Linden (Union County)	24,115	30,644	39,931	41,409	27.1	30.3	3.7	35.1
Middlesex County	217,077	264,782	433,856	583,813	22.0	63.8	34.6	120.4
New Jersey	4,160,165	4,835,329	6,066,782	7,168,164	16.2	25.5	18.2	48.2

Source: U.S. Census of Population

PLATE NO. 4

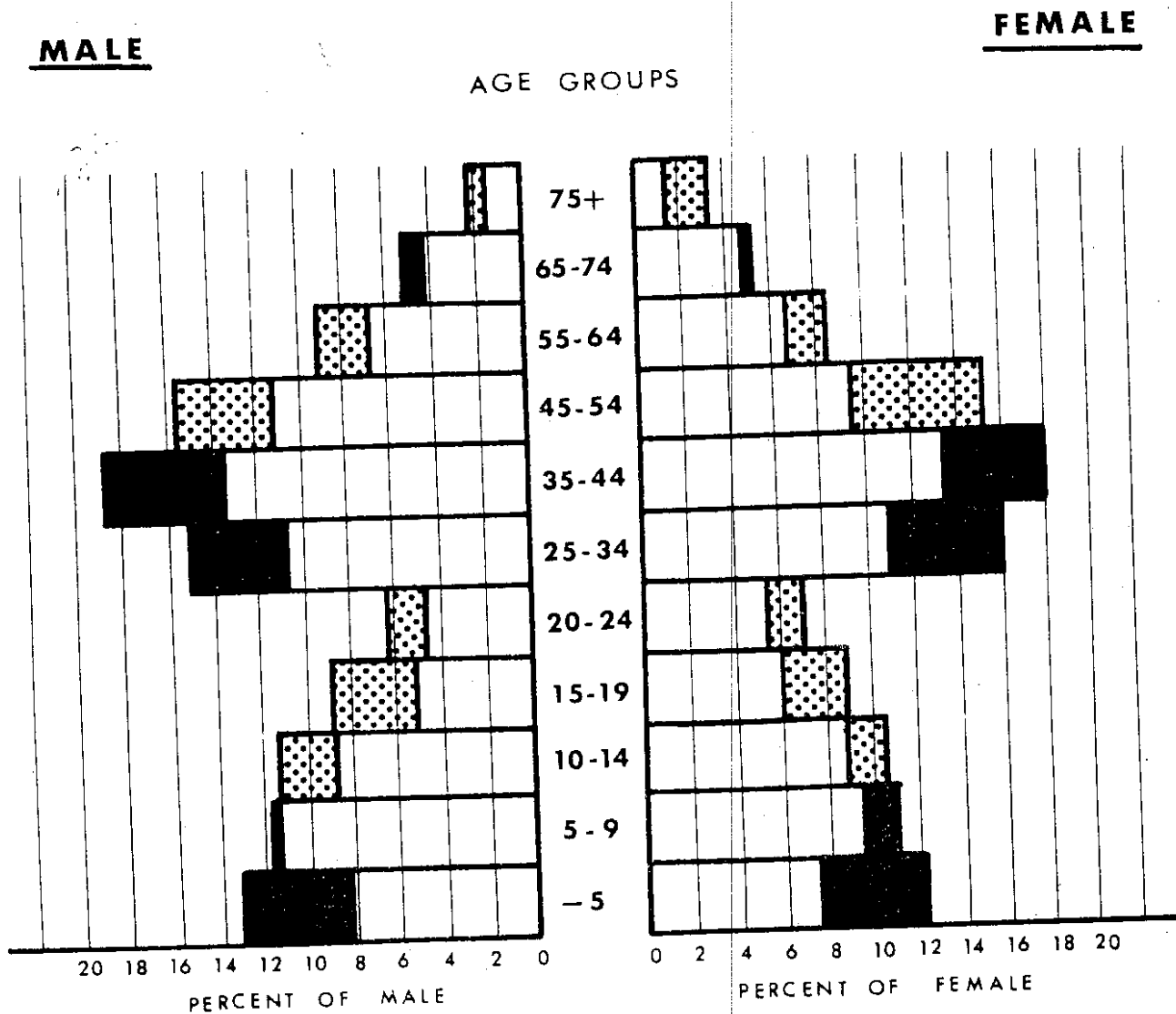
AGE AND SEX DISTRIBUTION OF POPULATION IN 1970

Carteret

AGE GROUP	TOTAL NUMBER	PERCENT	MALE NUMBER	PERCENT	FEMALE NUMBER	PERCENT
Under 5	1,837	7.9	939	8.2	898	7.7
5-14	4,820	20.8	2,487	21.7	2,333	20.0
15-24	3,594	15.5	1,730	15.1	1,864	16.0
25-34	2,477	10.7	1,197	10.5	1,280	10.9
35-44	3,116	13.5	1,538	13.4	1,578	13.5
45-54	3,579	15.5	1,793	15.7	1,786	15.3
55-64	2,004	8.7	1,048	9.1	956	8.2
65 & Over	1,710	7.4	727	6.3	983	8.4
TOTAL	23,137	100.0	11,459	100.0	11,678	100.0

Source: U.S. Census of Population, 1970

PLATE NO. 5
AGE AND SEX COMPOSITION
CARTERET **NEW JERSEY**



INCREASE FROM 1960 TO 1970
 DECREASE FROM 1960 TO 1970

SOURCE: 1960 and 1970 U.S. Census of Population

Between 1960 and 1970 the number of children under the age of 5 dropped from 12.4 percent to 7.9 percent. The high percentage of preschool age children in 1960 reflects the large number of single-family housing constructed in the late 1950's which was occupied by "young families". By 1970 many of these families had ceased bearing children and, consequently, the number of preschool age children dropped significantly.

Most of the children of the families that moved into the Borough in the late 1950's are reflected in the 5 to 19 school age group which increased from 24.9 to 29.7 percent of the population in the years between 1960 and 1970. Since new housing construction, which generally attracts younger families, will be limited in Carteret in the future, it can be expected that the percentage of persons in the 5 to 19 age group will not increase in future years and will probably decrease slightly.

The age group of 25 to 44 reflects the age of the parents that moved into the new housing constructed in the Borough during the 1950's. In 1960 the 25 to 44 age group comprised 33.8 percent of the population. By 1970, the parents of the families that moved into new housing in the Borough constructed in the 1950's were ten years older and consequently the percentage of population in the 25 to 44 age group dropped to 24.2 percent of the population. As can be expected, the decrease in the 25 to 44 age group between 1960 and 1970 is reflected in the middle aged groups of 45 to 64 which increased from 17.5 percent of the population in 1960 to 24.2 percent in 1970.

The age group of 65 and over showed a slight increase from 1960 when it represented 6.8 percent of the population to 1970, when it represented 7.4 percent of the population.

COMPONENTS OF POPULATION CHANGE

Population change within a municipality or area results from a combination of the difference between birth and death rates and the migration of people. Birth and death rates remain relatively constant, regardless of location, for a population with a certain age and sex composition. Within the Middlesex County area, the primary effect of population change has resulted from migration. Plate No. 6, "Components of Population Change", shows the components of population change for Carteret, the surrounding municipalities and Middlesex County.

In Carteret the natural increase resulting from birth over deaths accounted for 32 percent of the population increase between 1950 and 1960, while net

PLATE NO. 6

COMPONENTS OF POPULATION CHANGE

Carteret, Surrounding Municipalities
and Middlesex County, 1950-60

<u>GOVERNMENTAL UNIT</u>	<u>POPULATION</u> <u>April 1, 1950</u>	<u>BIRTHS</u> <u>(+)</u>	<u>DEATHS</u> <u>(-)</u>	<u>NATURAL</u> <u>INCREASE</u>	<u>NET</u> <u>MIGRATION</u>	<u>POPULATION</u> <u>April 1, 1960</u>
Carteret	13,030	3,725	1,318	2,407	5,065	20,502
Woodbridge	35,758	14,052	3,761	10,291	32,797	78,846
Perth Amboy	41,330	7,563	4,306	3,257	-6,580	38,007
South Amboy	8,422	2,541	1,051	1,490	-1,490	8,422
Edison	16,348	6,948	1,683	5,265	23,186	44,799
Linden (Union County)	30,644	8,322	2,851	5,471	3,816	39,931
Middlesex	264,872	83,238	27,932	55,306	113,678	433,856

Source: 1950 and 1960 Census of Population, Middlesex County Planning Board and
New Jersey Department of Health

migration accounted for 68 percent. Migration was relatively the most important factor in population increase in the entire County, except for the already built up areas such as New Brunswick, Perth Amboy and South Amboy, where natural increase amounted to more than the net in-migration or out-migration.

Although the detailed statistics for the components of population change between 1960 and 1970 have not yet been tabulated, it is obvious that net migration was not as significant a factor in the 1960's as in the 1950's since less new housing was constructed during the latter decade.

In future years, when only limited new housing will be constructed in the Borough, population changes will likely indicate population increases as a result of the number of births over deaths compiled with a negative (-) net migration similar to the changes experienced by Perth Amboy and South Amboy during the 1950's.

NATIONAL ORIGIN OF THE POPULATION

The 1960 Census showed that 9,242 persons, or 45.1 percent of the Borough's population, were either foreign born or of foreign born parentage. In 1970 the Borough's foreign stock showed a decrease to 8,998 persons or 38.9 percent of the total population. The national origin of Carteret's population is strongly Slavic. In fact, the 1960 Census showed that 4,908 persons, or 53.1 percent of the Borough's 9,242 foreign stock, were from either Poland, Hungary or Czechoslovakia. Although the 1970 population from these three countries decreased to 4,266 or 47.4 percent of the Borough's foreign stock it still indicated a strong Slavic background. Between 1960 and 1970 the foreign stock of Italian heritage showed the greatest increase from 830 to 1,183.

Plate No. 7, "Origins of Population", shows the origin of the foreign population or population with foreign parentage and the nonwhite population in the Borough in 1960 and 1970. Between 1960 and 1970 the nonwhite population in Carteret increased from 564, or 2.8 percent, to 823, or 3.6 percent, of the total population.

Although a strong Slavic influence continues to exist in the population of Carteret, which is evident in the social and cultural activities of the Borough, it can be expected that most of the people who will migrate into the Borough and most of the new births in the Borough will be at least second generation Americans. Therefore, when the statistics of the 1980 Census are available, they should indicate a continued decrease in the percentage of people in the Borough of foreign birth and with foreign parentage.

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In future years, when only limited new housing will be constructed in the Borough, population changes will likely indicate population increases as a result of the number of births over deaths compiled with a negative (-) net migration similar to the changes experienced by Perth Amboy and South Amboy during the 1950's.

NATIONAL ORIGIN OF THE POPULATION

The 1960 Census showed that 9,242 persons, or 45.1 percent of the Borough's population, were either foreign born or of foreign born parentage. In 1970 the Borough's foreign stock showed a decrease to 8,998 persons or 38.9 percent of the total population. The national origin of Carteret's population is strongly Slavic. In fact, the 1960 Census showed that 4,908 persons, or 53.1 percent of the Borough's 9,242 foreign stock, were from either Poland, Hungary or Czechoslovakia. Although the 1970 population from these three countries decreased to 4,266 or 47.4 percent of the Borough's foreign stock it still indicated a strong Slavic background. Between 1960 and 1970 the foreign stock of Italian heritage showed the greatest increase from 830 to 1,183.

Plate No. 7, "Origins of Population", shows the origin of the foreign population or population with foreign parentage and the nonwhite population in the Borough in 1960 and 1970. Between 1960 and 1970 the nonwhite population in Carteret increased from 564, or 2.8 percent, to 823, or 3.6 percent, of the total population.

Although a strong Slavic influence continues to exist in the population of Carteret, which is evident in the social and cultural activities of the Borough, it can be expected that most of the people who will migrate into the Borough and most of the new births in the Borough will be at least second generation Americans. Therefore, when the statistics of the 1980 Census are available, they should indicate a continued decrease in the percentage of people in the Borough of foreign birth and with foreign parentage.

NONWHITE POPULATION TRENDS

Of the 20,502 persons residing in Carteret at the time of the 1960 Census of Population, 564, or 2.8 percent, were of a nonwhite race. Of these nonwhite persons, 554 were Negroes. Census Tract CA-39, which includes the Chrome Area, housed 550, or all but four of the Negroes residing in Carteret in 1960. That same census tract also housed 245 of the Borough's total 265 Puerto Rican population. The total population within Census Tract CA-39, which includes the area of the Borough south and east of Holly Street, Pershing Avenue and Noe Creek, was 3,792 in 1960. Therefore, the nonwhite and Puerto Rican population in that area of 795 persons represented 21.0 percent of the population of that census tract, while the nonwhite and Puerto Rican combined population of 829 persons in the entire Borough represented only 4.0 percent of the total population in Carteret.

In 1970 the nonwhite population of the Borough had grown to 823 and represents a greater proportion (3.6%) of the total population and is also more prevalent in other areas of the Borough outside of Census Tract CA-39.

EDUCATIONAL ATTAINMENT

The level of educational attainment of the population has both a cause and affect impact on the economy and development of an area. If the economy generates technical and professional jobs, more college graduates are in the population. A high level of educational attainment implies a pool of technical and professional talent residing in the area, which is a locational factor in attracting new and specialized industry.

In 1970 the median number of school years completed by persons 25 years old and over in the Borough was 11.1 years, equal approximately to the eleventh grade. This means that about half the persons over 25 years of age had completed less than eleven years of school and half had completed more than ten years. The median year of attainment for Middlesex County was 12.2 years. Plate No. 8, "Years of School Completed", gives the relative measures of the educational attainment for the Borough.

Of the Borough's population of 25 years old and older in 1970, 3.9 percent of the persons 25 years and older received the equivalent of a college education, 43.4 percent completed high school, and 81.3 percent elementary school. Only 2.1 percent had received no formal schooling.

PLATE NO. 8

YEARS OF SCHOOL COMPLETED

Carteret, 1970

	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Percent of Total</u>
25 years old and over	6,313	6,582	12,895	100.0
No school years completed	142	136	278	2.1
Elementary: 1-4	269	305	574	4.5
5-7	765	796	1,561	12.1
8 years	1,030	1,084	2,114	16.4
High School: 1-3 years	1,447	1,325	2,772	21.5
4 years	1,899	2,460	4,359	33.8
College: 1-3 years	414	319	733	5.7
4 years or more	347	157	504	3.9
Median school years completed	11.0	11.2	11.1	-
% High School graduates	42.1	44.6		

Source: U.S. Census of Population, 1970 (Estimate)

POPULATION DENSITY

Plate No. 9 , "Population Densities, Trends and Projections", shows the trends in population density for Carteret, the surrounding municipalities and Middlesex County, and projections of population densities for these governmental units through the year 2000. The projections of population density are based upon the population projections made by the Middlesex County Planning Board.

In 1970 Carteret's population density was greater than the nearby Townships of Woodbridge, Edison and Linden but less than in the more urbanized centers of Perth Amboy and South Amboy. Although the projections by the Middlesex County Planning Board reflect the same relative position of Carteret to these municipalities in population density from 1970 through the year 2000, they also reflect over a 75 percent increase in the Borough's population density for that period. Since very little vacant land remains for residential development in Carteret a density increase such as projected by the County Planning Board would require the replacement of existing housing, as it becomes dilapidated, with housing of a higher density.

Population is translated into housing demands through the formation of households. There were 3,542 households in Carteret in 1950. This number increased to 5,841 in 1960 and to 6,590 in 1966. The average size of households in the Borough has decreased from 3.67 persons in 1950 to 3.50 in 1966 and 3.3 in 1970. Data on households is given in Plate No. 10, "Growth in Households", below.

PLATE NO. 10

GROWTH IN HOUSEHOLDS

Carteret, 1950-1970

	<u>1950</u>	<u>1960</u>	<u>1966</u>	<u>1970</u>	<u>Change 1950-70</u>	
					<u>Number</u>	<u>Percent</u>
Number of Households	3,542	5,841	6,590	7,099	3,557	100.4
Size of Households	3.67	3.49	3.50	3.3	-0.37	-10.1
Household Population	12,999	20,382	23,065	23,089	10,090	77.6

Source: U.S. Census of Population, Middlesex County Planning Board

PLATE NO. 9

POPULATION DENSITIES, TRENDS AND PROJECTIONS

Carteret, Surrounding Municipalities and Middlesex County

GOVERNMENTAL UNIT	AREA SQ. MI.	POPULATION DENSITY (PERSONS PER SQUARE MILE)						
		1940	1950	1960	1970	1975	1985	2000
Carteret	4.9	2,444.1	2,659.1	4,184.1	4,721.8	5,413.8	6,280.0	7,381.6
Woodbridge	24.5	1,109.8	1,459.5	3,221.4	4,038.5	4,704.8	5,619.7	6,879.3
Perth Amboy	6.0	6,873.6	6,888.3	6,334.5	6,466.3	7,737.1	8,744.0	10,254.1
South Amboy	1.8	4,334.4	4,678.8	4,678.8	5,187.7	5,942.7	6,647.7	8,485.5
Edison	30.4	377.3	537.7	1,473.6	2,207.8	2,722.7	3,463.4	4,161.9
Linden (Union County)	10.95 ¹	2,192.3 ¹	2,798.5 ¹	3,646.7 ¹	3,781.6	4,611.8 ²	4,931.5 ³	5,205.5 ⁴
Middlesex County	318	703.0	857.8	1,405.0	1,890.5	2,270.9	3,058.2	4,346.5

Source: U.S. Census of Population, Middlesex County Planning Board

¹ Department of Conservation and Economic Development

² Union County Planning Board for 1980

³ Union County Planning Board for 1990

⁴ Union County Planning Board for 2000

Plate No. 11, "Average Household Size, Trends and Projections", shows past trends and projections in average household size as estimated by the Middlesex County Planning Board for Carteret, the surrounding municipalities and Middlesex County. The projections of household size made by the County Planning Board were made prior to the 1970 Census. Although the County Planning Board had anticipated a decreasing family size throughout the County because of a variety of factors, the 1970 Census indicated a greater decrease than envisioned by the County. In view of this factor it can be anticipated that the family sizes in 1975, 1980 and 2000 will be even less than indicated on Plate No. 11. The estimated general decline in household size in the future can be attributed to a variety of factors including an increasing number of elderly persons, trends toward apartment development and a declining rate of births per family.

POPULATION PROJECTIONS

Plate No. 12, "Population Projections", shows the projections of population for Carteret, the surrounding municipalities and Middlesex County based on projections made by the Middlesex County Planning Board. These projections estimate the Borough's population at 26,528 in 1975, 30,772 in 1985, and 36,170 in 2000.

Since only limited land remains in the Borough for new residential construction it is doubtful that these projections by the County Planning Board will be realized unless existing housing is replaced, as it becomes dilapidated, with multi-family housing at a much higher density.

After a Land Use Plan Map has been developed in conjunction with this Master Plan study, projections of future populations will be made which reflect the proposals of the Land Use Plan.

PROJECTIONS OF AGE AND SEX DISTRIBUTION

Based on the projections made by the Middlesex County Planning Board, estimates were made of the age and sex characteristics for 1985 as shown on Plate No. 13, "Projections of Age and Sex Distribution of Population in 1985".

While the figures on Plate No. 13 give a general indication as to what might be expected in the future in terms of the age and sex characteristics of the population, it is important to again note that the development policies relative to the type of new housing construction followed by the Borough in the future will have a significant effect upon the actual future composition of the population.

PLATE NO. 11

AVERAGE HOUSEHOLD SIZE, TRENDS AND PROJECTIONS

Carteret, Surrounding Municipalities and Middlesex County

<u>GOVERNMENTAL UNIT</u>	<u>1950</u>	<u>1960</u>	<u>1966</u>	<u>1970</u>	<u>1975</u>	<u>1985</u>	<u>2000</u>
Carteret	3.67	3.49	3.50	3.3	3.46	3.41	3.34
Woodbridge	3.66	3.74	3.68	3.6	3.64	3.59	3.52
Perth Amboy	3.45	3.13	3.10	2.9	3.06	3.01	2.94
South Amboy	3.75	3.45	3.48	3.2	3.44	3.39	3.32
Edison	3.71	3.68	3.58	3.5	3.54	3.49	3.42
Linden (Union County)	3.63	3.41	-*	3.1	-*	-*	-*
Middlesex County	3.59	3.53	3.53	3.4	3.51	3.48	3.42

Source: Middlesex County Planning Board; U.S. Census, 1970 and Union County Planning Board

*Unavailable

ECONOMIC BASE

To a large extent the economic growth of Carteret will depend on the overall economic situation of the region within which the Borough is located. The economic stability of Carteret depends largely on the relative position of the Borough and the surrounding areas to such things as the level of employment and income opportunities, availability of suitable land for industry and business, proximity to labor and markets, transportation facilities, and the attractiveness of the community as a place in which to live.

LABOR FORCE

The labor force of an area is defined as that portion of the population 16 years of age and older who have jobs or who are seeking jobs. Plate No. 14 "General Labor Force Characteristics, 1970", shows the general labor force characteristics in 1970 for New Jersey, Middlesex County and Carteret.

In 1970, 68.8 percent of Carteret's population was 16 years of age or older. This was higher than the percentage of 16 years and older population in Middlesex County (67.9%) but lower than for the State of New Jersey (70.2%) as a whole. The higher percentage of persons under the age of 16 in Middlesex County and Carteret as compared to New Jersey in 1970 can be attributed to the relatively larger amount of new single family homes that were constructed in the Borough and County since 1950 as compared to the State as a whole. New single family housing is generally characterized by a large percentage of children. The greater percentage population increases between 1950 and 1960 in Carteret (57.3%) and Middlesex County (63.8%) than in the State of New Jersey (25.5%) give an indication of the relatively higher rate of new single family construction that occurred in the Borough and County during that period.

In 1970 the labor force in Carteret represented a smaller percentage of the population 16 years of age and older than for the County, while the percentage of males in the labor force was higher in Carteret than for the County. The combination of these two factors indicates that a smaller percentage of married women were employed in Carteret than in Middlesex County as whole in 1970.

The civilian labor force of an area is defined as that segment of the labor force that is not in the armed forces. Since, practically speaking, there is full employment in the armed forces, unemployment rates are calculated as a percentage of the civilian labor force. At the time of the 1970 Census of Population, the unemployment rate in Carteret (3.0%) was slightly less than for the State of New Jersey (4.6%) and the same as Middlesex County (3.0%).

PLATE NO. 14

GENERAL LABOR FORCE CHARACTERISTICS, 1970

Carteret, Middlesex County and New Jersey

	<u>CARTERET</u>	<u>MIDDLESEX COUNTY</u>	<u>NEW JERSEY</u>
TOTAL POPULATION	23,137	583,813	7,168,143
POPULATION - 16 years and older	15,939	396,384	5,035,364
% of Total Population	68.8%	67.9%	70.2%
LABOR FORCE	9,865	247,852	3,023,010
% of 16 years and older population	61.2%	62.5%	60.0%
Males	6,379	157,922	1,893,379
Females	3,486	89,930	1,129,631
% Males	64.7%	63.7%	62.6%
CIVILIAN LABOR FORCE	9,859	247,422	2,972,561
Employed	9,523	239,938	2,915,652
% Employed	97.0%	97.0%	98.1%

Source: U.S. Census of Population, 1970 (Estimate)

INCOME

Perhaps the most important measure of a community's well-being is its relative position in relation to income. In 1959 the per capita income was greater in Carteret (\$2,423) than in either Woodbridge Township (\$2,356) or Middlesex County (\$2,380). By 1969, the per capita income rose 30.7 percent to \$3,167 in Carteret, and 48.1 percent to \$3,524 in Middlesex County. The greater increases in per capita income in Middlesex County as related to Carteret reflects the higher rate of new housing construction that has occurred in the County as compared to the Borough. This new housing has generally attracted families of higher incomes.

Plate No. 15, "Median Family and Per Capita Incomes", shows the median family and per capita incomes for Carteret, Woodbridge Township and Middlesex County in 1959 and 1969. Although the plate indicates that both the per capita and family incomes in Carteret were lower in 1969 than in Middlesex County, the differences are not substantial.

Plate No. 16, "Family Incomes", indicates the number and percentage of families by income ranges in Carteret and Middlesex County in 1959 and 1969. In 1959 families with incomes greater than \$15,000 accounted for 3.8 percent of all families in Carteret and 4.3 percent of all families in Middlesex County. In 1969 families with incomes greater than \$15,000 accounted for 23.3 percent of all families in Carteret and 30.0 percent of all families in Middlesex County. Therefore, from 1959 to 1969 the number of families with incomes over \$15,000 increased by only 19.5 percent of the total number of families in Carteret as compared to an increase of 25.7 percent of the total number of families in the County, which again reflects the higher rate of new housing construction in other areas of the County.

In relation to lower and moderate income families, 39.7 percent of the families in Carteret earned less than \$10,000 in 1969 as compared to 33.9 percent of the families for the County as a whole.

PLATE NO. 15

MEDIAN FAMILY AND PER CAPITA INCOMES

Carteret, Woodbridge and Middlesex County
1959 and 1969

<u>GOVERNMENTAL UNIT</u>	<u>1959 Median Income</u>		<u>1969 Median Income</u>	
	<u>Family</u>	<u>Per Capita</u>	<u>Family</u>	<u>Per Capita</u>
CARTERET	\$ 6,841	\$ 2,423	\$11,232	\$ 3,167
WOODBIDGE	7,243	2,356	N.A.	N.A.
MIDDLESEX COUNTY	7,054	2,380	11,982	3,524

Source: U.S. Census of Population, 1960 and 1970 (Estimate)

N.A. - Not Available

PLATE NO. 16

FAMILY INCOMES

Carteret and Middlesex County
1959 and 1969

FAMILY INCOME	1959				1969			
	CARTERET		MIDDLESEX CO.		CARTERET		MIDDLESEX CO.	
	No.	Percent of Total	No.	Percent of Total	No.	Percent of Total	No.	Percent of Total
Under \$4,000	671	12.3	14,040	12.7	397	6.7	9,069	6.2
\$4,000 - \$6,999	2,212	40.4	40,266	36.6	614	10.4	12,962	8.8
\$7,000 - \$9,999	1,626	29.7	34,093	30.9	1,327	22.6	27,776	18.9
\$10,000 - \$14,999	755	13.8	17,028	15.5	2,174	37.0	53,075	36.1
\$15,000 - \$24,999	198	3.6	3,962	3.6	1,225	20.8	36,953	25.2
Over \$25,000	11	.2	767	.7	146	2.5	7,101	4.8
All Families	5,473	100.0	110,156	100.0	5,883	100.0	146,936	100.0

Source: U.S. Census of Population, 1960 and 1970 (Estimate)

NET EFFECTIVE BUYING INCOME

In determining the potential for new or expanded retail and other commercial development within the Borough, consideration must be given to the purchasing power of the population within the area. Since consumers are not generally bound by corporate limits, the effective buying income should be considered for both the Borough and Middlesex County. Plate No. 17, "Net Effective Buying Income", shows the trends in total and average household net effective buying income for Carteret and Middlesex County from 1963 through 1969.

During this period of time, the total net effective buying income in Carteret increased \$31,532,000, or 63.2 percent, and in Middlesex County, \$723,282,000, or 66.7 percent. During the same period the net effective buying income per household in Carteret increased \$3,128, or 42.0 percent, and in Middlesex County, \$2,975, or 37.3 percent. The percentage increase in total net effective buying income is greater than in the average household net effective buying income, since it reflects the population increases as well as the increase in average household net effective buying income.

Although the per household net effective buying income in Carteret has remained lower than the per household net effective buying income for Middlesex County during the 1963-1969 period, the difference has decreased since 1963. In 1969 the per household net effective buying income in Carteret was \$373 less than in Middlesex County as compared to a difference of \$526 in 1964. The higher net effective buying income per household in Middlesex County as compared to Carteret corresponds to the higher percentage of persons employed in professional and managerial positions in Middlesex County. The 1960 U.S. Census of Population revealed that 20.0 percent of the workers in Middlesex County were employed in professional and managerial positions as compared to 15.3 percent in Carteret. The 1970 U.S. Census of Population again indicated a lower percentage of persons employed in professional and managerial positions in Carteret (15.4%) as compared to Middlesex County (24.0%).

RETAIL SALES

Review of the trends in retail sales in Middlesex County helps to establish guide lines in relation to the types of retail establishments Carteret may be able to attract and support. Plate No. 18, "Retail Sales", compares the retail sales by type of business in Middlesex County between 1958, 1963 and 1968.

PLATE NO. 17

NET EFFECTIVE BUYING INCOME

Carteret and Middlesex County
1963 - 1969

YEAR	CARTERET		MIDDLESEX COUNTY	
	TOTAL	Per Household	TOTAL	Per Household
1963	\$49,916,000	\$ 7,450	\$1,084,723,000	\$ 7,976
1964	53,632,000	7,662	1,169,075,000	8,321
1965	58,843,000	8,173	1,279,252,000	8,810
1966	67,233,000	8,846	1,399,461,000	9,195
1967	68,754,000	9,418	1,535,256,000	9,797
1968	74,573,000	9,943	1,667,779,000	10,320
1969	81,448,000	10,578	1,808,005,000	10,951

Source: Sales Management Magazine

PLATE NO. 18

RETAIL SALES

Middlesex County, New Jersey

	<u>1958</u>	<u>1963</u>	<u>1968</u>	Percentage Change <u>1958-1968</u>
Lumber, Building Materials, Hardware, Farm Equipment Dealers	\$ 27,435,000	\$ 26,631,000	\$ 34,717,000	26.5
General Merchandise	31,670,000	97,539,000	195,783,000	518.2
Food Stores	123,504,000	150,642,000	193,715,000	56.8
Automotive Dealers	63,482,000	100,084,000	133,322,000	110.0
Gasoline Service Stations	30,691,000	41,986,000	57,196,000	86.4
Apparel, Accessory Stores	36,436,000	38,510,000	52,117,000	43.0
Furniture, Home Furnishings, Equipment	26,857,000	26,218,000	36,937,000	37.5
Eating & Drinking Places	42,113,000	52,181,000	77,728,000	84.6
Drug Stores, Proprietary Stores	12,593,000	19,113,000	28,043,000	122.7
Others	51,115,000	65,989,000	63,648,000	24.5
TOTAL RETAIL ESTABLISHMENTS	\$445,896,000	\$618,867,000	\$873,206,000	95.8

Source: U.S. Census of Business and Sales Management Magazine

Carteret and Middlesex County are experiencing a trend common throughout the State. Newer suburban shopping centers with large modern facilities, adequate parking and other conveniences are attracting shoppers away from the older business centers and neighborhood stores.

To protect the Borough's potential for expanded retail trade, efforts should be made to insure that new and existing shopping areas within Carteret provide a balance of retail types in line with the shopping needs of the area and are designed to minimize traffic congestion and provide adequate parking.

As indicated in the Existing Land Use section, the Borough has limited retail facilities, most of which are inadequately supported by off-street parking and other conveniences for shoppers. The Borough should develop a long range program, in conjunction with the owners of retail businesses, to insure the improvement of these supporting facilities for retail trade.

Only through the concentrated actions of Borough officials and business men can the retail areas in Carteret hope to compete with the modern shopping centers continually being developed in nearby areas.

EMPLOYMENT OF POPULATION

Plate No. 19, "Employment of Population by Industrial or Business Groups", compares the industries in which the labor forces of Carteret and Middlesex County were employed in 1970. At the time of the 1970 U.S. Census of Population, 47.0 percent of Carteret's employed residents worked in manufacturing industries as compared to only 38.9 percent in Middlesex County. The principal industries in Carteret in 1970 were metal, machinery and chemical industries. These three types of manufacturing industries employed 28.0 percent of employed residents in the Borough in 1970.

Plate No. 20, "Employment of Population by Work Type", shows the number and percentage of persons employed by work type in 1970 for Carteret and Middlesex County. Carteret in 1970 had a lower percentage of its populations in professional managerial and other work types that are generally accompanied by higher incomes than did the County. This can generally be attributed to the large concentration of heavy industrial uses located in the Borough, where the bulk of the employees have blue collar jobs. Many of the managerial employees of the large industrial concerns in Carteret reside outside of the Borough.

EMPLOYMENT OF POPULATION
BY INDUSTRIAL OR BUSINESS GROUPS

Carteret and Middlesex County
1970

INDUSTRIAL GROUP	CARTERET		MIDDLESEX COUNTY	
	Number	Percent	Number	Percent
TOTAL EMPLOYED	9,753	100.0	239,940	100.0
Mining & Agriculture	22	.2	1,720	.7
Construction	386	4.0	12,085	5.0
Manufacturing	4,498	47.0	93,218	38.9
1. Durables	2,380	24.9	45,975	19.2
a. Furniture, Lumber & Wood Products	63	.7	780	.3
b. Metal Industries	1,115	11.7	11,048	4.6
c. Transportation Equipment	157	1.6	3,190	1.3
d. Machinery	730	7.6	18,908	7.9
e. Other Durable Goods	315	3.3	12,049	5.1
2. Non-Durables	2,118	22.1	47,243	19.7
a. Food & Kindred Products	152	1.6	3,957	1.6
b. Textile & Apparel Products	388	4.1	7,201	3.0
c. Printing, Publ. & Allied Ind.	130	1.3	3,762	1.6
d. Other Non-Durables	1,448	15.1	32,323	13.5
Non-Manufacturing	4,667	48.8	132,917	55.4
1. Transportation, Comm. & Publ. Ut.	953	10.0	18,529	7.7
2. Wholesale Trade	502	5.3	9,379	3.9
3. Eating & Drinking Places	320	3.3	6,086	2.5
4. Other Retail Trade	985	10.3	28,288	11.8
5. Business & Repair Services	267	2.8	8,072	3.4
6. Personal & Professional Services	965	10.1	41,676	17.4
a. Educational Services	337	3.5	18,097	7.5
7. Public Administration	368	3.8	9,804	4.1
8. Other Non-Manufacturing	307	3.2	11,083	4.6

Source: 1970 U.S. Census of Population

PLATE NO. 20

EMPLOYMENT OF POPULATION BY WORK TYPE

Carteret and Middlesex County
1970

WORK TYPE	CARTERET		MIDDLESEX COUNTY	
	Number	Percent	Number	Percent
Total Employed	9,573	100.0	239,940	100.0
Professional, Technical and Kindred Workers	930	9.7	39,017	16.2
Managers, Officials and Proprietors	547	5.7	18,668	7.8
Clerical and Kindred Workers	1,937	20.2	46,956	19.6
Sales Workers	449	4.7	16,201	6.7
Craftsmen, Foremen and Kindred Workers	1,588	16.6	37,107	15.5
Operatives and Kindred Workers	2,555	26.7	49,955	20.8
Private Household Workers	27	.3	963	.4
Service Workers	974	10.2	21,540	9.0
Laborers	560	5.8	8,837	3.7
Farm Workers	6	.1	696	.3
Private Wage and Salary Workers	8,246	86.1	198,369	82.7
Government Workers	897	9.4	31,471	13.1
Self-Employed	381	4.0	9,426	3.9
Unpaid Family Workers	49	.5	674	.3

Source: 1970 U.S. Census of Population

EMPLOYMENT IN CARTERET

Plate No. 21, "Distribution of Employment, 1966", shows the total employment by zones in Carteret in 1966 and Plate No. 22, "Employment Distribution by Industrial Type", shows a breakdown of the employment by industrial type for each zone on the above mentioned map.

In 1966 there were a total of 6,546 persons employed within Carteret. Of the total, 4,403 persons were employed in manufacturing industries. This accounted for 67.3 percent of all the employment within the Borough. Retail businesses are the second largest employers in the Borough. In 1966 retail trade employed 587 persons, or 9.0 percent of the total employment in Carteret. Government services accounted for 514 employees, representing 7.9 percent of the total employment in the Borough and constituting the third largest type of employer. Review of the Borough and County indicates there are sufficient varieties of job opportunities to adequately accommodate the labor force in Carteret.

MAJOR INDUSTRIAL PLANTS

Plate No. 23, "Major Industries", lists the major industrial companies in the Borough employing over 50 people, indicating their type of product or service and their address. The largest industrial employer in Carteret is the U.S. Metals Refining Company, located on Middlesex Avenue along the Arthur Kill Channel. Other large industrial employers in the Borough include Englehard Industries, FMC Corporation, and Metro Glass Container.

