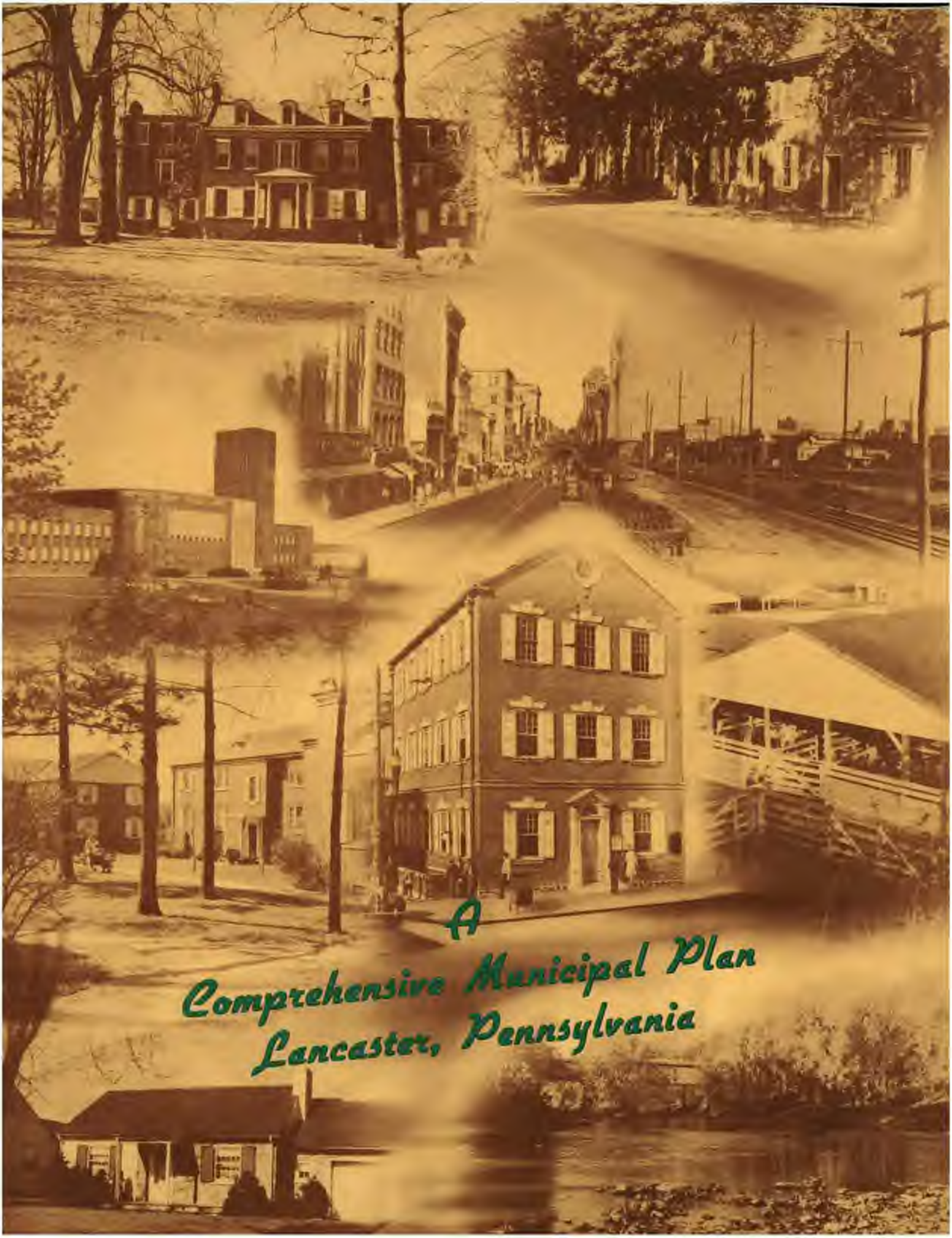
A
Comprehensive Municipal Plan
Lancaster, Pennsylvania

A

Comprehensive Municipal Plan

CITY OF LANCASTER
PENNSYLVANIA

Prepared by

MICHAEL BAKER, JR.

THE BAKER ENGINEERS

Consulting Engineers, Planners, and Surveyors

ROCHESTER, PENNSYLVANIA

1945

CITY OF LANCASTER, PA.

-Department of Public Affairs

Lancaster is situated in the center of the richest agricultural section of the East. The citizens are thrifty and progressive, and a large percentage are home owners. The City proper is hampered in growth by its narrow boundaries, but there is a large and growing population surrounding the city. This suburban population is closely allied to the city because of economic, social, and industrial conditions.

The Lancaster Post-War Planning Council, which included citizens of the city and the suburban area, was organized in 1943. Its first recommendation was that there be developed a Comprehensive Municipal Plan that would include Lancaster City and a three mile area outside the city.

Accordingly the City Council of Lancaster secured the services of Michael Baker, Jr. and the Baker Engineers who made a thorough survey of the possibilities of the future development of a Greater Lancaster.

This report is published in order to acquaint the citizens with the recommendations and suggestions. It should serve as a guide for future development, and it should stimulate a keener interest in orderly, systematic, civic progress.

Dale E. Cary.

Mayor of the City of Lancaster

November 30, 1945

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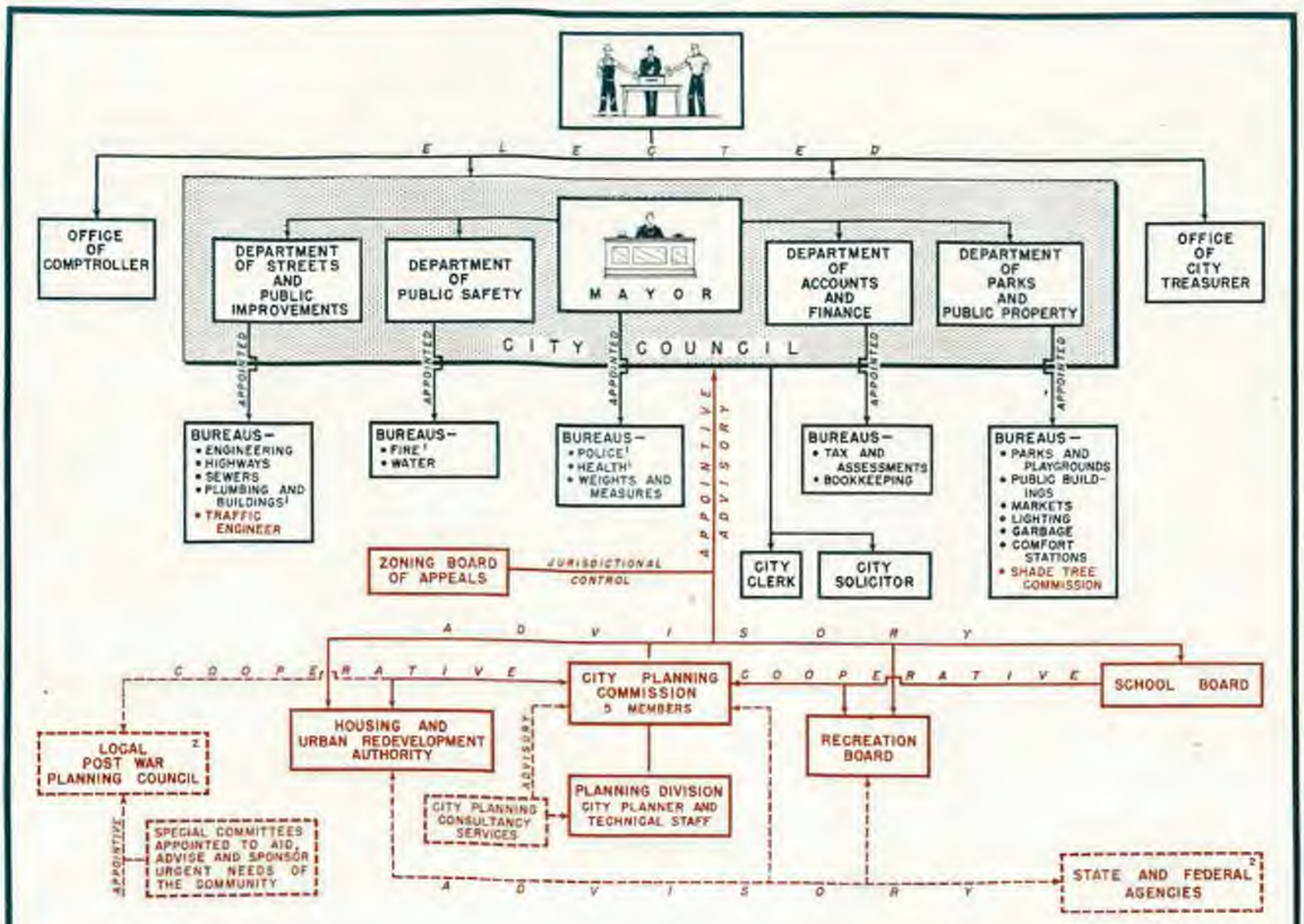

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PART I

HISTORICAL DEVELOPMENT

TOPOGRAPHIC AND CLIMATIC CHARACTERISTICS

TRADE ROUTES AND TRANSPORTATION

COMMERCE AND INDUSTRY

HISTORICAL DEVELOPMENT

Introduction
Colonization of Pennsylvania
Colonization of Lancaster County
Creation of Lancaster Townstead
Creation of Lancaster Borough
Creation of Lancaster City

TOPOGRAPHIC AND CLIMATIC CHARACTERISTICS

Topography of the Lancaster Region
Climate of the Lancaster Region

TRADE ROUTES AND TRANSPORTATION

King's Highway
Turnpikes
Canals
Railroads
Interurban Transportation

COMMERCE AND INDUSTRY

Pioneer Trade and Manufacture
Regional and National Commerce and Industry

Historical Development

INTRODUCTION

THE EPIC OF LANCASTER, PENNSYLVANIA, began in Europe. The population was overcrowded, war-weary, persecuted for religious beliefs, land hungry, and in debt. Men lost their rights of liberty because of religious and political views.

An unpaid debt of 16,000 pounds which Charles II owed Admiral Penn because the instrument of young William Penn's "Holy Experiment" for religious liberty and democratic form of government. William Penn, 38 years of age, inherited the debt and petitioned the King to discharge it with a land grant in the New World. Thus it came about that the King traded 46,000 square miles of forest, inhabited by some 7,000 Indians, and a sparse assortment of Swedes, Dutch, and English, to William Penn for his $80,000 debt.

COLONIZATION OF PENNSYLVANIA

Human distress in Germany was appalling following the Thirty Years War which ended in 1648. People, livestock, crops, buildings and property were pillaged and harried. To all this was added political and religious persecution. As a consequence, between 1683 and 1727 some 20,000 Germans emigrated to Pennsylvania.

Conditions in Ireland were almost equally difficult. North Ireland had been settled by Scots during the reign of King James I, following the forfeit of large estates to the crown for conspiracy against the government. The Scots prospered by their superior industry, knowledge and temperance until the Revolution of 1689 in England left them crushed. The following years of economic depression, drought, and epidemics of smallpox brought unspeakable misery to these "Scotch-Irish," so that by 1729 seven or eight thousand had emigrated to America, mostly to Pennsylvania. In the few years following, many thousands more came to Pennsylvania in search of land for homes and freedom of speech and religion.

William Penn had land for sale. He welcomed people of faiths other than his own Society of Friends and people of nations other than England. The land which he had acquired from the King at two dollars a square mile, he sold to land-hungry Europeans for ten cents an acre.

The power and vigor of Lancaster stem from the fibre of the early settlers. Traits of character which have contributed to the high quality of development in the region of Lancaster are integrity, industry, inventiveness and thrift.

After twenty-five years of colonization in the vicinity of Philadelphia, settlement proceeded rapidly in the early years of the 18th Century, as far west as the Susquehanna River. Typical of the colonization which took place in what was to become Lancaster County was the settlement in 1709 by Swiss and French Huguenots of Paradise on Pequea Creek; settlement in 1717 by

German Mennonites, Amish and Dunkards east of Paradise; settlement in 1725 by Welsh colonists in the Welsh Hills; settlement of Columbia in 1728 by English Quakers; settlement of the southern and northwestern sections of the county in 1728 by Scotch Irish; settlement of Ephrata in 1732 by Germans under Conrad Beissel; settlement in 1740 in the center of the county by German colonists; and settlement of Lititz in 1742 by Moravians. The county was settled by men and women of strong religious convictions—characteristics which have moulded the character of the modern Lancaster. The first known settlement of white men within the present limits of Lancaster City occurred during the second decade of the 18th Century.

In 1729, the King decreed that the German colonists should be "deemed, taken and esteemed his natural born subjects" of the province of Pennsylvania. This naturalization was conferred in consideration of the contribution which "divers Protestants, subjects of the Emperor of Germany, (who) transported themselves to America" added to enlargement of the British Empire, and to raising and improving commodities for the market of Europe.

COLONIZATION OF LANCASTER COUNTY

Until 1729 there were only three counties in Pennsylvania, namely Philadelphia, Chester and Bucks. Lancaster became the fourth county by Act of the Assembly and signature of the Governor on May 10, 1729, which separated it from Chester County. The new county comprised "all the province lying northward of Octorara Creek and westward of a line of marked trees running from the north branch of the said Octorara Creek northeasterly to the river Schuylkill." The county was named by John Wright, one of the first settlers of this region, for his home Shire of Lancaster, England.

After the county had been created, a meeting was held on the ninth of June, 1729, by magistrates and inhabitants of the county to settle upon names and boundaries for townships. Seventeen townships were thus agreed upon and their names and boundaries were fixed.

Lancaster is a county of the fourth class, having a population of 212,504 in 1940. There are now 41 second-class townships in the county, 18 boroughs, and a city of the third class, Lancaster. Lancaster County is twelfth in size of the 67 counties of Pennsylvania and comprises one forty-fifth of the area of the state.

LANCASTER TOWNSTEAD

James Hamilton laid out "Lancaster Townstead" in 1730 on his 500-acre tract of land, at a place where George Gibson kept a tavern known as "Hickory Tree," on a public road and near a spring. There were 200 inhabitants in the town at that time. In 1734 when the seat of justice was established in Lancaster a frame log courthouse was built in Penn Square, and the jail was built on the corner of West King and North Prince Streets. At the close of the Revolutionary War, the courthouse and jail were rebuilt of brick and stone. These buildings were razed in 1850–51 when the present structures were built. The original Hamilton Plan of Lancaster provided a north-south, east-west, gridiron street pattern around Penn Square, thus establishing rectangular blocks and lots for about three blocks in each direction from the Square. The boundary

lines of private properties adjoining the Hamilton tract on the southeast and southwest are reflected in the diagonal street patterns beginning at Church Street and at Strawberry Street. Although the rectangular pattern was superimposed upon the topography in an unfortunate manner in many places, the radial streets which developed from the old country roads are an aid to the circulation and distribution of traffic from the four corners of the city.

LANCASTER BOROUGH

Lancaster was incorporated as a borough in 1742 by Royal Charter granted by George II. The boundaries of the borough were described as being one mile each way from the center of the Square. The boundary has remained the same for over 200 years. The population at this time was over 1,000 and there were almost 300 houses. At the time of the Revolutionary War the borough contained about 2,225 persons. Lancaster was host briefly during the Revolutionary War to the Continental Congress as it was moving for security reasons from Philadelphia to York. The Royal Charter was replaced during the Revolutionary War by an Act of the Assembly re-establishing the borough with all rights of the old charter and all Acts supplementary thereto. The old seal, bearing royal insignia, was ordered destroyed and a new one was substituted for it.

In 1789 Lancaster was the largest, most flourishing inland town in the United States. General Edward Hand, Chief Burgess, submitted to the Congress in 1789 a letter setting forth the advantages of Lancaster as a site for the National Capital, "should the general interest of the Union point out an inland central situation as preferable to a seaport for the future residence of your Honorable Body."

Lancaster was the capital city of the Commonwealth from 1799 to 1812, when the state government moved to Harrisburg. During its stay in Lancaster, the Legislature met in the courthouse in Penn Square, which was thereafter known as the State House.

LANCASTER CITY

In 1818 Lancaster was incorporated as a city, having at that time more than 6,000 inhabitants. During the following century the population of the city increased nine-fold and, due to improved transportation facilities and crowding within the city, extensive development of areas outside the city limits began.

In 1923 an amendment to the Constitution of the Commonwealth authorized the Legislature to classify cities according to population. Lancaster was classified as a city of the third class. In 1926 the old charter was discarded and the commission form of government was adopted. The Commission is composed of five members, including the Mayor. The administrative and legislative branches are united in the Commission and each Commissioner is head of a particular department. The primary function of the nine wards within the city is now to serve as voting districts.

Aside from federal, state and county governmental operation in and affecting the City of Lancaster, only two units of government have legal status within the city—namely, the municipal government, and the City School District. There are at this time no special districts and no special authorities in operation.

TOPOGRAPHIC AND CLIMATIC CHARACTERISTICS

TOPOGRAPHY OF THE LANCASTER REGION

Lancaster County is in the Piedmont Plateau physiographic region of Pennsylvania. The plateau is composed of three sections, each of which forms a part of the county.

The Lowland and Hill Section crosses the northern part of Lancaster County. The rock structure in this section is red shale, sandstone and traprock. Much of this soil is thin and unproductive.

The Piedmont Highlands Section crosses the southern part of the county. The area is rolling or hilly. It is cut by narrow, steep-sided stream valleys. The climate is temperate, and the fertile soil produces abundant crops.

The Limestone Valleys Section lies between the Lowland and Hill Section and the Piedmont Highlands Section. It is a broad, gently rolling lowland. The section is underlaid with limestone which has weathered into soil rich in plant food, which has been an important factor in the excellent agricultural development in the county. The City of Lancaster is located within this limestone section.

Lancaster County is within the Lower Susquehanna Drainage Basin. Lancaster City is drained by Conestoga Creek on the east, and by Little Conestoga Creek on the west. Conestoga Creek rises in Berks County at an elevation of 930 feet, flows southeasterly to Morgantown, then southwesterly past Lancaster to join the Susquehanna River at Safe Harbor. The total length of the stream is 61 miles, and the drainage area is 475 square miles. The Little Conestoga rises in the vicinity of East Petersburg, flows west of Lancaster, and joins Conestoga Creek a few miles north of Safe Harbor.

Significant elevations in Lancaster and vicinity are 355 feet above sea level at Penn Square; 405 feet at the bottom of the storage reservoir on East King Street near the City Line; 252 feet at the Pumping Station on Conestoga Creek; and 168 feet where the Conestoga joins the Susquehanna at Safe Harbor.

CLIMATE OF THE LANCASTER REGION

Lancaster County is in the most moderate of the four district climatic areas of the State; these climatic areas correspond generally with the major topographic features of Pennsylvania.

The average length of the growing season in Lancaster is 158 days. The average growing season varies considerably within the county, from 158 days at Lancaster, to 173 days at Ephrata, and 205 days at Holtwood on the Susquehanna. The relatively long growing season is an important factor contributing to the excellent agricultural development in the county, and to pleasant, healthful living in the out-of-doors. It is interesting that in spite of the relatively long growing season, the maximum and minimum temperatures have been somewhat extreme. Within a span of 28 recorded years a minimum temperature of 27 degrees below zero and a maximum of 107 degrees have been recorded. The average January temperature during 28 recorded years has been 30.6 degrees, and the average July temperature has been 74.3 degrees.

Precipitation in Lancaster during 39 recorded years averaged 41.01 inches compared with the annual precipitation in the state which averages 42.23

inches. Precipitation is rather well spaced throughout the year, only February, May and November recording less than three inches. June, July and August record over four inches, and each of the other months records between three and four inches. The average number of days of rainfall is only 98, which is an indication of the clear atmosphere that facilitates outdoor work and recreation. Lancaster is in a region of relatively light snowfall, the average being only about 30 inches, and ordinarily covering the fields about one-third of the time during the winter season.

TRADE ROUTES AND TRANSPORTATION

KING'S HIGHWAYS

Good transportation has been of great importance in the development of Lancaster. Prior to the establishment of the county, roads following Indian trails were developed by traders who traversed the area with trains of packhorses. As has been stated previously, "Lancaster Townstead" was laid out on a public road where there was a tavern known as "Hickory Tree."

After the county was established, a committee was appointed "to view and lay out by course and distance, a convenient high road from said town of Lancaster; and the committee recommended that a similar committee of Chester County lay out from the Lancaster-Chester County line a road to Philadelphia and report upon additional improvements along said road to facilitate travel by carriages and for the better accommodation of the inhabitants," for this King's Highway from Lancaster to Philadelphia was the greatest factor in the growth of Lancaster. The road, like other "king's highways," was laid out 66 feet wide although through heavy timber tracts and meadows the usable width was not more than 20 feet. In 1734 this King's Highway was extended as a county road to Columbia.

In pre-Revolutionary days Lancaster was an important stage town. There were 62 inns between Philadelphia and Lancaster, including such famous inns as "Indian Queen," "Black Horse," "Cross Keys," "Rising Sun," and "The Grape Inn." The innkeepers were often men of prominence and intelligence.

The second King's Highway in Lancaster County was the Paxton Road, which was laid out in 1736 from the ferry of John Harris on the Susquehanna, now Harrisburg, to Whiteland, Chester County, by way of Ephrata, Hinkletown, and Blue Ball. The Harrisburg and Downingtown Turnpike was later built upon the location of the Paxton Road.

Another King's Highway known as the "Horse Shoe Road" was laid out in Lancaster County in 1738. This road extended from Lancaster to Coventry Iron Works on French Creek in Chester County, with a branch to the Reading Furnace. New Holland, Blue Ball, and Morgantown are among the towns which grew up along this King's Highway.

During the thirty-five years following the establishment of the county in 1729, petitions were presented for some hundred and fifty local roads. This was truly a time of development and expansion of public internal improvements.

TURNPIKES

During the last decade of the 18th Century, Lancaster County experienced a rush of turnpike construction, just as in the middle of the same century there

had been extensive construction of king's highways. The growth of commerce after the Revolution called for highway betterments, and turnpikes resulted. The first turnpike of any length in the United States was the 62-mile road from Philadelphia to Lancaster, which was completed in 1794 at a cost of $465,000. The Philadelphia and Lancaster Turnpike Road Company had been incorporated in 1792 to build and operate the turnpike, and the undertaking was successful from the time of its completion until the opening of the Philadelphia and Columbia Railroad.

During the next twenty years numerous turnpike companies were organized for construction of other roads to serve the county. Among these enterprises were the Lancaster and Susquehanna Turnpike Company which was incorporated in 1794 for the construction of a road to Columbia; the Lancaster, Elizabethtown and Middletown Turnpike Company which was incorporated in 1796; the Downingtown, Ephrata and Harrisburg Turnpike Company which was incorporated in 1803 for construction of a turnpike on the location of the old "Paxton Road"; and the New Holland and Lancaster Turnpike Company which was incorporated in 1810 for construction of the New Holland Pike.

An important factor in the success of the turnpikes for transportation of goods and services was the Conestoga Wagon, "The Ship of Inland Commerce." This wagon was a Lancaster County invention, and thereby reflects not only the commercial importance of the county, but also the craftsmanship of citizens of the county who developed an extensive business as blacksmiths, wagon-makers, saddlers, and harness-makers. Powerful draft horses were produced on the farms of the county. Six of these horses were used in making up a team for each wagon, and the loads ranged from two to four tons.

CANALS

The turnpike era gave way in the second quarter of the 18th Century to the canal era. By that time, the cost of maintenance on the many miles of turnpikes consumed the profits, and they could not compete with water transportation. Turnpikes then assumed the minor role of freight feeders to water transportation facilities.

Lancaster County had its canal boom. The Conestoga Navigation Company was formed, and in 1825 construction was started on a system of nine dams and locks in the eighteen miles of stream from Reigart's Landing, south of the city limits of Lancaster, to Safe Harbor. In this distance, Conestoga Creek falls 64 feet, thus furnishing potential water power resources. The cost of construction was $59,813 and the work was completed in 1829. This canal, plus the tidewater canal to Port Deposit, opened navigation to the City of Baltimore and Chesapeake Bay.

The canal era was short lived in Lancaster, for in 1834 the Columbia-Philadelphia Railroad was completed with the express purpose of diverting the growing trade to Philadelphia, instead of continuing the practice of shipping goods by the Susquehanna River to Baltimore.

One product of the canal era in Lancaster County was the interest aroused in the mind of the boy, Robert Fulton, in navigation as he played along the banks of the Conestoga Creek.

RAILROADS

Just as the state had assisted in promoting turnpikes and canal construction, so did railroads receive state support in their early days in Pennsylvania. In fact, the Columbia and Philadelphia Railroad was a state enterprise for twenty-five years after its construction was completed. This is now the Columbia Branch of the Pennsylvania Railroad.

Other railroads were built during the railroad era to serve Lancaster. The Harrisburg, Portsmouth, Mount Joy and Lancaster Railroad Company built a road serving those cities, which service later became the main line of the Pennsylvania Railroad. Subsequently, the main line was built eastward from Lancaster through The Gap to Philadelphia, and a branch line still serves New Holland from Lancaster. The Reading and Columbia Railroad built a branch road to Lancaster from a point between Landisville and Manheim. This railroad was later leased for a long term of years by the Philadelphia and Reading Railroad Company, and is now The Reading Company Railroad. The fifteen-mile-long Quarryville and Lancaster Railroad was projected as an independent, narrow-gauge line and was subsequently leased to the Philadelphia and Reading Railroad. The line is now the Quarryville Branch of the Pennsylvania Railroad. At this time, all direct railroad service for Lancaster is provided by the Pennsylvania and The Reading railroads.

The act authorizing construction of the State Railroad (later the Pennsylvania Railroad) provided for the line to be located on the north side of Lancaster upon the route now occupied by the Pennsylvania, with a lateral road to serve the city. Many citizens of Lancaster thought that the main line of the railroad should serve the center of the city. The route was changed, therefore, to provide railroad service within two blocks of Penn Square. Subsequent events and experience have proven the fallacy of in-town railroad locations, so that in 1928 the line through the city was abandoned. The main line of the Pennsylvania Railroad and the station are now located a mile from the center of the city, in the industrial north side.

INTERURBAN TRANSPORTATION

Just as railroads have furnished regional and inter-regional carrier service for Lancaster for a century, so has an important need been filled for over a half century by interurban railways and buses. From 1875 to 1890 horse cars were operated in Lancaster, and in 1875 horse-drawn cars began interurban operation from Lancaster to Millersville.

In 1890 electric railways were introduced in Lancaster, only two years after the first electric railway service in the United States began at Richmond, Virginia. Interurban lines developed rapidly during the next decade, so that at the turn of the century service was being provided to Millersville, Columbia, Lititz, and Ephrata. This network of interurban lines played an important part in development of industry and commerce in Lancaster and the other centers of population in the county.

In 1923, a new step forward in transportation service was taken when transportation by bus was inaugurated from Lancaster to Long Park. Other lines were developed rapidly in the city. Interurban bus service to Elizabethtown, Manheim, Strasburg, Quarryville, Blue Ball, and Millersville was estab-

lished in 1933 and 1934. At this time, about 200 miles of street railway and bus lines radiate within and from the city, operated by the Conestoga Transportation Company.

COMMERCE AND INDUSTRY

PIONEER TRADE AND MANUFACTURE

The commercial and industrial history of Lancaster date from the early days of the community. Lancaster, like other American cities, began as a trading post. A brisk trade developed between the commercial center of Philadelphia and the hinterland of central and western Pennsylvania, with Lancaster as the distribution and transfer point. Presently the trade of the community was supplemented by the manufacture of articles for local and frontier use.

REGIONAL AND NATIONAL COMMERCE AND INDUSTRY

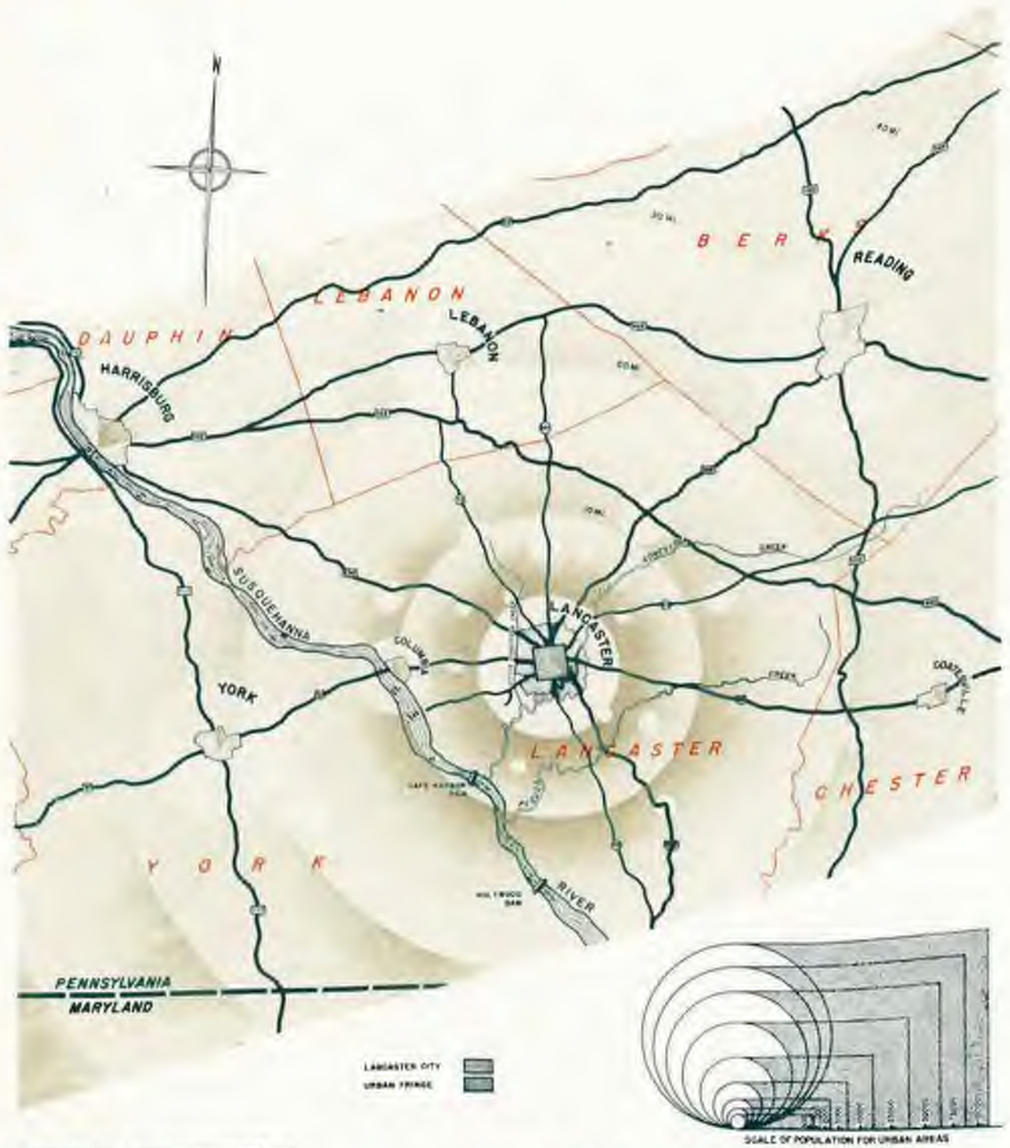
Important developments of equipment necessary on the Lancaster frontier included the Conestoga Wagon and the "Kentucky Rifle." The extensive development of overland trade brought about the invention of the strong, well-balanced Conestoga Wagon, together with the appurtenances which bear the name of Conestoga, such as "Conestoga Horses," "Stogie Boots," and even the black cigar known as "Stogie." The number of these wagons increased steadily until at the height of transportation by wagon it is said that there were 3,000 running daily between Philadelphia and Pittsburgh. The loads consisted of such produce as grain, tobacco, whiskey, pottery, glass, and iron. The distance covered was generally about 20 miles a day.

The "Kentucky Rifle" was developed in Lancaster and rifles, powder, and balls were manufactured here for many years. During the Revolutionary War, William Henry operated a gun factory at the southeast corner of the Square, and manufactured and repaired arms for the Continental Army.

Uniforms for the soldiers in the Revolutionary War were made here, and Anthony Wayne's men were provided with 650 uniforms made in Lancaster. By the end of the century the craftsmen in Lancaster included twenty-five blacksmiths and whitesmiths, six wheelwrights, four tinners, seven gunsmiths, seven nail makers and several silversmiths and potters.

While industrial development of Lancaster had grown since the early days of the community, the decade from 1840 to 1850 was notable for the introduction of the cotton industry, the manufacture of soap, and of locks. Lancaster's first cork company and the stockyards were started soon after the Civil War. Before the end of the century five lock concerns and brick and hardware manufacturers were firmly established. After several attempts, the Hamilton Watch Company was finally established in 1892. Other important industries which developed at this time were candy, iron toy, and umbrella manufacture.

Lancaster's large linoleum manufacturing plant, now known as the Armstrong Cork Company, moved to the present location in 1908, and several important metal-working industries were established. Many of these industries have shown continued expansion and development and the markets for their manufactured products have expanded throughout the years.



REGIONAL MAP
COMPREHENSIVE MUNICIPAL PLAN
LANCASTER, PENNSYLVANIA

MICHAEL BAKER, Jr.
THE BAKER ENGINEERS
ENGINEERS, PLANNERS and SURVEYORS
ROCHESTER, PENNSYLVANIA

Figure 1

Living conditions in Lancaster are favorably affected by the nature of the economic base. The major industries are relatively clean and free from disagreeable smokes and gases. Many of the industries succeed because of the special skills, integrity and inventiveness of the people of this community.

The regional map (Figure 1) shows the position of Lancaster in the southern tier of counties bordering the State of Maryland, and north and east of the Susquehanna River. The City of Lancaster is two miles square, and is surrounded by an urban fringe which extends from Conestoga Creek on the east, to Little Conestoga Creek on the west side of the city. The adjacency of Lancaster to other important cities of southeastern Pennsylvania is shown. The position of Lancaster on the main line of the Pennsylvania Railroad and on the Lincoln Highway is important in the industrial and commercial history and future of the city.

PART II

THE ECONOMIC BASE OF LANCASTER

POPULATION CHARACTERISTICS

The Economic Base of Lancaster

THE STANDARD OF LIVING
- Occupations
- Income
- Expenditures

RELATION OF THE ECONOMIC BASE TO THE COMPREHENSIVE MUNICIPAL PLAN
- Land Allocations for Commerce, Industry and Agriculture
- Importance of Transportation Services
- Importance of Public Utilities

AGRICULTURAL STRUCTURE
- Lancaster County "Firsts"

COMMERCIAL STRUCTURE
- Sphere of Influence
- Wholesale Trade
- Retail Trade

INDUSTRIAL STRUCTURE
- Major Industry Groups
- Relation to State and National Trends

CONCLUSIONS
- Agricultural Policy
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- Industrial Policy

The Economic Base of Lancaster

STANDARD OF LIVING

EVERY COMMUNITY EXPRESSES a character of its own; it is largely this group individualism which creates loyalty and civic pride. One of the most important determinants of the character of a community is its "economic base." The nature of this base is determined by the combination of the various economic activities of the people—by their commercial, industrial, agricultural, and closely-allied transportation and service occupations. The economic base is the foundation upon which rests the entire community structure.

The economic base has a definite effect upon the welfare of the people. The degree of skills demanded by the occupations, the gross number of workers required, and the pools of labor available are all factors which contribute to the economic structure and which largely determine the adequacy of the livelihood of the individuals who collectively make a community.

Working conditions vary considerably with different types of occupations. Certain industries, such as mining, quarrying, iron and steel manufacture, and lumbering require workers who have great physical strength and who are willing to hazard life and limb. Although these workers are usually well rembursed for their labors, they are subject to frequent layoffs due to the seasonal nature of such industries.

Certain other industries require higher degrees of special skills and may or may not be arduous or hazardous. Such occupations as stone-carving, cabinetmaking, watchmaking, patternmaking, and tinsmithing demand highly-developed hand skills, muscular co-ordination, and, usually, native ability. Higher wages and more pleasant working conditions ordinarily benefit the skilled workman and the man with a trade.

Some communities are primarily composed of "white-collar" workers. These people have the somewhat dubious distinction of earning their living with their brains, depending very little, if any, upon their muscles to perform their occupations. Working conditions are usually good. The enforced sedentary life, however, is the cause of occupational diseases just as real as the silicosis of the quarry worker. The majority of this group has had special education, fitting them for work as bookkeepers, stenographers, and accountants. Business executives and professional people also fall into this category. They are often independent and are thus able to create working conditions to suit themselves.

Living conditions are often seriously affected by the nature of the economic base of the community. Heavy industries, such as steel plants, chemical works, charcoal and brick kilns, emit disagreeable smokes, and sometimes odorous gases, which cast a pall over an entire community. Some plants, such as drop forge mills and boiler works, are noisy to the point of nuisance. More fortunate communities, like Lancaster, are economically supported by

clean, light industries or by trade or other commercial activities. In such cases, the living conditions of the workers are apt to be unaffected adversely by their sources of income.

The basic economic differences between Lancaster and other communities of Pennsylvania are illustrated in the charts on Occupations, Figure 2; Incomes, Figure 3; and Expenditures, Figure 4.

Occupations. This study illustrates the percentages of the total labor force comprised of unskilled, skilled, and professional workers in 1940. As may be seen, Lancaster follows the middle ground rather consistently in the three categories of workers, indicating an economy which is not highly specialized.

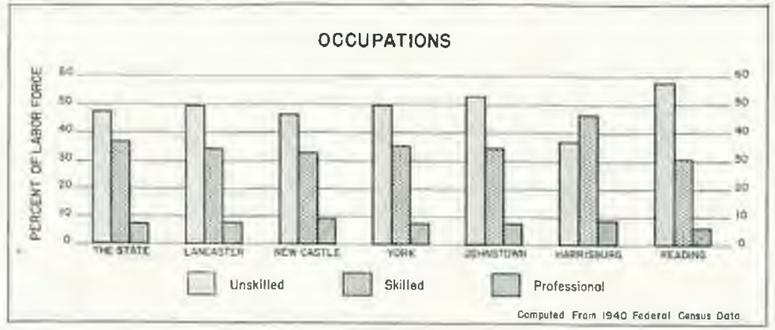


Figure 2.

Reading and Johnstown, for instance, show high proportions of unskilled workers, indicating the dependence of these cities on economies which are principally industrial. Harrisburg, conversely, indicates its highly developed government economy in the high percentage of skilled workers, primarily composed of office employees.

Incomes. This study compares the average annual worker income in Lancaster with those of other cities in 1940. As will be seen, only York stands as low as Lancaster in this respect. An apparent parallel to low average income is high percentage of women workers. Thirty-five per cent of Lancaster's manufacturing labor force is composed of women. Johnstown, which has the highest average income, has the lowest percentage of women workers. Apparently, the many small, light industries in Lancaster employ a large percentage of women. 40.3 per cent of Lancaster's population is gainfully employed, a high percentage when compared to those of the heavy industrial communities of Johnstown and New Castle which have 33.0 per cent and 26.1 per cent respectively.

This indicates that there are comparatively more families in Lancaster which have two breadwinners each and that, though the average per worker wage is low by comparison, the average per family wage may be considerably higher. The same assumption is strengthened by the high percentage of service workers (12.6 per cent) in Lancaster, as shown in the above-mentioned graph, which implies that in proportionately more families domestic help is employed.

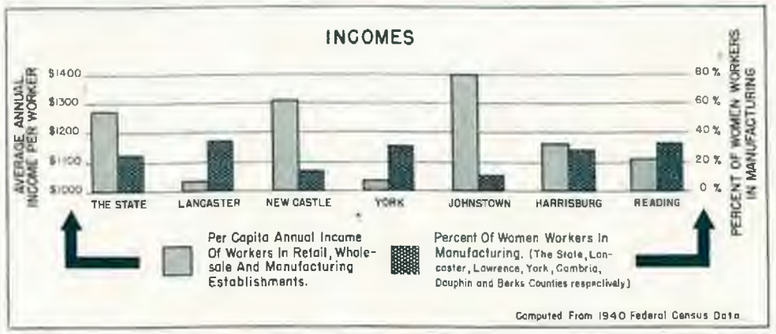


Figure 3.

Expenditures. The people of Lancaster are apparently good spenders. Only Johnstown people spend considerably more per capita than Lancaster people for what might be called essentials. On the other hand, while Lancaster people spend annually $224 per capita for essentials, which is the third highest in

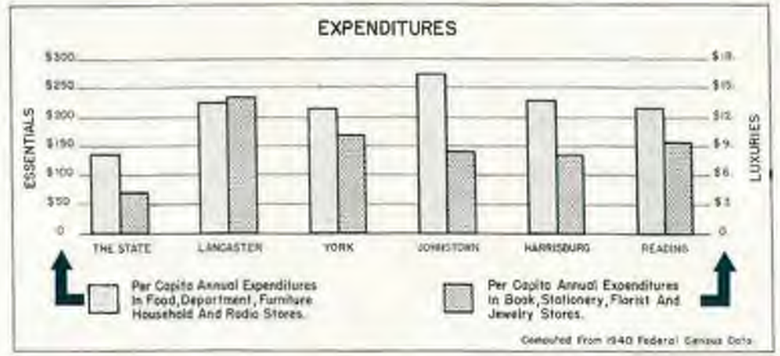


Figure 4.

dollars, that sum represents only 39 per cent of the total per capita expenditures in this city, which is next to the lowest figure proportionately. A comparison of per capita annual expenditures in 1940 for essentials, and for books, jewelry and florist products is shown in Figure 4.

Lancaster evidentaly enjoys a comparatively low cost of living. The people have to allot only a relatively small proportion of their total expenditures for the essentials of life. Johnstown people, in contrast, must spend $274 each, or 51 per cent of all their monies to purchase the essentials for which Lancaster spends but $224 each, or 39 per cent of their expenditures. If books, stationery, flowers, and jewelry may be considered luxury items, the people of Lancaster certainly appreciate a relatively high standard of living for they spend annually $14.10 per capita for those items, representing 2.4 per cent of all their expenditures. York is the next highest city in this category with an annual per capita expenditure of $10.06 for the same types of items.

RELATION OF ECONOMIC BASE TO THE COMPREHENSIVE MUNICIPAL PLAN

The foregoing factors, in combination with coefficients of wholesale and retail trade, largely determine the standard of living enjoyed by a community. The physical city must be so planned, the private developments and public facilities of which it is composed so arranged, that these will facilitate the performance by the community of its distinctive functions and the attainment of the standard of living to which its citizens aspire.

Inasmuch as the principal consideration of this study is the physical planning for the future of Lancaster, the economic base has been studied to determine which of its characteristics shall be encouraged by the Comprehensive Municipal Plan. Such considerations include the determination of the present economic position and prospects of the metropolitan area in the light of regional and national conditions and trends; the growth and relative importance of different income-producing activities; the type and size of manufacturing industries; appraisal of the position and prospects of the dominant types of industries in the light of the national and regional positions of, and trends in, such industries.

Land Allocations for Industry, Commerce and Agriculture must be carefully determined in proper proportions to each other and to the expected future population of the metropolitan area. Zoning plans and ordinances include necessary legal machinery to attain the desired ends. The problems of land use are definitely problems of economics, public as well as private; the proportions of land allocated to various uses cannot be computed honestly without considering the community's economic structure—what it is and what it should be.

The industries within Lancaster use a normal percentage of city area. It is proposed, however, to increase the allocations of land for light industry from .94 to 2.0 per cent of the total city area; and for heavy industry from 2.8 to 3.0 per cent of the total city area—total of 32.14 acres. The increase is proposed in order to provide for location of light industry adjacent to redistributed population, and for limited expansion of existing heavy industry. Due to space limitations within the city, and the major railroad facilities outside the city, it is expected that most of the industrial expansion will take place in the townships surrounding the municipality.

The ratio of the total area of the City of Lancaster per capita which is devoted to commercial uses is largely due to the importance of Lancaster as a retail and wholesale trade center. Tobacco warehouses are an important commercial use. Almost ten per cent of the total city area is now, and should continue to be, devoted to commercial uses.

Importance of Transportation Services. Transportation facilities are the circulatory system through which flow the raw materials to feed industry, and the finished products which are the ultimate source of profit. If the water, railroad, truck or air lines are not given due consideration, industries may be isolated.

In 1944, the railroads in Lancaster carried an average of 170,000 tons of freight per month. The trucking companies operating through the city carried an average of 57,000 tons of freight per month. A major difficulty in the

freight transportation systems through Lancaster is that southbound railroad traffic must be routed via York or Philadelphia instead of going directly south to the Baltimore transportation center, only 70 miles away.

Figure 5. Excellent terminal facilities. Pennsylvania Railroad Station.

Public Utilities and Services are of major importance to the life of industrial and commercial developments. This is particularly true in the case of manufacturing industries which usually require large quantities of power, water, and waste disposal facilities.

Commercial establishments, retail and wholesale, also require utilities although not on nearly as large a scale as are required by the industries.

Industrial expansion may be encouraged by proper land allocation in the zoning plan and ordinance. Actual development of the areas so zoned, however, will not take place unless utilities and public services are made readily available. The Comprehensive Plan for the physical development of Lancaster recognizes the areas which are zoned for industrial development and proposes expansion of the utility systems to make the areas usable. Water and sewer extensions can be made available to areas in the townships by joint authorities for areas outside the city, or by annexation of township areas to the city.

Tracing the development of Lancaster's industrial structure as it grew to its present importance is not within the scope of this report. Due to good transportation facilities, a favorable climate, the proximity of large centers of population, and the native inventiveness and craftsmanship of the early settlers, many diversified industries developed in this area. Lancaster is today in the enviable position of having an industrial economy which is nearly immune to the vagaries of depression and prosperity.

A brief analysis of the agricultural, commercial and industrial structure

of Lancaster is presented to the extent necessary for preparation of the Comprehensive Municipal Plan.

Prior to the war, Lancaster County enjoyed a unique economic balance between agriculture, commerce and industry. The county stood first in rank in Pennsylvania (1940) in eight categories of agricultural comparison. It stood eleventh, fourteenth, fifteenth, and seventeenth in rank in four categories of industrial comparison. It stood eleventh in rank as a retail market area out of the 24 major market areas in the state. Although twelfth in size, the county ranks sixth in total true valuation ($250,764,000 in 1940).

That such a diversification of economic dependence is a healthy situation is beyond argument. Employment statistics prove that there was relatively little unemployment and that few people were on relief rolls in Lancaster County during the depression years. The county ranked sixty-fourth out of the 67 counties in the state in the percentage of population on relief. In 1941 only 3.8 per cent of the county's population was on relief, whereas the state average was 8.6 per cent.

During good times the labor pool in Lancaster County has been more constant and the cost of living has remained relatively lower than in most communities.

The Bureau of Business Research of the Pennsylvania State College describes Lancaster County's economic structure thus:

"The statistical evidence points to an old, well developed and stable community where a wide variety of skills have come into operation, where industry is for the most part small scale, and where, consequently, the worst evils of high industrialization have not yet put in their appearance. Light industry is well represented, and there is a relatively high percentage of female labor. This means that Lancaster industry is subject to less fluctuation than elsewhere, but it also indicates a conservative industrial position."

AGRICULTURAL STRUCTURE

Lancaster County is recognized throughout the nation for its great agricultural wealth. This reputation is well founded, for the county ranks first in many categories of agricultural comparison, not only among the counties of Pennsylvania, but among the 3,073 counties of the United States.

The Palatinates, the Huguenots, and the Swiss Mennonites, who collectively make up the "Pennsylvania Dutch" population peculiar to this region, are inherently good farmers. They love the soil and tend their crops religiously. Although fundamentally "plain" in their personal living habits, they accept modern improvements and practices for agricultural pursuits. Their farms are beautifully developed and maintained; the buildings present a trimness and efficient aspect not found so abundantly in any other region.

Inasmuch as this portion of the report is concerned with the economic base of the City of Lancaster, it is not the intent to dwell at great length on the agricultural structure of the county. However, as pointed out heretofore, the city's enviable economy would not exist without the rural wealth of Lancaster County. The equilibrium of agriculture, commerce, and industry is largely maintained for the city through the external influence of the agricultural system.

For example, 90 per cent of the tobacco grown in Pennsylvania is grown

in Lancaster County and the manufacture of tobacco products is of prime importance in the city. In this industry an ideal barter is effected. The farmers find a ready market for their major cash crop and the manufacturers have no difficulty obtaining their raw materials. Thus one supports the other at a mutual advantage.

Lancaster County "Firsts." On the basis of state-wide comparisons, Lancaster County ranks first among the 67 counties in the total value of field and fruit crops. The values in 1941 of the field crops in which Lancaster County stands first were as follows:

Tobacco	$6,588,320
Corn	3,808,910
Winter wheat	2,113,410
Tame hay	1,924,760
Barley	397,360

Lancaster County ranked first among the 67 counties of the state in 1941 in the total value of livestock products. The following were the 1941 values of livestock in which the county was first in rank:

Chickens	$1,972,320
Horses	1,124,030
Cattle	9,405,200
Milk cows and heifers	5,679,230

Nationally, Lancaster County ranks first of all counties in the United States in the value of livestock on farms, averaging $19 per farm acre according to the 1940 Federal Census. Among the 3,073 counties in the United States, Lancaster stands second in the value of crops. The county ranks first in the state in the use of commercial fertilizer on farms, in the total number of poultry farms, the number of dairy farms, and in the production and value of milk. The county ranks second in the state in the production of pears, fifth in the production of apples and cherries, and seventh in the production of peaches. That high agricultural production is profitable is attested by the following facts about the modern improvements enjoyed on Lancaster County farms: the county ranks first in the number of farms having power plants, running water, telephones, heating systems, and bathrooms (1941); and first in the number of automobiles, trucks, tractors, and radios (1942).

COMMERCIAL STRUCTURE

An important factor in the economic base of Lancaster is wholesale and retail trade. The availability of local markets for local products, both manufactured and agricultural, provides a useful economy for the inhabitants. Evaluation of the trade economy of a particular area is difficult. The production of tangible items provides concrete means of comparison of industrial systems: in the case of trade, however, gross sales, number of establishments, and number of employees, provide the means of comparison between trade centers. By such comparisons it is possible to gain an insight into the trade of an area.

Sphere of Influence. The sphere of influence of Lancaster as a trade center may be determined by a number of criteria. Newspaper circulation is one of

the best means. Other criteria involve study of the marketing of milk and other farm products, telephone service, sale of railroad and bus tickets, and highway traffic counts. The accompanying map (Figure 6) graphically portrays various "spheres of influence" surrounding the City of Lancaster.

On the basis of city edition newspaper circulation, the Audit Bureau of Circulation defines an area surrounding the City of Lancaster as the "City Zone."

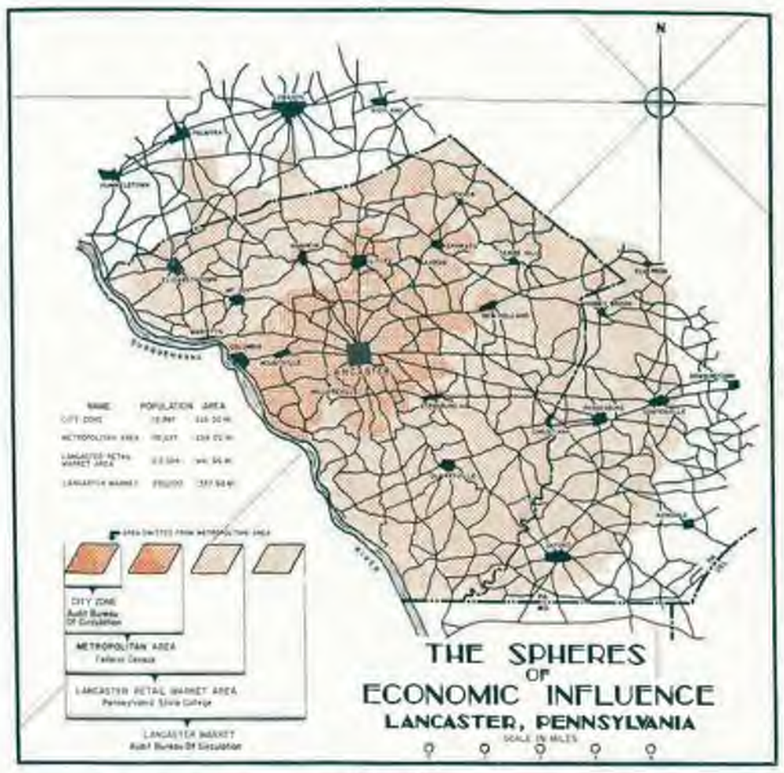


Figure 6.

This area covers a territory surrounding the city for a varying distance of from two to twelve miles and includes, in addition to the contiguous area, the boroughs of Manheim, New Holland, and Strasburg. The "City Zone" has a population of 112,897 and the 1942 retail sales in the area totaled $105,495,000. The area contains approximately 226 of the 941 square miles in Lancaster County.

The Federal Census Reports describe a metropolitan area surrounding and including Lancaster. The method is entirely mechanical, all contiguous political subdivisions having population densities of over 150 people per square mile being included. On this basis the Lancaster Metropolitan Area covers somewhat more territory than the Audit Bureau of Circulation "City Zone"

but excludes the boroughs of Manheim, New Holland, and Strasburg, which are not contiguous with the other areas. The larger boroughs of Akron, Ephrata, and Columbia, however, are included. The Lancaster Metropolitan Area has a population of 132,027, and covers approximately 259 square miles.

On the basis of the newspaper advertising of Lancaster retail markets and the response as evidenced by subscriptions and purchases, the Audit Bureau of Circulation defines the "Lancaster Market" as a much more inclusive area than either the City Zone or the Metropolitan Area. The Lancaster Market includes all of Lancaster County, a considerable part of Chester County, and a small part of Lebanon County. The Lancaster Market includes approximately 250,000 persons, and it covers about 1,367 square miles.

The Pennsylvania State College Bureau of Business Research has established arbitrary market areas throughout the State of Pennsylvania, dividing the state on the basis of 24 marketing centers. One of these centers is Lancaster and the market area ascribed to it is Lancaster County. On the basis of all retail trade, this market ranks eleventh in the state.

In the individual group studies, "General Stores with Foods," this market accounts for 4.3 per cent of all the business in the state in the group. On the basis of per capita volume of total trade and service the market ranks fourth on the basis of per capita volume of retail trade only.

As may be seen from the foregoing discussion, Lancaster exerts considerable influence on the surrounding territory. Conversely, it is also true that without the sphere of influence, Lancaster could not exist as a major community. The city's economy is greatly dependent upon the support of the inhabitants of hundreds of square miles; the city is not self-sufficient.

Wholesale Trade. That Lancaster is a wholesale trade center of considerable importance is shown by comparisons with the state and cities of New Castle, York, Johnstown, Harrisburg and Reading.

WHOLESALE ESTABLISHMENTS—1939

	1940 Population	*Number per 10,000 People*	*Per Cent of Wage Earners*	*Average Annual Earnings per Employee*
The State	9,900,180	12	2.4	$1710
Lancaster	61,345	23	3.9	1390
New Castle	47,638	17	2.8	1382
York	56,712	21	2.3	1440
Johnstown	66,668	14	2.3	1455
Harrisburg	83,893	26	3.2	1565
Reading	110,568	19	2.3	1445

Considering total wholesale trade, we find that 3.9 per cent of all Lancaster wage earners are employed in wholesale activities. This percentage is considerably higher than that of the state or of any of the other cities. Lancaster has 142 wholesale establishments which is a relatively high number. Expressed in terms of establishments per 10,000 people, only Harrisburg has more wholesale establishments. The average annual earnings per employee in the wholesale business is low in Lancaster. New Castle is the only community with a lower average. That Lancaster stands so low in this respect

may be due to the tobacco and farm product wholesale businesses here which pay relatively low wages everywhere, but which form a greater percentage of the total wholesale business in Lancaster than in other communities and so tend to pull down Lancaster's average.