PLATE NO. 22

EMPLOYMENT DISTRIBUTION BY INDUSTRIAL TYPE

Carteret, New Jersey - 1966

<u>Zone</u>	<u>Agric.</u>	<u>Mining</u>	<u>Const.</u>	<u>Mfg.</u>	<u>*T.C.U. Wholesale</u>	<u>Retail</u>	<u>**F.I.R.E.</u>	<u>Services</u>	<u>Gov't.</u>	<u>Totals</u>	
1	0	0	22	0	10	0	63	2	30	243	
2	0	0	57	219	0	0	178	0	30	677	
3	0	0	49	2,379	83	0	55	0	28	2,594	
4	0	0	23	724	248	75	277	64	103	1,684	
5	0	0	0	1,036	53	37	14	0	75	1,250	
6	0	0	0	45	53	0	0	0	0	98	
TOTALS	0	0	151	4,403	447	112	587	66	266	514	6,546

*T.C.U. - Transportation, Communications and Utilities

**F.I.R.E. - Finance, Insurance and Real Estate

Source: Estimates by Middlesex County Planning Board

PLATE NO. 23

MAJOR INDUSTRIES

Carteret, New Jersey

<u>NAME OF INDUSTRY</u>	<u>Product or Service</u>	<u>Employee Class</u>	<u>Address</u>
American Standard	Air Conditioning	251-500	1300 Federal Boulevard
Best Made Company, Inc.	Garment Contractor	51-100	51 Essex Street
H.F. Butler Corporation	Metal Fabricators	51-100	377 Roosevelt Avenue
Carteret Novelty Company	Clothing	51-100	52 Wheeler Avenue
Carteret Products Company	Men's shirts	101-250	652 Roosevelt Avenue
Celotex Corporation	Urethane Foam Building Products	51-100	1000 Blair Road
Continental Can Company, Inc.	Fibre Drum	101-250	400 Blair Road
The Dow Chemical Company	Foam Sheet Meat Trays	51-100	800 Federal Boulevard
Engelhard Industries, Inc.	Jewelry Findings, Settings, Sheet Solder, etc., and Dental Products	251-500	700 Blair Road
FMC Corporation	Industrial Chemicals	251-500	500 Roosevelt Avenue
General American Transportation Corp.	Chemicals and Petroleum Products	101-250	78 Lafayette Street
Metal Goods	Non-ferrous Metals	101-250	Milik Street
Metro Container (Division of Kraftco Corp.)	Glass Containers	251-500	Minue Street

PLATE NO. 23

MAJOR INDUSTRIES
continued

<u>NAME OF INDUSTRY</u>	<u>Product or Service</u>	<u>Employee Class</u>	<u>Address</u>
Reichold Chemicals, Inc.	Plastics	101-250	Middlesex Avenue
Rex Packaging Co. (Division of Standard International Corp.)	Paper & Polyethylene Bags	101-250	10 Minue Street
U.S. Metals Refining Company	Refiners, Smelters of Non-ferrous Metals	1001-2000	400 Middlesex Avenue
Wilgreen Industries, Inc.	Electronic Connectors	51-100	500 Millik Street
Ichabod T. Williams & Sons	Hardwood Lumber and Veneers	51-100	Roosevelt Avenue

Source: 1972 Middlesex County Industrial Directory

FINANCIAL ANALYSIS

One of the primary limitations in a municipality's ability to implement the proposals of a Master Plan is its financial capacity. Recommendations for improvements have little meaning unless they are financially realistic. Whether improvements are to be financed from current revenue sources or through the issuance of municipal bonds, there are both practical and legal limitations to the Borough's capacity for public expenditure. An important part of the planning process is to develop fiscal policies that meet the growing demand for services without resulting in wide fluctuations in the tax rate.

This section of the Master Plan reviews the current situation and past trends in local revenue, expenditures, allocation of property taxes and bonding capacity to provide basis for projecting the future fiscal needs and capabilities. Sound Capital Improvement Programming requires a full understanding of the fiscal picture within the Borough of Carteret.

EXPENDITURES

The Borough's total expenditures include not only those funds spent for municipal purposes, but also expenditures required for school and county purposes. Between 1960 and 1969 total local expenditures in the Borough of Carteret rose from \$3,298,220 to \$6,309,861, which represents an increase of \$3,011,641 or 91.3 percent. Plate No. 24, "Trends in Total Expenditures", shows the costs for school, municipal and county purposes for each year from 1960 to 1969.

A. School Costs

Local expenditures for school costs increased \$1,746,310, or 169.1 percent, from \$1,032,806 in 1960 to \$2,779,116 in 1969. The increase in school costs since 1960 can be attributed to a combination of (1) debt service payments on facilities constructed since 1960, (2) increases in the number of students and faculty, and (3) increased salaries and operating costs. In 1960 school costs represented 31.3 percent of total expenditures. In 1969 the percentage of school costs as related to total costs had risen to 44.0 percent. These figures for school costs include only those costs for which revenues were raised from the local property tax.

PLATE NO. 24

TRENDS IN TOTAL EXPENDITURES

Borough of Carteret

YEAR	MUNICIPAL COSTS		SCHOOL COSTS		COUNTY COSTS		TOTAL	
	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT
1960	1,749,772	53.1	1,032,806	31.3	515,642	15.6	3,298,220	
1961	1,837,303	53.3	1,162,408	33.8	443,877	12.9	3,443,588	
1962	1,880,677	52.3	1,230,111	34.3	481,848	13.4	3,592,636	
1963	1,921,910	49.5	1,371,060	35.3	588,784	15.2	3,881,754	
1964	1,904,751	45.4	1,629,430	38.9	656,624	15.7	4,190,805	
1965	1,907,405	42.1	1,891,290	41.7	734,587	16.2	4,533,282	
1966	2,327,612	46.8	2,017,860	40.5	630,748	12.7	4,976,220	
1967	2,228,433	42.6	2,203,130	42.2	793,024	15.2	5,224,587	
1968	2,399,364	42.4	2,397,570	42.3	864,785	15.3	5,661,719	
1969	2,609,477	41.4	2,779,116	44.0	921,268	14.6	6,309,861	

Expenditures covered by revenues paid directly to the Board of Education, such as State and Federal Aid to schools and tuition payments, are not included in these cost figures as these funds are not raised directly from revenue paid to the Borough. Since the budget year for the Board of Education differs from the budget year of the Borough, allocations of these other school revenue sources can not be accurately added to the Borough's fiscal year.

During the 1969-70 school year the Board of Education estimated their total expenditures at \$3,689,782, of which \$2,964,669 was to be raised from local property taxes and \$725,113 was to be raised from other revenue sources. These other anticipated revenue sources included \$708,913 in State Aid, \$2,000 in Federal Aid, \$7,200 in tuition payments, and \$7,000 in fees for special evening education.

B. County Costs

Carteret's share of Middlesex County taxes grew from \$515,642 in 1960 to \$921,268 in 1969, an increase of \$405,626 or 78.7 percent. County costs have represented a relatively constant percentage of total expenditures, ranging from a low of 12.7 percent in 1966 to a high of 16.2 percent in 1965. In 1960 County costs represented 15.6 percent of total expenditures as compared to 14.6 percent in 1969.

In 1969 Middlesex County collected a total of \$22,607,821 from the local property taxes of the 25 municipalities in the County. Carteret's taxes of \$921,268 for County purposes represented 4.1 percent of the total County tax requirements.

C. Local Purpose Expenditures

Expenditures for municipal facilities and services increased \$859,705, or 49.1 percent, from \$1,749,772 in 1960 to \$2,609,477 in 1969. Although local purpose expenditures rose substantially during this period, they showed a decrease as a percentage of total expenditures. In 1960 local purpose expenditures represented 53.1 percent of total expenditures as compared to only 41.4 percent in 1969.

Plate No. 25, "Local Purpose Expenditures by Major Governmental Functions", illustrates the increase in municipal purpose expenditures by various governmental activities. The largest increase in local public expenditures since 1960 has occurred in Public Safety costs which rose \$340,605, or 39.6 percent of the \$859,705 increase in total purpose expenditures. This increase is primarily the result of a larger police force and increased salaries for policemen and firemen. Other substantial increases were \$199,165 in General Government, \$114,687 in Sanitation and \$107,128 in Recreation and Non-School Educational costs.

REVENUES

Municipal revenues are derived from six major sources:

1. Current Property Tax Collections
2. Delinquent Property Taxes
3. Surplus Appropriations from the Previous Year
4. Miscellaneous Revenues
5. Business Personal Property Taxes
6. State Aid

Carteret's total revenues have increased \$3,082,914, or 93.0 percent, from \$3,313,415 in 1960 to \$6,396,329 in 1969. Plate No. 26, "Trends in Total Revenues", indicates the changes in total revenues from 1960 to 1969, as well as the changes in each of the six major categories for sources of revenue.

Current property taxes represents the greatest source of revenue for the Borough, as is common in most New Jersey municipalities. In 1960 current property taxes accounted for \$2,886,213, or 87.1 percent of all revenues, while in 1969 they increased to \$4,821,596. However, in 1969 current property taxes represented only 75.4 percent of total revenues. Prior to 1968 current property taxes represented a fairly constant percentage of total revenues, ranging between a low of 86.2 percent and a high of 89.2 percent. In 1968, the enactment of State legislation permitting municipalities to collect local business personal property taxes provided a new revenue source of \$679,007 to the Borough, thereby reducing the percentage of total revenues that had to be raised by current property taxes.

Revenues from delinquent tax payments have ranged between a low of \$53,467 in 1964, or 1.2 percent of total revenue, to a high of \$164,111 in 1968, or 2.8 percent of total revenues.

Revenues from surplus appropriations have fluctuated during this period depending largely upon the adequacy of budget estimates for the preceding year.

PLATE NO. 25

LOCAL PURPOSE EXPENDITURES
BY MAJOR GOVERNMENTAL FUNCTIONS

Borough of Carteret
1960 and 1969

	1960		1969		AMOUNT CHANGE 1960 - 1969
	AMOUNT	% OF TOTAL	AMOUNT	% OF TOTAL	
General Government	157,910	9.0	357,075	13.7	199,165
Public Safety	393,295	22.5	733,900	28.1	340,605
Streets & Roads	202,225	11.6	202,550	7.8	325
Sanitation	239,213	13.7	353,900	13.5	114,687
Health & Welfare	70,260	4.0	106,500	4.1	36,240
Recreation & Education (Excluding Schools)	106,872	6.1	214,000	8.2	107,128
Capital Improvements	60,000	3.4	70,000	2.7	10,000
Debt Service	344,429	19.7	391,128	15.0	46,699
Deferred Charges, Statutory & Other Expenses	175,568	10.0	180,424	6.9	4,856
TOTAL	1,749,772	100.0	2,609,477	100.0	859,705

PLATE NO. 26

TRENDS IN TOTAL REVENUES

Borough of Carteret

YEAR	CURRENT PROPERTY TAX		DELINQUENT PROPERTY TAXES		SURPLUS APP. FROM PREVIOUS YEARS		MISC. REVENUES		BUSINESS PERSONAL PROP. TAX		STATE AID		TOTAL AMOUNT
	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	
1960	2,886,213	87.1	57,696	1.7	127,600	3.9	232,466	7.0	-	-	9,440	.3	3,313,415
1961	2,986,429	88.4	67,472	2.0	86,613	2.5	228,444	6.8	-	-	9,440	.3	3,378,398
1962	3,261,062	89.6	67,327	1.9	-	-	298,607	8.2	-	-	11,508	.3	3,638,504
1963	3,455,041	87.4	76,641	1.9	89,955	2.3	321,408	8.1	-	-	11,543	.3	3,954,588
1964	3,705,378	88.2	53,467	1.2	100,000	2.4	331,428	7.9	-	-	11,706	.3	4,201,979
1965	3,645,314	86.2	117,344	2.8	112,000	2.6	341,459	8.1	-	-	12,082	.3	4,228,199
1966	4,601,065	89.2	153,424	3.0	-	-	394,696	7.6	-	-	11,179	.2	5,160,364
1967	4,630,295	87.9	95,427	1.8	58,000	1.1	424,143	8.0	-	-	61,987	1.2	5,269,852
1968	4,442,974	74.7	164,111	2.8	120,000	2.0	521,498	8.7	679,007	11.4	22,739	.4	5,950,329
1969	4,821,596	75.4	142,751	2.2	225,850	3.6	428,562	6.7	679,007	10.6	98,563	1.5	6,396,329

NOTE: The above Revenues do not include revenues paid directly to the Board of Education, such as State and Federal Aid to schools and Tuition payments.

In 1962 and 1966 there were no surplus appropriations from the previous year's budget, while in 1969 the surplus appropriation amounted to \$225,850 or 3.6 percent of total revenues.

Miscellaneous revenues, comprised of income from licenses, fees and permits, fines and court costs, interest and cost on delinquent taxes, franchise taxes, gross receipt taxes and other miscellaneous sources, has increased as a source of revenue from \$232,466 in 1960 to \$428,562 in 1969. In 1969 the largest sources of miscellaneous revenues were \$168,942 in gross receipts taxes and \$149,925 in franchise taxes.

State Aid, exclusive of the State Aid paid to the Board of Education, has not been a major revenue source in the Borough. Even with the addition of \$81,090 in State Aid from the Sales Tax in 1969, State Aid only amounted to \$98,563, or 1.5 percent of total revenues.

The total increase in revenues from the six major sources since 1960 is as follows:

	INCREASE IN REVENUE 1960-69	PERCENT OF TOTAL INCREASE 1960-69
Current Property Taxes	1,935,383	62.8
Delinquent Property Taxes	85,055	2.7
Surplus Appropriations	98,250	3.2
Miscellaneous Revenues	196,096	6.4
Business Personal Property Tax	679,007	22.0
State Aid	89,123	2.9
TOTAL	3,082,914	100.0

PROPERTY TAX RATE

The above table shows that most of the revenues necessary to cover increasing cost of local and county governments and school costs have been derived from current property taxes. Since the construction of new ratables within the Township has not kept pace with the increase in expenditures for local purposes, school and county taxes, these increased revenues from property taxes have resulted in increasing property tax rates. The true tax rate, which is derived by multiplying the property tax rate by the ratio of assessed value to true value of property,

increased 37.8 percent from \$2.30 per \$100 of true property value in 1963 to \$3.17 in 1970. Plate No. 27, "Comparative Tax Rates", shows the 1970 property tax rates, equalization ratio and true tax rates for each of the 25 municipalities in Middlesex County. Carteret's true tax rate is the eleventh lowest in the county in 1970.

PROPERTY TAX ALLOCATIONS

Plate No. 28, "Trends in Property Tax Allocations", shows the amount and percentage of the property tax levy utilized to cover local, school and county costs and veteran and senior citizen tax deductions in the years from 1960 to 1969. The portion of the property tax levied for local purpose functions dropped from 48.0 percent in 1960 to 25.2 percent in 1969. The tax levied for local purpose expenditures in 1969 was \$1,295,816. Since local purpose expenditures in 1969 amounted to \$2,609,477, the additional amount of \$1,313,661 had to be raised from revenue sources other than the property tax. The actual revenue from sources other than the property tax in 1969 amounted to \$1,574,734, or over \$260,000 more than required to meet the local purpose budget expenditures. At the present time over half the cost of municipal facilities and services, exclusive of schools, is supported from revenues other than the property tax.

The percentage of the property tax allocated to school purposes has risen from 34.7 percent in 1960 to 54.1 percent in 1969. The actual school tax levied during that period has risen from \$1,032,806 in 1960 to \$2,779,116 in 1969.

Since 1960 county taxes have represented between 14.2 and 18.3 percent of the total tax levy. The tax levied to cover property tax deductions for veterans and senior citizens has remained fairly constant at about \$145,000 since this tax levy was introduced in 1964.

Plate No. 28, indicates that school costs are requiring an increasing proportion of the local property taxes, even though the amount of State and Federal Aid to schools has increased during the last few years.

The total property tax levy has increased from \$2,975,746 in 1960 to \$5,138,310 in 1969, an increase of \$2,162,564 or 72.7 percent. Increases in the school tax have amounted to \$1,746,310 or 80.8 percent of this total increase.

PLATE NO. 27

COMPARATIVE TAX RATES, 1972

Middlesex County

<u>MUNICIPALITY</u>	<u>1972 TAX RATE PER \$100 ASSESSED VALUATION</u>	<u>EQUALIZATION RATIO %</u>	<u>TRUE TAX RATE</u>	<u>RANK IN COUNTY (Low to High)</u>
Carteret	\$ 8.49	36.46	3.0955	13
Cranbury	7.32	37.37	2.7355	7
Dunellen	10.80	33.30	3.5964	21
East Brunswick	9.33	36.35	3.3195	16
Edison	5.89	50.00	2.9450	9
Helmetta	8.35	31.22	2.6069	3
Highland Park	8.71	50.00	4.3550	24
Jamesburg	10.55	37.22	3.9267	23
Madison	8.81	50.00	4.4050	25
Metuchen	11.53	29.37	3.3864	17
Middlesex	9.37	32.39	3.0349	12
Milltown	7.08	36.88	2.6111	4
Monroe	9.13	29.69	2.7107	6
New Brunswick	8.70	41.38	3.6001	22
North Brunswick	5.27	50.00	2.6350	5
Perth Amboy	8.50	39.94	3.3949	18
Piscataway	10.80	32.99	3.5629	20
Plainsboro	4.74	33.46	1.5860	1
Sayreville	7.59	31.99	2.4280	2
South Amboy	8.96	32.45	2.9075	8
South Brunswick	9.36	37.37	3.4978	19
South Plainfield	7.73	41.32	3.1940	14
South River	9.74	33.00	3.2142	15
Spotswood	9.69	30.96	3.0000	10
Woodbridge	7.66	39.35	3.0142	11

PLATE NO. 28

TRENDS IN PROPERTY TAX ALLOCATION

Borough of Carteret

YEAR	LOCAL PURPOSE TAX		LOCAL SCHOOL TAX		COUNTY TAX		VETERAN & SENIOR CITIZEN DEDUCTIONS		TOTAL
	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	TAX LEVIED
1960	1,427,298	48.0	1,032,806	34.7	515,642	17.3	-	-	2,975,746
1961	1,522,892	48.7	1,162,408	37.1	443,877	14.2	-	-	3,129,177
1962	1,631,489	48.8	1,230,111	36.8	481,848	14.4	-	-	3,343,448
1963	1,579,740	44.6	1,371,060	38.7	588,784	16.7	-	-	3,539,584
1964	1,505,570	38.2	1,629,430	41.4	656,624	16.7	147,550	3.7	3,939,174
1965	1,725,300	38.4	1,891,290	42.0	734,587	16.3	146,620	3.3	4,497,797
1966	2,191,860	43.9	2,017,860	40.6	630,748	12.6	147,570	2.9	4,988,038
1967	1,864,389	37.2	2,203,130	44.1	793,024	15.8	147,040	2.9	5,007,583
1968	1,320,210	27.9	2,397,570	50.7	864,785	18.3	144,310	3.1	4,726,875
1969	1,295,816	25.2	2,779,116	54.1	921,268	17.9	142,110	2.8	5,138,310

NOTE: School costs shown in the above table represent only those costs paid from the local property tax and do not include costs paid from other reserve sources such as State and Federal Aid and Tuitions paid directly to the Board of Education.

BORROWING CAPACITY

State law, according to Title 40, Chapter 2 as amended June 23, 1964, allows a municipality to incur a maximum net debt for municipal bonds equal to three and one-half percent of the "Equalized Valuation Basis". The Equalized Valuation Basis is calculated by taking the average of all real property for the past three years plus the assessed value of Second Class Railroad Property.

The debt limit for school bonds is normally set at four percent of the Equalized Valuation Basis. However, State law will permit the school debt to exceed four percent if the sum of school and municipal net debts does not exceed seven and one-half percent of the Equalized Valuation Basis. Borrowing in excess of this amount requires prior approval from the New Jersey Division of Local Finance.

In 1972 the Equalized Valuation Basis for Carteret was \$182,062,966. The total debt limit for the Borough was \$13,654,722, or 7.5 percent of the Equalized Valuation Basis. The municipal debt limit in 1972 was \$6,372,204, or 3.5 percent of the Equalized Valuation Basis.

At the end of 1972 Carteret had a gross debt of \$7,092,095, of which \$2,867,000 was in school debts, and \$4,225,095 was in municipal debts. However, \$170,000 of the municipal debt was for bonds to cover the Borough's cash share of Urban Renewal costs and was not chargeable against the net municipal debt. Therefore, the net municipal debt at the end of 1972 was \$4,055,095, leaving an unused borrowing capacity of \$2,317,109 for municipal bonds.

The four percent of the debt limit applicable to school bonds provides a borrowing capacity of \$7,282,519. Therefore, an additional school borrowing capacity of \$4,415,519 was available at the end of 1972.

CIRCULATION AND TRANSPORTATION

The production and ownership of automobiles and other motor vehicles has increased at such a rapid rate in the United States that municipalities, counties and states, particularly urban states such as New Jersey, have experienced monumental problems in providing the necessary thoroughfares and traffic controls to enable vehicles to travel with relative speed and safety. Planning for future circulation and transportation needs must not only take into consideration future traffic volumes, but must also evaluate changing patterns in the modes of travel and the design of motor vehicles. Many present day automobiles are designed to travel at speeds far in excess of the design standards of existing highways or the competence of the average driver. The provision of expressways for high speed automobile travel requires wide rights-of-way which are not presently available within urban areas.

In providing future traffic arteries, the advantages of increased ease in traffic flow must be weighed against safety and cost factors. In urban areas, mass transportation facilities which make possible the transportation of large numbers of people to and from city centers should be increased and improved to alleviate the congestion of streets and highways caused by the use of motor vehicles for the purpose of commuting to and from work and/or shopping.

REGIONAL HIGHWAYS

The regional highway system directly affects local traffic patterns and the function of local streets. Local thoroughfares not only accommodate local circulation but also act as feeder streets which carry traffic to and from the regional highways. Since local traffic patterns will be affected by the regional highway system, it is important that the existing and proposed highway networks be considered in the development of future local street improvements.

Plate No. 29 "Regional Highways", shows the position of Carteret in relation to the present and future major highway routes.

The only major highway passing through Carteret is the New Jersey Turnpike. Almost all of the long-haul regional traffic to and from the Borough of Carteret utilizes the New Jersey Turnpike. The section of the Turnpike that passes through Carteret is part of Interstate Route 95 which, when completed, will service the east coast of the United States from Florida to Maine. The Turnpike through Carteret has been widened from its original six lanes to twelve lanes to provide for increasing traffic volumes.

While the Turnpike is beneficial to Carteret in terms of regional vehicular access, it creates a physical barrier between the western and eastern portions of the Borough. This physical barrier, which is crossed only by Roosevelt Avenue, impedes the flow of traffic within the Borough itself and makes access for municipal services more difficult.

Other than Roosevelt Avenue, the closest interchanges on the Turnpike are over four miles away in Woodbridge to the south, and in Elizabeth to the north. For this reason many trucks traveling from the industrial areas in both Carteret and Woodbridge utilize Roosevelt Avenue for access to the Turnpike Interchange in Carteret. This heavy truck traffic hinders flows on Roosevelt Avenue and creates a blighting influence on adjoining residential and commercial uses.

The only other access routes between Carteret and areas outside the Borough are Randolph Avenue, which becomes Roosevelt Avenue as it enters the northwestern portion of Carteret, and the Woodbridge-Carteret Road, which becomes Roosevelt Avenue as it enters the southeastern portion of the Borough. Randolph Avenue intersects U.S. Route 1 at the Rahway-Woodbridge boundary line, and the Woodbridge-Carteret Road connects with State Route 35 and U.S. Route 1 in Woodbridge southwest of the Borough.

Therefore, the regional highways that carry vehicles to and from Carteret are the New Jersey Turnpike, U.S. Route 1 and State Route 35. Virtually all of the traffic between these highways and Carteret utilize portions of Roosevelt Avenue.

TRAFFIC VOLUMES

Plate No. 30, "Traffic Volumes, 1969", shows the 1969 traffic volumes on the major highways in the vicinity of Carteret.

The plate indicates that the primary direction of traffic flow in the vicinity of Carteret is between the northeast and southwest or, in terms of major metropolitan areas, between New York and Philadelphia.

Less than five miles to the southwest of the Borough is the area in which the major north-south traffic volumes of New Jersey converge. Vehicular traffic between Northeastern New Jersey and New Brunswick, Trenton, Philadelphia and the New Jersey coastal communities is principally carried on the New Jersey Turnpike, the Garden State Parkway and U.S. Routes 1 and 9, all of which converge in Woodbridge Township. In the area where they converge, these four major highways carried a total 1969 average daily traffic volume of over 250,000 vehicles.

The remainder has been financed by local funds and by an appropriation of the State of New Jersey to the Department of Community Affairs as part of the Cooperative Governmental Planning Program.



LEGEND

— Existing
 - - - Proposed

MASTER PLAN

CARTERET, MIDDLESEX COUNTY, NEW JERSEY

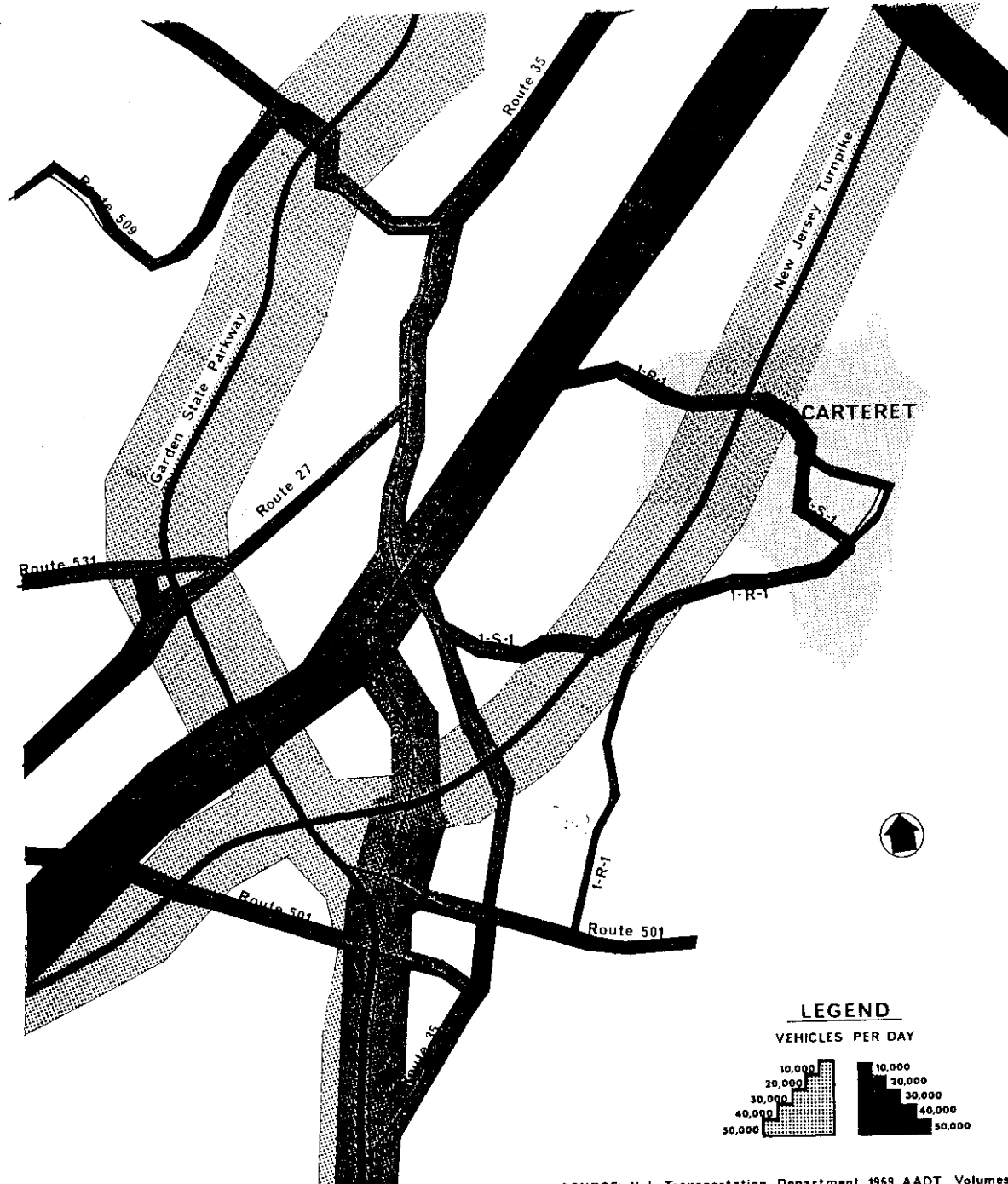
0 1 2 3 4 5 6 MILES

KEHAYAS ASSOCIATES, INC. SOMERSET, NEW JERSEY

PLATE NO.

29

JULY, 1970



LEGEND
VEHICLES PER DAY



SOURCE: N.J. Transportation Department 1969 AADT Volumes

MASTER PLAN

BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY

0 1/4 1 1 1/4 2 2 1/4 3 MI.

KEHAYAS ASSOCIATES, INC.

SOMERSET, NEW JERSEY

TRAFFIC VOLUMES
1969

PLATE NO.

30

JULY, 1970

Within Carteret, the New Jersey Turnpike carried 1969 average daily traffic volumes of 85,800 vehicles north of the interchange and 79,100 vehicles south of the interchange. Therefore, the flow of traffic between the Carteret interchange and areas to the north is an average of 6,700 vehicles per day greater than the flow between the Carteret interchange and areas to the south.

In 1965 the Carteret Interchange handled 3,017,607 vehicles entering and leaving the Turnpike. Of this total, 2,581,784, or 85.6 percent, were automobiles and 435,823, or 14.4 percent, were trucks or buses. This amounts to an average of 8,267 vehicles per day that utilized the interchange in 1965.

In 1969 the number of motor vehicles entering and leaving the Turnpike at the Carteret Interchange increased to a total of 4,047,918 vehicles. Of this total, 3,277,988, or 81.0 percent, were automobiles and 769,930, or 19.0 percent, were trucks or buses. This amounts to an average of 11,095 vehicles per day that utilized the interchange in 1969.

Since the average daily traffic volume on the New Jersey Turnpike in 1969 was 6,700 vehicles greater to the north of the Carteret Interchange than to the south, it can be assumed that, of the 11,095 vehicles entering or leaving the Turnpike, approximately 8,895 vehicles were traveling between Carteret and areas to the north, and only 2,200 were traveling between Carteret and areas to the south. Therefore, over 80 percent of the traffic utilizing the Carteret Interchange on the Turnpike has an origin or destination north of Carteret. This heavy traffic flow between Carteret and areas to the north demonstrates the strong ties that exist between the Borough and urban areas of New York and Newark, particularly in terms of employment.

The 1969 average daily traffic volumes on Roosevelt Avenue were 13,780 vehicles in the northwestern portion of the Borough at Blair Road, and 13,450 in the southeastern portion of the Borough at the Woodbridge Township line.

TRAFFIC ACCIDENTS

Although a primary cause of traffic accidents is negligence on the part of motor vehicle operators, other factors such as poor sight distance, inadequate traffic controls and poorly designed or maintained streets also contribute to the cause of accidents. A review of the history of traffic accidents within a community often reveals problem locations where improvements should be considered. Streets and street intersections having large numbers of accidents usually have physical design problems that should be corrected.

During the one year period from June 1, 1969 to May 31, 1970 there were a total of 555 accidents which were reported within the Borough of Carteret. The breakdown for these 555 accidents by type of accident is as follows:

<u>Type of Accident</u>	<u>Number</u>	<u>Percent of Total</u>
2 or more moving vehicles (involving automobiles only)	219	39.5
2 or more moving vehicles (involving at least one truck or bus)	45	8.1
Moving vehicle and stopped vehicle	48	8.6
Moving vehicle and parked vehicle	159	28.6
Moving vehicle and pedestrian	20	3.6
Moving vehicle and bicycle	5	.9
Moving vehicle and motorcycle	2	.4
Moving vehicle and fixed object	53	9.5
Motor vehicle and train	3	.5
Parked auto and falling tree	1	.2
TOTAL	555	100.0

The relatively high number of accidents involving parked motor vehicles can be attributed largely to the extensive amount of on-street parking within the Borough, particularly on narrow, heavily traveled streets such as Roosevelt and Washington Avenues.

A total of 289 accidents, over half the accidents during this period of 1969-1970, involved only one moving vehicle. Such a high concentration of accidents involving only one moving vehicle usually reflects a congested situation where traffic arteries are either overcrowded or hindered by narrow widths and vehicles parked on the street. The 48 accidents involving stopped motor vehicles generally occurred where motor vehicles were stopped at an intersection for a stop sign, traffic light or waiting to make a turn.

Time of day is a factor in the frequency of accidents. The heaviest concentration of accidents usually occurs during the hours of heaviest traffic volumes. In Carteret the period of heaviest traffic volumes is between 3 and 6 in the afternoon. From June 1, 1969 to May 31, 1970, a total of 115 accidents, or 20.7 percent of the total 555 accidents, occurred during the three hour afternoon period. The accidents in Carteret during this period of 1969-1970 are listed below by the time of day at which they occurred.

<u>TIME</u>	<u>No. of Accidents</u>	<u>TIME</u>	<u>No. of Accidents</u>
12 Mid.-3 A.M.	49	12 Noon-3 P.M.	78
3 A.M.-6 A.M.	16	3 P.M.-6 P.M.	115
6 A.M.-9 A.M.	55	6 P.M.-9 P.M.	79
9 A.M.-12 Noon	70	9 P.M.-12 Mid.	63

Other principal causes of accidents are poor weather conditions and wet or icy road surfaces. From June 1, 1969 to May 31, 1970 there were 179 accidents, or approximately 32 percent of the total 555 accidents, that occurred when the weather was inclement or the road surface was not dry. Of these, 73 occurred when the road surface was icy or snow covered, 105 occurred when the road surface was wet and one occurred on a dry surface during foggy weather.

In municipalities such as resort communities, the time of year has a significant effect on the number of accidents, since traffic volumes increase substantially during the seasons in which the resort facilities are utilized. In Carteret traffic volumes are not appreciably affected by the time of year and consequently there is no distinct difference in the number of traffic accidents reported for the various seasons of the year. The number of accidents during each of the twelve months in the 1969-1970 period are listed below:

<u>Month</u>	<u>No. of Accidents</u>	<u>Month</u>	<u>No. of Accidents</u>
June, 1969	44	December, 1969	47
July, 1969	47	January, 1970	60
August, 1969	43	February, 1970	41
September, 1969	39	March, 1970	51
October, 1969	38	April, 1970	22
November, 1969	51	May, 1970	63

The large difference between the number of accidents that occurred in April and May of 1970 is apparently coincidental. During 1969 the number of accidents that occurred were not significantly different for April (37 accidents) and May (44 accidents).

While weather conditions, traffic volumes and time of day affect the frequency of accidents, they do not, generally, have a significant effect on the location of accidents. Usually, locations prone to accidents because of poor sight distance, inadequate traffic controls and poorly designed or maintained streets become much more of a traffic hazard during nighttime hours, in heavy traffic volumes and when road surfaces are wet, icy or snow covered.

Plate No. 31, "Traffic Accidents", shows the location of the accidents that occurred in Carteret between June 1, 1969 and May 31, 1970. In the following text the areas where the largest concentration of accidents occurred are analyzed in terms of the physical street or control problems that exist.