Automobile sales in Lancaster average $24.50 per capita, which is relatively high. The average sales per capita for Harrisburg was $39.60 and for New Castle the sales were $28.50 per capita. As the average for the state is but $13.45, it may be seen that Lancaster serves as an automobile distributing center for a territory considerably larger than that of its own environs. Sales per capita in York, Reading, and Johnstown were relatively low at $13.80, $9.07, and $5.07 per capita, respectively.

Farm products (raw materials) reveal Lancaster as a very important wholesaling center for the wealthy farming country surrounding it. Lancaster wholesales $19.80 per capita of raw farm products, totaling $1,219,000. This is a greater volume of business by 52 per cent than the City of Pittsburgh does in the wholesaling of these products. York is the only other city playing a part of enough importance to be recorded for comparison. York wholesales $6.88 and the state wholesales $4.35 per capita.

The very high figure in Lancaster is primarily accounted for by the wholesaling of leaf tobacco and livestock. Lancaster County produces 90 per cent of the total state production of tobacco and the city of Lancaster wholesales a great percentage of it. This business, however, pays next to the lowest average annual per capita wages of all the wholesale businesses in Lancaster.

Farm products (consumer goods) is another wholesale business in which Lancaster compares very favorably. This city does an annual per capita business of $29.30, the nearest competitor being New Castle with a per capita business of $20.20. The state average per capita is $5.30. This high figure for Lancaster is undoubtedly accounted for by the fact that the city serves as the collecting and redistributing center for the bulk of the excellent farm products of the county.

Groceries and foods account for a $72 average annual per capita wholesale business in Lancaster. This figure is lower than for York ($101.00) and New Castle ($81.75), but it is three times higher than the state average ($24.20). Although the food products is the third most important of Lancaster's industries, the $18,000,000 worth of finished products is evidently shipped for wholesale elsewhere. The total wholesale sales of groceries and foods in Lancaster is only $4,412,000. Retail sales of food are relatively low in this area, presumably due to the great amount of foodstuffs raised by the inhabitants. This fact undoubtedly tends to lower the wholesale figure.

Plumbing and heating equipment and supplies make a relatively good wholesale business in Lancaster. Harrisburg is the only city with higher per capita sales ($23.10) and other cities are very much lower. The state average of $3.40 per capita is only one-sixth as much as for Lancaster. The only explanation available is the possibility that the great number of individual wells used for water supply throughout the county causes a large demand for pumps, well casing, and filters. It should be noted that the wholesaling of these products is of considerable importance in Lancaster.

In tobacco and products (except leaf), Lancaster stands relatively high; Harrisburg and York being the only cities higher in this category, having $40.00

and $33.60 per capita, respectively. Although Lancaster is a cigar manufacturing center, most of the cigars are evidently shipped to other larger centers for wholesale distribution.

Only ten wholesale companies maintain wholesale branches or offices in Lancaster. In this category the city stands lower than any other city on the list. In great contrast, Harrisburg wholesales $211.50 per capita through manufacturers' sales branches or offices to Lancaster's $17.35 per capita. This type of wholesaling is no doubt centered in the large cities for, except Harrisburg, the state displays a higher average at $115.50 per capita than any individual city under study. The average earnings of $1885 per employee in Lancaster are higher in this category than in any of the others, and the average is nearly $100 higher than for Harrisburg, which comes the closest to that of Lancaster.

Petroleum bulk stations, as a type of wholesale trade, is a relatively large business in Lancaster, averaging $45.50 annual per capita sales. York, with $51.70 per capita, is the only city which does a greater per capita business in this category than Lancaster. Harrisburg is third with $41.10 per capita and Reading, Johnstown, and the state follow with sales of $26.50, 26.30, and $24.90, respectively.

Total annual wholesale sales per capita in Lancaster are third highest of the cities studied, with Harrisburg and York standing higher, respectively.

Retail Trade. A detailed picture of the retail trade in Lancaster may be derived by study of the analyses of Pennsylvania Retail Market Areas made by the Pennsylvania State College Bureau of Business Research, prepared in 1943 and based on 1939 statistical data. Inasmuch as so much study has already been accomplished in relation to this subject, some general observations on Lancaster's rank in the various retail groups will constitute the extent of report on this subject.

In relation to its size, Lancaster stands above its rank of 11th in population in the state in the following seven types of retail business:

Type of Business	*Rank in State*	*Volume in Thousand Dollars*	*Percentage of State Total*
General merchandise	10	6,734	1.34
Apparel group	10	3,564	1.34
Automotive group	9	5,103	1.42
Filling stations	6	1,917	1.19
Lumber, building materials, hardware	10	1,175	0.87
Eating and drinking places	10	2,383	0.91
Drug stores	7	1,344	1.29
Food group	14	——	—
Furniture, household, radio group	13	——	—

In only the latter two retail categories does Lancaster stand below its rank of 11th in population.

Lancaster stands 10th in total retail sales with a volume of $35,611,000. The city ranks 16th out of the 92 Pennsylvania cities of over 10,000 population, with a value of $580 in sales per capita. Of the 15 cities ranking higher than Lancaster, only Harrisburg has a larger population.

Study of the graphs on Occupations, Incomes, and Expenditures, discussed previously in this section of the report, will reveal the spending habits of the people of Lancaster City and County. From these data, conclusions may be drawn as to which types of businesses do well in Lancaster compared to other cities in the state.

INDUSTRIAL STRUCTURE

The Department of Internal Affairs has established eleven major classifications of manufacturing industries for use in studying industrial statistics. Table 1, Industrial Statistics of the Lancaster Urban Area—1943, gives a statistical breakdown, by the major classifications, of all industries within the urban area. Study of this table will reveal some important facts about Lancaster's industrial economy. As will be noted, there were 225 firms manufacturing 77 different types of products and employing 21,708 workers in 1943. The high number of types of products is particularly significant in that it indicates very high diversification and a relatively stable manufacturing structure.

Excluding the employment statistics of the cork products companies, it will be found that 223 firms employed 12,660 people—an average of only 57 employees per firm—showing that the industrial makeup of Lancaster is predominantly one of medium and small size firms. The average number of employees per manufacturing establishment in Pennsylvania in 1940 was 82. In general, manufacturing in Lancaster is in small scale operations, where a high degree of skill approaching handicraft is required and light industry predominates. The value of products per dollar invested has dropped since 1940 from $2.40 to $2.15; the value of products per dollar of compensation has dropped from $3.72 to $3.13. In the same period, however, the value of products per employee has risen sharply from $3943 to $6100, and the average earnings per employee have likewise risen from $1056 to $1952. These sudden changes are undoubtedly due to wartime conditions which are dominated by high wages, high cost of raw materials, long working hours with extra compensation for overtime, and high prices received for the finished products.

Major Industry Groups. The following observations regarding each of the eleven major industry groups are presented:

Chemicals and allied products is a major group of such small importance in Lancaster that very little information about it is available. One fireworks firm, one patent medicine firm, and one paint manufacturing firm are the only three in this field of industry. Collectively they employ 16 people.

Clay, glass, and stone products is another group of minor local importance. Two companies make bricks, two make concrete products, and one is classified as a pottery and chinaware factory. These industries employ only 69 people.

Food and kindred products is a classification of major importance in the Lancaster urban area as well as throughout Lancaster County. As noted, 72 companies are engaged in 14 different types of food processing or food manufacturing industries. Over half of these companies are bakeries, confectioners, and ice cream manufacturers who collectively employ 978 out of the total of 1575 for the entire major group. An interesting local food industry is that of pretzel making. There are seven pretzel making firms employing 42 people.

TABLE 1

Industrial Statistics of the Lancaster Urban Area—1943

Major Groups	Number of			Earnings per Employee	Pay Roll	Valuation in Thousand Dollars			
	Types	Firms	Employees			Plant	Raw Materials	Added by Manufacture	Added per Employee	Finished Products
Chemicals and allied products	3	3	16	—	—	—	—	—	—	—
Clay, glass and stone products	3	5	69	—	—	—	—	—	—	—
Food and kindred products	14	72	1,575	$1,685	2,654.2	4,365.2	12,904.9	5,620.8	3,565	18,525.7
Leather and rubber goods	1	1	2	—	—	—	—	—	—	—
Lumber and its remanufacture	5	13	446	1310	583.7	480.4	974.7	864.8	1,940	1,839.5
Metals and metal products	22	41	6,544	2180	14,237.6	9,027.4	11,135.3	22,967.3	3,510	34,102.6
Mine and quarry products	2	4	26	2080	53.9	144.0	52.1	82.9	3,190	135.0
Paper and printing industries	4	29	702	1960	1,377.2	1,674.0	1,066.5	2,473.1	3,510	3,539.6
Tobacco and tobacco products	2	10	1,014	1450	1,473.8	4,840.5	1,314.8	2,416.2	2,400	3,731.0
Textiles and textile products	7	14	1,288	1770	2,275.1	1,684.9	5,300.5	3,081.7	2,390	8,382.2
Miscellaneous products	14	33	10,026	1930	19,382.3	12,711.9	28,836.2	33,108.3	3,300	61,944.5
TOTAL	77	225	21,708	$1,952	42,370.8	34,928.3	61,585.0	70,615.1	3,253	132,200.0

In the food and kindred products group the average value added by manufacture per employee is $3565, which is the highest figure of all the groups by this comparison. The average earnings per employee are relatively low when compared to the average of all groups. In value of finished products, this group ranks third of the eleven, with a total value in 1943 of $18,525,700. The group accounts for 14 per cent of all manufacturing in the area.

Leather and rubber goods is a group which, but for a leather belting manufacturing company, would be nonexistent in the Lancaster urban area.

Lumber and its remanufacture is primarily represented by four furniture-making companies and a cork company, which together employ 393 people out of the 446 for the group. As will be noted, this group receives the lowest average annual earnings per employee ($1310); and adds the lowest value by manufacture per employee ($1940). It ranks seventh out of the eleven groups in value of finished products. The group accounts for only 1.4 per cent of all manufacturing production in the area.

Metals and metal products as a major group represents the most diversification in types of industries. Of the 41 firms in this group, eight manufacture hardware and specialties; four are machine repair shops; and the balance are distributed among the other twenty types of industries which run the gamut from watches to electric refrigerators, from jewelry to elevators. The Hamilton Watch Company is the only representative of its type but it is by all odds the largest firm in the major group and the second largest firm in the area. The Radio Corporation of America—radio tube manufacturers—was not included in this study as the plant was still under construction in 1943. Over one-third of all employees in this group work at the Hamilton Watch Company. The eight hardware and specialty companies employ 1,218 workers. The average earnings per employee in this group are higher than those of any other group and the value of finished products was $34,102,600 for 1943. This group ranks second only to miscellaneous products.

The significant index of value added is important in this group, for the value added by manufacture is double the raw material value, and the value added per employee is one of the three highest. The group accounts for 26 per cent of all manufactured products in the urban area. The percentage of national production in 1939 was the same as in 1919.

Mine and quarry products is the group of least importance in the area on the basis of known statistics, producing only $135,000 worth of finished products in 1943.

Paper and printing industries are relatively important in the Lancaster urban area. Of the 29 firms in this group, 25 are in the printing and publishing industry which collectively employs 574 out of the 702 workers. The average earnings per employee are about equal to the average of all groups but the average value added by manufacture per employee is relatively high, standing with the metals and metal products group at $3,510. This group stands sixth out of the eleven in value of finished products. In 1919 only 0.06 per cent of the national product was produced by Lancaster County, but the percentage climbed rapidly in the middle 1930's to 0.13 per cent in 1933. Production had increased to 0.69 per cent in 1939. Value of products in this group has increased 50 per cent since 1939 but lack of national figures

for the same period makes it impossible to determine the county's share for a more recent date. This group shows great promise.

Tobacco and tobacco products is the fifth largest industrial group in this section, producing $3,731,000 worth of finished products in 1943. This group represents 2.8 per cent of the products manufactured in the urban area. Four firms manufacture cigars, employing 515 out of the 1,014 total employees of the group. The average earnings per employee for this group is next to the lowest out of the eleven and it is third from the lowest in average value added by manufacture per employee. This last figure is undoubtedly low because of the great amount of handwork necessary in making cigars.

This important industry in Lancaster has declined greatly since 1919 when Lancaster County produced 1.03 per cent of the nation's tobacco products. In 1939 the county production amounted to only 0.29 per cent of the national product. This decline is largely due to the loss in popularity of cigars and the rise in cigarette consumption and production. The tobacco which is raised in this vicinity is cigar leaf tobacco and is too heavy to be used for cigarettes.

Textiles and textile products as a group is comprised primarily of three firms producing silk goods (including rayon). These firms employ 556 workers out of the 1,288 for the group. Women's and children's clothing manufacturers and one producer of cotton goods employ 400. This group is the fourth most important of the eleven in the value of finished products.

The relative importance of the county in this group was only 0.19 per cent in 1919, but it steadily increased to a high of 0.49 per cent in 1931 and in 1939 accounted for 0.45 per cent of national production in the group. Population centers other than Lancaster account for the bulk of the county's production of textiles and textile products. The trend is no doubt a fair comparison, however, for the industry is important in Lancaster's economic structure, accounting for 6.4 per cent of the value of all finished products.

Miscellaneous products is by far the most important industrial group in the Lancaster urban area, accounting for 47 per cent of the value of all finished products in 1943. The reason for this unusual situation is the inclusion of the Armstrong Cork Company in this group, which manufactures so many different types of products including cork, linoleum, oil cloth, closures, plastic articles, soundproofing and insulating materials, and fuselages for airplanes (wartime). There is no other category into which the Armstrong Cork Company could be placed. The group is composed of 14 different types of industries represented by 33 firms. Cork products, oil cloth, and linoleum are listed together as one of the 14 types and that type employs 9,048 workers out of the 10,026. One firm is classified as "aircraft and parts" and employs 370 persons. Five firms making umbrellas, parasols, and parts employ 237. These three categories account, then, for all but 375 of the entire labor force of the group. The earnings per employee for this group are about average. The average value added by manufacture per employee is somewhat above the average for the eleven groups. The total value of finished miscellaneous products in 1943 topped $60,000,000.

This group has grown rapidly and steadily in national importance. In 1919 the county accounted for 0.89 per cent of all national output of miscellaneous products but in 1939 this percentage had increased to 2.99 per cent.

The fact that industries in this group have been able to more than hold their own in national competition is an encouraging fact, and indicates that the county can successfully compete on a national basis with the right kind of industries.

Figure 7. Armstrong Cork Company and railroad transportation facilities.

Relation to State and National Trends. Pennsylvania has failed to retain its share of the national manufacturing output in the last 25 years. In 1919 the state produced 11.8 per cent of all manufactured products in the United States. By 1942 this figure had dropped to 9.2 per cent. In the same period, however, Lancaster County held its own relatively well compared with the country. In 1919 the county produced 1.4 per cent of all manufactured products in the state; this share expanded through the 1930's and by 1939 had increased to 2.4 per cent. During the war period the county's share fell because other counties in the state, such as Allegheny, Philadelphia, and Erie, were better fitted to produce heavy war materials such as ships, and increased their production tremendously. As a consequence, in 1942 Lancaster County's production had dropped to 1.8 per cent of the state total. As the major industrial efforts in this area are directed to the production of small consumer items, it is reasonable to expect that the county would lose by comparison with those counties which produced heavy war materials.

The industrial economy of this area has successfully weathered wars and depressions. It is interesting to note that of the years since 1919, it was in 1933 that Lancaster County assumed its greatest share (2.5 per cent) of the state's production; that year being in the depth of the depression decade. Lancaster's diversified industry hung on doggedly and suffered far less than other industrial areas.

By comparison with federal production, Lancaster County production indicates a trend similar to that of its comparison with state production. From

1919 the county increased its percentage of national production in manufacturing from 0.16 to 0.19 per cent. The peak was reached in 1933, when the percentage reached 0.25 per cent. The percentage held rather high through the depression decade, fluctuating somewhat, but still standing at 0.23 per cent in 1939. Placement of the heavy war industries in other parts of the country undoubtedly accounts for the drop in Lancaster County's share of production since 1939. Pennsylvania has also definitely lost ground on a relative basis since 1939. Neither the county nor the state has received its proportionate share of war orders nor its proportionate share of new war facilities. Whether or not this trend will continue after the war is a matter of speculation. Certainly the South, Southwest, and West, having gained tremendously in production facilities during the war, expect to hold their gains. The State of Pennsylvania, as well as the rest of the Northeast, must expect to face industrial competition hitherto unknown.

CONCLUSIONS

The preceding analysis of the economic characteristics of Lancaster illustrates the unique balance between agriculture, commerce, and industry. The analysis has dealt with an existing successful economy. It shows that Lancaster is highly significant as an agricultural area; that the commercial structure has developed around the agricultural structure, and that Lancaster is most significant industrially as a producer of consumer goods.

Maintenance of the equilibrium presently enjoyed is of prime consideration. Diversification of development should continue to be the keynote and every effort should be made to encourage new business enterprises and expansion of existing enterprises.

The Future Agricultural Policy for Lancaster County can hardly be other than continuance of the superior practices already well established. It would be unrealistic to suggest that anything can be basically unsound with the agricultural economics of this top-ranking farming area of the United States. Crop diversification, dependence upon more than one cash crop, modern methods of crop rotation and the use of farm machines and ample fertilizing are all practices which are currently followed in Lancaster County and which, along with plenty of hard work, make the county the Garden Spot of America.

The system of co-operative marketing of farm products is not highly developed in this section. Possibly this is due to the independent nature of the Lancaster County farmer; possibly it has never come about simply because the superior products of the area have sold themselves. Only recently, a tobacco co-operative has been established in Lancaster to facilitate the marketing of the tobacco growers' products at top prices and to cut the cost of handling and storing. Undoubtedly, this movement will gain momentum as the benefits of co-operation become more evident to the farmers.

Inasmuch as cigar smoking is losing popularity, it may be advisable that the farmers of Lancaster County investigate some other agricultural specialty product. It is understood that burley tobacco has been produced on a small scale in this county, and at greater profit than from the standard cigar leaf tobacco. The possibilities will bear thorough investigation.

The interest in soybean plastics is widespread and it is realized that much investigation as to the present and potential market, type of soil required, and climate preferred, would be necessary before specific action should be encouraged. National production of soybeans has grown rapidly from 13,000,000 bushels in 1933 to 207,000,000 bushels in 1943. The soybean has many uses. The oils are used for varnishes, paints, foods, infant formulas, and salad oils. The meal is used for poultry and livestock feed; the flour is used in pastry. Soybeans are a crop of great potential significance to Lancaster County.

Truck farming should be a source of greater revenue to Lancaster County farmers. The Philadelphia market should be ideal for quality in-season fruits and vegetables from Lancaster County. Top prices are paid in local markets for these products and it seems reasonable that the market could be extended almost indefinitely as more rapid transportation facilities develop.

Commercial Policy. The commercial structure of Lancaster has developed to a great extent around the excellent agricultural structure of the community, wherein farm products as raw materials such as tobacco and livestock, and farm products as consumer goods, are basic commodities. It is not the purpose of this report to propose any changes in the commercial economy. Proposals are made, however, for further consolidation of the wholesale commercial houses in specified districts adjacent to the railroad, to the shopping district and to major highways. It is believed that this consolidation will facilitate access to these important places of business and will reduce congestion of traffic on streets which are not designed for wholesale commercial use.

The retail trade of a city must be carefully considered in the Municipal Plan. It is suggested by the Pennsylvania State College Bureau of Business Research that the best test of a retail shopping center is the amount of general merchandise and apparel sold in that area. People buy food, gasoline, and automobiles near home, but they are willing to travel considerable distances for clothing and other similar merchandise. Shopping for articles in which price, style, or quality are competitive is done in larger cities. It is a disturbing fact that Lancaster makes its poorest showing in this general merchandise and apparel group which is considered to be the measure of a retail market area.

The Lancaster merchants should be fully aware of the existing and potential shopping sphere of the city. They should understand that there is probably nothing more effective in promotion of retail trade than competitive stores of the window display type. They should realize that their real competition is against stores of neighboring cities rather than against other merchants of this city.

Various proposals submitted in subsequent sections of this report are intended to aid the merchandising of goods. Land use analyses show a disproportionate number of small retail convenience stores scattered over the city, mostly in converted dwellings. Sales analyses show a small income from these retail stores by comparison with similar stores in other cities of Pennsylvania. Proposals contained in this report will recommend consolidation of the scattered retail stores into neighborhood shopping centers or into the periphery of the central business district. Convenience stores, such as bakeries, drug stores, barber and beauty shops, banks, real estate and insurance offices, printing offices, and cleaning shops all benefit by the window displays of the main stores in the central business district. Recommendations for street lighting improvements, for reduction of traffic congestion and for parking improvements all are designed to aid the commercial area by improving access to the stores and by increasing their popular appeal.

Industrial Policy. As has been shown, Lancaster is most significant industrially as a producer of consumer goods such as foods, paper and printing, textiles and textile products, linoleum, oil cloth, plastic articles, insulating materials, and other miscellaneous products. In the field of production goods such as metal, lumber, tobacco, and chemical products, the value has declined in relation to the national value. The trend of the industrial status of Pennsylvania, in fact, in the years prior to World War II has been changing from dominant heavy industry.

Thus, the industrial development for consumer goods in Lancaster County conforms with the trend and, in fact, has preceded the state trend. Because of its proximity to large population centers and its favorable position in the consumption goods industries, further emphasis may well be placed on consumption goods in the future economy in Lancaster.

In particular, business research reports available to the city suggest that the skills which have been developed in connection with the watchmaking industry in Lancaster are susceptible of adaption to other precision instrument manufacture, such as are used in aircraft and automobiles. Other individual technical skills involved in the manufacture of certain automobile accessories should offer local opportunities. It is suggested, also, that office machine and equipment manufacture will probably expand after the war, particularly for new types of machines. Manufacture of precision parts for these machines appears to be another potential outlet for the technical skills available in Lancaster.

Pennsylvania has been in first rank in production of many aluminum products. The greatly increased volume of aluminum production and the many new uses of aluminum will offer opportunities for new fabrication plants. It has been suggested that the probable surplus capacity of steel fabricating plants in Lancaster might be converted to aluminum and magnesium fabrication.

Expansion of the existing baking industry in Lancaster, particularly in cakes and cookies, seems to offer excellent prospects. There is a relatively stable demand for these products, and even with the existing keen competition, there still seems to be opportunity for small producers of products of particular excellence or uniqueness.

It is suggested that Lancaster's industrial economy could capitalize on its agricultural background by entering more deeply into food processing fields. The prospects of almost universally home-frozen foods in the future opens the way for construction of lockers and parts, and there will undoubtedly always be a demand for bulk canned items such as corn, peas, tomatoes, peaches, pears, and soups.

The printing industry, already well represented in Lancaster, has caused development of a group of highly-skilled artisans. Further development in this field should offer excellent opportunities. The fabrication of plastics has already received a start in Lancaster and undoubtedly it will remain an excellent field in the future. The fabrication of plastics is a mechanical problem

involving presses which can be operated under very high pressures and temperatures. Much of the labor for this industry can be unskilled, but there must also be available sufficient technicians to design the molds. Skilled tool and die makers are also required to prepare the discs.

War restrictions on the production of refrigerators, washing machines, vacuum cleaners, radios, toasters, fans, and electric shavers, and consequent depletion of stocks, have caused a great demand to be supplied in the postwar period. Most of the production in this field is highly concentrated, but the manufacture of parts should offer considerable promise for Lancaster's "miscellaneous products" industry.

Due to the huge wartime production of industrial machinery and machine tools the prospects in the metals industry are questionable. Unless the war continues to the point of wearing out or making obsolete the large stock of industrial machinery there will probably not be a great demand for heavy metals in the near future. This industry occupies a prominent position in Lancaster. Adaptation or conversion of the heavy metals industries to the fabrication of aluminum and magnesium products, which no doubt will be in great demand in the postwar period, would seem a logical consideration.

A recent report for Lancaster by the Bureau of Business Research of the Pennsylvania State College suggests that "the greatest possibilities of industrial expansion would appear to be found in the creation of already known products such as refrigerators and other durable goods for low level incomes. If durable goods can be produced to sell at lower prices to the great mass of the population, the market for them will undoubtedly be greatly expanded. This means, of course, that these products must be simplified, stripped of all non-essential gadgets, and sturdily made to serve their purpose. In the intense competition that will prevail after the war the greatest prospects of success lie in the attempt to reduce costs of production and hence prices, in order to meet the large market that is undoubtedly to be found when low level incomes can be reached."

Population Characteristics

TREND TOWARD A STABLE POPULATION
- Population Trend in the City of Lancaster
- Population Trend in Pennsylvania
- Population Trend in Lancaster County

POPULATION PREDICTIONS
- Natural Population Increase
- Net Migration
- Population of Lancaster, 1944
- Population of the Urban Fringe, 1944
- Prediction

POPULATION COMPOSITION

POPULATION DISTRIBUTION
- Population and Growth of the City by Wards

Population Characteristics

TREND TOWARD A STABLE POPULATION

THE FACT THAT LANCASTER is approaching an era of stationary population will come as a shock to persons who are not aware of population trends in the nation and commonwealth. National, state, and local development have been based in the past upon a rapidly expanding population. In order that Lancaster may plan for the conservation and utilization of its resources in such a way as to make available progressively the highest standards of living for the people of the community, facts regarding the population trend are presented and discussed in this section of the Comprehensive Municipal Plan.

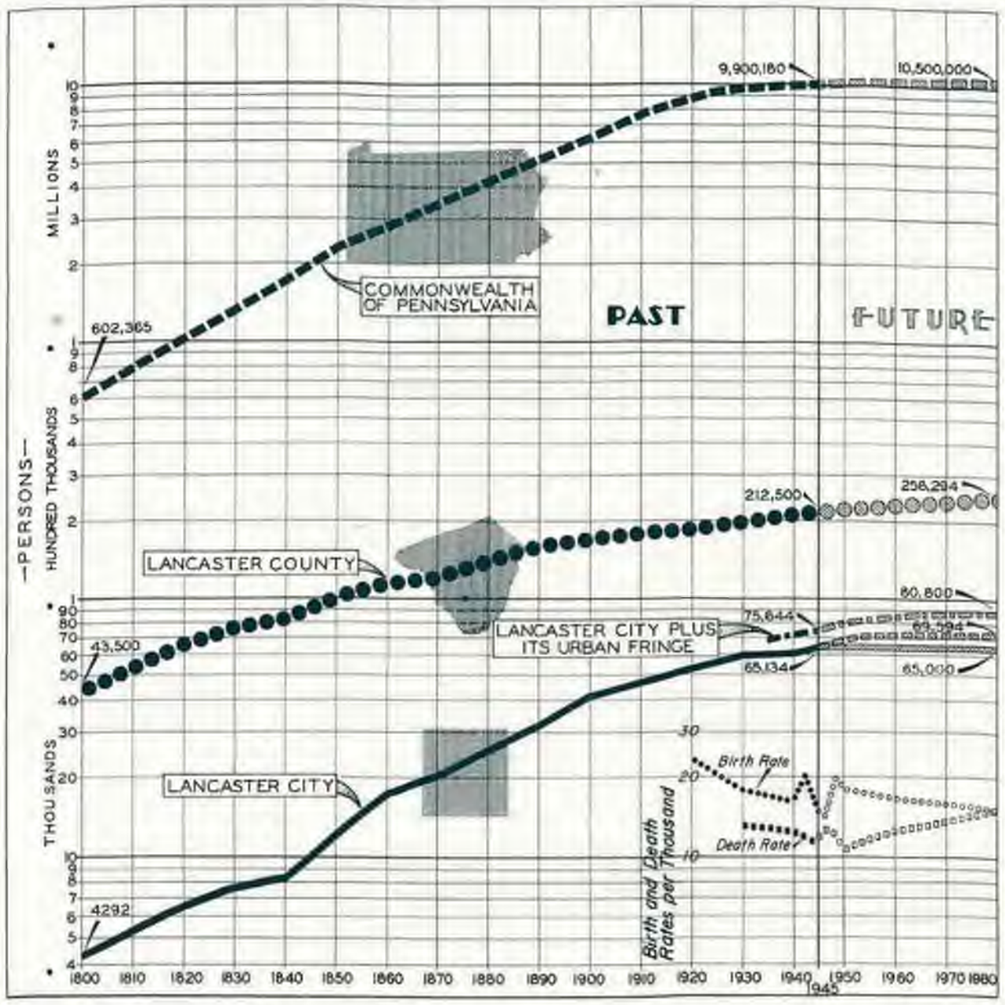
The slowing down of national population growth is due primarily to the reduction in the birth rate, which has been declining somewhat inconspicuously for nearly a century. The decline has been concealed until recently by a general reduction in death rates; by heavy immigration from abroad; and by the large proportion of relatively young people in the population, which has been conducive to a relatively large birth rate per thousand population.

Immigration now has been drastically reduced; and in recent years the decline in the birth rate has come to outweigh the other factors listed.

The prospect of a stationary population has great significance for government and business. At the government level transition to a stationary population will mean an ample supply of resources for a high level of living for all the people if those resources are conserved and used wisely and effectively. At the business level, the past source of large dividends through markets created by expanding population has passed. Further expansion of the market for our goods and services must be developed through increased consumer demand and broadened consumer income.

The Population of the City of Lancaster was 61,345 in 1940 according to the U. S. Bureau of the Census. Figure 8 shows graphically the 15-fold increase from the year 1800 to the present. It will be noticed that during the 40 years between 1800 and 1840 the population doubled, increasing at an average rate per decade of 18.4 per cent. During the 20 years between 1840 and 1860 the population doubled again, increasing at an average rate per decade of 44 per cent. The rate of growth during the 40 years from 1860 to 1900 was less than during the two previous decades, averaging 24 per cent per decade. During the first three decades of the twentieth century, the rate of growth was less again than during the four previous decades, and averaged 13 per cent per decade. The increase during the decade from 1930 to 1940 was the least in the history of the city, being only 2.3 per cent.

It is interesting to note that, although population increases have run in cycles, the rate of growth in each cycle during the past century has been decreasing.



POPULATION

PAST AND FUTURE—1800 TO 1980

LEGEND

Future Population Of LANCASTER CITY Plus Its URBAN FRINGE.

Future Population Of LANCASTER CITY If THE COMPREHENSIVE MUNICIPAL PLAN And ZONING ORDINANCE Are Not Applied.

Future Population Of LANCASTER CITY If THE COMPREHENSIVE MUNICIPAL PLAN And ZONING ORDINANCE Are Applied.

NOTE:

In 1980 The Average Density Of LANCASTER CITY Will Be 73 Persons Per Developed Residential Acre If The COMPREHENSIVE MUNICIPAL PLAN And ZONING ORDINANCE Are Not Applied, And 58 Persons Per Developed Residential Acre If The COMPREHENSIVE MUNICIPAL PLAN And ZONING ORDINANCE Are APPLIED.

Figure 8.

The boundaries of the City of Lancaster have remained unchanged since the city was established. The figures showing population increases are, therefore, the result of actual additions to the population by excess of births and in-migration over deaths and out-migration. In the past 25 years there has been a new factor affecting city population growth. That factor is the growth of subdivisions in the urban fringe, housing almost ten thousand people outside the two-mile-square city limits.

Population Trend in Pennsylvania. - The declining rate of population increase is not peculiar to Lancaster but was common over the New England, Middle Atlantic, and North Central States due to a generally declining birth rate, restricted immigration and unfavorable employment conditions in the areas during the period. In Pennsylvania the rate of population increase for the first three decades of the twentieth century declined from an average of 15.3 per cent to 2.8 per cent during the decade from 1930 to 1940, compared with the decline in the City of Lancaster from 13 per cent to 2.3 per cent.

Population Trend in Lancaster County. Growth in Lancaster County has been at a lesser rate than for either the city or the commonwealth, having averaged 17 per cent for the first four decades of the nineteenth century and 17.5 per cent during the next two decades. Except for the decade following the Civil War, the growth during the last four decades of the century was comparatively low, averaging only 8.5 per cent. During the first three decades of the twentieth century the growth in the county was only 7.4 per cent, compared with 13 per cent for the city and 15.3 per cent for the commonwealth. The rate of population growth in the county, however, during the depression decade was 8 per cent, which was three times as great an increase as in the city and the commonwealth.

POPULATION PREDICTIONS

Population growth is profoundly affected by the economic level. The balance between the decline in birth rate which accompanies rising living standards and migration toward areas of higher living standards makes analysis extremely difficult except on a broad scale. It is necessary, however, that the future population of the city be predicted to serve as a basis to determine the facilities and services which will be necessary and desirable for the people of the community.

The National Resources Committee has estimated that the population of the United States will reach a peak of approximately 160 million about 1975, and that thereafter the population will remain stationary or perhaps decrease.

The Pennsylvania State Planning Board has prepared tables showing a population by 1950 of approximately 10,500,000 without out-migration, and 10,200,000 in 1950 if out-migration occurs during the next five years at the same rate as between 1930 and 1940. Furthermore, the State Planning Board contemplates a stabilized population between 1960 and 1970 if the present economic balance is maintained.

The rate of growth of Lancaster County has shown a gradual leveling off during the present century, although the average rate has been 7.6 per cent. Because of the excellent agricultural resources and the favorable balance be-

tween agriculture and industry, the prospects are good that the population of the county will continue to grow at a rate faster than that of the state as a whole.

The analysis of the future growth of population for the City of Lancaster is based upon two major factors, namely—natural population increases by an excess of births over deaths; and net migration, which is the difference between in-migration and out-migration.

The Natural Population Increase in Lancaster has been computed from birth and death records and census population data as shown in Figure 8. The birth rate declined from 24 per thousand population in 1920 to a low of 15 per thousand in the middle of the depression decade. During the following seven years the rate increased again to 20 per thousand, but at the present time a new low is being reached, due to wartime conditions. It is expected that if the war ends early in 1946 and servicemen return to civilian life, the birth rate will rise temporarily to a rate of approximately 20 births per thousand population, and that thereafter it will gradually decrease to a rate of 15 births per thousand population in 1980.

A study of the death rate is also significant. The average death rate in the City of Lancaster between 1920 and 1944 has been 11.9 deaths per thousand persons. The trend has been downward, with a high of 13.1 in 1920 and a low of 10.9 in 1943.

The greater decrease in birth rate than in death rate is resulting in an older population, which will in turn result in an increasing death rate. It is to be expected that an increasing death rate during the war years will be followed by a decreasing death rate until about 1950. During the ensuing thirty years an increasingly higher death rate due to the older population will overbalance the decline caused by increasing life expectancy and will result in an increase in the death rate, leveling off about 1980.

The difference between the average annual birth rate of 17.1 and the average annual death rate of 11.9 represents the average annual natural population increase since 1920. As indicated on the graph, we are in a period when the birth rate and the death rate closely approach each other. The rates will soon begin to diverge and will reach a maximum divergence about 1948. Thereafter the decreasing birth rate and the increasing death rate will continue until the rates converge about 1980. This forecast is in conformity with more comprehensive studies which have been made by such authorities as Warren S. Thompson, author of the book "Population Problems," and by the National Resources Committee as presented in "Problems of a Changing Population."

Net Migration. In addition to the factor of birth and death rates, migration is important in the trend of population. The significance of migration in the population trend of Lancaster is shown as follows:

	1920-30	*1930-40*	*1940–44*
Total actual increase	6,799	1,396	3,789
Increase from births	12,006	10,095	4,677
Decrease from deaths	6,932	7,357	2,859
Natural increase by excess of births over deaths	5,074	2,738	1,818
Increase by in-migration	1,725		1,971
Decrease by out-migration		1,342	

It will be seen that during the decade from 1920 to 1930 there was an average annual net in-migration of 173 persons; that during the depression decade there was an average annual net out-migration of 134 persons; but that during the war years since 1940 there has been an average annual net in-migration of 493 persons. These figures are too inconsistent to indicate a trend, but they add confirmation to the fact cited previously that population growth in a city is profoundly affected by the economic level. Not only is the birth rate higher during years of prosperity than during years of depression, but during "good times" there is a migration to the city, whereas during "bad times" there is a movement from the city to the country. The sharp increase in the rate of population growth in the City of Lancaster during these war years is caused by the need for an unprecedented number of workmen in the war industries.

Population of Lancaster, 1944. In order to determine the city population at the time the Comprehensive Municipal Plan was started, the following additional data were secured:

	Date	*Family Units*	*Persons Per Unit*	*Population*
City population (U. S. Census)	April, 1940	16,955	3.62	61,345
Additional units occupied	September, 1944	835	3.62	3,023
Rooming house-hotel units (Rent Control Board)	September, 1944	2,099	1.0	2,099
				66,467
Less—Roomers counted (U. S. Census)	April, 1940	——	—	1,333
Total city population	September, 1944			65,134

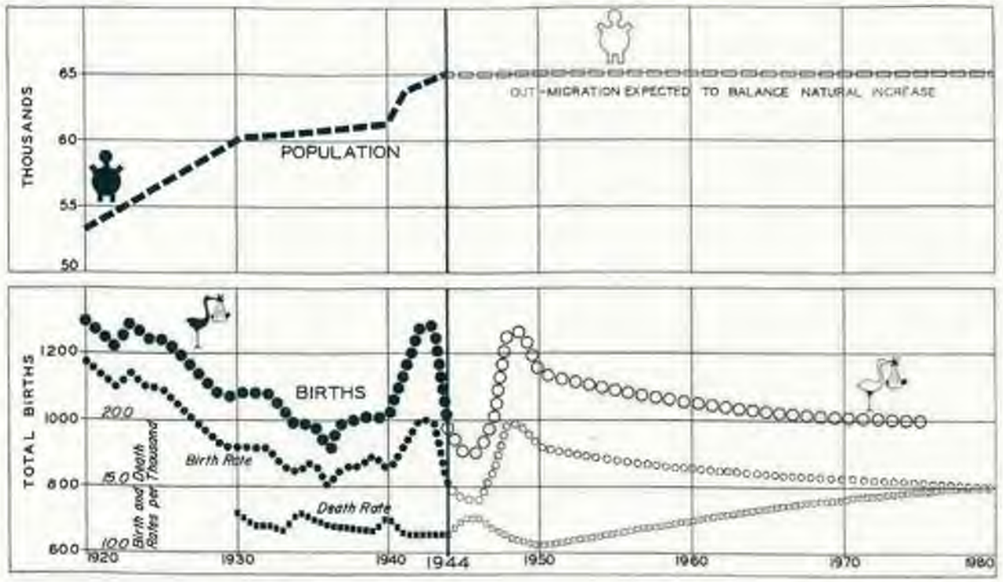
The average number of persons per family unit in the city in 1940 was found to be 3.62 by dividing the total population of 61,345 by the number of occupied dwelling units, 16,955. The same constant was found from the 1936 WPA Real Property Survey data, which listed the total number of dwelling units in the metropolitan area as 19,315 and the total population as 70,046.

Population of the urban fringe, 1944. In order to determine the population in the urban fringe area at the time the Comprehensive Municipal Plan was started, the number of family units in the portion of each township within the urban fringe was counted and multiplied by the constant of 3.62 persons per dwelling unit with the following result:

Urban fringe population of Manheim Township	4,851
Urban fringe population of Lancaster Township	4,707
Urban fringe population of East Lampeter Township	287
Urban fringe population of West Lampeter Township	665
Total urban fringe population	10,510

The combined population, therefore, of the city and the urban fringe area in September, 1944, was estimated to be 75,644 persons.

Predictions. The estimate of population for the future as shown on Figure 9 is for a potential population in 1980 of almost 70,000 within the present city limits. The estimate was reached by forecasting the natural increase by excess of births over deaths, as shown on Figure 9, and deducting the probable



ACTUAL AND EXPECTED POPULATION, TOTAL BIRTHS, AND BIRTH AND DEATH RATES FOR THE LANCASTER CITY AREA

Figure 9.

out-migration for each year until 1980. An average annual out-migration constant of 150 persons was reached by consideration of the average out-migration of 134 persons per year from 1930 to 1940; of the restricted living space within the city limits; the constantly improving means of private and mass transportation from work in the city to homes in the suburbs; and the improved financing arrangements for individual homes, most of which will be built in the suburbs due to lack of space in the city. The plotted line for the estimate of population in Lancaster represents a trend similar to that of Lancaster County and the Commonwealth of Pennsylvania.

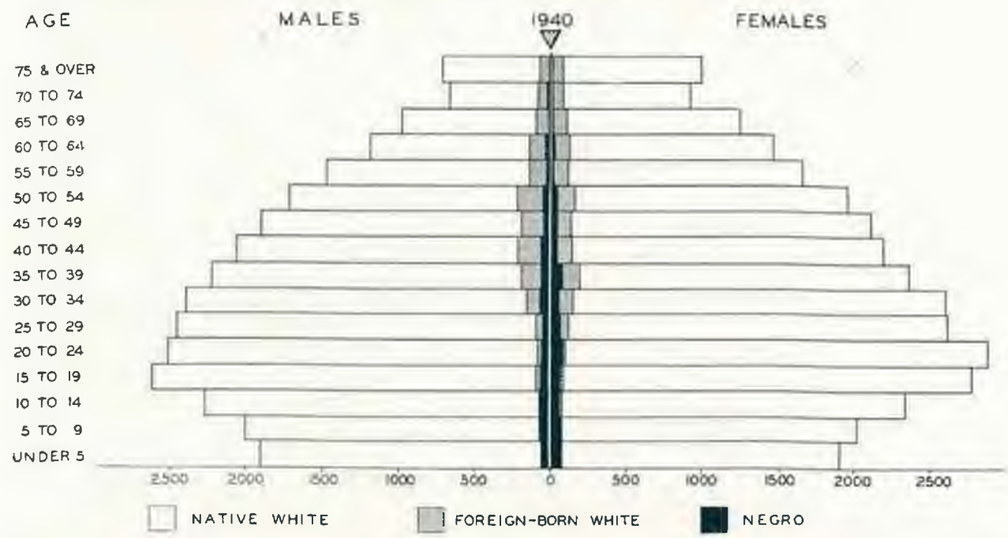
Studies of existing land uses and densities in Lancaster have figured importantly in estimating the ultimate population of the city. Over thirty per cent—783 acres of the total area of the city is in residential use. By comparison, in a study of 16 cities made some years ago, it was found that the land used for residential purposes in those cities amounted to an average of less than 24 per cent of the total area of the cities.

In addition to the relatively large percentage of land in residential use in Lancaster, the average number of persons per developed residential acre

at present is almost 73 persons. The average of the 16 cities was only 34.4 persons per developed residential acre.

Analysis of the potential population of the city and of the restricted space developed or feasible for residential development, and consideration of excessive population density has led to the conclusion that Lancaster has now as many people as the present four-square-mile area can properly provide with desirable homes, recreational areas, transportation facilities, and other necessary conditions of comfortable, satisfactory living. It is proposed, therefore, that in the program for future development within the present boundaries of the city, major emphasis be placed upon redistribution of the present sixty-five thousand people. It is proposed, also, that 194 of the 514 vacant acres be developed for residential use in order to permit the necessary and desirable reduction of residential density. The residential area in Lancaster would ultimately be 977 acres, with an average density of 58.33 persons per residential acre. Detailed analysis of existing land uses, density and redistribution of population, and housing conditions and needs in Lancaster are presented in subsequent sections of this Comprehensive Municipal Plan.

Lancaster has come of age and is reaching maturity. Middle age may be for Lancaster the most productive period of its existence. The city, however, must face the necessity of planning for a mature community. Areas of urban blight will not be absorbed in the future by surging growth and expansion, for population growth in Lancaster, as in the commonwealth and nation, has declined to a relatively insignificant figure.



LANCASTER POPULATION
COMPOSITION BY AGE, RACE, AND SEX

Figure 10.

POPULATION COMPOSITION

The composition of the Lancaster population is shown by age, race, and sex in the graph indicated as Figure 10. The small proportion of negroes and foreign-born whites in the population is clearly indicated. Negroes constitute only about two and one-half per cent of the city population. It is interesting to observe that almost all of the foreign-born population is now thirty or more years old, and due to the closing of in-migration some years ago this portion of the population will continue to grow older and smaller.

POPULATION DISTRIBUTION

A record of the cycles of population increase in Lancaster would show a series of "explosions." Prior to the Civil War the population was concentrated in the in-town area enclosed by James, Shippen, Howard, Andrew, Dorwart, and Charlotte streets. In the next twenty years the population filled in that area and "exploded" into adjacent areas. Before the end of the nineteenth century the population was distributed generally within the area bounded by College, Liberty, Plum, Lehigh, Broad, Dauphin, Fairview, and Pearl streets. During the early years of the twentieth century previously developed areas were further filled in.

Following World War I the most remote portions of the city were developed, such as the corner west of Franklin and Marshall College, the Second to Fourth Street section at West End, and the Ann Street section in the Sixth Ward. Due to lack of available room in the city, and due to new opportunities by modern transportation, the population "exploded" to the greener pastures of the suburbs. Subdivisions which developed included Hamilton Park, Woodlawn, Bausman, School Lane Hills, Glen-Moore, Rossmere, and Grand View Heights. The plan showing population distribution (Figure 11, see Map Section) was prepared by multiplying the actual number of family units in each block by the constant of 3.62 persons per family dwelling unit. The plan is important to show the population pattern throughout the city and the urban fringe and the centers of congested population.

The Population and Growth of the City by Wards since 1890 is summarized below. The "explosion" of the population as previously described is reflected in these population figures. It is important to notice that during the war years, 1940 to 1944, the greatest increases of population have been in the older, more congested parts of the city.

	1890	*1900*	*1910*	*1920*	*1930*	*1940*	*1944*	*Per Cent Change 1940–44*
Ward 1	1,912	1,920	1,675	1,659	1,442	1,692	2,075	22.8
Ward 2	3,126	3,673	3,663	3,874	4,081	4,016	4,575	13.9
Ward 3	2,442	2,433	2,379	2,471	2,134	2,638	3,093	17.2
Ward 4	3,207	3,382	3,412	3,527	3,597	3,750	3,773	0.6
Ward 5	3,169	3,917	4,269	4,371	4,375	4,434	5,230	18.0
Ward 6	4,768	6,526	7,832	10,008	12,558	12,986	14,153	9.0
Ward 7	4,022	6,610	8,736	9,541	11,042	11,416	10,888	—4.8
Ward 8	5,231	7,553	9,282	10,905	12,991	12,867	12,820	—0.4
Ward 9	4,134	5,445	5,979	6,795	7,729	7,546	8,414	11.5
Total	32,011	41,459	47,227	53,150	55,949	61,345	65,134	6.2

For the past 15 years this country has been passing through "abnormal" periods. The depression decade caused diversions from normal trends. There were definite upswings in the population of the downtown low rent areas as is evident in the figures for Wards 1 and 3. It will be noticed that population in these wards had been declining rather rapidly during the twenties and thus reversed their trends in the thirties. While these wards gained population during the thirties, so also did the undeveloped areas of Wards 6 and 7, while the middle and better class areas of Wards 2, 8, and 9 lost population. Ward 5 remained stable in the same period.

These trends reversed again in the years between 1940 and 1944—another "abnormal" period. Wards 1, 3, and 4 continued to gain due to the demand for practically all available houses, apartments, and rooms. As these Wards contain large numbers of rooming houses, high gains in population in these old and largely commercial districts were quite possible. Wards 2 and 5 made sudden gains in population for the same reason, although the 2nd Ward had been losing in the thirties. The biggest gains in population were in Wards 9 and 6. The 9th Ward reversed very sharply its trend of the 1930's. These two Wards lie close to the heavy industrial areas and with the wartime employment gains and transportation difficulties, it was natural that new workers would live close to their jobs. Wards 7 and 8 lost population in this period, the 7th Ward sharply reversing its previous trends. It is noticeable that these two Wards are on the opposite side of the city from the war industry centers, and use of mass transportation involves travel through the downtown section and transfers.

As a result of these periodic abnormalities the population shifts within the city are not particularly indicative of future trends. However, it is expected that the zone of transition around the downtown commercial area will lose population more rapidly than other parts of the city after the war. The more remote portions of Wards 7 and 8 will gain in population because there is enough undeveloped land within their confines to absorb the population which is expected to shift from the more congested central areas when redevelopment and zoning measures gain effectiveness.

Blighted areas of the city have always been the first home of the inmigrant—the foreign born, the Negro, and the rural surplus. It is important to realize that history is repeating itself in Lancaster at this time. The present source of repopulation of the blighted areas is not foreign-born immigrants, for that source is practically eliminated. It is not Negroes, for there has been no significant change in this portion of the population. The source is the rural surplus and people from other communities, who are in the city for work in the war plants. Many of these temporary residents of the city will move from the city at the end of the war and the problem of the blighted areas will then become acute.

PART III

EXISTING LAND USE

HOUSING

LANCASTER CITY SCHOOLS

LANCASTER PARKS

STREETS, HIGHWAYS, AND PARKING

MASS TRANSPORTATION

AIRPORT SYSTEM

STREET LIGHTING

UTILITIES

CIVIC CENTER

ULTIMATE LAND USE

Existing Land Use

DEFINITIONS

PERCENTAGE OF TOTAL CITY LAND IN VARIOUS USES

ACRES OF DEVELOPED LAND PER THOUSAND PERSONS

POPULATION DENSITY

REDISTRIBUTION OF POPULATION AND LAND

Comparisons in this chapter to land uses in 16 selected cities refer to "Urban Land Uses," Bartholomew, Harvard City Planning Studies, 1932.

Existing Land Use

CITIES AND CITY SERVICES are for people to use for their benefit. It is necessary, therefore, that the existing physical pattern of the city, as well as the trend and distribution of the population, should be understood and used as basic data in the preparation of a long-range, comprehensive municipal plan. The population study furnishes the scale for design of the community plan and the separate units thereof. The land use study defines the areas devoted to different community uses. The approaching stabilization of population affords the opportunity and in fact requires, that we plan for definite densities and for definite land uses.

The base map for the analysis of existing land use is the Existing Land Use Map, Figure 12. Preparation of this map involved classification and delineation of each parcel of land in the city. The four major classifications of residential, commercial, industrial, and public and semipublic uses divide into various subclassifications as shown on the map. These various use classifications are defined as follows:

DEFINITIONS

Single Family Use: used as a dwelling for a single family, regardless of number of stories, normally occupied by a household with provisions for sleeping and cooking.

Multiple Family Use: used as two or more dwellings for two or more families, regardless of number of stories. Includes apartments and rooming houses.

Mixed Use: used as one or more dwellings, plus commercial or industrial use.

Light Commercial: used as a retail store or a retail service establishment, except that all stores in the downtown or central part of the city are considered as heavy commercial.

Commercial Parking: used as a parking area or garage for five or more autos, trucks, or other vehicles.

Heavy Commercial: used as a wholesale store or service establishment, except that all stores in the downtown or central part of the city are considered heavy commercial. Includes downtown hotels, warehouses, junk yards, public garages, gas stations, lumber and coal yards.

Light Industrial: used as the place of manufacture or processing of a product. Not objectionable as to noise, smoke, or odor.

Heavy Industrial: used as the place of manufacture or processing of a product. Objectionable as to noise, smoke, or odor.

Schools: used as a public or private school.

Parks, Playgrounds, and Reservations: used as a playlot, playground, playfield, neighborhood park, civic center, scenic park, picnic area, outing area, or as an undeveloped piece of land reserved and protected for recreational or scenic use.

Cemeteries: used as a place of burial or above ground repository.

Miscellaneous Public and Semipublic Areas: used as a church, hospital, police station, fire station, municipal building, library, courthouse, postoffice, institution, or other use of public and semipublic nature.

Railroad Property and Terminals: used as a railroad right-of-way or as a passenger or freight terminal.

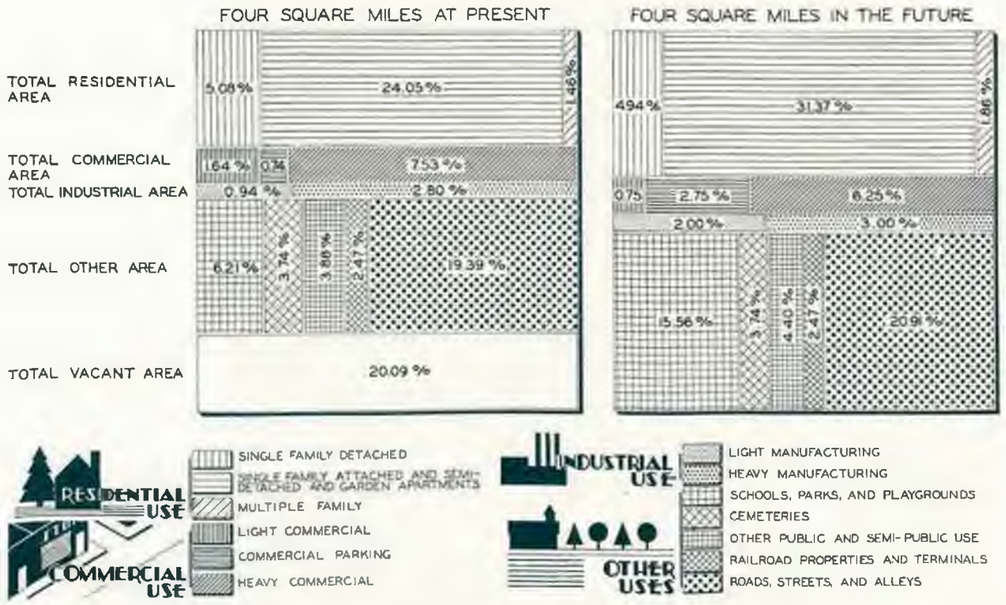
Roads, Streets, and Alleys: used as a highway, road, street, land, or alley for vehicular travel.

The actual area of each use listed was scaled in order to determine the total number of acres of each and the percentage of total city land in various uses. From these data other information regarding land use in Lancaster has been derived, such as the percentage of developed city land in various uses; the developed acres per thousand persons of total population; and the percentage of the residential area devoted to different types of residential structures.

The types of residential structures in Lancaster are classified and defined as follows:

Detached: a single structure regardless of number of stories, with open space on all sides, not attached to another structure except for incidental garages or sheds.

Semi-Detached: a structure which is part of a pair of structures built as



LAND USE IN LANCASTER

SHOWN IN PERCENT OF TOTAL CITY AREA

Figure 13.

a unit or attached by a common wall, regardless of number of stories, such as in "duplex" or "twin houses."

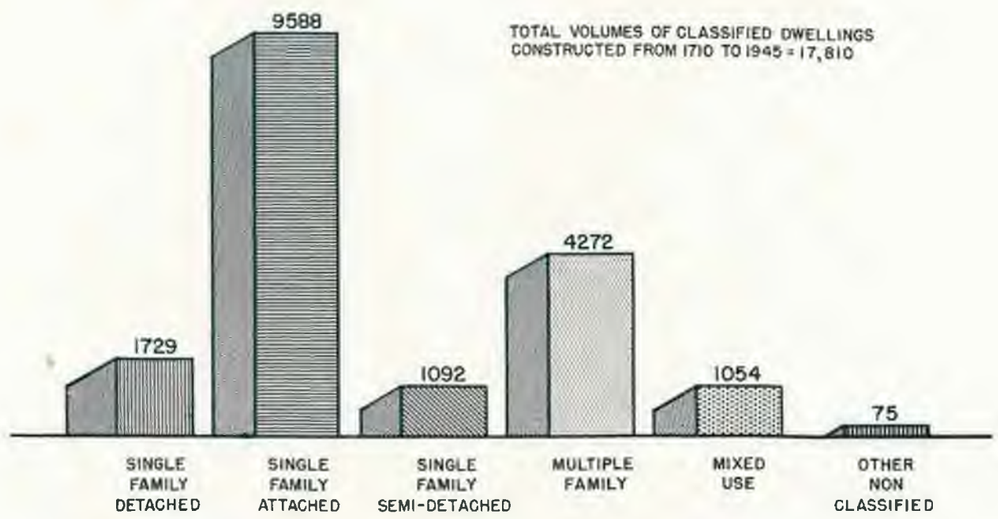
Attached: a structure which is a part of three or more structures attached by common walls, regardless of number of stories, as in "row houses." The end structures of such a "row" are considered to be in this category.