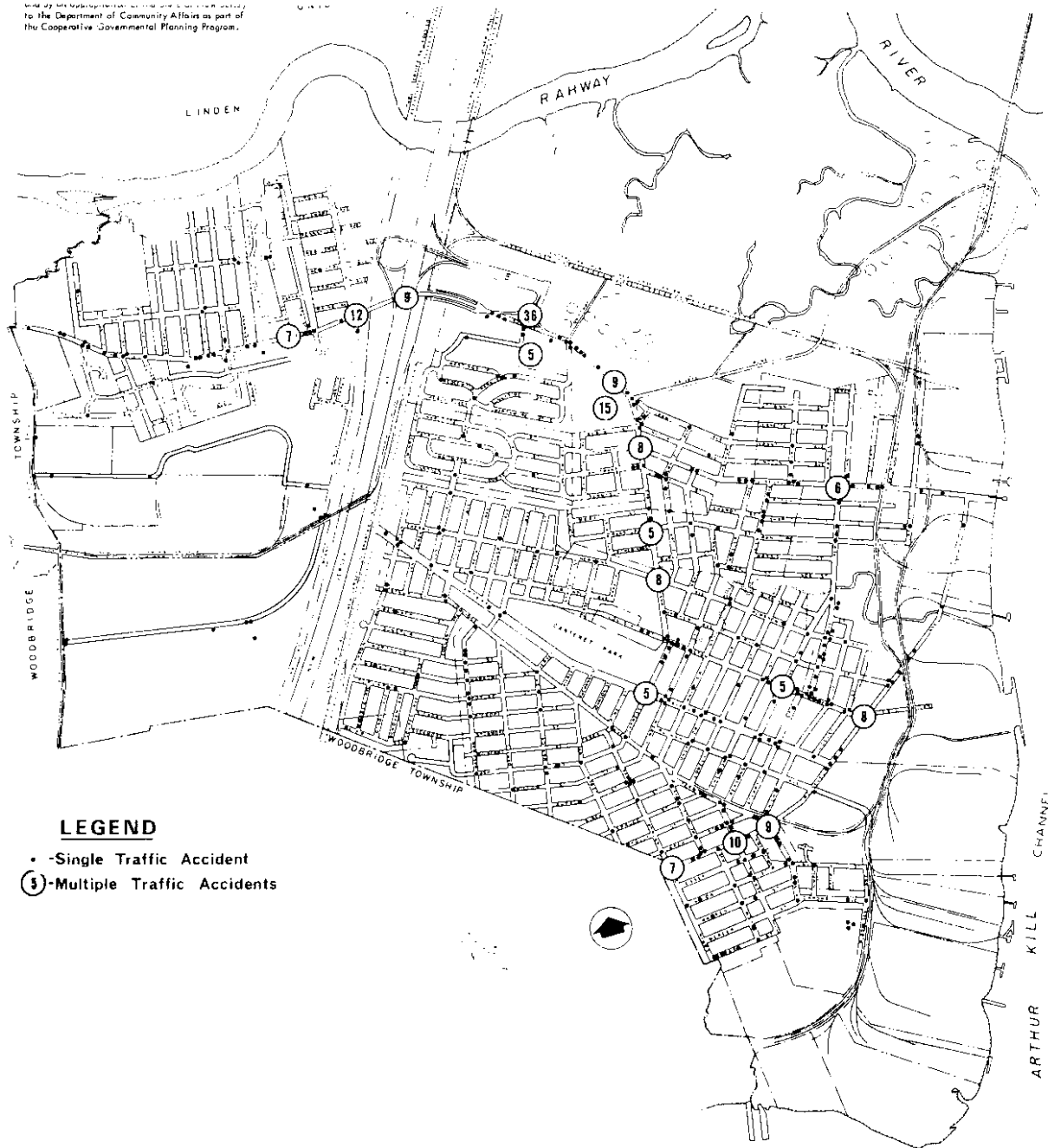
A. Streets - The streets that had the highest number of accidents between June 1, 1969 and May 31, 1970 are reviewed below. The number of accidents indicated for each street shows the number of accidents that occurred on the street as well as accidents that occurred at or within 100 feet of intersections on the street.

1. Roosevelt Avenue - There were 203 accidents, or 36.6 percent of the total number of accidents in the Borough, that occurred on Roosevelt Avenue or at the intersections of other streets with Roosevelt Avenue. The portion of Roosevelt Avenue between Blair Road and Grant Avenue accounted for 111 of these accidents; the portion between Grant Avenue and the turn in the roadway near the Arthur Kill Channel accounted for 37 of the accidents; and the remainder of Roosevelt Avenue through the southeastern portion of the Borough accounted for 55 of the accidents.

Among the factors that contribute to accidents on Roosevelt Avenue are heavy traffic volumes, the intermingling of automobiles and truck traffic, on-street parking, the narrow roadway width, the numerous intersections and the direct access permitted to many abutting uses.

2. Washington Avenue - There were a total of 65 accidents on Washington Avenue and its intersections. The highest concentration of accidents (39) occurred on the portion of Washington Avenue between the high school and Roosevelt Avenue in the southern portion of the Borough.

Among the principal factors that contribute to accidents on Washington Avenue are heavy traffic volumes, on-street parking, narrow roadway width, and the numerous intersections.



LEGEND

- - Single Traffic Accident
- (3) - Multiple Traffic Accidents

SOURCE: Carteret Police Department

MASTER PLAN

BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY
2400 1600 800 0 1600 2400 FT.

KEHAYAS ASSOCIATES, INC. SOMERSET, NEW JERSEY

TRAFFIC ACCIDENTS

PLATE NO.

31

JULY, 1970

3. Carteret Avenue - There were a total of 33 accidents that occurred on Carteret Avenue and its intersections. The section of Carteret Avenue between the high school and Roosevelt Avenue accounted for 25 of these accidents.

Among the principal factors contributing to accidents on Carteret Avenue are heavy traffic volumes and the numerous intersections.

- B. Intersections - Below are listed the fifteen intersections within Carteret that had five or more accidents at or within 100 feet of the intersection during the period from June 1, 1969 to May 31, 1970.

<u>INTERSECTION</u>	<u>NO. OF ACCIDENTS</u>
Roosevelt Avenue and Tumpike I terchange	36
Roosevelt Avenue and Minue Street	12
Roosevelt Avenue and Pershing Avenue (in Chrome Area)	10
Roosevelt Avenue and Hudson Street	9
Roosevelt Avenue and shopping center entrance	9
Roosevelt Avenue and Tumpike Bridge	9
Roosevelt Avenue and Washington Street (southern intersection)	8
Roosevelt Avenue and Washington Street (northern intersection)	8
Washington and Hermann Avenues	8
Roosevelt and Arthur Avenues	7
Roosevelt Avenue and Clauss Street	7
Roosevelt and Pershing Avenues (northern intersection)	6
Washington and Pershing Avenues	5
Washington Avenue and Randolph Street	5
Carteret Avenue and Cypress Street	5

Relatively high traffic volumes, large numbers of turning movements and poor sight distance are among the factors that contribute to accidents at these intersections. The intersection between Roosevelt Avenue and the New Jersey Tumpike entrance is inadequately designed to handle the traffic volumes that pass through that location.

EXISTING STREET SYSTEM

To properly analyze the street system in Carteret, it is necessary to classify each street according to the function it performs or should perform. Once classified, a street can then be rated as to its effectiveness in performing its in-

tended function. The various types of street classifications and the functions of each type of street are reviewed below.

1. Freeways or Expressways - Freeways or expressways are high speed, high capacity, limited access highways, devoted entirely to the movement of motor vehicles and which provide no direct access to abutting properties. They generally traverse large areas, and often an entire state, and connect with freeways of adjoining states.

Design features of freeways or expressways include the separation of opposing traffic lanes by a continuous center barrier or median strip, and full access control and grade separation of intersections or interchanges, which are generally widely spaced. Freeways usually have right-of-way widths of 150 to 300 feet, carry multiple lanes of traffic in each direction, and are generally designed for a capacity of between 1,000 and 1,500 vehicles per lane per hour. The New Jersey Turnpike is an example of a freeway that passes through the Borough.

2. Primary Arterial Roads - Primary arterial roads serve as major feeder roads to and from the freeway system and carry major movements of traffic between the principal traffic generators in a region. In areas such as Middlesex County, where the freeway system is incomplete, they also act as carriers for major regional traffic flows.

Primary arterial roads usually have four or more traffic lanes and provide direct access to abutting property, a secondary function which interferes with the flow of traffic. They often intersect at grade and utilize timed traffic signals, center barriers, jughandle interchanges and lane markings to facilitate traffic flow. The minimum right-of-way width of a primary arterial road should be 80 feet, with 120 feet being a desirable right-of-way width.

There are presently no roads within Carteret that could be classified as primary arterial roads. Examples of primary arterials that connect with roads providing access to the Borough are U.S. Route 1 and State Route 35.

3. Secondary Arterial Roads - Secondary arterial roads generally connect collector streets with primary arterial roads and freeways and often act as alternate routes for primary arterial roads. Like primary arterial roads, they are characterized by direct land access and grade intersections, but carry less traffic and often have only one traffic lane in each direction.

Secondary arterial roads should have a minimum right-of-way width of 66 feet, with two traffic lanes in each direction. Where possible, a desirable right-of-way width for a secondary arterial road is 100 feet.

In developed areas such as Carteret it is often infeasible or too expensive to acquire additional lands to widen or construct secondary arterial roads at 100 foot right-of-way widths.

Examples of secondary arterial roads in Carteret are Roosevelt, Washington, Pershing and Cooke Avenues, Blair Road, the portion of Carteret Avenue between Cypress Street and Roosevelt Avenue, and the portion of Cypress Street between Washington and Carteret Avenues.

4. Major Collector Streets - Major collector streets supplement the arterial road system and are intended primarily for inter-neighborhood traffic and as feeder roads into industrial and commercial areas. As a general rule, major collector streets are not continuous over long distances and, therefore, carry mostly short-trip traffic. Where major collector streets carry relatively high traffic volumes or service industrial or commercial areas, a desirable right-of-way width is 80 feet.

Examples of streets in Carteret that serve as major collectors are Carteret Avenue west of Cypress Street, Cherry Street, Hermann Avenue, Romanowski Street, Lafayette, Hudson and Union Streets, Middlesex Avenue, Edwin Street, Arthur Avenue, Minue Street, Matthew Avenue, Irving Street and Mercer Street.

5. Local Collector Streets - Local collector streets provide the primary means of access into major residential developments and are intended primarily for the use of neighborhood traffic. Local collector streets should have a minimum right-of-way width of 60 feet.

Examples of streets that serve as local collectors in Carteret are Post Boulevard, Randolph Street between Washington and Pershing Avenues, Poplar Street, Whitman Street, and Harrison Avenue.

6. Local Streets - Local streets have the primary function of providing access to abutting properties. They also serve as easements for the various public utilities and provide light and air to adjacent buildings. Local streets should have a minimum right-of-way width of 50 feet.

Plate No. 32, "Existing Street System", classifies each street within Carteret based on the function it serves or should be serving. The plate also shows the location of all traffic signals, stop signs, yield signs and one-way streets.

PROPOSED STREET IMPROVEMENTS

Plate No. 33, "Proposed Street Improvements", shows the recommendations for improvements to the existing street system in Carteret. These improvements, which are based on the preceding analysis, are discussed below:

1. Roosevelt Avenue and the New Jersey Turnpike Interchange - This location presently has one of the highest traffic accident concentrations in the County of Middlesex. The New Jersey Turnpike Authority is presently undertaking studies for the redesign of the connection between Roosevelt Avenue and the entrance to the New Jersey Turnpike.

The preliminary plans for the redesign of the Turnpike entrance provide for the straightening out of the westbound lanes of Roosevelt Avenue and the installation of a traffic signal. Presently, traffic at this location is controlled only by channelization islands and stop and yield signs.

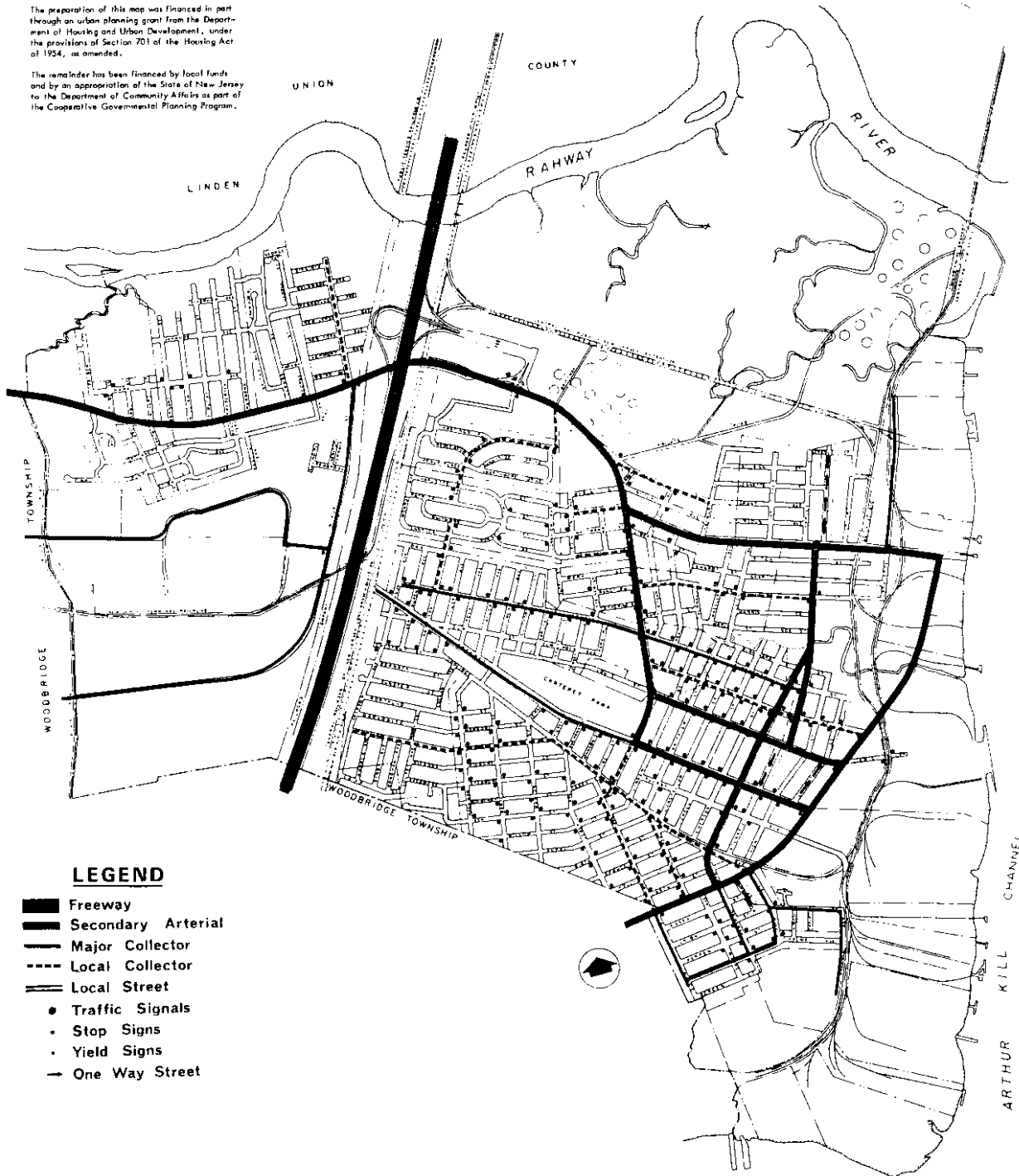
This redesign of the connection between Roosevelt Avenue and the Turnpike entrance provides only a partial solution to the problem at this location. Truck traffic between the Turnpike and the industrial uses along the Arthur Kill is one of the major causes of the hazardous conditions and traffic congestion at this location. The redesign of the connection to the Turnpike on Roosevelt Avenue alone will not remove the problem related to truck traffic at this point.

2. Carteret Industrial Road - In order to remove a substantial portion of the truck traffic that presently utilizes Roosevelt Avenue and the connection to the Turnpike on Roosevelt Avenue, it is recommended that a local Industrial Road be constructed along the right-of-way of the Central Railroad of New Jersey between the Turnpike Interchange and Woodbridge Township in the southeastern portion of the Borough. This proposed roadway would divert truck traffic between the Turnpike Interchange and the industries along the Arthur Kill. The diversion of this truck traffic would relieve traffic congestion not only at the present entrance to the Turnpike, but also on the local street system of the Borough, particularly Roosevelt Avenue.

It is further recommended that the Borough approach Woodbridge Township and the County to provide for the extension of this roadway into Woodbridge Township to connect with the Woodbridge-Carteret Road. Once this entire roadway were completed, all industrial truck traffic to and from Interchange 12 of the Turnpike presently utilizing Roosevelt Avenue and other local streets could be required to travel on this new industrial roadway.

The preparation of this map was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

The remainder has been financed by local funds and by an appropriation of the State of New Jersey to the Department of Community Affairs as part of the Cooperative Governmental Planning Program.



LEGEND

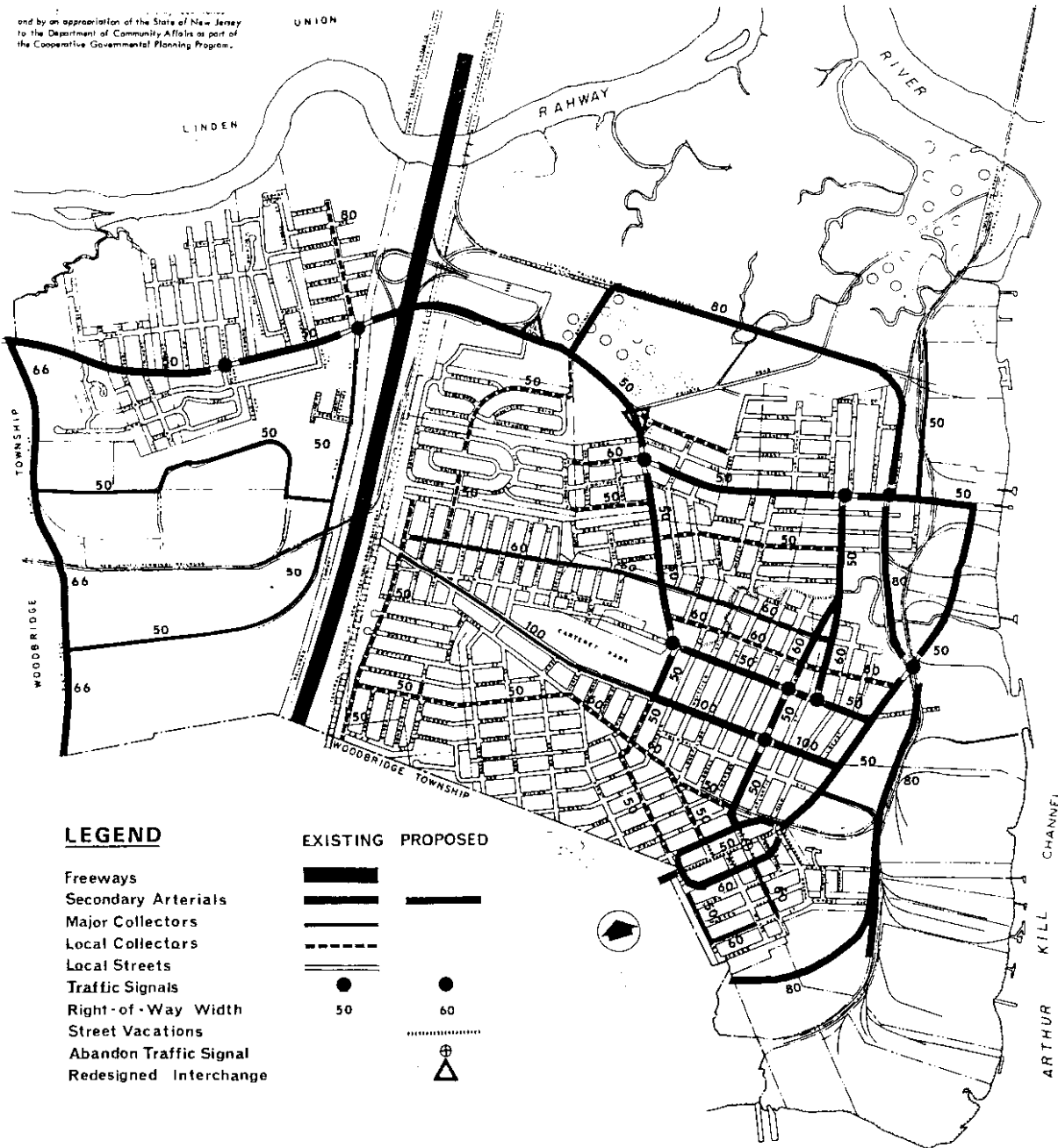
- Freeway
- Secondary Arterial
- Major Collector
- Local Collector
- Local Street
- Traffic Signals
- Stop Signs
- Yield Signs
- One Way Street

SOURCE: Field Survey

MASTER PLAN
BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY
2400 1600 800 0 1600 2400 FT.

**EXISTING STREET
SYSTEM**

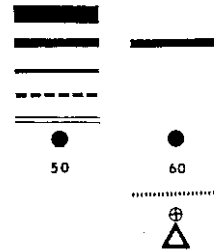
PLATE NO.
32



LEGEND

Freeways
Secondary Arterials
Major Collectors
Local Collectors
Local Streets
Traffic Signals
Right-of-Way Width
Street Vacations
Abandon Traffic Signal
Redesigned Interchange

EXISTING PROPOSED



MASTER PLAN

BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY
2400 1600 800 0 1600 2400 FT.
KEHAYAS ASSOCIATES, INC. SOMERSET, NEW JERSEY

PROPOSED STREET IMPROVEMENTS

PLATE NO.

33

MAY 1973

The construction of the Carteret Industrial Road, which would divert regional truck traffic, is particularly important since the existing intensive development along Roosevelt Avenue and other local streets in the Borough make the widening of these streets to handle greater traffic volumes infeasible.

The construction of the Carteret Industrial Road could be undertaken in two stages. The first stage could involve the construction of the roadway from the Turnpike Interchange to Roosevelt Avenue near Irving Street, and the second stage could involve the construction of the roadway southward to the Woodbridge Township boundary where, hopefully, it would be extended to connect with the Woodbridge-Carteret Road.

Once the first stage of the Carteret Industrial Road is completed, heavy truck traffic could be eliminated from other streets in the Borough. It is recommended that the Borough adopt an ordinance after the completion of the first stage of the Industrial Road designating the following streets as light traffic streets:

- a. Washington Avenue
- b. Pershing Avenue
- c. Carteret Avenue
- d. Irving Street
- e. Roosevelt Avenue (between Grant Avenue and Lefferts Street)

Since Middlesex Avenue has already been extended to connect with Roosevelt Avenue it is recommended that Middlesex Avenue be utilized to handle heavy industrial traffic in the Chrome Area at the present time. To expedite this diversion of truck traffic to Middlesex Avenue, it is recommended that the following streets be designated as light traffic streets within the Chrome Area:

- a. Union Street
- b. Hudson Street
- c. Chrome Street

d. Edwin Street

e. Salem Street

It is recommended that the industrial roadway be constructed at a minimum 50-foot right-of-way width since this is the existing width of the railroad right-of-way that could be utilized for portions of the industrial road. However, if constructed at only a 50-foot width, it is also recommended that uses other than industrial plants not be permitted to front on the roadway. If residential and commercial uses are not permitted to front on the roadway, sidewalk areas would not have to be provided. This would allow the entire 50-foot right-of-way width to be used for vehicular traffic and permit the construction of a four lane roadway.

3. Realignment of Roosevelt Avenue in Chrome Area - In connection with the Chrome Urban Renewal Project, Roosevelt Avenue will be realigned so that westbound traffic is diverted to Larch Street and eastbound traffic is diverted to Essex Street. This realignment will permit utilization of Roosevelt Avenue between Hudson Street and Arthur and Erwin Streets as a pedestrian mall in connection with commercial uses in the area.

Since, under this plan, Larch Street will be one-way west and Essex Street will be one-way east, there will be no need for traffic signals in this area and the present traffic signals at the intersections of Roosevelt with Pershing Avenue and Hudson Street can be abandoned.

4. Extension of Blair Road - It is recommended that Blair Road be extended northward from Roosevelt Avenue across the Rahway River to connect with U.S. Route 1 in Linden. This roadway would provide another access road to the major highway network of the area and aid in diverting traffic from Roosevelt Avenue in both Carteret and Woodbridge.
5. Extension of Carteret Avenue Across New Jersey Turnpike - To provide a much needed second crossing of the New Jersey Turnpike in Carteret, it is recommended that Carteret Avenue be extended over the Turnpike to connect with Minue Street. This roadway should be developed solely as a local artery and designed to discourage its use as a major thoroughfare. Since a portion of the traffic between the eastern and western areas of Carteret could utilize this new crossing

of the Turnpike, it would help to relieve some of the traffic congestion on Roosevelt Avenue.

In addition, a second crossing of the Turnpike is needed to assure adequate access between East and West Carteret in time of emergency or disaster. Recent industrial accidents along the Arthur Kill have pointed up this problem. If the present bridge over the Turnpike is blocked, the access to these areas by emergency and rescue vehicles would be greatly diminished.

6. New Turnpike Interchange with Woodbridge-Carteret Road - A substantial portion of the heavy truck traffic that presently utilizes Exit 12 of the New Jersey Turnpike is generated by industrial areas in Woodbridge and the southern portions of Carteret. This traffic would be better served by an interchange in the Port Reading area with the Carteret-Woodbridge Road. Also, industrial usage, particularly oil storage facilities, is expanding in the area of Woodbridge along the Carteret-Woodbridge Road. This new interchange would aid in removing this industrial traffic from the local streets of Woodbridge as well as Carteret.

Therefore, it is recommended that the Borough of Carteret consult with Woodbridge Township, Middlesex County, and the New Jersey Turnpike Authority concerning the feasibility of providing this additional interchange.

7. Roosevelt Avenue and Minue Avenue - It is recommended that a traffic signal be installed at the intersection of Roosevelt and Minue Avenues. The change in grade and curve on Roosevelt Avenue at the bridge over the Turnpike limits visibility at this location. Therefore, the installation of a traffic signal appears to be warranted to improve traffic safety conditions.

BUS SERVICE

Carteret is served by bus routes between Carteret, Newark and New York that utilize Roosevelt and Washington Avenues in the Borough and a bus route between Plainfield and New York City that utilizes Blair Road and Roosevelt west of the Turnpike interchange. All of these bus routes have stops within the Borough on Roosevelt and/or Washington Avenues.

RAIL SERVICE

The industrial areas of the Borough along the Arthur Kill and in West Carteret are well served by lines of the Central Railroad of New Jersey which connect with lines of all the major railroads in the region.

Although there is no passenger railroad station located within the Borough, commuter stations are located nearby along the mainline and shoreline branch of the Penn Central Railroad. The mainline of the Penn Central Railroad has commuter stations located at Iselin, Colonia and Rahway, and the shoreline branch has commuter station nearby in Woodbridge Township at Arsenal, Edgar and Woodbridge.

Carteret is fortunate that the extensive railroad network serving the industrial areas of the Borough has very few grade crossings with the local street system and therefore does not appreciably hinder the flow of vehicular traffic.

AIR SERVICE

Linden Airport located across the Rahway River in the City of Linden provides a nearby facility that can be used for the storage of small aircraft for business or pleasure flying. Newark Airport has a direct connection with the New Jersey Turnpike and provides domestic air passenger service within less than a half an hour travel time from the Borough. Newark Airport also has helicopter connections to John F. Kennedy International Airport, which provides transcontinental air passenger service.

These three nearby airport facilities provide the industries, businesses and residents of Carteret with all levels of private, passenger, and freight air service.

SCHOOL FACILITIES

Modern educational techniques involving a great range of subjects and increasing use of mechanized teaching apparatus require that present day school plants be much larger than those that existed in the early 1900's. Also, the increased emphasis on recreation as an integral part of education requires that modern school sites be large enough to provide the necessary areas and facilities for outdoor recreational programs.

Standards established by the New Jersey Department of Education recommend the following minimum site sizes:

Elementary School - There should be provided a minimum site of 10 acres plus one additional acre for each 100 pupils.

Junior High School or Middle School - There should be provided a minimum site of 20 acres plus an additional acre for each 100 pupils.

Senior High School - There should be provided a minimum site of 30 acres plus an additional acre for each 100 pupils.

Although the above standards are desired, the State has approved lesser requirements where the cost of land was prohibitive in the more urban areas or for other valid reasons.

It is a generally accepted standard that 25 students per classroom provides a desirable level, and 30 students per classroom provides an absolute maximum for adequate teaching conditions whereby students may receive a sufficient amount of individual attention.

EXISTING SCHOOL FACILITIES

The Carteret Board of Education presently operates seven public schools that provide education for grades K through 12. There are also four parochial schools located within the Borough which provide elementary school education. These parochial schools are St. Elias, Holy Family, St. Joseph's and St. Joseph's Annex. Plate No. 34, "Existing Community Facilities", shows the location of each of the existing public and parochial schools in Carteret. Plate No. 35, "Existing Public School Facilities", indicates the physical information pertaining to each of the schools operated by the Carteret Board of Education. These public schools are reviewed below:

1. Cleveland Elementary School, which was constructed in 1922 is located on Pershing and Pulaski Avenues. During the 1969-1970 school year grades K-2 were housed here, and the enrollment on October 1, 1969 was 284 pupils. The structure contains two kindergarten classrooms, 8 regular classrooms and an all-purpose room (combination gymnasium-auditorium). Based on a maximum capacity of 30 students per classroom, Cleveland Elementary School has a capacity of 360 students. Based on the desirable level of 25 students per classroom, the desirable maximum enrollment at the school should be 300 students. The above enrollment capacities are based on kindergarten classrooms being used for both morning and afternoon sessions.
2. Columbus Elementary School was originally constructed in 1910 on Carteret Avenue between Roosevelt Avenue and High Street. A substantial addition to the school was constructed in 1965. The school contains grades 3-8, 6 classrooms for special education students, a home economics room, industrial arts shop, library and a combination gymnasium-auditorium. On October 1, 1969, the total enrollment at the Columbus School was 571 students of which 519 were in grades 3 through 8, and 52 were in special education. Based on a maximum capacity of 30 students per classroom (excluding classrooms for special education), the Columbus School has a capacity of 720 students. Based on the desirable level of 25 students per classroom, the desirable maximum enrollment (other than special education) should be approximately 600 students.
3. The Lincoln School, which was constructed in 1962, is located on Carteret Avenue at Fillmore Avenue, adjacent to Carteret Park. An addition to the school was constructed in 1965. During the 1969-70 school year grades K-8 were housed here, and the enrollment on October 1, 1969 was 833 students. The school contains two kindergarten classrooms, 24 regular classrooms, home economics room, industrial arts shop, library and a combination gymnasium-auditorium. Based on a maximum capacity of 30 students per classroom, Lincoln School has a capacity of 840 students. Based on the desirable level of 25 students per classroom, the desirable maximum enrollment at the Lincoln School should be approximately 700 students. The above enrollment capacities are based on kindergarten classrooms being used for both morning and afternoon sessions.

The preliminary plan for this map was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

The remainder has been financed by local funds and by an appropriation of the State of New Jersey to the Department of Community Affairs as part of the Cooperative Governmental Planning Program.

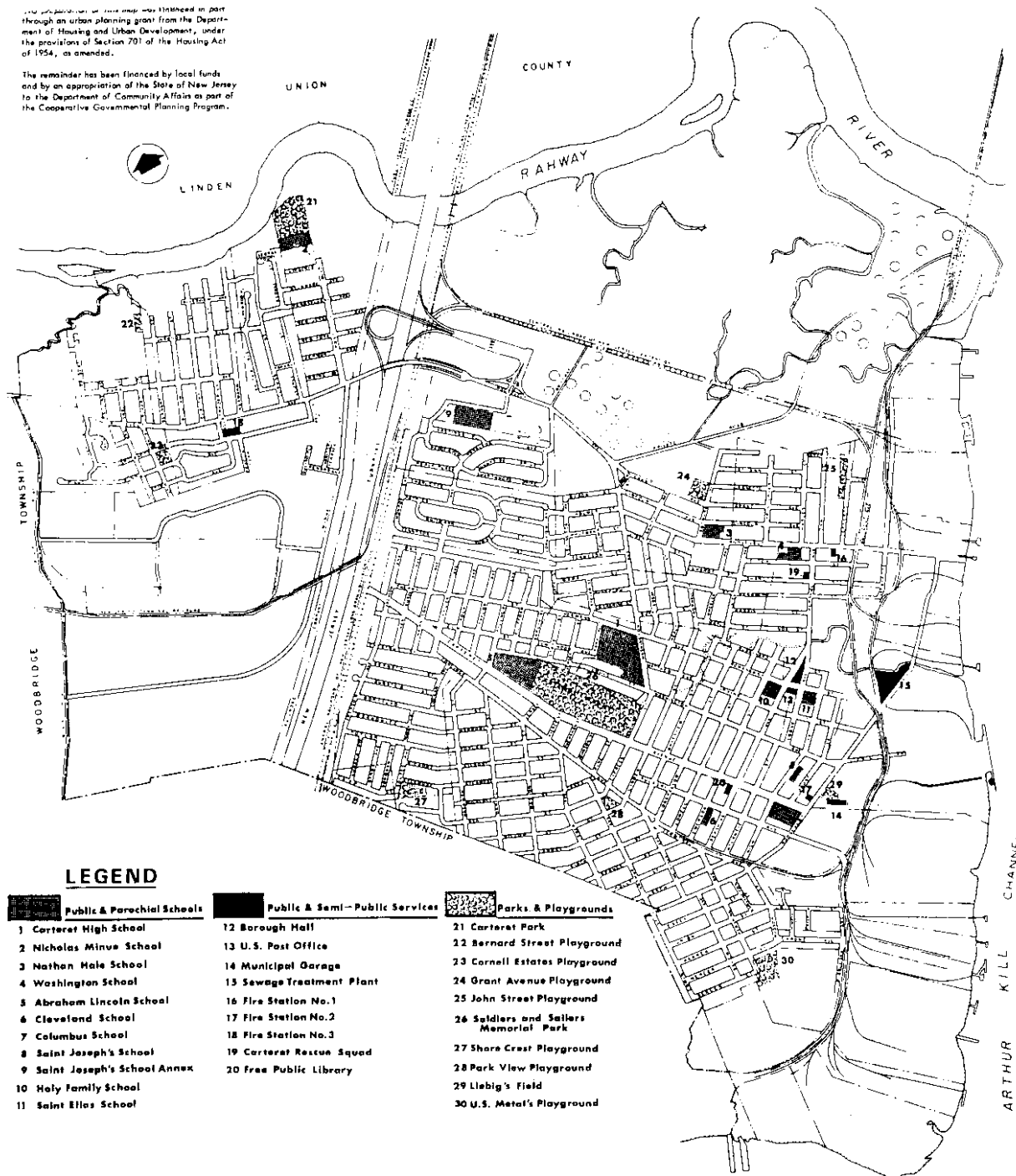


PLATE NO. 35

EXISTING PUBLIC SCHOOL FACILITIES

Borough of Carteret

Name of School	Grade Levels	Year Built	Year Add. Built	School Enroll. 10/1/69	Reg. Class-rooms	Shops	Dom. Science Rooms	Other		Library	Audi-torium	Gym.	Multi-Purpose Room
								Spec. Teach. Rooms	Total Teach. Rooms				
Cleveland	K-2	1922	-	284	10	-	-	-	10	-	-	-	1
Columbus	3-8 Spec.Ed.	1910	1965	571	24	1	1	6	32	1	-	-	1
Lincoln	K-8	1962	1965	833	26	1	1	-	28	1	-	-	1
Minue	K-8	1962	1965	489	18	1	1	-	20	1	-	-	1
Nathan Hale	3-8	1922	-	467	17	1	1	-	19	1	-	-	1
Washington	K-3	1939	-	300	9	-	-	-	9	-	-	-	1
High School	9-12	1925	1965	1,531	64	4	2	-	70	1	1	2	1
ALL SCHOOLS	K-12	-	-	4,475	168	8	6	6	188	5	1	2	7

Source: Carteret Board of Education

4. The Private Minue Elementary School was constructed in 1962 on the west side of Post Boulevard, north of Virginia Avenue. An addition to the school was constructed in 1965. Presently the school has two kindergarten classrooms, 16 regular classrooms, home economics room, shop, library and combination gymnasium-auditorium.

On October 1, 1969, the enrollment at the Minue School was 489 students in grades K through 8. Based on a maximum capacity of 30 students per classroom, the Minue School has a capacity of 600 students. Based on the desirable level of 25 students per classroom, the desirable maximum enrollment at the school should be approximately 500 students. The above enrollment capacities are based on kindergarten classrooms being used for both morning and afternoon sessions.

5. The Nathan Hale Elementary School was constructed in 1922 on the northerly side of Roosevelt Avenue at Hayward Avenue. The school contains 17 classrooms, home economics room, shop, library and combination gymnasium-auditorium.

On October 1, 1969, the enrollment at the Nathan Hale School was 467 in grades 3 through 8. Based on a maximum capacity of 30 students per classroom, the Nathan Hale School has a capacity of 510 students. Based on the desirable level of 25 students per classroom, the desirable maximum enrollment at the school should be 425 students.

6. The Washington Elementary School which was constructed in 1939 is located on the southerly side of Roosevelt Avenue between Pershing and Lincoln Avenues. During the 1969-70 school year grades K through 3 were housed here, and the enrollment on October 1, 1969, was 300 students.

The structure contains two kindergarten classrooms, seven regular classrooms, and a combination gymnasium-auditorium. During the 1969-70 school year a portion of the combination gymnasium-auditorium was utilized as a kindergarten classroom. Based on a maximum enrollment of 30 students per classroom, the Washington School has a capacity of 330 students. Based on the desirable level of 25 students per classroom, the desirable maximum enrollment

of the Washington School should be approximately 275 students. The above enrollment capacities are based on kindergarten classrooms being used for both morning and afternoon sessions.

7. Carteret High School was constructed in 1925 on the north-westerly corner of Washington Avenue and Louis Street. An addition to the High School was constructed in 1965 along Louis Street. The High School contains 64 regular classrooms, 4 shops, a two-station home economics area (food and clothing), library, auditorium and two gymnasiums.

On October 1, 1969, Carteret High School had an enrollment of 1,531 students in grades 9 through 12. Based on a maximum capacity of 30 students per classroom, Carteret High School has a capacity of 1,920 students. Based on the desirable level of 25 students per classroom, the desirable maximum enrollment at the High School should be approximately 1,600 students.

SCHOOL ENROLLMENT TRENDS

Plate No. 36, "Total School Enrollment Trends by Grade", shows the total enrollment and the average daily enrollment by grade for each school year from 1964-65 through 1969-70. The total enrollment reflects all students that were enrolled in the school system during the school year, including transfers into and out of the school system. The average daily enrollment reflects the average number of students enrolled in the school system for a school day.

In the five years from 1964-65 to 1969-70 the total school enrollment for the school system increased by 205 students, and the average daily enrollment increased by 157.3 students. However, during the last year (from 1968-69 to 1969-70) the total school enrollment showed a decrease of 54 students, and the average daily enrollment showed a decrease of 61.1 students.

Since the 1964-65 school year, both the total kindergarten enrollments and the average daily kindergarten enrollments have steadily decreased. The total kindergarten enrollment has decreased by 143 students, from 521 students in 1964-65 to 378 students in 1969-70. The average daily kindergarten enrollment has decreased 143.3 students, from 491.7 students in 1964-65 to 358.4 students in 1969-70. The total enrollments in grades 1 through 3 have also shown decreases during this period but not to as large an extent as the kindergarten enrollments.

PLATE NO. 36

TOTAL PUBLIC SCHOOL ENROLLMENT TRENDS BY GRADE

Borough of Carteret

GRADE	1964-1965		1965-1966		1966-1967		1967-1968		1968-1969		1969-1970	
	Total	Av. Daily	Total	Av. Daily	Total	Av. Daily	Total	Av. Daily	Total	Av. Daily	Total	Av. Daily
K	521	491.7	524	504.5	489	462.6	479	454.5	415	390.2	378	358.4
1	377		363		394		334		305		329	
2	376		343		346		376		316		341	
3	340		358		338		364		385		319	
4	283		334		338		320		338		381	
5	323		279		331		326		334		328	
6	322		327		264		319		327		323	
1-6	2,021	1,932.7	2,004	1,911.4	2,011	1,911.4	2,039	1,939.6	2,050	1,947.6	2,021	1,915.4
7	297		317		333		261		361		317	
8	284		289		312		339		256		312	
7-8	581	566.2	606	592.7	645	626.2	600	573.3	572	550.5	629	601.4
9	299		416		403		430		476		392	
10	332		284		389		372		409		428	
11	333		317		271		379		354		394	
12	333		316		302		254		357		330	
9-12	1,297	1,259.3	1,333	1,287.4	1,365	1,325.6	1,435	1,387.9	1,596	1,537.1	1,544	1,490.8
Sp.Ed.	30	25.3	33	21.0	40	36.3	64	54.2	76	68.2	83	66.5
TOTAL	4,450	4,275.2	4,500	4,307.0	4,550	4,362.1	4,617	4,409.5	4,709	4,493.6	4,655	4,432.5

* Total enrollment includes all students that were enrolled during the school year.

** Average Daily Enrollment is the average number of pupils enrolled on a given school day during the year.

These decreases in enrollments in the lower grade levels over the past five years can generally be attributed to a combination of the following factors:

1. Many of the younger families that moved into the housing constructed in Carteret during the late 1950's have reached an age where they are no longer bearing children.
2. School children of new families moving into Carteret, replacing older families, mostly attend the higher grades.

Enrollments in the grade levels 4 through 8 have remained fairly constant during the last five years, while enrollments at the High School showed a steady increase between 1964-65 and 1968-69. However, from 1968-69 to 1969-70 the total and average daily high school enrollments have also shown decreases of 52 and 46.3 students respectively.

In Carteret, kindergarten public school enrollments have consistently been greater than the next year's first grade enrollments. This difference in enrollments represents students who attended kindergarten in public schools and then transferred to parochial schools for elementary education.

A similar difference exists between eighth and ninth grade enrollments in the public school system. Ninth grade enrollments have consistently been greater than the previous year's eighth grade enrollments, since most students who attend elementary school in the parochial schools in Carteret transfer to Carteret High School for their secondary education.

Since very little land remains in Carteret for new residential development, it is unlikely that substantial increases will occur in the public school enrollments in the future. If increases do occur in the enrollments within Carteret's school system, they will primarily be the result of either, or a combination, of the following two factors:

1. The in-migration of families with more school age children than the families they replace.
2. The replacement of existing housing with new housing which has a higher density of school age children.

Plate No. 37, "Enrollment by School", shows the October 1, 1969 enrollment by grade and the 1969-70 average daily enrollments by grade levels

PLATE NO. 37

ENROLLMENT BY SCHOOL
1969-1970

Borough of Carteret

Grade	Tot. Enrollment	CLEVELAND		COLUMBUS		LINCOLN		MINUE		NATHAN HALE		WASHINGTON		HIGH SCHOOL	
		Oct. 1 1969	Avg. Daily	Oct. 1 1969	Avg. Daily	Oct. 1 1969	Avg. Daily	Oct. 1 1969	Avg. Daily	Oct. 1 1969	Avg. Daily	Oct. 1 1969	Avg. Daily	Oct. 1 1969	Avg. Daily
K	355	101	358.4	103.9		86	83.5	63	62.9			105	108.1		
1	308	91				83		49				85			
2	317	92				86		56				83			
3	308				91	91		43		56		27			
4	364			104		104		62		94					
5	316			80		96		55		85					
6	315			89		83		63		80					
1-6	1,928	183	1,915.4	178.9	364	543	538.9	328	324.8	315	314.5	195	198.5		
7	308				80	111		39		78					
8	301				75	93		59		74					
7-8	609		601.4		155	204	203.6	98	96.7	152	151.1				
9	386													386	
10	429													429	
11	388													388	
12	328													328	
9-12	1,531		1,490.8											1,531	1,490.8
Sp.Ed.	52		66.5		52										10.8
TOTAL	4,475	284	4,432.5	282.8	571	833	826.0	489	484.4	467	465.6	300	306.6	1,531	1,501.6

for each of the public schools in Carteret. Under the present school system students who attend Cleveland School for grades K-2 are usually transferred to Columbus School for the remainder of their elementary school education, and students who attend Washington School in the lower grades are usually transferred to the Nathan Hale School in either third or fourth grade for the remainder of their elementary education. The Lincoln and Minue Schools provide education for grades K through 8.

Based on a maximum capacity of 30 students per classroom (excluding the classrooms used solely for special education students at Columbus School), the schools in the Carteret Public School System have a total capacity of 5,280 students. Based on the desirable level of 25 students per classroom, the desirable maximum total enrollment in the Carteret School System should be about 4,400 students. The average daily enrollment during the 1969-70 school year (excluding special education students) was 4,366 students, and the October 1, 1969 enrollment (excluding special education students) was 4,423 students. The above enrollment capacities are based upon the eight kindergarten classrooms in the school system being used for both morning and afternoon sessions. The present school system has 168 classrooms, including eight classrooms for kindergarten use. If all eight kindergarten classrooms are used for both morning and afternoon sessions, the school system can be considered to have 176 classrooms in addition to shops, domestic science rooms, and special education classrooms.

FUTURE SCHOOL NEEDS

Since it is unlikely that there will be any substantial increases in the future public school enrollments in Carteret, there does not appear to be a need for the construction of any new schools within the Borough. Future capital improvements to the school system will most likely be in the areas of renovations, additions, and the replacement of antiquated facilities in order to meet the changing curricula and extra-curricula needs of the school system.

The Board of Education is presently working in conjunction with officials of the Borough and Redevelopment Agency to determine what curriculum and facilities improvements should be undertaken in the future.

Based on the foregoing review of the public school facilities and enrollment trends, it is recommended that improvements be considered in the following areas:

1. Cafeteria Facilities: At the present time there are no cafeteria facilities located in any of the public schools in Carteret. Although students are permitted to bring lunches, many students presently go home for lunch.

The provision of cafeteria facilities with hot lunches is becoming an increasingly essential part of the educational system throughout the country. Several New Jersey municipalities have instituted free hot lunch programs for children from lower income families, and some are even considering, or are instituting, hot breakfast programs within the schools.

The future improvement programs for the school system should consider incorporation of cafeteria facilities in several of the public schools, particularly for students of grades 7 through 12, where the need for supervision during lunch hours is not as great.

2. Swimming Pools: There are presently no swimming pools in any of the Carteret schools or within the Borough of Carteret. While a need exists for outdoor swimming facilities as part of the recreation program of the Borough, an additional need also exists for a swimming pool within the school system.

It is recommended that consideration be given to the future construction of an indoor swimming pool at Carteret High School which can be incorporated into the physical education program of the school and also utilized for competitive swimming with other schools. The facility could also be utilized by the Recreation Department during the summer months.

3. Outdoor Recreation Space: A need exists for additional outdoor recreation space at all the public schools in the Borough, except the Private Minue and Lincoln Schools, both of which are adjacent to major playground and park facilities. The provision of this needed space could largely be accomplished through a long range program to acquire adjacent properties in the blocks in which the schools are located.

The future acquisition of the homes along the north side of Louis Street east of Park Place would permit the High School site to be expanded along Louis Street, and the future acquisition of the homes along the south side of Louis Street would permit Carteret Park to

be expanded to Louis Street. These two expansion programs would not only provide additional outdoor recreation areas on the site of the High School, but would also provide a direct relationship between Carteret Park and the High School and permit portions of Carteret Park to be easily incorporated the recreation program of the High School. A need presently exists at Carteret High School for outdoor practice areas for the school's athletic teams, which should be located either at the school site or nearby in Carteret Park.

In acquiring land for these proposed school expansions, consideration should be given to applying for financial assistance under the Federal Open Space and State Green Acres Programs. Although the Green Acres and Open Space Programs are generally known and used for their recreational and other open space uses, it is also possible to apply these programs to acquire large open areas surrounding public buildings such as schools, libraries, Borough Hall, etc. As an example, if a proposed school area is to be acquired from private owners, the largest portion of the land which is to be used for recreation, walkways, and other open areas can be acquired under these programs. Only the land upon which the building will be constructed need be purchased with local funds.

PARKS AND RECREATIONAL FACILITIES

Public recreation has become increasingly important in our rapidly changing society. Automation and shorter working hours have resulted in increased leisure time for recreation. In addition, the availability of both public and private means of transportation has enabled more people to travel easily to a wide variety of recreation areas for either long periods of time or for a few leisurely hours. The differing needs of people have necessitated a wide variety of such facilities.

To assist communities in providing the necessary types of recreation facilities, the National Recreation Association has developed general guidelines. The overall standard for total needs is ten acres of recreational land for every 1,000 persons. This includes all types of recreation, active and passive. Many types of recreation facilities (such as camping, hiking and fishing) need not be supplied within every municipality but may be provided on a regional basis.

In developing the park and recreation system for Carteret, the following standards can be utilized as guides:

1. Playgrounds

A playground of at least five acres in size should be provided for each residential neighborhood of 4,000 persons. These playgrounds may be provided in conjunction with an elementary school. Where schools are not within walking distance of residential areas (usually one-half mile), additional playgrounds of at least two acres in size are needed for each 1,000 to 1,500 population.

Examples of the types of facilities that may be included in playgrounds are as follows:

- a. Area for preschool children
- b. Apparatus area for older children
- c. Open space for informal play
- d. Surfaced area for basketball, handball, volleyball, dancing, skating
- e. Field for games such as softball and touch football

- f. Area for storytelling, crafts, dramatics, quiet games
- g. Shelter house
- h. Wading or spray pool
- i. Tennis courts
- j. Landscaping

2. Neighborhood Parks

Parks of approximately five acres in size should be provided for each neighborhood. These areas should be utilized for picnics and general family use and can aid in preserving attractive natural features such as forests and hilltops.

3. Playfields

Playfields of approximately 25 acres in size should be provided in conjunction with senior and junior high schools. These playfields should provide community-wide facilities for older children and adults and include baseball, football and soccer fields; basketball, volleyball, and tennis courts; running tracks, recreation buildings, and other such facilities.

4. Regional Parks

Large scale park areas should be provided on a regional basis and need not be located within the Township. These park areas should be located within easy driving distance of the Township and provide facilities for swimming, boating, picnicking, water sports, hiking, day camping, field sports and nature study.

Although consideration of the total recreation needs of Carteret must be thought of on a regional basis, the need for playgrounds, neighborhood parks and playfields must be provided through the efforts of the Borough.

EXISTING PARKS AND RECREATION FACILITIES IN CARTERET

Carteret presently has 10 active park and recreation areas located in the Borough. The facilities provided at each of these park and recreation areas and the outdoor recreation facilities provided at each of the seven public schools and four parochial schools in the Borough are discussed below and shown on Plate 34, "Existing Community Facilities".

1. The Bernard Street Playground is located on the WOR property to the rear of the homes facing on the west side of Bernard Street. The playground equipment is located on the southern half of the site near Oakwood Avenue and includes four swing sets, sliding board, climbing device and a merry-go-round. Also located on the southern half of the site is a pavilion with a concrete floor and two park tables with attached benches. The northern half of the site is an open grass area that can be utilized for softball or other general recreation activities.
2. The Private Minue School is located on the west side of Post Boulevard north of Virginia Avenue. On the northwestern corner of the site is an asphalt covered area with two basketball backstops. The southwestern portion of the site is a grass covered area that can be utilized for general recreation. Although there are no other outdoor recreational facilities on the school site, it is located adjacent to Liberty Park which has extensive recreational facilities.
3. Liberty Park is located on the westerly side of Post Boulevard just north of Private Minue School. Playground equipment is located on the southern end of the site adjacent to the Private Minue School and includes three swing sets, large climbing device, seesaw set and sliding board. The playground area and the entire park are separated from the Private Minue School by a chain link fence. There is a fenced in baseball diamond in the southwesterly portion of the park with a dugout located along the right field line and spectators' stands located along the left field line.

The remainder of the site is a park area which is largely tree covered and equipped with extensive picnic facilities. This portion of Liberty Park includes four outdoor grills, a covered pavilion for the dispersion of food and drink, a small uncovered dance platform, water fountains, 15 to 20 park benches, and 10 to 15 picnic tables.
4. The Cornell Estates Playground is located on the easterly side of Orchard Street between Spokaneetz and Pinhoe Avenues. The

playground is completely enclosed with a chain link fence. The site includes an asphalt covered basketball area with two backstops, a covered pavilion with a concrete floor, three swing sets, large climbing device, sandbox, and two sliding boards.

5. The John Street Playground is located on the southwesterly corner of Lefferts and Beverly Streets. Although the site of the playground area is large, only a small portion is developed for playground use. The playground portion of the site is located along Beverly Street to the rear of the properties on John Street and includes three swing sets, merry-go-round, sliding board and sandbox. About 200 feet south of the playground equipment is an asphalt area with two basketball backstops. Approximately 80 percent of the site is undeveloped for recreation uses.
6. The Grant Avenue Playground is located on the northwestern corner of Grant and Hayward Avenues. The area is completely fence-enclosed and includes an asphalt covered area with two basketball backstops that is located in the southwesterly corner of the site. The playground equipment is located in the southeasterly portion of the site nearest the intersection of Grant and Hayward Avenues and includes four swing sets, large climbing device, sliding board, sandbox, and several park benches. The remainder of the site is a softball field which has a backstop, benches for the players and small spectators' stands along both foul lines. Home plate on the softball diamond is adjacent to the playground area and centerfield is to the northwest.
7. The Washington School is located on the southerly side of Roosevelt Avenue between Pershing and Lincoln Avenue. There are no outdoor playground facilities located on this school site. However, to the rear of the school along Fitch Street is an open area which is half asphalt and half grass covered which can be used for general recreation. On the grass covered portion are two picnic tables with attached benches and a park bench.
8. The Nathan Hale School is located on the northerly side of Roosevelt Avenue at Hayward Avenue. To the rear of the school, along Lincoln Avenue, is an asphalt covered play area which

includes eight benches and two basketball backstops. In the northeasterly corner of the site there is a grass and dirt covered area that has a picnic table with attached benches. Although the front of the school at Roosevelt and Hayward Avenues has a large lawn area, it is not for recreational use.

9. Leibig's Field is located on the easterly side of Roosevelt Avenue between Washington Avenue and Carteret Avenue. The area consists solely of a Little League baseball field located in front of the Municipal Garage property. There are two concrete and wooden park benches on the left field line and one on the right field line. The field has a chain link backstop, chain link fences in front of the benches for the teams and a snow fence around the outfield.
10. The Columbus School is located on Carteret Avenue between Roosevelt Avenue and High Street. There are no outdoor playground facilities at this school, although an asphalt covered parking area to the rear of the school, off High Street, can be utilized for general play activities.
11. The Cleveland School is located on Pershing and Pulaski Avenues. There are no outdoor playground facilities at this school, although an asphalt covered parking area to the rear of the school, off Pershing Avenue, could be utilized for general play activities.
12. The U.S. Metals (Copperworks) Playground is located on the southeasterly corner of Pershing and Bergen Avenues. The playground has a fenced in area along Pershing Avenue containing a playground area with two sliding boards, three swing sets, a sandbox, and a covered pavilion with a table and benches. Also within the fenced in area is an asphalt covered section with four basketball backstops. To the east of the fenced in playground area is a baseball field with benches for the two teams and small spectators' stands along the right field line.
13. The Parkview Playground is located on the easterly side of Arthur Avenue between Willow and Ash Street. The area is entirely fence-enclosed and includes an asphalt covered area with two basketball backstops, a covered pavilion with a concrete floor, three swing sets, sliding board, seesaw set, water fountain and two picnic tables with attached benches.

14. The Shore Crest Playground is located on the southeasterly corner of Sycamore Street and Soltes Avenue. The area is completely fence-enclosed and includes an asphalt covered area with two basketball backstops, a covered pavilion with a concrete floor, picnic table with attached benches, four swing sets, sliding board, sandbox, seesaw set and a Little League baseball field. The baseball field is enclosed by a four foot chain link fence and also has a chain link backstop, a dugout on the left field line, team benches on the right field line and small spectator stands on the left field line. Homeplate is located in the northeasterly corner of the site.
15. Carteret High School is located on the northwesterly corner of Washington Avenue and Louis Street. The high school faces on that intersection and has a large lawn area in the front which is not used for recreational purposes. To the rear of the high school on Hermann Avenue and Park Place is a fence-enclosed stadium. The stadium includes a football field and cinder track. Permanent, covered stands are located on the west side of the football field and track, and uncovered bleachers are located on the east side. The football field runs north-south with the scoreboard at the south end of the field.
16. Lincoln School is located on Carteret Avenue at Fillmore Avenue. The rear of the school property has frontage on Louis Street. Although there is no outdoor playground equipment on the school site, the school is located at the westerly edge of Carteret Park and has the use of the facilities in the park.
17. Carteret Park is bounded by Carteret Avenue, Cypress Street, the rear of the properties facing on Louis Street, a portion of Louis Street and the Lincoln School. At the western end of the park along Carteret Avenue there is a hardball baseball field (Sullivan Field) which is utilized by Carteret High School. Also at the western edge of the site, along Louis Street, is an asphalt covered, fence-enclosed area with four tennis courts. Directly to the east of the tennis courts is a playground area which is separated from the baseball field by a ten foot fence. The playground area includes a sandbox, sliding board, two swing sets, climbing device, two basketball backstops on an asphalt area, The Youth Center building with lavatory facilities, park benches, and a large flower bed.

Two Little League baseball fields are located directly to the east of the high school baseball field and the playground area. One of the Little League fields is located along Carteret Avenue with homeplate in the corner adjacent to the baseball field and Carteret Avenue. Centerfield is to the northeast. The other Little League field is located to the rear of the homes on Louis Street, with homeplate in the corner adjacent to the playground area and the homes on Louis Street. Centerfield is to the southeast. Water fountains are located near the Little League fields.

To the east of the two Little League fields is an open park area with a monument. This open park area stretches from Carteret Avenue to the rear of the properties on Louis Street.

To the east of this open park area, along the rear of the properties on Louis Street, is a picnic area with approximately 15 tables and benches. Adjacent to the picnic area is a building for the storage of equipment of the Parks Department. To the south of the picnic area and storage building is a lake with a half dozen park benches along the banks. There is a covered pavilion with a concrete floor on the eastern bank of the lake. The lake stretches from Carteret Avenue to the storage building.

Between the lake and Cypress Street is a passive park area. The border of this section of the park along Cypress Street and Carteret Avenue is heavily planted with trees and shrubbery. However, there is very little tree cover in the area adjacent to the lake.

Perpendicular parking stalls are located along Carteret Avenue adjacent to the baseball field and along Louis Street adjacent to the playground area and Lincoln School.

18. The Saint Elias Parochial School is located on the southwest corner of Romanowski and High Streets. There are no outdoor playground facilities located on the site of the school. However, there is a small asphalt-covered area to the rear of the school that can be utilized for general play activities.
19. The Holy Family Parochial School is located on the easterly side of Emerson Street between Irving and Romanowski Avenues. To

the rear of the school, off Pershing Avenue, is a small playground area that includes two basketball backstops and a picnic table with attached benches.

20. The St. Joseph's Parochial School is located on the easterly side of High Street between Washington and Carteret Avenues. On the westerly side of High Street, across from the school, is an asphalt-covered parking area that includes two swing sets and a basketball backstop. There are no other outdoor recreation facilities at the school site.
21. The St. Joseph's Parochial School Annex is located off Roosevelt Avenue directly to the west of the Carteret Bowling Lanes. There is an asphalt-covered parking area on the west side of the school that includes two basketball backstops. There are no other outdoor recreational facilities at the school.

The municipal recreation areas in Carteret are generally well located to serve all areas of the Borough. Although the municipal recreation areas provide adequate playground facilities, a need exists within the Borough for outdoor swimming facilities and additional tennis courts and baseball fields.

With the exception of Lincoln and Private Minue Schools, which are located adjacent to large municipal recreation area, the public and parochial schools within the Borough are deficient in outdoor recreation space and equipment.

The parks and playgrounds in Carteret are maintained by the Borough's Park Department which employs a permanent full-time staff of eight persons. During the summer months an additional 10 to 12 persons are hired to assist in the maintenance of the playgrounds and parks.

In addition to being responsible for the preparation and maintenance of the Borough's parks and recreation areas, the Parks Department also maintains the traffic lights and traffic signs and is responsible for the painting of lines at crosswalks and cutting the grass on all Borough owned property.

RECREATION PROGRAMS

Carteret's recreation programs are organized and conducted by the Recreation Department which is staffed by a part-time Superintendent and

three part-time assistants. During the summer months the Recreation Department also employs approximately nine playground supervisors. Among the major activities sponsored and directed by the Borough's Recreation Department during the past year are the following:

1. Little League Baseball

During the summer of 1970 there were three Little Leagues in Carteret with a total of 38 teams and approximately 550 players. The Recreation Department estimates that there will be a total of 42 Little League teams in 1971. The Little League baseball program, which is operated for children from the ages 8 through 11, utilizes the two Little League fields at Carteret Park and fields at Liberty Park, Shore Crest Playground and Leibig Field.

2. Joe Medwick Baseball League

This program, which is run for boys from ages 13 to 15, included five teams with a total of approximately 100 players in 1970. The Joe Medwick League utilizes the baseball field at the Grant Avenue Playground.

3. Babe Ruth League

Carteret's Babe Ruth League, which is also for boys from ages 13 to 15, included five teams during 1970, with a total of approximately 100 players. The League utilized Sullivan Field in Carteret Park.

4. Girls' Softball League

Carteret's Girls' Softball League, which is co-sponsored by a group of interested citizens, had six teams during 1970, with approximately 18 players per team. The Girls' Softball League utilized the fields in Carteret Park on Saturdays and Sundays.

5. Men's Slow Pitch Softball

In 1970 the Recreation Department ran two men's slow pitch softball leagues: the Commercial League with seven teams and the Oldtimers' League with twelve teams. Both of these

leagues utilized Sullivan Field in Carteret Park and the field at the U.S. Metals (Copperworks) Playground.

6. Boys' Basketball Clinics and Leagues

The Recreation Department conducts basketball clinics, one for 4th grade boys which runs for a period of about 12 weeks, and one for 5th and 6th grade boys which runs for a period of about five weeks. Both of these clinics are held at the Columbus and Minue School gymnasiums and are followed by league basketball games.

A 7th and 8th grade boys' basketball league is run in conjunction with the Board of Education, with teams representing public and parochial schools. This program runs for about 15 weeks and is held in the afternoons at Columbus, Lincoln and Minue Schools.

7. Girls' Basketball Clinics and Leagues

Basketball clinics and leagues are conducted for girls in the 5th and 6th grades and the 7th and 8th grades. The clinics are held for a four week period and are followed by 10 weeks of league competition. The 5th and 6th grade program is run on Saturday mornings, and the 7th and 8th grade program is run on Saturday afternoons at the Lincoln School gymnasium. During the 1969-1970 season the 5th and 6th grade league contained 12 teams, and the 7th and 8th grade league contained 8 teams.

8. Youth Center Activities

Among the organized activities offered at the Youth Center in Carteret Park are twirling classes, art classes, bingo and movies. Twirling classes are conducted three nights a week throughout the year for 8 to 9, 10 to 11, and 12 to 14 year old children. Every other Saturday for a nine month period, bingo games are conducted for children between the ages of 8 to 12. On the other Saturdays during the same nine month period, movies are shown at the Youth Center for the same age group. Elementary art classes were conducted during the summer of 1970 on Mondays, Wednesdays and Fridays from 10:00 A.M. to 12 noon.

9. Arts and Crafts

A two hour arts and crafts program was conducted once a week at nine playgrounds in Carteret during the summer months of 1970.

10. Other Activities Conducted by the Recreation Department

Among the other activities conducted by the Recreation Department during the past year are the following:

- a. Golf instruction on Tuesday and Thursday evenings at the High School.
- b. Tennis instruction.
- c. Block dances on five Wednesday evenings at Nathan Hale and Minue Schools and the U.S. Metals Playground.
- d. Swimming and picnicking trips to Thompson Park on Mondays.
- e. Four trips to Palisades Park.
- f. A trip to the Garden State Arts Center.
- g. Wrestling classes for subteenage boys on Saturdays at the High School.
- h. Gymnastics program for high school level children in the evenings.
- i. Trip to Yankee Stadium.
- j. Awarding of trophies to league champions.

Carteret operates a well rounded recreational program which fully utilizes all available municipal and school recreational facilities. Expansion of the Borough's recreational program will primarily require the provision of additional recreational facilities, including swimming facilities and additional baseball fields and tennis courts.

RECOMMENDED RECREATION AREAS

1. Liberty Park Expansion

In 1968 the Borough of Carteret recommended to the Board of Freeholders that the County acquire and expand Liberty Park as part of the County Park System. There were several reasons for this request, of which the most important are:

- a. Full maintenance would be provided by the County;
- b. Liberty Park could be expanded to provide greater variety of facilities;
- c. A marina could be provided adjacent to the Rahway River;
- d. The County has a full-time staff that would continually provide facilities and necessary improvements;
- e. Carteret would have an adequate outdoor recreation facility in this area for all age groups;
- f. With the future dredging of the Rahway River, the Liberty Park area would be further enhanced and become even more desirable as a park facility;
- g. There is a possibility of providing a children's nature study area.

Middlesex County has submitted and received approval of a \$487,000 Open Space Grant from the Federal Government to assist in the acquisition of the land needed for this new County facility. Application was also made by the County for a \$487,000 Green Acres Grant from the State of New Jersey. However, since there are no Green Acres Funds available at the present time, approval of this grant request is dependent on the issuance of future bonds for Green Acre purposes.

This proposed facility will encompass Liberty Park and additional areas along the Rahway River from the New Jersey Turnpike west into Woodbridge Township. In total, the park will encompass approximately 83 acres, of which approximately 75 acres will be

within the Borough of Carteret. The Borough has dedicated approximately 47 acres of land within the area of the proposed park to the County. The remaining 36 acres of privately owned land, which includes the entire WOR property, will be acquired by the County.

After acquisition of the park land, the County will prepare plans for development of the facility and apply for further Federal assistance toward the development costs.

2. Civic Center Park (Formerly Known as Noe Street Park)

The Borough received approval for an Open Space grant of \$324,346 from the Federal Government to assist in the acquisition and development of the Civic Center Park, which will comprise approximately 14 acres. A Green Acres application for a grant of \$114,000 was submitted to the State in 1968. Although this application has been approved by the State, there are presently no State Green Acres funds available for grants. If and when the State approves a bond issue for more Green Acres money, this \$114,000 grant will be given to the Borough. The total cost of the Civic Center Park was estimated to be approximately \$650,000 in 1968.

The development of this area is expected to further establish the Borough Hall as the focal point for a Civic Center Complex. The construction of municipal facilities in this area and expansion of the municipal parking lot will further promote the establishment of this Civic Center Complex.

Because of the large amount of Federal grant received to acquire this area and the need for recreation in this area of the Borough, the Borough should proceed immediately in its planning and development. The proposed Civic Center Park should be separated into several phases:

- a. The first phase should be to acquire the land since it is needed by the Borough for recreation facilities, although the specific uses may have to be replanned to encompass the needs of all citizens of the Borough. As the cost of land is continually rising, the Borough should immediately initiate the acquisition to insure the least possible cost to the community.

- b. The second phase would be to level the area following the land fill and provide detailed planning of activities which would encompass all age groups of the community. Special emphasis should be given to the senior citizens which have little or no facilities within the community. This area is ideal since it is in the heart of the older portion of the Borough where many of the senior citizens are located.
- c. The third phase would be to install the improvements planned for in Item "b" above.

3. Chrome Area Park

In conjunction with the Chrome Urban Renewal Project, a new park is proposed for the area bounded by Essex Street, Pershing Avenue, Bergen and Salem Streets. This facility will provide needed open space and recreation areas in this densely populated section of the Borough.

RECOMMENDED RECREATION FACILITIES

1. Tennis Courts

At the present time there are only four tennis courts located in the Borough, all at Carteret Park. It is recommended that additional tennis courts be erected in other areas of the Borough. Locations where the erection of new tennis courts could be considered are:

- a. The proposed County Park in West Carteret (Liberty Park expansion);
- b. The proposed Civic Center Park; and
- c. The proposed park area in the Chrome Urban Renewal Project.

2. Swimming Pools

There are presently no swimming pools located within the Borough, either at the schools or the playground areas. It is recommended

that the Borough consider either:

- a. The development of a large below-ground community swimming pool, or
- b. The erection of several smaller above-ground swimming pools.

A community-wide swimming pool could be incorporated into the development plans for either:

- a. The Civic Center, or
- b. Proposed County Park (Liberty Park).

Smaller above-ground pools could be considered for the proposed park in the Chrome Area, the John Street Playground and Carteret Park.

Because of the relatively small size of the Borough, the consideration of a community-wide swimming pool would appear to provide the better of the two approaches and involve less of a supervision problem. To help defray the costs of such a facility the Borough could charge a small membership fee to the residents who utilize the pool. A community-wide swimming pool could also include locker room and refreshment facilities which would not be feasible at smaller neighborhood pools.

In providing new recreational facilities, the Borough should consider applying for financial assistance available from the Federal Bureau of Outdoor Recreation. The Federal Government, through the New Jersey Department of Environmental Protection, provides up to 50 percent grants for the improvement of municipal recreation facilities. Eligible development costs for recreation facilities may include the following: landscaping, baseball field, basketball courts, tennis courts, sanitary facilities, lighting, parking areas, nature trails, circulation roads, picnic areas, water sports facilities, winter sports facilities, beautification, and supporting facilities directly related to outdoor recreation.

POLICE FACILITIES

The Carteret Police Department presently has a strength of 40 policemen. The Police Department feels that there is a need for at least 46 policemen on the force. The officers authorized for the Police Department consist of a Chief, Deputy Chief, Captain, three Lieutenants and nine Sergeants.

The Police Department also has two civilian employees of the Municipal Court working at Headquarters in the Borough Hall. In addition, the department is in charge of 22 school crossing guards and a Police Reserve Unit with 28 volunteers. The Police Reserve Unit performs Sunday church crossing duty without compensation. For football games, bazaars, dances, and any other duties they are asked to perform they receive nominal compensation from the agencies being served.

There are five marked police vehicles within the department. All of these marked police vehicles are recent model, fully equipped Chevrolets. During a normal day three cars are utilized as patrol cars, one is utilized by the Traffic Bureau of the Police Department and one is held in reserve. The Police Department annually trades in its marked police vehicles for new models. The patrol cars generally travel about 100,000 miles during a year. There is also a 1967 unmarked Chevrolet within the Police Department which is utilized by the Detective Bureau.

From approximately 7:30 a.m. to 3:30 p.m. there are usually three patrol cars on duty with one man in each vehicle. From 3:30 p.m. until approximately 1:00 a.m. there are usually three patrol cars on duty with two men in each vehicle. After 1:00 a.m. there are usually two patrol cars on duty with two men per car.

The police force generally has about 10 officers on duty during the daylight hours of 6:00 a.m. to 7:00 p.m. During the hours of 7:00 p.m. to 3:00 a.m. there are usually 12 or 13 officers on duty. From 3:00 a.m. to 6:00 a.m. there are usually only six police officers on duty.

In addition to the policemen who serve on patrol duty, the Police Department has a seven-man Detective Bureau under the direction of a Lieutenant, a two-man Juvenile Bureau, a three-man Traffic Bureau and a Sergeant assigned as a Records Clerk on a full-time basis.

The Carteret Police Department operates on its own radio frequency and is tied into the Middlesex County police radio frequency. In addition to handling communications with the police vehicles, the police dispatcher also receives and relays fire alarms and calls for First Aid Squad service.

Police Headquarters is located in Borough Hall and is equipped with six cells. Most of the police facilities are located on the first floor of Borough Hall, along with the Municipal Court and Court Clerk. However, the Juvenile and Traffic Bureaus are located on the third floor. The space needs of the Police Department are far greater than the space available for their use in Borough Hall. It is recommended that the Capital Improvements Program for the Borough provide for the future construction of a separate police headquarters. This would also provide much needed additional office space within the Borough Hall for other municipal functions.

The Police Department feels that a new police headquarters should be a one story building and that a good location for this facility would be on a site adjacent to or near the Borough Hall. The municipal court facilities could remain within Borough Hall and would still be closely related to the Police Headquarters.

FIRE FACILITIES

The Borough of Carteret is served by three fire stations, a paid full time Fire Department, and Volunteer Firemen. The three fire stations and the equipment housed at each of these stations are as follows:

FIRE HOUSE NO. 1

This station is located in the Hill section of the Borough on the south side of Roosevelt Avenue across from Lefferts Street. The fire station houses a 1955 International (built by Tasc) aerial ladder truck which is also equipped with a 750 gpm pumper.

FIRE HOUSE NO. 2

This station is located on the west side of the lower section of Roosevelt Avenue between Carteret and Washington Avenues. The fire station houses a 1964, 1000 gpm FWD pumper and a 1943 LaFrance 1000 gpm pumper. This second vehicle is presently inoperable and should either be repaired or replaced with another piece of equipment.