PERCENTAGE OF TOTAL CITY LAND IN VARIOUS USES

The percentages of total city land in various uses are shown in Figure 13. They tell an interesting story regarding the different uses of land which have developed in the city.

It is interesting that single family detached residences occupy only 5.08 per cent of the total city area, and that single family attached and semi-detached residences—row and duplex houses—occupy 24.05 per cent, making a 1 to 4.7 ratio.

Studies of residential types in other selected cities show a ratio of 17 per cent single family detached residences to one per cent single family attached and semi-detached. It is evident, therefore, that the character of residential use within the city limits of Lancaster is definitely different from that of most cities. The difference is due to the facts that almost all of the single family detached residences are outside the present city limits, and are, therefore, not a part of this analysis; and that the dominant residential type in Lancaster is the row house (see Figure 14, comparative volumes of classified dwellings).



COMPARATIVE VOLUMES OF CLASSIFIED DWELLINGS

Figure 14.

The percentage of total city area in residential use is high, as shown in the following comparison:

Type of Use	*Lancaster*	*Average of 16 Selected Cities*
Single family detached	5.08	21.8
Single family attached and semi-detached	24.05	1.29
Multiple family	1.46	0.69
Total residential	30.59	23.78

The high ratio of residential land in the city and the dominance of row and duplex houses result in the high density of population in the city.

Lancaster has developed a relatively large proportion (9.91 per cent) of its total city area for commercial uses. The growth has been unrestricted and does not represent area merely designated for commercial use, for the city does not have, and never had, a zoning ordinance. Only land in use for commercial purposes is so listed.

The commercial acreage is twice as much per person as is used for the same purpose in five cities of comparable size, which indicates a relatively large retail and wholesale trade. One commercial use which is peculiar to Lancaster is tobacco warehouses, which constitute an important portion of the heavy commercial use.

The amount of space devoted to commercial parking is small in spite of the numerous garage groups in residential areas in which stalls are rented to individuals. These garage groups are a product of the dense residential development of Lancaster where space is not available on individual lots for private garages.

The industries of Lancaster use a normal amount of space for light and heavy industry within the city limits so far as the percentage of city land is concerned. In acres of land used for industry per capita, however, the city ranks low with only one and one quarter acres per thousand persons in this use. Many of the larger industries are located outside the city limits and are not included in this land use analysis.

Other existing land uses in Lancaster include schools, parks, playgrounds, and reservations; cemeteries; miscellaneous public and semipublic areas; railroad property and terminals; roads, streets, and alleys—which all together account for 35.67 per cent of the total city land.

The 159 acres of school grounds, parks, playgrounds, and reservations in Lancaster occupy 6.21 per cent of the total city area. The desirable ratio of park and playground space to population and city area has frequently been stated as 10 per cent of the total city area and one acre for each 100 persons. The 159 acres amount to one acre of park and recreational area for each 409 persons. While this ratio appears to be very inadequate, the fact is that several excellent public park areas lie immediately outside the city limits and make significant contributions toward meeting country park needs of the people of Lancaster. Several specific needs are not met within Lancaster, however, such as adequate playgrounds and playfields, and preservation for use for public recreation of the attractive Conestoga Valley within and near the city limits. Detailed consideration is given to the park requirement of Lancaster in a later section of this report.

Cemeteries occupy an unusually large portion of the total city area,

amounting to almost 96 acres or three and three-fourth per cent of the city area. No expansion of cemetery areas within the city limits is proposed in this Comprehensive Municipal Plan, due to the need for all available living and working space for the people of the city.

Railroad property and terminals occupy only a small portion of the total city area, due to the removal a few years ago of the main line railroad service to the edge of the city. Only 63.21 acres, representing two and one-half per cent of the total city area, are devoted to the use of the railroads. No increase is contemplated.

Roads, streets, and alleys, next to residential use, occupy the most city land in Lancaster. Almost five hundred acres, or 19.39 per cent of the total city area, are dedicated as traffic ways. Although the total area in streets is large, only 7.6 acres per thousand persons are provided, whereas twenty to thirty acres per thousand persons is not uncommon. The low ratio in Lancaster emphasizes the existing density in the city and illustrates a cause of the street congestion.

Other public and semi-public uses includes sites used by churches, hospitals, institutions, and municipal and federal buildings. These facilities use less than a hundred acres of the total city land and constitute only half as great a percentage of city area as is normal. The small space devoted to public and semi-public buildings is evident in the lack of "setting" of all municipal buildings and of the churches, hospitals, and other institutional buildings.

The various uses described above total 2,045.66 acres of land in the city, leaving 514.34 acres, or twenty per cent, of the city land vacant. While this percentage of vacant land may seem wasteful and uneconomical, it is actually comparatively small; cities of this size often contain 40 or 45 per cent vacant land. In Lancaster only eight acres per thousand persons are vacant, whereas 16 selected cities of this population class have ten times as much vacant area per thousand persons. Here, again, is an indication of the density of Lancaster.

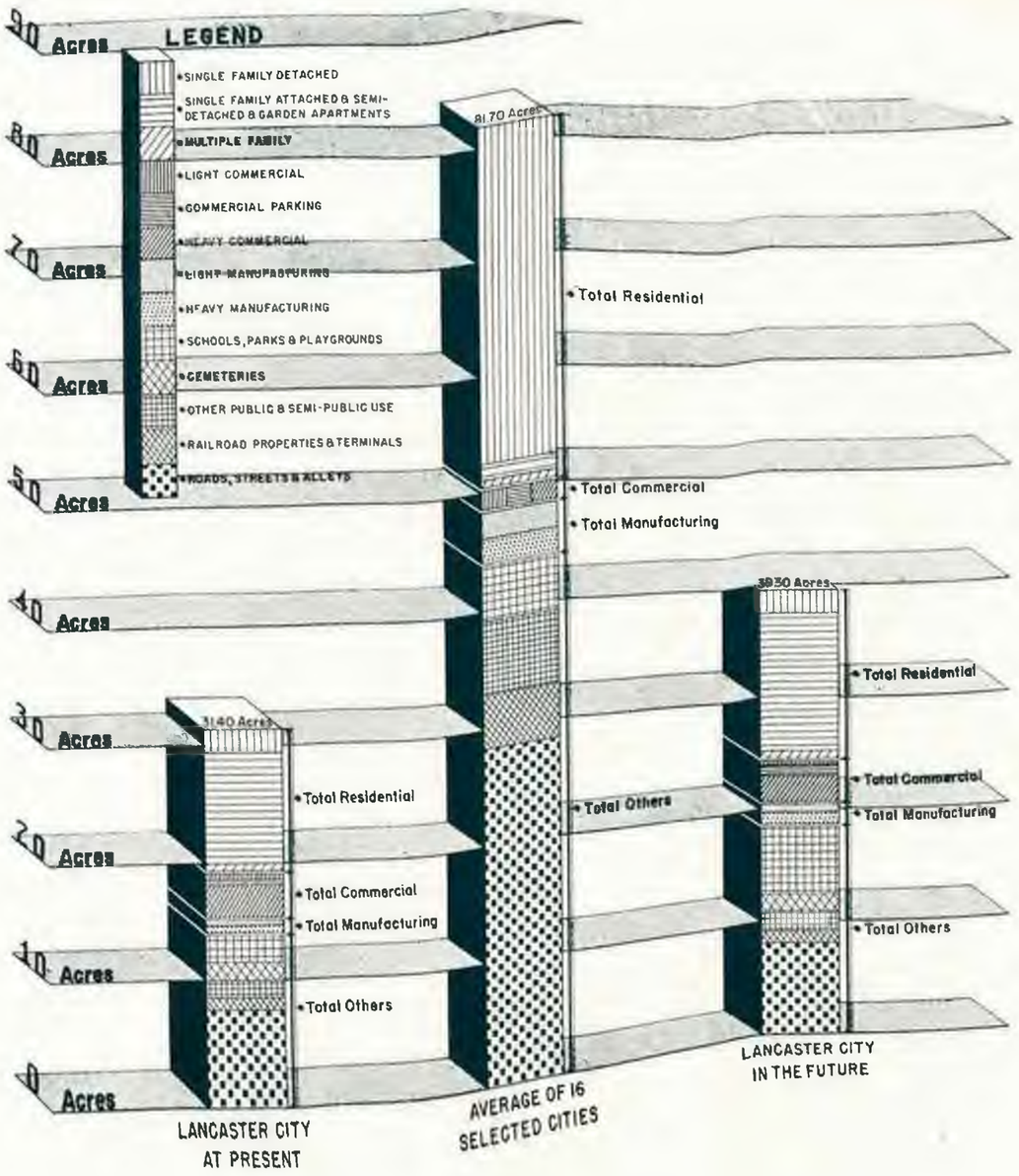
ACRES OF DEVELOPED LAND PER THOUSAND PERSONS

The compact character of Lancaster is illustrated in Figure 15, acres of developed land per thousand persons of total population. Because the ratio is developed on the basis of a unit of population, the actual size of city makes no direct difference in the ratio.

It is obvious that there are vast differences in the ratios of areas of use in Lancaster to the 16 selected cities. Total areas devoted to residential use per thousand persons in those cities amount to 2½ times that of Lancaster. The ratio per thousand persons of total commercial area in Lancaster at present to the 16 cities is 2 to 1; the industrial ratio is 1 to 3; the school, park, and playground ratio is 1 to 2; the public and semi-public use ratio is 1 to 4; the railroad property ratio is 1 to 4½; and the ratio of acres of streets is 1 to 4.

In summary, the number of developed acres per thousand persons in the 16 cities is over 2½ times the number of acres per thousand persons in Lancaster.

It is in the portions of Lancaster devoted to the three main classes of residential use that the most outstanding land use characteristic is evident. Almost 15 times as many acres per thousand persons are developed for single



·ACRES OF DEVELOPED LAND PER·
·THOUSAND PERSONS OF·

family detached residences in the 16 selected cities as in Lancaster; while almost nine times as many acres are developed in Lancaster for single family attached and semi-attached residences as in the 16 cities.

POPULATION DENSITY

The density of population in Lancaster was computed as part of the population study. Densities were checked, however, as part of the study of existing land use by a survey made of 16 selected city blocks. Four blocks—one in each quadrant of the city were selected from apparent low-density areas, four from apparent medium-density areas, four from apparent high-density areas, and four from apparent mixed-use areas.

Information was secured by enumerators on prepared questionnaires for each street number in each selected block. Data were secured regarding the type of structure—whether single house detached, duplex, row or apartment; regarding the use—whether living quarters, commercial, industrial, mixed use or other; and regarding the population—the number of dwellings, number of families, number of roomers, and total number of persons. The area of use for each dwelling in each of the 16 selected blocks was calculated from the Insurance Atlas in order to determine the acres of single family detached, single family attached and semi-detached, and multiple family use. The spot-check density and housing survey covered approximately five and one-half per cent of the population of the city.

From the spot-check survey, it was learned that the average number of persons per dwelling in each of the three main classes of residential use in Lancaster is—

3.66 persons in single family detached dwellings;
3.44 persons in single family attached and semi-detached dwellings;
1.98 persons in multiple family dwellings.

From these figures, the average number of persons per developed residential area was computed (see Figure 16). Comparison of these data for Lancaster with data from other selected cities shows no significant variation within the residential types. An important variation occurs, however, in the total residential averages. Due to the dominance of single family attached and semi-detached residential use, with 615.56 acres having an average density of 78.29 persons per acre; and the relatively small acreage devoted to single family detached residential use, with only 130.11 acres having an average density of only 31.09 persons per acre, the total average residential density per acre in Lancaster is over twice as high in the 16 selected cities.

REDISTRIBUTION OF POPULATION AND LAND

Analysis of the existing population density in Lancaster and consideration of methods for improving the living conditions has led to two fundamental conclusions. The first conclusion is that population density is too high in the single family attached and semi-detached residential areas of Lancaster, which comprise 78.62 per cent of the total residential area of the city; and in the

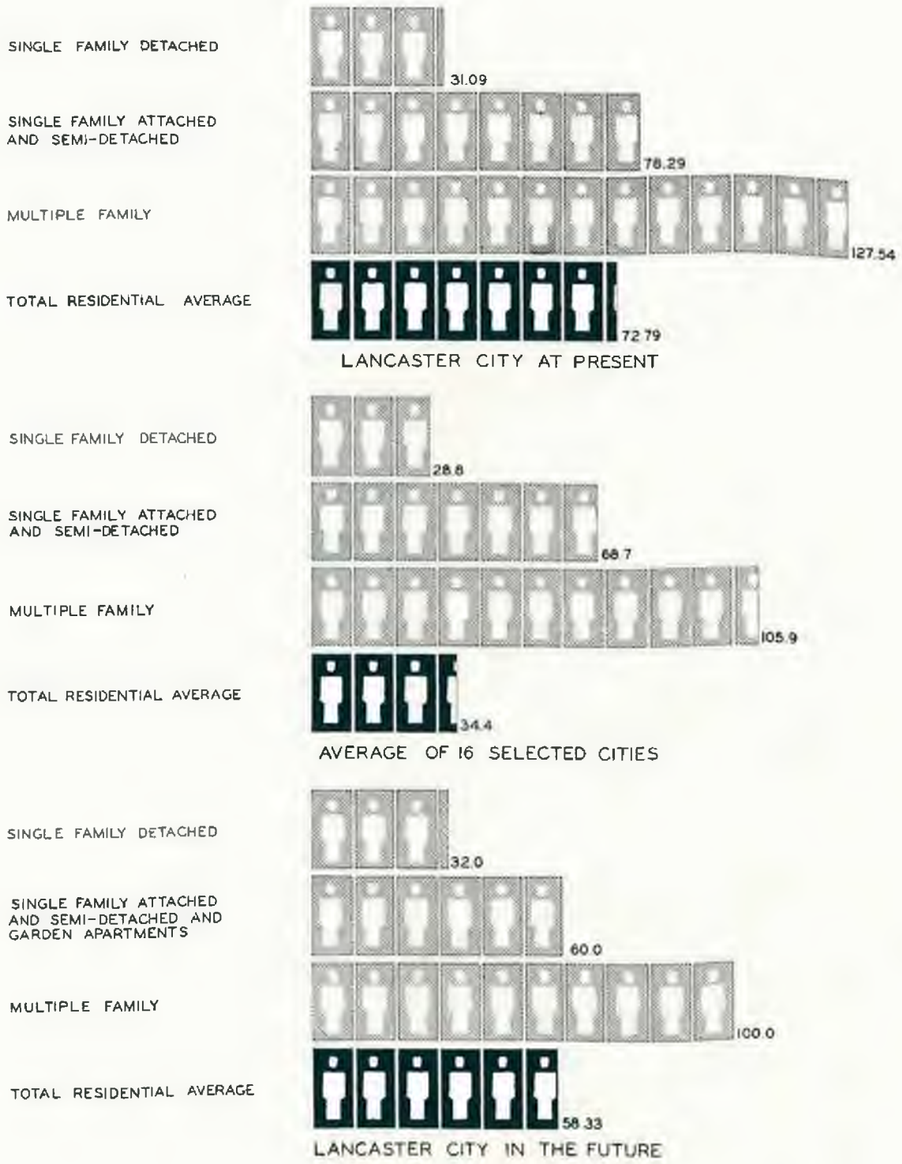


Figure 16.

commodations is one of redistribution of the population to secure more desirable densities throughout the city. Comparison of densities in Lancaster with those of other cities of similar size and with densities of planned cities confirms the conclusions that the present densities are too high and that the population should be redistributed.

Further analysis of present density, present and estimated population, and present and potential residential and public areas has shown that desirable residential space can be provided only for a population of about sixty-five thousand persons within the present city limits. Maximum densities of 32 persons per acre are recommended in single family detached areas, 60 persons per acre in single family attached and semi-detached areas, and 100 persons per acre in multiple family residential areas.

It is proposed, therefore, that the present ratio of percentage of population in the four types of residential use be retained for the future as follows:

Residential Type	*Lancaster Present and Future per cent of residential area*
Single family detached	6.21
Single family attached and semi-detached	73.99
Multiple family	7.31
Mixed use	12.49

Retention of the same percentage in the dominant single family attached and semi-detached residential type will preserve a characteristic Lancaster way of living. It is necessary, however, to reduce the number of people who live on the average acre by redistribution of the population.

REDISTRIBUTION OF LAND USE

It naturally follows, therefore, that additional residential area must be provided and developed in the city. The acreage requirements are as follows:

Residential area classification	*Persons per Acre*		*Area in Acres*			*Number*
	Present	*Future*	*Present*	*Future*	*Change*	*of Persons*
Single family detached	31.09	32.00	130.0	126.4	—3.70	4,025
Single family attached and semi-detached	78.29	60.00	615.56	803.2	187.64	48,192
Multiple family	127.54	100.00	37.33	47.61	10.28	4,761
Mixed use	—	—	—	—	—	8,156
Total			782.89	977.21	194.22	65,134

The proposed increase in residential area is 194.22 acres, and the total area proposed for residential use is 977.21 acres. The additional 194.22 acres are available as part of the 514.34 acres now vacant in the southeastern and southwestern sections of the city. The 320.12 acre residue of vacant land, after deduction for new residential areas, is to be distributed among other community uses as described in the following paragraphs.

Roads, streets, and alleys at present include 496.35 acres. Due to the proposed development of 194.22 acres of new residential areas, additional

streets amounting to 38.84 acres will be necessary. The residue of vacant land after deducting for new streets will be 281.28 acres.

The commercial areas in the city are extremely dispersed. The light commercial establishments need to be consolidated to offer better neighborhood services and to encourage clean-up of residential areas. One product of such consolidation would be a reduction of the area devoted to light commercial use. The present total of 41.96 acres is proposed for reduction to 19.20 acres. The residue of vacant area would be increased 22.76 acres thereby, to 304.04 acres.

Considerable economy of space in the city could also be achieved by consolidation of presently dispersed heavy commercial establishments. Consolidation is illustrated on the Zoning Map and on the Ultimate Land Use Plan. The present area of 192.80 acres is suggested for reduction to 160 acres, resulting in a decrease of 32.8 acres of heavy commercial land use. The 304.04 acre residue of vacant area, therefore, would be increased by 22.76 acres to a total of 336.84 acres.

Additional commercial parking area is needed in Lancaster. On a basis of a minimum of two acres of parking area for each acre of light commercial area, and a minimum of one acre of parking for each acre of heavy commercial area, Lancaster will need 108.8 acres of parking area. Present parking facilities provide only 18.91 acres. Due to the very limited areas available for parking a total of only 70.4 acres of commercial parking is being proposed, representing an increase of 51.49 acres. The 336.84 acre residue of vacant land will be decreased thereby to 285.35 acres.

It should be noted that the decrease in total commercial area is only 4.07 acres, almost all of the reduction in light and heavy commercial areas having been allotted to additional commercial parking areas.

Light industry is well developed in Lancaster and in the Urban Fringe. It is proposed, however, to provide for a small increase of light industrial area within the city—from 0.94 per cent of the total city area to 2.00 per cent in order to encourage the establishment of new light industries and to centralize light industrial areas adjacent to centers of population, as shown on Figure 91. (See Map Section.) The area devoted to light industrial uses in Lancaster is much less than in other selected cities. There are at present 24.18 acres devoted to light industry. It is proposed to increase the total to 51.20 acres—an increase of 27.02 acres. The 285.35 acre residue of vacant land will be decreased to 258.33 acres, a reduction of 27.02 acres.

Heavy industry, also, is well developed as a land use in Lancaster and in the Urban Fringe. It is considered advisable, however, to provide for a slight increase within the city from 2.8 per cent to 3.0 per cent, which will amount to 5.12 acres. This small area will allow for desirable expansion of existing heavy industry or for establishment of a small amount of new industry. The 258.33 acre residue of vacant land will, thereby, decrease to 253.21 acres.

No change in acreage for railroads and terminals, nor for cemeteries is contemplated. A small increase in miscellaneous public and semi-public use is proposed to provide space for the Civic Center and other uses of a public and semi-public nature. There are at present 95.69 acres in this classification. It is proposed to allow 112.69 acres, or an increase of 14.0 acres. The 253.21 acre residue of vacant land will be decreased, thereby, to 239.21 acres.

School grounds, parks, playgrounds, and reservations in Lancaster at present consist of 159.03 acres. According to the accepted standard of ten acres of parks and playgrounds for each 1,000 persons, Lancaster should have six hundred and fifty acres in this use. Acreage designated for playgrounds, playfields, and neighborhood parks must be provided within the city limits, but country park and reservation acreage may be located outside as well as inside the city. It is considered advisable, therefore, to allocate the remaining residue of vacant land, amounting to 239.21 acres to this category of use. The proposed park acreage within the city limits will, therefore, total 398.24 acres.

The proposed percentages of land in the different uses are shown on Figure 13, the acres of land as proposed for development per thousand persons of the total population is shown on Figure 15, and the average number of persons proposed per developed residential acre is shown on Figure 16.

Housing

INTRODUCTION

FACTORS INDICATIVE OF RESIDENTIAL QUALITY
- Condition
- Age
- Rentals

QUALITY OF RESIDENTIAL AREAS
- Blighted Areas
- Conservation Areas
- Stable Areas
- Vacant Areas

RECOMMENDED TREATMENT OF RESIDENTIAL AREAS
- Vacant Areas
- Blighted Areas
- Nonresidential and Nonmixed Areas
- Conservation Areas
- Stable Areas
- Miscellaneous Areas To Be Developed or Maintained for Nonresidential and Nonmixed Use

METHODS OF APPROACH TO BETTER HOUSING
- Subdivision Control
- Building Codes
- Housing Legislation

Housing

INTRODUCTION

ALL OF THE EVIDENCE which has been accumulated in the preparation of this report shows conclusively that Lancaster is a prosperous community whose citizens have higher than average education and skill as craftsmen. These skills and training are among the resources of Lancaster. It seems the more incongruous and inconsistent, therefore, that these abilities and the community prosperity have not been integrated to a greater extent to provide good homes for all the people as one of the necessary things of life.

New homes will be built for and by some of the people of Lancaster in the postwar period. The national volume of postwar housing has been variously estimated at from one to one and one-half million new homes annually for ten years. On the basis of that estimated volume and its proportion of the national population, the Lancaster urban area could expect a demand for from 500 to 750 new homes annually during the next ten years. The demand may not be that extensive—or because of the greater-than-average age and congestion of the existing houses, the demand may exceed the proportional estimate.

Although the rate of population growth in Lancaster has slowed down in recent years, the number of families and the consequent need for additional housing is still increasing and will increase sharply immediately after the war. Whether the new homes which will be built for Lancaster families will be built in the pleasant suburbs or within the city is a choice of policy for the people of Lancaster and their official leaders to make. Due to the limited amount of building space now available for residential development within the city, choice by the city of a laissez-faire policy will assure that the new homes will be built in the urban fringe and will leave the over-age, congested, unhealthy, hazardous residential sections of Lancaster for further decay. Nostalgia for the picturesque character of Lancaster does not retain the tax-paying population nor increase the taxable values of the city. Choice of an aggressive policy of improvement and urban redevelopment will be expensive in the beginning, but will assist in increasing the satisfactions of living in the City of Lancaster and will retard movement from the city.

Urban redevelopment is a new use of municipal growth which is in the pioneer stage. In ancient times, when a city became overcrowded and outworn, it was common to move to a new site. American cities are relatively new and they have grown rapidly. They were planned piecemeal—if at all. They now find themselves diseased at the center. Investments in business, industry and utilities, and structural immobility are so great that wholesale removal of the entire city to a new and wholesome site is impossible. The trend in recent years, however, has been that individuals move to the suburbs to live and commute to the city to work. Two major problems, with many ramifications thereof, have developed. Transportation for the commuters in

addition to the business traffic has congested the horse-and-buggy streets of the cities. And removal of the more prosperous, land-owning residents has left the cities with a less taxable population and with declining residential property values.

The Comprehensive Municipal Plan for Lancaster is in itself of gigantic import to the city. Perhaps the most significant portion is the study of housing conditions with its conclusions on residential quality and its recommendations regarding the future treatment of residential areas.

After more than 200 years of unregulated city growth during which homes, stores, and factories, like Topsy "just growed," there is presented a plan for future growth and a program for co-ordinating the efforts of public

Figure 17. Conversion—A threat to residential neighborhoods.

and private builders, so that the homes, stores, and factories of Lancaster will fit together into an attractive, efficient community pattern.

This study of existing dwellings in Lancaster, together with data brought out in the Land Use Study and the Population Study, all point to the inescapable conclusion of extremely crowded conditions, with a high portion of aged, obsolete, and crowded homes. Such conditions are apparent over the entire city. They are also reflected in some major problems of the city, such as juvenile delinquency, insufficient space for safe play and recreation, health, deterioration of property values, and a host of other human and municipal ills.

Certain sore spots such as Yanko Court, Barney Google Row, and Shantytown are depicted. They are only highlights, however, of the blighted conditions in many blocks of the city. This study classifies the dwellings of the city according to quality, and recommends a program for rebuilding, conver-

sion, and maintenance to provide the essential qualities of light, air, adequate space for living and play, together with the amenities of a modern community.

It is proposed to replace gradually the substandard or blighted dwellings with modern, attractive, healthful dwellings in neighborhood groups. It will take a long time—perhaps generations. This long-range plan will point the way toward redevelopment of neighborhoods in an orderly manner for several generations.

The population studies show that only a slight increase in population may be expected in Lancaster. The land use studies show that Lancaster is at present highly crowded in its density of persons per residential acre. The conclusion is reached, therefore, that the creation of adequate housing for the people of Lancaster is essentially a problem of redistribution. It is proposed to reduce densities where necessary, by developing almost 200 acres of vacant land within the city for residential use.

In this study the quality of dwelling units is determined by consideration of the condition, age, and average rentals of the existing residential structures.

Lancaster, in 1945, has 17,810 dwelling units within the city limits. These dwellings are made up of the following types: 9.7 per cent are single family detached structures; 53.84 per cent are single family attached structures (row housing); 6.13 per cent are semi-detached structures (duplex); 23.99 per cent are multiple family structures (apartment, flat, etc.); 5.92 per cent are mixed use structures (residential plus commercial or industrial); 0.42 per cent are nonclassified. An analysis of these figures shows that 90.3 per cent of the dwellings in the city are other than single family detached structures. The high percentage of row and multiple dwellings results in crowded and unhealthy conditions within the congested residential sections of the city.

The preponderance of brick construction for residential structures in the Lancaster urban area is noteworthy. The 1936 WPA Real Estate Property Survey shows that of 14,750 residential structures surveyed, 12,733 or 86.3 per cent are brick, 1,316 or 8.9 per cent are wood, 412 or 2.8 per cent are stucco, and 177 or 1.2 per cent are stone. 112 or .8 per cent are constructed of other materials such as tarred paper, cinder block, and roofing metal.

FACTORS INDICATIVE OF RESIDENTIAL QUALITY

The present distribution of the various residential uses in Lancaster is shown in Figure 12, Existing Land Use in Lancaster. Although the mixture of all residential types is clearly indicated and no distinct patterns of housing can be seen, it is evident that the duplex and row type predominate. It should be noted also that the vacant city land exists in the southeastern and southwestern corners of the city.

Data on Condition, Age, and Rental of housing were secured from the 1936 Real Property Survey of Lancaster. The age of dwelling units was studied further with the aid of the 1940 Census which was brought up to date (1945) by means of city building permits. It is considered that the 1936 data on Condition, Age, and Rental is applicable to the present studies because practically no change has occurred between 1936 and 1945, except for accumulated age, very slightly higher rentals, and depreciation of condition. The plan data presented herein applies to the City only, whereas the 1936 Real

Property Survey data included the City plus the urban fringe. Proper adjustment of figures has been made.

Housing in the urban fringe is generally newer and better than that inside the City limits, and, therefore, the following data are weighed in good characteristics and City characteristics are somewhat worse than indicated.

It will be noted that 14,750 structures are reported under condition and age, and that 19,315 dwellings are reported under rental. The additional number reported under rental is due to the fact that one structure often contains several dwellings.

TABLE 2

Condition, Age, and Rental of Residential Structures in the Lancaster Urban Area

A. Condition of Structure	*Number*	*Per Cent*
Total structures reported	14,750	100.00
In good condition	5,107	35.00
In need of minor repairs	7,484	50.4
In need of major repairs or unfit for use	2,159	14.6
B. Age		
Total structures reported	14,750	100.00
Under construction in 1936	23	.16
Built 1935	64	.44
Built 1920–1934	2,918	19.70
Built 1905–1919	2,726	18.50
Built 1885–	4,925	33.3
Built 1860 1884	3,046	20.6
Built 1859 or before	1,071	7.3
C. Rentals		
Total dwellings reported	19,315	100.00
$ 4.99 or less	112	.6
5.00 to 9.99	405	2.1
10.00 to 14.99	1,492	7.8
15.00 to 19.99	3,363	17.4
20.00 to 24.99	3,836	19.8
25.00 to 29.99	3,782	19.6
30.00 to 39.99	3,871	20.1
40.00 to 49.99	1,274	6.5
50.00 to 74.99	861	4.5
75.00 to 99.99	254	1.3
100.00 to 149.99	45	.2
150.00 and over	20	.1

Source—1936 WPA Real Property Survey of Lancaster, Pa.

Condition. The condition of residential structures is of primary importance in determining the quality of residential areas. Block by block study of residential areas having a high proportion of their structures unfit for use, or in need of major repairs, was made to locate blighted neighborhoods, as shown in Table 2, Condition, Age, and Rental of residential structures, and Figure

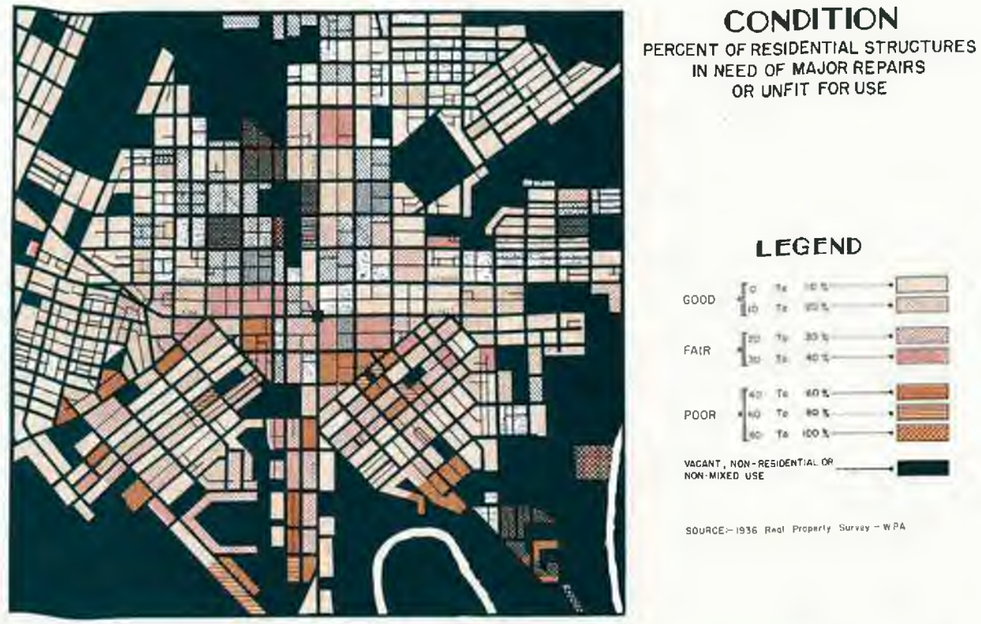


Figure 18.

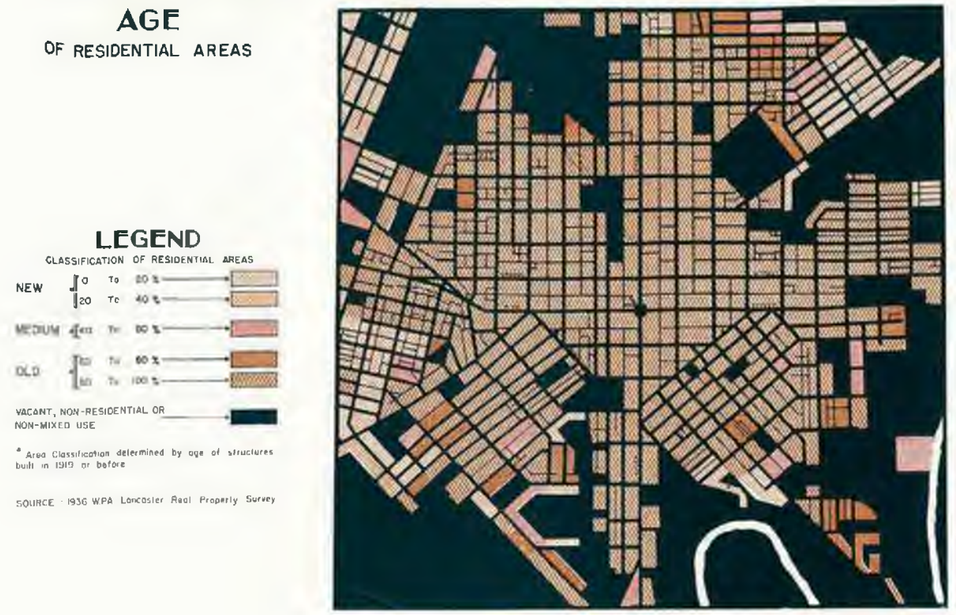


Figure 19.

18, Condition. For purpose of delineation and study, areas with from zero to 20 per cent of structures needing major repair, or unfit for use, are considered to be in good condition; areas with from 20 to 40 per cent of the structures in that category are considered to be in fair condition; and areas with from 40 to 100 per cent of the structures in that category are considered to be in poor condition.

Age. The consideration of age, shown in Table 2 and Figure 19, is second in importance in determining quality of residential areas. Age alone is not a true criterion for evaluating quality, for there are many old structures in the city which were well built, have been carefully maintained, are now in good condition and have adequate sanitary facilities, which should be conserved for further use. It is true, however, that the coincidence of age with condition serves to further clarify the status of those residential areas studied under condition.

Block by block data applying to the city was used in making the study of age of dwellings. Areas having from zero to 40 per cent of their residential structures built in 1919 or before are considered to be new; areas having from 40 to 60 per cent of their structures built in 1919 or before are considered to be of medium age; and areas having from 60 to 100 per cent of their structures built in 1919 or before are considered to be old.

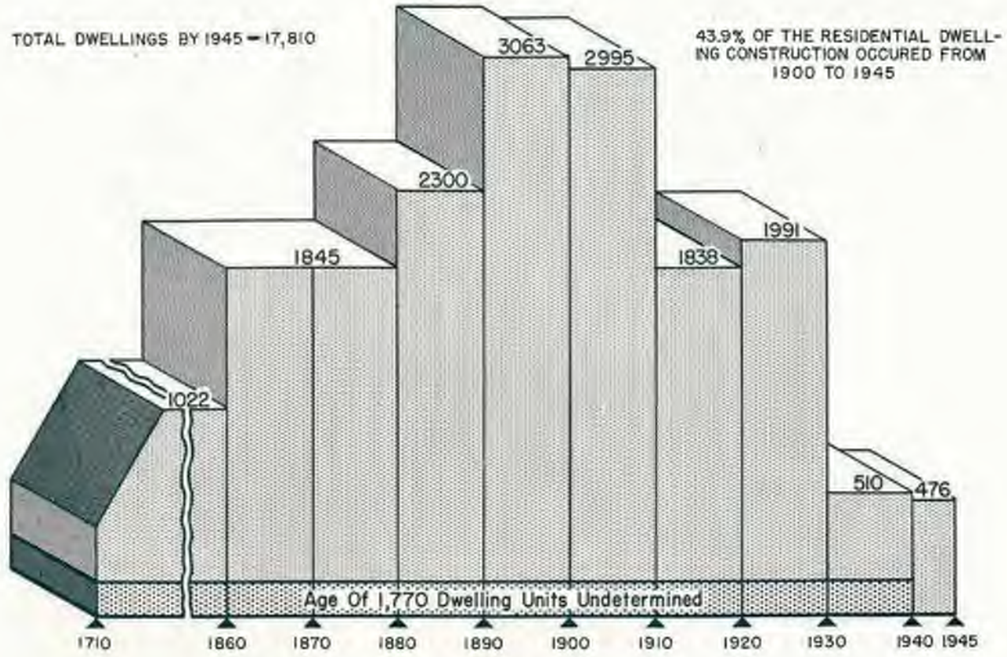
In order to summarize the study of age of residential structures in Lancaster, reference is made to Figure 20, Periods of Residential Construction. When surveyed in 1936, only one-fifth of the residential structures were less than 15 years old, while one-half of them were 35 years old, and almost one-third were 75 years old. The nine years which have passed since the Real Property Survey was made in 1936 should be added to the indicated age of residential structures.

Rentals. The consideration of average rentals is of less importance than condition and age in a determination of residential quality, but rentals are important in classifying areas of doubtful status not clearly determined by condition or age. It is generally true that the areas of extremely low rent within the city show the most blighted conditions.

Block by block data applying to the city were used in making the study for Table 2 and Figure 21, rentals. The areas where the dwellings have an average rental of $30 or more per month are considered to be high rent areas; areas averaging $15 to $30 per month are considered to be medium rent areas; and areas averaging zero to $15 per month are considered to be low rent areas.

Although not listed as one of the major factors indicative of residential quality, the sanitary facilities in the residential areas are significant and contributory to the values covered under Condition, Age, and Rental. The facilities provided according to the 1936 Survey are as follows:

		Per Cent
Total dwellings reported	19,315	10.00
At least one toilet and bath	15,017	77.7
At least one toilet and less than one bath	624	3.2
Shared toilet with running water	1,208	6.3
Shared toilet, no running water	7	.003
No toilet with running water	1,999	10.4
No toilet, no running water	460	2.4



PERIODS OF RESIDENTIAL CONSTRUCTION

Figure 20.

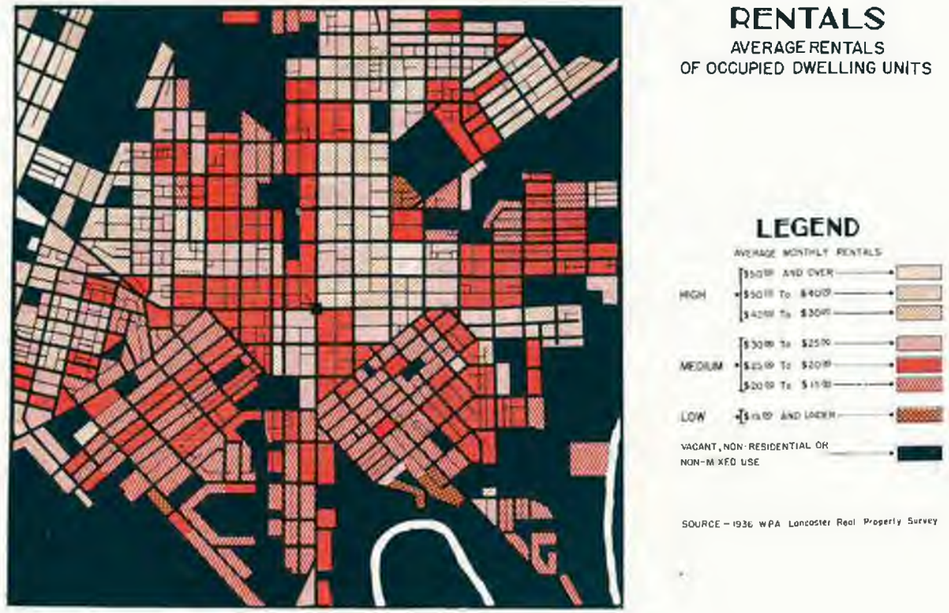


Figure 21.

QUALITY OF RESIDENTIAL AREAS

The three criteria of Condition, Age, and Rentals were used in determining the various qualities of residential areas as illustrated in Table 3, Summary of Factors Determining Quality of Residential Areas. In each case, the coincidence of the three factors has been used to segregate the quality of residential areas into the three classifications of Blighted, Conservation, and Stable Residential Areas. The location of the areas so classified is shown on Figure 22, Present Quality of Residential Areas.

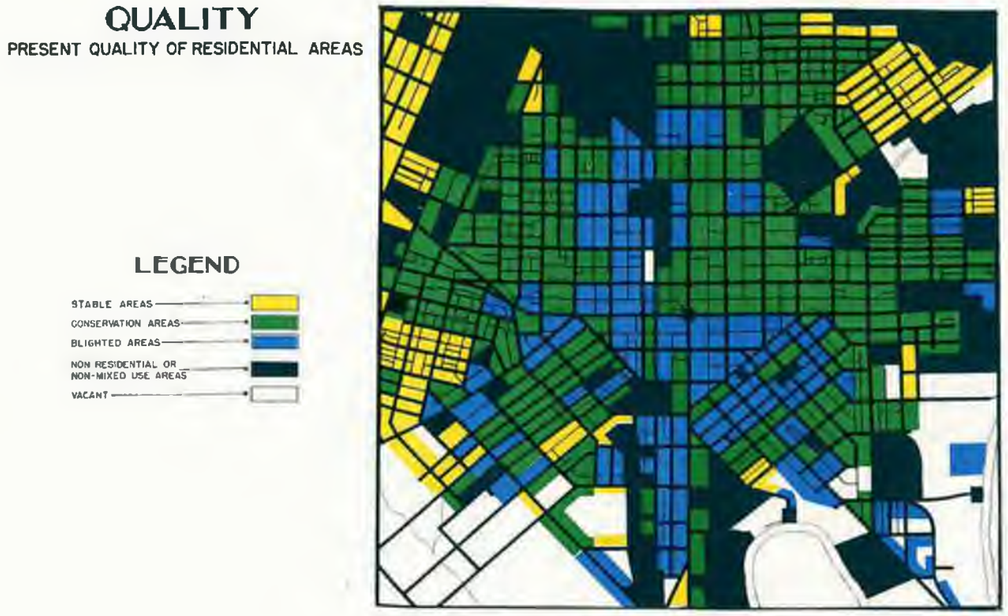


Figure 22.

The summary of the studies on Condition, Age, and Rentals is as follows:

TABLE 3

Summary of Factors Determining Quality of Residential Areas

Determined by Data Classified as to Condition, Age, and Rental of Structures by Percentages of Each per Block

Group	*Condition*	*Age*	*Rental*	*Quality*
1.	Poor	Old	Low	Blighted
	Poor	Old	Medium	Blighted
	Poor	Old	High	Blighted
2.	Poor	Medium	Low	Blighted
	Poor	Medium	Medium	Blighted
	Poor	Medium	High	Blighted

TABLE 3—*Continued*

Group	*Condition*	*Age*	*Rental*	*Quality*
3.	Poor	New	Low	Blighted
	Poor	New	Medium	Blighted
	Poor	New	High	Blighted
4.	Fair	Old	Low	Blighted
	Fair	Old	Medium	Blighted
	Fair	Old	High	Conservation
5.	Fair	Medium	Low	Conservation
	Fair	Medium	Medium	Conservation
	Fair	Medium	High	Conservation
6.	Fair	New	Low	Stable
	Fair	New	Medium	Stable
	Fair	New	High	Stable
7.	Good	Old	Low	Conservation
	Good	Old	Medium	Conservation
	Good	Old	High	Conservation
8.	Good	Medium	Low	Stable
	Good	Medium	Medium	Stable
	Good	Medium	High	Stable
9.	Good	New	Low	Stable
	Good	New	Medium	Stable
	Good	New	High	Stable

NOTE: Undeveloped land, less than 10% in residential use, is classified as vacant.

Present Status	*Present Acres*	*Per Cent of Total City Area*	*Per Cent of Total City Residential Area*
1. Nonresidential and nonmixed use areas . .	562	21.96	——
2. Blighted areas	418	16.34	26.19
3. Conservation areas	898	35.09	56.27
4. Stable areas	280	10.93	17.54
5. Vacant area	402	15.68	——
Totals	2,560	100.00	100.00

It will be noted that the total residential acreage indicated above is higher than that shown in the Land Use Study because of the inclusion of streets, mixed use residential acreage, and incidental uses.

The acreage of vacant areas indicated is less than that shown in the Land Use Study, because of the exclusion of small scattered vacant lots occurring throughout the city.

Blighted Areas as used in this study defines those urban districts in which the major portion of the housing is detrimental to the health, safety, morality, or welfare of the occupants by reason of age, dilapidation, overcrowding, faulty arrangement, lack of ventilation, light or sanitation facilities, or any combination of these factors.

The blighted residential areas of the city are concentrated in the first, third, fourth, and in-town portion of the 7th Ward, and in the eastern portion of the 9th Ward with several smaller scattered areas.

As indicated above, 16.34 per cent of the total city area and 26.19 per cent of the total residential area is blighted.

The residential structures in the blighted areas are comprised of all types, with row and duplex houses predominating. It is obvious to anyone familiar with the city that the blighted areas delineated here contain the worst housing conditions in the city, and represent the areas where primary consideration should be given to rebuilding. Many of these residences are extremely old. The majority of them are of brick construction, with a few scattered units built of stone, frame, tin, or tarred paper. Original units, in many cases, have been converted to contain additional dwellings by additions, partitionings, and alterations from basements to attics. Modern sanitary facilities are often entirely lacking or are shared by two or more families. Many of the structures are so far beyond rehabilitation that repairs and even maintenance have been abandoned. Nearly all of them are now devoid of desirable residential qualities and are virtually unfit for habitation.

Figure 23. Dunie's Court—A community hazard.

In considering the city as a living, growing organism, the blighted areas are like a cancerous tissue. Like a cancer in a human body, they destroy the rest of the city.

The characteristics of blighted areas in Lancaster, such as population density, narrow streets and narrower alleys, dwellings built upon alley frontage, the noise and confusion of traffic, and the indiscriminate location of industries and corner stores, all contribute to the vicious circle of blight breeding more blight.

Extremely high density in persons per acre is a problem resulting from crowding of residential structures on the available land. Conversion of structures into several dwellings and the creation of dwellings over garages, stores, and other nonresidential uses adds to the total high density. The highest

densities are found in the blighted areas. In some sections the density is as high as 200 persons per acre, whereas the total average residential density for Lancaster is high at 72.79 persons per acre. In view of the total average residential density of 34.4 persons per acre for 16 selected cities described in the Land Use Study, it is apparent that density is one of the major problems of the city.

The hopelessness of blighted areas in Lancaster is accentuated by the fact that they are profitable real estate investments. The initial investment is relatively small and, although the income per unit is also small, it is sure. Payment of taxes is essentially a matter of choice by the investor, for taxes may become delinquent without serious danger of collection by process of

Figure 24. Alley dwellings—Life in the shadows.

law. There have been no foreclosures for delinquent taxes in Lancaster. In 1922, all outstanding tax liens were deleted from the record. Between that time and the present time, delinquent taxes and liens, not including interest, have accumulated to the sum of $36,827. It is true that the percentage of unpaid taxes is small; but it is also true that tax delinquent properties, however limited, contribute nothing to the financial support of the city and are a burden in the form of heavy costs for police and fire protection, and health and welfare services.

In a study made in Cleveland in 1934 of a portion of a slum area, it was found that city, county, and board of education services to the selected

area cost six times as much as was paid to the city in taxes. Adding the cost of services furnished by nonpublic agencies, the cost of the slum area to the city was nine times as much as the tax income. Fire protection cost the city $50 per thousand valuation and police protection cost $31 per thousand valuation. The costs of those services in a suburban area was sixty-three cents and sixty-seven cents, respectively.

These relative costs and incomes are indicative of the problem which exists in Lancaster as well as in Cleveland. The city *should* be vitally interested in the social costs to those of its citizens who must live in the blighted areas. It *must* be interested in the actual money costs of those areas to the community.

It is not our intention to give undue prominence to the local problems of any racial, ethnic, or economic group who have been caught in the backwash of urban life. It is the purpose of this study to designate areas of Lancaster which have become or are in the process of becoming blighted, because the consequent decline or stagnation of development impairs their economic soundness and stability, and the tax base upon which the municipal revenues depend is thereby unbalanced. The effects of urban blight are harmful to the health, safety, morals, and general welfare of the inhabitants of such blighted areas.

One pertinent fact which has evolved from the housing study is related to income groups. One would expect blighted residential areas to be occupied largely by low-income groups—those who can not afford to live elsewhere. This is not true in Lancaster. These residential areas are occupied by many people who are willing and anxious to pay higher rents for better housing, or who wish to build when materials and sites become available.

The city-wide extent of conditions directly contributing to the development and retention of blight will be clarified by reference to the following data from the 1936 Real Property Survey of Lancaster. It deals with the city and outlying suburban areas and is, therefore, weighted in favor of good characteristics.

	Per Cent
Dwelling units without toilets	12.8
Dwelling units without running water	2.4
Structures built before 1895	61.2
Structures unfit for use or in need of major repairs	14.6
Structures completely or partly converted	10.3
Dwellings renting for $20 per month or less	40.4

The following data was collected by the Committee on Housing for Colored People for the Lancaster Postwar Planning Council in July, 1944. The survey covered 238 dwelling units housing colored persons, which represents 80 to 85 per cent of the total Negro housing in the city, practically all of which is located in blighted areas. Fifty-eight per cent of the tenants indicated a willingness to pay higher rent for better housing. Only nine per cent are unwilling to pay more.

Dwellings	*Per Cent*
Unfit for use	48
Made of salvaged material	19
Without water	30

Dwellings	*Per Cent*
Without toilets	60
Heated by stoves	67
Without electricity	40
Without gas	75
Owner occupied	10
Tenant occupied	70
Squatter occupied	20
Renting from $10 to $15 per month	41
Renting from $15 to $20 per month	30
Renting from $20 and over	29

A few specific cases of residential blight in Lancaster are described below, such as Miller's Court, Yanko Court, Barney Google Row, and Shantytown.

Miller's Court is in the rear of 447 Rockland Street. It comprises six housing units in two structures. One structure consists of a four-room unit and the other of five- or two-room units. In the latter, one room of each is on the first floor and one on the second floor.

The five-unit building appears to have been converted from a stable and is in a horribly dilapidated condition. It contains no kitchen sink, nor water, nor other plumbing facilities, nor any gas or electric service. Water for the six units is obtained from one common hydrant in the yard. Sanitary facilities are provided by one common toilet in the yard within twelve feet of the front doors. It is difficult to understand how such unsanitary conditions pass legal health and safety requirements. These properties are reported as producing an annual rental of approximately nine hundred dollars. All the occupants state that they would be willing to pay more rent if better housing were available.

Yanko Court contains seven units in dilapidated frame and brick buildings in the rear of 335 and 359 Howard Avenue. Here, also, water is supplied from one outside hydrant and one outside toilet provides common sanitary facilities. Information on rentals for all these units was not available, but those which were obtained appear even higher than reported for Miller's Court. All the occupants state that they would be willing to pay more rent if better housing were available.

Barney Google Row consists of twelve units located on what is called Southeast Avenue, west of South Duke Street and south of Juniata. It is a solid row of one-story, flat-roof units, each covering an area approximately 16 feet square. Four are two-room units and eight are three-room. Water is provided in the kitchen space but no other conveniences of any kind are included. Sanitary facilities are located about twelve feet from back doors in a yard sixteen feet square.

Data reported by the occupants indicate a total rental of approximately $1,500 is collected annually, which would appear to be forty or fifty per cent of the capital investment. One of these three-room units houses a family of six and another a family of seven. All occupants state that they would be willing to pay more rent if better housing were available.

Shantytown is a development of "squatters." It is located east of the George Washington School grounds on South Ann Street and comprises forty-

eight shanties. Two are fairly well constructed and forty-six are of crude construction. The number of rooms in each is not known, but evidently they contain mostly one room. These shanties have been constructed by the occupants, in many cases of material salvaged from the near-by dump, such as old tin, sheet metal, boxes, and other miscellaneous lumber. Water is obtained from a street hydrant in the locality.

The shanties house 144 persons, 42 of whom are working in war industries. It is reported that no rent or tax is paid for the site. Inquiry reveals that the occupants were forced into these conditions because of the lack of adequate housing accommodations in the city. Practically all appear to be thrifty people. A number would buy or rent better homes if given an opportunity. An indication of the type of persons in Shantytown is revealed by the fact that lawlessness here is at a minimum.

Figure 25. "Shanty" housing—Retards community growth.

Conservation Areas as used in this study defines those urban districts in which the major portion of the housing is in such condition, and of such age and value for residential purposes that at least 25 more years of useful life remain, and which therefore should be conserved and maintained in a livable condition for at least another generation.

As shown on Figure 22, conservation areas comprise by far the largest and most extensive portion of the residential city land. Areas suitable for conservation include 35.09 per cent of the total city area and 56.27 per cent of the total residential area.

The residential structures in the conservation areas are composed of all types, with row and duplex houses predominating. Many of the structures are of extreme age, but differ essentially from those in blighted areas in that

the majority is either in good or in fair condition. Most of the structures are of brick or stone construction. Many have been converted to contain extra dwelling units or to contain commercial ground floor establishments which adds to the already high density and neighborhood congestion.

The structures in the conservation area are considered to be close to the city-wide averages and, while having a high density, nevertheless possess enough remaining value for residential purposes to lift them above the class of blighted areas and warrant their continued use.

The problem of the conservation area is one of gradual deterioration. The problem is accentuated by the fact that this is fertile ground for the spreading of adjacent blighted areas. The treatment of the adjacent blight as well as the arrest of deterioration in the conservation areas themselves is of prime importance if values of the areas are to be preserved. Throughout

Figure 26. Row housing—Typical in old sections of Lancaster.

the conservation areas are small nuclei which show the beginnings of blight and which require immediate treatment. The city-wide characteristics of solidly built up street frontage, of narrow alleys with residential frontage, of traffic noise and confusion, and of indiscriminate location of stores and industries contribute to the lowering of residential quality.

Extremely high density in persons per acre is nearly as prevalent here as in blighted areas and indicates the need for conservation of these areas by redistribution of population.

The crowding of structures on the land, with very little front and side yards and with a minimum of rear yards, is a major cause of the high city density. All types, sizes, ages, and shapes of structures are found in the conservation area. Buildings in poor condition detract from the value, desirability and appearance of the neighborhood in general. The lower rentals of

such buildings attract into the community families of low economic status who often lack neighborhood pride.

The existence of one or more corner stores on nearly every street corner is prevalent and has resulted in the creation of commercial usage far beyond the capacity of the neighborhood to support adequately. The surplus of neighborhood commercial establishments and the low income therefrom is described in the section of this report devoted to economics.

Potential sources of blight are, therefore, inherent in the conservation areas. The various ills of the area have not, however, progressed beyond the point where a cure is possible. These areas, therefore, should be considered as suitable for residential use, but in immediate need of control and guidance toward the ultimate objective of good housing.

Stable Areas as used in this study defines those urban districts in which the major portion of the housing is of good quality and of high value for residen-

Figure 27. Substantial row houses in a conservation neighborhood.

tial purposes, with several generations of useful life remaining, and which, therefore, should be preserved for several generations.

The stable areas are rather well defined in three large groups, one northwest of Franklin and Marshall College, one north of New Holland Avenue, and one north of Manor Street, with a few smaller scattered areas. These residential areas are, in general, either relatively new or of medium age and in good condition. Stable areas amount to 10.93 per cent of the total city area and 17.54 per cent of the total residential area.