FIRE HOUSE NO. 3

This relatively new station is located on the east side of Pedola Terrace in West Carteret. The fire station houses a 1964, 1000 gpm FWD pumper and a 1942 Mack 1000 gpm pumper. This second vehicle is operable and can be used in extreme emergencies

The Carteret paid fulltime Fire Department has an authorized force of 17 men consisting of a Chief, three Captains and 13 Engineers. Each fire station has a Captain in charge and four Engineers assigned to the station. The Engineers are responsible for operating all fire equipment, and at least one fireman is on duty at each fire station at all hours. Since only three firemen are required to cover a fire station during a twenty-four hour period, the additional engineers are utilized to cover vacations and days off.

On days when more than twelve firemen are on duty the extra men are assigned to the Fire Prevention Bureau as Fire Inspectors. When the Fire Department is at its full strength of 17 men it is possible to provide an Engineer on fulltime duty as a Fire Inspector. The Fire Prevention Bureau is responsible for enforcement of the Fire Code in all nonresidential properties in the Borough. The Carteret Borough

Council recently adopted, by reference with certain amendments, the 1970 edition of the Fire Prevention Code recommended by the American Insurance Association.

The Carteret Volunteer Fire Company consists of approximately 64 men, including a Chief, First Assistant Chief, Second Assistant Chief, Foreman, and Assistant Foreman. The remaining men in the Volunteer Fire Company are firemen. The Chief of the Volunteer Fire Company is elected yearly and cannot serve a second successive year in that capacity. Normally the Volunteer Fire Company follows a policy of elevating its officers through the various positions from Assistant Foreman to Chief. The Chief of the Volunteer Fire Company is responsible for supervising the fighting of a fire in collaboration with the Chief of the Carteret Fire Department.

The Volunteer Firemen receive their equipment from the Borough and normally receive a small compensation in the form of a bonus payment from the Borough at the end of the year.

Fire alarms are received by the Carteret Police Department. When fire alarms are received the police dispatcher immediately alerts the fire stations so that the equipment can be driven to the scene of the fire. The police dispatcher then records the location of the fire through a special telephone apparatus and pushes a button which causes a special ring on the phones of the paid and volunteer firemen. When the firemen answer the phone they receive the recorded message on the location of the fire and can proceed directly to the scene.

The fire hydrants in Carteret, which are rented from the Middlesex Water Company, are generally well located and provide excellent pressure. The Fire Department attempts to have fire hydrants located so that not more than 400 to 500 feet of hose is necessary from the hydrant to the location of the fire. With the exception of several industrial plants on Blair Road, most buildings within the Borough are located within 500 feet of a fire hydrant.

In addition to the equipment housed at the three fire stations in Carteret, the Fire Department has agreements whereby it can utilize two smog trucks recently purchased by the General American Tank and Storage Company, as well as the fire fighting facilities of the Hess Oil Company in Woodbridge. In addition, the Carteret Fire Department has a mutual aid agreement with all other municipalities in the area.

The Fire Department is planning to purchase a new piece of fire apparatus within the near future, which will be either an aerial ladder truck or a "snorkel" truck. The snorkel truck provides a platform, rather than a aerial ladder, which can be raised for fighting fires from above.

Fire Station No. 1 is an extremely antiquated structure which does not satisfactorily serve the needs of the Fire Department. It is recommended that this station be replaced by a new fire station within the same general area. The new fire station should provide at least two bays so that additional equipment could be housed within the structure. Although Fire Station No. 2 is also an older structure, it can satisfactorily serve the needs of the Fire Department for a period of years.

STORM DRAINAGE and SANITARY SEWERAGE FACILITIES

Approximately 25 percent of Carteret's land area is less than 10 feet above mean sea level, and well over half is less than 20 feet above mean sea level. This low land level in the Borough presents a problem in providing adequate storm and sanitary sewerage facilities. At the present time, when tide levels are about three feet above normal in the Arthur Kill, water cannot easily be discharged from the sewerage system and sewage must be retained in the system until the tide levels subside.

Most of Carteret is presently served by combined sanitary and storm sewers. The Borough has begun the separation of the sanitary and storm sewerage facilities within the Chrome area and will provide for the separation of these facilities throughout the Borough. When this separation is completed, only sanitary sewage will be treated at the sewage disposal plant, and storm waters will be discharged directly into the Arthur Kill and Rahway River. At present both sanitary sewage and storm flows are treated at the disposal plant.

Because of the existing combined collection system, high tide levels impede the flow of both sanitary sewage and storm waters. After completion of the separation of storm and sanitary sewers, high tide levels will only impede the flow of storm waters.

Most of the developed properties in Carteret are presently served by the combined sanitary and storm collection system. After the separation of facilities is completed the developed areas of the Borough will discharge their sanitary sewage into the collection system, and storm waters will be gathered by separate facilities that will discharge directly into the Rahway River and Arthur Kill. Because of the low land level of the Borough, storm waters will continue to be retained in the storm drainage facilities during high tide levels after the separation of facilities is completed. However, these waters will not contain sanitary wastes and consequently will not present a serious health problem.

The present combined collection system has seven diversion chambers which permit sewage flows in excess of about 4 million gallons per day to discharge directly into the Arthur Kill. Several of the industrial uses along the Arthur Kill presently discharge their industrial and process waste waters directly into the Arthur Kill. Although no figures are available, it is estimated that the total storm and sanitary

sewage flows in the Borough approach 30 million gallons per day during heavy rainfalls.

Because of Carteret's low land level, the pumping of sewage is necessary in many areas of the Borough. There are presently six pumping stations in the Borough that pump sewage from low areas and three major interceptor sewers which carry sewage to the treatment plant.

The Borough operates its own municipal sewage disposal plant which is located on Roosevelt Avenue, north of Irving Street and adjacent to the tracks of the Central Railroad of New Jersey. The disposal plant has a design capacity of 2.94 million gallons per day but during heavy rainfalls it treats as much as 4 million gallons per day. The plant provides primary sewage treatment which consists of chemical flocculation and settling, chlorination and sludge removal. The effluent from the plant is discharged into the Arthur Kill and the sludge is taken to the Borough dump off Roosevelt Avenue near the New Jersey Turnpike Interchange.

Plate No. 38, "Raw Sewage Characteristics" shows the sewage flow, chlorine used on an average day (Chlorine Demand), the Biological Oxygen Demand (BOD) of the raw sewage, and the suspended solids in the raw sewage for the first six months of 1970.

Chlorine Demand is the measure of the chlorine necessary to kill disease producing bacteria. Suspended solids are those particles in raw sewage that neither settle to the bottom of the sewage nor float on the top. Biological Oxygen Demand (BOD) is a measure of the oxygen required for maintaining and supporting the organisms that destroy organic matter in sewage.

The primary treatment at the municipal sewage disposal plant produces effluent with BOD of between 30 to 40 percent less than the raw sewage, and removes between 50 to 65 percent of the suspended solids.

The Borough of Carteret is presently under Superior Court order from a complaint originating from the New Jersey Department of Health to construct or utilize facilities which will provide for secondary treatment of all domestic and industrial waste before it is discharged into the Arthur Kill. Secondary sewage treatment provides increased BOD and suspended solids removal from raw sewage of between 75 to 90 percent.

In 1968 the Borough of Carteret submitted an application to the Federal Department of Housing and Urban Development for a maximum Sewer and Water

PLATE NO. 38

RAW SEWAGE CHARACTERISTICS

Borough of Carteret

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
Total Months Sewage Flow (million gallons)	91.38	94.02	102.05	105.10	79.42	89.14
Maximum Day Sewage Flow (million gallons)	3.63	3.77	33.65	4.14	3.54	3.56
Minimum Day Sewage Flow (million gallons)	2.31	2.72	2.54	2.02	2.00	2.35
Average Day Sewage Flow (million gallons)	2.94	3.35	3.29	3.17	2.56	2.97
Average Amount of Chlorine Used (pounds/day)	353	433	409	438	444	454
Average Biological Oxygen Demand (parts/million)	330	346	484	404	390	446
Average Suspended Solids (parts/million)	405	328	575	328	302	355

Facilities grant to assist in the construction of the facilities necessary to provide the sewage disposal required under the Court Order. The sewer improvement program outlined in the application provides for:

1. The separation of sanitary and storm sewerage facilities throughout the Borough.
2. Flood relief construction in the Chrome Area.
3. Construction of a pumping station and force main to pump sewage from Carteret to a regional sewage plant in Woodbridge which would provide secondary treatment.
4. The improvement of Woodbridge's Sewaren Disposal Plant to increase its capacity and provide a higher level of secondary treatment.

The total cost of these improvements to the Borough of Carteret was estimated at over \$5,000,000 in 1968. The separation of sanitary and storm sewers has already been undertaken in the Chrome Area.

The 1968 application for the Sewer and Water Facilities grant contemplated that the existing sewage treatment plant would eventually be abandoned and replaced by a pumping station which would pump the raw sewage to the regional plant.

The proposed regional secondary sewage treatment plant will have a capacity of about 20 million gallons per day. The improvements to the Sewaren Plant recommended in the 1968 Public Works grant application to make the plant suitable as the regional secondary treatment plant to serve Carteret and Woodbridge were as follows:

1. Reequipment of main pumping station for the increased flows and heads involved;
2. Construction of two center-fed primary clarifiers on the plant site;
3. Installation of grit removal chamber;
4. Abandonment of the existing flocculation channels and rapid sand filter;
5. Construction of aeration basins using accelerated activated sludge processes and aeration by mechanical aerators;

6. Conversion of the two existing primary clarifiers to final clarifiers;
7. Construction of recycle sludge pumping station;
8. Increasing capacity of chlorine contact tank;
9. Construction of sludge thickeners.

The municipal department in charge of sewage treatment employs thirteen men. Ten men are employed at the treatment plant and three men are used to maintain the collection system. The sewage disposal plant is in operation 24 hours a day with someone on duty at the plant.

The department is equipped with two dump trucks, one pickup truck and a scavenger vacuum for the cleaning of catch basins. One of the dump trucks is utilized to transport sludge to the municipal dump and the other is utilized in the maintenance of the collection system.

WATER FACILITIES

Potable water is supplied to Carteret by the Middlesex Water Company, which also serves Woodbridge Township, Metuchen and portions of Edison Township and South Plainfield. The distribution system of the Middlesex Water Company receives its water supply from several different sources:

1. the Delaware and Raritan Canal;
2. two well fields in South Plainfield;
3. a well field in Edison Township;
4. three individual wells in South Plainfield;
5. an individual well in Colonia;
6. purchase of water from the Elizabethtown Water Company; and
7. a reservoir in Clark Township on the Robinson's Branch of the Rahway River.

Water received from the Delaware and Raritan Canal is treated at a plant of the Middlesex Water Company located in Edison Township. The plant has a capacity of 20 million gallons per day.

Water from the wells of the Middlesex Water Company receives only chlorine treatment at the source. The total rated pumping capacity of all the wells in the system is about 28 million gallons per day.

Water from the Robinson's Branch of the Rahway River is only utilized in emergency situations and is treated at a filtration plant in Clark Township. The rated capacity of this plant, which is maintained on a standby basis, is seven million gallons per day.

Most of the water lines that serve the residential areas in Carteret are six inches in diameter, although there are isolated locations with four inch and smaller lines. The larger service mains in Carteret include a 30-inch main in Blair Road, a 20-inch main in Roosevelt Avenue from Blair Road to the vicinity of Orchard Street, then extending in an easement across the Turnpike to Carteret

Avenue and along Carteret Avenue to Roosevelt Avenue, and several other larger mains which distribute water from these two mains and a five million gallon reservoir tank and pumping station located behind the public housing units off Bergen Street. These other larger mains are primarily located in streets such as Roosevelt Avenue, Middlesex Avenue and Lafayette Street and provide service to the industrial uses along the Arthur Kill.

In total there were 308,065 linear feet of water mains of the Middlesex Water Company in Carteret at the end of 1969. Of this total, 294,814 feet were located in public rights-of-way and 13,251 feet in private rights-of-way. The breakdown of the total water lines in the Borough by the diameter of the main is as follows:

<u>DIAMETER OF WATER LINE</u>	<u>TOTAL LENGTH OF LINE IN BOROUGH</u>
30 inches	5,767 feet
24 "	1,722 "
20 "	15,920 "
16 "	11,232 "
12 "	26,946 "
10 "	8,526 "
8 "	8,203 "
6 "	214,786 "
4 "	11,912 "
Less than 4"	3,051 "
ALL LINES	308,065 "

During 1969 the Middlesex Water Company served 5,371 customers in Carteret. All customers in the Borough are metered and the charge for water is based upon the amount actually used. Consumers are billed quarterly, and the minimum charge is based on the size of the meter.

In the year between April 1, 1969, and March 30, 1970, a total of 217,388,600 cubic feet (1639.1 million gallons) of water from the Middlesex Water Company was used in Carteret. This represents a daily consumption of 4.5 million gallons of water. Approximately 26 percent of the water supplied by the Middlesex Water Company is utilized by domestic consumers and 74 percent by industrial plants. In addition, F.M.C. and U.S. Metals obtain large quantities of water directly from the Arthur Kill for industrial cooling purposes. Several of the large industries along the Arthur Kill discharge water used for industrial processes directly into the Arthur Kill rather than the Municipal Sewerage System.

At the end of 1969 there were a total of 288 fire hydrants located within the Borough. The total rental charge paid by the Borough to the Middlesex Water Company for fire hydrant service in 1969 was approximately \$50,000. Water used by the Borough in public buildings and parks is paid for at normal meter rates.

The entire Borough of Carteret is serviced by water mains of the Middlesex Water Company. The water provided by the Company is of good quality for domestic purposes, and water pressures are adequate in all areas for fire fighting purposes. Fire hydrants are generally well located and adequately cover all the developed areas in the Borough.

FIRST AID SQUAD

The facilities of the Carteret First Aid Squad are housed in a building located at the northwest corner of Pershing Avenue and Sharot Street. The First Aid Squad operates three fully equipped Cadillac Meteor Ambulances. The present ambulances are 1970, 1969 and 1968 models. Each year the First Aid Squad trades in the oldest of its ambulances for a new model.

The Carteret First Aid Squad was incorporated in 1934 as an independent organization to promote health and safety and to provide emergency care and ambulance service to the public. The First Aid Squad presently has 25 volunteer members who serve with no compensation.

The business officers of the First Aid Squad consist of a President, Vice-President, Secretary, Treasurer and three trustees. The Line officers of the squad are a Captain, Assistant Captain, First Lieutenant and Second Lieutenant.

Calls for the First Aid Squad are placed through the Police Department. During the hours between 7:00 a.m. and 11:00 p.m. the Police Department activates an audible alarm to alert members of the First Aid Squad. For calls after 11:00 p.m. the Police Department is supplied with a schedule of squad members who can be contacted by phone. Members of the First Aid Squad are not usually on duty at the station itself. Patients transported by the First Aid Squad are usually taken to Perth Amboy General, Elizabeth General, Rahway or John F. Kennedy Hospitals.

The Borough of Carteret contributes \$5,000 annually toward the operation of the First Aid Squad. The remaining funds necessary for the operation of the First Aid Squad are raised through door to door solicitation. The cost of providing First Aid Squad services is approximately \$20,000 annually. The service provided by the Carteret First Aid Squad is adequate for the first aid and ambulance transportation needs of the Borough.

LIBRARY

The Carteret Free Public Library is located in a large converted frame house on the southwest corner of Carteret and Pershing Avenues. The library is under the direction of a seven member Board of Trustees consisting of the Mayor, Superintendent of Schools, and five citizens at large. The President of the Library Board of Trustees is elected from the citizen members.

During 1969 a branch store-front library was opened at 83 Roosevelt Avenue in the Chrome Urban Renewal Area. The Chrome Branch Library, which was funded by a \$13,655 Federal grant, provides a total of 24 hours service a week to the persons in the Chrome area.

In 1969 the main and branch libraries had a full time staff of seven persons and parttime staff that provided the equivalent of two full time employees. The full time employees of the Library Board in 1969 were a Director, Supervising Library Assistant, three Senior Library Assistants, a Junior Library Assistant, and a Building Service Worker. Part time staff were utilized as Senior and Junior Library Assistants, a Building Service Worker and a Junior Library Clerk.

At the end of 1969 the Carteret Free Public Library had a total of 30,436 books, an increase of 3,235 books over the 27,201 owned by the Library at the end of 1968. Of this total number of books, 28,711 were located at the Main Library and 1,725 were at the store front library. The books at the Main Library consisted of 21,485 adult books and 7,226 children's books. Those at the Chrome Branch Library consisted of 1,001 adult books and 724 children's books.

During 1969 the Carteret Free Public Library subscribed to 90 magazines and 5 newspapers. At the end of the year the Library owned a total of 484 recordings, an increase of 264 recordings over the number owned at the end of 1968. The Main Library housed 381 recordings, and the Chrome Branch Library housed 103 recordings.

The total circulation from the Carteret Free Public Library system was 56,611 books, of which 29,217 books were for adults and 27,394 books were for children.

Among the other services offered by the Carteret Free Public Library are:

1. Arts and Crafts at the Main and Chrome Branch Libraries
2. Field trips to museums and other places of interest

3. Picture Book Hour for pre-school age children at Main Library
4. Summer Reading Program for elementary school children at Main Library
5. Chess Club at the Main and Chrome Branch Libraries
6. Checker Club at the Chrome Branch Library
7. Class visits from public and parochial schools
8. Borrowing of requested books from other libraries
9. Stereo tape recorder which may be utilized at the Main Library
10. Phonograph records which may be borrowed for up to one week are located at both libraries
11. Meeting room in Main Library which may be reserved for use by community organizations
12. Obtaining of answers to questions asked over the telephone
13. Xerox 914 Copier which may be utilized by library patrons at a nominal cost is located at the Main Library

The total operating cost of the Carteret Free Public Library during 1969 was \$86,135.54, of which \$12,210.20 was utilized to run the branch library in the Chrome Area. Revenues during 1969 included \$13,655 in Federal Aid, \$12,395 in State Aid, \$420 in cash donations, donations of several hundred dollars worth of books and materials, revenues from book fines and public use of the Xerox 914 Copier and \$55,000 from the municipal budget.

Although the existing Main Library building can continue to be utilized for a number of years, it is recommended that the long range plans of the Borough provide for the construction of a new library. Consideration should be given to construct this facility near the Borough Hall and to develop a Municipal Center complex. A good location for the library would be the southwest corner of Noe Street and Pershing Avenue. At this location the library would be directly related to several public schools and be located on a major thoroughfare.

MUNICIPAL GARAGE

The Carteret Municipal Garage is located off the west side of the lower portion of Roosevelt Avenue between Carteret and Washington Avenues. The garage is a recently constructed building consisting of five bays, locker room, shower room, storage room, mechanics' room, office and lavatory. Two of the bays contain hydraulic lifts for the maintenance of automobiles and trucks.

All Borough vehicles for trash and garbage collecting, street cleaning and road repairs are stored on the Municipal Garage property. The equipment stored at the Municipal Garage includes the following:

1. Six 20-yard packer trucks for garbage collection.
2. Four dump trucks.
3. Three Wayne Sweepers for street cleaning.
4. Two vacuum trucks for leaf collection.
5. Bulldozer.
6. Small road grader.
7. Massey Ferguson 3- to 5-ton roller.
8. Nelson snow loader.
9. Small 1/2 yard payloader.
10. Two salt spreaders that can be attached to trucks.

The repair and maintenance of all Borough-owned vehicles, including the above-mentioned equipment, Police and Fire Department vehicles, Parks Department vehicles and the automobiles of other Borough officials is provided at the Municipal Garage.

In addition to trash and garbage collection, which is reviewed under a separate section, other activities conducted from the Municipal Garage include street cleaning, street maintenance, snow removal and the making of street signs.

Street cleaning is conducted five days a week with two sweeper trucks in operation. The Borough owns three sweeper trucks, one of which is held in reserve as a spare. Each sweeper truck is manned by a driver and two helpers. During the Fall months, the two vacuum trucks owned by the Borough are utilized to collect leaves from the streets.

The street cleaning schedule of the Carteret Sanitation Department which was recently included in a pamphlet distributed to all residences in the Borough is as follows:

- Monday: All of Parkview and Shorecrest from Jackson to Arthur to Casey.
- Tuesday: West Carteret from Turnpike Bridge to Blair Road.
- Wednesday: All of Carteret Hills from Washington Avenue to Monroe Street to Carteret Avenue.
- Thursday: Herbert Street to Lafayette Street to Randolph Street to Washington Avenue to St. Ann Street.
- Friday: Between Randolph and Carteret Avenue and all of the Chrome Area.

Street maintenance carried on by the Streets and Roads Department normally consists of street patching, street resurfacing, and the construction of new streets with a temporary penetration type pavement. However, the construction of new streets with curbing and permanent type base and surface courses is provided for under private contracts and generally through a bond issue.

Snow removal on Washington and Roosevelt Avenues is provided by Middlesex County. During snowfalls, Borough-owned trucks are utilized to remove snow on other streets. The Borough-owned vehicles generally begin by plowing the major streets such as Pershing, Carteret, and Coolidge Avenues and later the local residential streets. In heavy snow falls the Borough also hires five or six private tandem trucks to aid in snow removal in the residential areas.

TRASH AND GARBAGE

The collection and disposal of trash and garbage in the Borough of Carteret is provided by the Carteret Sanitation Department. The Sanitation Department is equipped with six 20-yard packer trucks for the collection of trash and garbage. Open dump trucks are also utilized for the collection of trash.

Garbage is collected on Monday and Thursday from the residential properties in West Carteret and east of the Turnpike in the general area north of Oak Street and Washington Avenue. Garbage is collected from the other residential properties in the Borough on Tuesdays and Fridays.

The residential properties having garbage collections on Mondays and Thursdays also have trash pickups on the first and third Wednesdays of the month. The residential properties having garbage collections on Tuesdays and Fridays have trash pickups on the second and fourth Wednesdays of the month. The Borough does not provide trash and garbage collection for industrial and business uses.

On Monday and Tuesday garbage collection days, five packer trucks are utilized for collections, with the sixth truck held in reserve. On Thursday and Friday garbage collection days only four packer trucks are utilized, since garbage accumulations are usually not as great.

Each of the packer trucks has a driver and two helpers. On trash collection days both packer trucks and open dump trucks are utilized for collections. Normally, two dump trucks are utilized.

The regulations governing trash and garbage collections, recently included in a pamphlet distributed to all residences in the Borough, are as follows:

1. Garbage collection starts at 6:00 A.M. Therefore, all containers must be at the curb at 6:00 A.M. Garbage placed out after this time may not be collected.
2. All garbage must be in regulation metal or plastic containers with lids and handles, minimum size 20 gallons, maximum 26 gallons. Oil drum type containers or other type such as fibrepak containers are not acceptable. After first warning, these containers will be classified as rubbish and taken away.

3. Weight of container and garbage shall not exceed 75 pounds.
4. Newspapers must be free of rubbish and tied securely in small bundles. Cardboard boxes must be broken up and tied into small bundles. No bundle shall exceed 75 pounds.
5. Dirt and stones are not to be placed in garbage containers for regular pick up. See #8.
6. Materials injurious to the health of the sanitation employees will not be handled.
7. Materials other than garbage such as furniture, appliances, branches, leaves in containers, and other large items will not be collected during the regular collection. See #8 for special pick up instructions. Branches must be cut to 5-foot lengths for pick up.
8. Trash other than garbage will be picked up on Wednesday. Those who have Garbage Pick up on Monday and Thursday will have a Trash Pick up on the first and third Wednesday of the month. Those who have Garbage Pick up on Tuesday and Friday will have a Trash Pick up on the second and fourth Wednesday of the month.

When a holiday falls in that week, there will be no trash pick up for that area.

9. Refuse service will not be given for hot ashes, earth, plaster, trade waste, and materials from excavating, construction, altering or repairing any building.

Trade waste means all waste material resulting from any business trade or industry conducted for profit.

10. Holiday Schedule: The Sanitation Department recognizes the following holidays:

New Year's Day	July 4th	Veterans' Day
Washington's Birthday	Labor Day	Thanksgiving
Good Friday	Columbus Day	Christmas Eve
Memorial Day	Election Day	Christmas Day

11. Unless otherwise advertised in local newspapers, no collection will be made in the Borough on the holidays listed above. Garbage collection in that area that falls on the holiday will not be picked up that day. (Check the News Tribune or the Carteret Press.)
12. Residents who may wish to bring items directly to the dumping area may do so by obtaining permission at the Borough Garage, 186 Roosevelt Avenue, from 8:00 A.M. to 3:30 P.M.

Dumping hours: Weekdays 7:00 A.M. - 2:30 P.M. There is no dumping on Saturday, Sunday and Holidays.

The land fill site for the disposal of trash and garbage in Carteret is located in the northern portions of the Borough on the northern side of the Central Railroad of New Jersey Extension. The entrance to the land fill site is off Roosevelt Avenue across from Harrison Avenue (opposite the A & P). It is estimated that the land fill site can be used for at least 10 to 15 years.

In addition to the trash and garbage dumped at the land fill site from municipal collections, the industries and businesses in the Borough may obtain permits to use the land fill site.

The business properties in the Borough generally rely on private collection companies to collect trash and garbage. Most of these private collectors dispose of the trash and garbage outside the Borough. If it is determined that a private refuse collector receives his load of trash and garbage from business properties in Carteret, he may be permitted to use the Borough's land fill site for a fee. At the present time one private refuse collector is permitted to utilize the land fill site.

The trash and garbage collection and disposal service provided to the residential properties in the Borough is adequate and should serve future need as well. Also, since a disposal site is available within the Borough, businesses and industries are not burdened with the necessity of transporting solid wastes long distances.

New State regulations on garbage disposal have required the Borough to revise its procedures at the land fill site. Although more costly, these procedures are designed to assure adequate and effective health standards.

HOSPITALS

Although the residents of Carteret do not have general hospital facilities available to them within the Borough, there are twelve general hospitals located in Middlesex and Union Counties which can be utilized by the residents of Carteret. Plate No. 39, "General Hospital Facilities", gives general information concerning the hospitals located in both counties.

Plate No. 39 shows that in 1968 these twelve hospitals had a total bed capacity of 3,345 beds, based on an inventory of facilities conducted by the New Jersey Department of Institutions and Agencies. Since 1968 new facilities have been constructed or are under construction at four of these hospitals which will provide an additional bed capacity of 282 beds. This new construction is at Alexian Brothers (103 beds), Middlesex General (35 beds), South Amboy General (120 beds), and Muhlenberg (24 beds).

The optimum patient occupancy rate for a general hospital is about 80 percent of bed capacity. Occupancy rates lower than 80 percent generally indicate that the facility is being under utilized. Occupancy rates greater than 80 percent generally indicate overcrowding and tend to reduce the operating efficiency of the hospital. Plate No. 39 shows the 1968 occupancy rates for all the general hospitals in Middlesex and Union Counties.

There are also no nursing homes or other long-term care facilities located in Carteret. However, in 1968 there were a total of 34 nursing homes or long-term care facilities located in Middlesex and Union Counties with a total combined licensed capacity of 2,770 beds. Since 1968 three new long-term care facilities have been constructed in the two counties with a combined capacity of 330 beds, and additions for 105 beds were constructed on existing facilities.

Because of the lack of suitable vacant land within Carteret, it is doubtful that hospital facilities will be located in the Borough in the future. However, the facilities presently located in Middlesex and Union Counties adequately serve the hospital needs of the residents of Carteret.

GENERAL HOSPITAL FACILITIES

Middlesex and Union Counties
1968

NAME	LOCATION	Bed Capacity 1968	Total Inpatient During 1968	Total Patient Days in 1968	Average Daily No. Of Patients 1968	Percent of Occupancy Rate (Daily Patients Bed Capacity) 1968
J. F. Kennedy Community Hospital	Edison	202	7,306	62,222	170.0	84
Middlesex General Hospital	New Brunswick	325	10,086	82,236	224.7	69
Perth Amboy General Hospital	Perth Amboy	437	16,181	145,233	396.8	91
St. Peter's General Hospital	New Brunswick	286	14,427	106,529	291.1	102
South Amboy General Hospital	South Amboy	166	2,980	17,988	49.1	30
Muhlenberg Hospital	Plainfield	399	16,232	132,296	361.5	91
Alexian Brothers Hospital	Elizabeth	238	6,307	63,023	172.2	72
Elizabeth General Hospital	Elizabeth	263	9,757	84,858	231.9	88
Memorial General Hospital	Union Township	183	5,259	49,783	136.0	74
Overlook Hospital	Summit	336	15,662	136,701	373.5	111
Rahway Hospital	Rahway	209	8,754	66,180	180.8	87
St. Elizabeth Hospital	Elizabeth	301	11,225	109,125	298.6	99

HOUSING ELEMENT

One of the acute problems facing our society today is the provision of standard housing for all segments of the population. The seriousness of this problem is particularly evident in the metropolitan regions of the country where rising construction costs, property taxes and financing rates have caused the sales prices and rental rates of new privately constructed housing to rise to a point beyond the financial means of most low and moderate income families. Efforts by the Federal, State and local governments in constructing public housing, providing rent supplement payments for lower income families and making available low interest construction loans to nonprofit and limited dividend organizations have been only moderately successful and have, at best, provided only a partial solution to the problem.

In New Jersey, where the bulk of the cost of public education must be raised through local property taxes, the construction of new single-family houses usually results in an increase in the local property tax rate. Since new single-family housing usually results in a tax loss to a municipality, most communities in the state are adopting zoning and subdivision regulations which will slow down the rate of single-family construction in order to protect the existing residents against a rapidly increasing property tax rate.

Many New Jersey municipalities have also encouraged the construction of garden apartments which have generally proven to be a tax benefit to the municipality. However, since zoning ordinances normally limit the number of two bedroom units to 20 percent or less and generally do not permit the construction of three bedroom or larger units, these new garden apartment developments have provided housing for a limited segment of the population. The residents of new garden apartment developments are generally young married couples, retired couples or unmarried individuals. Also, the rental rates of garden apartments are generally geared toward attracting middle income families and individuals and are therefore usually beyond the means of low and moderate income families and individuals.

The purpose of this housing element study is to review the existing housing supply in Carteret as it relates to the overall demand for housing in the area, and to establish a program for the provision of new housing to help satisfy the area's housing demand without placing an undue burden on the taxpayer of the community.

DESCRIPTION OF CARTERET'S HOUSING SUPPLY

The 1960 U. S. Census of Housing indicated that there were a total of 6,041 housing units in the Borough, of which 4,323 were single-family homes and 1,718 were

units in multi-family housing. The units that were located in multi-family housing in 1960 were primarily in structure of two or more families. Except for 76 public housing units, there were no large scale apartment developments in the Borough in 1960. The 1960 Census further indicated that there were 2,461 new residential structures built in the period between 1950 and 1960. These units were primarily single-family homes. The multi-family structures (two or more families) that existed in Carteret in 1960 are principally located in the older sections of the Borough developed prior to 1950.

The Middlesex County Planning Board estimated that on January 1, 1969 there were a total of 6,848 housing units in the Borough, of which 4,776 were single-family homes and 2,072 were units in multi-family housing. The increase of 453 single-family homes since 1960 mostly occurred during the early part of the decade and represented the tail end of the relatively large amount of single-family construction that began in the Borough during the 1950's. The increase of 296 multi-family units that occurred in the Borough since 1960 was principally represented by the 140 garden apartment units constructed near the St. Joseph's Parochial School Annex and the 100 public housing units for the elderly constructed on Union Street and Noe Street. During this period there were also a limited number of two-family homes constructed and some units in older multi-family structures were demolished.

In 1969 building permits were issued for 5 new single-family homes, 5 new two-family homes and 176 units of 221 (d) (3) housing in garden apartments in the Chrome Urban Renewal Project. Also during 1969, a total of 41 dwelling units were demolished, of which seven were single-family homes and 34 were located in homes of two or more residences. Most of the housing demolition that occurred during 1969 was within the Chrome Urban Renewal Project.

Therefore, it is estimated that in mid-1970 there were a total of 6,998 housing units in Carteret, including all of the 176 garden apartment units of 221 (d) (3) housing in the Chrome Urban Renewal Project. Some of these garden apartment units were not occupied in mid-1970 but were under construction. Of this total number of housing units in 1970, it is estimated that there were 4,774 single-family homes, and that 2,224 units were in multi-family housing. The multi-family housing units included 176 units in public housing and 316 units in garden apartments. The remaining estimated 1,732 multi-family housing units are located within homes of two or more families. It should also be noted that approximately 350 of the owner-occupied homes are trailers located in the trailer parks in West Carteret.

The 1960 Census of Housing also showed that there were 4,174 owner-occupied units and 1,667 renter-occupied units in Carteret at the time of the 1960 Census. Of the owner-occupied dwelling units in 1960, only 232 units, or 5.6 percent, were either

deteriorated or dilapidated. Of the total renter-occupied dwelling units, 432, or 25.9 percent, were either dilapidated or deteriorated. In 1960 there were 511 renter-occupied units in single-family homes, 911 renter-occupied units in two-family homes, and 76 renter-occupied units in public housing. The remaining 179 renter-occupied units were located in structures containing more than two dwelling units. Many of the 911 renter-occupied units in the two-family homes were located in structures where the owner occupied one of the two units.

When the results of the 1970 Census of Population and Housing are published more detailed information will be available concerning the present housing characteristics in Carteret.

Except for small parcels of land, the residential areas of Carteret are completely developed. Therefore, future housing construction in the Borough should largely involve the replacement of older deteriorated housing with newer housing units, which because of acquisition costs, would be in apartment structures.

THE RELATIONSHIP OF CARTERET'S HOUSING SUPPLY TO OTHER ELEMENTS OF THE RESIDENTIAL ENVIRONMENT

The type of housing within a community has both a cause and effect relationship with other elements of the residential environment such as income, employment patterns, the availability of utilities, the location of employment centers, transportation facilities and community services. The relationship of Carteret's housing supply in respect to these other elements of the residential environment is discussed below.

INCOME

New single-family housing generally attracts families with relatively high income. The 1950 U. S. Census of Population showed that Carteret had a lower per capita income (\$1,486) and a lower average household income (\$5,464) than the adjoining municipality of Woodbridge (\$1,668 and \$6,129 respectively) and all of Middlesex County (\$1,581 and \$5,700).

During the decade between 1950 and 1960, Carteret experienced a higher rate of single-family housing construction than both Woodbridge and Middlesex County as a whole. This is reflected in the changes that occurred in per capita and average household income. Between 1950 and 1960, per capita income increased \$937 in Carteret as compared to increases of only \$688 for Woodbridge and \$829 for Middlesex County, and the average household income increased \$3,000 in Carteret as compared to only \$2,715 in Woodbridge and \$2,731 in Middlesex County.

After 1960 the rate of single-family construction in Carteret decreased as compared to neighboring Woodbridge and Middlesex County. In fact, between 1960 and 1969 only New Brunswick, Highland Park, and Perth Amboy, in Middlesex County, had shown lower percentage increases in the total number of housing units than Carteret.

This slow rate of residential growth in Carteret since 1960 reflects a reverse trend in per capita and average household income. In direct contrast to the decade between 1950 and 1960, Carteret's per capita and average household income has increased at a lower rate since 1960 than for neighboring Woodbridge and Middlesex County as a whole.

Based on estimates by the Middlesex County Planning Board, between 1960 and 1966 per capita income rose only \$784 in Carteret as compared to \$974 in Woodbridge and \$962 in Middlesex County, and average household income rose only \$2,811 in Carteret as compared to \$3,486 in Woodbridge and \$3,437 in Middlesex County. This reflects the higher income of families moving into new housing constructed outside of Carteret.

In 1960 Carteret had an average household income of \$8,464, which was \$33 greater than the average household income of \$8,431 for Middlesex County. In 1966 Carteret's average household income of \$11,275 was \$583 less than the County average of \$11,858.

Since the Borough of Carteret has virtually developed all of its residential areas, it can be expected that the rate of new single-family housing construction will be much greater in most of the other municipalities in the County in the future.

This trend should continue to be reflected in Carteret's relative position in relation to average household income. Those areas where new single-family housing is constructed will most likely attract a larger proportion of the higher income families. Future residential construction in Carteret should largely consist of replacement housing which, because of high acquisition costs, most likely will take the form of multi-family structures such as garden apartments. Much of this replacement housing will most likely be utilized to relocate families being displaced from substandard housing that has been demolished. These relocated families will generally be lower income families.

EMPLOYMENT

Prior to 1950 the Borough of Carteret was populated by families whose livelihood was directly related to the industrial uses along the Arthur Kill. For the 40 years prior

to 1950 Carteret's population remained fairly constant, fluctuating between 11,000 and 14,000.

The newer residential areas of the Borough, developed after 1950, contain a population which does not primarily derive its livelihood from the industrial area along the Arthur Kill. To an extent, the residential areas of Carteret developed after 1950 are a bedroom community for people whose employment is located outside of the Borough, while the older residential sections of Carteret contain a population which still primarily depends on the industrial uses along the Arthur Kill for their employment.

The housing construction boom hit Carteret later than other municipalities which were not as ideally located in relationship to the New York-Newark area. The primary reason that the housing boom did not develop in Carteret during the late 1940's was that land with better construction characteristics and accessibility was available in other areas. After 1950, with the expansion of highways and increased automobile ownership, the need for additional housing areas increased, and almost all available vacant land in the suburbs, including land with poor physical characteristics, was considered prospective sites for housing. With the construction of Interchange #12 of the N.J. Turnpike, new residential, commercial and industrial uses expanded in most of the vacant developable land in Carteret.

Although the newer residential areas of Carteret are populated with a higher proportion of white collar workers and professionals, the population of Carteret as a whole is still largely industry-oriented in terms of employment. In 1960, 53.8 percent of the employed population in Carteret worked in manufacturing industries as compared to 44.1 percent in Middlesex County and 29.0 percent in the New York-Northern New Jersey Standard Consolidated Area.

UTILITIES

All of the residential areas of Carteret are served by water and sewerage systems. The presence of these utilities has permitted the residential areas of Carteret to develop at higher density than other areas in Middlesex County not fully served by utilities. Detailed analyses of the various utilities serving Carteret are contained in other sections of this Master Plan Report.

PHYSICAL CHARACTERISTICS

Approximately 25 percent of the Borough is less than 10 feet above mean sea level, and well over half is less than 20 feet above mean sea level. This is, and will continue to present, a problem in providing adequate storm drainage.

The heavy industrial uses presently located along the Arthur Kill are on man-filled tidal marshes. These industrial areas, along with the unfilled, vacant tidal

marsh areas in the northern portion of the Borough, make up over 20 percent of the gross area of the Borough.

The remainder of Carteret has a glacial moraine type of soil of mixed clay and sand. This type of soil generally has poor drainage characteristics and bearing capacity. The poor drainage characteristics of the soil prevents proper drainage of roadways unless storm drainage sewers are provided, and the provisions of these sewers is often difficult because of the low level of the land in relation to mean sea level.

In most areas of the Borough bedrock is deep, which makes the construction of supporting foundations for highrise structures expensive and difficult. However, the fact that bedrock is not close to the surface makes the construction of foundations for low rise structures easier and less expensive.

Under these circumstances it can be expected that future apartment house construction in the Borough will principally be in the form of low rise garden apartments.

TRANSPORTATION

Although Carteret has direct access to the New Jersey Turnpike, which provides an advantage for long distance travel, the internal road system of the Borough is poor. The New Jersey Turnpike bisects the eastern and western portions of the Borough and is crossed only by Roosevelt Avenue. Virtually all traffic entering and leaving Carteret, including truck traffic, utilizes Roosevelt Avenue, which is a relatively low capacity road. Roosevelt Avenue, Washington Avenue and the other major streets in the Borough experience congested traffic conditions during peak traffic hours. These heavily traveled routes are mostly located within or adjacent to the older residential areas of the Borough developed before 1950. Within these areas heavy traffic flow is a factor which contributes to deterioration.

The newer residential areas developed after 1950 are mostly located away from the heavy traffic arteries and consequently are not directly affected by these traffic problems.

Although Carteret is served by several bus routes between the Borough and other major points in the metropolitan New York area, the service on the routes is infrequent and utilized mostly by persons commuting to employment outside of Carteret.

COMMUNITY SERVICES

The Borough provides a relatively high level of community services to the residents of Carteret.

Public education is provided for all grade levels within the school system. Although future alterations, renovations and additions may be necessary to the school plants in order to meet the ever changing curricula and extra curricula needs, the number of classrooms within the existing schools appears adequate to serve future anticipated enrollments.

Fire fighting facilities are provided from three fire stations by the combined services of a full-time fire department and volunteer firemen. These facilities are supplemented by industrial fire equipment and the facilities of adjoining municipalities which can be called in for major fires. Although a need exists to replace Fire House No. 1, the location of all these fire houses and the equipment and manpower available offers adequate protection to all the residential areas of Carteret.

Adequate police protection is provided by the Carteret Police Department. The Police Department is in need of more spacious headquarters so that it can more effectively and efficiently carry out the functions of law enforcement.

Ambulance and first aid service is provided to residents of the Borough by the Carteret First Aid Squad.

Municipal garbage collection is provided twice weekly, and trash collection is provided once every week to all residential properties. Industrial and business uses may transport their own trash and garbage to the municipal dump upon obtaining permission. The Borough's Street Department also provides street cleaning, road maintenance and snow removal service.

There are nine municipal parks and playgrounds and an additional baseball field which are maintained by the Borough's Park Department. These parks and playground areas, along with the facilities located at the Borough's schools, are utilized by the Recreation Department in providing a relatively extensive recreation program. One of the major recreational needs of the Borough is swimming facilities. There is no pool located within the Borough. Pool facilities are also a need within the recreation and athletic programs of the school system.

The relatively high level of community services is a plus factor in the desirability of Carteret as a place to live. While there are improvements needed in certain areas of the community services provided by the Borough, these can generally be scheduled at a minimal cost to the taxpayer. This relatively high level of community services would be an incentive to residential development if residential land were available within the Borough.

COMPOSITION OF POPULATION

Of the 20,502 persons residing in Carteret at the time of the 1960 Census of

Population, 564, or 2.8 percent, were of a nonwhite race. Of these nonwhite persons, 554 were Negroes. Census Tract CA-38, which includes the Chrome Area, housed 550, or all but four of the Negroes residing in Carteret in 1960. That same census tract also housed 245 of the Borough's total 257 Puerto Rican population. The total population within Census Tract CA-38, which includes the area of the Borough south and east of Holly Street, Pershing Avenue and Noe Creek, was 3,792 in 1960. Therefore the nonwhite and Puerto Rican combined population in that area of 795 persons represented 21.0 percent of the population of that census tract, while the nonwhite and Puerto Rican combined population of 821 persons in the entire Borough represented only 4.0 percent of the total population of Carteret.

The 1960 Census showed that 9,242 persons, or 45.1 percent of the Borough's population, were either foreign born or of foreign born parentage. The national origin of Carteret's population is strongly Slavic. In fact, the 1960 Census showed that 4,908 persons, or 53.1 percent of the Borough's 9,242 foreign stock, were from either Poland, Hungary or Czechoslovakia.

Since 1960 the nonwhite population of the Borough has grown and represents a greater proportion of the total population and is also more prevalent in other areas of the Borough outside of Census Tract CA-38.

A strong Slavic influence continues to exist in the population of Carteret, which is evident in the social and cultural activities of the Borough.

When the detailed statistics from the 1970 Census are published, more detailed information will be available concerning the composition of Carteret's population. A full understanding of all the characteristics of the Borough's population, broken down into the various census tract areas, is essential in pinpointing the types of housing needed to satisfy the needs of the Borough's residents. Persons of different races, national origins and religion, and within different income and educational attainment levels characteristically have different life styles that dictate different housing needs.

MUNICIPAL FINANCES

In providing community improvements that enhance living conditions in a municipality, the governing body must always be mindful of the fiscal situation of the locality. A high level of community facilities and services, if provided at the expense of excessive bonded indebtedness and an extremely high municipal tax rate, can result in reducing residential property values, thereby decreasing the desirability of the municipality as a place to live. However, maintaining a low level of community services in order to maintain an extremely low bonded indebtedness and municipal tax rate can also bring about the same result.

Perhaps the most difficult aspect of municipal government is determining at what point the provisions of needed municipal facilities and services will begin to produce a negative ultimate result in the overall fiscal situation of a municipality.

At the end of 1969 the Borough of Carteret had an unused borrowing capacity of \$337,471 for municipal purposes and \$2,190,790 for public school purposes. While the unused school borrowing capacity appears more than adequate to meet future bonded improvements that may be necessary to the school system, the present improvements that are warranted in municipal facilities would require bond issues far in excess of the unused municipal borrowing capacity. The scheduling of these needed municipal improvements in order to provide the best balance between the level of municipal facilities and services and the Borough's fiscal status should be the subject of many hours of intensive study by the Planning Board and Borough Council in arriving at a long range Capital Improvement Program and the annual Capital Budget.

Carteret's 1970 true municipal tax rate, which is about 3.17 percent of true property value, is the eleventh lowest among the 24 municipalities in Middlesex County. Plainsboro (1.86 percent of true property value) has the lowest tax rate in the County, while Madison Township (4.52 percent of true property value) has the highest tax rate in the County. In formulating their annual budgets, the Borough Council and Board of Education must always be mindful of the balance between level of services and property taxes, relative to the position of Carteret in Middlesex County and other nearby areas.

In a similar manner, the probable effects that various types of development will have on the balance between service needs and property taxes must be given serious consideration by the Planning Board and Borough Council in the formulation and amendment of the Master Plan and Zoning Ordinance.

STATEMENT OF PROBLEMS RELATED TO HOUSING ELEMENT

The problem related to increasing the supply of housing available in Carteret to help satisfy the housing demands of the area, particularly in relation to low and moderate income families, are as follows:

1. Lack of Available Land

Virtually all of the residential land in Carteret is developed. Only scattered small vacant parcels of land remain within the Borough's residential area. For this reason, it can be expected that most future residential development in the Borough will be replacement housing. Because of the high costs involved in assembling developed land, it

can further be expected that most of the replacement housing will take the form of multi-family housing where a greater economic return per square foot can usually be realized.

2. Financing

The areas where replacement housing is most likely to be developed are within the older and generally lower income areas of the Borough where some of the existing housing is deteriorated. Construction of new housing in these areas with private financing will result in high rental rates, particularly because of the high cost of assembling land. Also high rental apartment housing would not be as marketable in these lower income areas as it might be in other areas. For this reason it is doubtful that any substantial amount of privately financed apartment housing will be developed within the Borough in the near future. Any such privately financed apartments will probably be limited to small structures constructed on existing vacant parcels. A very limited amount of privately financed construction of one- and two-family homes on vacant parcels in the Borough can also be expected. To a large extent, housing improvements in the older lower income areas should involve the rehabilitation of existing deteriorating housing.

The construction of any new major apartments for low and moderate income families will generally require the acquisition and demolition of existing structures. Public assistance in the form of Federal and State financing, rent supplement payments and/or public housing will be necessary to provide this housing at rentals within the means of low and moderate income families.

3. Shopping Facilities

Major food and clothing stores where low and moderate income families can shop economically are not generally located near those older areas of the Borough where future construction of replacement housing for low and moderate income families is likely to occur.

Since public transportation within the Borough is limited, most shopping would require the use of an automobile. This presents a problem to lower income families who cannot afford an automobile or where the housewife does not have access to the automobile because it is used for transportation to work. This presents an even greater problem among low income elderly persons who are unable to drive.

4. Physical Characteristics

Because the residential areas of Carteret are fully developed, any substantial increase in the housing supply in Carteret would require the replacement of existing deteriorated housing with housing of greater density. Since the soil characteristics in Carteret are not conducive to high-rise construction, where the greatest densities can be realized, future replacement housing will most likely be garden apartment type structures, which will produce only a limited increase in the housing supply.

5. Traffic

The residential areas of the Borough where the highest concentration of structural deterioration exists are subject to heavy traffic volumes and, more particularly, traffic which includes heavy trucks traveling to and from the industrial areas. To fully stabilize these areas for residential purposes, it is necessary that these traffic volumes be removed from the local residential streets.

OBSTACLES TO SOLUTION OF PROBLEMS RELATED TO HOUSING ELEMENT

1. Lack of Available Land

Since the residential areas of Carteret are fully developed, future housing programs in Carteret will primarily involve the improvement of conditions of existing housing and the replacement of older deteriorated housing that cannot be improved economically. These programs plus some limited new construction on the few vacant parcels that still exist within residential areas will provide only a small increase in the housing supply in Carteret.

For this reason, the bulk of the area's future housing needs will most likely have to be provided in areas outside of Carteret.

2. Financing

The present tight money market, high construction costs and high interest rates provide a deterrent to all types of construction and rehabilitation, particularly in relation to providing housing for low and moderate income families.

For this reason, heavy reliance will have to be placed upon Federal and

State financial assistance in providing increased housing opportunities for low and moderate income families within the Borough.

3. Shopping Facilities

There does not presently appear to be a demand for large food and clothing stores to locate within those areas of the Borough where rehabilitation or replacement housing for low and moderate income families is likely to be built.

4. Physical Characteristics

It is unlikely that consideration will be given to the construction of high-rise housing within the Borough, particularly because of the soil characteristics. Therefore, increases in Carteret's housing supply will result principally from the replacement of deteriorated structures with garden apartment construction and new construction on the few remaining parcels of residential land. This will provide only a small increase in the Borough's total housing supply.

5. Traffic

The residential areas of the Borough where the highest degree of structural deterioration exists are located adjacent to heavy industrial areas and are subject to traffic generated by those industrial areas, particularly heavy trucks. The removal of this truck traffic will require the construction of a new industrial highway which would bypass these residential areas. The construction of this bypass route in the southern areas of the Borough will require the cooperation of Woodbridge Township, since a portion of the roadway would have to be built within Woodbridge.

OBJECTIVES RELATED TO HOUSING ELEMENT

1. Determination of areas where new housing could be built and where existing housing should be rehabilitated

During the next year a windshield survey of building conditions will be made within the Borough in conjunction with the Master Plan. This survey will provide a basis for pinpointing those areas of the Borough where existing housing should be rehabilitated. Also in the development of the Land Use Plan the vacant areas that exist within the Borough will be considered in terms of their feasibility as future housing sites.

2. Establishment of nonprofit corporations to construct and rehabilitate housing

During the next year the Borough will consult with church groups, civic organizations and business leaders in the community in order to establish nonprofit housing corporations which would be eligible for Federal and State financial assistance in the development of new housing and the rehabilitation of existing housing.

Based on the windshield survey to be conducted next year, areas where prospective new housing could be considered and areas where the rehabilitation of existing houses could be considered will be delineated.

During the second and third year it is hoped that one or more nonprofit corporations will be established and begin the initiation of housing construction and rehabilitation under the applicable Federal and State financing programs.

3. Public Housing

During the next two years the Carteret Public Housing Authority will construct 50 units of elderly housing and 36 units of turnkey public housing in the Chrom Urban Renewal Area.

During this same period, the Housing Authority will review other prospective areas in the Borough where additional public housing units might be warranted.

4. Shopping Facilities

During the next year, in conjunction with the development of the Land Use Plan, neighborhood shopping areas where the basic shopping needs of low and moderate income families can be met will be delineated on the Land Use Plan. These proposed neighborhood shopping areas will be located near to the prospective locations where housing for low and moderate income families is likely to be developed.

Subsequently, the Planning Board and the Borough will solicit the aid of area realtors in attempting to attract those types of shopping facilities to these areas which will satisfy the basic shopping needs of low and moderate income families living nearby.

5. Traffic

During the next two years the Borough will work in conjunction with Middlesex County to have the first stage of the proposed Industrial Highway constructed. This first stage will involve construction of the roadway from the Turnpike Interchange to Roosevelt Avenue in the vicinity of Irving Street. During this same time the Borough will work with Middlesex County and Woodbridge Township to establish the alignment for the remainder of the roadway through the southern portion of Carteret and within Woodbridge. Once the alignment for the remainder of the Industrial Highway is established, it is hoped that construction of this remaining portion of the roadway can be initiated within the next three years. With the completion of this roadway, traffic, and particularly heavy traffic, can be diverted from local residential streets in the Borough.

6. Code Enforcement

Based on the windshield survey of building conditions to be conducted during the next year, properties and areas in the Borough where code inspection should be conducted will be delineated, and a schedule of inspections for subsequent years will be established.

PLANNING ACTIVITIES RELATED TO HOUSING ELEMENT

The housing-related planning activities undertaken by the Carteret Planning Board during the past year (1969) included the initiation of studies for a Revised Master Plan, a proposal recommended to the Borough Council and County Planning Board that the County expand Liberty Park and incorporate it into the County park system, and the review of subdivision plats.

The housing-related planning activities to be undertaken during the next two years include:

1. Master Plan Revision

During the next two years (1970 and 1971) the Planning Board will complete its studies, hold public hearings, and adopt a revised Master Plan for the Borough of Carteret.

An essential part of the Master Plan studies to be conducted during the next year will be a windshield survey of building conditions which will provide the basis for determining the areas of the Borough where:

- a. new housing construction should be initiated;
- b. housing should be rehabilitated; and
- c. code enforcement programs should be initiated.

The revised Master Plan will be prepared by the Planning Consultant in conjunction with the Federal 701 Master Plan program.

2. Revised Zoning Ordinance

After the preparation and adoption of the revised Master Plan, the Planning Board, during the second year (1971), will prepare and recommend to Borough Council for adoption, a revised Zoning Ordinance which will reflect the principles embodied in the new Master Plan.

Special consideration will be given in the preparation of the revised Zoning Ordinance to provisions that will aid in fostering the development of housing adequate to meet the needs of moderate income families of the Borough.

IMPLEMENTATION ACTIONS RELATED TO HOUSING ELEMENT

1. Implementation Actions During Previous Year (1969)

- a. Issuance of Building Permits for 191 residential units, of which 5 were single-family homes, 10 were two-family homes, and 176 were 221(d)(3) garden apartments in the Chrome Urban Renewal Project. The 176 garden apartment units consist of 32 one-bedroom, 70 two-bedroom, 59 three-bedroom, 10 four-bedroom, and 5 five-bedroom units.
- b. A total of 41 housing units and a boarding house with 16 sleeping rooms were demolished during 1969. Seven of the residential units were in single-family structures, 14 were in two-family structures, and 20 were in four-family structures. Most of the housing units demolished in 1969 were located in the Chrome Urban Renewal Area.

2. Implementation Actions to be Taken During the Next Three Years

a. First Year (1970)

- (1) Issue Building Permits for construction of an estimated 30 private housing units.
- (2) Begin construction of 36 units of turnkey housing in Chrome Urban Renewal Project.
- (3) Issue permits for the demolition of approximately 50 housing units.
- (4) Initiate revision of Master Plan.

b. Second Year (1971)

- (1) Issue Building Permits for construction of an estimate 30 private housing units.
- (2) Begin construction of 50 units of elderly public housing in the Chrome Urban Renewal Area.
- (3) Issue permits for the demolition of approximately 50 housing units.
- (4) Form nonprofit corporations for construction and rehabilitation of housing.
- (5) Initiate area code inspections of approximately 300 housing units. Compliance will be completed in an estimated 100 housing units.
- (6) Initiate first phase of proposed Industrial Highway.
- (7) Complete and adopt revised Master Plan.
- (8) Initiate revision of the Zoning Ordinance.

c. Third Year (1972)

- (1) Issue Building Permits for construction of an estimated 30 private housing units.

- (2) Issue permits for the demolition of approximately 40 housing units.
- (3) Initiate new housing construction and rehabilitation by nonprofit corporation(s).
- (4) Initiate area inspections of approximately 300 housing units. Compliance will be completed in an estimated 250 units.
- (5) Initiate second stage of proposed Industrial Highway.
- (6) Complete and adopt new Zoning Ordinance.

NEIGHBORHOOD ANALYSIS

The analysis of neighborhoods or planning areas provides a method for evaluating a municipality's ability to function for its intended purposes. The neighborhood analysis approach involves the following:

1. Delineation of neighborhoods or planning areas.
2. Evaluation of the general character of the neighborhood or planning area.
3. Evaluation of the adequacy of community facilities and services.
4. Evaluation of structural conditions.
5. Determination of the probable causes of deterioration in the neighborhood or planning area.
6. Recommendations for programs or improvements within the neighborhood or planning area.

Neighborhoods are commonly thought of as developed residential areas served by neighborhood shopping facilities, schools, recreational and other community facilities. Several large areas of Carteret are devoted almost exclusively to industrial areas and are not developed as traditional neighborhoods. However, based upon physical features, development patterns and land uses, the Borough can be delineated into eight planning areas. These planning areas are delineated on Plate No. 40, "Neighborhood Conditions".

The maintenance of sound living conditions is a prime objective of every municipality. The very character of a community is reflected by the type and condition of its housing and structures. Well maintained housing and nonresidential buildings can help to stimulate the development of new quality homes, businesses and industries; whereas deteriorated building conditions will tend to discourage the type of growth that may be desired. Deterioration and blighting influences are contagious and may spread if not checked at an early stage.

For this analysis, structural conditions were measured by a windshield survey of all principal buildings in the Borough. Accessory buildings such as garages were not evaluated in the structural conditions measurement. However, the general condition of these accessory buildings, the maintenance of land and the presence of blighting influences were considered in the analysis of each planning area.

Buildings were rated as deficient if they were in need of structural repair or lacked proper maintenance. Buildings were classified as dilapidated if they appeared to be structurally substandard or were in need of extensive exterior repairs. The

survey conducted in 1970 revealed that there were a total of 5,353 principal buildings within the Borough, of which 1,191 or 22.2 percent, were classified as deficient. Of these deficient structures, 278 were classified as dilapidated.

The eight planning areas shown in Plate No. 40 are individually analyzed below.

PLANNING AREA NO. 1 - WEST CARTERET

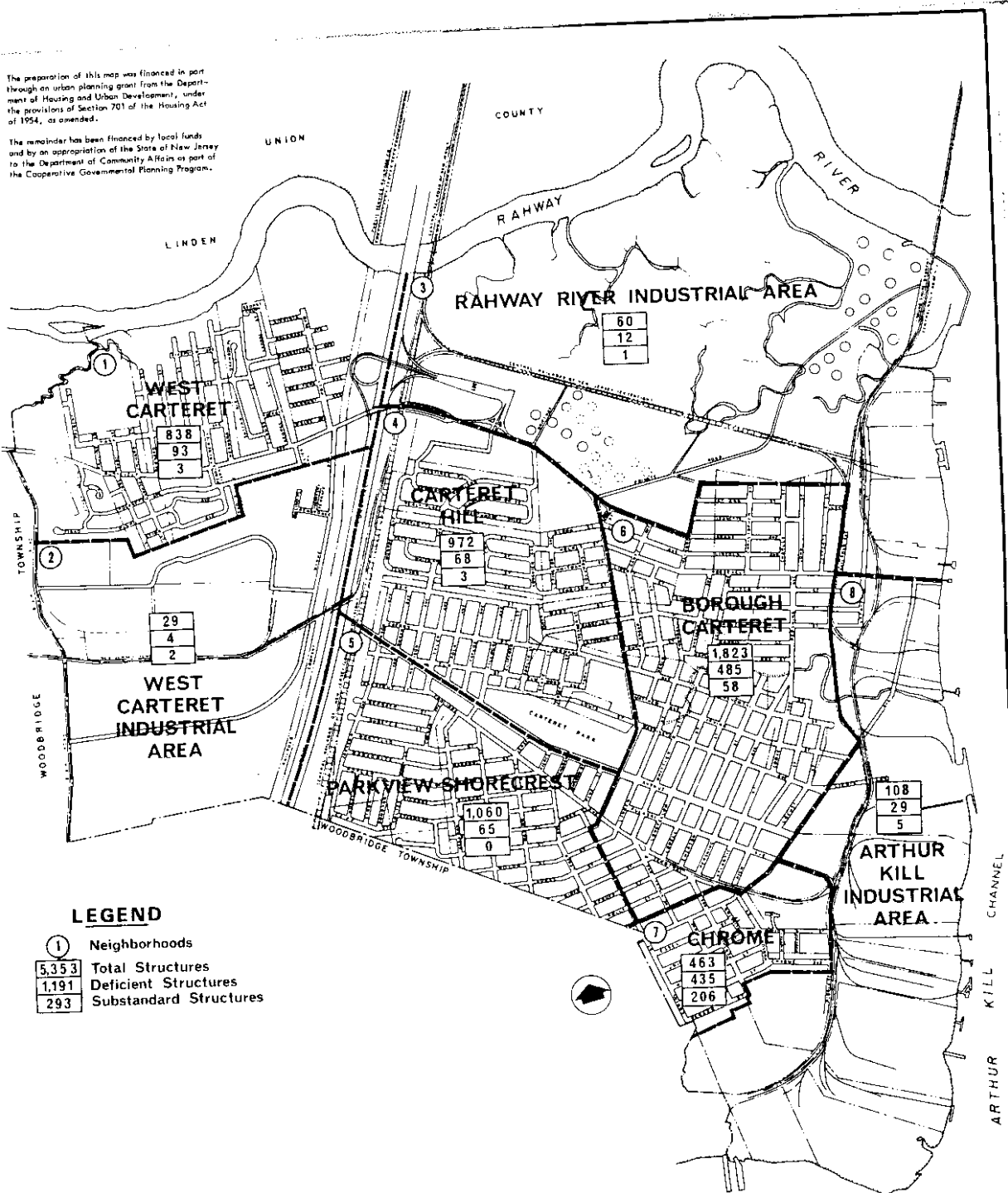
1. Location - The West Carteret Planning Area is situated in the north-western portion of the Borough. It is generally bounded on the north by the Rahway River, on the east by the New Jersey Turnpike, on the south by the rear of the industrial properties on Milik Street and on the west by Woodbridge Township.
2. Area Characteristics - The West Carteret Planning Area is a predominantly residential neighborhood with commercial uses located along Roosevelt Avenue. The commercial uses are primarily located on the south side of Roosevelt Avenue between the New Jersey Turnpike and Orchard Street and on the north side of Roosevelt Avenue near the Woodbridge Township border. A large trailer camp that contains approximately 350 residential trailers is located within the Planning Area adjacent to Woodbridge Township on both sides of Roosevelt Avenue. The area also includes a 22-acre tract of land owned by radio station WOR. This tract of land is located on the northwest corner of the planning area and is predominantly vacant land containing two radio towers and one building.

The housing in the West Carteret Planning Area consists primarily of one-family homes with a small number of two-family and multi-family buildings, generally interspersed in the area north of Roosevelt Avenue, and the previously mentioned trailer camp.

Except for the WOR property and the vacant areas adjacent to the Rahway River, the planning area is almost entirely developed, with only a few isolated vacant parcels remaining.
3. Community Facilities - The community facilities located within this planning area include the Private Minue Elementary School, Fire Station No. 3, Liberty Park, the Cornell Estates Playground and the Bernard Street Playground. The planning area is completely served with potable water from the Middlesex Water Company and by combined sanitary and storm drainage sewers.
4. Structural Conditions - The field survey conducted on 1971, revealed that this planning area contained a total of 838 principal

The preparation of this map was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

The remainder has been financed by local funds and by an appropriation of the State of New Jersey to the Department of Community Affairs as part of the Cooperative Governmental Planning Program.



SOURCE: Field Survey

MASTER PLAN
BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY

2400 1600 800 0 1600 2400 FT.

KEHAYAS ASSOCIATES, INC. SOMERSET, NEW JERSEY

**NEIGHBORHOOD
CONDITIONS - 1971**

PLATE NO.
40
July 1972

structures of which 93 were classified as deficient. Of these deficient structures, 3 were classified as dilapidated. The deficient structures are not concentrated in one location but are generally spread throughout the area north of Roosevelt Avenue. In general these deficiencies are of a minor nature. The structural condition of the buildings in the planning area is good, and the level of maintenance among the older housing is relatively high.

5. Causes of Deterioration - Among the causes of the deterioration that exists in the West Carteret Planning Area are:

- A. Traffic - The heavy volume of through traffic on Roosevelt Avenue, particularly the heavy truck traffic, is a blighting influence on the properties fronting on that street.
- B. Mixed Land Use - Some of the commercial uses located within the area are not adequately screened or buffered from adjoining residential properties and, consequently, are a blighting influence on the residential properties.
- C. Lack of Maintenance - Although the overall level of property maintenance within the planning area is high, some of the older residential properties within the area were in need of repair and painting and were, therefore, classified as deficient.

6. Recommendations - the following recommendations are made for programs and improvements in the West Carteret Planning Area:

- A. Community Facilities - The vacant areas adjacent to the Rahway River and the WOR property are being considered for acquisition by Middlesex County for the development of a County Park. The County Park, which will include the existing Liberty Park, will encompass approximately 75 acres within Carteret and an additional 8 acres in Woodbridge Township. This park along with the existing Cornell Estates Playground should more than adequately serve the recreation area needs within the neighborhood and will also serve as a large scale recreational facility for all the residents of the Borough.

The Private Minue Elementary School is presently of adequate size to serve the school needs of West Carteret. Since large population increases are not likely to occur within the planning area because of lack of available vacant land for new residential development, the school should also be adequate to serve the future school needs.

When the planned separation of sanitary sewers and storm drainage facilities is completed within West Carteret, the existing storm drainage problem that presently exists in portions of the area after heavy rainfalls will be eliminated.

- B. Street Improvements - The proposed Carteret Industrial Road and the proposed extension of Blair Road across the Rahway River to U.S. Route 1 should help divert traffic, particularly truck traffic, off Roosevelt Avenue and reduce the blighting effects that this traffic has on the properties fronting on Roosevelt Avenue.
- C. Code Enforcement - General code enforcement by the Borough should be all that is required to eliminate the deterioration that exists within West Carteret. For the most part, the deterioration that exists within the area is minor and is a result of the lack of proper maintenance. Through enforcement of a property maintenance code and a housing code, these building could be brought up to acceptable standards.

PLANNING AREA NO. 2 - WEST CARTERET INDUSTRIAL AREA

- 1. Location - The West Carteret Industrial Area is situated in the south-westerly portion of the Borough. It is bounded on the east by the New Jersey Turnpike, on the south and west by Woodbridge Township, and on the north by Planning Area No. 1 (West Carteret).
- 2. Area Characteristics - This planning area consists primarily of light industrial uses and vacant land. The only nonindustrial uses that exist within the West Carteret Industrial Area are five residential structures and a commercial structure located on Gulino Place and Ivanitsky Terrace in the northeasterly portion of the Planning Area. The portion of the planning area located between Minue Street and the New Jersey Turnpike is occupied by overhead Public Service transmission lines and is, therefore, not available for private development. A power station for these transmission lines is located on the westerly side of Minue Street just north of Pendro Avenue.

Among the major industrial uses located within this planning area are Continental Can Co., Metro Glass Company, Englehard Industries, Rex Packing Company, Whitehead Metals and Wilgreen Industries. The areas in Woodbridge Township to the west and south of the planning area are also developed with industrial uses.

3. Community Facilities - There are no community facilities located within this planning area. Water is supplied to the developed properties by the Middlesex Water Company. Sanitary sewage is collected from the industrial properties in the municipal collection system and treated at the Borough's Treatment Plant.
4. Structural Conditions - The field survey conducted in 1971, revealed that this planning area contained a total of 29 principal buildings of which 4 were classified as deficient. Of these deficient structures, 2 were classified as dilapidated. All 4 deficient structures were residential buildings located between Gulino Place and Ivanitsky Terrace.
5. Causes of Deterioration - The deterioration that exists in the four residential structures is principally caused by the age of the structures and a general lack of maintenance. It is probable that these residential structures will be demolished in connection with industrial development in the area.
6. Recommendation - Since the planning area is to be entirely developed for industrial purposes, no community facilities are recommended. Further recommended street improvements include the widening of Blair Road and the extension of Carteret Avenue over the New Jersey Turnpike to connect with Minue Street. The widening of Blair Road is necessary to provide for the increased volume that can be expected from industrial development in the area. The extension of Carteret Avenue is proposed to improve emergency access and provide a local traffic connection between the areas of Carteret east and west of the New Jersey Turnpike.

Since future industrial development should eliminate the structural deterioration that exists within the area, no specific building improvement programs are recommended.

PLANNING AREA NO. 3 - RAHWAY RIVER INDUSTRIAL AREA

1. Location - The Rahway River Industrial Area is located in the northeasterly portion of Carteret. It is generally bounded on the west by the New Jersey Turnpike, on the north by the Rahway River, on the east by the Arthur Kill and on the south by Roosevelt Avenue, Grant Avenue and Beverly Street.

2. Area Characteristics - The planning area is utilized largely by heavy fuel-oriented industries and includes the majority of the vacant land in the Borough. Also located within the planning area are several recently constructed light industrial plants on Grant and Hayward Avenues and older residential and commercial buildings located between Railroad Avenue and Lafayette Street.

The vacant areas of the planning area are principally marsh lands located between the Rahway River and the tracks of the Central Railroad of New Jersey Extension.

3. Community Facilities - The community facilities located within this planning area include Carteret's Land Fill Site and the Grant Avenue Playground. This playground at the Corner of Grant and Hayward Avenues had been used as a playground for many years with the consent of the owners, the American Oil Company. In 1969 the American Oil Company deeded this property to the Borough for recreation purposes.

4. Structural Conditions - The field survey conducted in 1971, revealed that this planning area contained a total of 60 principal buildings, of which 12 were classified as deficient. Of these deficient buildings, one was classified as deteriorated. The structural deterioration is principally located in the older commercial and residential buildings located between Railroad Avenue and Lafayette Street.

The Rahway River Industrial Area contains well over 100 fuel storage tanks which were not counted as principal buildings in the field survey. These tanks, which belong to the American Oil Company and the General American Transportation Company, are well maintained and in good structural condition.

5. Causes of Deterioration - Among the causes of the structural deterioration, which is principally located between Railroad Avenue and Lafayette Street, are the following:

- A. Age of Structures - The buildings located in the above mentioned portion of the planning area are relatively old structures which are not adequate for present day needs.
- B. Lack of Maintenance - The level of maintenance among the older buildings is relatively low.

- C. Mixed Land Use - The structural deterioration in the older residential and commercial properties is partially a result of their proximity to incompatible heavy industrial uses.
 - D. Traffic - Heavy truck traffic on Roosevelt Avenue, Lafayette Street and Railroad Avenue has contributed largely to the deterioration that exists. In the past, railroad freight traffic on the railroad spur line adjacent to Railroad Avenue also contributed to deterioration. This spur line is planned to be abandoned and utilized as a portion of the right-of-way for the proposed Carteret Industrial Highway.
6. Recommendations - The following recommendations are made for programs and improvements in the Rahway River Industrial Area:
- A. Traffic - The recommended alignment for the proposed Carteret Industrial Highway is to follow an alignment along either the northern or southern side of the tracks of the Central Railroad of New Jersey Extension from the Turnpike interchange to the railroad spur along Railroad Avenue and then to utilize the right-of-way of that spur to Roosevelt Avenue. This proposed roadway would serve to divert heavy truck traffic away from Roosevelt Avenue, which would then be designated a light traffic street on which heavy trucks would not be permitted.
 - B. Industrial Development - The proposed Industrial Highway would also provide access to the large vacant marsh land areas in the northern portion of the planning area. With construction of this roadway, it is possible that private industry would itself fill and reclaim these marsh areas for industrial usage.

However, it is recommended that the Borough consult the Federal Government to see if funds are available to assist in undertaking studies to determine the feasibility and marketability of developing this land.

PLANNING AREA NO. 4 - CARTERET HILLS

- I. Location - The Carteret Hills Planning Area is located in the Central portion of the Borough. It is bounded on the west by the New Jersey Turnpike, on the north by Roosevelt Avenue, on the east by Washington Avenue and Cypress Street, and on the south by Carteret Avenue.

2. Area Characteristics - The planning area is a predominantly residential neighborhood with the Carteret Shopping Center, Carteret Bowling Lanes, other commercial uses located along Roosevelt Avenue, and scattered commercial uses located along Washington Avenue. There is also a heavy industrial use area located adjacent to the New Jersey Turnpike and immediately south of Roosevelt Avenue.

Except for the recently constructed garden apartments off Roosevelt Avenue, a small garden apartment area on Byron Street, and scattered two-family homes, the planning area is principally occupied by single-family housing. The area is almost entirely developed except for a few small vacant residential parcels.

3. Community Facilities - The community facilities located within this planning area include Carteret High School, Lincoln Elementary School, Carteret Park and the St. Joseph Parochial School Annex. The Carteret Hills Planning Area is completely served with potable water from the Middlesex Water Company. Sanitary sewage and storm drainage is collected by the Borough's combined sewer system.