The stable areas are composed of a mixture of types. Row and duplex homes predominate but a higher ratio of single family homes predominates than in the blighted or conservation areas. The single family homes, however, are found in quantity only in the stable area northwest of Franklin and Marshall College, where they comprise about 35 per cent of the area.

Most of the structures are of madium age and about 30 per cent are new.

Brick or stone construction predominates as in the two other quality areas, but the proportion of frame structures is slightly higher in the stable area class. Some conversions of residential structures for commercial use have been made.

The density of the stable areas is higher than it should be due to the fact that many of the dwellings are in row and duplex structures where front and side yards are negligible, and rear yards are small. Too many families are crowded on the land exactly as in the other classes although not to so marked a degree.

The stable areas are above the city average in their quality, density, and attractiveness, and therefore possess the highest merit for residential use of all areas throughout the city. Their continued use is warranted for several generations.

The problem of Stable Areas is to keep the present high quality. Careful attention to zoning recommendations, especially with regard to maximum density provision and to limiting of conversion, will be required.

Figure 28. Attractive design of duplex housing.

Stable areas in Lancaster are not spotted with vacant lots as is the case in many cities. Where there is a large area of land not used for its intended residential purpose, however, an additional quality class termed "arrested development areas" is applied. Steps should be taken to correct the defects which cause such arrested development.

Although the Stable Areas are of high quality and represent the best housing of the city, the density is too high. The long range objective in these areas should be a lowering of density, as in the other quality areas.

Vacant areas are major tracts of land valuable for residential use, with less than 10 per cent of the area now developed with structures. Small scattered vacant lots are not considered in this category, it being limited to areas of considerable size and of value for development.

The amount of vacant land in the city is 20.09 per cent of the total city area, or 514.34 acres. Of this total, approximately 402 acres, or 15.68 per

cent of the total city area, is in large tracts. Of the 402 acres, 242 acres, or 9.45 per cent of the city total, is considered valuable for general residential development plus neighborhood streets. The major portion of this land is located in the southern extremity of the city, consisting of one large area southwest of Fairview Avenue and one large area south of Dauphin Street.

One of the major problems of the vacant area is that of proposed streets which do not fit the contours of the land or make the most advantageous use of building sites. The layouts are merely an extension of the present rectangular patterns. Luckily, few streets exist in the vacant areas. Nearly all of the vacant land is gently rolling and should be subdivided that streets follow the contours. The major retardant to residential development in the large vacant areas seemingly has not been excessive land costs, excessive subdivision, accumulation of delinquent taxes, excessive speculation, or taxation and assessment restrictions as in the case of many cities. Lancaster's vacant land is undeveloped for residential purposes because of poor access, outmoded and ill-designed streets layouts, inadequate city utilities, and the proximity of low class housing and blighted areas. A large city dump exists, in addition, in the center of the Fairview Avenue vacant area. The ills of the vacant areas, however, have not progressed to the point where the land is unsatisfactory for residential use. The vacant areas should be subdivided for residential uses in accordance with the Zoning Ordinance and the Master Plan.

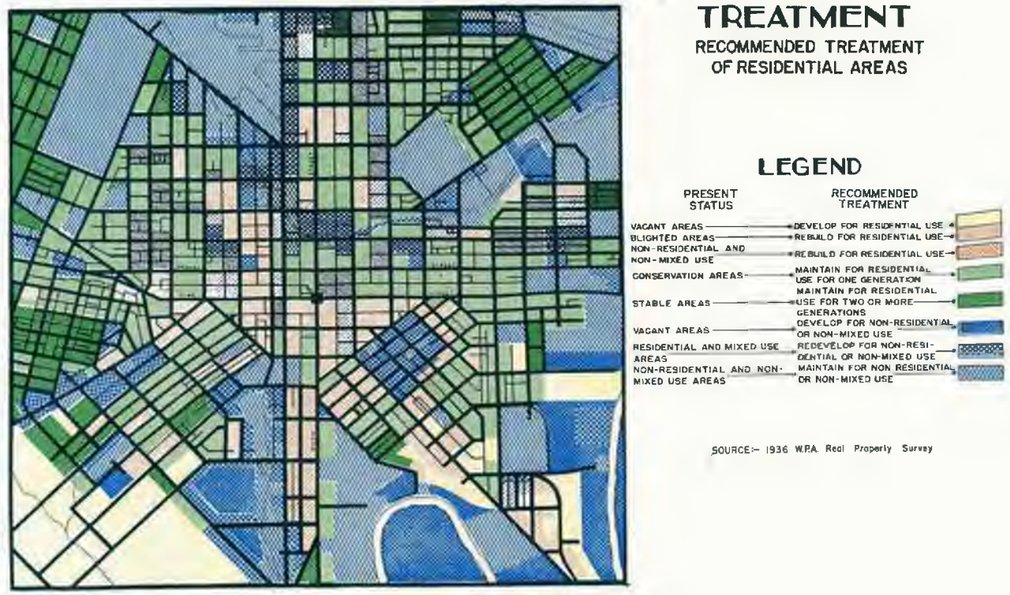


Figure 29.

RECOMMENDED TREATMENT OF RESIDENTIAL AREAS

The Comprehensive Municipal Plan involved many urban problems in addition to housing. The housing study is, therefore, complicated by the fact that some nonresidential areas are to be converted into residential areas, and that some residential areas are to be converted into nonresidential areas.

Figure 29, Recommended Treatment of Residential Areas, illustrates the actual recommendations for future adjustments in residential uses within the entire city area. It is derived directly from the studies of the Present Quality of Residential Areas, Figure 22, but also takes account of the ultimate use proposed for various sections of the city as shown in the Master Plan, and the Proposed Land Use Plan. The entire program recommended is based upon (a) maintenance of structures and areas which are in good condition and which have a reasonable life expectancy, (b) control of blight through zoning ordinances, and (c) rebuilding of structures and areas of low residential value.

The population density pattern of Lancaster is shown in Figure 11, Population Distribution, and Figure 30, Population Density at Present. These figures illustrate the fact that low density areas correspond in general with the high quality residential areas; that the high density areas correspond in general with the low quality residential areas and with areas of a high proportion of mixed use; and that the medium density areas are distributed over the remainder of the city, coinciding in general with areas of medium quality. As shown in the study on Land Use, Lancaster's total density is 72.79 persons per acre, while the average of the 16 selected cities is 34.40. As is indicated also in the Land Use Study, it is recommended that the total average density of Lancaster per residential acre be reduced to 58.33, which is the closest approach to ideal density that appears to be feasible.

High density areas in Lancaster seem to have been caused largely by four conditions, namely (a) the practice of subdividing land into narrow lots only 12, 15, 18, or 20 feet wide; (b) the resultant practice of building houses one against the other in order to provide living quarters on the narrow lots; (c) the conversions and additions to original residences during periods of rapid population growth; (d) low rent due to age and congestion, thus inducing further congestion in these areas.

It is proposed, as shown in the Land Use Study, to lower the present densities in the high density areas through redistribution of crowded population into parts of the city which are now vacant or underdeveloped.

Figure 31, Proposed Changes in Population Density, indicates the average increase or decrease in persons per acre required to achieve the desirable average densities. The proposed density changes were studied block by block for the entire city, and are correlated with the recommendations on housing, and with the objectives of the Master Plan, the Proposed Land Use Plan, and the Zoning Ordinances. Fig. 32, Population Density in the Future, illustrates the ultimate density pattern recommended for Lancaster.

The recommended treatment of residential areas is not intended to be a blueprint for an entirely new city. The treatment is recommended to guide the evolution of these areas into satisfactory housing for the people of Lancaster.

The recommendations for residential area development and redevelopment listed in order of their priority are as follows:

1. Create new residential communities on the vacant areas to be developed for residential use.
2. Clear and rebuild blighted and nonresidential areas according to a planned schedule.
3. Thin out, remodel, and maintain for a generation the conservation areas suitable for residential use. Rebuild these areas as the housing standards of the city become better and as deterioration occurs.
4. Conserve and maintain for two or more generations the stable areas which are suitable for residential use. Rebuild these areas as deterioration occurs.

The residential uses recommended for the various sections of the city are shown on the Proposed Land Use Plan. It will be apparent that additional private construction must be on a limited scale due to the population density and high cost of building sites of single family detached homes. It is felt, however, that considerable construction of group houses or garden apartments to replace substandard row and duplex housing is advisable.

The Proposed Zoning Ordinance applying to these areas permits construction of single family homes, duplex, and row homes in addition to garden apartments, but it is urged that whatever rebuilding is proposed, full consideration be given to garden apartments in order to secure satisfactory density, open space, reduction of street area, and generally improved living conditions.

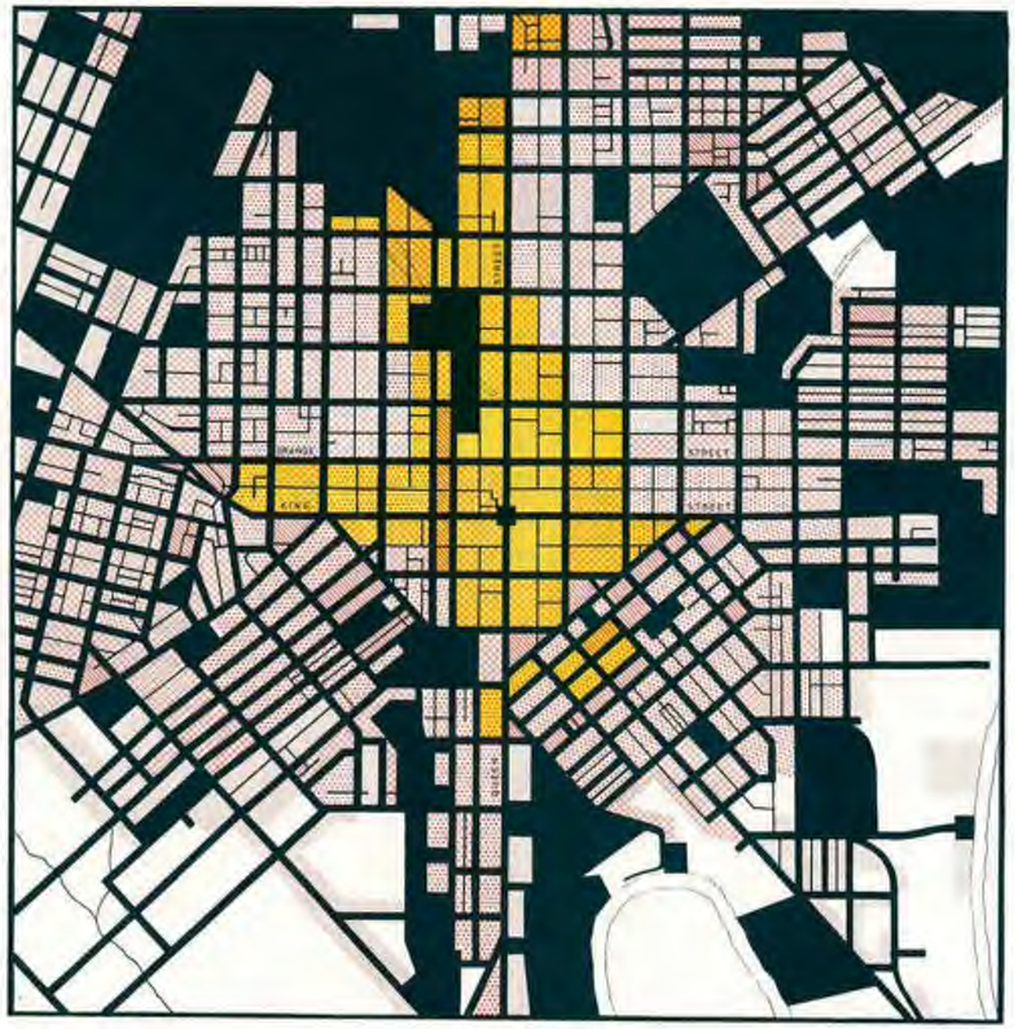
Vacant Areas To Be Developed for Residential Use should have first priority. As indicated in Table 4, vacant areas comprise 242 acres, which is 9.45 per

TABLE 4

The Extent of Residential Areas for Which Treatment is Recommended

Present Status	*Recommended Treatment*	*Acres To Be Treated*	*Per Cent of Total City Area*	*Per Cent of Total City Residential Area*
1. Vacant areas	Develop for residential use	242	9.45	
2. Blighted areas	Rebuild for residential use	320	12.50	20.05
3. Nonresidential and nonmixed use areas	Rebuild for residential use	8	0.31	
4. Conservation areas	Maintain for residential use	794	31.02	49.75
5. Stable areas	Maintain for residential use for 2 or more generations	248	9.69	15.54
6. Nonresidential and nonmixed use areas	Maintain for nonresidential and nonmixed use	554	21.64	
7. Residential and mixed use areas	Redevelop for nonresidential and nonmixed use	234	9.14	14.66
8. Vacant areas	Develop for nonresidential and nonmixed use	160	6.25	
Totals		2,560	100.00	100.00

Note: The acreage of vacant land to be developed for residential use is greater than that shown in the Land Use Study because of the inclusion here of streets and parks.



POPULATION DENSITY AT PRESENT

LEGEND
(NO. OF PERSONS PER ACRE)
AREAS WITH AN AVERAGE DENSITY OF 32
AREAS WITH AN AVERAGE DENSITY OF 50
AREAS WITH AN AVERAGE DENSITY OF 80
AREAS WITH AN AVERAGE DENSITY OF 130
MAJOR AREAS IN NON RESIDENTIAL AND NON MIXED USE
AREAS WITH A HIGH PROPORTION OF MIXED USE
MAJOR VACANT AREAS

Figure 30.

PROPOSED CHANGES IN POPULATION DENSITY

LEGEND
(AVERAGE INCREASE OR DECREASE IN NUMBER OF PERSONS PER ACRE)

- -150 To -75
- -75 To -50
- -50 To -25
- -25 To -10
- NO INCREASE OR DECREASE
- +10 To +25
- +25 To +50
- +50 To +75

Figure 31.

POPULATION DENSITY IN THE FUTURE

LEGEND
(NUMBER OF PERSONS PER ACRE)

- AREAS WITH AN AVERAGE DENSITY OF 32
- AREAS WITH AN AVERAGE DENSITY OF 60
- AREAS WITH AN AVERAGE DENSITY OF 100
- MAJOR AREAS IN NON RESIDENTIAL AND NON MIXED USE
- AREAS WITH A HIGH PROPORTION OF MIXED USE AND A VARIABLE DENSITY UP TO 60

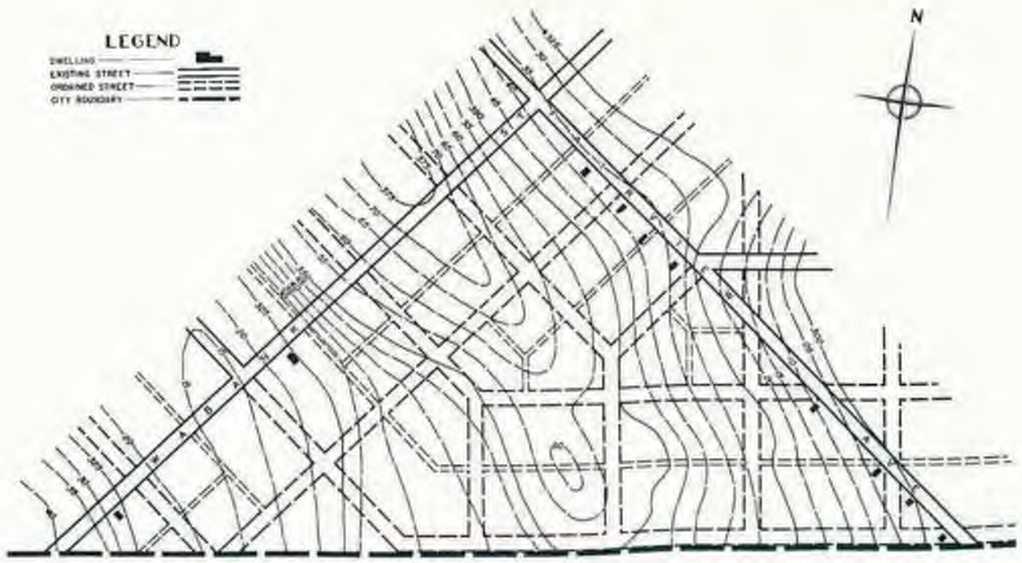
Figure 32.

cent of the total city area. As rebuilding and redevelopment of the blighted and conservation areas proceed, fewer people will be able to reside therein due to reduction of density. Development of suitable vacant areas must proceed simultaneously with urban redevelopment in order that residences may be available for that portion of the population which must be relocated. The street layouts in the vacant areas should be redesigned to fit the contours of the land, and to avoid the difficulties of utility layout, undesirable street grades and excessive cuts and fills imposed by adherence to the gridiron street pattern.

Consideration should be given to designs which exclude through traffic and which include parks, playfields, schools, shopping centers, and other neighborhood services in each neighborhood unit. Figure 33, A Typical Vacant Area in Lancaster, and Figure 34, Suggested Typical Development, have been prepared to illustrate such a design for a vacant area. Facilities and densities suggested are in accordance with the proposed Zoning Ordinance and the Master Plan.

The area selected for design study is in the southwest corner of the city. It is classed at present as a vacant area and includes some of the finest residential land in the city. There are no existing interior streets in the area and less than a dozen houses on it. The land is open and gently rolling.

The street layout as platted is shown on the study in broken lines. The



A TYPICAL VACANT AREA IN LANCASTER

Figure 33.

SUGGESTED TYPICAL DEVELOPMENT

Figure 34.

platted street layout does not fit the slopes of the land, it cuts the area into small blocks, and it does not distinguish between streets for through traffic and for local traffic.

The street pattern indicated on the Suggested Typical Development is designed to fit the contours of the land, to provide adequate and pleasing access to the area, and to discourage through traffic. The design study does not recognize the city line as an actual boundary and the subdivision has been extended, therefore, outside the city limits to the edge of the proposed Circumferential Greenbelt Highway.

The proposed development shows the upper portion of this triangular vacant area in row, duplex, and garden apartment residential use. The lower portion is recommended for single family use. In conformity therewith, the upper portion has been designed for a density of 60 persons per acre, and the lower portion is designed for a density of 32 persons per acre.

In order to illustrate residential design in super-blocks, with a street pattern which fits the topography, and all conforming with the Proposed Land Use Plan, the Suggested Typical Development study includes garden apartments, duplex houses, and single family houses. It will be observed that the three residential uses are adjacent to each other, but not intermixed, thus assuring minimum requirements of light and air, and protecting property values. Attention is also called to the fact that small parcels of land are set aside for

Figure 35. Multifamily residences—Garden apartments.

recreational use by the residents of the area in each of the blocks, and a community recreation building is indicated. Although not shown on the study, ample off-street parking space should be provided for automobiles in the multiple family areas. The boundary streets—Wabank, Fairview, and the proposed Greenbelt Highway—are the only major streets serving this residential area. The interior streets are all minor residential streets and some of them are cul-de-sacs.

A summary of the areas, capacities, and densities provided in this subdivision is shown below:

Area devoted to garden apartments	19	acres
Structure coverage	23	per cent
Density (persons per developed acre)	60	persons
Areas devoted to semi-detached residences	5	acres
Capacity to 45 semi-detached residences	90	families
Density (persons per developed acre)	60	persons
Area devoted to single family detached residences	25	acres
Capacity of single family detached residential areas	212	families
Density (persons per developed acre)	32	persons

The number of acres, families, and persons per acre shown above are computed only for the portion of the subdivision within the city limits.

Blighted areas to be rebuilt for residential use. The clearing out and removal of all structures in the blighted areas to be rebuilt for residential use is of major importance in the housing program. As indicated in Table 4, such areas comprise 320 acres, or twenty per cent of the total residential area. If there is sufficient prior development of vacant areas to house a portion of the population now living in blighted areas, demolishing and redeveloping of the latter can be initiated immediately when materials are available and legal and financial requirements have been met.

Development of several blocks at a time, as a part of a carefully planned and co-ordinated redevelopment program, is the only feasible solution in the blighted areas. Streets should be widened where necessary. Alleys and streets should be eliminated where possible, thus reducing maintenance, and increasing the acreage of residential and recreational land. Adequate off-street parking space should be provided.

The existing conditions in a typical blighted section of Lancaster are shown in Figure 36, A Typical Substandard Residential Area. The four-block area, bounded by Howard Avenue, North Street, Duke Street, and Strawberry Street, is located in one of the larger blighted areas. The data submitted in the report of the citizens' committee on housing for colored people includes this portion of the Seventh Ward.

The assessed valuation in the four blocks is $852,300. The total tax delinquencies for this area amount to $1,531.32.

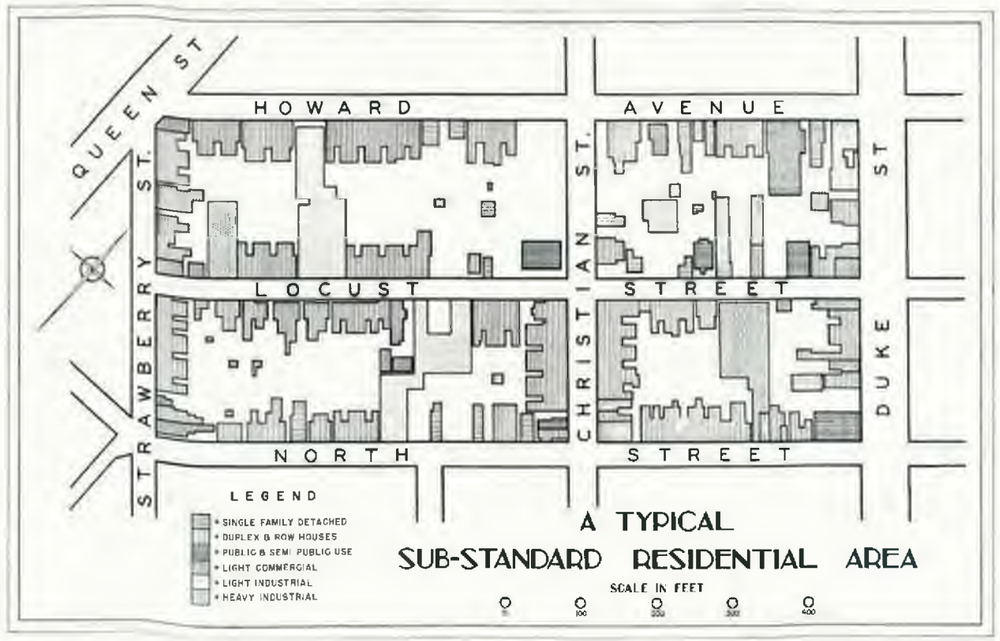


Figure 36.

The 170 residential structures in the selected four-block area belong to 109 property owners, some of whom own 10 to 30 of the properties. The residential properties range in assessed valuation from $300 to $5,500. Crispus Attucks, a community building, has a valuation of $24,000, and the Elks Club has a valuation of $10,000. A program of redevelopment, with group housing or garden apartments to provide light, air, open space, and ordinary sanitary facilities, should be prepared for the entire 320 acres of blighted residential area.

Comparative data applying to the four-block blighted area, existing and redeveloped as proposed, are as follows:

	Existing	*Redeveloped*
Total acreage exclusive of streets	8.30	9.07
Acreage devoted to residential use	4.30	8.67
Acreage devoted to nonresidential use	4.00	.40
Number of residential structures	170.00	19.00
Number of dwelling units	191.00	151.00
Number of families	191.00	151.00
Number of persons	692.00	520.00
Average density (persons per developed residential acre)	161.00	60.00

A maximum amount of light and air, green lawn space, and play area has been provided in the design, keeping within the proposed density of 60 persons per developed residential acre as determined in the Land Use Study.

Off-street parking space has been provided for approximately 76 cars. The central grass court featuring the church and bell tower provide a large open park area for all residents of the area. Occasional service truck or moving van access to all structures has been provided by off-street courts, and by the interior system of ten-foot concrete walks.

The Crispus Attucks Recreation Center, the church, and the Elks Club are the only structures in good condition on the entire plot and they have been retained (Figures 37 and 38). The design shows a proposed addition to the Crispus Attucks Center for much-needed recreational facilities, and an addition to the church in the form of a rectory and bell tower. The remainder of the area is proposed for clearance and redevolpment for residential use.

It should be emphasized that this redesign study of the typical blighted area is limited to the delineation of structural form, density, and space relationships. Recommendations on the architectural style of the residential structures are not intended. The fact that garden apartments are shown in simple flat-roofed block form should not be taken to indicate that this is the style recommended. Further architectural analysis and study should keep the structural style in line with the general architectural character in Lancaster.

Nonresidential and Nonmixed Use Areas. These areas, extremely few and small in size, are now in either commercial or industrial use. They comprise only eight acres, or .31 per cent of the total city area. They should be considered in the same category and priority as blighted areas to be rebuilt for residential use; and will then fit into and form a part of the neighborhood residential areas in which they are located.

Conservation Areas. The arrest of deterioration in areas of this class should begin at once. The existing structures and utilities of the conservation areas represent millions of invested dollars and should be utilized for another generation for residential use. Major changes in street layout or design are not recommended because of the present value and intensive development of the areas. However, many of the defects inherent in these communities should be remedied long before rebuilding occurs. The removal of many

Figure 37. Model of area for urban development.

Figure 38. Model detail for urban redevelopment.

alley dwellings and excessively old structures and those in poor condition will improve the present density and will provide considerable additional light, air, and play area. Adherence to the Zoning Ordinance should be observed in order to control densities during the lifetime of these areas. As indicated in Table 4, conservation areas comprise 794 acres, 31.02 per cent of the total city area, and 49.75 per cent of the total residential area. Over the period of years necessary to bring the density of conservation areas down to

the recommended number of persons per acre, a backlog of residential areas developed on vacant land will be necessary to provide accommodations for the displaced population. Adherence to the Zoning Ordinances here, also, should be strict in order to control the recommended densities. Portions of the conservation areas will be obsolescent and ripe for rebuilding in from 25 to 30 years. Wholesale redesign and reconstruction of entire blocks or groups of blocks will then be desirable, as in the present blighted areas.

Stable Areas. The treatment recommended for stable areas is essentially similar to that recommended for the conservation areas, except for the time element. As the stable areas are in general composed of the newest and

Figure 39. Modern apartment housing.

most structurally sound residential structures in the city, their life expectance and future usefulness is considerably greater than those of any previous category. As indicated in Table 4, stable areas comprise 248 acres, 9.69 per cent of total city area, and 15.54 per cent of the total residential area.

The principal treatment recommended for the stable areas is that of maintaining the high residential standards now characteristic of the areas for two or more generations, and at the same time lowering the density through adherence to zoning restrictions. Obsolescence, as nearly as can now be predicated, will be reached in the stable areas in from 50 to 75 years. Redesign and reconstruction of these areas should then be initiated in order to prevent decadance and to maintain a high residential quality in the city.

Miscellaneous areas to be developed or maintained for nonresidential and nonmixed use include.

Nonresidential and nonmixed use areas to be maintained as such. This use accounts for 554 acres or 21.64 per cent of the total city area.

Residential areas and mixed-use areas to be redeveloped for nonresidential and nonmixed use. This use accounts for 234 acres or 9.14 per cent of the total city area and 14.66 per cent of the total residential area.

Vacant areas to be developed for nonresidential and nonmixed use. This use accounts for 160 acres or 6.25 per cent of the total city area.

These areas are, in general, intended to provide commercial shopping centers, new industrial locations, and parks and playgrounds. The creation of a few new areas of these types in studied locations is necessary in order to provide recreation space, shopping centers, and a small extension of industry in certain sections of the city within easy reach of the population.

Nonresidential and nonmixed use areas, in which no change in use is recommended, should be maintained for the limit of life expectancy, then remodeled or reconstructed in conformity with the zoning recommendations for residential and mixed use areas. Vacant areas which are to be developed and redeveloped for nonresidential and nonmixed use should be built up for that use as the surrounding residential areas approach the objectives delineated here. They should be maintained thereafter in that use in conformity with zoning provisions.

METHODS OF APPROACH TO BETTER HOUSING

As in most American cities, Lancaster's residential growth has leap-frogged to the suburbs since the advent of the automobile. High-class residential areas have tended to move ever outward from the restricted inner portions of the city, into the open spaces northeast and northwest of the city.

Actually, the four square miles of the city are only the central core of the urban area. The population of Lancaster is 65,134. The population in the urban fringe outside the city is 10,510. Converting these figures into percentages, we find that 86.10 per cent of the total urban population lives within the city limits, and that 13.90 per cent lives outside the city limits.

The population of the United States is approaaching stabilization and the future growth of American cities is limited. The usual source of repopulation for blighted areas—the immigrant—will be less numerous. In order to avoid depopulation of the older central city areas, a definite program of slum clearance and urban redevelopment must be initiated and correlated. Subdivision control and building code requirements are a part of the broad objective and should be considered fully as a part of the housing study.

Lancaster, through its Planning Commission, has power to regulate land subdivision activities within the city area and in the territory three miles outside of the city limits. Planning Commission approval is a prerequisite for recording plat maps and subdivision plans and the commission has final jurisdiction in the matter of land subdivision regulation.

Successful subdivision planning involves far more than the mere layout of street and lot lines. It includes the planning of neighborhoods in a broad sense, beginning with the selection of the raw land, the economical planning

of streets, lots, and utilities in proper relation to transportation, schools, and parks. Provisions for adequate community services, the control of house design, and the use of a sound marketing program are also important elements of subdivision planning.

There is urgent need in Lancaster for the establishment of subdivision regulations to establish standards in accordance with the objective of the Comprehensive Municipal Plan. Each subdivision should be designed and platted to meet specified standards as to lot sizes, street and sidewalk widths, alignment and grades, and provision of park area, conforming with the objectives of the Comprehensive Municipal Plan and Zoning Ordinance.

Abandonment of the rigid, grid-type street pattern in future subdivisions in favor of modern, well-designed and integrated subdivisions will secure major economies in utilities and service, and more attractive, livable, and stable communities will result. The elimination of unnecessary streets, alleys, utility lines, and through traffic can save considerable money, protect property values, increase safety, and reduce street maintenance and other costs.

It has been proven many times that increased social and economic values can be obtained by intelligent subdivision of vacant land. The same values and economies may in many instances be secured by redesigning obsolete and blighted areas. A reduction of portions of the existing improvements and utilities will be well worth while when one considers the economies and social values to be achieved. Since the regulation of land subdivision is essential in carrying out the Comprehensive Municipal Plan and essential for the proper economic development of new subdivisions, it is recommended that subdivision regulations be established for Lancaster. Administration of subdivision regulations by the Planning Commission is provided by law.

Subdivision regulations should include:

1. A statement of procedure to be followed by the land subdivider in submitting a plat map for approval; and procedure to be followed by the Planning Commission in reviewing plat maps. This procedure should provide, among other things, for two steps in plat map submission:
   a. Submission of a preliminary plat map for examination and tentative approval of the Plan Commission. It should show the location and width of streets and approximate arrangement and size of lots;
   b. Submission of a final or record plat map which should show any changes in the preliminary plat map which may have been specified in the conditional approval.
2. A list of engineering data and other information required to be shown on the plat maps. The required information should be sufficient to assure that all important topographic and other information has been available to the subdivider in making his plan; sufficient to assure that the location of all development features are feasible; that the location and dimensions of all streets, lots, and other areas shown on the plat map can be readily determined in the office and on the grounds; and sufficient to show the physical relationship of the land being subdivided to neighboring properties and to existing streets.

   The minimum of engineering information should include the following:
   a. The property area and boundaries by courses and distances.
   b. The location of all existing structures, fences, etc., on the property.

   c. The location of street and property lines as marked by monuments.
   d. The locations and dimensions of property dedicated to public use.
   e. Street names; right-of-way widths; width of the parts thereof, such as roadway, sidewalk, planting strips; and position of rows of trees.
   f. Curb line locations and elevations at all corners, points of curvature and tangency, and at all curb grade changes.
   g. Lot dimensions sufficient for complete description of each lot.
   h. Location of all building set-back lines.

   The final plan should be accompanied by a profile of street showing the existing surface elevations at the property line along each side and the proposed grade along the center line of the roadway.

3. A list of approximate standards to be required, which may take the form of a statement as to minimum and maximum acceptable block dimensions, street grades, etc.
4. A list of special requirements such as minimum provisions for drainage, number and location of permanent monuments, and extent of improvements to be installed by the subdivider.

Building Code. The power of cities of the third class in Pennsylvania to enact and enforce building, health, and sanitary ordinances is contained in the State Act of General Assembly No. 317, Article XLI.

The purpose of building codes is to provide minimum standards, provisions, and requirements for safe and stable design, methods of construction and uses of materials in buildings which are constructed, altered, moved, converted to other uses or demolished. Building codes also regulate the equipment, maintenance, uses, and occupancy of structures.

The building code for Lancaster consists of a resolution adopted in 1906 by Common Council. It has not been amended or brought up to date to recognize the advance of the past 40 years in structural methods and materials. The resolution is brief and inadequate in many respects, as well as out of date.

Many of the ills of Lancaster which are evident in the blighted areas are due in some measure to lack of an adequate building code. There are at present no standards, nor inspection required regulating electric wiring. There are no city controls of building demolition. The plumbing code consists of the State Act of General Assembly of June 7, 1901, together with several amendments and a few city ordinances. It is inadequate and out of date for modern plumbing control. A sound, reasonable, and modern plumbing code is necessary to the economic and social stability of the city. It is recommended, therefore, that an adequate building code be enacted and enforced in Lancaster.

The code should contain sections dealing with administration, structural requirements, fire protection, health and sanitation requirements, electric wiring, demolitions, and other necessary provisions. It should also provide adequately for materials and advanced techniques of construction which are tested and found satisfactory.

HOUSING LEGISLATION

Several bills concerned with slum clearance and urban redevelopment were recommended by the Pennsylvania Postwar Planning Commission, approved

by the governor on March 5, 1945, and introduced into the Pennsylvania legislature. The pending legislation includes the following:

a. Reviving of the State Housing Authority as the supervising agency for local redevelopment authorities.
b. Granting of power to cities and counties to create local redevelopment authorities.
c. Authorization of local redevelopment authorities to oversee and certify the housing and redevelopment plans of private capital, and to acquire land by condemnation for redevelopment purposes.
d. Authorization of local redevelopment authorities to determine areas within the locality which are ready for redevelopment.
e. Authorization to permit the local redevelopment authority to contract with insurance companies and other private capital for the clearance and redevelopment of slums and blighted areas, such contract to be approved by City Council or Board of County Commissioners.
f. Authorization to permit contracting private capital to proceed with approved redevelopment contracts.
g. Authorization of life insurance companies to invest 10 per cent of their total assets in approved slum clearance and redevelopment projects. (10 per cent of the total assets of insurance companies doing business in Pennsylvania amounts to $3,600,000,000.)
h. Authorization to permit the redeveloper to sell or lease any part of the redeveloped area, upon completion, subject to any covenants in the deed inserted by the redevelopment authority.
i. Authorization of local redevelopment authorities, in case private capital fails to take advantage of the opportunity, to construct their own projects and float bond issues to finance them.

One of the most important of the acts of the 1945 Session of General Assembly is House Bill No. 331. This act is known as the Urban Redevelopment Corporations Law. It relates to the clearance, replanning, rehabilitation, and reconstruction of substandard and insanitary areas in cities of the commonwealth, and provides for incorporation and regulation of redevelopment corporations.

This act summarizes and is so drawn as to effectuate the very ideals and objectives described in detail in the preceding discussion of blighted and residential areas in Lancaster; of excess population density; of excess building coverage of land; of inadequate parks and playgrounds; of traffic congestion; of hazards to the public safety, and many of the other objectives of the Comprehensive Municipal Plan.

It is stated in Section 2 of Housing Bill No. 331 ". . . that in cities of the State, substandard and insanitary areas exist which have resulted from inadequate planning, excessive land coverage, lack of proper light, air, and open space, defective design and arrangement of buildings, lack of proper sanitary facilities, and the existence of buildings which by reason of age, obsolescence, inadequate or outmoded design, or physical deterioration have become economic or social liabilities or both; that such conditions are prevalent in areas where substandard, insanitary, outworn or outmoded industrial, commercial or residential buildings prevail; that such conditions impair the economic value of large areas, infecting them with economic blight; and that such areas are characterized by depreciated values, impaired investments, and reduced capacity to pay taxes; that such conditions are chiefly in areas which are so subdivided into small parcels in divided ownerships and frequently with defective titles that their assembly, for purposes of clearance, replanning, rehabilitation

and reconstruction, is difficult and costly; and that the existence of such conditions and the failure to clear, replan, rehabilitate, or reconstruct these areas results in a loss of population by the areas, and further deterioration accompanied by added costs to the communities for creation of new public facilities and services elsewhere; that it is difficult and uneconomic for individual owners independently to undertake to remedy such conditions; that it is desirable to encourage owners of the property or holders of claims thereon in such areas to join together and with outsiders incorporate groups for the purpose of the clearance, replanning, rehabilitation, and reconstruction of such areas by joint action; that it is necessary to create, with proper safeguards, inducements, and opportunities for the employment of private investment and equity capital in the clearance, replanning, rehabilitation, and reconstruction of such areas; that such conditions require the employment of such capital on an investment rather than a speculative basis, allowing however the widest latitude in the amortization of any indebtedness created thereby; that such conditions further require the acquisition at fair prices of adequate areas, the gradual clearance of such areas through demolition of existing obsolete, inadequate, unsafe, and insanitary buildings, and the redevelopment of such areas under proper supervision with appropriate planning, land use, and construction policies; that the clearance, replanning, rehabilitation, and reconstruction of such areas on a large scale basis are necessary for the public welfare; that the clearance, replanning, reconstruction, and rehabilitation of such areas are public uses and purposes for which private property may be acquired; that such substandard and insanitary areas constitute a menace to the health, safety, morals, welfare, and reasonable comfort of the citizens of the state; that such conditions require the creation of the agencies, instrumentalities, and corporations hereinafter described which are hereby declared to be agencies and instrumentalities of the State for the purpose of attaining the end wherein recited; that the protection and promotion of the health, safety, morals, welfare, and reasonable comfort of the citizens of the State are matters of public concern, and the necessity in the public interest for provisions hereinafter enacted is hereby declared as a matter of legislative determination . . ."

Just as it has been recommended that the Lancaster City Planning Commission establish definite minimum subdivision regulation standards, so does Act No. 331 define certain minimum information pertaining to redevelopment plans to be required by the City Planning Commission and the supervising agencies, including:

a. A metes and bounds description of the development areas.
b. A description of the real property in the development area.
c. A statement of the various stages by which the development is proposed to be constructed or undertaken, and a time limit for the completion of each stage.
d. A statement of the existing buildings or improvements in the development area to be demolished immediately.
e. A statement of the existing buildings or improvements in the development area not to be demolished immediately.
f. A statement of the proposed improvements, if any, to each building not to be demolished immediately.
g. A statement of type, number, and character of each new industrial, commercial, residential, or other building or improvement to be erected or made.
h. A statement of those portions, if any, of the development area which may be permitted or will be required to be left as open spaces, the use to which each such open space is to be put, the period of time each such open space will be required to remain an open space and the manner in which it will be improved and maintained, if at all.
i. A statement of those portions, if any, of the development area which the

redevelopment corporation proposes to sell, donate, exchange or lease to, with, or from the city and the outline of the terms thereof.

j. A statement of the proposed changes, if any, in zoning ordinance or maps necessary or desirable for the redevelopment and its protection against blighting influences.
k. A statement of the proposed changes, if any, in streets or street levels and any proposed street closings.
l. A statement of the character of the existing dwelling units, if any, in the development area, the approximate number of families residing therein, together with a schedule of the rentals being paid by them and a schedule of the vacancies in such accommodations together with rental demand therefore.
m. A statement of the character, approximate number of units, approximate rentals, and approximate date of availability of the proposed dwelling units to be furnished during construction and upon completion of the development.
n. A statement of the proposed method of financing the development.
o. A statement of persons who it is proposed will be active in or associated with the management with the redevelopment corporation during the period of at least one year from the date of approval of the development plan.

Application of the preceding minimum information to the study for redevelopment of four typical substandard residential blocks (Figure 36) is easily made, as follows:

a. The metes and bounds description can be easily secured.
b. A description of the real property can be readily secured.
c. A statement of the stages of redevelopment of the four-block area would be prepared by the redevelopment corporation, and the architects and engineers.
d. There are 170 residential structures in the four-block area, all of which are substandard and would be demolished.
e. Three existing buildings should be retained, namely: Crispus Attucks Recreation Center, the Mennonite Church, and the Elks Club.
f. Certain improvements are indicated for the Crispus Attucks Recreation Center and for the church.
g. Nineteen new residential structures are proposed to house 151 families.
h. A description of the proposed open area adjacent to the church would be given.
i. Howard Avenue, which it is proposed to close, would probably be leased from the city and would be described in this paragraph.
j. The proposed zoning ordinance has been drawn to conform with the recommendations for these four blocks.
k. Widenings for the boundary streets and closing of Howard Avenue would be described in this paragraph.
l. The character of existing dwellings and the schedule of rentals is available in general from the report of the Committee on Housing for Colored People. The four blocks now house 191 families and 692 persons with a density of 161 per persons per residential acre.
m. Suggestions are given in Figure 37 for the character of dwelling units. The suggested development will provide for 151 families and 520 persons. Rentals and date of completion must be given further study by the local sponsors.
n. Methods of financing must be given detail study, and must take advantage of recent and forthcoming legislation. The number of dwelling units and the cost per unit would be basic considerations, along with land costs.

In Allegheny County, where extensive low rent housing has been built, the average development cost per dwelling unit in a typical project was $5,390. There are 4¾ rooms in the average unit. Rentals for these dwellings in

Allegheny County, based on income of the occupants, vary from $32.50 to $38.50 per month.

The act provides that no development shall be initiated until certificates of approval of the development plan thereof shall have been issued by both the Planning Commission and the supervising agency.

The Planning Commission must hold public hearings on the development plan and must determine:

a. That the area within which the development area is included is substandard or insanitary, and that the redevelopment of the development area is necessary or advisable to effectuate the public purpose described in Section 2 of the act.
b. That the development plan is in accord with the Master Plan of the city.
c. That the development area is not less than 100,000 square feet in area or of sufficient size to allow its redevelopment in an efficient, economic, and satisfactory manner and to contribute substantially to the improvement of the area in which the development is located.
d. That the various stages by which the development is proposed to be constructed or undertaken are practicable and in the public interest.
e. That public facilities including but not limited to school, fire, police, transportation, park, playground, and recreation are presently adequate or will be adequate at the time that the development is ready for use.
f. That the proposed changes in the city map in zoning ordinances or maps and in streets and street levels or any proposed street closings are necessary or desirable for the development and its protection against blighting influences and for the city as a whole.
g. That there will be available for occupation by families then occupying dwelling accommodations in the development area legal accommodations at substantially similar rentals in the development area or elsewhere in a suitable location in the city, and that the carrying into effect of the development plan will not cause undue hardship to such families.

The Comprehensive Municipal Plan, and particularly this section thereof on housing, thoroughly analyzes and describes the factors which must be determined by the Planning Commission.

The importance of an active Planning Commission with competent membership must be evident from the list of responsibilities which have been outlined.

The supervising agency is likewise important to the success of the urban redevelopment program. The City Council is authorized by Act No. 331 to provide for appointment of the chief financial officer of the city or some other official or agency as the person or body to exercise the powers and perform the duties held by or incumbent upon a supervising agency. He may approve a development plan and issue a certificate of approval thereof after the Planning Commission has given its approval.

The State Board of Housing and the local housing authority are authorized to render such advisory services in connection with the preliminary surveys, studies, and preparation of a development plan as may be requested by a redevelopment corporation or the City Planning Commission.

A redevelopment corporation may be formed by three or more persons on making, subscribing, acknowledging, and filing in the Department of State a certificate pursuant to article 2 of the Business Corporation Law. The certificate shall contain a declaration that the redevelopment corporation has

been organized to serve a public purpose and that it will be subject to proper supervision and control.

The redevelopment corporation may acquire real property by gift, grant, lease, purchase, or otherwise and may institute condemnation proceedings to acquire real estate as provided for in the condemnation law.

According to a recent decision of the Illinois Supreme Court, the power of eminent domain may legally be used to acquire urban land for private rebuilding. As ruled by the court, this use is a public purpose even if public controls cease when the development is finished. Favorable judicial precedent is, therefore, established for similar cases in Pennsylvania.

Redevelopment acts providing for slum clearance and redevelopment by private companies have been passed in Illinois, Indiana, Kansas, Kentucky, Maryland, Michigan, Missouri, New Jersey, New York, and Wisconsin.

Legislation now pending in Washington is concerned with a new National Housing Subsidy Program for slum clearance and redevelopment. Annual subsidies of $110,000,000 are proposed for various housing purposes. In the first three years after the war it is proposed to implement the programs of 400 cities for investment of $1,000,000,000 in low rent public housing, and various amendments to present regulations are proposed under which local housing authorities would be able to obtain 100 per cent private financing of all their projects.

Drafted in the form of amendments of the National Housing Act, the proposals include continuance of the $28,000,000 subsidy or "annual contribution" of the Federal Government to keep rents low in public housing; an additional $28,000,000 subsidy for projected postwar housing contributions; $35,000,000 aid for the rehabilitation of structurally sound urban housing and for rural slum clearance; and $25,000,000 annually as aid to cities in the new urban redevelopment projects in which private builders would participate.

One of the most important features of the bill would provide federal subsidies for the redevelopment of large substandard areas in cities. A municipality, acting in conjunction with its housing authority, would be able to purchase slum districts, tear down the old buildings, replan and rezone the area, use part of it for parks, playgrounds, schools, libraries, hospitals, and other suitable buildings; arrange with its housing authority for erection of apartments and adjacent land to rehouse the families that may be displaced; and then sell or lease the balance of the replanned site for private development under proper restrictions and liberal city suprvision for dwellings, stores, industrial establishments, or whatever other structures may be deemed feasible and acceptable for the new neighborhood.

To interest private industry in the projects, and to permit private capital to realize an adequate return, the land cost would be "written down" for the purchaser and the loss to the city would be made up to it in the form of a federal subsidy. Heretofore, the comparatively high land costs in slum districts has been a major deterrent to private reconstruction jobs.

One of the first plans for securing federal aid in rebuilding the blighted areas was formulated by Guy Greer of Fortune Magazine and Professor Alvin H. Hansen of Harvard University. The Greer-Hansen plan provides that, for any city which had been granted power to acquire blighted land by condemnation and which had produced a satisfactory master plan, the federal gov-

ernment would be asked to advance a substantial part or all of the funds necessary to acquire the blighted areas, such loans to be repaid so far as possible out of subsequent proceeds from the use of the land. This plan contemplates that after the slum areas had thus been acquired by the cities through federal loans, the land would be leased to private developers at its economic value. It would not be necessary for the municipalities to repay the federal loans in full if the returns from the redevelopment projects did not permit it. As the authors of the plan state, "The Federal Government might be compelled to assume a considerable part of the burden of paying for the past errors of the cities and towns—e.g., for their inability to foresee and plan for the economic and social effects of the advent of the automobile and the airplane, for the bad judgment exercised by people and institutions in buying or lending money on land, and probably to some extent for the results of greed and even crookedness on the part of individuals." In other words, under this plan, a subsidy would be paid by the federal government, if necessary, to write off the difference between the cost of acquiring blighted area sites and their value for redevelopment projects.

A very similar plan has been proposed by the Urban Land Institute, an agency affiliated with the National Association of Real Estate Boards. This plan suggests the creation of a Federal Urban Commission for acquiring land in the blighted areas. The Urban Land Institute favors selling as well as leasing the land so acquired to private redevelopment corporations, which would be required to rebuild these areas in accordance with the Master Plan of the city.

The Federal Housing Administration sponsored a plan for rebuilding the slums in which a city realty corporation, an instrumentality of the municipality, would be the sole agency to acquire and dispose of lands for large-scale redevelopments.

The publication of these various plans and the widespread interest they evoked among realtors, architects, builders, city planners, and housing officials has led to the introduction in Congress of two bills designed to secure federal aid for slum clearance.

The first of these bills, introduced by Senator Thomas of Utah provides for the establishment of a separate federal authority to be known as the Urban Redevelopment Agency with power to make advances to municipalities for the acquisition of real property for redevelopment. The municipality receiving this loan would be obligated to repay it, together with interest at the rate of two per cent per annum, but the debentures issued by the municipality to secure these advances would not be required to be secured by its general credit but would be payable from the rentals received from redevelopment projects. The federal advances may be made only to those cities which have planning agencies and whose Master Plans include plans for future major thoroughfares, plans for future residential, industrial, commercial, and recreational land uses and estimates of future population growth and the amount of land required to provide for it. The Thomas bill proposes an appropriation of $150,000,000 of which not more than $50,000,000 is to be expended before the end of the first fiscal year.

Another bill, introduced by Senator Wagner of New York at the request of the Urban Land Institute, while having the same main objective as the

Thomas bill, differs from it in a number of important particulars. Instead of proposing to create a separate federal agency, it provides that the authority to make loans to cities or the appropriate instrumentalities of cities be given to the National Housing Agency. The advance so made to the city is to be secured by a direct lien upon the land acquired, and not merely by debentures based on the rents from redevelopment projects. The eligibility of the city for a loan depends upon its having a development plan which is acceptable to the Administrator of the National Housing Agency, but the specific elements stipulated for a Master Plan in the Thomas bill are not required. An appropriation of one billion dollars is proposed for the (first) fiscal year.

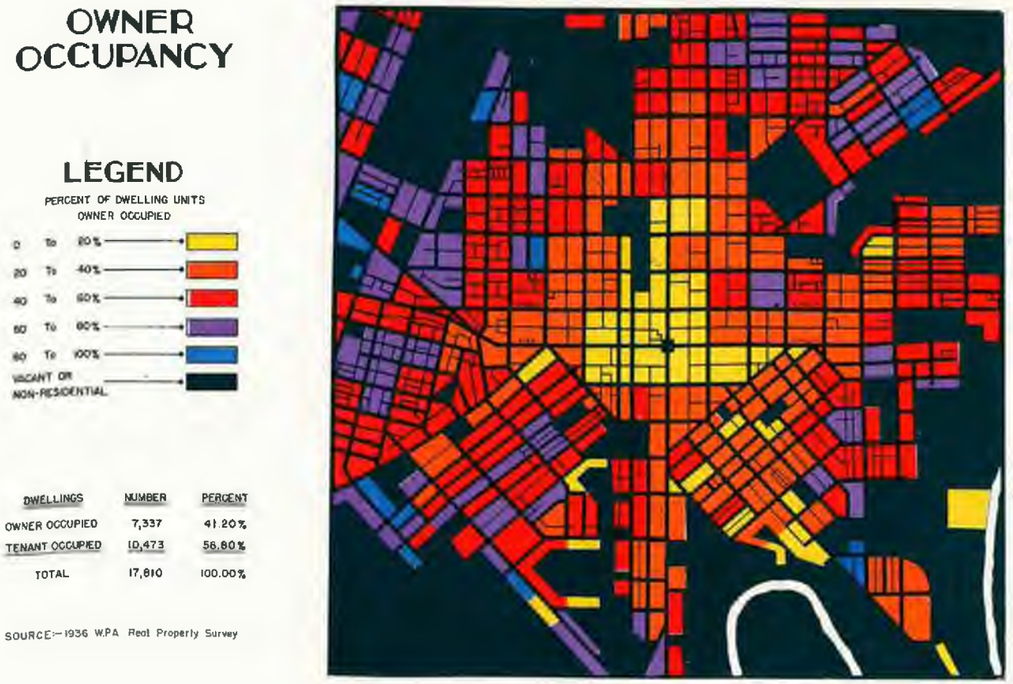


Figure 40.

In the light of past and pending legislation, it seems logical to expect that Lancaster will soon be empowered to proceed with slum clearance and redevelopment. When so empowered, a Lancaster Redevelopment Corporation should be created. If federal legislation now pending is enacted into law, federal funds will be available for subsidizing land costs to private redeveloping capital, and also to subsidize city tax losses which may occur through redevelopment.

By Act of the Pennsylvania General Assembly, No. 317, authorization has already been granted to cities of the third class to proceed with public

sale of tax delinquent property and tax liened property. The present assessed valuation of the city is $91,023,450. City tax liens and delinquent taxes without accrued interest have accumulated to a total of $36,827 in the 23 years since all tax liens were deleted from the record. An inspection of Figure 40, "Per Cent of Dwelling Units Owner-Occupied," will show that 58.80 per cent of the total city dwellings are tenant occupied, and that the percentage of tenancy in the blighted areas is very much higher. Such data indicate that redevelopment projects in the blighted areas in Lancaster may be designed primarily for tenant use. Adequate provision should be made, however, to allow for the purchase of individual dwelling units by private individuals who may so desire.

With financial aid from the federal level, with legislation aid from the state level, with this Comprehensive Municipal Plan for a guide and a beacon, Lancaster must now exercise initiative and determination to rehouse its people in healthful, attractive homes.

The School System

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The School System

INTRODUCTION

THIS STUDY of the Lancaster City Schools is concerned with the school age population and trend thereof; the school locations; and the physical plant of each school. Although the major emphasis in the study has been placed on the public schools within the present municipal boundary, which boundary also defines the limits of the Lancaster School District, parochial, and private schools in the entire Lancaster urban area were investigated and are given recognition for the educational opportunities which they provide.

In gathering facts about the city schools, study has been made also of the township schools which are situated in the immediate environs of Lancaster City. Additional study of the adjacent township schools will be necessary in the event of annexation in the future. It is considered, however, that the system recommended for the present Lancaster School District is the logical core of an expanded system which would serve greater Lancaster. Inasmuch as school district revision does not necessarily accompany municipal annexation, this study covers primarily the existing school district in the existing city.

The physical plant of the Lancaster School District consists of 18 public schools: 15 elementary schools, two junior high schools, and one senior high school. The school system is under the direction of the nine member Lancaster School Board. The administration of the public schools is vested in the superintendent of schools; eight supervisors and directors assist the superintendent in administration of the school program.

Teaching services were provided during the 1943–44 terms as follows:

9	kindergarten teachers for	354 pupils
137	elementary school teachers for	4,052 pupils
83	junior high school teachers for	2,020 pupils
73	senior high school teachers for	1,582 pupils
9	special class teachers for	129 pupils

A staff of 12 teachers also gave instruction in evening school courses.

Annual expenditure of one and a quarter million dollars for the school district indicates the magnitude of the operation. Of this amount, over one-half is spent on instruction, eight and one-half per cent on operation and maintenance of plant, and a third on debt service. The latter figure is unfortunately high.

The proposed school system is based upon a total population of 65,000 people within the present city limits. Although the future building program is based upon normal economic conditions, portions of it might be advanced during depression years when labor is abundant.

It is not within the scope of this survey to evaluate the cultural phase of the public school system. The Harvard University Graduate School of Education made such analysis in 1924, and many of the recommendations contained therein have been followed. The Pennsylvania Department of Public Instruction also co-operated to the extent of providing periodic syllabuses on the modern improvements in public education and in offering consultation services upon request. The office of the Superintendent of Schools conducts frequent surveys of its own for improvement of the curricula and methods of instruction.

It is suggested that full consideration be given to the need for more emphasis upon adult part-time education as a public responsibility and for recognition of the responsibility of the public schools for reorientation of the young war veterans who will return to civilian life.

SCHOOL POPULATION ANALYSIS

School Enumerations. The basic study of the school age population of Lancaster was approached through examination of total enrollments by grades for each year from 1930 to 1944, inclusive. A further breakdown of the 1944 statistics showed enrollment by grade and school, number of special students (orthogenic), number of teachers, and night school enrollments. Enrollments for 1944 were also obtained from the Catholic and private schools.

The School District Attendance Officer makes an annual school enumeration. During each summer a house-to-house canvass is made to record pertinent facts about each child in the city between the ages of five and a half and seventeen years. Each child is listed by name, age, and residence, and is assigned a code number indicating his eligibility or responsibility to attend public school in the fall of the current year. Through study of these statistics, the total number of school age children and their eligibility for public school is obtained.

Figure 41 shows 1940 and 1944 school enumerations graphically. In spite of an increase in the total population of the city from 61,345 in 1940 to 65,134 (estimated) in 1944, the number of school age children dropped from 10,893 to 9,717. This decline is a direct result of two factors: (1) a birth rate declining faster than the total population gains for the same period, resulting in fewer children; and (2) loss of child population through migration to the suburban areas.

Study of the chart shows that in 1940, 77.6 per cent of the total children enumerated attended public schools, .9 per cent attended private schools other than Catholic, 17.2 per cent attended Catholic schools, and 4.3 per cent were exempt from school attendance. It is believed that 1940 may be accepted as representative of peacetime conditions, and interesting comparisons may be drawn with the 1944 wartime figures. In 1944, private and Catholic school percentages remained about the same as in 1940, but 7.7 per cent of the children were exempt from school as against 4.3 per cent in 1940. The breakdown reveals that this sudden increase in exemptions is due to the fact that last year 464 children, at the age of 16 or over, from the junior and senior high schools quit school to work (with permission of school authorities), as compared to 180 exempt students in 1940. Another way of realizing the current

situation is by noting that in 1940–41, 81.1 per cent of the junior high school age children attended junior high schools and 69.8 per cent of the high school age children attended public senior high schools, whereas in 1944–45 only 77.7 per cent of the junior high school age children are attending public junior high schools and only 59.0 per cent of the senior high school age children are attending public senior high schools, a decline of 3.4 per cent and 10.8 per cent, respectively.

Evidently the Catholic and private junior high and senior high school

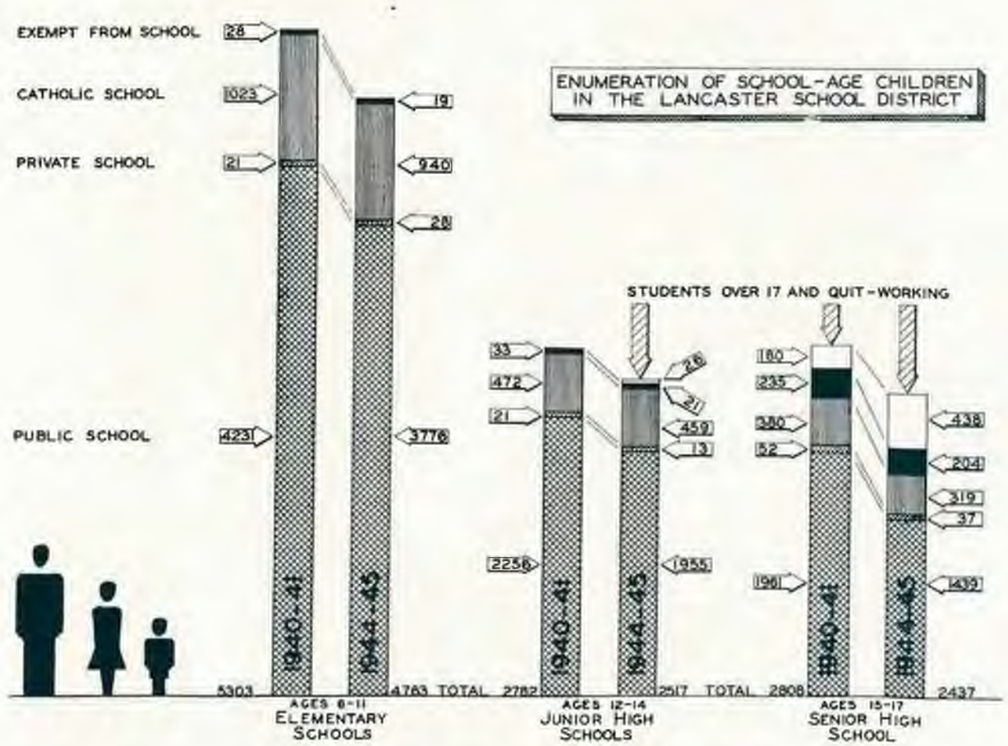


Figure 41.

children are staying closer to their books, for in the same period the percentage attending these schools did not appreciably decrease. As enumeration is not made beyond age 17, the Selective Service draft has not been a factor in these changes.

Study of enrollments reveals the recent trends in school attendance. Of the years since 1930, the highest elementary school enrollment was recorded in 1931, with a steady decline to 1943 and with an unappreciable gain in 1944. The junior high schools show the high enrollment year to be 1936 with a steady decline, except for one year, to the current year. The senior high school

peak was recorded in 1939, with a steady decline during succeeding years. The population during the 30's stayed fundamentally stationary; therefore, these enrollment figures gain significance by showing the steadily decreasing proportion of children and young people in the city's population. Later discussion in prognosticating future needs will clarify the school age population trends.

Future School Population—Elementary. Preliminary to planning the ultimate elementary school system, it was necessary to determine the number of elementary school age children to be accommodated in future years. Two graphs have been prepared with data of previous years to portray the current situation. The variants have been projected into the future on the basis of expected trends and with calculations made from actual births in past years.

Figure 9 is the basic population graph. It shows the total city population, the birth and death rates per thousand, and the total births per year from 1920 to 1944. The lines denoting birth rate and death rate per thousand are projected to the year 1980 where they converge. The population, therefore, would stabilize after 1980 if there were a net balance of migration for the same period.

Land use and population analyses of the city emphasize the current high population density and indicate that continued population increase within the four square miles will be unlikely and undesirable. The population of the city increased by only 1,396 persons between 1930 and 1940, in spite of the net gain of births over deaths. It is thus evident that there was a steady population loss by out-migration from the city in the 1930's. Many new suburban subdivisions were started in that period and are now well under way. The period from 1940 to 1944 has evidenced a sudden influx of population into the city, due to the demands of war industries for labor. The increase in the population of Lancaster since 1940 is the result of abnormal war conditions. It is to be expected that at the end of the war a tapering off of population growth within the city will begin and will gather momentum as residential building in the suburban area increases.

As indicated graphically, the declining birth rate and increasing death rate per thousand population are expected to converge about 1980. Except for migration, therefore, the population may be expected to grow at a constantly diminishing rate, leveling off finally about 1980.

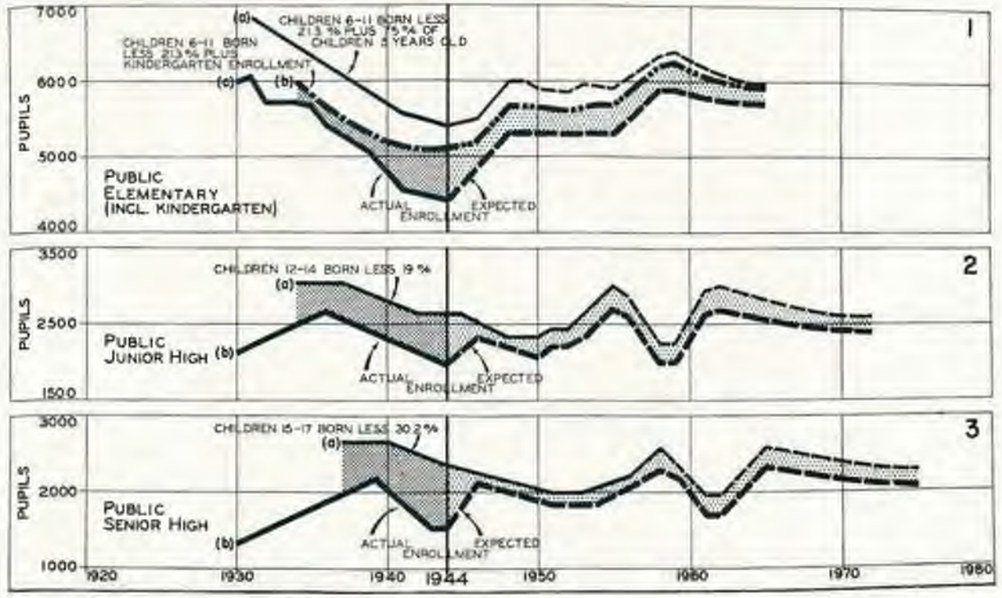
It has been assumed, however, in prognostications for Lancaster, that the prewar trend of migration to the suburbs will continue and that zoning regulations will encourage net density reduction and a stabilizing population.

In planning a school system for the Lancaster School District we may consider approximately the same total population which now exists. The planning is premised on continuation of the present four square mile city and school district boundary. Some problems to be considered in the event of possible future mergers with or annexations of certain adjacent school districts will be discussed later in this section. Having estimated the expected future population and birth rates for Lancaster, it is possible to estimate the number of births which may be expected annually.

Figure 42 shows the total number of children who, according to date of birth, should attend the public schools of the city. It also shows the actual school enrollments from 1930 to 1944; and the expected school enrollments

for the next 20 years. These data are shown for each of the three public school groups, namely elementary, junior high, and high school.

The first section of Figure 42 shows the number of elementary school children and enrollments, including kindergarten. Line (a) was derived by adding together the births six, seven, eight, nine, ten and eleven years previous to date, deducting therefrom the number of child fatalities which may be expected for that period; deducting, also, 21.3 per cent for the elementary school age children who are exempt from public school attendance; and adding, finally, 75 per cent of the children born five years previous as the maximum percentage of kindergarten age children who will attend kindergarten. The resultant



ACTUAL AND EXPECTED ELIGIBLE AND ACTUAL AND EXPECTED ENROLLED CHILDREN IN ELEMENTARY [INCLUDING KINDERGARTEN], JUNIOR HIGH, AND SENIOR HIGH SCHOOLS IN LANCASTER SCHOOL DISTRICT.....

Figure 42.

figure is the total number of children who could reasonably be expected to attend the public schools.

Line (b) includes the same number of elementary school age children, but it includes only the actual kindergarten enrollment. It will be noticed that this second line gradually converges with the first, for kindergarten attendance is gradually increasing.

Line (c) shows the actual elementary school enrollment, including kindergarten. As must be expected, actual enrollment is considerably lower than potential enrollments as represented by lines (a) and (b). Expected enrollments were computed by deducting from line (b) the number of children who

may be expected to migrate to the suburbs. The number of migrating children was estimated at nine per cent of the migrating population, this being the approximate percentage of elementary school age children in the population.

The highest expected elementary school enrollment is 5,900 children in 1958–59. This peak will result from the high birth rate which may be expected at the close of the war. After these peak years, the school enrollment will decline to about 5,700 due to the leveling off of the birth and death rates.

Future School Population—Junior High School. The second section of Figure 42 shows the number and enrollments of junior high school age children in the Lancaster City School District. Line (a) was derived by adding together the births 12, 13 and 14 years previous to date; deducting therefrom the number of expected fatalities for that period; deducting, also, 19 per cent for the junior high school age children who are exempt from public school attendance.

Line (b) shows the actual and expected junior high school enrollment. The expected enrollment after 1944 was computed by deducting from line (a) the number of children eligible for junior high school, but who may be expected to migrate. It is expected that peaks in junior high school enrollment will be reached in 1955 and 1962, with maximum enrollments, during those years, of about 2,700.

Future School Population—Senior High School. The third section of Figure 42 shows the number and enrollments of senior high school age children in the Lancaster City School District. Line (a) was derived by adding together the births 15, 16 and 17 years previous to date; deducting therefrom the number of expected fatalities for that period; deducting, also, 30.2 per cent for the senior high school age children who are exempt from public school attendance.

Line (b) shows the actual senior high school enrollment to 1944, and the expected enrollment thereafter. The expected senior high enrollment after 1944 was computed by deducting from the eligible children 4½ per cent of the expected net migration representing the net, eligible high school age migrants. It is expected that peaks in senior high school enrollment will be reached in 1958–59 and in 1964–65.

PUBLIC SCHOOL SYSTEM

Before presenting the requirements and recommendations for the ultimate elementary school system for the City of Lancaster, the following comments are made regarding the features considered desirable for modern school buildings.

School System Design Criteria. Probably the most progressive move in recent years has been the rapidly increasing recognition that a school building should be utilized as a community center; that to pull the shades, wash the blackboards, and lock up at four o'clock is wasteful of a public facility which might be utilized after school hours as a community center for adult education and recreation, concert and club meetings. Through recognition in the design of the possibilities inherent in a flexible school plan much more use may be made of such structures in the future.

Another development in the technique of public education in recent years

has been the realization that school children are individuals and that regimentation and standardization of teaching methods do not always result in the best development of character. Provision of rooms with flexible seating arrangements, oftentimes with movable partitions, makes adaptation to a more individualistic curriculum possible.

Although the school laws do not require provision of kindergarten or "pre-school" instruction for children under six years of age, it is commonly believed that such schooling is highly desirable. The question as to how soon the child should leave the home for a major part of his character molding is still much debated. There are many arguments pro and con. Nevertheless, kindergartens for five year old children acquaint small children with the school environment and group living, and is widely accepted as a worthy adjunct to the elementary school. Many parents like to have their children attend and benefit from "pre-school" training. The current need for nursery schools to care for children of working mothers will undoubtedly abate at the end of the war. In schools with flexible plans, however, future emergencies such as exist at the present time could be met.

Most of the existing elementary schools in the Lancaster School District are 8 or 12 room buildings which, figuring on the basis of the generally accepted modern standard of 35 pupils per average classroom, accommodate 280 or 420 pupils. Modern studies of school economy and efficiency point to the desirability of building larger schools accommodating up to 1,000 students. Larger schools can offer broader curricula at greater economy. Special studies ordinarily limited to but a few schools in the existing system, or perhaps not taught at all, can be economically offered in each school building in a modern system. Overlapping of teacher responsibilities becomes a minor problem in a larger school. The entire school system administration can be simplified when it is composed of fewer, though larger, elements.

The provision of adequate playground space per pupil is much more economical in land utilization when provided in large units. Standards of playground requirements show that when provided in larger units the ratio of users to acreage may be higher. It is evident that in any playground tract there is considerable non-usable space on the perimeter; usually too, the topography renders some part unsatisfactory. In the acquisition of large tracts the proportion of such perimetrical waste space is reduced, and grading for the improvement of topographically unfit sections becomes feasible. Fencing is an important factor in all playgrounds, although often neglected because of expense. Large tracts of land are fenced at lower costs per acre.

In considering school locations, one of the first principles is that of placing the school within one half mile of the homes of elementary school pupils, within one mile of junior high school pupils, and within one and one half miles of senior high school pupils. These are accepted standards governing school building locations as recommended by the United States Bureau of Education and other official and semi-official agencies. Although these distances cannot be rigidly followed, they are a yardstick for initial study.

Another important factor in locating schools is the pattern of traffic arteries. Even with cooperation from the police and the use of school traffic patrols, it is hazardous to arrange school districts so that children must cross busy streets several times a day.

It is recognized that school district boundaries must be flexible due to unforeseen population shifts. Many expedients have been adopted to keep pace with such population changes. In some cities children have been transported daily by taxicab to and from distant schools. Sometimes portable classrooms have been utilized to augment overcrowded facilities in a district for a few years. Such makeshifts are to be avoided if at all possible. The simplest solution, and the one most frequently practiced, is merely to change the school district boundary, shifting children from the overcrowded school to an adjacent school which can accommodate them. This expedient may cause changes which are contrary to the principles of maximum walking distance and traffic artery hazards. In addition, the advantages of neighborhood unity may be nullified by frequent school district boundary changes. Continuous long range planning is the safest preventive measure.

An architect should be selected who is thoroughly familiar with school building design and with fitting the school to the complete needs of the neighborhood. There are many excellent school architects who will conscientiously propose designs which will provide the most modern, progressive, and economical building suited specifically to the particular location and problems. Too often a less competent man is chosen because of his political connections or just because he is a local man.

In general, school buildings should utilize the most modern but thoroughly tested and approved building materials to provide low maintenance cost, complete fire prevention, healthful heating and ventilating systems, daylighting and eye-saving artificial lighting, acoustical classroom treatment, and sanitary conditions throughout. Modern buildings in other than large cities should consist of only one floor if possible, with never more than two. School layouts should be flexible, to allow ease of adaptation to unpredictable population shifts and to meet the needs of changing curricula. Gymnasiums, auditoriums, cafeterias and even swimming pools are rapidly becoming accepted as essential facilities even for elementary schools.

As stated previously, the school and grounds should be considered as a community center—only one of its uses being for education of children five days weekly—six or seven hours per day. If so designed, the school can become an important factor in the development of a closely knit neighborhood, educating people in the use of their leisure time and helping to prevent delinquency. The buildings and grounds should present an inviting, cheerful and refined appearance, and should reflect their usefulness as a community center.

Existing School Facilities. The schools within and near Lancaster, number of classrooms, number of grades accommodated, 1944 enrollment and size of play space are shown on Table 5. School districts and existing schools are shown on Figure 43. (See Map Section.)

Through study of these data it will be seen that most of the public elementary school buildings are old. Only three elementary buildings are less than 20 years old, only four are between 21 and 45 years old and eight are over 46 years old. The oldest school now in use was built 64 years ago. No set standards can be adopted which will measure the age at which a school building is no longer useful. Studies of school plants in other cities have set the lifetime of buildings at from 25 to 75 years. Obviously much depends upon

the maintenance that the buildings receive through the years and the amount of modernization which has been done on the old structures. It is considered, however, that about 40 years of service brings a school to old age.

In 1924 the Harvard University Graduate School of Education prepared a survey of the Lancaster School System. In evaluating the elementary school plant, the report stated that Lancaster has old buildings which do not conform to modern standards in most of the essential elements: safety to life, healthfulness, flexibility, expansiveness, adaption to educational needs and economy. Extensive repairs, including changes in heating apparatus, have been made within the last year. In spite of such changes, however, all of the buildings except the Ross, Rockland Street (Higbee), and Fremont Street (Lafayette) schools are old buildings with such fundamental defects that they cannot be remedied except at undue expense. Even if large sums were spent on pro-

Figure 44. Good education needs planned schools.

viding fire-resistive stair towers, modern toilets, and better lighting, they would not warrant the expenditures as they would still be old buildings. The School Board heeded the Harvard criticisms to the extent of eliminating five of the old buildings (Walnut Street, Chestnut Street, James Street, Mulberry Street and Franklin Street). During the past 20 years the School Board also took steps to improve some of the old buildings by installing new toilets and fire escapes, and in the case of the Eichholtz School thoroughly rebuilding the structure. However, school structures still standing (10 out of a total of 18), which were old in 1924 are now 20 years older. Condemnation of these same buildings was reiterated by the Department of Public Instruction in their 1933 survey.

Two elementary schools have been built since the Harvard survey, namely, the James Wickersham School and the George Washington School. The Wickersham School, built in 1927, is a 15 classroom structure of modern fireproof

construction. The George Washington School, built in 1933, is a 22 classroom structure of modern fireproof construction.

The construction of the new McCaskey Senior High School made the Fulton and the Stevens buildings, formerly used as high schools, available for elementary school use. The Stevens School is 40 years old and has a third story auditorium with inadequate fire escapes. The Fulton School, 26 years old, has been modernized recently in the interior. The new junior high schools, Edward Hand and John Reynolds, now house the 7th and 8th grades which were formerly housed in the elementary schools under the old 8-4 system. It has been possible, therefore, to eliminate five of the older buildings.

The existing older elementary schools are of the traditional 8 and 12 room size and type. They are severely rectangular in shape, placed on inadequate lots with expansion practically out of the question. Many are three stories

Figure 45. A wasted school playground.

high. The third floors are no longer used, for third story classrooms are now uniformly considered unsafe in a non-fireproof building, even with fire escapes. The newer Washington and Wickersham schools have been designed to provide progressive educational facilities, up-to-date sanitary fixtures, classrooms conducive to school enjoyment and study, and flexible plans offering chances to accommodate curriculum variation. These buildings have aesthetic appeal and have ample playground space.

The 15 buildings in the present elementary system cover the city area in a fairly uniform pattern. Children do not in many cases have to walk more than one half mile to school, nor do many of them have to cross main traffic arteries. However, due to the steadily decreasing enrollments of the past 15 years, rooms have been closed in some buildings and school district lines have been changed from time to time.

The present situation is uneconomical for there are more schools than neces-

sary. They are all being operated, consequently, at a higher per capita cost than necessary, and most of them are so old that they require excessive maintenance expenditures. There is considerable overlapping of school districts as is shown by circles of one half mile radii scribed from the building locations.

Table 5 shows the inadequacy of play space provided around each of the older school buildings. Among the elementary schools only Washington, Wickersham and Lafayette have tracts which meet accepted standards of from two and one half to five acres for elementary school grounds.

TABLE 5

Existing School Facilities in Lancaster and Vicinity

Name	*Date Built*	*Number of Classrooms*	*Grades*	*1944 Enrollments*	*Play Areas (acres)*
Public Schools					
William Henry	1888	8	Orthogenic	119	.20
Adam Reigart	1895	8	1–4	231	.40
James Wickersham	1927	15	K & 1–6	348	3.50
R. K. Buehrle	1895	8	1–6	212	.25
C. Elvin Haupt	1880	12	1–6	237	.50
George Ross	1924	18	K & 1–6	383	.75
Thomas Wharton	1895	8	K & 1–6	168	.50
Thaddeus Stevens	1904	25	1–6	349	.20
Thomas Mifflin	1895	8	K & 1–6	246	.50
Jacob Eichholtz	1888 ('24)	8	K & 1–6	197	.40
Lafayette	1902	12	K & 1–6	357	2.50
E. E. Higbee	1902	12	1–5	309	.80
George Washington	1933	22	K, 1–6 & Sp.	471	8.00
Robert Fulton	1918	37	K & 1–6	408	.20
Muhlenberg	1891	12	K & 1–3	105	.50
Reynolds Junior High	1924 ('28)	45	7–9	1003	5.00
Hand Junior High	1924 ('28)	42	7–9 & Sp.	952	8.00
McCaskey Senior High	1938	111	10–12 & P. G.	1548	30.00
Catholic Schools					
St. Anthony's	—	—	1–8	250*	1.00
St. Mary's	—	—	1–8	251	.25
St. Joseph's	—	—	1–8	485	.75
Sacred Heart	—	—	1–8	290*	.25
St. Anne's	—	—	1–6	166	.25
Catholic High	1930	15	9–12	459	3.80
Private Schools					
Sacred Heart Academy		10	K & 1–12	169	.50
Thaddeus Stevens Industrial School			9–12	108	7.00
Lancaster Country Day School		12	1–7	121	0.00
			9–12	144	
Lancaster Mennonite School		4	42 wks.—2 yrs.	120	
Lancaster Business College		5	18 months	65	
Bowman Technical School		17	4 years	680	54-acre campus
Franklin & Marshall College		Bldgs.	Liberal Arts		
Theological Seminary		4 Bldgs.	3 years Graduate	70*	4.5-acre campus
Lancaster County Schools (within urban fringe)					
Rohrerstown	—	4	1–8	111	—
M. J. Brecht	1929	13	1–6 & Sp.	316	6.00
Nathan Sheaffer	—	8	K & 1–6	247	4.50
Hambright	1935	4	1–6	111	.50
Burrowes	—	4	1–6	116	.75
Bausman	—	2	1–6	51	1.00
James Buchanan	1924 ('29)	17	1–9	412	7.00
Temperance Home School	—	2	1–6	70	.50

*Enrollment estimated.

Referring to the Pennsylvania School Laws, it becomes evident that only in the construction of new school buildings is the provision of playground space mandatory and even then the size and facilities are left to the discretion of the local board, for the law reads (Sec. 604) "No new school building shall hereafter be erected without a *proper* playground being provided therefor." It therefore devolves upon the local board members to determine the playground needs for the district served by a particular school, and to provide accordingly. As the present school laws were not written and put into effect until 1911 and as most of the older structures were built before that time, even that meagre law did not govern.

The older elementary schools in Lancaster are provided with what might be called "recess airing spaces," varying in size from as low at .20 acres to a maximum of .80 acres per school. The paved yards may assist in cleanliness and economical maintenance, but in no way invites free play by children nor attractive setting for the school.

The provision of "adequate" or "proper" playgrounds in the recommended elementary school system for the future will be discussed in more detail in a later portion of this report.

The general appearance of the public school buildings in Lancaster is good. The buildings and grounds reflect pride in their neatness and cleanliness. Even the old buildings show good maintenance in past years. The brick joints are well pointed, sash and other trim are painted, roofs, entrances and stonework all show that they have been well maintained. A few of the schools need trim repainting but the current labor shortage has deferred such work.

Proposed Public School System—Elementary. On the basis of the studies of expected elementary school enrollments in various sections of the city, and the studies of existing school plants, facilities and locations, proposed school system and neighborhood districts were outlined (see Figure 46, Map Section). Only seven school districts are proposed in the new elementary school system instead of the existing fourteen. As previously explained, this simplification would decrease costs of operation and maintenance and would aid in establishing more modern and complete educational practices. School Neighborhood District A is in the northwest corner of the city. It is proposed that a new building be erected in the vicinity of the southeast corner of Buchanan Park. On the basis of expected school population, this school should accommodate 950 elementary pupils. Location of the school in the corner of the existing large park would make a commodious site available where ample playground facilities can be provided.

The adjacent territory is intensively developed and consequently of high land value. There is very little vacant land other than Buchanan Park. The recommended half mile walking distance encloses nearly the entire area, excepting only a small part of the district south of Columbia Avenue. It is recommended that the city construct a pedestrian subway under Columbia Avenue at its intersection with West End Avenue to increase the safety of children attending the proposed school from the portion of the district south of Columbia Avenue. With the construction of this school and subway and another subway under Manor Street for the protection of children attend-

ing the proposed Lafayette School, it would become feasible to abandon the existing school district between Columbia Avenue and Manor Streets and would make possible the eventual razing of the 50-year-old Mifflin School.

The Wharton School, also 50 years old, could be razed upon construction of the new school in Buchanan Park. The Wharton School is severely limited in potential neighborhood service, being bounded on the north by the railroad, on the east by warehouses and on the west by Franklin and Marshall College.

School Neighborhood District B in the proposed system is bounded by the Harrisburg Pike, James, and Park Streets, and the north city line. The existing George Ross School is large enough to accommodate the expected elementary school population of 575. It is proposed, however, to acquire additional land in the rear of the school for expanded playground facilities. The properties fronting on the west side of Market Street and extending the width of the Ross School property are assessed at $7,200. Market Street should be closed from Ross Street north to the boundary of the Ross School property. This 25-foot right-of-way should be deeded to the School Board. Closing the street for this distance would effect no traffic difficulties for there would be egress through Ross Street to Prince Street. This acquisition would increase the Ross School playground to a total of one and a half acres. Buehrle School would be maintained in use until the new District E is created.

Due to its location in a remote corner of the district, bordered on one side by the city line and on another by an industrial zone, the full usefulness of the Ross School as a neighborhood center is limited. It is thought that when the school eventually becomes old and has to be rebuilt, consideration should be given to selection of a site near the center of the school district. At such time, the boundary between Districts B and E should be moved to the New Holland Pike. This is a radial major street, and crossing of it by school children is undesirable.

School Neighborhood District C is bounded by Districts A and B, and Prince, Conestoga and Filbert Streets. This district could be served adequately by the existing Robert Fulton School, accommodating the expected 650 pupils. Prince Street has been recognized as the busiest traffic artery in the city and no child should be required to cross it to attend school. No part of the district lies beyond the one half mile radius.

The existing Stevens School would not be needed in the new School District plan but would be maintained and operated until the new District D is established.

School Neighborhood District D is bounded by Prince Street on the west, Church Street on the southeast, Plum Street on the east and James Street on the north. This district is to be served by a new school to be located at the northwest corner of Orange and Shippen Streets, and to accommodate 800 pupils. This location is proposed because of its adjacence to the Musser property. It is hoped that this property, now held in trust for the City, will become a part of the City's playground system, and that by locating the new school next to it the acquisition of only a small school site will be required. Marion Street, a 14-foot alley, should be closed between the Musser tract and the new school property. With the construction of this new school, Stevens and Haupt schools, now 41 and 65 years old respectively, would no longer

be needed and could be razed. Muhlenberg School should be maintained to serve the area immediately to the southeast until new District F has been created. Nearly all of District D would be within one half mile of the new school; the sections beyond the half mile radius lie between Queen and Prince Streets and are areas proposed for commercial use, with little or no resident population.

School Neighborhood District E is in the northeast section of the City, north of East King Street, east of District D and southeast of District B. Enlargement of Wickersham School to accommodate 150 additional pupils would make it adequate to serve the future estimated school population for this district. The largest portion of the district outside of the one half mile school radius is occupied by the Lancaster Cemetery. With the creation of this district the 50 year old Buehrle and the 57 year old Henry School could be eliminated from the school system.

School Neighborhood District F is in the southeast corner of the City, south of East King Street, southeast of Church Street and east of South Prince Street. The district will be served by Washington School. This is a modern structure, a fine site, and, if expanded to accommodate 525 additional pupils, would serve this new district admirably.

Parts of the area of the new district lie beyond the one half mile radius: part is cemetery, part along Prince Street is recommended to be zoned as a commercial and industrial district, and the balance lies in the Fourth and Seventh wards where reduction in population density is proposed. Due to the excessive walking distance to Washington School and due also to marked differences in ethnic and economic backgrounds, it is possible that the Reigart School should be retained and rehabilitated to serve the elementary pupils who live beyond the one half mile circle from Washington School. While this retention of the Reigart School is mentioned as a possibility, it is not considered in the layout of school neighborhood districts nor in the financial program.

With the creation of District F, the 43 year old Higbee and the 53 year old Muhlenberg School would no longer be needed and could be razed. The Eichholtz School might be retained for a few of the succeeding years until redistribution of population becomes a reality.

School Neighborhood District G located in the southwest corner of the City, would be bounded by Districts A and C and South Prince Street. The 42 year old Lafayette School would be replaced by a new building on the same site to accommodate 900 pupils. The land immediately surrounding the present school lot is vacant and should be acquired for playground purposes. The balance of the block, bounded by Fairview, Pearl, St. Joseph, and Fremont Streets and totaling 4.2 acres, is assessed at about $46,700. Its addition to the existing property could provide an entirely adequate school site and playground of about 8.2 acres.

Land Use, Population and Housing studies show that the vacant land in this southwest corner of the city is ripe for residential development in single family, duplex and garden apartments. This development would make a large increase in the school population, and new school facilities would be necessary.

School Neighborhood District—Summary. The proposed elementary school system will be simple compared to the present 15 schools and districts. Elimination of ten of the oldest structures, which in 1960 would range in age

from 58 to 80 years, and the construction of three totally new buildings, will provide a modern, compact system of seven elementary schools. If the elementary school system as herein proposed is developed, in 1960 the age of the two oldest buildings would be 42 and 36 years; the older, however, having been modernized about 1935. There would be seven school plants to maintain instead of the fifteen of today. The individual plants would be larger, thus simplifying the problems of instruction and offering greater possibilities for variable curricula.

Proposed Public School System—Junior High. Figure 42 shows that enrollment peaks in the Junior High Schools of Lancaster will be reached in 1955 and 1962 with an enrollment of about 2,750. The existing Reynolds and Hand Junior High Schools, both built in 1924 and enlarged in 1938, have a combined normal capacity of about 2,500 pupils. It is expected that these two schools are adequate to handle the future enrollments inasmuch as in only two future periods will the expected number of pupils exceed that figure. These high enrollments will be a direct result of the greatly increased birth rates of the early war years and of the postwar years.

The two Junior High Schools are well situated to serve the City. The customary walking distance radii of one mile, when scribed from each building, nearly covers the entire city. The Reynolds Junior High School in the northwest quadrant of the City is situated on an inadequate site. It does not seem feasible, however, to recommend purchase of the remainder of the block, for the topography is not such as to make the additional land particularly usable as part of the existing unit. The total cost, also, would be excessive due to existing structures. The School Board owns an entire block in the extreme northwest corner of the City bounded by Clay, State, New Streets and President Avenue. This property is used as an athletic field by Reynolds Junior High School. It is a half mile distant, but provides the school with a total of five acres of land.

The Hand Junior High School is situated on an eight acre tract adjacent to the eight acre Washington School grounds. Adequate playfield area, therefore, is available for this Junior High School. Each Junior High School is located away from main traffic arteries and has good offscape views. The buildings are modern and provide excellent facilities for the Junior High School curricula.

Proposed Public School System—Senior High. Figure 42 shows that the expected enrollments in the Senior High School will exceed slightly the 2,200 designed capacity of the existing High School building at two future periods (1958–59 and 1964–65–66). The excesses are not considered serious for they amount to only 150 students. The McCaskey High School (Figure 47) was erected in 1938 and is an excellent structure which offers superior facilities for modern high school education. It is situated on a 30 acre tract of land near the northeast corner of the City. There are excellent facilities for outdoor physical education.

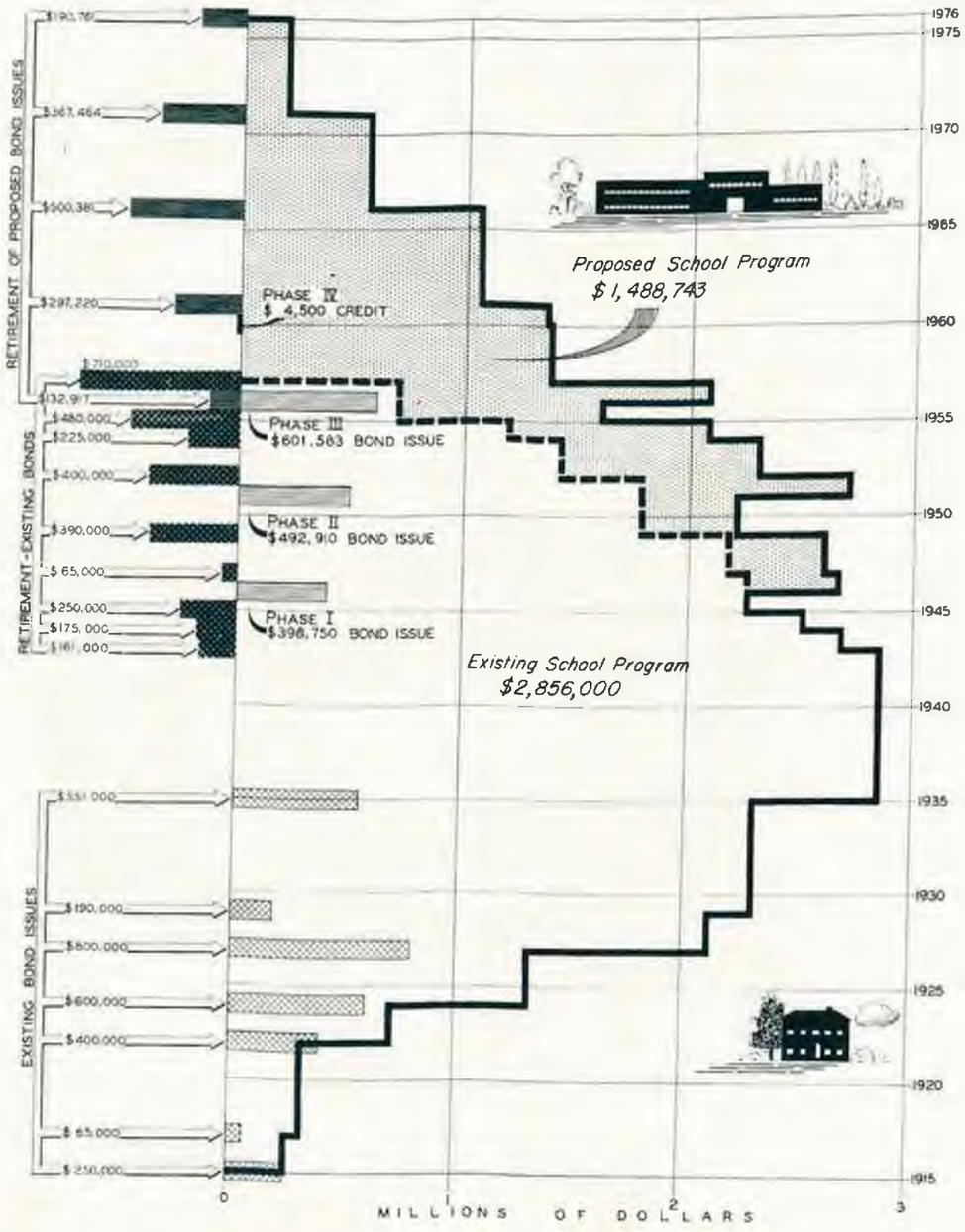
The School is farther than the mile and a half maximum desirable distance from a considerable portion of the high school population. In no case, however, does a student live over two miles from School. The building site on the east side of the City was selected because sufficient land was available

at a cost commensurate with the School Board's ability to pay. Other similar perimetrical locations were available but the School Board chose this one as best located to serve the densely populated sections of the City. It is felt that this selection was wise, for the students have been provided with excellent outdoor activity facilities which could not have been provided in a more central location. With the expected population shifts it is believed that an increasing proportion of the high school population will be located farther than a mile and a half from school. This probability is not considered serious, however, for the distance will in no case exceed two miles, and the advantages of the commodious high school tract more than balance the disadvantage of the extended traveling distance.

Figure 47. McCaskey High School provides facilities for good education.

Financing Proposed School Construction. Creation of the entire new school system at one time is not proposed. Different units of the existing system are not in an equal state of obsolescence, and immediate postwar financing to the extent of almost $1,500,000 for new schools is unnecessary. It is the purpose of this entire report, however, to point out the needs, their priority and to suggest a program and budget to meet the needs. McCaskey High and the two Junior High Schools are of recent construction, well located, and adequate as to space. The school construction program will, therefore, consist of revisions to the elementary school system.

Figure 48 depicts the bonded indebtedness of the Lancaster School District. It also shows how the proposed new system could be financed in four



FINANCING OF EXISTING AND PROPOSED CONSTRUCTION PROGRAMS
LANCASTER SCHOOL DISTRICT, 1915–1976

Figure 48.

phases without raising the tax rate, without causing the total indebtedness to rise in the future above past maxima, and without levying a per capita tax, unless sinking fund interests decrease so they are insufficient to meet current obligations. The graph shows the years of amortization of current indebtedness and the years in which the phases of new construction and new financing should take place.

The feasibility of a school rebuilding program of this magnitude may be questioned by some School Directors and taxpayers. To substantiate our conviction that the school system can be modernized without adding to the present tax burden, an analysis of the average annual debt service for the past five fiscal years and a 20 year estimate are shown on Table 6. The balance

Figure 49. Buehrle Elementary School—50-year-old structure on inadequate site.

is more than sufficient to meet the new issue of bonds necessary to cover the improvement program at the present tax rate.

The reduced plant maintenance costs will affect economy, particularly in the reduction of the janitorial, lighting and heating costs. The teaching staff may be reduced because of fewer, larger schools, without impairing the efficiency and effectiveness of the work. In the past, finances have not been too liquid by reason of the huge sums borrowed on short term loans. This method of financing should be discouraged. Plans and budgets should be made to build up a sufficient surplus to meet current operating expenses until such time as tax monies are available. It is expected that better rates of interest can be secured in the future by means of a planned, long-range program and budget.

TABLE 6

Average Annual Debt Service and 20 Year Estimate

SCHOOL DISTRICT OF LANCASTER

Amortization of Bonds and Interest Payments

Amortization of bonds and interest payments

Fiscal Year	*Amount*
1939–40	$ 504,657.21
1940–41	384,749.57
1941–42	434,453.11
1942–43	433,577.58
1943–44	419,063.50
5-year total	$2,176,500.97
5-year average annual obligation on debt service	$ 435.300.19

Bond Issue—Year	*1943–44 Interest*
1927	$ 28,400.00
1935	10,800.00
1924	20,250.00
1929	7,012.00
1915	10,000.00
1917	2,600.00
1922	2,250.00
1922	15,750.00
Total	$ 97,062.00
1943–44 interest on bonds	$ 97,062.00

Redemption of short term loans

Fiscal Year	*Principal*		
1939–40	$ 120,600.00		
1940–41	144,700.00		
1941–42	187,025.20		
1942–43	173,912.60		
1943–44	169,200.00		
5-year total	$ 795,437.80		
5-year annual average short term loan payments		159,087.56	
Average annual short term loan and bond interest payments			$ 256,149.56
Average annual obligations for amortization of bonds and for tax purposes			$ 179,150.63
Average annual obligation $179,150.63 × 20 years			$3,583,012.60
Bonded indebtedness (present)		$2,520,000.00	
Sinking fund assets:			
Cash and assets	$ 502,062.40		
Sinking fund receipts	248,212.33		
		750,274.73	
(Current bonded indebtedness) (Less cash and sinking fund)			1,769,675.27
Balance available to amortize new bond issue			$1,813,337.33

Source: Annual financial reports—1939–44 Manual, School District, Lancaster, Pa.

The Lancaster School District tax is less than in 12 comparable Second-Class School Districts as shown in Table 7.

TABLE 7

TAXATION FOR SCHOOL PURPOSES

In Thirteen Municipalities of Pennsylvania—1943

Municipalities	*Rate*	*Assessed Value of Real Estate in Per Cent*	*Per Capita*
Wilkes-Barre	.0175	100	$5.00
Altoona	.017	90	5.00
Johnstown	.017	60	5.00
Erie	.017	100	——
York	.018	40–60	1.00
Reading	.015	100	2.00
Bethlehem	.016	65	3.00
Allentown	.015	75	3.00
Easton	.0145	100	4.00
Chester	.014	90	5.00
Harrisburg	.0155	55	——
Lower Merion (Twp.)	.013	35–50	——
Lancaster	.011	75	——

Source: Annual financial reports—Department of Education, Harrisburg, Pennsylvania

It is proposed that the school building program be undertaken in four phases, as described below. Cost estimates for the school building program are shown on Table 8.

Phase 1—This phase would be accomplished in 1946 or as soon after the war as practicable, and would consist of building the new school in District A, razing the Wharton School, and selling the Wharton School property. The total cost of this phase of improvement is estimated at $398,750. This work has been scheduled as the first operation because it is the least costly unit of the entire project and would best be done in the near future while the total indebtedness is highest; it involves an area of considerable stability in the expected population pattern of the future; and it lays the groundwork for the eventual abandonment and razing of the old schools.

Phase 2—This phase would be accomplished in 1951 and would consist of construction of the new school for District D, the expansion of the Wickersham School in District E, and the purchase of additional land at the Ross School. Credits would result, during the same phase, through the razing and sale of properties of the Buehrle, Haupt, Henry and Stevens schools. The total cost of this phase of improvement is estimated at $492,910.

Phase 3—This phase would be accomplished in 1956 and would consist of the construction of the new school for District G and the expansion of Washington School. Credits would result, during this phase, from the razing and sale of properties of the Mifflin, Muhlenberg, Lafayette, Reigart and Higbee schools. The total cost of this phase is $601,583.

Phase 4—This phase would be accomplished as soon as possible, probably about 1960, and would consist of the razing of the building and sale of the property of Eichholtz School which would produce a credit estimated at

TABLE 8

COST ESTIMATE FOR SCHOOL BUILDING PROGRAM

1946 to 1960

District	*Proposed*	*Capacity*	BUILDING *Cost*	LAND *Acres*	LAND *Cost*	CREDITS *School*	CREDITS *Acres*	CREDITS *Credit*
A	New	950	$ 356,250	1.5	$ 15,750	Mifflin &	.6 A	$ 7,000
						Wharton	.9 A	9,500
B	None	—	—	—	7,200	Buehrle	.7 A	8,900
C	None	—	—	—	—	Stevens	.9 A	40,000
D	New	800	300,000	1.5	131,800	Haupt	.7 A	6,000
E	Addition	150	67,500	—	—	Henry	.4 A	3,500
F	Addition	535	196,875	—	—	Muhlenberg	.7 A	7,900
						Higbee &	1.7 A	15,000
G	New	900	337,500	4.2	46,700	Reigart	.5 A	5,000
						Lafayette		
						Eichholtz	.5 A	4,500
TOTAL COST			$1,258,125		$201,450			$ 107,300
10% Contingencies								= 1,352,275
								135,228
GRAND TOTAL								$1,487,503

$4,500. As previously mentioned, it is expected that this building will be needed until after the complete new system has been established. If, however, it can be dispensed with at an earlier date, the credit derived could be deducted from the expenses of one of the earlier phases.

Annexation and the Proposed Public School System. As stated at the beginning of this report, the most detailed study of the Lancaster schools has been made of the public school system of the existing Lancaster School District which area is identical with the present four square mile area of the municipality.

In the event of annexation by the municipality of portions of the urban fringe, additional detailed study must be made before sound recommendations can be made for absorption by the Lancaster School District of parts of the

Figure 50. A township school in the urban fringe.

adjacent township school systems. Population studies would be necessary to determine which annexed areas will continue to grow and develop most rapidly. It is believed, however, that the system herein recommended for the present district would be the logical core of an expanded system. Its basic simplicity and the perimetrical locations of the majority of its buildings form a school pattern which could be effectively merged with portions of the present township school districts. Due to the possibility that annexation may take place in the years to come, a brief discussion of the effects of consolidation of city and township schools in the urban area is presented.

North Side. The Milton Brecht and Nathan Sheaffer Elementary Schools are in the southernmost portion of Manheim Township and in the Lancaster urban fringe. They are relatively modern plants (see Figure 50), both situated on excellent sites and about a mile apart. They serve the area north

of the Pennsylvania Railroad right-of-way and are adequate for present needs. A new elementary school should eventually be built a few blocks southeast of and replacing the Ross School within the City to serve the new District B, thus making it possible to move the division line between Districts B and E to the New Holland Pike. This new school could serve the limited population between the present north City boundary and the railroad tracks in addition to District B.

West Side. The existing Buchanan School is well located to serve the elementary population in the sections of Lancaster Township and the City east of the Little Conestoga Creek, south of Columbia Avenue and north of Manor Street. When the School Lane Hills subdivision develops further, a public school will be necessary in the vicinity of Marietta Pike and Wilson Drive. Reservation of land should be made for that purpose.

East Side. Annexation east to Conestoga Creek would include a sparsely developed section adjacent to the Lincoln Highway. This area is now served by the antiquated Burrowes School. A new elementary school two or three blocks further east would serve the future elementary school population between the present east City boundary and Conestoga Creek.

South Side. Development south of the City is limited by the meandering course of Conestoga Creek through this section. Much of the area is zoned for park, cemetery and agricultural use. If residential neighborhoods develop some time in the future, each would probably have its own elementary school. No recommendations are possible at this time due to the total lack of any indicative trends.

Junior High Schools—In the event of annexation, it is considered that three junior high schools will be necessary to serve Greater Lancaster. The territory of the Hand Junior High School would not be seriously affected by annexation and no change in district boundary appears necessary.

The northern portion of the City and the southern portion of Manheim Township would need junior high school service. It is probable that the Ross School would be suitable for conversion to that use after the erection of a new elementary school central to the proposed School Neighborhood District B. Only the extreme eastern end of Grandview Heights would be over a mile from the school. If and when Ross School becomes a junior high school, the entire block bounded by Clay, Queen, Liberty, and Prince Streets should be acquired to provide adequate playfield space.

It is possible that junior high school facilities for the area between Prince Street, Harrisburg Pike and the Little Conestoga Creek can be met for some time by the Reynolds Junior High School. When this building and site become obsolete, consideration should be given to a junior high school location in the general vicinity of the Hamilton Watch Company in order to locate in a position central to the area to be served.

Senior High School—McCaskey High School would probably carry the additional load of the annexed southern Manheim Township until such time as this new area is completely developed. It is expected, however, that eventual expansion of the City westward will absorb Lancaster Township as far as the Little Conestoga Creek. In this event, the Buchanan School with its fine site and playfield facilities, could become the embryo of a new school center and, through acquisition of additional land and the building of high

school structures, could serve the area roughly bounded by the Little Conestoga Creek on the west, Long Park and the Harrisburg Pike on the north, Prince Street on the east, and Conestoga Creek on the south. McCaskey High School would then easily serve the entire area roughly east of Prince Street and the Manheim Pike.

CATHOLIC SCHOOLS

As stated previously, about 17 per cent of the school age children of Lancaster attend Catholic schools. There are five parochial schools in Lancaster for children from the first through the eighth grades, and one four-year high school. The junior high school system has not been adopted by the Catholic schools. The elementary parochial schools are situated adjacent to their respective churches. Two are downtown, one is in the north, one in the east and one in the west section of the City. Each church ministers to the communicants who live within the boundaries of that parish. The five parishes include the entire area of the City. Each parochial school is supported by the church to which it is affiliated and children of its parishioners may attend the school tuition free.

The five parochial schools of Lancaster are St. Anthony's with grades through the eighth, and an estimated enrollment of 250; St. Mary's with grades through the eighth, and an enrollment in 1944 of 485; St. Anne's with grades through the sixth, and an enrollment in 1944 of 166; and Sacred Heart with grades through the eighth, and an estimated enrollment of 290.

The architecture of the parochial school buildings has ecclesiastic character. The school lots are small but well maintained and neat in appearance. Detailed examination of the parochial schools was not made.

The Catholic High School building is situated on a five acre tract in Rossmere, a subdivision north of Lancaster. It is a modern structure, built in 1930, well maintained and of good appearance. The playfield is hardly large enough for the football gridiron squeezed on it and the remaining space is uneconomical in distribution. With more judicious planning, however, greater utilization could result. The school has a post-war program for the development of recreational facilities, and plans are under consideration to increase the capacity of permament bleachers, to grade the undeveloped area and to construct thereon a ¼ mile track, tennis courts and handball courts. Funds are already available for these improvements.

Communicants from the five City parishes may attend the Catholic High School tuition free, for the school is supported by the five City parishes. A few children from other areas pay tuition to attend the school. In 1944, there were six tuition students, all from Columbia Borough. The total enrollment was 459.

In formulating plans for the future public school system in Lancaster, 17 per cent of the expected future school age population was "written off" in the belief that about the same proportion of children would continue to attend Catholic schools.

PRIVATE SCHOOLS

In addition to the public and Catholic primary and secondary schools in Lancaster, there are three important private schools providing instruction for

children from the first through the twelfth grades. These three schools, and other private schools throughout the east, accommodate about one per cent of the city's school age population.

Sacred Heart Academy is the largest of the three local private schools. It is largely self-supporting. Tuition is charged those who can afford to pay and charity students are few in number. The school is primarily for Catholic children but a few Protestant and Jewish children also attend. The teaching staff is composed of 12 nuns of the Order of the Holy Cross and two lay women. Instruction is offered to girls from pre-school age through the grades and high school. Most of the students come from Lancaster City and County. Considerable emphasis in the high school grades is placed upon music—instrumental and vocal instruction being offered as part of the curriculum. In 1944 there was a total enrollment of 169 students.

The building is old (built 1869) but it has been kept in good repair and was appraised in 1942 at $160,000. There are ten classrooms with a capacity of 225 students. There are no boarding accommodations for students but 15 nuns live at the school, three of whom teach elsewhere.

The attractive, half-acre schoolyard is composed primarily of a large lawn walled on two sides and planted with fine trees and shrubs. A few pieces of children's playground equipment are provided.

The Lancaster Country Day School is a non-profit private school owned by a group of local citizens. It occupies the structure built in 1908 for the former Shippen School. The building has ten classrooms, a laboratory, gymnasium, study hall, library and lunch room. The present enrollment of 121 overcrowds the facilities. The school is coeducational through grade eight but accepts only girls in the high school grades. Practically all of the students come from Lancaster City. The students all pay tuition or attend on scholarships. Play space is completely lacking. Plans have been initiated for relocation of the school to a site west of the city after the war, and a fund of $100,000 is available for the initial stages of the building program.

The Lancaster Mennonite School is located four miles east of Lancaster on the Lincoln Highway and occupies the five buildings and 88 acres of the former Yeates Preparatory School for Boys. The buildings consist of two girls' dormitories, one classroom building, one commercial building and one auditorium-gymnasium. The school is reported to be overcrowded at present with 144 students. There are accommodations for 75 boarding students. The school offers only a high school curriculum and draws its pupils from the Lancaster Conference District of Mennonites which includes eastern Pennsylvania, eastern New York, New Jersey and Maryland. The school is supported partly by the Mennonite Church and partly by tuition.

COLLEGES AND SEMINARIES

Franklin and Marshall College has filled an important place in the cultural development of Lancaster. Franklin College was founded in 1787 and was named for Benjamin Franklin. In 1853, Marshall College of Mercersburg was merged with Franklin College to form Franklin and Marshall College.

It is situated on a campus of 54 acres in the northwest section of the City. The campus presents a park-like atmosphere which is an asset to the residential section that has developed around it. Beautiful trees line its walks and enframe its fine buildings. Athletic facilities, football, baseball, soccer, practice fields and tennis courts occupy about half the total area of the campus. The buildings are in excellent condition; some of them, such as Goethean Hall and Diagnothian Hall, date back to 1856. Other more modern structures, such as the Fackenthal Library, Biesecker Gymnasium, Fackenthal Laboratory, and Fackenthal Swimming Pool, offer the finest facilities for college instruction. A master plan for the future development of the campus is now in preparation and a one and one half million dollar post-war building program is proposed. The assessed valuation of the entire physical plant of the college in 1943 was approximately $2,500,000.

Franklin and Marshall College confers Bachelor of Science, Bachelor of Arts and Bachelor of Science in Economics degrees. The major departments in its curriculum are pre-medical, liberal arts, business administration and sciences. The pre-medical department has a national reputation and usually has from 150 to 200 students. The average peacetime enrollment of the college is between 750 and 800 with a graduating class of about 150 each year.

Educational opportunities are offered to the local citizens through the evening school with credit or noncredit courses.

The college has been under contract during the war with the War Training Service of the Civil Aeronautics Administration to provide ground school instruction for V-5 aviation cadets of the United States Navy. Flight instruction has been provided at the Lancaster Municipal Airport. The college also taught Engineering, Science, and Mechanics War Training Courses in cooperation with the various war industries in Lancaster. Between July and November, 1944, a thousand Navy enlisted men learned to fly at Franklin & Marshall. Between July 1943, and July 1944, 1,071 different students attended the school, of which 840 were Navy trainees.

Fackenthal Library contains almost 100,000 volumes and serves as an excellent reference source for the public in addition to its primary use as the College Library. It is a repository for documents of the United States Government.

The Theological Seminary of the Evangelical and Reformed Churches is located directly opposite Franklin and Marshall College on a campact four and one half acre campus. The Seminary was founded in 1825. This school expresses a fine ecclesiastical character in its cloister-like setting. Its plant consists of four buildings, which appears to be in excellent condition. The seminary curriculum is a three year post-graduate course, leading to a Bachelor of Divinity degree. It is especially formulated to train men for the ministry in the Evangelical and Reformed Church. Between 90 and 95 per cent of all students have bachelor degrees upon entrance. The seminary can accommodate about 80 students and operates nearly at capacity.

The Millersville State Teachers College is located in the borough of Millersville, four miles southwest of Lancaster. This was the first State Normal

School in Pennsylvania, having been established and operated in 1855—two years before the passage of the Normal School Law of 1857.

The campus consists of 25 acres of lawns, large trees and a picturesque lake. The buildings include the Administration Building and two girls dormitories; the Library of 25,000 volumes; the Science Building which houses the Industrial Arts Department; Wickersham Hall for laboratories and classrooms; and the Physical Education Building. There is an athletic field and other sports facilities on the campus. Two other buildings serve as a laboratory or demonstration school—one for elementary pupils and one for junior high school pupils.