4. Structural Conditions - The field survey conducted in 1971, revealed that this planning area contained a total of 972 principal buildings, of which 68 were classified as deficient. Of these deficient structures, 3 were classified as dilapidated.

Although the extent of structural deterioration in this planning area is relatively low, it is primarily concentrated within the blocks adjacent to Washington Avenue and along Louis Street in the residential properties abutting Carteret High School and Carteret Park. The newer Carteret Hills Subdivision and the areas west of Jersey Street are virtually free of structural deterioration.

5. Causes of Deterioration - Among the causes of the deterioration that exists in the Carteret Hills Planning Area are the following:

- A. Traffic - The heavy traffic volumes on Washington Avenue, which is a relatively narrow street, have contributed to the deterioration of the buildings in the adjoining blocks.
- B. Mixed Land Uses - The mixture of commercial and residential uses along Washington Avenue has been a blighting influence within that area. The activity generated at Carteret High School and Carteret Park has also contributed to the deterioration in the abutting residential properties.

- C. Lack of Maintenance - Traffic volumes and mixed land uses along Washington Avenue have been factors that have contributed to a lack of proper maintenance in some of the older structures.
- 6. Recommendations - The following recommendations are made for programs and improvements within the Carteret Hills Planning Area:
 - A. Community Facilities - It is recommended the Borough plan, as a long range goal, acquire the properties on Louis Street that abut Carteret High School and Carteret Park. This would permit expansion of both of these facilities along Louis Street and permit Carteret Park to be easily used for the High School's recreational programs. The present recreational facilities located on the High School site are limited.

In conjunction with the expansion of Carteret Park, it is recommended that a new library be constructed on the southwest corner of Washington Avenue and Cypress Street. This would provide a central location for the library and place it in close proximity to the High School for use by the students.

- B. Code Enforcement - It is recommended that enforcement of a property maintenance code and housing code be instituted for the blocks fronting on Washington Street, to eliminate the existing deficiencies in this area and prevent the spread of blight to the other sections of the Carteret Hills Planning Area.

PLANNING AREA NO. 5 - PARKVIEW-SHORECREST

- 1. Location - The Parkview-Shorecrest Planning Area is situated in the southcentral portion of the Borough. It is bounded on the west by the New Jersey Turnpike, on the north by Carteret Avenue, on the east by Cypress Street and Arthur Avenue, and on the south by Woodbridge Township.
- 2. Area Characteristics - This planning area is a residential neighborhood consisting principally of one-family homes. The area is entirely developed except for a few scattered small residential lots.
- 3. Community Facility - The only community facility located within the planning area is the Shorecrest Playground located on Sycamore Street. However, the recreational needs of the area are also served by Carteret

Park and the Parkview Playground which are both adjacent to the planning area.

The elementary school needs for the Parkview-Shorecrest area are primarily met by the Lincoln School, located on the westerly edge of Carteret Park in the Carteret Hills Planning Area.

The planning area is completely served with potable water from the Middlesex Water Company and by combined sanitary and storm drainage lines.

4. Structural Conditions - The field survey conducted in 1971 revealed that this planning area contained a total of 1,060 principal buildings, of which 65 were classified as deficient. There were no buildings classified as dilapidated.

There are no areas of concentrated deterioration within the planning area. The buildings classified as deficient are generally located among the older structures in the area.

5. Causes of Deterioration - The principal cause of the small amount of deterioration that exists within the Parkview-Shorecrest Planning Area is a lack of proper maintenance of some of the older homes.
6. Recommendations - General code enforcement should be all that is required to eliminate the small amount of deterioration that exists in this area. For the most part, the deterioration that exists is a result of the lack of proper maintenance. Through the enforcement of a property maintenance code and a housing code, these buildings could be brought up to acceptable standards.

PLANNING AREA NO. 6 - BOROUGH CENTER

1. Location - The Borough Center Planning Area is situated in the central portion of the Borough. It is generally bounded on the west by Washington Avenue, Cypress Street and Arthur Avenue, on the north by the Rahway River Industrial Area, on the east by tracks of the spur line of the Central Railroad of New Jersey and Roosevelt Avenue, and on the south by Larch Street.
2. Area Characteristics - The predominant use within this planning area is residential, but commercial uses are interspersed throughout the area with concentrations of small commercial establishments located on Roosevelt

Avenue near Pershing Avenue, Washington Avenue between Cypress and Whittier Streets, and in the area of Washington and Cooke Avenues. Scattered within the planning area are also several industrial plants. Most of the churches and other semi-public uses within Carteret are located within this Planning Area.

The residences within the area are predominantly single-family. However, two-family and multi-family structures are located in various parts of the planning area. Fifty units of public housing for the elderly were constructed on Noe Street in the late 1960's.

There are small vacant parcels of land scattered throughout much of the planning area. However, the only large vacant area in the Borough Center Planning Area is presently being acquired and developed by the Borough for park purposes with the aid of Federal Open Space funds.

3. Community Facilities - The community facilities located within the Borough Center Planning Area include the following:

- A. Nathan Hale Elementary School
- B. Washington Elementary School
- C. Cleveland Elementary School
- D. Columbus Elementary School
- E. Borough Hall
- F. Carteret Post Office
- G. Fire House No. 1
- H. Fire House No. 2
- I. Carteret Rescue Squad
- J. Carteret Free Public Library
- K. John Street Playground

- L. Parkview Playground
- M. St. Joseph's Parochial School
- N. Holy Family Parochial School
- O. St. Elias Parochial School

The heavy concentration of community facilities and churches within the Borough Center Planning Area can be attributed to the fact that this area and the Chrome Area contained most of the residential development that existed in the Borough prior to 1950. Most of the community facilities and churches were established in this area prior to 1950 to serve the population that resided in the Borough at that time.

The entire area is served with potable water from the Middlesex Water Company and by combined sanitary and storm drainage sewers.

4. Structural Conditions - The field survey conducted in 1971 revealed that this planning area contained a total of 1,823 principal buildings, of which 485 buildings were classified as deficient. Of these deficient buildings, 58 were classified as deteriorated.

Although there is evidence of structural deterioration throughout most of the Borough Center Planning Area, the largest concentration of deterioration is within the Hill Section in the area generally bounded by Beverly Street, Railroad Avenue, Randolph Street, Pershing Avenue, and Charles Street.

5. Causes of Deterioration - Among the causes of the deterioration that exists in the Borough Center Planning Area are:
 - A. Age of Structures - Much of the deterioration, particularly in relation to the buildings classified as dilapidated, is located in old structures that are not functional under today's standards.
 - B. Lack of Maintenance - Many of the structures classified as deficient are structurally sound but have been allowed to deteriorate through a lack of proper maintenance.

- C. Mixed Land Uses - The intermixing of residential properties with commercial and other nonresidential uses has contributed to the general deterioration throughout the area.
 - D. Traffic - Relatively heavy traffic volumes on Roosevelt, Washington, Pershing and Cooke Avenue have contributed to the overall blight in the area. Heavy truck traffic on Roosevelt Avenue has been a significant factor in the deterioration that exists along that street.
 - E. Inadequate Streets - Narrow street widths and lack of adequate paving on some streets within the Hill Section have contributed to the deterioration of abutting properties.
6. Recommendations - The following recommendations are made for programs and improvements within the Borough Center Planning Area:
- A. Urban Renewal - Consideration should be given to initiating a federally-aided urban renewal program in the areas of the Hill Section where the largest concentration of structural deterioration exists. The initiation of an urban renewal project in this area would be particularly beneficial in receiving federal assistance for the many public improvements needed in that area, including street paving and the separation of sanitary and storm drainage lines.
 - B. Concentrated Code Enforcement Program - A large portion of the Borough Center Planning Area appears to qualify for a federally-assisted Concentrated Code Enforcement Program. It is recommended that the Borough consider applying for federal assistance under this program to aid in the improvement of the planning area. The Federal Concentrated Code Enforcement Program provides federal assistance not only for code enforcement activities but also for the construction of necessary public improvements. This and other Federal aid program will be explained in detail in a later section of this study.
 - C. Community Facilities - In addition to the Park being constructed on Noe Street and Pershing Avenue with assistance under the Federal Open Space program, it is recommended that a new fire station be constructed to replace the existing Fire Station No. 1, which is inadequate for the present needs of the Fire Department.

Since little land remains in the area for the construction of additional housing, it is not anticipated that school enrollments will rise significantly in the future. Therefore the capacities of the existing school

facilities in the area should be adequate to meet future enrollment needs and no new schools are recommended. However, since all the existing schools in the planning area are deficient in outdoor recreation space, it is recommended that a program be initiated to acquire, over a period of years, additional land adjacent to these school facilities. In addition, this will permit new school facilities to be constructed to replace existing schools as they become antiquated without requiring the demolition of the old school before the new facility is completed.

Although the Green Acres and Open Space Programs are generally known and used for their recreational and other open space uses, it is also possible to apply these programs to acquire large open areas surrounding public buildings such as schools. As an example, if a proposed school area is to be acquired from private owners, the largest portion of the land which is to be used for recreation, walkways, open areas, etc. can be acquired under these programs. Only the land upon which the building will be constructed need be purchased with local funds.

It is recommended that the Borough consider construction of a Police Headquarters separate from Borough Hall. This will provide needed additional space for the other offices in Borough Hall as well as a modern police facility.

PLANNING AREA NO. 7 - CHROME

1. Location - The Chrome Planning Area is located in the southeasterly portion of the Borough and includes the same areas as the Chrome Urban Renewal Project which is presently in execution. It is generally bounded on the north by the Borough Center Planning Area, on the west by Woodbridge Township and on the south and east by the Arthur Hill Industrial Area (Planning Area No. 8).
2. Area Characteristics - Since the Chrome Area is presently undergoing constant change because of urban renewal activities and since detailed information is available concerning the characteristics of the area just prior to the start of execution of the project in 1968, the area characteristics included here relate to the area just prior to the start of the Chrome Urban Renewal Project. Under the section of this analysis related to recommendations, the proposals for the development of the Chrome Area

and an indication of those improvements that have already taken place will be outlined.

Prior to the start of urban renewal activities the Chrome Planning Area was a predominantly residential area with commercial uses concentrated on Roosevelt Avenue and scattered throughout the remainder of the area. The area also contained several store front churches scattered throughout the project.

Structural conditions within the Chrome Project were extremely poor, and housing consisted of a wide variety of types including single-family homes, multi-family structures, public housing and apartments above stores. In 1967 the area contained a total of 823 private dwelling units, 76 public housing units and 50 public housing units for the elderly. These 126 public housing units were excluded from the project area and not scheduled for acquisition.

The Chrome Area housed approximately 608 families excluding public housing in 1967 of which 131 families were nonwhite. The nonwhite families living in the Chrome Area represented over 90 percent of the nonwhite families in the Borough.

3. Community Facilities - The only community facility located within the Chrome Area in 1967 was the U. S. Metals Playground. The area was completely served with potable water from the Middlesex Water Company and by combined sanitary and storm drainage sewers.
4. Structural Conditions - Based on the detailed survey conducted during the planning stage of the Chrome Urban Renewal Project the area contained a total of 463 buildings of which 435 were classified as deficient. Of these deficient buildings, 206 were classified as dilapidated. As can be seen from the above figures, structural deterioration was widespread throughout the planning area. Only 28 buildings within the entire Chrome Area were classified as standard structures, and 19 of these buildings were public housing structures. The project area plans provide for 251 structures to be cleared and 193 buildings to be rehabilitated.
5. Causes of Deterioration - Among the many factors that caused the widespread deterioration in the Chrome Planning Area are the following:
 - A. Overcrowding - Residential lots in the area had an average frontage

of only 25 feet, and many second residential structures were located in rear yards. Most buildings had no setback from the street line.

- B. Age of Structures - Most of the buildings in the planning area were very old, and many building types were obsolete according to today's standards.
 - C. Lack of Maintenance - Most of the buildings in the area showed evidence of serious lack of maintenance.
 - D. Streets - Many of the streets in the area were very narrow and in need of paving or repair.
 - E. Traffic - Heavy traffic volumes, particularly heavy trucks, on Roosevelt Avenue and other streets in the area contributed to the general deterioration of both residential and commercial buildings.
 - F. Mixed Land Use - The high degree of mixed residential and non-residential uses within the same structure and adjacent to each other contributed to the general deterioration in the area. Many of these mixed uses resulted from conversion of a portion of a building to a use for which it was not designed.
6. Recommendations - The following indicates the proposals of the Urban Renewal Plan for the Chrome Area:

- A. Housing: In the northeast corner of the Chrome Area, 176 units of 221 (d) (3) garden apartment units have been constructed. These units are generally located to the north and east of the existing public housing for the elderly on Union Street and include the tracks of the New Jersey Terminal Railroad which have been abandoned.

Thirty six units of turnkey public housing are being constructed to the north of the existing public housing units on Mercer Street. These turnkey housing units will front on Warren and Mercer Streets between Edwin and Salem Streets.

Fifty units of public housing for the elderly will be constructed directly to the east of the existing housing for the elderly units.

Two hundred eighty-eight (288) existing housing units will be rehabilitated under the Urban Renewal Plan.

- B. Commercial - New commercial facilities are to be provided on Roosevelt Avenue just east of Hudson Street and along Middlesex Avenue on the eastern side of the project area.

The existing commercial buildings along Roosevelt Avenue between Edwin Street and Hudson Street are to be rehabilitated.

- C. Street Improvements - Middlesex Avenue has been extended north of Union Street along the eastern boundary of the project area to connect with Roosevelt Avenue.

Roosevelt Avenue is to be vacated between Edwin and Hudson Streets and developed as a mall for the adjoining commercial buildings which are to be rehabilitated. In conjunction with this, a one-way loop will be formed around this section of Roosevelt Avenue by making Larch Street one-way west and Essex Street one-way east and providing for smooth connections from these arteries to Roosevelt Avenue at Edwin and Hudson Streets. The structures facing on the north side of Essex Street and the south side of Larch Street are to be demolished and the areas developed as parking for the rehabilitated commercial uses fronting on the Roosevelt Avenue Mall.

- D. Community Facilities - A neighborhood park is to be developed in the area bounded by Salem, Essex, Pershing and Larch Streets. In connection with this, Mercer, Warren and Union Streets will be vacated between Salem and Pershing Streets. A neighborhood community center building will be provided across from this park on Essex Street.

The separation of sanitary and storm sewer lines has already been completed within the Chrome Area in conjunction with the Urban Renewal Project.

PLANNING AREA No. 8 - ARTHUR KILL INDUSTRIAL AREA

- I. Location - The Arthur Kill Industrial Area is located on the southeasterly portion of the Borough. It is bounded on the east and south by the Arthur Kill, on the west by Woodbridge Township, the Chrome Planning Area and the Borough Center Planning Area, and on the north by the Rahway River Industrial Area.

2. 2. Area Characteristics - The planning area is largely developed with heavy manufacturing industries. Residential and commercial structures are located on the northeastern corner of the planning area in the area generally bounded by Roosevelt Avenue, Lafayette Street, Randolph Street and the railroad right-of-way which is to be utilized for the Carteret Industrial Highway.

Several parcels of vacant industrial land are located within the planning area along Roosevelt Avenue and to the south of the Chrome Area.

3. Community Facilities - The Arthur Kill Industrial Area contains the Borough's Sewage Treatment Plant, the Municipal Garage and the Liebig Field recreation area. All the developed properties in the area receive potable water from the Middlesex Water Company. Several of the larger industrial plants also utilize water from the Arthur Kill for processing purposes.

Domestic sanitary sewage is collected in the municipal combined sewer system but most of the industrial wastes from the larger manufacturing plants is discharged directly into the Arthur Kill.

4. Structural Conditions - The field survey conducted in 1971 revealed that there were a total of 108 principal buildings in the planning area, of which 29 were classified as deficient. Of the deficient structures, 5 were classified as dilapidated.

The largest concentration of structural deterioration is in the residential and commercial buildings in the northeast corner of the planning area.

5. Causes of Deterioration - Among the causes of the deterioration that exists in the Arthur Kill Area are the following:

- A. Lack of Maintenance - There has been a low level of maintenance in the residential and commercial buildings in the northeast corner of the planning area.
- B. Age of Buildings - Many of the buildings in the planning area are old and obsolete for their present use.
- C. Mixed Use - The location of heavy industrial uses nearby has contributed to the deterioration of the residential and commercial uses in the northeast corner of the planning area.

6. Recommendations: The following recommendations are made for programs and improvements within the Arthur Kill Industrial Area:
- A. Urban Renewal - It is recommended that the residential and commercial buildings in the northeast corner of the planning area be included in the federally-aided urban renewal program recommended for the Hill Area (under the Borough Center Planning Area analysis).
 - B. Streets - It is recommended that the proposed Carteret Industrial Highway follow an alignment from the northwest corner of the planning area along the abandoned railroad right-of-way (western boundary of the planning area) to Roosevelt Avenue, and then extended along the westerly side of the Central Railroad of New Jersey to Middlesex Avenue, and then extended (to include Middlesex Avenue), also along the westerly side of the Central Railroad of New Jersey, to the Woodbridge Township Line. The industrial highway should then be extended within Woodbridge to connect with Woodbridge Avenue along an alignment jointly worked out by Carteret, Woodbridge and Middlesex County officials.

LAND USE PLAN

The Land Use Plan is designed to establish a basic pattern of community development for the future. Essentially, it embodies a statement of land use policies and objectives based upon information and recommendations set forth in the preliminary planning studies. By its very nature, the Plan must be both firm and flexible. It must be firm enough to carry out community objectives while simultaneously being flexible enough to accommodate changing circumstances.

In and of itself, however, the Land Use Plan is neither legally binding nor self-implementing. If it is to be effective in achieving the Planning Board's objectives, it must be supported by such legal instruments as the Zoning Ordinance, subdivision regulations, official map and a capital improvements program, all of which carry the power of implementation.

Plate No. 41, "Land Use Plan, indicates the major land use categories recommended for each area of the Borough.

Moderate Density Residential - Single Family

The areas designated on the Land Use Plan as "Moderate Density Residential - Single Family" are those areas of the Borough which are either developed or are recommended for development with single family homes on minimum lot sizes of 5,000 square feet. For the most part, these areas are developed. However, scattered vacant parcels do exist which should be developed in accordance with the character of the adjoining residential properties.

The Moderate Density Residential areas include all of the newer single family residential developments in the Borough. Housing conditions are generally good and normal property maintenance should be sufficient to maintain these areas as stable residential neighborhoods.

High Density Residential - One and Two-Family

The areas designated on the Land Use Plan as "High Density Residential - One and Two Family" are those areas of the Borough which are either developed or are recommended for development with single family homes on minimum lot sizes of 3,750 square feet or two family homes on minimum lot sizes of 5,000 square feet.

The areas designated as High Density Residential are largely developed and contain the older housing areas of the Borough. There is a high degree of structural deterioration in many portions of the High Density Residential areas. Concentrated Code Enforcement programs and/or Urban Renewal programs will be necessary to restore portions of the High Density Residential areas to a stable condition.

These areas are also characterized by scattered nonresidential areas which are not compatible with the housing areas and provide an additional deteriorating influence. Improvement programs in the High Density Residential areas should include plans for replacement of these nonresidential uses with one or two family homes.

Multi-Family Housing

The areas indicated as "Multi Family Housing" on the Land Use Plan include those areas presently utilized for public housing and private garden apartment developments plus several areas recommended for future garden apartment development.

The existing Multi-Family Housing areas shown on the Land Use Plan include the following:

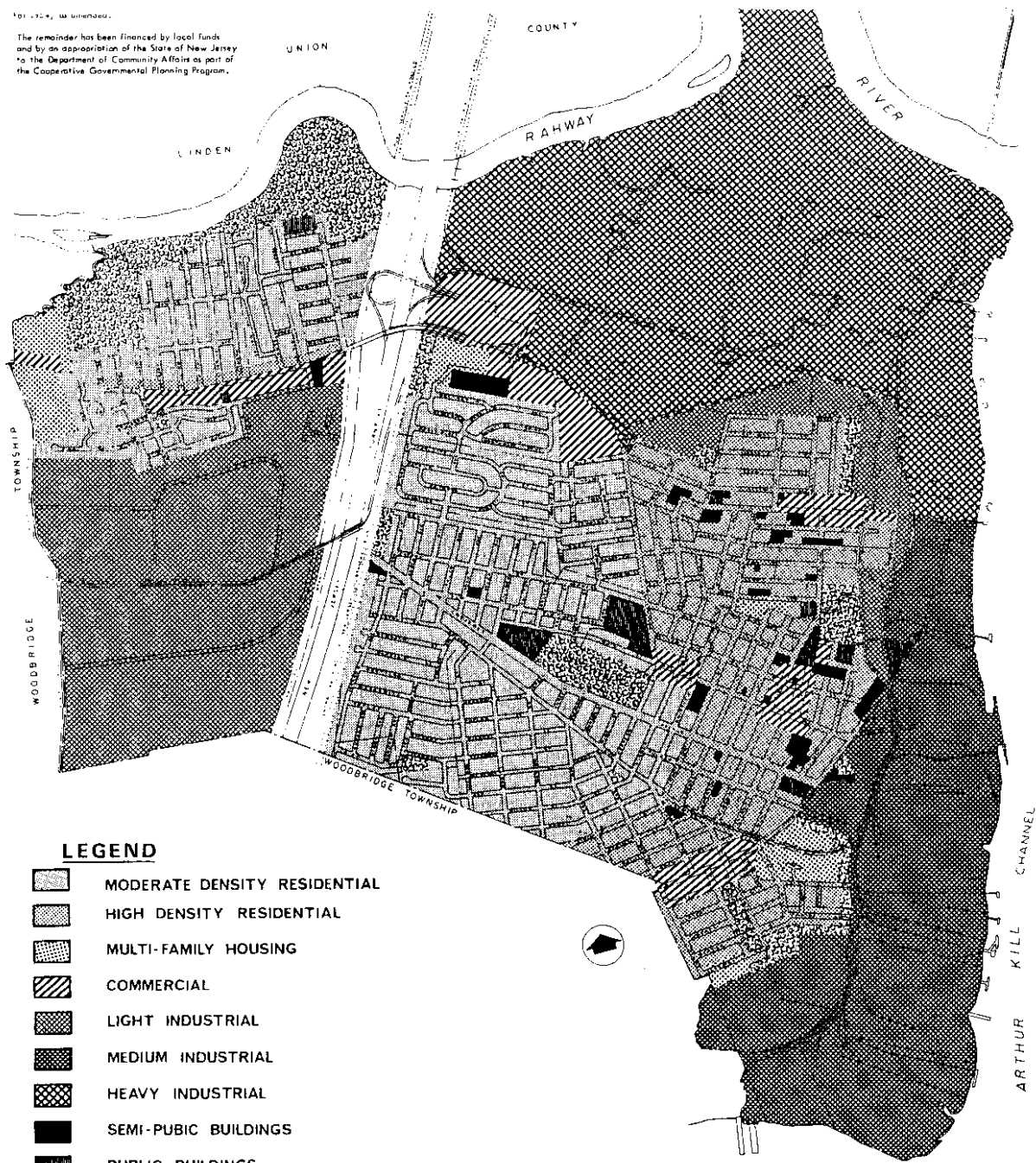
1. The Public Housing located on Bergen Street.
2. The Public Housing for the Elderly located on Union Street.
3. The Public Housing for the elderly located on Noe Street.
4. The newly constructed 221 (d) (3) garden apartments in the Chrome area along Roosevelt and Middlesex Avenues.
5. The garden apartment area adjacent to Saint Joseph's Parochial school and the Carteret shopping center.
6. The garden apartments located on Byron Street, and
7. The garden apartments located on the corner of Spoganetz Avenue and Pekola Terrace.

The proposed Multi Family areas shown on the Land Use Plan include the following:

1. The expansion of the Public Housing for the elderly in the Chrome area which is to be built in the land generally bounded by the present housing for the elderly, Union Street, Burlington Street and the extension of Essex Street to Roosevelt Avenue.

101-130-4, as amended.

The remainder has been financed by local funds and by an appropriation of the State of New Jersey to the Department of Community Affairs as part of the Cooperative Governmental Planning Program.



LEGEND

- MODERATE DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- MULTI-FAMILY HOUSING
- COMMERCIAL
- LIGHT INDUSTRIAL
- MEDIUM INDUSTRIAL
- HEAVY INDUSTRIAL
- SEMI-PUBLIC BUILDINGS
- PUBLIC BUILDINGS
- PARKS AND RECREATION

MASTER PLAN

BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY

2400 1600 800 0 1600 2400 FT.

KEHAYAS ASSOCIATES, INC.

SOMERSET, NEW JERSEY

LAND USE PLAN

PLATE NO.

41

MAY 1973

2. The two tracts of land in West Carteret which are presently utilized as trailer parks. As a long range objective of the Land Use Plan, it is recommended that the two trailer parks be planned for eventual replacement with garden apartments.

Commercial

The areas indicated on the Land Use Plan as Commercial represent a recommendation to consolidate commercial uses in seven locations in the Borough. The commercial areas shown on the Land Use Plan are as follows:

1. The existing commercial areas on the north side of Roosevelt Avenue in West Carteret. The area should be improved with landscaping along the street frontage.
2. The area in West Carteret generally bounded by Roosevelt Avenue, Minue Street, Germak Drive, Spoganetz Avenue and Orchard Street. Although this area is presently developed, it is likely that some of the older buildings will be replaced by new commercial uses in the future. This area should be improved with landscaping along the street frontage and a reduction in the number and size of driveways onto Roosevelt Avenue.
3. The Carteret Shopping Center. It is recommended that the Roosevelt Avenue street frontage of the shopping center be improved with landscaping and sidewalks. The improvement of the appearance of the street frontage along the Carteret Shopping Center is of particular importance since it is the initial view of the Borough for person exiting the Turnpike.
4. Roosevelt Avenue between the proposed Industrial Road and Roosevelt School. Although this area is presently completely developed many of the structures are presently in mixed commercial residential use. It is recommended that this area be planned for commercial use only. Because of the age of structures in the area, it is likely that buildings will be replaced in the future. Any new commercial development in this area should provide off-street parking facilities.

5. Washington Avenue between Cypress and Whittier Streets. This area is presently utilized for commercial purposes and should be planned for low intensity neighborhood commercial uses in the future.
6. Washington and Cooke Avenues. There are presently many commercial uses located along Washington and Cooke Avenues in the vicinity of the Borough Hall. It is recommended that this area be planned for further development of service type commercial uses such as offices and restaurants. The recommended commercial area includes some residential properties which should be planned for future commercial use.
7. Roosevelt Avenue in the Chrome Area. The area between Larch and Essex Streets is planned as a commercial area utilizing Roosevelt Avenue as a pedestrian mall. In conjunction with the Chrome Urban Renewal Project properties along the south side of Larch Street and the north side of Essex Street are being acquired and demolished to provide off-street parking for the commercial uses fronting on the Roosevelt Avenue Mall.

Light Industrial

The area in West Carteret indicated on the Land Use Plan as Light Industrial is presently approximately 80 percent developed with industrial uses. The areas in Woodbridge Township adjacent to this light Industrial area are also developed with compatible industrial uses. The industrial plants located in West Carteret differ from those located along the Arthur Kill in that they do not generally involve the processing of raw materials. The plants along the Arthur Kill are heavily involved in raw material processing and utilize large quantities of water from the Arthur Kill for industrial working purposes.

Heavy Industry

The areas indicated as Heavy Industry on the Land Use Plan include the existing heavy industrial processing plants and oil refineries along the Arthur Kill and in the area generally bounded by the Turnpike entrance, Roosevelt and Grant Avenues, Hayward Avenue and the tracks of the Central Railroad of New Jersey. Also included within the areas designated as Heavy Industry is the vacant marshland in northern Carteret between the Rahway River and the tracks of the Central Railroad of New Jersey. Although this area is not presently suitable for development, future reclamation of the land through land fill activities would make this area of Carteret useable for heavy industrial purposes.

Semi-Public

The areas indicated as Semi-Public on the Land Use Plan show the location of the existing churches, synagogues, parochial schools, and civic organizations such as the American Legion, Masons and Knights of Columbus. It is not anticipated that new Semi-Public uses will be located within the Borough and consequently the Land Use Plan does not specify any proposed future Semi-Public areas. It is likely, however, that some of the churches and civic organizations will either expand their facilities or move to new locations in the Borough. These developments cannot, of course, be anticipated at this time and should be evaluated on an individual basis under specific controls established in the Zoning Ordinance.

Public

The areas indicated as Public on the Land Use Plan show the existing and proposed location of parks and recreation areas, public schools and public buildings in the Borough. All of the public uses shown on the Land Use Plan are discussed in detail under the Community Facilities Plan section of the Master Plan.

CIRCULATION PLAN

The Circulation Plan indicates all the long range physical improvements recommended for the major road system in the Borough to provide an adequate circulation system for future traffic flows in Carteret.

Plate No. 42, "Circulation Plan," classifies existing and proposed major roads according to the function they should serve, indicates the recommended ultimate right-of-way width for each major road, and shows the location of existing and proposed traffic signals and interchanges.

The proposals of the Circulation Plan for the existing and proposed major roads in the Borough according to their functional classification are discussed below.

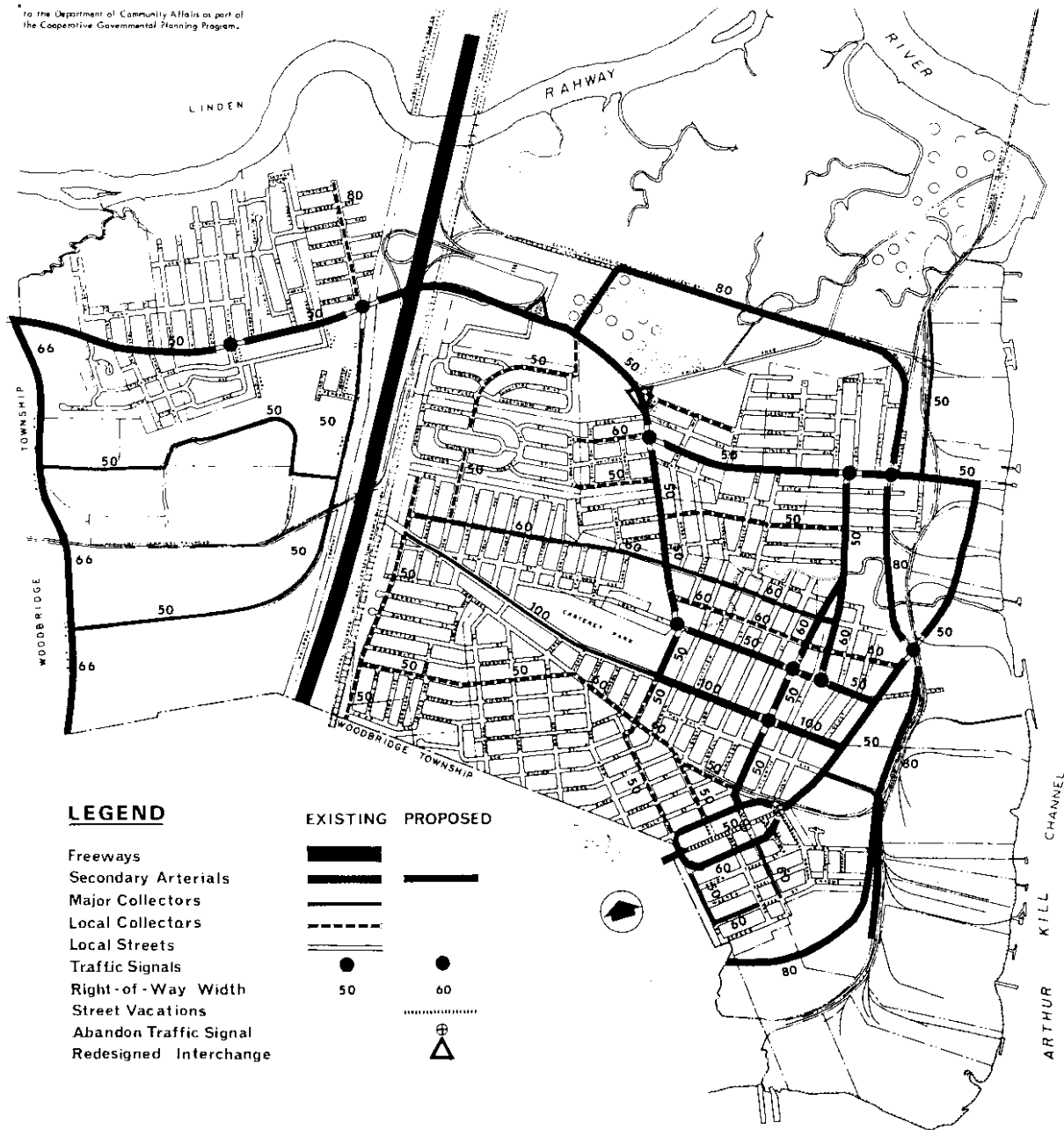
1. Freeways

The only Freeway that passes through Carteret is the New Jersey Turnpike. The Turnpike is of significant importance to Carteret because of its interchange with Roosevelt Avenue. The large traffic volumes, approximately 20 percent of which are trucks, that utilize this interchange presently create serious traffic problems. The connection between Roosevelt Avenue and the entrance to the New Jersey Turnpike is the location at which the largest number of traffic accidents occur within the Borough.

The New Jersey Turnpike Authority is presently redesigning and will reconstruct this connector at Roosevelt Avenue. The redesigned Turnpike connection will partially resolve some of the traffic problems at this location. However, truck traffic between the Turnpike and the industrial uses along the Arthur Kill, which is one of the major causes of hazardous conditions and traffic congestion at this location, will not be removed through the redesign of the Turnpike connection to Roosevelt Avenue. The construction of the proposed Carteret Industrial Road must also be undertaken to adequately relieve the traffic problems at this location.

2. Secondary Arterial Roads

The arterial road system provides the principal routes of travel within the Borough. The secondary arterial roads as shown on the Circulation Plan are as follows:



MASTER PLAN
BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY
2400 1600 800 0 1600 2400 FT.
KEHAYAS ASSOCIATES, INC. SOMERSET, NEW JERSEY

CIRCULATION PLAN

PLATE NO.

42

MAY 1973

- a. Carteret Industrial Road - This proposed new road is the most significant and important improvement included within the Circulation Plan. In order to remove a substantial portion of the truck traffic that presently utilizes Roosevelt Avenue and the connection to the Turnpike on Roosevelt Avenue, it is recommended that a local Industrial Road be constructed along the right-of-way of the Central Railroad of New Jersey between the Turnpike Interchange and Woodbridge Township in the southeastern portion of the Borough. This proposed roadway would divert truck traffic between the Turnpike Interchange and the industries along the Arthur Kill. The diversion of this truck traffic would relieve traffic congestion not only at the present entrance to the Turnpike, but also on the local street system of the Borough, particularly Roosevelt Avenue.

It is further recommended that the Borough approach Woodbridge Township and the County to provide for the extension of this roadway into Woodbridge Township to connect with the Woodbridge-Carteret Road. Once this entire roadway is completed, all industrial truck traffic to and from Interchange 12 of the Turnpike presently utilizing Roosevelt Avenue and other local streets could be required to travel on this new industrial roadway.

The construction of the Carteret Industrial Road, which would divert regional truck traffic, is particularly important since the existing intensive development along Roosevelt Avenue and other local streets in the Borough make the widening of these streets to handle greater traffic volumes infeasible.

The construction of the Carteret Industrial Road could be undertaken in two stages. The first stage could involve the construction of the roadway from the Turnpike Interchange to Roosevelt Avenue near Irving Street, and the second stage could involve the construction of the roadway southward to the Woodbridge Township boundary where, hopefully, it would be extended to connect with the Woodbridge-Carteret Road.