The curricula offered at Millersville are the Elementary, the Secondary, the Industrial Arts and the Library Science. These curricula carry four years of work and lead to the degree of Bachelor of Science in Education. The normal enrollment in the Teachers College is 500 to 600, over half of whom come from Lancaster County.

SPECIAL SCHOOLS IN LANCASTER

The Thaddeus Stevens Industrial School was founded in 1905 in accordance with provisions of the will of "The Father of Public School Education in Pennsylvania"—Thaddeus Stevens.

In 1909 the school was taken over by the Commonwealth and is now operated under the direct supervision of the Department of Public Instruction and a board of trustees. The Commonwealth appropriates $47,500 annually for operation and maintenance.

The school is situated on a fine five acre tract of land on the eastern edge of the City. The plant consists of an administration and instruction building, a shop building, a gymnasium, and three dormitories.

The students are high school age Pennsylvania boys who are either orphans, part orphans, or who can show definite need of assistance. They are given a homelike atmosphere in cottage living quarters. They are trained to be skilled craftsmen, and through extracurricular activities, are developed into men with well rounded personalities, capable of actively participating in community life. Athletic areas include tennis courts, athletic field and practice field.

Vocational instruction is given in electricity, machine shop practice, and woodworking. Each boy is also given academic training in English, history, economics, sciences, mathematics, mechanical drawing and physical education. The normal length of the training course is three years of forty weeks each. During the war, however, the School has been operating on an accelerated program with 24 hours per day, seven days per week schedules.

An $800,000 post-war building program has been submitted to the State Legislature for the construction of additional dormitories and replacement of obsolescent shops and shop equipment. Proposed additional dormitories would enable the school to handle 250 boys instead of 125—the present capacity. It is proposed to add printing to the curriculum when additional funds are available for the purchase of the necessary equipment.

Lancaster Business College was established in 1855 and is one of the oldest of its kind in Pennsylvania. It has been located for 35 years in the

upstairs floors of 48 North Queen Street. The school is privately owned and operated and all students pay tuition. There are four classrooms, which accommodate 160 students at capacity. No building program is proposed by the school officials.

Four courses are offered in the curriculum—stenographic (42 weeks), secretarial (60 weeks), combined business and stenographic (18 months), and business administration (2 years). The school operates a day and a night school. The enrollment in 1941–42, which is considered an average year, was 155 day students and 111 night students. Enrollment has decreased to 45 day and 75 night students in the 1944–45 school year.

The Bowman Technical School, situated at the corner of East Chestnut and North Duke Streets, offers a unique training. The curriculum includes an eighteen-month course in watchmaking and special courses in jewelry working. Students attend from all parts of the country, for the school has established an excellent reputation since its origin over 50 years ago.

Most of the students are physically handicapped and are financed through the school by the U. S. Veterans Administration and various state agencies. There are about 12 handicapped veterans from World War II enrolled at present. A high enrollment is expected after the war due to the human rehabilitation program. Immediately following the last war the enrollment reached 400, though the facilities had a "capacity" of but 100. About 65 students are enrolled at present.

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Lancaster Parks and Recreational Areas

INTRODUCTION

THE TREND during the past century to more leisure time for all members of the family has had important effects upon family life in Lancaster as well as in other communities of America. During pioneer and agricultural eras, when men worked from sunup to sundown, there was little opportunity or need for organized public recreational programs and areas. The change from an agricultural to an industrial economy a century ago, and successive reductions in the hours of work have increased the need for creative, active, and passive recreation.

The need for a comprehensive recreational program is persistent. During the depression decade, broad recreational programs were necessary to aid the unemployed in putting in their time as creatively as possible. Now, during the rush of the war period, recreation has been found necessary to relieve strain and to maintain production. Recreation will be necessary, also, during the postwar period when difficult social and economic adjustments are being made.

The following pages present a detailed analysis of the recreational areas and facilities which are considered essential for Lancaster. Park properties, however, are not the goal. They are only a means to an end—a community recreation service which will meet adequately the recreational needs and interests of the people of Lancaster.

The recreational area needs of Lancaster may be classified broadly in two groups—areas for concentrated, active recreation within easy reach of the youth of the city; and areas which are large enough and natural enough to provide community-living man with an opportunity to renew his contact with nature. Playfields, playgrounds, and playlots are the elements of the former. Neighborhood parks, country parks, and reservations are important elements of the latter.

It is the purpose of this section of the Lancaster Comprehensive Municipal Plan to propose a system of recreational areas and facilities for development over a period of years, which will provide maximum opportunities for all the people of the community—adults as well as children. The study has not been confined to the corporate boundaries of the city. Playgrounds, playfields, and neighborhood parks have been studied within the city, but country parks, reservations, and parkways outside the city make necessary and important contributions to the recreational assets of the community and are given full consideration.

Existing and proposed school buildings and grounds are included as units of the complete recreational area system.

RECREATIONAL PROGRAMS

Recreational programs on the various playgrounds and playfields within and adjacent to Lancaster are conducted by the Lancaster Recreation Association. This association is supported primarily by the Welfare Federation with an annual appropriation therefrom of approximately $12,000. Additional funds are secured from other sources, such as $1,300 from the City Park Department. The School Board of Lancaster co-operated in 1944 by paying salaries of supervisors on the school grounds in the amount of $1,200. The Recreation Association in 1944 conducted programs on 13 playgrounds, 10 evening playground centers, a craft shop for boys, a craft shop for girls, boys' and girls' clubs at different playgrounds, the Lancaster Boys' Club, and a center for colored people. Total registration for the various activities in 1944 was 11,085.

Playground and playfield facilities in use during the 1944 season included 16 softball diamonds, 1 regulation baseball diamond, 10 paddle tennis courts, 13 volleyball courts, 2 horseshoe courts, 7 shuffleboard courts, and 4 ping-pong tables.

The Association directs activities on playgrounds and playfields, sponsors a hiking club and sponsors victory gardens in the summertime. Community dances, basketball games, craft shops, and boys' and girls' clubs are winter activities.

DEFINITIONS

For the purpose of this study, the following classifications and definitions of recreational areas have been used:

Square or plaza—Usually an ornamental area of limited size such as a triangle or square at a street intersection, or the setting of a public building, such as the proposed Civic Center.

Playlot—An area within the neighborhood for the play of preschool age children. It may be the size of a city lot or smaller.

Playground—An area intended to provide active recreation for children of grade and junior high school age, five to 14 years old, inclusive. It should contain from three to seven acres and should be located within a half mile of the homes of the children.

Playfield—An area intended to provide active recreation for young people, 15 to 24 years old, inclusive. It should contain from 10 to 25 acres and be located within a mile of the homes of the young people.

Neighborhood Park—An area chiefly devoted to passive recreation and serving a neighborhood, although a playground or playfield may be included within the park. A neighborhood park takes advantage of a scenic feature, if possible, such as a valley, woodland, or vista. The area usually contains between five and 50 acres.

Country Park—A large area for the preservation of broad expanses of natural scenery, with selected areas developed for active recreation by large groups

of people. Country parks are usually 50 acres or more in size. They may be located within the city, but due to the compactness of Lancaster, most of the country park areas are in the adjacent urban fringe.

Reservation—An extensive area of natural scenery wherein development, if any, is limited to making the area accessible. It should be large enough to avoid intensive use, thereby prescribing a minimum of several hundred acres.

Parkway—Legally, a road through a park. A parkway is a limited-access passenger car highway. The right-of-way may vary from three hundred to several thousand feet in width. Recreational developments may be provided in areas of wide right-of-way. The narrower rights-of-way are planted to create the illusion of driving through a park, and abutting properties are screened from view.

Special Areas—There are many special types of outdoor recreational areas serving Lancaster—many of them privately owned and operated. Such areas include golf courses, swimming pools, archery ranges, baseball parks, stadiums, outdoor theatres, bathing beaches, and boating centers.

EXISTING PARKS AND RECREATIONAL AREAS

The existing park and outdoor recreational areas in Lancaster are listed by ownership, name, location, and size in Table 9. In addition, the playgrounds and playfields are given adequacy classifications. Population distribution has not been a major factor in this classification. The four categories—A, B, C, and D—denote the following:

A. A playground or playfield which is adequate in size, shape, and topography; which is adequately provided with facilities; and which is well located to serve a certain neighborhood.
B. A playground or playfield which is adequate in size, shape, and topography; which is fairly well located to serve a certain neighborhood; but which lacks adequate facilities.
C. A playground or playfield which is well located; which is provided with facilities to serve a certain neighborhood; but is inadequate in size, shape, and/or topography.
D. A playground or playfield which is inadequate in all respects but which is used because of the lack of better provisions in the neighborhood.

Playlots, Playgrounds, and Playfields—There are no public playlots specifically set aside for the use of preschool age children in Lancaster. It is recognized, however, that on the city playgrounds special areas are set aside for small children.

As shown on Figure 51, Existing and Proposed Parks and Playgrounds, there are 43.9 acres of public playgrounds within the city. The School District of Lancaster provides 26.3 acres of these playgrounds in conjunction with the schools, representing 60 per cent of the public playground acreage. The city provides 17.6 acres of playgrounds, which represent only 40 per cent of the public playground acreage.

As shown on Table 9, only four of the 23 playgrounds provided by the School District of Lancaster and by the city have topography, shape, facilities,

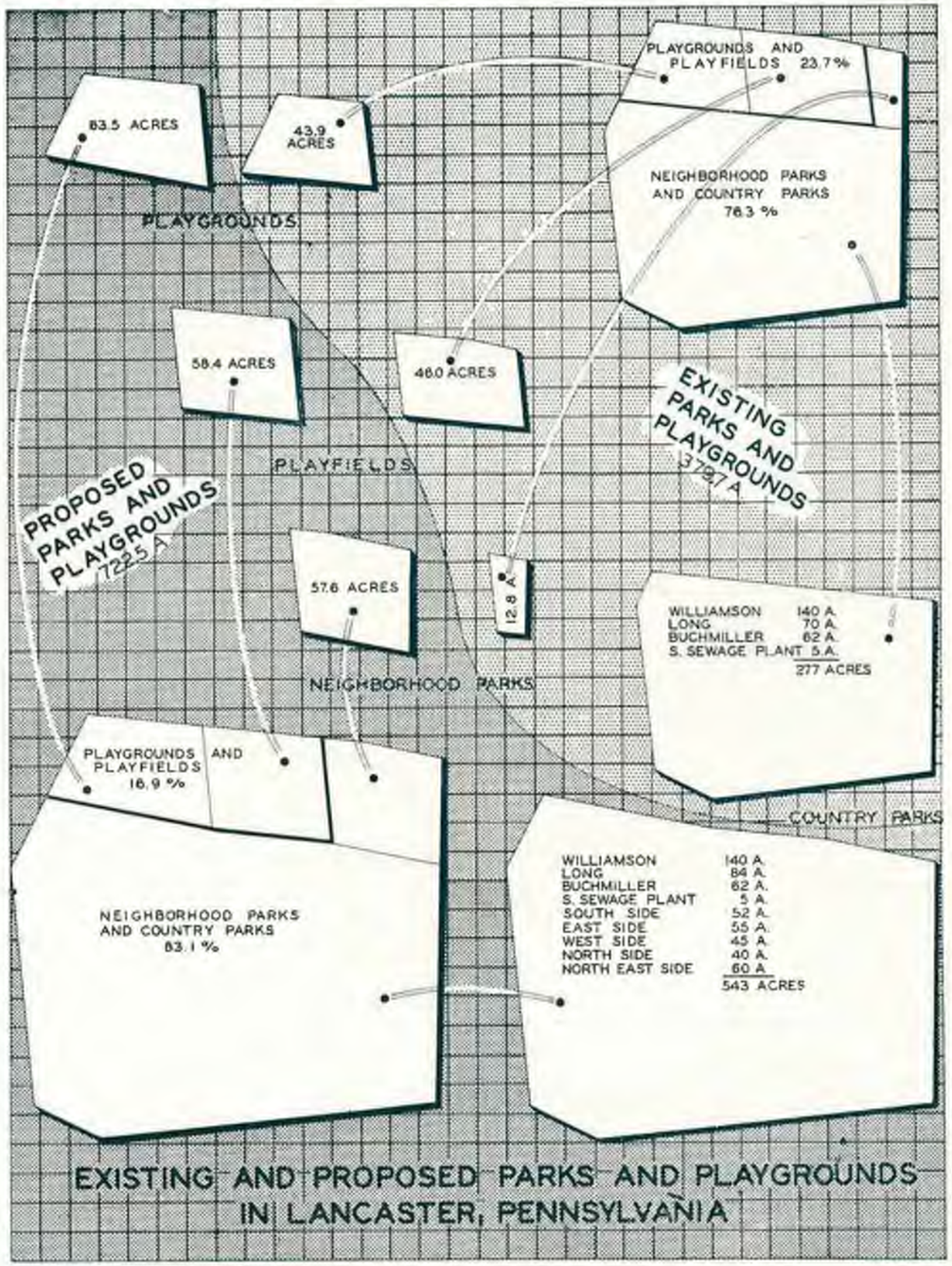


Figure 51.

TABLE 9

Outdoor Recreation Areas In Lancaster and Vicinity

PLAYGROUNDS

		Acres	*Adequacy*
SCHOOL DISTRICT OF LANCASTER			
Thomas Wharton School	705 N. Mary St.	.50	C
George Ross School	840 N. Queen St.	.80	C
R. K. Buehrle School	Clay Street	.30	C
Thaddeus Stevens School	343 W. Chestnut St.	.20	D
Detached playground	Chestnut Street	.50	C
Robert Fulton School	225 W. Orange St.	.20	D
James Wickersham School	401 Reservoir St.	3.50	A
C. Elvin Haupt School	Lime and Lemon Sts.	.50	C
McCaskey High School	455 Reservoir St.	6.70	B
Thomas Mifflin School	34 Pearl St.	.50	C
Jacob Eichholtz School	526 S. Prince St.	.40	D
Muhlenberg School	128 S. Duke St.	.50	C
Lafayette School	801 Fremont St.	2.50	C
Adam Reigart School	500 E. Strawberry St.	.40	D
E. E. Higbee School	315 Dauphin St.	.80	C
George Washington School	545 S. Ann St.	8.00	A
		26.30	
CITY OF LANCASTER			
Rockland St. Playground	Rockland St.	.50	C
Buchanan Park	Buchanan Ave.	8.50	A
Sixth Ward Playground	Ross St.	2.60	B
Reservoir Park	Orange St.	.30	C
Rodney Park	Rodney St.	.60	C
John Farnum Playground	Fremont St.	3.60	A
South End Playground	Beaver St.	1.50	C
		17.60	
COUNTY SCHOOLS			
Nathan Shaeffer School	Manheim Twp.	4.50	
Burroughs School	Lancaster Twp.	.75	
James Buchanan School	Lancaster Twp.	1.50	
Brecht School	Manheim Twp.	1.00	
Bausman School	Lancaster Twp.	1.00	
		8.75	
CATHOLIC SCHOOLS			
Saint Anthony's	E. Orange St.	1.00	
Saint Mary's	Vine St.	.25	
Sacred Heart Academy	504 E. Orange St.	.50	
Saint Anne's	Liberty St.	.25	
Sacred Heart	233 Nevin St.	.25	
Saint Joseph's	Mulberry St.	.75	
		3.00	

PLAYFIELDS

SCHOOL DISTRICT OF LANCASTER			
Hand Jr. High School	429 S. Ann St.	8.00	A
Reynolds Jr. High School and detached area	625 W. Walnut St. President and Clay Sts.	5.00	C
McCaskey High School	455 Reservoir St.	23.00	A
		36.00	
CITY OF LANCASTER			
Buchanan Park	Buchanan Ave.	10.00	A
STATE OWNERSHIP			
Stevens Industrial School	E. End Ave.	7.00	
COUNTY SCHOOLS			
Brecht School	Manheim Twp.	5.00	
James Buchanan	Lancaster Twp.	5.50	
		10.50	

TABLE 9—*Continued*

PRIVATE OWNERSHIP		*Acres*
Catholic High School	Juliette Ave.	3.80
Franklin & Marshall College	College Ave.	28.00
Radio Corp. of America	New Holland Pike	20.00
		51.80
NEIGHBORHOOD PARKS		
CITY OF LANCASTER		*Acres*
Buchanan Park	Buchanan Ave.	3.80
Reservoir Park	Orange St.	9.00
		12.80
COUNTRY PARKS		
CITY OF LANCASTER		
Williamson Park including Kiwanis Park	Rocky Springs Road	140.00
PRIVATE OWNERSHIP		
Long Park	Harrisburg Pike	70.00
Buchmiller Park	Quarryville Pike	62.00
		132.00
SPECIAL AREAS		
CITY OF LANCASTER		
Water Works Bathing Beach	Pumping Station—Sand beach in Conestoga Creek	
PRIVATE OWNERSHIP		
Maple Grove Park	Columbia Pike — Roller skating, dance pavilion, swimming pool, ice skating, auditorium, and athletic field	
Rocky Springs Park	Rocky Springs Road — Amusement park	
Brookside Twin Swimming Pool	Harrisburg Pike — Swimming pools, 1,600 capacity	
Overlook Golf Club	Lititz Pike—Swimming pool and 18-hole golf course	
Hiemenz Golf Course	Country Club Heights — 10-hole golf course and picnic area	
Lancaster Country Club	New Holland Pike—18-hole golf course and swimming pool	
Meadia Heights Country Club	Quarryville Pike — 18-hole golf course	

and location to justify their classification as adequate; and only two come in the second (B) classification. Thirteen playgrounds come in the third (C) classification, due largely to small size which limits the playground facilities which may be placed thereon. Four playgrounds are inadequate in all respects, two of them containing less than a quarter of an acre.

The parochial schools of the city provide less than an average of one-half acre each of playground area—little more than recess airing spaces. The county schools in the urban fringe provide playground space more generously with an average of one and three-quarters acres per school.

The School District of Lancaster provides almost 80 per cent of the playfields in the city. Buchanan Park playfield, containing ten acres, is the only playfield provided by the city. The four playfields are considered to be adequate with the exception of the John Reynolds Junior High School tracts. The two tracts together make only five acres. No playground facilities are provided at this Junior High School and the detached area is only partially developed with athletic field facilities.

The playgrounds and playfields owned and operated by the county schools are, in general, adequate to serve the needs of the suburban areas. The play areas at the James Buchanan School in Lancaster Township deserve special recognition, however, for their location is so close to the city limits that many Lancaster children play there. The facilities are excellent.

Catholic school playgrounds are little more than recess airing spaces, as are the areas adjoining most of the public elementary schools in Lancaster. Catholic High School has a football field with bleachers, a running track, and an open playfield. The school has plans, however, for expanding their facilities after the war and a considerable fund has been set aside for that purpose.

Thaddeus Stevens Industrial School has a very good playfield with all the facilities required for secondary physical education, including football,

Figure 52. Rockland Street Playground.

track, and tennis. Public use of this field and of the Catholic High School field, is limited to intramural sports.

The RCA Victor Division of the Radio Corporation of America is developing a playfield for the use of its employees. Two tennis courts, two softball fields, six horseshoe pits, and six quoit pits have been built. The total area covers about 20 acres and is still in the process of development.

Neighborhood Parks—Buchanan Park is a neighborhood park. In the listing of recreational areas, however, only 3.8 acres of the total 22.3 acres has been declared as such. The total area of 22.3 acres has been broken down into use classifications, of which 8.5 acres are credited to playground use, 10 acres to playfield use, and only the remaining 3.8 acres are credited as neighborhood park.

Reservoir Park is primarily a neighborhood park, although a quarter of

an acre has been called "playground." This park is fundamentally a "passing-through" or "sit-down" park. The central part is occupied by the six-million-gallon twin reservoir, the sides of which are sloped and sodded. The entire area is attractively developed with trees, walks, and benches.

Country Parks—Williamson Park is the only city-owned country park. The original area, located south of Rocky Springs Road and east of Conestoga Creek, contains 85 acres and was a gift to the city. Its south boundary approaches to within 500 feet of Mill Creek. A more recent acquisition by the city of 55 acres immediately south of the original area includes the peninsular

Figure 53. Williamson Park—Aesthetic stream development.

area enclosed by Mill Creek. The peninsula is popularly known as Kiwanis Park, because the Lancaster Kiwanis Club established the park and for several years operated a boys' camp on the tract. The Kiwanis Camp has been abandoned. A camp established there by the National Youth Administration was recently sold to the city.

The north portion of Williamson Park has been developed by the city to provide paved drives and picnic areas with a limited number of fireplaces, pavilions, and water and sewer facilities. The facilities for active recreation are inadequate, consisting of several poorly constructed tennis courts, a nine-hole golf course which shows little evidence of careful design, and a limited hiking trail.

The south portion of Williamson Park (Kiwanis Park) has had very little

development other than the NYA camp and truck trails through the woods. The only means of access is by a circuitous route from the Rocky Springs Road, so this southern section of Williamson Park receives little use. On the hill in the bend of Mill Creek at the north end of the peninsula is a fine picnic pavilion.

The topography of Williamson Park is ideal for the development of nature trails. The meandering Conestoga Creek and the limestone rock escarpments along the stream lend considerable scenic interest. The lack of large, open, level areas prevents development of many facilities for active recreation.

The existing park drive is necessary, for practically all visitors arrive by automobile, no public transportation facilities being available. Due to the topography, adequate parking facilities cannot be provided at the entrance to the park.

Figure 54. Williamson Park—Lacks comprehensive planning.

Buchmiller Park is one of two private country parks serving Lancaster. It is located south of Lancaster, between the Quarryville Pike and Conestoga Creek. It was left in trust for public use and is administered and operated by the Fulton Bank trustees. The park contains approximately 62 acres. Conestoga Creek, rock escarpments, and beautiful old trees at the water's edge provide scenic interest in several places. A disturbing feature is the Pennsylvania Railroad Quarryville Line which separates the park from the Conestoga. Only a few freight trains per week however use the single track line.

A beautiful picnic area with tables, benches, outdoor fireplaces, and sanitary facilities is provided. Tennis courts and some playground apparatus supply active recreation needs. A nine-hole golf course was developed, but its use has been discontinued to reduce maintenance expenses. There is city bus service to the front entrance of the park.

Long Park, another country park in private ownership, is a 70-acre tract northwest of the city, situated between the Harrisburg Pike and the Pennsylvania Railroad right-of-way. The Long Park Commission owns and operates the park as trustee for the donor.

This park presents an excellent appearance, for it is well planned, beautifully planted, and well maintained. The driveway encircles the park, providing access to picnic areas, play areas, a small lake, and lawns. Open areas are defined and accented by wooded areas. A nine-hole golf course, unfortunately, has been superimposed on the park.

Picnic facilities are provided in the wooded areas. Two large, open picnic pavilions, sanitary facilities, outdoor fireplaces, and a few children's

Figure 55. Long Park—Good planning emphasizes scenic values.

swings are included. Tennis courts and baseball fields are provided on the open lawn areas.

A spring-fed, artificial lake furnishes scenic interest. Ice skating is permitted but no warming house nor lighting facilities are provided to encourage participation.

A caretaker's house and a service building with greenhouse attached are provided.

SPECIAL OUTDOOR RECREATION AREAS

The Pumping Station and Filtration Plant east of the city on the Grofftown Road, immediately north of the Pennsylvania Railroad bridge, are under the direction of the Department of Public Safety. This department has developed a sand bathing beach on Conestoga Creek downstream from the pumping station. The beach contains about four acres and no restrictions are

made on its use. No supervision is provided and bathing should be discontinued until the area is policed and lifeguards are provided.

The grounds surrounding the filtration plant buildings on the east side of the creek are attractively provided with drives, street lighting, and park benches to encourage use of the area as a park by the public. Poor accessibility due to the narrow bridge over the dam limits the use of the area for park purposes. The entire area is restricted during wartime, of course, and at present the public is not allowed on the grounds.

The start of a community forest was made on part of the grounds in 1926 and during succeeding years more seedlings have been added. About 20 acres of this land are now forested with 50,000 trees, mostly white pine and spruce. It is the intention of the Bureau of Water to continue these plantations as time and money are available, to reforest the banks of the impounding area and thereby to reduce turbidity of the stream.

Golf—Facilities for golf are adequately provided by several privately owned courses within two or three miles of the city limits. There are two private country clubs—the Lancaster Country Club on the New Holland Pike and the Meadia Heights Country Club on the Quarryville Park opposite Buchmiller Park. The Hiemenz Golf Course opposite the Lancaster Country Club and the Overlook Golf Club on the west side of the Lititz Pike are public courses with nominal fees for use.

As mentioned previously, Williamson Park, Long Park, and Buchmiller Park each provide a small golf course. The Buchmiller Park course is the only one of these which should be continued. Long Park is too intensively developed to include such a specialized, space-consuming activity; and Williamson Park is not topographically suited for golf course development.

Swimming—The Lancaster Country Club and the Overlook Golf Club have outdoor swimming pools, the latter being available to the public.

One of the most commodious swimming facilities in the vicinity of Lancaster is the Brookside Twin Swimming Pool on the Harrisburg Pike adjacent to Long Park. The two spring-fed concrete pools, each 60 by 200 feet in size, have a capacity of 1,600 swimmers. The bathhouse is an excellent, completely equipped structure.

Two amusement parks—Rocky Springs and Maple Grove—also have swimming pools as part of their facilities.

Amusement Parks—Rocky Springs is a typical privately-owned amusement park development located east of Williamson Park between the Rocky Springs Road and Conestoga Creek. The facilities include a roller coaster, dance pavilion, swimming pool, various amusement devices, and food concessions. The park is served by trolley car from Lancaster and is very popular during the summer months.

Maple Grove Park is west of the city on the Lincoln Highway, and located beside the Little Conestoga Creek. This private development at present provides a roller skating rink which accommodates 800 persons, a dance pavilion for 1,500, and an outdoor swimming pool for 2,200. An old quarry is flooded for ice skating. Picnic facilities are provided in the grove which

borders the Little Conestoga Creek. The owner intends to further develop the park after the war by adding amusement facilities, including a roller coaster.

RECREATIONAL AREA STANDARDS

There are "rules-of-thumb" for evaluating the adequacy of practically any kind of facility. One ton of coal per room, according to one "rule-of-thumb," will heat the average house with the average heating system during the average winter in the northern United States. The size of the rooms, the heat loss coefficient of the walls, the b.t.u. per ton of coal used, the type of heating system, the actual geographical location of the house are all factors which make necessary the alteration of the "rule-of-thumb" to fit the actual case. One quart of milk per day, six glasses of water per day, three teeth cleanings per day are other, perhaps more familiar, "rules-of-thumb." Such rules have been found generally reliable, for the varying factors usually nearly balance one another.

There are "rules-of-thumb" for planning, too. The exact application of these rules is not always practicable and allowances one way or the other must be made.

The most familiar "rules-of-thumb" in park and playground planning express the following:

a. Ten per cent of the total city area should be devoted to parks and playgrounds.
b. Ten acres per thousand people should be devoted to parks and playgrounds.
c. Twenty to thirty per cent of the total park and playground area should be devoted to active recreational facilities in the nature of playgrounds and playfields.

It is significant to note that "rules-of-thumb" *a* and *b* can prevail at the same time only when the gross density of the community is ten persons per acre. If the density is greater than ten per acre, then the provision of ten acres per thousand people will demand more than ten per cent of the total area; and in a community of high density, land for any "luxury" use is at a premium. Conversely, in a community of less than ten persons per acre gross density, less acreage on the basis of population will be required but land will be more readily available.

The City of Lancaster has a gross density of about 25 persons per acre, and an average density per residential acre of 78.29 persons. Even with the proposed redistribution of the population so as to reduce net densities of congested residential areas, the gross density will remain the same until either the population is reduced or the area of the city is increased. Proposals contained in this Comprehensive Municipal Plan contemplate densities per residential acre of 58.33 persons. As it is not considered feasible to plan on the basis of further density reductions, or of increase in city area, the present population and proposed densities will be used in this analysis.

Reference to the section on Land Use will reveal that approximately 398 of the city's 2,560 acres is to be devoted to parks, playgrounds, and reservations when the ultimate master plan for Lancaster becomes a reality. As only 159 acres of city land are at present devoted to those uses, it may be seen

that considerable additional development of the park and playground system is proposed. Allocation of 398 acres to park use would amount to 15.5 per cent of the total city area. This is a generous allotment when compared to the standard of ten per cent of the city area. Franklin and Marshall College and Stevens Industrial School grounds provides 61 acres of open, semipublic land. It is felt that since these grounds are not closed to the public, they serve as park space and can be classified as parks.

Despite the generous allotment of land for parks in the future land use of the city, 398 acres will not be sufficient to provide ten acres of parks per thousand people. On the basis of a population of 65,000 within the present city limits, some 651 acres are needed. This is not a particularly difficult problem to solve, however, for Lancaster is sufficiently compact that the balance of needed parks may be acquired on lands adjacent to but outside the city, without putting them too far from the people they are intended to serve.

The playground study has been made by neighborhood districts which are bounded primarily by traffic arteries. The districts are shown on the Parks and Playgrounds Plan, Fig 56 (see Map Section). Existing and proposed park acreages by types are illustrated on Figure 51. The proposed playground system is based upon an estimated child population of 10,800, six through 14 years of age.

PROPOSED PARK AND RECREATIONAL AREA SYSTEM

The recommended system of parks and recreational areas herein described is based upon the standards of requirements previously discussed, tempered by factors peculiar to Lancaster.

Playlots—There are no areas existing in Lancaster which can be classified specifically as playlots limited to preschool age children. Playlots should be provided in the extremely congested city area where small children need safe places in which to play. Such conditions prevail in blighted and mixed use areas. The row houses typical of Lancaster usually hide behind their continuous facades back-yard areas which could help keep the children off the streets.

Playlots are recommended for Lancaster in residential redevelopment areas. It is recommended, also, that neighborhood parks and small squares be designed to include small areas restricted to playlot use.

Playgrounds—In determining the playground needs for the city, attention was given to factors such as traffic arteries; commercial and industrial districts; neighborhood units; existing and estimated future child population; location of existing playground facilities; and the maximum one-half-mile walking distance between playgrounds and children's homes. One-quarter-mile walking distance was used in the case of the smaller areas.

Another consideration in planning playground areas is the selection of as few individual areas as possible, striving for but one playground per district. Adequate supervision and instruction for each area will then become more of a probability.

The 12 neighborhood districts shown on The Park and Playground Plan, Figure 56, are as follows:

District A will be served adequately by seven acres of Buchanan Park set aside for such use and will be ideally located adjacent to the new elementary school proposed on the southeast corner of the park. The child population estimated for District A in 1960 is 1,250. Only a small proportion of the users will live more than one-half mile from the playground. The large area of this playground and adjacence to a playfield and neighborhood park will create an important community park. The area is owned by the city.

District B is inadequately provided with playgrounds, the small areas behind the Ross and Haupt schools being the only public playground spaces in the entire district. About four more acres of playground are required to meet the minimum standard.

The district is quite congested at present; it is estimated that residential density, however, will lessen appreciably in the future and that about 1,050 children will live therein in 1960. The block bounded by East Clay, North Duke, East New and North Queen streets is suggested as desirable for playground purposes. About half the block is occupied by an old estate. The grounds have fine trees on the periphery which could be retained and would add immeasurably to the setting of the playground area. The total block is assessed at $144,600.

It has been proposed in the school section of this report that the School District of Lancaster acquire additional property in the rear of Ross School. The proposed areas would then total 4.9 acres which, on the basis of standards, would still be insufficient but which seems to be the maximum area that could reasonably be devoted to such use within the district.

District C is bounded by District B, the New Holland Pike and the city limits. The existing Sixth Ward Playground is about an acre less than the standard requirements for the areas on the basis of population. However, acquisition of abutting properties would necessitate the razing of many comparatively new homes. The cost would be excessive and could hardly be justified. It is suggested that by careful design and construction, maximum facilities and use may be secured on this undersized playground. The Sixth Ward Playground will have a use radius of one-quarter mile. The more remote portions of the district are occupied by cemetery or industry. The estimated 1960 child population is 550.

The small recess play area in connection with the existing Buehrle School is negligible.

District D is relatively small in area, but is congested. It is expected that it will contain approximately 550 children of playground age in the future.

The only existing playground in the district is the detached playground for Stevens School which is one-half acre in size. Inasmuch as the entire district is intensively developed, it is advisable to acquire additional land adjacent to the existing playground area. It is recommended, therefore, that the entire block bounded by Chestnut, Mulberry, Marion, and Charlotte streets, with the exception of the church property at the corner of Chestnut and Charlotte streets, be acquired for playground purposes. The eventual razing of the old Stevens School across Chestnut Street will make available .9 of an acre which could probably be supervised jointly with the area just described. These two parcels, totaling about 3.6 acres, would provide adequate playground space for the district.

The old Stevens School property might be acquired from the School District after its abandonment for school use. The transaction has been shown as a $40,000 credit for the School District. This figure is not a recommended purchase price but is an estimate based upon the average, per acre, valuation of undeveloped land in the immediate vicinity. Consequently, it is shown as a debit or expense to the city for the same amount of money.

The properties adjoining the existing playground on Chestnut Street and which are proposed as part of the ultimate playground for the district are assessed at $153,500. The existing areas at the Stevens and Fulton schools are negligible. It is estimated that the proposed playground would have a drawing radius of about one-quarter mile.

Figure 57. Private bequests may aid public recreation

District E—A large portion of this district is and will continue to be commercial. The residential sections, however, will develop into apartment use. It is estimated that about 800 playground age children will live in the area.

There are no existing playground facilities in the district. Fortunately, the old Grubb property, which was purchased by the Musser Estate for public park use, is a potential playground. The Fulton Bank is trustee and holds a fund of some $100,000 for the development of the area. Determination of the use—whether neighborhood park, playground, arboretum—is for the city to decide. The trustee is to supervise development before turning the area over to the city.

As described in the school section of this report, it is proposed to acquire

the half block adjacent to the Grubb property as a site for a new elementary school building. This contiguity of areas will create an ideal community center if developed in harmony. It is proposed that the old house facing Lime Street be renovated and maintained for use as a community recreation building, and that the immediate grounds be kept in the present park-like form. As much of the area as possible, however, should be devoted to playground facilities. This playground would have a drawing radius of about a quarter of a mile.

District F is already adequately provided with play space at Wickersham Elementary School and McCaskey High School playgrounds. They are directly across the street from each other and total 10.2 acres. It is believed that they can be supervised as a unit.

About .3 of an acre of Reservoir Park, which lies in this district, is now half-heartedly devoted to playground use. It is proposed to abandon the area for such use and to devote the entire area to neighborhood park use. It is too small to be economically supervised individually.

District G is now inadequately served by small Rodney Park, a triangular-shaped area of .6 acre bounded by Third, Crystal and Rodney streets. The area was originally privately owned and operated by a neighborhood park group but has since been turned over to the city. It is proposed to increase the area of this playground by acquiring Rodney Street itself and the adjacent block bounded by Rodney, Second, and Coral streets. The assessed valuation of these properties is $74,000. The total playground area would then be about 2.6 acres—little over half the area required on the basis of the estimated future child population of 900 for the district. It is believed, however, that many of the older children will play in more commodious areas in adjacent districts. The Mifflin School recess airing space is of little playground value in the district.

District H is adequately served by the John Farnum Playground and, on the basis of the estimated future child population of 850, it will be adequate for the future. It is proposed, however, that the city acquire the small property in the southeast corner of the block to improve the shape of the playground and to increase the usefulness of the area. The parcel is assessed at $18,000.

A statement of acreage is misleading as to the adequacy of the Farnum Playground, for the side hill cut and shape limit its use. Topographically, the area lies down hill from its residential areas, thus limiting the use radius to about one-quarter of a mile.

District J is the most congested section of the city, being the in-town part of the Seventh Ward. Over a thousand playground age children reside in this district, and even with the proposed lower density in the future, it is expected that there will still be approximately 800 children in the area in 1960. Considerable new playground development will be necessary if delinquency is to be kept at a minimum, if play on streets is to be reduced, and if normal, healthy boys and girls are to develop in the area.

In areas of great congestion, vacant land is usually an unknown quan-

tity; District J is no exception. It is recognized at the outset that condemnation and razing of structures will be the only solution to the needs. The only existing play areas in the district are the small Rockland Street Playground of one-half acre owned by the city, and the recess airing space surrounding the old Muhlenberg School.

Acquisition of the balance of the block containing the existing Rockland Street Playground is recommended. The properties involved are assessed at $210,900. Chester Street should be closed between Rockland, Green, Duke, and North streets, and would contain about 3.7 acres. The area would have an estimated use radius of about one-quarter of a mile.

District K—Lafayette School has a play area of about 2.5 acres, which is probably adequate for the present time inasmuch as the area is not fully developed. It is proposed, however, that with the construction of a new school at this location, the School District acquire the remainder of the block, making a total of 7.2 acres. The city should acquire the block southeast of the southern half of the new school property, closing Fremont Street from Fairview (extended) to Prospect Street. This block would add 2.8 acres, which combined with the school ground, would provide a total playground space of ten acres. The estimated cost of the additional 2.8 acres of playground area for this district is $1,176.

This playground should have considerable drawing power, for it would be well situated and the topography is suitable for playground development. Its use radius would be about one-half mile. The 1960 playground age population for District K is estimated at 1,450.

District L may be expected to lose population as more industrial and commercial development takes place. A minimum playground of 3.5 acres is recommended. The existing south end playground, purchased recently by the city, serves the southern portion of this district and the Reigart and Eichholtz school grounds help out in the more northerly section.

It has been recommended that the Eichholtz School be maintained for about twenty years and in that event its meagre play area will continue in use. Acquisition of additional land for playgrounds for this district is not recommended due to the fact that only 350 children are expected to live therein in the future. This area will have a use radius of about one-quarter mile.

District M is a large district and one which is expected to gain population in the future to an estimated 1,400 children in 1960. Higbee School has a play space of about 1.8 acres and Washington School has about 7.0 acres. Higbee School is not included in the proposed school system and it is felt that acquisition of those grounds by the city and their development into a neighborhood park will help relieve the congestion in the Seventh Ward.

Playground facilities for this district can be adequately handled by the seven-acre area adjacent to the Washington School. This playground has a use radius of a half mile and undoubtedly helps to alleviate congestion in District J, which, as pointed out previously, cannot be adequate served locally.

Playground Summary—The existing and proposed playgrounds in the city and the estimated number of children in 1960 is summarized by districts as follows:

District	1960 Children (Estimate)	Existing Acres School	City	Total	No. of Areas	Proposed Acres School	City	Total	No. of Areas
A	1,250	.5	8.5	9.0	2	—	7.0	7.0	1
B	1,050	1.3	—	1.3	2	1.3	3.6	4.9	2
C	550	.3	2.6	2.9	2	—	2.6	2.6	1
D	550	.9	—	.9	3	—	3.6	3.6	2
E	800	—	—	—	—	1.5	3.5	5.0	1
F	900	10.2	.3	10.5	4	10.2	—	10.2	2
G	850	.5	.6	1.1	2	—	2.6	2.6	1
H	850	.4	3.6	4.0	2	—	5.4	5.4	1
J	800	.5	.5	1.0	2	—	3.7	3.7	1
K	1,450	2.5	—	2.5	1	7.2	2.8	10.0	1
L	350	.4	1.5	1.9	2	—	1.5	1.5	1
M	1,400	8.8	—	8.8	2	7.0	—	7.0	1
TOTALS	10,800	26.3	17.6	43.9	24	27.2	36.3	63.5	15

The proposed acreages tabulated above were computed using the following scale, with adjustments to meet local conditions:

500 square feet per resident child when the child population is about 200; minimum area of 2.3 acres.

250 square feet per resident child when the child population is about 600; minimum area of 3.5 acres.

225 square feet per resident child when the child population is about 1,200; minimum area of 6.2 acres.

Playfields—The National Recreation Association has set a standard of one acre of playfield for each 800 people in the city; a playfield for at least every 20,000 of the population; and a playfield within one-half to one mile of every home. On the basis of these standards, Lancaster should have 80 acres of playfield, divided into four fields—one for each of the four quadrants of the city. Except for the total acreage, the city playfields conform generally with the standards.

In the northwest section, Buchanan Park and the small detached Reynolds Junior High School playfield provide 15 acres of playground. In the northeast section, McCaskey High School provides a 23-acre playfield. In the southeast section, the Hand Junior High School provides an eight-acre playfield adjoining the Washington School playground. The southwest section, however, is totally devoid of playfield facilities. There are a total of 46.0 acres of publicly-owned playfields definitely set aside for that use in Lancaster. The Franklin and Marshall College athletic field, the Thaddeus Stevens Industrial School field, and the Catholic High School field are semipublic and augment the publicly-owned facilities. The three semipublic playfields include about 39 acres.

Inasmuch as new residential development in the southwestern section of Lancaster is proposed, it is suggested that the city acquire the land bounded by Hazel, Wabank, Fairview, and Seymour streets, and the southern projection of Hillside Avenue for playfield development. Lot frontage may be retained on Hazel Street and Fairview Avenue in residential use. The central portion of this undeveloped tract, with judicious grading, can be developed into a playfield of about 12.4 acres.

The publicly-owned playfields proposed for Lancaster amount to 58.4 acres. Although this total is 25 per cent less than the desirable 80 acres, it is suggested that careful design and development of the 58.4 acres would provide sufficient facilities of this type. The 39 acres in three semipublic playfields would bring the total playfield acreage to 97.2 acres. No home in Lancaster would be more than a mile from one of the four public playfields. The cost of land for the proposed playfield in the southwest quadrant is estimated at $5,208.

The existing and proposed playfields in the city are summarized as follows:

Quadrant	Name	Existing Acres	Proposed Acres
Northwest	Buchanan	10	10.0
	Reynolds Jr. High (Detached)	5	5.0
Northeast	McCaskey High	23	23.0
Southeast	Hand Jr. High	8	8.0
Southwest		None	12.4
TOTAL		46	58.4

Neighborhood Parks provide a quiet place of natural beauty for rest and relaxation within the city. They are frequently rather large areas which include playfield and playground developments, and small areas for the use of preschool age children. In this study, however, portions of an area devoted to different types of use are segregated for separate consideration so that proper distribution of recreational areas may be provided. Thus one neighborhood park may receive consideration in the playground, playfield, and neighborhood park sections.

It is proposed that 3.8 acres of Buchanan Park be reserved for passive use as a neighborhood park. It should be developed as a wooded area with walks and benches, sand boxes for preschool age children, and with planting to blend it harmoniously with the adjacent playgrounds and playfields.

Connection of the open areas of the civic center with the playground and playfield development at McCaskey and Wickersham schools is suggested by utilizing the old Pennsylvania Railroad right-of-way now owned by the city. This strip of unused land can be graded, planted, and made into an attractive neighborhood park for the central part of the city. A bicycle trail could be included in the area. Acquisition and planting of a strip of land bordering the industrial section eastward along Fulton Street to Ann, along Ann to Walnut and thence to Lehigh, ending at the playground opposite McCaskey and Wickersham schools would provide a "greenbelt" barrier between the industrial and residential sections. This strip might be as narrow as 100 feet, somewhat matching the width of the old railroad right-of-way. At selected points, small areas of extra width might be acquired for more intensive neighborhood use. About eight acres should be included in this area. It is estimated that the cost of land would be $5,600.

Reservoir Park should continue to serve as a neighborhood park. It is suitable for that purpose, and provides a fine open space for that part of the city.

The section of the city bounded by Columbia Pike and Manor Street has been described as a congested area, particularly in that part closest to the center of the city. With the limited expansion of Rodney Park proposed for playground development, it is suggested that the triangle across Third

Street be acquired and developed for neighborhood park use. This area is bounded by Third, Crystal, and Coral streets, and is assessed at $45,900. Combination of the two areas would provide a recreation center for a district whose people have been striving to provide facilities for themselves.

Within playground district "L" and adjacent to the proposed playfield development, it is recommended that additional land be acquired and developed as neighborhood parks. A small triangular piece of land near Hazel Street between the proposed playfield and the rear lot line is hilly and already partially covered with trees. South of the proposed playfield and extending about 200 feet deep on each side of Fairview Avenue land should be acquired and developed as neighborhood park. This development would continue to the city line where it would blend gradually into less intensively developed country park, as shown on the plan.

Development of a more pleasing southern portal to the city is recommended. The visitor approaching from the south passes through pleasant surroundings in the vicinity of Buchmiller Park and Meadia Heights Golf Course, downgrade to Conestoga Creek and then enters the city through undignified and haphazard surroundings. It is recommended that the city acquire the triangular block bounded by Prince, Queen, and Furnace streets, and develop it in accordance with a studied design to create a dignified approach to the city. This block contains a few stores on its western edge, but there is no substantial development. The assessed valuation of the property is $43,500. The intersection of the Baltimore Highway and the circumferential parkway will necessitate an interchange in this vicinity, thus adding importance to the triangular tract.

The parks indicated on the plan in the southeast section of the city adjacent to Conestoga Creek should include a neighborhood park. As indicated, the neighborhood park would form a transition between the playground-playfield area at Washington Elementary and Hand Junior High schools, and the country park and reservation strip proposed along the creek. The estimated cost of this area is $5,300.

The aforedescribed neighborhood parks constitute the large areas recommended for this type of development. Several small areas scattered through the city are also recommended as neighborhood parks. Four of the areas recommended for this use are school properties proposed to be abandoned in the new school program, namely, Mifflin, Muhlenberg, Reigart, and Higbee schools.

Three other properties are recommended for small neighborhood parks. These properties have been selected because they are situated in congested areas and are at present vacant. One of these areas is located on West Mifflin Street near Mulberry and is assessed at $700; another area is on Fulton Street near Marshall and is assessed at $600; the third area is on Madison Street near Lime and is assessed at $800. These areas would be inexpensive and would go far toward providing park areas adjacent to the homes of the people of Lancaster.

The plaza of the proposed civic center should be so designed as to form a suitable entourage for the structures. In addition, attractive lawns and planting, adequate walks and park benches will encourage use of the plaza by residents of the near-by multiple-family district. The plaza, therefore,

will serve in a dual capacity, but it is not listed as a neighborhood park because its civic center use is considered its major function.

The existing and proposed neighborhood parks in the city are summarized as follows:

Name or Location	*Existing Acreage*	*Proposed Acreage*
Buchanan Park	3.8	3.8
Railroad R/W and Bicycle Trail	—	8.7
Reservoir Park	9.0	9.0
Rodney Street	—	1.0
Hazel-Fairview	—	13.6
South Portal Park	—	2.6
Southeast	—	12.6
Mifflin School	—	.6
Muhlenberg School	—	.7
Reigart School	—	.5
Higbee School	—	1.7
W. Mifflin Street	—	—
Fulton Street	—	2.8
Madison Street	—	—
Total	12.8	57.6

Country Parks—Lancaster has unusual natural recreational areas only a mile or two from the homes of most of the people of the city. These recreational areas are special resources of the streams which bound Lancaster on the east and on the west—Conestoga Creek and Little Conestoga Creek, respectively.

Conestoga Creek flows parallel with and adjacent to the eastern city limits, then flows south of the city in a series of ox-bow loops which are as much as a mile long. The land within these loops rises up to a hundred feet above the stream, although the peninsulas may be only a quarter mile wide. It is obvious, therefore, that the slopes to the Conestoga are steep and rocky, and not adaptable to development for residential, commercial, or industrial uses. Many of the steep hillsides are wooded and the combination of stream, hillside, and woodland presents a great potential recreational resource easily accessible to the people of Lancaster.

West of Lancaster the Little Conestoga Creek flows through a wide, fertile valley where the peace and plenty of Lancaster County are familiar features of the scene.

Williamson Park should be further developed for picnicking, hiking, and horseback riding. Requests to use the grounds for picnicking exceed the capacity of the facilities. Construction of a new bridge and consequent improvement of access by the Rocky Springs Road, plus service to the park with public transportation facilities, will bring increased use.

It is expected that Buchmiller and Long parks will continue as country parks under trustee ownership and operation for some years before eventual absorption into the city system.

New areas recommended for acquisition by the city for inclusion in the proposed park system have been selected because of their natural scenic value, and because they are well located and spaced along the proposed circumferential greenbelt highway. As shown on the Parks and Playground Plan, Figure 56 (see Map Section), Williamson and Long parks are on the route of

this proposed circumferential highway and Buchmiller Park is adjacent thereto. A system of country parks connected by the circumferential highway, immediately suggests itself as a possibility and it is to that end that the design of the country park system has been directed.

Connection between Williamson Park and the proposed playground-playfield-neighborhood park development between Hand Junior High School and the Conestoga Creek should be accomplished by the acquisition and development of a strip of land bordering the creek. This land could be developed with foot and bridle trails connecting the two parks and the parkway. Some of it is now in uses which are contrary to the best interests of the community and which detract from the scenic resources of Conestoga Creek.

Figure 58. Conestoga Creek—Preserve for the future.

As shown on Figure 51, Existing and Proposed Parks and Playgrounds, about five acres of the South Sewage Plant area is indicated as existing country park. This is the part of the property lying between the New Danville Road and Conestoga Creek. It needs only a little cleaning and planting to give it a park-like character. Acquisition of the land between the road and the creek upstream should be attempted so that a connection may be made with the proposed neighborhood park along Fairview Avenue, and the proposed South Portal Park between Queen and Prince streets. The land between the cemeteries and the creek should be acquired southward from the city limits. Trails and naturalistic planting should be developed; but otherwise the area should be retained as a reservation. South of Conestoga Creek

in this vicinity a reservation strip along the stream between Buchmiller Park and the Meadia Heights Golf Course should be acquired and reserved. This strip would not be developed, but would be reserved for stream bank protection.

With the foregoing acquisition, park connections could be developed between proposed "intown" parks, the existing country parks, and the proposed circumferential highway. The sections of these areas to be acquired and developed as country parks total about 52 acres and are included on Figure 51, as "South Side" areas.

East of the city a parkway "cut-off" is proposed to cross the Conestoga on the ridge between the covered bridge and Rocky Springs Park, thence proceeding northward on the ridge to overpass the Lincoln Highway west of Bridgeport, passing west of the North Sewage Disposal Plant to the Grofftown Road; thence under the Pennsylvania Railroad bridge and past the

Figure 59. The time for decision—City dump or scenic resource.

Water Works Pumping Station to cross the New Holland Pike and eventually to intersect the circumferential greenbelt highway north of Grandview Heights.

A country park development is proposed between the parkway "cut-off" and Conestoga Creek south and north of the Lincoln Highway as shown on the Parks and Playgrounds Plan. The topography in this area is particularly adaptable to such development and the country park would serve an important local need when residential development takes place in the future. About 55 acres should be included in this development. This tract is listed on Figure 51 as "East Side."

The Lancaster Water Works Pumping Station has a park-like character. It is proposed to acquire the land adjoining Grofftown Road northward from the Water Works property to the New Holland Pike. This area has particularly fine rural character. It is well located to serve the future population of the Grandview Heights area and the northeast portion of the city. A

parkway connection should be made between this area and the large playground-playfield development at McCaskey High School, thus connecting with the proposed neighborhood park-bicycle trail, and the proposed civic center downtown.

Due north of Lancaster, west of the Glen-Moore subdivision, but east of the Fruitville Pike, land eventually should be acquired surrounding and including the Belmont Quarry. After the need for the quarry as a water supply reservoir has been eliminated, the area could become the nucleus of an interesting small country park development. It would be on the route of the proposed parkway and would be an ideal spot for the development of picnic areas. The area would include about 40 acres and is listed on the accompanying chart as "North Side."

The private Brookside Swimming Pool development is adjacent to Long

Figure 60. Grofftown Road—Recommended for parkway use.

Park. The proposed circumferential highway would pass alongside this private area and through part of the old fair grounds. It is proposed that eventually the city acquire Brookside and Long Park and incorporate them into its park system. These acquisitions are not necessary as immediate measures and should not be contemplated until such time as the present owners and operators are no longer able to carry on satisfactory programs.

Adjacent to Maple Grove Park and following the course of the Little Conestoga Creek is a natural site for a "West Side" park. This area includes about 45 acres and would serve the School Lane Hills suburban section and the western sections of the city.

It should be pointed out that acquisition of all these country park lands need not be accomplished at one time. The entire system has been planned with the possibility of annexation in mind and certain of the outlying areas

recommended for park use perhaps would be considered unessential unless the immediately surrounding territory becomes part of the city. However, it should be kept in mind that these lands probably may be acquired at much lower figures before annexation. Estimating the probable purchase prices of these tracts is difficult. The tax assessors of the different townships involved base their assessments on varying percentages of the real values. Some of the land is improved or semi-improved and would be more valuable. However, cursory investigation indicates that relatively unimproved lands outside the city limits will cost about $300 per acre. On this basis, the acquisition of the lands recommended for development as country parks would cost about $80,000.

Figure 61. Picturesque covered bridge—Worthy of preservation.

Reservations—Lands designated on the plan as "reservations" are not included in the total acreage of the park and playground system. They are areas which should be publicly owned for one or more of the following reasons:

a. Land which may be purchased cheaply because it is unsuitable for building purposes but which is adaptable for future use as park land.
b. Land which in private ownership might be exploited to the detriment of adjacent property.
c. Land which has exceptional scenic interest and which should be protected from the possibility of private exploitation.

Several areas bordering Conestoga Creek have been designated "reservation," such as the peninsula extending its tip into the city between South Queen and South Duke Streets. This area seems impractical for residential development due to its relative inaccessibility and the impracticality of providing utilities. The reservation bordering the creek elsewhere should have a minimum width of about 200 feet so that insulation can be secured. Development of these strips for hiking and horseback riding would be logical.

These reservations should be forested if they can be acquired at a suitable price per acre. In general, the maximum price per acre which can be justified for land to be reforested is $20.00. Maintenance costs may be expected to range from $3.00 per acre for 50-acre tracts, to $1.50 per acre for 500-acre tracts. Revenue from forests comes slowly, for 40 to 50 years are necessary for the forests to mature. A small forest of pines and spruces has been developed on land at the filter plant belonging to the Department of Public Safety. This plantation was justified primarily because it comprises part of the drainage area of the Lancaster water supply.

Many communities have developed such forests to great advantage. In nearly all cases the lands were acquired very cheaply and in most cases the areas were already wooded. There are 102 community forests in Pennsylvania, comprising a total of 75,000 acres. Recent aerial surveys show that only 17.6 per cent of Lancaster County is forested—a relatively low proportion due to intensive cultivation of the land.

Inasmuch as no "cheap" land is available in the Lancaster area, it is suggested that the lands described as "reservation" be purchased primarily for protection, preservation, and recreation for the time when open land close to the city will be needed.

FINANCIAL PROGRAM

Figure 62, Comparative 1940 Public Expenditures for Operating Parks, shows a comparison of expenditures for operation and maintenance of parks and recreational areas in Lancaster with ten cities of similar size throughout the United States. Comparison was also made with six Pennsylvania cities which were chosen because they operate under the same state laws governing municipalities. These comparisons were all drawn on data for the year 1940—the last peacetime year and probably most representative of normal times.

It will be noted that two sets of figures are given for Lancaster. The first shows figures which include only the areas and expenditures of the Bureau of Parks and Playgrounds and the Lancaster School District. These represent actual expenditures from public tax money.

The second shows all existing park and playground acreage, including Long and Buchmiller parks, and all expenditures for such purposes, regardless of source. These expenditures include those by the City Department of Parks and Public Property; by the Bureau of Parks and Playgrounds; $10,084 by the Recreation Association; $3,132 by the Crispus Attucks Association; $7,361 by the Long Park Commission; and $4,000 by the Buchmiller Park Commission.