Once the first stage of the Carteret Industrial Road is completed, heavy truck traffic could be eliminated from other streets in the Borough. It is recommended that the Borough adopt an ordinance after the completion of the first stage of the Industrial Road designating the following streets as light traffic streets (post weight limits to prohibit heavy trucks):

- (1) Washington Avenue
- (2) Pershing Avenue
- (3) Carteret Avenue
- (4) Irving Street
- (5) Roosevelt Avenue (between Grant Avenue and Lefferts Street)

Since Middlesex Avenue has already been extended to connect with Roosevelt Avenue it is recommended that Middlesex Avenue be utilized to handle heavy industrial traffic in the Chrome Area at the present time. To expedite this diversion of truck traffic to Middlesex Avenue, it is recommended that the following streets be designated as light traffic streets within the Chrome Area:

- (1) Union Street
- (2) Hudson Street
- (3) Chrome Street
- (4) Edwin Street
- (5) Salem Street

In order to initiate this project as quickly as possible, it is recommended that the industrial roadway be constructed at a minimum 50-foot right-of-way width since this is the existing width of the railroad right-of-way that could be utilized for portions of the industrial road. However, the Zoning Ordinance should require sufficient setbacks so that the roadway can eventually be widened to a minimum right-of-way width of 80 feet. If the roadway is initially constructed at only a 50-foot width, it is also recommended that uses other than industrial plants not be permitted to front on the roadway. If residential and commercial uses are not permitted to front on the roadway, sidewalk areas would not have to be provided. This would allow the entire 50-foot right-of-way width to be used for vehicular traffic and permit the construction of a four-lane roadway.

It is also recommended that the proposed Industrial Road include an alternate route utilizing the alignment of the existing private road which extends northeast from the intersection of Roosevelt and Grant Avenues. This alternate route would permit traffic, particularly truck traffic, between West and East Carteret to utilize the Industrial Road without utilizing the entrance road to the Turnpike interchange. The alternate road will therefore aid in minimizing traffic congestion at the Turnpike entrance and still provide a by-pass route to Roosevelt Avenue and other streets in the eastern portion of the Borough. It is recommended that this alternate route of the Industrial Road be constructed within a 60-foot right-of-way.

- b. Roosevelt Avenue - Roosevelt Avenue is utilized by virtually all the traffic that enters the Borough. It also provides the only vehicular access over the New Jersey Turnpike between West and East Carteret. Roosevelt Avenue presently has a right-of-way width of 50 feet except for isolated locations, such as the entrance to the Turnpike, where it has been widened. Since most of the frontage on Roosevelt Avenue has been developed, widening of the roadway would be extremely difficult and is therefore not recommended. The construction of the proposed Industrial Road will provide a by-pass route for much of the traffic presently utilizing Roosevelt Avenue.

In addition to the construction of the Industrial Road other recommended improvements for Roosevelt Avenue are as follows:

- (1) It is proposed that Minue Street be realigned at Roosevelt Avenue to eliminate the present off-set intersection with Post Boulevard. It is also recommended that a traffic signal be provided at the intersection of Roosevelt Avenue with Minue Street and Post Boulevard.
 - (2) Within the Chrome Project Area, Roosevelt Avenue is planned as a pedestrian mall between Edwin and Hudson Streets. Traffic will be diverted onto a one-way loop system utilizing Larch Street going West and Essex Street going East.
 - (3) Within West Carteret it is recommended that truck traffic from the industrial areas both in Carteret and Woodbridge be directed to utilize Minue Street rather than Roosevelt Avenue. This would be accomplished by posting weight limits to establish this portion of Roosevelt Avenue as a light traffic street.
 - (4) After the portion of the Industrial Road between the Turnpike entrance and Roosevelt Avenue is constructed, it is recommended that Roosevelt Avenue between Grant Avenue and Lefferts Street be posted with weight limits to prohibit heavy truck traffic.
- c. Washington Avenue - This street is presently constructed in a right-of-way with a width of approximately 50 feet. Since the properties fronting on Washington Avenue are almost completely developed, widening of the street is not feasible.

Washington Avenue is presently utilized by traffic to and from the bulk of the residential areas in East Carteret. It also is utilized by bus routes passing through the Borough and by trucks to and from some of the industries along the Arthur Kill.

Although no physical improvements are recommended for Washington Avenue it is proposed that, upon completion of the Industrial Road, Washington Avenue be posted with weight limits to prohibit heavy truck traffic. It is also recommended that on-street parking be prohibited, particularly during peak traffic hours, in order to facilitate vehicular flow on this important traffic artery.

- d. Pershing Avenue and Cooke Avenue - Pershing Avenue is the primary north-south street through the older sections of the Borough. Within the area of the Borough Hall both Pershing Avenue and Cooke Avenue provide the principal routes for north-south traffic. Pershing Avenue is mostly developed within a 50-foot right-of-way. However, between Washington Avenue and Noe Creek both Pershing and Cooke Avenues have 60-foot rights-of-way.

Although physical improvements are not recommended it is proposed that, upon completion of the Industrial Road, Pershing Avenue be designated as a light traffic street. Also, it is recommended that on-street parking be prohibited during peak traffic hours to facilitate traffic flow.

- e. Carteret Avenue and Cypress Street - Carteret Avenue from Roosevelt Avenue to Carteret Park and Cypress Street provide an alternate route to Washington Avenue in this section of the Borough and consequently carry considerable amounts of traffic. Carteret Avenue has a 100-foot right-of-way width with a center divider island and Cypress Street has a 50-foot right-of-way width. Although no physical improvements are recommended for these streets, heavy truck traffic should be prohibited after the industrial road is completed.
- f. Blair Road - Blair Road is a County highway with a 66-foot right-of-way width which provides access to the industrial areas in West Carteret and in Woodbridge Township. Officials of Middlesex and Union Counties have indicated that any proposed extension of Blair Road through Linden to connect with U.S. Route 1 may not provide enough benefit to warrant the costs involved. For similar reasons an alternate to the Blair Road extension from the Turnpike entrance across the Rahway River into Linden was not considered.

3. Major Collectors

Major collectors are streets which provide principal access from the arterial streets to the residential and industrial areas of the Borough. Physical improvements are not recommended for any of these major collectors. The streets classified as major collectors on the Circulation Plan and the right-of-way widths of these streets are as follows:

- a. Carteret Avenue (Cypress Street to Jackson Avenue) - 100-foot right of way
- b. Cherry Street - 60-foot R.O.W.
- c. Hermann Avenue - 60-foot R.O.W.
- d. Romanowski Street - 60-foot R.O.W.
- e. Lafayette Street - 50-foot R.O.W.
- f. Edwin Street - 50-foot R.O.W.
- g. Mercer Street - 60-foot R.O.W.
- h. Middlesex Avenue (Roosevelt Avenue to Industrial Road) - -foot R.O.W.
- i. Minue Street - 50-foot R.O.W.
- j. Milik Street - 50-foot R.O.W.
- k. Pershing Avenue (Roosevelt Avenue to Mercer Street) - 60-foot R.O.W.

4. Local Collectors

Local collectors, like major collectors are streets which provide access from the arterial streets or from major collectors into the residential areas of the Borough. The local collectors, however, generally are not utilized for access to as great an extent as the major collectors. Physical improvements are not recommended on any of the local collectors. The streets classified as local collectors on the Circulation Plan and the right-of-way widths of these streets are as follows:

- a. Post Boulevard - 80-foot R.O.W.
- b. Harrison Avenue - 50-foot R.O.W.
- c. Holmes Street - 60-foot R.O.W.
- d. Tennyson Street - 50-foot R.O.W.
- e. Grant Avenue - 50-foot R.O.W.
- f. Randolph Street - 50-foot R.O.W.
- g. Matthew Avenue - 60-foot R.O.W.
- h. Irving Street - 60-foot R.O.W.
- i. Poplar Street - 50-foot R.O.W.
- j. Coolidge Avenue - 60-foot R.O.W.
- k. Jackson Avenue - 50-foot R.O.W.
- l. Terminal Avenue - 50-foot R.O.W.
- m. McKinley Avenue - 50-foot R.O.W.
- n. Arthur Avenue - 50-foot R.O.W.
- o. Cypress Street (Arthur Avenue to Washington Avenue) - 50-foot R.O.W.

5. Local Streets

Local streets are streets whose primary function is to provide access to the properties fronting on the streets. In older municipalities such as Carteret, where large areas have developed with a grid iron street pattern, it is difficult to distinguish between local collector and local streets because virtually all streets in a grid iron street pattern are used for general circulation. The designation of local streets on the Circulation Plan attempts to identify those streets which are least used for general circulation throughout the Borough.

COMMUNITY FACILITIES PLAN

The Community Facilities Plan indicates the long-range physical improvements recommended to provide the citizens of Carteret with adequate schools, recreation areas, police and fire protection and other needed community facilities.

Plate No. 43 , "Community Facilities Plan," shows the existing and proposed parks, fire stations and other public buildings in the Borough. The proposals for these facilities shown on the Community Facilities Plan, as well as recommendations for water, sanitary sewer and storm drainage facilities, are discussed below.

Schools

Because very little land remains within the Borough for new residential construction, it is unlikely that public school enrollments will increase to the point that would warrant the construction of any new schools. In the previous section of the Master Plan which reviewed the existing school facilities, it was shown that the existing schools in the Borough have an adequate number of classrooms to provide for an increased enrollment of several hundred students. The increased school enrollments which may result from changes in family composition and limited new residential construction should be able to be absorbed within the existing classroom space of the school system.

Although the Borough's present school facilities appear to have adequate classroom space to meet future enrollment needs, there are several areas in which capital improvements should be made. These needed capital improvements to the school facilities are reviewed below.

1. Cafeteria Facilities - At the present time there are no cafeteria facilities located in any of the public schools in Carteret. Although students are permitted to bring lunches, many students presently go home for lunch.

The provision of cafeteria facilities with hot lunches is becoming an increasingly essential part of the educational system throughout the country. Several New Jersey municipalities have instituted free hot lunch programs for children from lower income families, and some are even considering, or are instituting, hot breakfast programs within the schools.

The future improvement programs for the school system should consider incorporation of cafeteria facilities in several of the public schools, particularly for students of grades 7 through 12, where the need for supervision during lunch hours is not as great.

2. Swimming Pools - There are presently no swimming pools in any of the Carteret schools or within the Borough of Carteret. While a need exists for outdoor swimming facilities as part of the recreation program of the Borough, an additional need also exists for a swimming pool within the school system.

It is recommended that consideration be given to the future construction of an outdoor swimming pool at Carteret High School which can be incorporated into the physical education program of the school and also utilized for competitive swimming with other schools. The facility could also be utilized by the Recreation Department during the summer months.

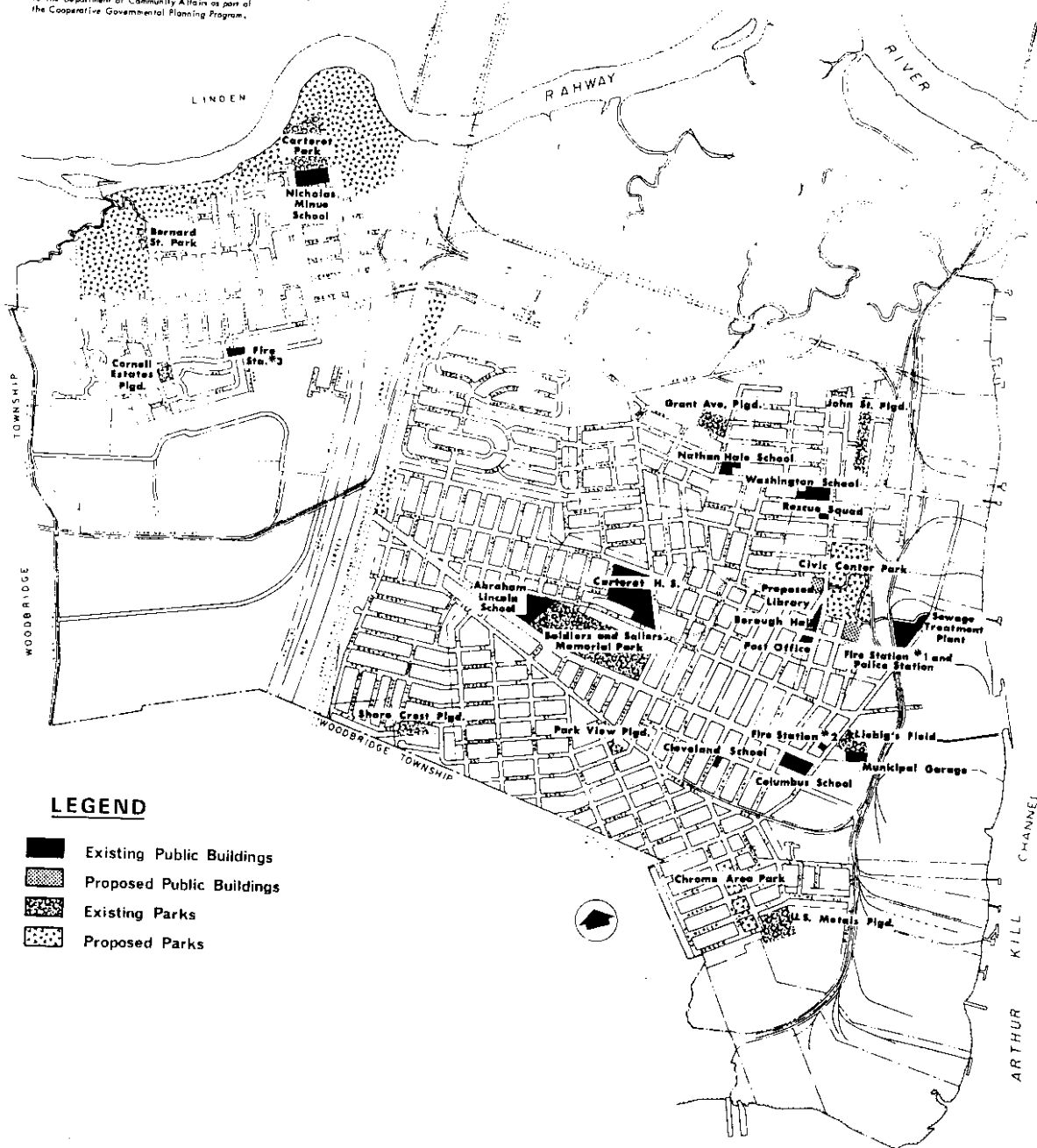
3. Outdoor Recreation Space - A need exists for additional outdoor recreation space at all the public schools in the Borough, except the Private Minue and Lincoln Schools, both of which are adjacent to major playground and park facilities. The provision of this needed space could largely be accomplished through a long range program to acquire adjacent properties in the blocks in which the schools are located.

The future acquisition of the homes along the north side of Louis Street east of Park Place would permit the High School site to be expanded along Louis Street, and the future acquisition of the homes along the south side of Louis Street would permit Carteret Park to be expanded to Louis Street. These two expansion programs would not only provide additional outdoor recreation areas on the site of the High School, but would also provide a direct relationship between Carteret Park and the High School and permit portions of Carteret Park to be easily incorporated into the recreation program of the High School. A need presently exists at Carteret High School for outdoor practice areas for the school's athletic teams, which should be located either at the school site or nearby in Carteret Park.

In acquiring land for these proposed school expansions, consideration should be given to applying for financial assistance under the Federal Open Space and State Green Acres Programs. Although the Green Acres and Open Space Programs are generally known and used for their recreational and other open space uses, it is also possible to apply these programs to acquire large open areas surrounding public buildings as schools, libraries, Borough Hall, etc. As an example, if a proposed school area is to be acquired from private owners, the largest portion of the land which is to be used for recreation, walkways, and other open areas can be acquired under these programs. Only the land upon which the building will be constructed need be purchased with local funds.

Parks

The proposed park and recreation areas shown on the Community Facilities Plan are the following:



1. Liberty Park Expansion - This proposed County Park will encompass approximately 83 acres including the existing Liberty Park. Of the total 83 acres, 75 acres will be within Carteret and 8 acres will be within Woodbridge Township. Middlesex County is acquiring the land for the park with the aid of Open Space and Green Acres funds. Approximately 47 acres within the proposed County Park were owned by Carteret and have been dedicated to the County.
2. Civic Center Park - The Civic Center Park will be a 14 acre Borough Facility which is to be acquired and developed with both Open Space and Green Acres funds. Because of its relationship to the Borough Hall the park could become a focal point for a future Civic Center Complex, which could include the proposed new Library and a Police Headquarters.
3. Chrome Area Park - In conjunction with the Chrome Urban Renewal Project, a new park is proposed for the area bounded by Essex Street, Pershing Avenue, Bergen and Salem Streets. This facility will provide needed open space and recreation areas in this densely populated section of the Borough.

In addition to the new park and recreation areas shown on the Community Facilities Plan, there are several types of recreational facilities in which the Borough is presently lacking and which should be considered in conjunction with these new recreation areas. At the present time, there are only four tennis courts located in the Borough, all at Carteret Park. It is recommended that additional tennis courts be erected in each of the three new park areas. In addition, there are presently no swimming pools located within the Borough, either at the schools or the playground areas. It is recommended that a community-wide swimming pool be considered for incorporation into the development plans of either the Civic Center Park or Liberty Park. To help defray the costs of such a facility, the Borough could charge a small membership fee to the residents who utilize the pool. A community-wide swimming pool could also include locker room and refreshment facilities which would not be feasible at smaller neighborhood pools.

In providing new recreational facilities, the Borough should consider applying for financial assistance available from the Federal Bureau of Outdoor Recreation. The Federal Government, through the New Jersey Department of Environmental Protection, provides up to 50 percent grants for the improvement of municipal recreation facilities. Eligible development costs for recreation facilities may include the following: landscaping, baseball fields, basketball courts, tennis courts, sanitary facilities, lighting, parking areas, nature trails, circulation roads, picnic areas, water sports facilities, winter sports facilities, beautification, and supporting facilities directly related to outdoor recreation.

Police Headquarters

The Community Facilities Plan shows a location for a proposed Police Headquarters which is adjacent to the Civic Center Park and near the Borough Hall. The space needs of the Police Department are far greater than the space presently available for their use

in Borough Hall. Construction of a new police headquarters will also provide much needed additional office space within the Borough Hall for other municipal functions. Construction of the new police headquarters near Borough Hall will provide a close relationship to the municipal court facilities which could remain within the Borough Hall.

Fire Stations

Fire Station No. 1 is an extremely antiquated structure which does not satisfactorily serve the needs of the fire department. The Community Facilities Plan indicates Fire Station No. 1 as being replaced and located next to the proposed Police Station. The new fire station should provide at least two bays so that additional equipment could be housed within the structure.

Although the Community Facilities Plan also indicates the eventual replacement of Fire Station No. 2, the need for this replacement is not as critical and the present structure can satisfactorily serve the needs of the Fire Department for a number of years.

Library

The Community Facilities Plan indicates a location for the proposed new Carteret Library on a site at the northwest corner of Noe Street and Pershing Avenue. This location will place the new library in an attractive setting directly across the street from the Civic Center Park and be in keeping with the proposal to provide additional municipal buildings, with the Civic Center Park as a focal point.

Rescue Squad

The Carteret Rescue Squad is housed in a relatively new building at the northwest corner of Pershing Avenue and Sharot Street. This building should be adequate to serve the needs of the Rescue Squad for many years.

Municipal Garage

The Municipal Garage is a recently constructed building located off the east side of Roosevelt Avenue between Carteret and Washington Avenues and should be adequate to serve the needs of the Borough for many years.

Borough Hall

Although there is not presently adequate space within Borough Hall for the offices housed there, the proposed relocation of the Police Department to a new Police Headquarters will provide adequate expansion space for the other municipal offices presently housed in Borough Hall.

Water Facilities

The entire Borough of Carteret is serviced by water mains of the Middlesex Water Company. The water provided by the Company is of good quality for domestic purposes, and water pressures are adequate in all areas for fire fighting purposes. Fire hydrants are generally well located and adequately cover all the developed areas in the Borough. New developments within the Borough can easily be served by extension of the Middlesex Water Company facilities.

Storm Drainage and Sanitary Sewerage

The combined sanitary and storm sewer system of the Borough is presently being converted into separate sanitary sewers and storm drainage facilities. This separation of the sanitary and storm drainage facilities has been completed in the Chrome area and is underway in other sections of the Borough.

The present Borough sewerage treatment plant is planned to be connected into a pumping station which will receive the sanitary sewage from the Borough and pump it to the Sewaren sewerage treatment plant which is to be expanded and improved as a regional facility.

At the present time, because of the low level of land in Carteret, when tide levels are about three feet above normal in the Arthur Kill, water cannot easily be discharged from the sewerage system and sewage must be retained in the system until the tide levels subside. After the separation of facilities is completed, storm waters will continue to be retained in the storm drainage facilities during high tide levels. However, these waters will not contain sanitary wastes and consequently will not present a serious health problem.

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7. The Design Standards section of the ordinance should also include specific minimum standards for the grading and landscaping of lots.
8. The present design standards for streets, blocks and lots should be reviewed and revised, where necessary, to meet modern development standards and the recommendations of the revised Master Plan. For example, the design standards for local streets should not be the same as for collector or arterial streets.
9. The Design Standards section should also include minimum design standards for storm drainage facilities.
10. A new section should be added to the Subdivision Ordinance which would include standards to prevent the construction of housing developments with an excessive number of look-alike structures.

Because of the large number of revisions and additions that should be made to the Subdivision Ordinance, the entire ordinance should be reviewed and a complete new ordinance prepared for adoption incorporating all the necessary changes.

ZONING ORDINANCE

The Zoning Map should be revised to reflect the new development in the Chrome Project and the recommendations of the Land Use Plan. In addition a number of improvements in the standards and language of Carteret's Zoning Ordinance are essential if the ordinance is to function as an up-to-date instrument in promoting well planned developments in the Borough. Some revisions in format would also make the ordinance easier to use and interpret by municipal officials and the general public. Some specific recommendations for improvements in the various sections of the Zoning Ordinance are discussed in the following paragraphs.

Definitions

Some uses, such as churches, hospitals, and restaurants, which are referred to in other portions of the ordinance are not defined in this section. Also, a number of definitions, especially those describing uses which are prohibited elsewhere in the ordinance, should be more detailed to safeguard the Borough. For example, the definition of "Nursing Home" is minimal, making no reference to licensing or required patient-care facilities. The definition for signs is also weak and does not specify that advertising painted on walls of buildings is considered a sign. A strong definition for signs and equally strong sign controls are very important to insure that developments will have a good appearance. In addition, a few definitions are unclear and others seem to have words missing.

Schedule

Several improvements are possible, including addition of minimum absolute yard dimensions in cases where only percentages now appear, and increased floor-area standards in some of the more intensive use zones.

Zones

Within this section are a number of uses which are specifically permitted or prohibited in the various zones which are not adequately defined in the ordinance. In general, more exacting standards could be developed for the commercial and industrial zone. It is specifically recommended that specific buffer zone requirements be included within commercial and industrial districts. It is also recommended that uses which require special treatment such as drive-in restaurants, car dealerships, motels, hospitals, etc. should only be included as special exception uses, not permitted uses. Recommendations relative to buffer zones and special exception uses are discussed under subsequent sections.

Site Plans Review

Although the site plan requirement in the Heavy Industrial-"B" Zone is adequate in its stipulations of what new development is to be shown, it should be specific as to map scale, dimensions, landscaping, existing topography, proposed grading, existing adjoining uses, and planned utility connections.

It is strongly recommended that a general site plan review section with requirements similar to those listed above and in conformance with the County's site plan requirements be added to the Zoning Ordinance. The section should specify those uses which are subject to site plan review and include basic review procedures to be followed by the Planning Board. Site Plans could be required for all nonresidential and apartment uses and all special exception uses. To insure good development, it is essential that site plan review be required.

The impact, utility requirements, and traffic patterns are as important for intensive uses as they are for new subdivisions and, therefore, should receive the same scrutiny from the Planning Board as required for a residential subdivision. This cannot be done without detailed knowledge and review of the proposals.

Buffer Zones and Yards

Although the present ordinance requires extra yard widths in some commercial and industrial zones where they border less intensive uses, detailed requirements should be developed in relation to the type of plantings, walls or fences that will be required in these areas. Specifically, buffer strip regulations should be developed for all uses involving nonresidential intensive activity or large-scale late-hour parking near residential areas. For example, when industrial uses are located at residential zone boundaries additional setbacks are required for industrial buildings. Planting or other screening should be specified, and intensive use areas such as major parking lots should not be permitted at a transitional lot line.

Performance Standards

It is recommended that a section be included in the ordinance establishing performance standards for all industrial uses. These standards should specify controls in relation to noise levels, air pollution, waste disposal, radiation, fire and explosion hazards, outdoor storage, outdoor lighting, etc. In many instances, the ordinance could refer to accepted official codes which can be legally and practically enforced.

Multiple Dwelling Groups

It is recommended that this section of the ordinance be completely rewritten to include specific standards in relation to density, building height, setback requirements for buildings from parking areas, signs, loading facilities, storage areas and other similar

controls which are not presently included. Also some of the present standards, such as the off-street parking requirements, do not appear to be adequate. The ordinance is presently unclear as to whether multiple dwelling groups are permitted in the R-A zone (the ordinance specifically lists the R-A Zone as a zone in which multiple dwelling groups are not permitted, but subsequently establish standards for multiple dwellings when located in the R-A Zone).

It is also recommended that multiple dwellings be subject to site plan review as previously outlined.

Off-Street Parking and Loading

It is recommended that this section be rewritten to establish off-street parking and loading standards by use rather than zone. For example, the present ordinance only requires off-street parking for dwelling units in a residential zone although the ordinance permits other uses to be located in residential zones. Therefore the present ordinance has no off-street parking requirements for home offices, clubs, private nurseries, rooming houses and other such uses permitted in residential zones. It is also recommended that detailed parking and loading plans be required on the site plans for all uses except one and two family residences. The ordinance should also include standards for aisle widths, location of driveways, etc. in relation to parking lots.

Signs

It is recommended that a separate section be included in the ordinance establishing standards for the size and types of signs which are permitted for each type of use. The present ordinance does not include provisions controlling the size, type and location of signs in relation to most business and industrial uses.

Special Exception Uses

A separate section should be included in the Zoning Ordinance which spells out the procedure to be followed in regard to Special Exception Uses. For each special exception use in the ordinance specific standards and submission requirements should be detailed. All Special Exception Uses should be subject to site plan review by the Planning Board.

Administration

The Zoning Ordinance should detail the specific conditions under which Zoning, Special Use, Building, and Certificates of Occupancy Permits are granted and designate the fees to be paid for each. For example, the issuance of a Certificate of Occupancy should be contingent not only upon completion of a building but also upon the provision or availability of certain improvements such as grading, utilities, streets, etc.

General

The above recommendations cover only a portion of the areas in which the zoning ordinance is in need of revision. The present zoning ordinance includes many other inconsistencies and inadequate standards. It should be understood that proper revision of the zoning ordinance will be a major undertaking that will generally involve the complete rewriting of the ordinance in order to eliminate the deficiencies that presently exist.

BASIS FOR AN OFFICIAL MAP

The New Jersey Official Map and Building Permit Act of 1953 states:

"The governing body may, by ordinance after public hearing, establish an official map of the municipality or any part or parts thereof. The Official Map shall be deemed conclusive with respect to the location and width of streets, drainage rights-of-way and to the location and extent of public parks and playgrounds..."

While the Master Plan is intended as a guide to community development and is adopted by resolution of the Planning Board after public hearing, the Official Map is a legislative control adopted by ordinance of the governing body. Further, the Master Plan may encompass all phases of community development, but the Official Map is limited to streets, drainage rights-of-way, and parks.

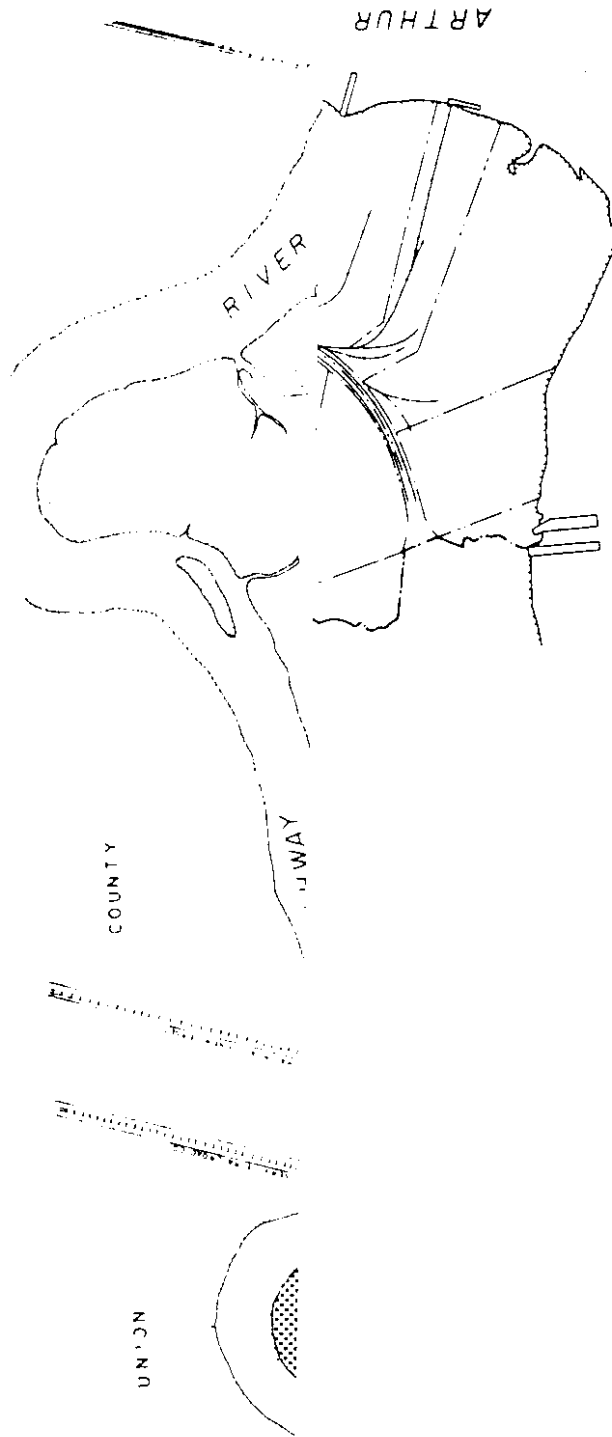
The Official Map offers a municipality a legislative means for reserving sites for parks and playgrounds and rights-of-way for streets and drainage. In an instance where an Official Map has been prepared and adopted, the municipality is given one year, from the time of final approval of a subdivision or application for a building permit, to acquire any park lands or playgrounds designated on the Official Map, which may be affected by the subdivision or building permit. However, based on recent New Jersey court decisions a community must provide certain compensations either in the form of cash grants or tax rebates in exchange for temporary control over development rights.

In relation to streets and drainage rights-of-way shown on the Official Map, the municipality may prevent development in the bed of any street or right-of-way shown on the Official Map for an indefinite period without the necessity of acquiring land.

Plate No. 44, "Basis for an Official Map", indicates those parks, recreation areas, streets and drainage rights-of-way recommended in the Master Plan which should be considered in the preparation of an Official Map. The actual Official Map must be a document prepared by a licensed professional engineer and show in detail the exact location and dimensions of any proposal. The Official Map need be considered only for those improvements that involve land that is not presently owned by the Borough, such as new streets, street widenings, drainage rights-of-way on private land, new and expanded park or recreation areas. The Official Map need not be adopted for all proposed improvements shown on Plate No.44. It may be prepared in stages and adopted in relation to any one or group of proposed improvements.

The preparation of this map was financed in part through an urban planning grant from the Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

The remainder has been financed by local funds and by an appropriation of the State of New Jersey to the Department of Community Affairs as part of the Cooperative Governmental Planning Program.



MASTER PLAN

BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY

2400 1600 800 0 1600 2400 FT.

KEHAYAS ASSOCIATES, INC.

SOMERSET, NEW JERSEY

PLATE NO.

44

MAY 1973

BASIS FOR OFFICIAL MAP

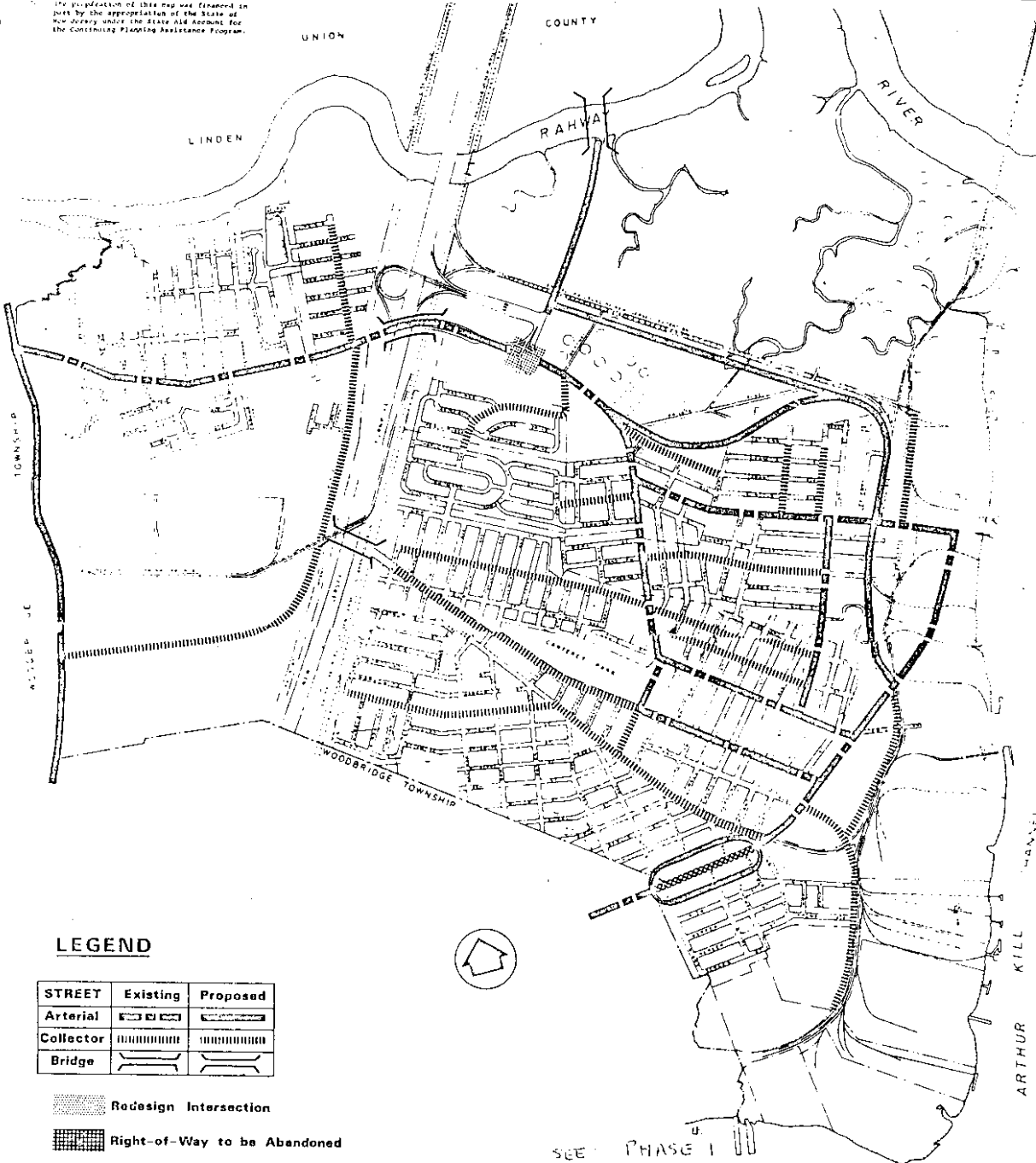
Statement on Citizen Participation

The Master Plan was prepared by meeting with several local agencies and groups which represented a cross-section of local citizens.

Any planning program, to be successful, must be understood and supported by the local citizenry. For this reason, it is recommended that periodic meetings be scheduled with local agencies and citizen groups for purposes of presenting current planning programs and strategy.

UNION

COUNTY



LEGEND

STREET	Existing	Proposed
Arterial		
Collector		
Bridge		

Redesign Intersection

Right-of-Way to be Abandoned

APPROVED AS NOTED
COMPLETE SEE
REVISION PLAN, PLATE
33 MAY 1973
Date...
Edward P. [Signature]

SEE PHASE I

* (CURRENT PRELIMINARY DETAILS FOR PHASE I)

CIRCULATION PLAN

BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY
2400 1600 800 0 1600 2400 FT.

KEHAYAS ASSOCIATES, INC. SOMERSET, NEW JERSEY
JANUARY 1969

NOT TO SCALE