It will be seen that Lancaster spends only 24 cents per capita of public funds on the operation and maintenance of its parks, playgrounds, and recrea-

	PUBLIC PARK ACREAGE	1940 POPULATION	PUBLIC EXPENDITURES FOR PARKS: DOLLARS PER CAPITA	DOLLARS	DOLLARS PER ACRE
LANCASTER, PENN.	184	61,345		14,900	
ALL AGENCIES	375		ALL AGENCIES	$ 38,278	ALL AGENCIES
TEN OTHER UNITED STATES CITIES					
PASSAIC, N. J.	109	61,394		75,954	
COVINGTON, KY.	548	62,018		22,819	
JACKSON, MISS.	234	62,107		60,187	
CEDAR RAPIDS, IA.	472	62,120		44,700	
BROCKTON, MASS.	500	62,345		30,000	
SPRINGFIELD, MO.	509	61,238		71,976	
WHEELING, W. VA.	897	61,099		103,457	
ST. PETERSBURG, FLA.	264	60,812		93,000	
FRESNO, CALIF.	178	60,685		73,445	
DURHAM, N.C.	178	60,195		35,125	
AVERAGE	389	61,401		61,066	
SIX OTHER PENNSYLVANIA CITIES					
ALLENTOWN	872	96,904		126,542	
BETHLEHEM	450	58,490		12,000	
CHESTER	95	59,285		7,680	
HARRISBURG	1500	83,893		98,766	
READING	2473	110,568		110,299	
WILKES – BARRE	317	86,236		74,289	
AVERAGE	951	82,563		71,686	
AVERAGE OF 91 UNITED STATES CITIES	701	50,000 TO 100,000		66,000	

COMPARATIVE 1940 PUBLIC EXPENDITURES FOR OPERATING PARKS

SOURCE — Municipal and County Parks in the U. S. 1940 National Recreation Association of National Park Service.

Figure 62.

tional programs as against a one dollar average for the ten United States cities similar in size.

The six selected Pennsylvania cities average 87 cents per capita; and 91 cities in the United States having between 50,000 and 100,000 population average 91 cents per capita.

On a per acre basis, Lancaster spends an average of $81 as against $157 average for the ten United States cities. The six Pennsylvania cities average $75 per acre; and the 91 cities in the United States average $94 per acre.

It will be noted that Lancaster has less than half as much park acreage in public ownership as the average of the ten United States cities, about one-fifth as much as the average of the six Pennsylvania cities, and about one-fourth as much as the average of the 91 United States cities having between 50,000 and 100,000 population.

Comparison of Lancaster's total park acreages, including Buchmiller and Long parks, and total expenditures, including those of private agencies, show better city participation in park areas and programs, although unfavorable comparison still prevails. It is evident from study of this chart and from analysis of park conditions that Lancaster is far from assuming the obligation of providing park, playground, and recreational facilities which comparable cities provide.

Estimated costs of land acquisition and park development for the proposed park and playground system have been recapitulated on Table 10. It is important to realize that the entire development is not proposed to take place at once—it is a long-range park and playground acquisition and development program. It is also important to realize that the cost of operation and maintenance must rise proportionately with the number of parks and facilities provided. The city, however, must accept its responsibilities in this direction and must schedule its financing to accommodate the necessary expansion program.

The proposed playground system is by far the most costly portion of the whole program. This phase of outdoor recreation is probably the most important in any community and in Lancaster it is the most deficient.

A part of the out-migration into the suburban areas in recent decades is no doubt due to the desire of parents to provide more open and healthful surroundings in which to rear their children. It is expected that there is a definite correlation between the outward movement from cities and the adequacy of the cities' park and playground systems.

It is estimated by the National Recreation Association that a completely adequate recreation program for a large city will include the following items and unit costs:

Recreation leadership	.75 per capita
Supplies, supplementary personnel	.25 per capita
Maintenance and operation of recreation facilities	.50 per capita
Maintenance and operation of general park areas not used for active recreation	1.50 per capita
	3.00 per capita

These figures cannot be accepted as inflexible standards. Few communities are spending this much money for such purposes. Sacramento, California;

TABLE 10

PARKS AND PLAYGROUNDS

Acquisition and Development Cost Estimate

Playgrounds

Area	Acres	Cost of Land	Cost of Develop.	Total Cost
*District B	3.6	$144,600	$ 45,000	$189,600
District D	3.6	193,500	50,000	243,500
District G	2.0	74,000	15,000	89,000
*District H	1.8	18,000	2,000	20,000
*District J	3.7	210,900	50,000	260,900
District K	2.8	1,176	30,000	31,176
Subtotal	17.5	$642,176	$192,000	$834,176

Playfields

*Southwest Side	12.4	$ 5,208	$ 40,000	$ 45,208
Subtotal	12.4	$ 5,208	$ 40,000	$ 45,208

Neighborhood Parks

Bicycle Trail	8.7	$ 5,600	$ 50,000	$ 55,600
Rodney Street	1.0	45,900	5,000	50,900
South Playfield Area	13.6	4,200	5,000	9,200
South City Portal	2.6	43,500	20,000	63,500
Southeast Playfield Area	12.6	5,300	5,000	10,300
Old School Properties (four)	3.9	34,900	10,000	44,900
*Neighborhood Lots (three)	2.8	2,100	6,000	8,100
Subtotal	44.5	$141,500	$101,000	$242,500

Country Parks

South Side	52.0	$ 15,600	$ 26,000	$ 41,600
East Side	55.0	16,500	27,500	44,000
Northeast Side	60.0	18,000	30,000	48,000
North Side	40.0	12,000	20,000	32,000
West Side	45.0	13,500	22,500	36,000
South Sewage Plant	5.0		3,000	3,000
Subtotal	257.0	$ 75,600	$129,000	$ 204,600
TOTALS	331.4	$864,484	$462,000	$1,326,484

*From average assessment in the city within the neighborhood, where park acreage is proposed.

Miami Beach, Florida; Beverly Hills, California; Virginia, Minnesota; Claremont, New Hampshire; and Onaheim, California, are the only cities having over 10,000 population listed in the 1940 Municipal and County Parks report which spent over $3.00 per capita in 1940. Sacramento (population 105,958), the largest of these six cities, spent $3.39 per capita for recreational purposes. Twenty-eight United States cities spent over $2.00 per capita in 1940. Lancaster spends 24 cents per capita from tax money and 62 cents per capita from all sources.

The combined public agencies in Lancaster providing recreational areas, facilities, and programs now spend about $102 per acre. It may be estimated, therefrom, that to operate and maintain the proposed system with the same efficiency and adequacy would cost $102 times 723 acres or $73,746—a cost of $1.13 per capita. More intensive use of the areas, community houses, and recreation centers would increase the per acre expenditure by perhaps 50

per cent. Thus the operating costs for a 723-acre system may be estimated at $108,450 per year, or about $1.67 per capita.

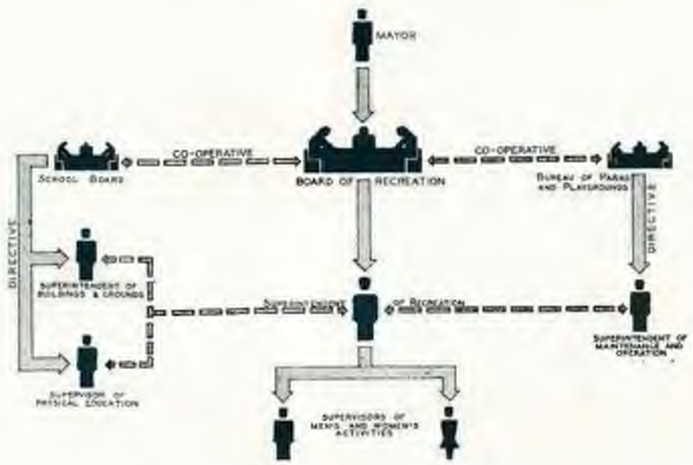
A city of the third class in Pennsylvania may levy a tax of up to two mills (Sect. 3709, Act 317) for maintenance and operation of a park, playground, and recreation system. Lancaster's assessed valuation in 1944 was $91,000,000. A special levy of 1.19 mills would provide enough funds to operate the proposed expanded recreation program. Funds for the purchase of lands and capital improvements are investments which are properly provided through bond issues (Sect. 3708, Act 317) scheduled in the long-range program with other necessary improvements.

PROPOSED ORGANIZATION FOR A RECREATION BOARD

It is recommended that a Recreation Board be established as part of the city government and that this body have complete jurisdiction over the entire recreational program. In accordance with Pennsylvania Third Class City Laws (Act 317, Sect. 3704, Sect. 3705, and Sect. 3706), Lancaster may set up such a board having personnel selected as follows:

> "A recreation board, when established, shall consist of five persons. Two of the members shall be members of the school board. Members shall be appointed by the Mayor to serve for terms of five years. Members of the board serve without pay. Women are eligible for appointment."

The Recreation Board should employ capable persons to administer and supervise all recreational activities. Co-operation between the Recreation Board, the School Board, and the Bureau of Parks and Playgrounds must prevail. The co-operating bodies may continue to maintain and operate the recreational facilities owned by them. The Recreation Board, however, would



ORGANIZATION FOR MUNICIPAL RECREATION

Figure 63.

make studies of needs, and plan with the co-operating bodies for the provision of the necessary areas and facilities. Inasmuch as two of the board members would also be members of the School Board, co-operation with that body should not be too difficult of attainment. Likewise, since the Board of Recreation and Bureau of Parks and Playgrounds are both under the jurisdiction of the Mayor and City Council, co-operation should be readily forthcoming. The accompanying chart, Figure 63, illustrates the suggested organization.

Such an agency would place the responsibility for providing and operating recreational facilities on the shoulders of a public municipal agency. The various social agencies would then be free of a burden which they have been forced to assume. They could then properly devote more of their time and attention to matters of welfare demanding individual sympathy and attention.

Streets, Highways and Parking Areas

THE LANCASTER STREET PATTERN

- Checkerboard Pattern
- Gridiron Pattern
- Radial Pattern
- Combination Street Pattern of Lancaster

NORTHERN EXPRESSWAY

CIRCUMFERENTIAL GREENBELT HIGHWAY

ARTERIAL HIGHWAYS

MAJOR CITY STREETS

LOCAL PARKWAYS

THE PARKING PROBLEM

- Parking in the Central Business District
- Parking Meters
- Parking Outside the Central Business District

TRAFFIC CONTROL

Streets, Highways and Parking Areas

THE LANCASTER STREET PATTERN

THE STREET SYSTEM is the framework of the City, within which are developed the central business district, industrial areas, residential neighborhoods, institutions, parks and other community units.

Three principal functions which streets serve in the community are as arteries for traffic; for access, light and air to abutting property; and as location for utilities beneath the surface or overhead, such as water, gas and sewer lines, and electric, telephone and telegraph wires, conduits and cables.

The street system of Lancaster is composed of all three of the customary street pattern types—checkerboard, gridiron, and radial—and combinations thereof. Many inherent disadvantages of each are evident in Lancaster.

Checkerboard Pattern—The checkerboard pattern of the original 500 acre Hamilton tract was copied directly from the system laid out for William Penn in Philadelphia. In this part of Lancaster, blocks are generally about 575 feet square, and the streets are mostly of uniform width. Alleys of variable width divide the blocks into halves or quarters in both business and residential areas. Considerable city building congestion is directly due to the development over the years of business houses and dwellings on these alleys. Street widths in the checkerboard section of Lancaster are generally from 60 to 66 feet. The streets of this pattern are characteristically north-south and east-west streets.

Gridiron Pattern—The gridiron pattern of streets is used chiefly in Lancaster in old Adamstown of the Seventh Ward and in the Cabbage Hill section of the Eighth Ward. The blocks of the gridiron pattern are rectangular—not square as in the checkerboard pattern. The streets are laid out diagonally to the checkerboard streets, that is northeast-southwest and northwest-southeast. Alleys are uncommon in the areas of Lancaster where the gridiron street pattern is used. Blocks are generally long and very narrow—240 feet by 600 to 750 feet—with residences built on each frontage. Streets are narrow, being only 30 to 36 feet wide.

Radial Pattern—The third basic type of street pattern in Lancaster is the radial street. Fortunately, there are a number of partial radials such as New Holland Pike, Harrisburg Pike, Marietta Pike, Millersville Pike and South Duke Street. These radials have developed from the old trails and country roads. They are effective in connecting the periphery of the central business district with neighboring communities and cities. In general, they provide

access to Lancaster through the corners of the City. Several of the gridiron street patterns of the City were obviously oriented to radial streets, rather than to compass points.

Combination Street Pattern of Lancaster—The combination of checkerboard, gridiron, and radial street layouts in Lancaster is a happy arrangement in some regards. The radials carry traffic to within an eighth or a quarter mile of the Square. The simplicity of the checkerboard and gridiron patterns is obvious—simple to prepare property descriptions, simple and economical for building design, simple for street names, and an aid to simple street intersections which promote traffic safety.

Certain disadvantages, however, of these three basic street systems, individually and in combination, create some of the fundamental traffic problems of Lancaster.

The radial streets, like spokes of a wheel, are securely anchored to the business hub of the City. But the Lancaster wheel of radial streets has no rim—no connector or circumferential by which traffic may cross from one city entrance to another without entering to the congested business district. Remedial measures proposed in this study include a new circumferential greenbelt highway as a rim for the wheel at the outer edge of the urban area; an intermediate circumferential system of crosstown or belt-line streets inside the City limits; and a partial inner loop connecting the ends of the radial streets. The "Northern Expressway" is also a special, partial circumferential, so located as to carry the heavy Philadelphia-Harrisburg traffic through the industrial northside rather than through the residential and commercial sections of the City.

A fundamental disadvantage of the gridiron and checkerboard street patterns in Lancaster is lack of recognition of the functional differences between streets. Lancaster street widths in any section of the city are generally the same, so that traffic is diffused on all streets rather than concentrated upon arterial streets several blocks apart. The lack of differentiation results in increased cost of street construction and maintenance by necessitating heavy construction for all streets, rather than for only every fourth or fifth street. Other results of the general traffic diffusion on gridiron and checkerboard streets are loss of character to residential neighborhoods because of increased noise, dirt and hazards; and encouragement for business and industry to scatter throughout the City, because all streets are equally suitable for heavy usage.

Lancaster is served by the following Federal Highways: the Lincoln Highway, Route 30, from Philadelphia to Pittsburgh and points west; Route 222, north, by way of Ephrata to Reading and Allentown; Route 222, south, by way of Quarryville to Baltimore; and Route 230 by way of Elizabethtown to Harrisburg. The State highways serving Lancaster, which in 1941 had enough traffic to be included in the Traffic Flow Map prepared by the Pennsylvania Department of Highways are as follows: Route 23, through New Holland, Morgantown and Pottstown; Route 501, through Lititz and Myerstown; Route 72, north, through Manheim and Lebanon. Each of these highways had a daily average traffic volume count within the City limits in 1941 exceeding 2,500 vehicles.

Certain streets which are important units in the highway system are main-

Figure 64. Perspective sketch—"Northern Expressway."

tained by the State. These are King and Orange Streets, both east and west; New Holland Avenue and Prince Street.

The major remedial measures proposed for Lancaster streets and highways to expedite traffic movements, to increase safety, to enhance the neighborhood amenities and to effect economies and efficiencies will be discussed under the topics of the Northern Expressway, the Circumferential Greenbelt Highway, Arterial Highways, Major City Streets, Local Parkways, Parking and Traffic Control.

NORTHERN EXPRESSWAY

It is proposed that a new highway be built through the industrial north side of Lancaster to connect the Harrisburg Pike with the Lincoln Highway East

Figure 66. Lititz Pike—Location of "Northern Expressway" crossing.

in such a way as to reduce the volume of through traffic which must enter the congested business district, and to expedite traffic to and from terminal points within the urban area. The character of development proposed for this Expressway is shown in the perspective sketch, Figure 64. It is considered that the highway should meet the standard of the federal report—"Interregional Highways—House Document No. 379, 1944" as to limited access, grade separations, road grades and alignment.

In 1941 Lincoln Highway East (Route 30) carried an annual 24-hour average of 12,752 vehicles, of which about 25 per cent were commercial. The Harrisburg Pike (Route 230) carried in 1941 an annual 24 hour average of 7,158 vehicles, of which about 20 per cent were commercial. Lincoln Highway West (Route 30) carried 7,854 vehicles, of which approximately 13 per

cent were commercial. Much of this traffic is routed through, or within a few blocks of, Penn Square.

The Pennsylvania Department of Highways has plans, in some detail, for a new four lane divided highway approaching Lancaster from Harrisburg. It is proposed to leave the present Highway in the vicinity of Salunga, and to remain on the northeast side of the Pennsylvania Railroad. The present terminus of the proposed Highway is northwest of the City, at Manheim Pike. This terminus is accepted as the point of origin of the Northern Expressway herein proposed. Careful reconnaissance studies were made for location eastward to junction the Lincoln Highway near the Lancaster County office of the Department of Highways—a distance of 6.5 miles—as shown on Figure 65, Streets and Highways.

The Existing Land Use Map, the Ultimate Land Use Plan and the Master Plan show the concentration of major industrial and commercial establishments, existing and proposed, along the northern limits of the City near the railroad. The Northern Expressway location was selected to serve these traffic-generating establishments in the most efficient manner, and at the same time, to facilitate the Philadelphia-Lancaster-Harrisburg traffic movement, especially for trucks.

Service to the center of the City, as well as to the major industrial districts and residential areas, and creation of desirable neighborhood and industrial areas were of major importance in the selection. Grades, alignment and property damages were other factors which further influenced and controlled the route selection.

Origin and destination traffic counts were not available for Lancaster. Studies which have been made by the Public Roads Administration show that for a city the size of Lancaster approximately 80 per cent of the traffic would be city bound and the other 20 per cent would be through traffic. The assumption that most vehicles would by-pass an urban center, if possible, is a fallacy. The fact is stated in the Interregional Highways Report that ". . . a very large part of the traffic originates in, or is destined to, the city itself. It cannot be by-passed."

The Interregional Highways Report also states that ". . . 85 per cent of all trips are less than 20 miles, and only about 5 per cent for more than 50 miles." The Lancaster sphere of influence, as outlined in the economic section of this report, is approximately the same as the County area. The travel distances involved, therefore, conform with the typical conditions outlined by the Interregional Highways Report. The location selected for the expressway—only a mile from the center of the City—will be convenient for interregional traffic, as well as for collection and delivery of traffic bound in and out of the City.

The proposed Northern Expressway has its western terminus at the Manheim Pike, three miles northwest of Penn Square. As previously stated, this point is also the proposed eastern terminus of a four lane relocation of the Harrisburg Highway now under consideration by the Pennsylvania Department of Highways. The Expressway follows and absorbs Manheim Pike southeastward almost a mile to a point where they make a junction with the proposed Circumferential Greenbelt Highway. A full interchange is recom-

mended at this location to collect and disperse traffic to and from the Expressway, the Circumferential and Manheim Pike.

Proceeding in a southeasterly direction over new right-of-way for three-quarters of a mile, the Expressway reaches the Fruitville Pike, having overpassed Dillerville Road extension on a grade separation. At Fruitville Pike the grades will be separated and a partial interchange will be provided.

Eastward from Fruitville Pike, the Expressway passes south of Brecht School and overpasses Lititz Pike on a grade separation. A three quarter interchange is proposed at Lititz Pike.

Continuing eastward, the Expressway parallels Marshall Avenue 500 feet north of the Union Stock Yards, then in the vicinity of the Lancaster Catholic High School it bears southeastward parallel with and on the southwest side

Figure 67. "Northern Expressway" location west from New Holland Pike.

of Fountain Avenue. The latter will be retained as a two-way suburban service road (Figure 67). The Expressway crosses New Holland Pike on a grade separation with a three quarter interchange, then underpasses the Pennsylvania Railroad main line and spur in the vicinity of the RCA plant.

Still bearing southeasterly, the Expressway overpasses the relocated Grofftown Road on a grade separation. After passing south of the North Sewage Disposal Plant, the alignment bears due east and crosses Conestoga Creek on a new bridge structure.

East of the Conestoga, the local road to Eden is crossed on a grade separation. The Expressway lies parallel with the railroad right-of-way for several thousand feet, then bears in a southeasterly direction, overpasses the Old Philadelphia Road with a grade separation, and merges with the Lincoln Highway, east, in the vicinity of the Lancaster County office of the Pennsylvania

Department of Highways. This is also the eastern terminus of the proposed Circumferential Greenbelt Highway. A complete interchange will be necessary at this terminal point to provide for collection and dispersal of traffic from the Lincoln Highway to the Expressway and to the Circumferential.

Figure 68, Highway Cross Section Details, illustrates a typical treatment of the recommended 120 foot right-of-way. 48 feet are to be devoted to four traffic lanes. A four foot medial strip is provided, ten feet on each

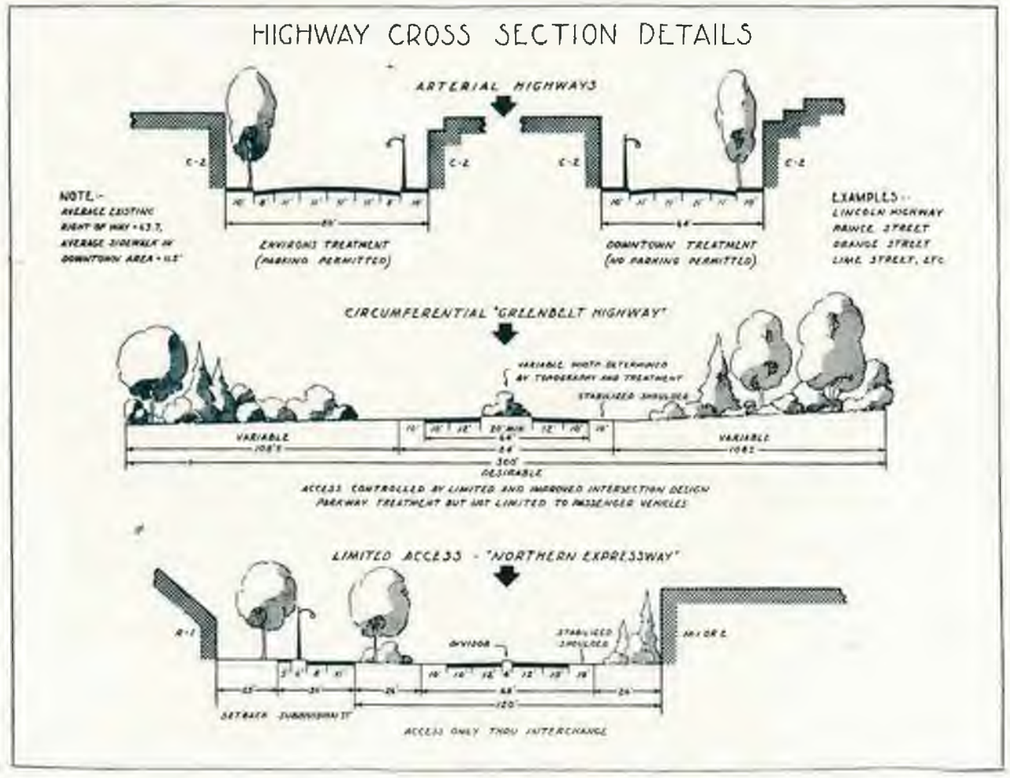


Figure 68.

side for stabilized shoulders, and 26 additional feet on each side to limit access and abutting uses are indicated. The 26 foot control or insulation zone should be designed in location and planting to screen adjacent unsightly developments and to protect property values of abutting residential developments.

Industries abutting the Expressway must have only limited access to the Expressway, through the interchange points. The greatest factor in the "express" character of the highway is control of access. Uninterrupted flow of vehicles is the ultimate aim. Along its entire length, therefore, sufficient

right-of-way should be obtained to insure against uncontrolled encroachments on the Expressway.

In the total distance of 6.5 miles from the Manheim Pike point of origin to the Lincoln Highway East there are a total of 15 highway, railroad, and bridge structures, including three complete interchanges and seven partial interchanges. A preliminary road profile indicates that cuts and fills would be negligible except at approaches to structures. It appears that the Expressway gradient will not exceed five per cent and that a maximum of four degrees of curvature is entirely possible. It is recommended that a detailed reconnaissance survey be made to secure accurate engineering data.

The Expressway, being a limited access type of highway, would provide for ingress and egress only at the interchanges indicated on the Highway Plan. These interchanges are one third to three quarters of a mile apart, thus providing various transfer points so that no one arterial highway will become overburdened with traffic generated by the Expressway. Prince Street (Fruitville Pike Interchange), Lime Street (Lititz Pike Interchange) and New Holland Pike will serve to divide the City-destined traffic. These arterial interurban highways make their junction with the Expressway just outside the congested area, thereby offering relief to downtown City streets.

The proposed Northern Expressway location is adjacent to the following important Lancaster establishments: the Pennsylvania Railroad passenger and freight terminals, within one quarter and one half miles, respectively, of the Expressway; the proposed Sports Area; the Lancaster Municipal Airport, approximately six miles north of the Expressway; the Motor Freight Terminal has easy access to the Expressway either over Dillerville Road or over the proposed Circumferential Highway; the Union Stockyards; Radio Corporation of America; Armstrong Cork Company; Stehli Silk Mills—all are close at hand. In fact, the greater portion of the heavy industrial and much of the heavy commercial district of the Lancaster urban area is adjacent to the proposed route.

One of the factors in the final selection of the route is the separation which will result between the industrial and the residential districts as shown on the Proposed Master Plan of Development for the City.

Many other factors were considered in the final decision for route location. One such factor was school zones. The Brecht School of Manheim Township is a new and substantial structure. The school serves a neighborhood which is mostly north of the school. To have located the Expressway north of the school would have isolated it from its neighborhood, and would demonstrate lack of comprehensive community planning.

The Catholic High School at Juliette and Franklin Streets would appear to be severed from its student population by the Expressway location. Actually, this is not the case, as the majority of the students come from within the City limits while only a few come from the environs and rural areas.

In order to further substantiate the Expressway location, property damage of alternate route locations were weighed one against the other. Where large or stable installations limited location possibilities, alternate locations were studied. The final selection is the least damaging of all those studied, as well as the most compatible with abutting land uses and community development. In fact, of the total length of approximately 6.50 miles, less than

two miles traverse developed areas. Most of the Expressway location is in wedges of undeveloped land between developed areas.

The system recommended in the Interregional Highways Report does not include Lancaster; nor does it preclude the possibility that other areas than those recommended might be warranted. It is considered that this Lancaster Expressway deserves full consideration in the Interregional Highway program.

CIRCUMFERENTIAL GREENBELT HIGHWAY

In foregoing portions of this report, emphasis has been placed upon the fact that the arterial highways which serve Lancaster converge one to five blocks from the Square; and that, therefore, the streets of the central business district are congested with traffic turning movements which could, to a considerable extent, be handled more efficiently on the perimeter of the urban area. Reference was made, also, to the need for a circumferential highway which would serve as a distributor of traffic outside the congested area.

By way of illustration, a vehicle en route from Reading to York now must enter the City, makes its way to Prince Street, thence to West Orange and out of the City over Lincoln Highway West. If a circumferential were available, the same vehicle could pass around the urban area, or if Lancaster bound, could enter at the arterial connection nearest the desired terminal point.

The proposed 12½ mile Circumferential Greenbelt Highway borders the suburban area on the north, west and south. The western terminus of the Circumferential is on the Lincoln Highway at Little Conestoga Creek, where a full interchange is proposed. The northern section of the Circumferential follows the Little Conestoga Valley northward, crosses the stream midway between the Lincoln Highway and Marietta Pike, and crosses the latter at grade. Relocation of a half mile long section of Little Conestoga Creek is proposed.

The Circumferential underpasses the Columbia Branch of the Pennsylvania Railroad, then bears eastward, crossing the existing Harrisburg Pike at grade. The main line of the Pennsylvania Railroad overpasses the Circumferential.

A junction is made with the proposed Expressway at Manheim Pike. The full interchange at this point has been described in the discussion on the Expressway.

Proceeding eastward, the Circumferential crosses Fruitville, Lititz and Ephrata Pikes, and the proposed East Side Parkway—all at grade—and reaches its eastern terminus at New Holland Pike northeast of Eden. The length of this northern section is 6.75 miles, and approximately five and one half miles will be new right-of-way.

The southern section of the Circumferential follows the Little Conestoga Creek Valley southward from the western terminus for almost a half mile, then bears southeastward, crosses the Millersville Pike at grade southwest of the Bausman community, and continues eastward along the southern boundary of the City to South Prince Street at the bridge over the Conestoga (Figure 69).

A full interchange is proposed at South Prince Street, although the Circumferential overpasses Prince on a grade separation without direct connection. Interchange between the Circumferential, South Queen Street and Fairview Avenue is provided by direct connection of the two latter streets to the Circumferential. Interchange is then provided between Prince, South Queen

and Fairview over a newly constructed Furnace Street connector. South of Furnace Street the existing one block length of South Queen and Fairview would be abandoned. This important interchange is located at the City limits, only one mile south of Penn Square—an important factor when considering the Circumferential for relief of traffic congestion within the City.

The Circumferential continues in a southeasterly direction south of Greenwood Cemetery, on the bluff in the loop of the Conestoga, then bearing eastward, it crosses Conestoga Creek and ascends to the summit of Williamson Park. Continuing its easterly course, the Circumferential merges with the Rocky Springs Road and continues eastward to a junction with the Lincoln Highway East in the vicinity of the Lancaster County office of the Pennsylvania Department of Highways. This is also the eastern terminus of the Expressway, and a full interchange is proposed. The length of this southern

Figure 69. Route 222, South-City approaches need improvement.

section of the Circumferential is 5.75 miles, of which approximately four and one half miles will be new right-of-way.

The significance of the term "Circumferential" must be fully apparent from the foregoing description of the opportunities for traffic distribution on the circumference of the urban area. The term "Greenbelt" also has definite significance in relation to the proposed community development. The function of the greenbelt is to separate the urban area from the rural area by means of a belt of vegetation. This belt will connect scenic areas which are proposed for development as neighborhood or country parks and reservations. Inasmuch as the greenbelt is a part of the Circumferential Highway, it too encircles the urban area and thereby provides an uninterrupted connection between the recreational areas on the perimeter of the urban area.

The Highway Cross Section Details (Figure 68) shows a width for the

Circumferential Greenbelt of 300 feet. Additional width should be included where scenic or topographic features are available. It is proposed that the Circumferential be a four lane highway, and that the opposing traffic lanes be separated by a 20 foot variable medial strip. The opposing lanes may be on different levels where necessary to fit the topography, with the difference in grade taken up by the medial strip. The total roadway width would be 84 feet, including a ten foot shoulder on each side. There would remain, therefore, 108 feet on each side of the roadway for screen plantings of indigenous trees and shrubs, planted in informal masses.

ARTERIAL HIGHWAYS

The arterial highways are those Federal and State Highways previously listed which carry interurban traffic of sufficient volume that they appear on the 1941 Pennsylvania Traffic Flow Maps. At present, these highways carry their traffic through the central business district for distribution to other cities, to dispersed points in other parts of the Lancaster urban area, and to various points within the congested district. It is expected that the Expressway will relieve certain arterials of a heavy burden of Philadelphia-Harrisburg through and stop-over traffic. It is expected, also, that the Circumferential will relieve all arterials of a heavy burden of through and stop-over traffic by enabling traffic to be sorted or distributed outside of the congested business district. It is considered that this relief to the arterial streets will be considerable, and that, thereby, they may once more serve as feeders to the local commercial, industrial and residential areas.

Lincoln Highway—East and West—will continue to serve as an arterial highway, but important traffic routing changes are proposed. Instead of King Street carrying only east bound traffic, and Orange Street carrying only west bound traffic, it is proposed that Orange Street carry both east and west bound traffic, as a four lane street and that on-street parking be eliminated along its entire length.

Two major objectives will be served in using Orange Street instead of King Street as the east-west arterial street. One is to reduce heavy traffic on West King Street because of the steep gradient thereon, Orange Street grades being more favorable. The other objective is to eliminate through traffic at the Square, thereby reserving it for pedestrian and mass transportation uses.

It is proposed that Prince Street remain as a two-way arterial street. Lime Street, also, should remain as a two-way arterial street, with a southern outlet over Church Street to South Queen Street.

Harrisburg Pike should continue to serve as an arterial street, with an outlet over James Street to Lime Street. New Holland Pike, also, will continue to serve as an arterial, with a direct outlet to Prince Street over Walnut.

Certain essential improvements will be required for these arterials, even though they may be relieved of a heavy burden of through and turning traffic. One of these improvements is elimination of parking on the arterials in the downtown area, as fully discussed in subsequent pages. Another is to bring right-of-way widths to a minimum standard. Figure 70, Street Cross Section Details, shows the necessary total width for the required traffic lanes.

Widening programs should be undertaken as necessary to provide free flow of traffic and to remove "bottlenecks."

A number of arterial street alignment improvements are suggested on the Streets and Highways Plan (Figure 65). Among the more important are a new connection by reverse curve from East King Street to East Orange Street at the reservoir site. Another arterial street improvement is the recommendation for a grade separation at the junction of West King and West

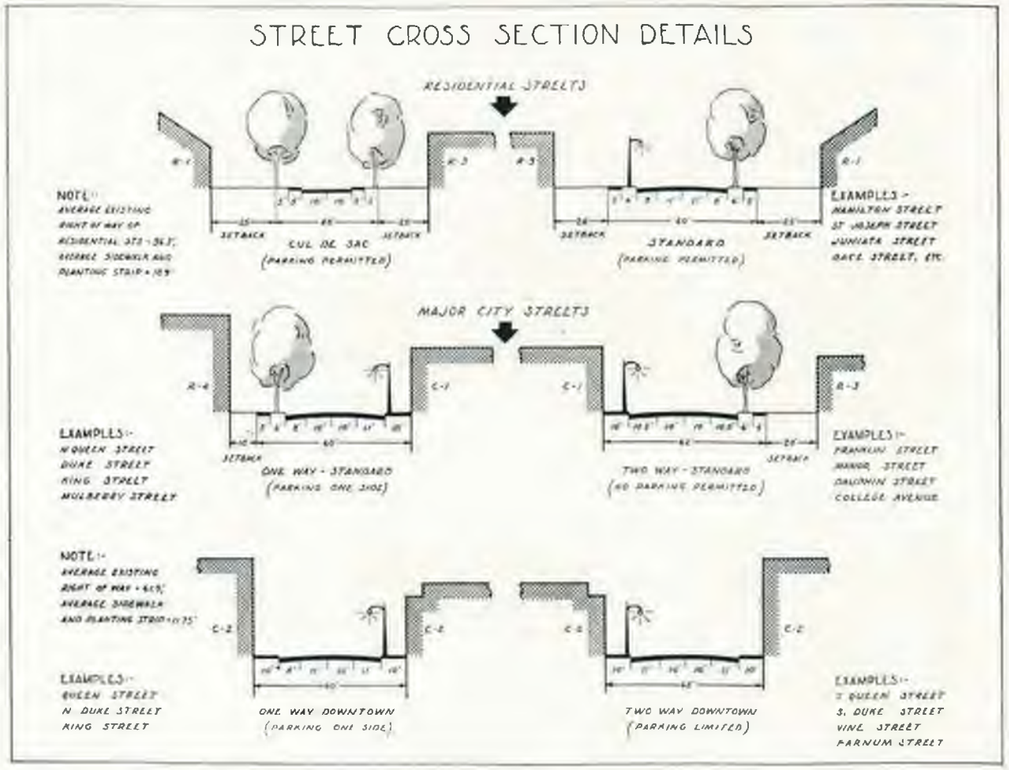


Figure 70.

Orange Streets and Columbia Avenue. This separation is necessary to accommodate the movement of west bound traffic from King to Orange Streets, without interfering with east bound traffic from Columbia Avenue to Orange Street. A third important arterial street improvement is the recommendation that Lititz Avenue be improved and extended to provide direct connection with Lime Street, thereby eliminating the weaving movement which is now necessary.

MAJOR CITY STREETS

The Expressway, the Circumferential and the Arterial Highways will be of great benefit to residents of the City and of the Lancaster trade area. Proposals which follow regarding the major city streets and local parkways of Lancaster will be of direct benefit to the residents of the Lancaster urban area itself. Some of these are, in effect, loop streets for the purpose of connecting secondary centers of business and industry within the urban area, thus reducing the need for all crosstown movements to pass through or near the Square. Others are major business streets of the City such as North Queen Street for south bound traffic and North Duke Street for north bound traffic. King Street—east and west—also becomes a major business street instead of an arterial. East King Street will continue to handle only east bound traffic,

Figure 71. Hazardous obstruction on an arterial street.

which will merge with east bound arterial traffic from Orange Street at the City line. West King Street is to become one-way, west, in order for traffic to operate downhill for grades are as much as 5.2 per cent; and to eliminate through traffic from Penn Square.

This major street system proposal includes two rather complete crosstown or loop routes within the City limits. The outer one consists of the following streets, beginning at the Harrisburg Pike: College Avenue, Pearl Street, Fairview Avenue, Wabank and Hazel Streets, Dauphin Street, northward on Franklin, across Franklin to Liberty, and westward thereon to the Harrisburg Pike. Various new street units and connectors and improvement of alignment (Figure 72) are recommended to facilitate this entire traffic movement. Certain alternates are indicated, such as Plum Street for Franklin; Clay Street for Liberty; and East Hager for Dauphin Street.

The inner crosstown route consists of Shippen, Lemon and Charlotte Streets, and in general connects the terminus of several radial traffic arteries. In this crosstown radial, Charlotte Street is to be one way, south, and Mulberry Street is recommended as the complementary north bound traffic street.

Typical Cross Section Details (Figure 70) show proposed widths of major streets to be used for various business and residential conditions, such as one-way streets with parking on one side, downtown, and under standard light commercial and apartment house conditions; and two-way streets with limited parking, downtown; and two-way streets without parking in light commercial and congested residential areas.

Figure 72. Traffic flow impeded by poor alignment.

LOCAL PARKWAYS

It is proposed that Marietta Avenue, Chestnut Street and Grofftown Road be treated as a local parkway. From the aesthetic viewpoint, a thoroughfare with landscape treatment passing the Civic Center should do much to improve the quality of abutting property. From the standpoint of actual serviceability, Chestnut Street has the best profile of any major east-west street. It should be so treated as to encourage its use for local and mass transportation. With its western terminus at the Circumferential, and the Expressway and East Side Parkway as the eastern terminus, and with the Civic Center and central business district midway between these termini, it is expected that this parkway will serve a large number of motorist and mass transportation commuters.

Because of the built-up character of Chestnut Street, it is suggested that only a two foot medial strip be installed. Carefully studied tree plantings could be made along the right-of-way. It is suggested that a six foot medial

strip be provided on Marietta Avenue and Grofftown Road, and that a true parkway character be achieved.

The other proposed parkway is called "The East Side Parkway." It is proposed as a connector to the Circumferential, north and south. Having parkway character and traversing east side park areas along the Conestoga, it serves to complete the circumferential movement.

Beginning at the southern section of the Circumferential at Williamson Park, the East Side Parkway extends northward across the Conestoga and parallel therewith toward the Old City Mill, then overpasses the Lincoln Highway on a grade separation east of Riverside Drive. Continuing northward to the vicinity of the North Sewage Disposal Plant, connection is made with the Grofftown Road, and on-and-off connections are made with the Expressway. Passing the Pumping Station and continuing northward through the small valley, the East Side Parkway crosses New Holland Pike with a grade separation structure.

This parkway is 3.8 miles long, and much of the required right-of-way must be acquired. It is proposed that the roadway width be at least 70 feet where practicable, and a medial strip is considered essential. The right-of-way width should be a minimum of 300 feet, in order to provide for greenbelt treatment.

THE PARKING PROBLEM

The Parking Problem in the Central Business District is all too familiar. The fact that in 1895 only four motor vehicles were registered in the nation, compared with 34,000,000 vehicles in 1941, illustrates the magnitude of the problem. Motor buses were not a part of urban life until 1906.

Cities were laid out with street and highway rights-of-way which were never intended for automobile traffic, certainly not for traffic plus on-street parking. Some measures to cope with the demands of modern traffic have been taken through traffic regulations, lights, rerouting, off-street parking areas, parking meters, one-way streets, and increased rights-of-way.

By-pass routes have been built in many cities, but, oddly enough, without furnishing relief to the downtown areas. Public Roads Administration, in its recent report to the President (January, 1944) on "Interregional Highways" states that in a study of five cities in a population range of 25,000 to 50,000, origin and destination surveys show that 80 per cent of the vehicles were going beyond the city without stopover. Two cities were studied which had a population of from 50,000 to 100,000. It was found that 83.8 per cent of the vehicles were destined for the city itself. "Furthermore, of this city-concerned traffic, the largest single element originates in or is destined to the business center of the city." National surveys also indicated that before the war, for cities of 100,000 population or less, 81 per cent of all persons entering the downtown area were carried in by private automobiles.

Post-war increase in private car operation is forecast. Even with improved mass transportation services, there is every indication of continued preference for private cars. With expanded purchasing power and continued lowering of automobile prices within the reach of the masses, the future use of automotive transportation in urban areas will cause ever-growing pressure for adequate parking space in the central business districts.

The ability to attract trade depends to a great extent upon the availability of parking space for automobiles. When traffic conditions in the central business district become intolerable, the shopper will seek less congested business districts in suburban centers or in neighboring cities. The trend toward decentralization is stimulated thereby, and the purposes for which the downtown area exists are thwarted. High property values and investments are jeopardized, and City tax revenue is threatened.

In most cities there has been a tendency to side-step responsibility for a parking solution, although it admittedly is an essential element in the overall problem of transportation. The best solution would be reached through combined efforts of both public and private interests cooperating under the technical guidance of competent traffic and planning engineers.

Figure 73. North Queen Street—Central business district.

The problem is too great to be solved by the municipality or by private action alone. The larger retail institutions, banks, hotels and places of entertainment should share the responsibility in order to enhance their businesses and to protect their investments.

Lancaster is not excepted from problems of traffic and parking congestion. Narrow rights-of-way; the compact central retail district; the popularity of "market days"; and the fact that Lancaster is the hub of major traffic routes aggravates the local condition (Figure 73).

As may be seen from the on- and off-street parking chart (Figure 74), Lancaster has made considerable effort to meet the problem of on- and off-street parking in the central business district. Through the efforts of the Bureau of Police, parking lots with uniform rates have been encouraged and expanded, while curb parking regulations have been progressively improved. These measures show that the City is conscious of the problem and of its re-

sponsibilities. However, additional specific and severe recommendations are made in this report effecting parking in the central business district.

Parking facilities in Lancaster are inadequate now and were inadequate before the war. On-street parking must be further reduced to facilitate moving traffic. Vehicular arteries, like arteries in the human body, must be kept free for traffic movement—not traffic storage. The downtown area must be made readily accessible to shoppers destined for the central business district

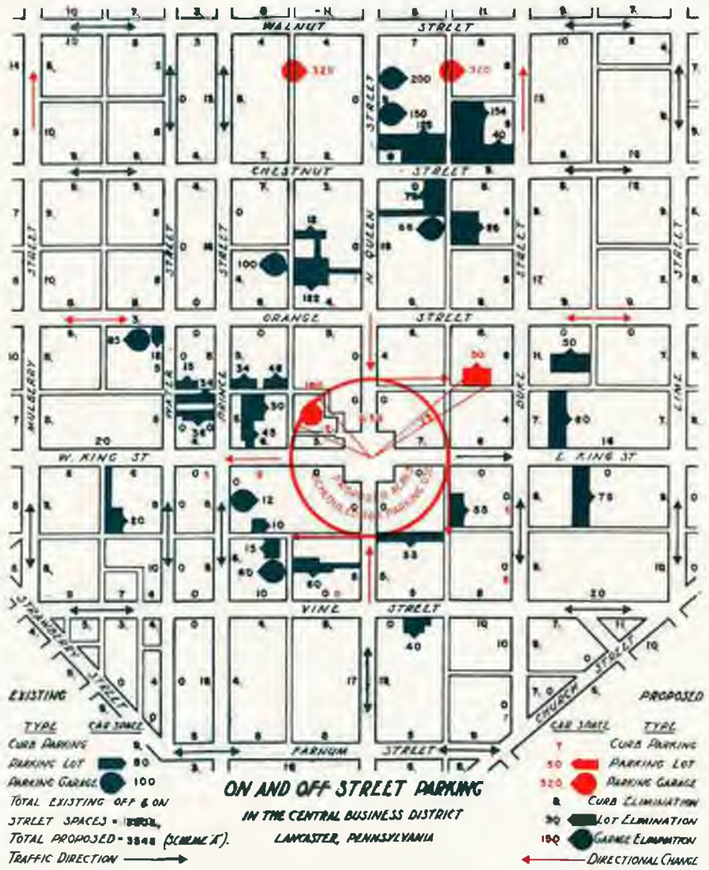


Figure 74.

in private automobiles and in buses. In Lancaster, property values make impractical a recommendation for street widening merely to permit car storage.

Merchants generally oppose the elimination of curb parking in the belief that business will be adversely affected. Facts prove that the volume of business contributed by curb parkers is small compared with the total busi-

ness, and that the congestion caused thereby is forcing certain types of businesses out of the central district.

Within the central business district of Lancaster there are 1,280 curb parking spaces with varying time restrictions. Those located nearest the Square have 15 minute parking limits, while those on the marginal streets have two hours or more.

The 15 minute parking interval gives a greater turnover and thereby may increase trade to the near by merchants; but the benefits are reduced by friction against normal traffic flow due to increased parking maneuvers in and out of traffic lanes. Of the 1,280 curb spaces, 800 are planned for elimination, leaving a residue of 480 spaces.

There are about 1,922 off-street parking spaces provided in lots and garages in downtown Lancaster. Because of other proposals of this Comprehensive Municipal Plan about 854 of these spaces will be eliminated, leaving 1,068 of the present off-street facilities.

Parking facilities existing, those to be displaced by other facilities or by elimination of curb parking on certain streets, and the remaining car spaces are summarized as follows:

Parking Facilities	*Existing Car Spaces*	*Displaced Car Spaces*	*Residue Car Spaces*
Garages	653	450	203
Lots	1,269	404	404
Total off-street	1,922	854	1,068
Total on-street (curb)	1,280	800	480
Grand total	3,202	1,654	1,548

The land use study shows that 7.24 acres are to be devoted to off-street parking in the central business district. It is proposed that two of the necessary areas be provided by using the present sites of the Central Market and the Police Station. The combined area of these two sites is 0.66 acres. There remains, then, a balance of 6.58 acres to be provided for off-street parking in the central business district. It is estimated that 6.58 acres is sufficient space for parking 1,150 cars.

New parking facilities in an underground garage are not computed in the above estimates, because the land for this use is allotted primarily for its surface use. It is proposed, however, that underground parking facilities be provided underneath the proposed park and plaza of the Civic Center. It is estimated that sufficient space will be available for 640 cars.

New parking facilities proposed, therefore, are as follows:

Garages:		
Civic Center	640	
Central Market	160	
Total		800
Parking Lots:		
Old Police Station	50	
Additional 6.58 acres	1,150	
Total		1,200
Total new off-street parking		2,000

No new on-street or curb parking spaces are proposed. The total proposed car spaces, therefore, are the sum of the residue of existing car spaces (1,548) and of the new car spaces (2,000), which is 3,548 car spaces. The present number of car spaces is 3,202. The proposed additional parking will be, therefore, 346 spaces or an increase of 11 per cent.

A great increase in the number of potential parking spaces could result from building double or triple deck structures on the 6.58 acres of proposed parking lots. If the lots were double decked as an average condition, the number of parking spaces on these 6.58 acres would be 2,300—an increase of 1,150 spaces. The total number of on- and off-street parking spaces would be, therefore, 4,698 or 1,496 more than are now available. The increase would be 48 per cent.

It is beyond the scope of this report to select or allocate definite parking sites. It is the purpose to determine the need, to suggest ways and means of fulfilling the needs, and to illustrate generally the desirable pattern most fitting for downtown Lancaster.

Municipalities have obtained desirable areas for parking purposes by purchase, condemnation, tax delinquencies and gift. Some operate the areas as a municipal service with or without parking charges. Others lease these lots to private operators at a low rate for operation under city regulations. The continued encouragement of private operators is advised, but total dependence upon them is not wise. It should be a public responsibility to insure the City against dislocations to parking facilities which may arise from abandonment of service by private operators. Much of the additionally proposed 6.58 acres should be acquired, developed and operated or leased by the City government.

Haphazard selection of sites and demolition of structures to meet the necessary parking acreages may lead to an unhappy end. The fact that an obsolete structure which is paying little revenue is ripe to be torn down does not necessarily mean that the site is suitable for use as a parking lot. The topography must be suitable, the site must be easily accessible, and it must be relatively near the final destination of the motorist-shopper in order for a parking lot to result in profitable business venture. Customers will not walk much over a thousand feet from a parking lot to shop. If a hill or other obstacle lies between the lot and the final destination, use of the lot may be further handicapped. In Lancaster, such limitations and barriers are evident. The land south and west of the Square is obstructed by steep grades. The excessively deep blocks make center-block parking lots rather inaccessible.

Areas in the central part of the blocks, however, are the logical places for parking accommodations to be expanded. They could be approached from the streets which carry the least pedestrian and vehicular traffic. Rear shop entrances facing the interior parking lots would facilitate access. Designation of alleys as one way, improvement of curb cuts and sight distances would increase accessibility. For instance, with expansion of the vacated Police Station property into a parking lot or open-wall garage, access would be easy from Duke Street which will be relatively free of pedestrian traffic. Abutting properties could be made inviting and accessible to the shopper by rear entrances and merchandise can be attractively displayed at the new parking lot entrance. Vehicle exits could be provided north to Orange and west to Queen

and south to King, depending upon factors of sight distance at exits, volume of pedestrian traffic, grades, and one-way street movements.

Existing off-street parking lots in Lancaster are often either extremely "open" in appearance and approach, to the disadvantage of pedestrian traffic and abutting properties; or they are so isolated and confined as to be hidden and inaccessible to the motorist. In general they are well paved. Often they lack protective rails and well defined parking and moving lanes which result in packing cars in, particularly on market days. The proposals which are made in this report for a continuous market would greatly relieve the market day parking congestion which now prevails. Sustained turnover rather than peak loads would help to assure the parking operator of dividends and at the same time to provide better service and accommodations to the shopper.

Figure 75. Off-street parking necessary in the central business district.

Although it is beyond the scope of this report to include details as to design, layout, construction and operation of parking lots and garages, attention is called to a few particulars. Good paving, screening and planting often serve to convert what might be an eyesore into an attractive element. Many fine examples of off-street parking accommodations may be seen in various cities throughout the country. They incorporate the better principles of design and construction and may be used as a guide to Lancaster's future areas. In Richmond, Virginia, a large department store has its adjacent parking lot so attractively paved and planted, that during the summer months the lot is a popular place for social events, such as USO dances.

Nominal rates will encourage the use of parking lots by shoppers as well as the all day parker, and will do much to create the off-street parking habit. The enforcement of curb parking regulations likewise will help.

Open walled garage structures are also in evidence in the downtown sec-

tion of many cities. They provide commodious space accommodations, without heating and ventilating problems. Cost per car space is lower than in standard type garage structures and the tax assessments are generally lower. In the solution of parking as a private enterprise this is perhaps as adaptable a parking facility as could be recommended for Lancaster where space is at a premium.

Roof-top parking facilities are sometimes installed, particularly on the newer and larger retail structures. Conversion of older buildings for such use would depend upon existing structural character and the building heights. In general, it does not seem applicable to Lancaster's present retail installations. There has been much speculation regarding helicopter and autogyro landings upon roofs of the larger retail department stores. Some aeronautic authorities believe such service will be a mass transportation operation. The scheduled landings and departures of a regulated helicopter bus service with a roof-top landing surface seems plausible and worth consideration by the larger retail establishments in their long range planning. The City itself might find that a garage roof surface could serve such a purpose and that space reserved for the use is desirable.

Parking Meters. A type of parking control which has not been mentioned is the parking meter. Whether they would be applicable to Lancaster is a question. A quotation from a report on Off-street vs. Curb Parking by Huber E. Smutz, City Planning Director, Los Angeles, California may best present the controversial views on the subject: "Various degrees of success have been reported from these installations. Excellent results have been obtained in some cities in ridding the streets of all-day parkers, eliminating double parking, providing more parking space, increasing the parking turnover, and speeding up traffic by eliminating the cruising of cars. Although not installed for revenue purposes, the net receipts in several medium-large cities have exceeded $100,000 which helps pay the salaries of the traffic officers who patrol the streets. The AAA contends that these net receipts should be placed in a fund to provide a permanent plan of off-street parking. Several cities have abandoned parking meters.

"Opponents of parking meters claim that some of the results obtained could be secured through proper enforcement of time limits on curb parking as parking meters are not self-enforcing but require close police supervision. The most effective way to keep traffic moving on principal business streets is to prohibit curb parking altogether. Parking meters should be a last resort and should be located on other than through traffic routes."

Parking Outside the Central Business District—This report has been devoted primarily to the problem of parking as it affects the central business district. The problem as it exists in light commercial, residential and industrial districts is also of great importance. Of the total acreage allotted to light commercial use in the land use plan, one half was for potential off-street parking. As new neighborhood stores are needed, they will undoubtedly be designed to provide "free parking" for shoppers. Serious consideration should be given to off-street parking for existing neighborhood stores.

In multifamily residential areas, whether elevator apartments, garden

style apartments, row or duplex houses, provision for off-street parking should be made in all future developments. This should be in direct proportion to the population density of the project. Control should be effectuated through zoning regulations, building regulations, or by special code.

Los Angeles, about four years ago, amended its zoning ordinance to require all multiple dwellings to furnish garage space on the premises. Other cities have followed this example and adopted similar provisions. The new zoning ordinance of Arlington County, Virginia calls for one off-street parking space for each family unit in apartment and other residential districts. Bronxville, New York has amended its ordinance to require on-the-lot parking for all multiple family properties.

The trend indicated is toward requiring property owners to cease storing cars in the public trafficway, which is more and more being reserved for moving vehicles. Off-street parking facilities are more difficult to provide in multiple family low cost housing projects where economy is a major factor. However, some form of off-street parking should be provided even in low cost developments.

With the reduction of densities on residential acreages, as proposed in the housing study of this report and the proposed Zoning Ordinance, the number of autos in a given area will likewise be reduced. Zoning may also relieve the parking problem directly and indirectly in the central business district, light commercial and industrial areas.

TRAFFIC CONTROL

It has been repeatedly stressed that the facilities proposed, whether Expressway, Circumferential, Arterial, or Major Streets—all are proposed to increase efficiency of traffic movement. Each plays a significant part in the plan, and each is dependent upon the other for overall efficiency.

The main objectives in this study have been to facilitate traffic flow in the entire metropolitan area; to relieve the central business district from excessive and extraneous traffic; to discourage use of Penn Square except for mass transportation and pedestrian traffic; and to provide adequate parking space in satisfactory locations.

One result of increased efficiency should be reduction of traffic accidents. Many accidents, however, are a result of inefficiencies in the traffic system. Traffic signals, stop signs, and other devices give relief, but study for improvement of the entire traffic movement is essential in the congested district. Considerable attention is given to mass transportation, for the importance thereof to Lancaster can not be overemphasized.

Prince Street bears a greater load of traffic, both truck and passenger, than any other City street. The intersections along this artery are particularly conspicuous for their accident counts are shown on the Traffic Flow and Accident Point Map. (Figure 76.) Although some of this traffic congestion will be eased by the major highway recommendations for the environs, a considerable portion of traffic will still require the use of Prince Street. Improved right-of-way treatment, the elimination of railroad grade crossings, and continued use of progressive traffic light signals will do much to reduce present inefficiencies. However, because of the heavy north-south movement and the

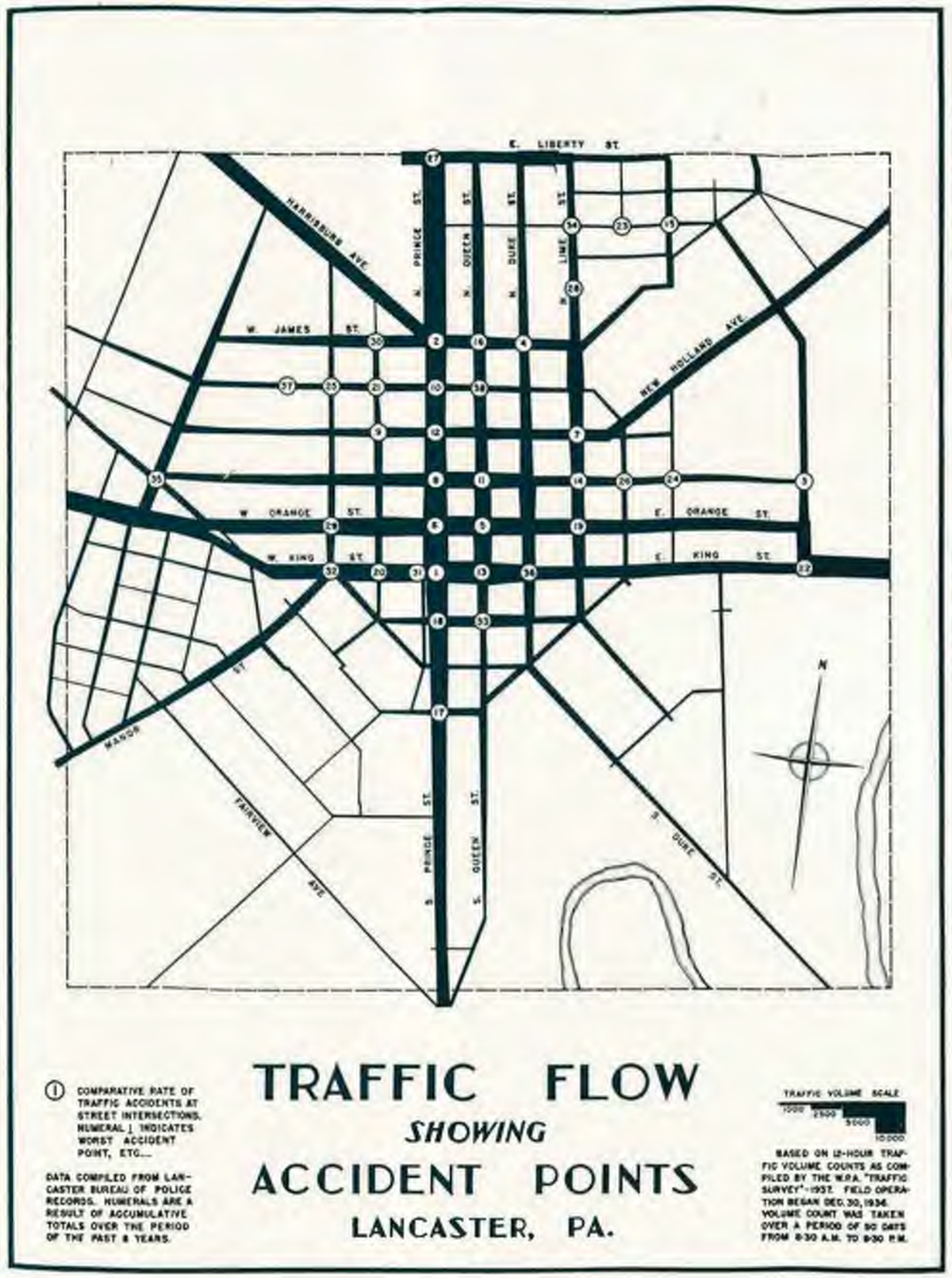


Figure 76.

character of abutting land uses, it was considered advisable to designate another city street to absorb some of this traffic. Lime Street now carries a heavy load, much of which should be absorbed by the Northern Expressway. With that movement reduced, and with Church and South Queen Streets right-of-way improved, a north-south route parallel to Prince Street is provided.

The designation of James and Walnut Streets as arterial highways is significant enough when the street and highway plan is analyzed. The connection from Prince to Lime at the Harrisburg Pike intersection gives an essential cross over movement. A parallel connection from Lime to Prince at the New Holland Avenue junction facilitates that traffic flow. There is considerable traffic on these two arterial highways. By providing for transfer over James and Walnut Streets, traffic not destined for the central business district will be less likely to become involved in congested district traffic.

The east-west movement now using the Lincoln Highway—east on King Street through Penn Square and west on Orange Street—is likewise of major significance. Not only do these streets carry considerable through traffic but they are burdened with local movements and mass transportation. The southern section of the Circumferential should divert considerable through traffic south of the City. However, some of the interurban traffic will still use the most direct route and will, therefore, come through the City's center.

The proposal has been described to make Orange Street a two-way artery. With eventual improvement and uniform width along its entire right-of-way; with parking eliminated; with progressive traffic light signals; and with mass transportation minimized, through movement would be greatly facilitated. Orange Street grades favor this use.

King Street and the Square will be relieved thereby of a burden of incompatible traffic. East King Street is to remain one-way as at present; West King Street traffic is to be reversed, only west-bound traffic being carried thereon. The north-south axial street, therefore, will carry traffic in to the Square and the east-west axial street will carry traffic out.

Mass transportation facilities which now enter Penn Square by way of circuitous routes with poor grades will be benefited. Buses arriving from the north, west or east will use Queen Street, and passengers destined for the Civic Center, the theater section, or retail establishments will have quick and easy access by use of this south-bound artery.

In Penn Square, pedestrian traffic will be safer than at present (Figure 77). Cross over movements of vehicular traffic will be prohibited, thus eliminating a considerable hazard to the pedestrian. Traffic lights will remain primarily to separate vehicular and pedestrian movement at crosswalks.

It is proposed that Duke Street become a one-way street, north, from East King Street. This is a necessity to compensate for reversing the flow of North Queen Street. South Queen Street, below Vine, will remain a two-way street, and South Duke Street will be a two-way street south of East King Street. Mulberry Street will be one-way, north, and Charlotte Street will be one-way, south. These streets together will provide two-way service west of Prince Street, much as Queen and Duke operate east of Prince.

Although traffic volume on Mulberry and Charlotte Streets are considerably less than on Queen and Duke Streets, they exceed and approach 2,000 cars, respectively. It is expected that Prince Street will benefit from this

revised routing. Increased mass transportation movement on Mulberry Street will be facilitated.

It is proposed in the parking plan to eliminate on-street parking from arterial highways in the downtown area. Parking will be permitted on the left side of one-way streets, the right side being reserved for bus loading and unloading. Major city streets having two-way traffic in the central business district would likewise permit parking on one side, except during rush hour periods.

The parking time limits already in operation seem to be entirely satisfactory. Curb markings and signs are uniform and standard. This is true of other mechanical traffic control devices throughout the city. The attempt of City authorities to regulate and control traffic within the City is commendable.

The problem transcends the application of devices, however, and an overall plan of development must ensue. Construction of new major streets and

Figure 77. Inadequate terminal facilities for pedestrians.

highways, improvement and rerouting of existing streets, plus the regulatory measures now employed are the means by which traffic will be controlled.

The entire circulation system as recommended is the ultimate goal and one element is dependent upon another for complete and successful fulfillment of the operation. Traffic control measures, however, could be effectuated without waiting for other portions of the system. When street cars are eliminated in the post-war period, one of the greatest obstacles to efficient traffic flow will have been removed.

Except for the on- and off-street parking recommendations, the one-way plan and designation of arterial highway routes (providing parking is entirely abolished on Orange Street at time of change) should take place at one time. The whole routing system must be put in operation at one time.

Because of route and directional changes, new points of traffic friction

will occur. It will be necessary to keep careful watch over these street crossings in order to correct inherent hazards as rapidly as possible.

Traffic control should not rest solely upon the improvement of the physical pattern. The City could gain much through educational methods, by which the public might become conscious of its part in the achievement of a working plan.

Mass Transportation

INTRODUCTION

MASS TRANSPORTATION is the most economical form of transportation for urban and suburban passengers. The daily travel needs of the masses of workers and shoppers to the central business district of Lancaster is of great importance to the City, and cooperation is necessary between the City officials and the transit company in developing satisfactory plans for these facilities. Transit facilities must be fast, convenient, reasonably comfortable and economical in order to compete successfully with the use of private automobiles. Successful operation of transit facilities can go far toward solving the problem of congestion of streets by private cars, and on- and off-street parking. The same number of persons can be carried by five large or ten small buses as can be carried by 120 automobiles.

The Conestoga Transportation Company provides the urban and suburban passenger transportation facilities for Lancaster, carrying an average daily passenger volume of 69,000 persons. This volume is the equivalent of one ride each day for each resident of the Lancaster urban area. Since the first bus line was inaugurated in Lancaster in 1923, bus transportation has been expanding in the City and suburbs, replacing the older electric street car service. Wartime transportation difficulties have delayed complete abandonment of street cars in the Lancaster area. Thirty three miles of car tracks remain in the City and on the Ephrata line.

Only passing recognition is given to the problems caused by the old street car system remaining in service, inasmuch as it is a temporary expedient. The trolley tracks in the center of the streets leave only narrow lanes at the side for other vehicular traffic. On East King Street, which carries only east bound vehicular traffic, trolley cars of two lines move westward against the east bound traffic. It is expected that these traffic hazards and congestion factors caused by return of the street cars to service during the war will be eliminated at the earliest possible date.

MASS TRANSPORTATION PLANNING OBJECTIVES

The elements of mass transportation which are of major importance in the Lancaster Comprehensive Municipal Plan are:

a. Adequate service and schedules.
b. Adequate frequency of round trips, loadings and unloadings.
c. Economy of fares.
d. Adequate equipment.
e. Reduction of congestion by rerouting.
f. Adequate terminal with protection from traffic hazards and the weather.
g. Coordination of the transit plan with the Comprehensive Municipal Plan as a whole.

Adequate Service and Schedules. The people of Lancaster are well served by mass transportation facilities. Most sections of the City are within the five minute zone from Penn Square, and many areas beyond the City limits are within the ten minute zone. (See Mass Transportation Time Zones, Figure 78, Map Section.) The urban and suburban areas are well covered with bus routes.

Adequate Frequency of Trips. The frequency of bus and trolley schedules, including loadings and unloadings appears to be adequate, even with the excessive demands of wartime conditions. Round trip frequency per day ranges between 54 and 189 trips. Frequency expressed in lapse between loadings and unloadings ranges between 10 and 15 minutes for urban service. Transfer points and transfer correlation are well worked out from the standpoint of schedules.

Economy of Fares. The basic bus and trolley fare for all points within the city is seven cents, or four tokens for a quarter. School chilldren may buy eight tokens for a quarter. A weekly pass costs $1.35. These rates are considered to be entirely fair.

Adequate Equipment. It is no discredit to the transit company that the present equipment is not adequate, modern, nor in good condition. Reference has previously been made to the fact that street cars were replaced in service during the wartime emergency and that they will be discarded again at the earliest possible time. Replacement of worn out buses will also be made as soon as possible.

It is suggested that proper consideration be given in the mass transportation phases of post-war planning to the advantages of retaining trolley wires where they now exist and inaugurating trolley bus service on these lines. The trolley bus runs on rubber tires but is driven by electric motor with two overhead trolleys. It operates well on steep hills, such as occur on West King Street and St. Joseph Street, and is efficient in heavy traffic. The life of the trolley bus is greater than that of the gasoline bus and maintenance costs are lower. The trolley bus can operate 12 to 18 feet on each side of the trolley wires. The trolley bus has the added advantage of rapid acceleration, speed, comfort, silence, absence of fumes and ease of handling in traffic.

Gasoline motor buses built after the war will provide more comfortable seating and lighting and easier riding qualities. Smaller, lighter buses will be available for feeder line service in Lancaster.

Reduction of Congestion by Rerouting. Reduction of congestion and conflict between buses, passenger cars and pedestrians will result from various proposals which have been made in connection with the street, highway and parking accommodations of Lancaster. Orange Street is to become the two-way, east-west traffic artery, with reduction insofar as is possible of use by local buses. Chestnut Street is to carry additional bus service, and the major use of East and West King Streets will be for bus transportation. Likewise, North and South Queen Streets will serve primarily for bus transportation.

All buses destined for the northeast quadrant of the City should be routed

from Penn Square, east one block over East King Street, then north on North Duke Street. In returning to the Square, these buses should be routed south on North Queen Street.

All buses destined for the southeast quadrant of the City should be routed east from Penn Square over East King Street. In returning, these buses should be routed west on East Vine Street and north on South Queen Street.

All buses bound for the southwest quadrant of the City should be routed west from the Square over West King Street. In returning, these buses should be routed north over South Queen Street.

All buses bound for the northwest quadrant of the City should be routed west from the Square over West King Street. In returning, these buses should be routed south over North Queen Street.

Figure 79. Mass transportation congestion—Penn Square.

Adequate Terminal Facilities. Provisions for more adequate terminal facilities at Penn Square are indicated in the proposed redesign of Penn Square (see Mass Transportation Plan, Figure 78, Map Section). This design shows the rerouting of traffic to bring buses southward on North Queen Street and northward on South Queen Street. This proposed routing will place buses in a position to be loaded at the northwest corner and the southeast corner of the Square.

It is proposed that a roofed terminal for passengers be provided in each of these two corners (see Figure 78, Map Section) and that sidewalks be extended around the terminal to form loading platforms for passengers. The present alley connection between the Square and Central Market, therefore, would be eliminated. Space in each of the two remaining corners could be reserved for service parking for local establishments. It is recommended that

the center traffic island be retained in order to reduce traffic speeds through the Square. These traffic reroutings and terminal accommodations will organize traffic through Penn Square so that a minimum of cross traffic will be necessary, so that both auto and bus traffic may move freely, and so that the Square will become increasingly a pedestrian and mass transportation center.

Coordination of the Mass Transportation and Comprehensive Plan. Coordination of the mass transportation study and the street, highway and parking area study with the City Plan as has been considered throughout this comprehensive plan. Proposals which have been made for urban redevelopment in Housing will also have important bearings upon post-war planning for mass transportation. Reduction of population density in areas of excessive density will reduce the potential users of transit facilities in those areas. And residential development, for example, in the southwest quadrant of the City will increase the potential users of transit facilities in that area. Proposals for consolidation of commercial and industrial areas and eventual removal of commercial and industrial plants placed at random throughout the City will have important effects upon mass transportation services in the City. Thorough coordination of the Mass Transportation Plan with the Comprehensive Municipal Plan can be an effective instrument in the proper long-range development and redevelopment of Lancaster.

Airport System

THE PRESENT LANCASTER AIRPORT SYSTEM consists of two airports; namely, the Lancaster Airport and the Lancaster Municipal Airport.

LANCASTER AIRPORT

The Lancaster Airport is a 98-acre grassed flying field, without paved runways, located one mile north of the city limits along the Manheim Pike (State Route 72). The field is privately owned and operated, and is used for private flying and for private flight instruction. It is listed as a Class 1 airport by the Civil Aeronautics Authority.

Airport facilities include three small public hangars, a small administration building, and a small repair shop. Prior to October, 1944, this airport was used considerably by Army and Navy planes. Expansion is limited by industrial developments and by highways on the periphery of the field.

Continued use of Lancaster Airport as a flying field for small planes seems justified. Improvements in maneuverability of planes, the location in the industrial district of Lancaster only two miles from Penn Square, plus accessibility to highway and railroad transportation facilities give this airfield interesting possibilities for nonscheduled commercial and private flights.

LANCASTER MUNICIPAL AIRPORT

The Lancaster Municipal Airport is intended to serve both commercial passenger and commercial cargo scheduled flights. T.W.A. already has authorized Lancaster to be put on its regular schedule if it provides adequate commercial air facilities. Applications by United Air Lines, Eastern Airlines, and Colonial Airlines for new routes which would include Lancaster as a stop are on file. It is expected that these applications are for trunkline services for the rapid movement of passengers, mail, and express between centers of large population. Lancaster is not now included, however, in any commercial, scheduled flights. The nearest scheduled flight accommodations are at Harrisburg.

Airports proposed in other boroughs of the county include one at Columbia, Ephrata, Gap, Elizabethtown, New Holland, and Quarryville. These airports will serve local flights and feeder airlines. It is reasonable to expect that if the Lancaster Municipal Airport is developed to the extent necessary to make it a scheduled stop for airlines, it would also become the hub of feeder airlines operations to communities such as those listed above within the Lancaster Market Area.

The Lancaster Municipal Airport is located on the Lititz Pike (State Route 501), five miles north of the City Square. The airport is well situated on gently rolling land at a considerable distance from any built-up area. The air approaches are clear and unobstructed from all directions. The airport property consists of 184 acres, and together with five buildings, represents an investment of $500,000. It was dedicated August 17, 1935.

The three runways are 3,000 feet, 3,100 feet, and 3,300 feet long. A 100-foot wide hard-surface 2,700 feet long is provided on two runways, and a 75-foot wide hard-surface 2,200 feet long is provided on the third runway. Two hard-surfaced taxi strips connect the runways with the main hangar apron. Field and runway marking and lighting have been installed in conformity with state and federal regulations.

Hangar accommodations at the airport consist of one public and four private hangars. The main hangar is of substantial brick, steel, and concrete construction and measures 100 by 106 feet. Administration offices and waiting room, totaling 2,500 square feet, are contained in a wing of the hangar building. A 70-foot beacon tower and a glass-enclosed traffic control room is mounted on the administration wing.

Four smaller substantial brick and steel hangars are located on the field

Figure 80. Lancaster Municipal Airport—Class II.

and are at present used for private plane storage. Additional facilities at the field include a restaurant and lodging house, with paved parking space for 1,800 automobiles. These accommodations indicate a wise recognition that "the airport is the sales counter of air transportation," and that ample provision should be made for accommodation of the public in order that sightseers may watch the planes and the airport operations.

The Municipal Airport was originally designed and constructed by the Works Progress Administration to provide facilities for regular airline service. The paved runways, however, are insufficient in length and strength for commercial cargo and passenger planes. Use of the airport is at present limited to private planes and to military training planes.

Another operational handicap of the airport is the present 500-foot clearance between runways and buildings, whereas the Civil Aeronautics Admin-

istration requires a clearance of 750 feet to provide necessary safeguards for instrument flying.

The Pennsylvania Legislature has appropriated $2,725,000 for statewide airport construction, approximately $317,600 of which will be allotted to improvement of the Lancaster Municipal Airport. The funds derived from the state, however, will be insufficient to cover the total cost ($900,000) of proposed improvements. It is planned to raise the remainder by local subscription.

Proposed improvements are to include new runways which will eventually be paved for a width of 150 feet and a length of 5,000 feet. The initial step calls for construction of a northwest-southeast runway 5,000 feet long; a northeast-southwest runway 4,000 feet long; and a north-south runway 3,000 feet long. It is planned to design runways and taxiways to serve planes weighing up to 75,000 pounds.

The Lancaster Municipal Airport is listed as a Class 2 airport. Proposed improvements to the field will result in a Class 3 airport.

Applications of airlines for certificates of convenience and necessity take cognizance of the present volume and convenience of travel. Hotel reservations in 1942 for three of the largest hotels in Lancaster and one in Lititz, and questionnaires returned by 125 firms in the Lancaster area in a survey made in 1940 show that traffic is heaviest between Lancaster and Pittsburgh, Philadelphia, New York, Baltimore, and Washington.

The train travel time between Lancaster and Pittsburgh ranges between six and eight hours. Plane travel time would be one and one-half hours.

The train travel time between Lancaster and Baltimore is three hours to cover the 55 miles. The train travel time between Lancaster and Washington is four hours to cover the 85 miles. Plane travel time between Lancaster and Baltimore would be only a half hour, and between Lancaster and Washington the time would be less than an hour.

The above illustrations of time consumed by travel to and from Lancaster by train and of the great savings in time through travel by plane become even more significant when the fact is realized that many trips which now involve overnight travel could be completed in one day if air travel were provided.

The future of air transportation in Lancaster is dependent as much on ground airport facilities as on the future of air commerce and travel. In the postwar period more commercial passenger and commercial cargo flights will be scheduled. Lancaster will receive a share of these new services. The extent of Lancaster's share will depend to a considerable extent upon the quality of airport services which the community has to offer to the airlines.

Street Lighting Program

HISTORY OF THE LANCASTER STREET LIGHTING SYSTEM

OBJECTIVES OF STREET LIGHTING

- The Need
- Promotes Safety
- Enhances Street Value and Attractiveness
- Promotes Better Business

THE PROGRAM FOR IMPROVED STREET LIGHTING

- Central Business District Street Lighting
- Light Commercial District Street Lighting
- Residential Street Lighting
- Highway Lighting
- The Proposed Improvement Program

Street Lighting Program

HISTORY OF THE LANCASTER STREET LIGHTING SYSTEM

THE CITY OF LANCASTER has experienced periods of evolution in methods of street lighting, as have other American cities. The gas-light era and various periods of electrical lighting became obsolete because of the progress which is being made in the research and development of street lighting.

The city streets and highways were lighted during the years preceding 1924 through the medium of gas and gasoline illuminating fixtures. In 1923, a contract was made with the Edison Company (now merged with the Pennsylvania Power and Light Co.) to replace approximately 400 gas and gasoline lamps with 174 post-type arc light lamps and 906 suspension arc light lamps. This work was accomplished in progressive stages, but the need for better lighting soon developed and in 1931 the suspension type arc lights, located principally in the residential areas, were replaced with incandescent type lamps. However, the original 174 post-type or rigid arc lamps in the downtown or central business district remain today as the principal street lighting system. The change from arc lights to incandescent lights in 1931 was estimated to have saved the city three thousand dollars annually in operating costs.

It is difficult to realize that in the 20 years from 1924 (end of the gas-light era) to 1944, the street lighting system of the city has undergone two major revisions and, that, now in 1945, a third revision is necessary to provide the city with adequate street lighting. The rapidity of these revisions is no doubt due to the great strides made in the automotive industry; advancement in commercial structural design and merchandise display; and advancement in lighting design by the illuminating engineering professions.

OBJECTIVES OF STREET LIGHTING

The Need. In view of dividends in terms of lives saved and reduced property losses, street lighting expenditures are regarded as a sound investment rather than a cost. The investment in a modern street lighting system is known to improve real estate values and business conditions, reduce lighting costs per unit, and promote greater civic pride in the community.

It is generally conceded that a lighting system cannot be classed as a permanent installation for a definite number of years and, therefore, plans should be made for continuous substitution of the most up-to-date equipment to modernize and increase the effectiveness of the lighting units An effective lighting unit is designed on the basis of "controlled light" directed in the most effective and efficient manner, and thereby maintenance operations are reduced. Adequate street lighting such as is proposed herein for the City of Lancaster is one of the services the municipality must perform for the betterment of its social and economic life. Adequate street lighting promotes safety and convenience on the streets at night through adequate visibility; enhances the

community value and attractiveness of the streets; and promotes increased business through better lighting in commercial centers.

Promotes Safety. Whether on the highways, on the business streets, or on residential streets, light standards should be correctly spaced and located, and luminaires should be of sufficient light intensity to insure confidence on the streets of the city and to call attention to obstructions and traffic. The objective is to help the citizens reduce accidents and loss of life and to increase safety of person and property.

The activities of a community continue long after dark, and it is at this time that crimes and accidents increase. Communities, therefore, have established police protection to safeguard and protect their citizens against crimes and accidents. The efficiency of police protection is limited, however, inasmuch as crimes and accidents can not be foreseen before they actually occur.

Other methods are necessary to aid citizens in personally preventing crimes or accidents. One method is to provide adequate street lighting—which minimizes "blacked-out" city areas that invite crime and results in damages to person and property.

Good lighting is definitely an instrument which aids police personnel in the prevention and detection of crimes; facilitates easier movement of pedestrian and automobile traffic; and encourages security and freedom about the home, streets, and business sections of the community.

Enhances Street Value and Attractiveness. A well-lighted approach highway creates a good impression. The lighting luminaires on the main arteries of travel should be located advantageously to illuminate the highway for safe driving; and to allow good road visibility with sufficient "spread of light."

Promotes Better Business. The lighting standards in the central district should be so spaced and the luminaries should be mounted at such height that the lighting invites pedestrians to enjoy window shopping. In addition, adequate street lighting increases pedestrian and automobile safety, especially during periods of traffic congestion.

THE PROGRAM FOR IMPROVED STREET LIGHTING

Adequate lighting is an immediate need and the total system should be installed at as early a date as possible. A progressive program of lighting development is not recommended because of the present need. After the system has been modernized the city should maintain a chart indicating future revisions necessary for proper and adequate street lighting.

The ownership and operation arrangement of the street lighting system is unique. The system may be divided into three groups by the type of facility, namely, 924 incandescent lamps on wood poles with service connection to overhead wires; 166 arc lamps on metal standards with service connection to underground wires; five incandescent lamps on metal standards with service connection to underground wires.

There are 1,095 lamps in the entire system, with an effective 134,017 candlepower. The power company owns all of the incandescent lamps, except

one on a metal standard which is owned by a manufacturing concern. The city owns the 166 arc lamp standards, but the cable and underground equipment belong to the power company.

The city contracts with the Pennsylvania Power and Light Company for power at a unit cost per lamp, and for operation and maintenance.

It is estimated that the average American city should invest two to two and one-half dollars per capita annually for night lighting. One Massachusetts community of 27,500 has over 1,500 street lighting units on 70 miles of streets. That community is expanding its system because statistics show a decrease in accidents where adequate lighting has been provided. Lancaster, with a population of over 65,000, has less than 1,100 street lighting units and spends only ninety-eight cents per capita annually for street lighting.

Figure 81. Street lighting—North Queen Street.

Central Business District Street Lighting. The boulevard type of lighting standards now in use on Queen Street are out-moded in that they are the fixed, inverted, arc light luminaires. This type of fixture directs the light above the standard, instead of directing the maximum amount of light downward on commercial establishments, streets, and walks. Light standards in the central business district should be located 75 to 90 feet apart and staggered. The lamps should provide 10,000 to 15,000 lumens per lamp.

Continued use of the existing arc lamps is subject to question as to economical operation, cost of current, and operating rate structure. The arc lamp lights should be replaced by an improved, modern standard which will improve lighting conditions for thoroughfares and commercial establishments.

Light Commercial District Street Lighting. On secondary business streets the light standards may be spaced further apart than in the central business dis-

trict and the lumens may be reduced. The standards may be placed 100 to 125 feet apart, staggered, with a 6,000 lumen lamp.

Residential Street Lighting. Residential street lighting should be improved by adding more street light standards on a closer spacing. The present spacing of lights has been determined by the "back-alley" or service-road type of distribution system in which lights are installed only at street intersections or main crossings of power feed wires. This method of light installation has resulted in long unlighted areas along residential streets. Lighting these areas by intermediate lights will require a pole or ornamental standard at the curb, and power from rear service lines through underground parkway cable. These light standards should be spaced 125 to 175 feet apart and staggered. The lamps should provide 2,500 lumens. Well-lighted residential sections mini-

Figure 82. Residential street lighting—inadequate for safety.

mize burglary and street crime, and present an unmistakable testimonial of a progressive community spirit.

Highway Lighting. The highway lighting system should be an inexpensive installation, but adequate to meet modern traffic conditions and to minimize night traffic accidents. Although highway illumination is important, care must be taken not to spend funds for it in places where the return per dollar invested will not be so great as for some other traffic engineering improvements. (See Figure 83, Map Section.)

Light standards or poles should be located a minimum of eight feet from the pavement edge. However, to gain maximum light on the traveled roadway, luminaires should be hung on extended bracket arms from the fixed upright standards or poles. It is recommended that the bracket arm should be of a pleasing design rather than the mast arm mounting which is so often used.

The spacing of light standards along streets and highways is dependent on (a) street classification determined by traffic volumes; (b) curb to curb width of street; (c) size of lamp used. The following standards are recommended by the Illuminating Engineering Society for street lighting:

Street Classification	*Width (feet)*	*Lamp Lumen*	*Luminaire Height (feet)*	*Lamp Spacing (feet)*
Residential	25	2,500	21	125–175 staggered
Light traffic	30	4,000	22	130–170 staggered
Medium traffic	40	6,000	23	100–125 staggered
Heavy traffic	50	10,000	25	75– 90 staggered
Very heavy traffic	60	15,000	25	100–150 opposite

The Proposed Improvement Program. Future improvement of the municipal lighting system rests with the city in its negotiations with the power company. Figure 83 shows the number, location, and candlepower of the existing system which should be retained in the ultimate plan. The plan does not show minor extensions, alley lights, or playground lighting which exist to some degree as special lighting.

The improvement program entails correction of the present lighting facilities to correct spacing of light standards; install additional light standards at traffic intersections, sparsely lighted residential streets, and congested thoroughfares close to industrial plants; correct luminaire heights above the traveled thoroughfares; install lamps of greater candlepower, thereby furnishing greater light intensity.

On main business thoroughfares—Queen Street from Vine Street to Walnut Street, King Street from Prince Street to North Lime Street, Vine Street from Prince Street to Duke Street, Orange Street from Prince Street to Duke Street, Chestnut Street from Prince Street to Duke Street—the recommended standards to be used (Figure 84) should have an ornamental metal standard and bracket. Spread of bracket should be 36 inches. Luminaire should be pendant, incandescent, with 10,000 to 15,000 lumens. The assembly should be a fully-enclosed reflector which may be a metal housing with separate silvered glass or aluminum reflectors. The long glass refractor shall be of the symmetrical type, thereby distributing light to a maximum degree of efficiency.

On secondary business streets the extent of improved street lighting is to be determined by the city on Queen Street, King Street, Duke Street, Walnut Street, Orange Street, Chestnut Street, Prince Street, and Columbia Avenue. The recommended standards to be used (Figure 85) should have a plain main shaft with ornamental base. The spread of the bracket should be 36 inches with pendant luminaire, incandescent, and 6,000 to 10,000 lumens.

On all city streets used primarily for residential purposes, exclusive of streets serving as principal arterial and commercial traffic ways, use of existing wood poles may be continued until such time as metal poles can be substituted. A recommended metal pole is illustrated in Figure 86, with pendant luminaire, incandescent, 36-inch bracket arm, plain base and main shaft, and a lamp of 2,500 lumens.

The development of street lighting should not be limited to political boundaries. Streets and highways continue from one area to another regard-

less of municipal boundary line limitations and lighting of these thoroughfares should also progress continuously. These recommendations should be applied, therefore, to the environs beyond the present city limits.

A lighting improvement program for the city can best be effected through negotiations with the private utility company. A proper contract will assure completion of the entire project without capital expenditure by the city for new construction or for change in design. The power company operates as a private business and can install lighting systems in any and/or all sections of the city stipulated by contract or agreement; but the city is legally prevented from expending monies beyond its political jurisdiction.

Sketches of standards and luminaires illustrate the recommendations made in this report. Further study preliminary to award of a contract to the power company may result in deviations from these sketches, but changes should not affect the ultimate plan proposed for adequate and up-to-date street lighting.

Utilities

WATER SERVICE
- Existing System
- Rates
- Valuation of the System

SEWERAGE SERVICE
- Existing System
  - Treatment Plants
  - Sanitary Sewerage System Lines
- Rates
- Valuation of the System

DEVELOPMENT PROGRAM OF WATER AND SEWERAGE SYSTEMS

POWER AND FUEL
- Electric Service
- Gas Service

TELEPHONE AND TELEGRAPH

RUBBISH AND GARBAGE DISPOSAL SERVICE
- Existing Methods
- Possibilities of Collection and Disposal

Utilities

WATER SERVICE

Existing System—The source of the city's water supply is from an impounded reservoir on Conestoga Creek. A modern filtration plant, constructed in 1934, with a nominal capacity of 16,000,000 gallons per day provides treated water for the city and the environ area distribution systems. An auxiliary water storage capacity of several large tanks and open reservoirs amounting to 12,400,000 gallons (excluding the creek source) is at present entirely adequate for city and industrial use.

The existing distribution system provides water service over the entire city and portions of Lancaster Township and Manheim Township, as shown in Figure 87. The environ or subdivision areas such as School Lane Hills, in Lancaster Township, is provided with water by a city owned and operated system; Woodlawn section and Hamilton Park, also in Lancaster Township, is owned and operated by the Lancaster Suburban Water Company, which secures its water by purchase from the city and also from its own source of supply, the Belmont Quarry reservoir immediately north of the city.

In Manheim Township, the city also supplies the Lancaster Suburban Water Company which serves the area in the vicinity of Armstrong Cork Company. In the Grandview Heights Development, a realty company owns the distribution system, but by mutual agreement it is maintained by city forces. The city reads the meters and bills the consumer for water used. All other lines in Manheim Township including Glen-Moore, Belmont Manor, and Overlook are owned, operated, supplied, and maintained by the city. These systems were installed by the Realty Development Company and later purchased by the city. The city also supplies such important industries as Armstrong Cork Company, Radio Corporation of America, and Hamilton Watch Company. The total number of consumers listed by the Bureau of Water is 15,502 inside the city and 1,619 outside the city. Water is furnished to all city properties and to the street department without charge. Fire service is provided over the entire system as a municipal service.

Rates—286 municipally owned water systems in the United States were studied by a Chicago firm in 1941 and the survey showed that the average minimum monthly charge of 83 cents in their communities was considerably higher than the 25 cents minimum as charged in Lancaster. However, the median charge for use of 5,000 gallons of water in the cities of 25,000 to 100,000 population is $1.40, a comparable rate to that charged in Lancaster. Additional rates for use of larger quantities of water listed in the report compare favorably with the existing city water rates.

The existing rate structure has been approved by the Public Utilities Commission as fair charges for services within and without the city limits—

nevertheless, there is a wide range existing in the rates charged for water service to users residing inside and outside the city area.

Attempts are constantly being made to adjust these rates on a more equitable basis. Suggestions of forming various types of municipal authorities, city annexation of areas now served by the municipal system, or forming an authority of the sewerage system and continue municipal ownership of the water system have been proposed. It is not fair to say that these suggestions are proposed to merely reduce rates because many individuals and groups are agitating for assured utility services in the urban fringe to guarantee residential and industrial expansion programs. Water and sewer services must be extended into these areas regardless of the organization controlling these facilities because the City of Lancaster has practically reached its ultimate growth development. Also, it is dependent on industries located in the urban fringe area and it must recognize a Greater Lancaster in the use of all services and developments existing and proposed within the city and the urban fringe areas.

The water rate ratio of approximately 3 to 1 for use of 75,000 gallons or less exists between the urban fringe area and city area. And rate reductions of 2 to 1 and 1½ to 1 in the consumption of water of 925,000 or less and 1,000,000 gallons or more, respectively exists in the present charge of 1,000 gallons use per quarter.

Valuation of the Water System—The estimated $3,691,761 valuation of the city water system indicates the excellent municipal facility that is available to Lancaster, and expansion of this facility should be ever present to meet future development programs.

SEWERAGE SERVICE

Lancaster's sanitary sewerage system provides sewage service over the entire city as well as the suburban areas in Lancaster Township and Manheim Township as shown in Figure 88.

Existing System—In 1934 two excellent sewage disposal plants were constructed for the treating of city and industrial sewage. The North Sewage Disposal Plant, northeast of the city, is located on Conestoga Creek and treats the material drained from the North City District and suburban areas lying to the north and northeast. The South Sewage Disposal Plant, located south of the city on Conestoga Creek, serves the Water Street, Stevens Avenue, Susquehanna, and Maple Grove districts. However, topographic conditions require three pumping station installations to pump sewage from these districts to the South Sewage Treatment Plant.

The city owns and operates all sewerage lines within the city and a small area in North Lancaster which were acquired in 1941. All other sewerage lines are owned by private investors but arrangements are made with the city to treat all sewage from these areas.

The existing sewage treatment plants are equipped to handle the present flow but further residential and industrial expansion will certainly demand early extensions to both plants. In addition, the treatment plants are bur-

dened by having to treat waste or drainage from a combined storm and sanitary sewer system. This condition will be remedied after the war as the City Water Department contemplates projects to separate the systems.

Rates—The sewerage rate structure is based on a front-foot charge plus a charge for consumption of water over 25,000 gallons per quarter. The front-foot charge is moderate and was levied in 1940 at a time when water rates were reduced for residents inside and outside the city. The change resulted in an inequitable revenue return as many large consumers are now enjoying a total service charge for both services that previously was paid for water service alone. In some cases the operational costs exceed the total revenue return from water and sewage services.

Figure 89. North Sewage Disposal Plant—example of good municipal service.

Operation and administration costs, expansion of service lines, plant improvements and expansion, financial budgets of costs and charges and increase of consumers are factors that must be considered to determine rate charges that are fair to city residents and to the municipal government. Lancaster must expect future residential and industrial expansion to take place principally outside the city area because within the city it lacks available areas for expansion. The city code does not permit extension of sewer lines beyond the city limits although it can extend water lines to areas where existing lines are not now existent. The limited use to which these utilities can be placed to outside consumers increases the argument for an organization with greater power to assure an expanded development program of these facilities for all individuals or groups seeking water and sewer service.

Valuation of the System—The present estimated valuation of the sewerage

system is $2,670,806. The total combined water and sewerage system valuation is estimated at $6,362,567.

DEVELOPMENT PROGRAM OF WATER AND SEWERAGE SYSTEMS

The City of Lancaster owns and operates the water and sewerage systems. It is furnishing good service to all consumers. However, unless an individual resides within the city limits, utility services must be secured through private developers or as in the case of water service from private companies. Planning of expanded service lines into these areas are usually limited to minimum capacities foreseen at the time of the development which retards the efficiency of the system for future expansion programs.

Central control is needed not only for operational purposes but also for planning the future of the system. The people of the city and immediate area have realized this problem through campaigns for formation of a municipal authority, referendums for city annexation, and finally determined action to amend the state laws permitting communities greater flexibility in the operation of its systems. Advantages and disadvantages to all interested parties seeking these services will be evident in any chosen scheme but if all the inhabitants of the area inside and outside the city limits strive for a development program which will aid and insure a better future for Lancaster then that system cannot be but successful.

POWER AND FUEL

Electric power is supplied to Lancaster by the Pennsylvania Power and Light Company. Ample power is generated at the $30,000,000 Safe Harbor hydroplant on the Susquehanna River, approximately nine miles southwest of Lancaster. A 66 K.V. high tension radial system passes through Donegal, South Manheim, Warwick, and South Akron. A similar high tension line from Holtwood, 15 miles south of the city, enters the Engleside substation for immediate distribution purposes throughout the city. The power line system is illustrated on Figure 90.

Manufactured gas is produced in Lancaster. The intermediate pressure distribution system is equipped to furnish industries large quantities of gas without jeopardizing the needs of the city wherein service is maintained by ten reducing regulators.

TELEPHONE AND TELEGRAPH

Communications are vital facilities in all communities. Lancaster is serviced by telephone, telegraph, and radio.

The telephone system is controlled by the Bell Telephone Company which maintains Lancaster as a district office in the Harrisburg Division. The present three-story structure was built in 1930. The existing structure on North Duke Street is designed for possible story additions to a maximum eight-story height. A dial system is now in operation and the Bell Telephone Company is preparing its equipment for coin dialing of long distance calls and use of television improvements.

Commerce and industry of Lancaster demand that its communications

keep pace with modern developments and the Bell System is making every effort to meet this demand.

A telegraph system is operated by Western Union on North Queen Street, where telegraph services are available to the city and environ areas. Accommodations for the central facilities are inadequate and additional space will be necessary for this service after the war period.

WGAL—a local radio station—is located on the top floor of the local newspaper office building on West King Street. It operates on a wave length of 1490 kilocycles. National programs of the National Broadcasting Corporation and Mutual Systems are broadcast from the station as well as local programs sponsored by business concerns of the community.

There is every indication that the value of radio will be increased after the war by the advent of television. The transmission of radio pictures has been in the experimental stage for many years and now plans have been formulated to commercialize television so that every community in the land will receive benefit from this means of communication. WGAL should prepare for expansion of its present facilities whereby improved radio broadcasting may increase as an important asset to Lancaster property and life.

RUBBISH AND GARBAGE DISPOSAL SERVICE

Existing Methods. The City of Lancaster yields approximately 4,000 tons of garbage annually. The city contracts with a private garbage collector to collect and dispose of the material for a lump sum fee. Trucks, labor and other equipment are furnished by the contractor who disposes of the waste by hauling it to a large piggery. In the past, community waste was dumped in streamways, isolated ravines or fed to pigs on nearby farms. However, programs to conserve our natural resources and increase health conditions instigated laws and regulations which prohibited promiscuous waste disposal and regulated the disposition of the material in a more satisfactory manner. Many communities constructed incinerators fired by wood, coal or oil which burned all the rubbish, garbage and dead animals, leaving only ash as a waste. Other communities considered waste disposal as a major public service and constructed units of incinerators and digestors whereby the community realized important by-products that netted a financial return to offset the cost of collection. Grease, the most important by-product, is processed for glycerin, soap, fine lubricating oils or pitch for roofing purposes, tankage or residue purchased by fertilizer plants is used as a filler in their products. Usually these processes yield three per cent grease and eight per cent tankage by volume.

By-products from waste is rather small by volume and a community must collect considerable tonnage to substantiate an investment in a processing plant. The City of Reading, population of 110,000, annually collects approximately 14,000 tons of garbage which in turn is processed and yields a financial return of $33,000. In recent years operation of this plant for garbage disposal cost its citizens .15 cents per capita per year and cost of collection per ton was $1.17, whereas Lancaster, collecting less tonnage and certainly under an impractical system, operates at 14 cents per capita per year and cost of collection per ton is $2.00.

The Lancaster yield is estimated about one-fourth of the Reading volume. By ratio it does not appear feasible for the city to make an investment of $100,000 in a processing plant unless it can realize a larger volume of garbage waste.

The present collection system and disposal of garbage by feeding it to pigs is inefficient, unsanitary and not practicable. The system of collection by contract creates a division of responsibility that fails as a community function from the important standpoint of health and sanitation. Although this method is not as costly as a municipal operation, this service is, nevertheless, unsatisfactory.

Transport of garbage in uncovered open trucks through the city streets creates offensive odors and litters thoroughfares with refuse. Lack of manpower has delayed collection calls which results in hijacking garbage by small collectors in the piggery business.

Piggeries using city garbage do not produce good trade meats. The pork obtained from garbage-fed pigs is not especially desirable as when the meat is cooked it gives off an offensive odor and considerable shrinkage results as compared to the more desirable grain-fed animals. Public officials upon whom rests the responsibility for the enforcement of health laws in their community, generally do not encourage garbage disposal in this manner.

Possibilities of Collection and Disposal. The City of Lancaster should assume collection and disposal of rubbish and garbage as a municipally-operated function. The city should purchase equipment and employ labor to operate collection equipment and a central incinerator plant.

It is recommended that a study be made to accurately estimate the maximum tonnage of garbage available from the city and urban fringe areas. At present, on the basis of an annual 4,000 ton return, the City of Lancaster cannot afford to construct a processing plant. However, an incinerator should be constructed whereby it can be expanded to accommodate facilities for the processing of by-products in the future.

Health and cleanliness are invaluable assets of any community and certainly an efficient method of handling garbage waste will aid Lancaster in the maintenance of these assets.

The Civic Center

INTRODUCTION

CIVIC CENTER—MUNICIPAL GROUP

- Municipal Building
- Police Headquarters
- Fire Headquarters
- Social Service Agencies
- Lancaster Free Public Library

CIVIC CENTER — COUNTY, STATE, FEDERAL AND AUDITORIUM GROUP

- County Court House and Treasury
- Sports Center and Public Auditorium
- Federal and State Agencies Building

OTHER PUBLIC AND SEMI-PUBLIC BUILDINGS AND FACILITIES

- Municipal Market
- Interurban Bus Terminal
- Park and Plaza
- Parking Sub-surface
- Old City Hall

Figure 91. Perspective sketch of Civic Center.

The Civic Center

INTRODUCTION

THE CONSTRUCTION of new public and semi-public buildings in the City of Lancaster will become more and more necessary as time passes. The grouping of such buildings as the city hall, library, museum, police and fire headquarters, court house, sports center, and public auditorium into an harmonious civic center is not only architecturally desirable and financially sound, but it is a public duty.

The lack of such grouping in a dignified manner and in a convenient location has been one of the crowning follies of American cities, and has resulted in heavy monetary expenditures and in confusion in the interrelationship of civic functions.

The projected plan for Lancaster's Civic Center is based upon the advantages of unity in civic functions, and the beauty of harmonious architectural design.

The first cost of the group plan for a civic center in Lancaster will probably not exceed the expenses of the common, haphazard method of providing for each building separately as necessity compels and as opportunity provides; and the final cost of providing a group site will be infinitely less, because it would be accomplished in advance and on a large scale. In addition, property values in the vicinity will be increased. Other sections of the city will thus be available for their planned uses, and free from the detrimental effects of scattered, misplaced public buildings.

The correct placing of imposing buildings around malls or squares, embellished with trees, grass, fountains and sculpture, not only increases the dignity of each structure but furnishes opportunity for emphasizing its architectural importance.

Such a grouping of Lancaster's public buildings will not only tend to achieve economy and efficiency in the conduct of public business, but will be an ever-present inspiration to her citizens, and an enduring monument to her wisdom and financial foresight.

The buildings of government—municipal, county, state and federal—which constitute the architectural elements of a civic center should be given a central location, and all the additional emphasis and conspicuousness that a good site can offer. No other structures are so appropriately entitled to the best position that the city can afford, convenience and appearance being jointly considered, as those which officially stand for the city. Not only do these structures belong together, but each gains importance and beauty from the proximity of the other. Collectively, they will make the city more prideworthy. The civic center group will make the city seem more dynamic and alive. It will have greater possibilities for good government than if civic

buildings were scattered about the town, lost in a labyrinth of commercial structures.

It is proposed that the civic center site occupy the two blocks bounded by North Duke, Chestnut, Walnut, and North Prince Streets, the buildings serving municipal functions to occupy the block east of North Queen Street, and the county group and public auditorium to occupy the block west of North Queen Street.

Factors which influenced selection of these two blocks as the site for the civic center are the present openness of the site; the fact that the city now owns a considerable portion of the property; the adjacence of public and semi-public structures, such as the United States Post Office, and the Brunswick Hotel; the reasonable proximity of the site to the center of the city; accessibility; the opportunity for bilateral design; and topography which would make possible a dominant and impressive group; and provide possible sub-surface parking.

The present municipal structures are old; they are inadequate in space requirements and certainly are too greatly dispersed throughout the city for convenience. The centralized civic center will facilitate and minimize operational costs, and will obviate numerous inconveniences of the dispersed arrangement. Efficiency in administration and operation should result from the civic center development. The economy of a central heating plant alone would produce considerable economy and efficiency for the various units of government.

Many cities of size comparable to Lancaster have a civic center which commands pride and admiration. Few cities have so favorable a location and site for a civic center, and one so free of major obstructions which might hinder such a project. Steps should be taken immediately to reserve the two blocks under consideration, that this opportunity may not be lost.

CIVIC CENTER—MUNICIPAL GROUP

The Municipal Group of the civic center should include Municipal Building, a Police Headquarters, a Fire Headquarters, a new Social Services Center, and the Library.

Municipal Building—The present structure was originally designed to serve as the United States Post Office. It was built in 1891 and was remodeled by the city in 1931 for use as the Municipal Building and City Hall. The building appears to be adequate. Actually, it does not accommodate certain municipal offices, such as the City Chemist and the Health Department; and many offices now located in the building have insufficient space. The proposed structure should be designed to accommodate all city offices other than Fire and Police Headquarters.

The present Municipal Building is perhaps more sound structurally than any of the other buildings involved in the replacement proposals but it is inadequate in space and is unfortunately dispersed from other buildings of government.

The proposed site for the Municipal Building will probably not be as readily available at a reasonable cost in the immediate future as the sites

for the other buildings in the Municipal Group as a considerable portion of the land for the Fire and Police Headquarters being already owned by the city.

It is suggested that the present Municipal Building, after being vacated, might be retained by the city as a museum. Many of the religious, cultural, economic, and historical objects peculiar to Lancaster could be housed and displayed there. There are no public accommodations for valuable historical objects and documents which are now scattered over the city, and Lancaster owes the preservation of irreplaceable material to its future citizens.

Police Headquarters—Only a Sherlock Holmes would find the present Police Headquarters hidden in Grant Street alley. A program should be established immediately to remove Police Headquarters from the present unfortunate site and structural limitations.

The site proposed for the new Police Headquarters was selected for several reasons: it is centrally located; it will have good service exits and entrances to North Duke Street; it is free from large volumes of traffic; it is partially combined with Fire Headquarters for efficiency in joint duties; and it is close to the proposed Municipal Building accommodating the city governmental departments.

The proposed Police Headquarters should be large enough to provide administrative facilities for a complement of 90 to 100 men. Garage accommodations should be double the present facilities. There should be an identification room and photographic laboratory, space for files and records, detention cells, and traffic sign storage.

Both the Police and Fire Departments require training quarters, living, sleeping, and recreational accommodations, and three-way radio control systems. Because of these parallel needs, it is wise to plan for both as a unit. Living accommodations are proposed for ten to 12 policemen and about 12 firemen, including sleeping and kitchen facilities and a recreation room. A small gymnasium with lockers is also desirable. The mechanical and electrical equipment which is needed for the remote control system for police cruising cars should also serve for fire equipment radio control. Expanded shop facilities are needed by the Police Bureau, and it is reasonable to expect that the same shop will serve the Fire Bureau. Although property is already reserved at the civic center site for Police Headquarters, no detail plans have been made nor funds appropriated for construction.

It is suggested that the present Police Station be demolished; that structures between the Station and the rear of the County Treasury also be acquired and demolished; and that the rear lots of adjacent properties fronting on Orange Street be acquired. The area thus made available should be converted into a municipal parking lot which would provide off-street parking half a block from Penn Square where such accommodations are most essential. Space for about 55 cars would be made available by this arrangement.

Fire Headquarters—The inadequacies of existing accommodations for the Fire Bureau Headquarters are similar to those of the Police Bureau. The age and condition of structures and the difficulty of ingress and egress are factors which necessitate an improved Fire Headquarters—one which will render better protection and more efficient service than are now supplied.

The proposed headquarters should be designed to accommodate from four to six pieces of modern fire apparatus, plus space for a small boat which is now stored at the N. Queen Street Station. The fire exit and entrance lanes should be separate from those of the Police Headquarters and might front on either Duke or Walnut Street, preferably the latter because of two-way traffic lanes. Recommendations for living, sleeping, and recreation accommodations are presented in the preceding paragraphs. The central location of the Fire and Police Headquarters in relation to the city as a whole, to the proposed municipal building, and to each other will increase the efficiency of these two Bureaus.

It is proposed that the North Queen Fire Station and property be sold. The existing Duke Street Fire Station should be demolished to make room for the proposed civic center developments. These operations may be carried on in successive steps so that fire equipment can be housed in the North Queen Street Station during demolition and construction at the new site.

Social Service Agencies—The present Welfare Federation building is adequate as to space but inadequate in interior plan. The building at 129 East Orange Street was built in 1909 and is of sound construction. It was converted from residential use to serve as administrative headquarters for welfare and social service agencies. The structure is owned by the Lancaster Community Service Association. The parent organization is, however, the Welfare Federation. Most of the welfare groups work on a county-wide basis, which takes them beyond the sphere of city participation. Some, however, have strictly city functions. Although the Federation secures most of its funds from contributions, it assumes responsibilities which would otherwise revert to Municipal or County Governments. The manner of including the Welfare Federation in the civic center group is uncertain because of its non-governmental character. It should be included, however, in order to place it in a central and accessible location.

Greater participation and responsibility in post-war community welfare, such as aid for returning veterans and expanded Boy and Girl Scout programs will require additional administrative space and facilities. It is desirable that the administrative space required be provided in the civic center, adjacent to City and County offices. The present structure should be retained by the Welfare Federation for use in services such as craft shops, day nurseries, and clinics.

Lancaster Free Public Library—The staff of the Lancaster Free Public Library and the people of Lancaster are aware of the inadequacies of the present library facilities. The present library building is an old residence which was given to the city in 1900, and the title is vested in the Judges of the local County Court, the Mayor, and other Trustees. The building was converted to library use, but display, shelving, storage, and public relations facilities are completely inadequate. The number of volumes on hand is about 48,600. A post-war building program is being prepared. The two properties north of the present library have been purchased at a cost of $33,000, and the new library is to be built on the three lots. It is proposed for the new library to have a capacity of about 128,000 volumes. The Trustees have a

fund of $150,000 available for their building program. The proposed library is estimated to cost $230,000.

The preliminary sketches of the proposed library indicate a pleasing and dignified structure. The location was chosen with the assistance of well-informed library authorities who advise against a location farther from Penn Square. The objective in library location is to locate where large numbers of people gather for work, shopping, and recreation—a location next door to the 5 and 10 Cent Stores has been mentioned as ideal.

It is recommended that proper consideration be given at once to the advantages of including the new library in the civic center group. The public library of a community is primarily a service institution. It should be ornamental, but it must be useful. Nothing need be lost from the ornamental character of the proposed Lancaster Library by changing the location from the mid-block on Duke Street to the proposed civic center site between Queen and Duke Streets. The setting of the building at the present site will be crowded between business structures converted from residential use, and will lack the dignity of setting and surroundings which such a building deserves.

It is considered that the library would gain by being a part of the civic center. It would secure the advantages of dignified, spacious setting and harmonious architectural character. Additionally, it would still be located only two blocks from Penn Square, and at one side of the central business district, and in the group of public and semi-public buildings, thus being well located to serve shoppers, the professional men whose offices are in the vicinity, and the people who gather downtown for social, recreational, and educational objectives.

The fact that the Public Library is not a direct responsibility of the City Government makes the choice to locate the Library in the civic center group essentially voluntary. It is believed, however, that the advantages to the Library and to its patrons of becoming a unit in the civic center merit thorough consideration.

CIVIC CENTER — COUNTY, STATE, FEDERAL AND AUDITORIUM GROUP

County Court House and Treasury—The existing County Court House is old and overcrowded. The main building was built in 1852—93 years ago. The building was remodeled in 1923 and again in 1926, to provide additional space. Now in 1945 there is insufficient space again and additions to the height of the front wings are under consideration as a post-war project. Insufficient space has caused decentralization of functions. The District Attorney, the Coroner, the County Treasurer, and other county offices are in dispersed locations.

It is interesting to consider the dates and ages of the three Lancaster County Court Houses. The first was built in 1730 and destroyed in 1784, when 54 years old. The second was built in 1787 and demolished in 1852 because of inadequacy, when 65 years old. The third and present Court House was built in 1852, expanded in 1923, expanded in 1926, and is now 93 years old.

It seems desirable, therefore, that space be set aside in the civic center for a future Court House. The county offices and courts should be included

within the group of government and other public buildings in the block west of North Queen Street.

It is suggested that inasmuch as storage space for accumulations of archives and records is a major factor in the problem of providing space in the County Court House, investigation be made of the advantages of recording valuable papers on microfilm, of film storage vaults, and of a suitable room for viewing the microfilm records.

Sports Center and Public Auditorium—The people of Metropolitan Lancaster travel to the small borough of Hershey or to some other more remote point to participate or to be spectators at large indoor sports events, exhibits, conventions, or pageant and festival programs. The fact that Hershey, Pittsburgh, Philadelphia, and other cities have large sports centers and auditoriums is not a basis for conclusion that Lancaster or any other city should have, or could support, such a center. All the aspects of the possibility, however, should be given full consideration in Lancaster.

Because of the location of Lancaster, because of its good transportation facilities, and because of its unique position in agriculture and industry, it seems feasible that local, state, and even national conventions might be held in Lancaster if adequate facilities were provided. Likewise, if further study were to show a favorable prospect for a sports arena, regional sports contests would be encouraged and local skills in a wide variety of sports would be developed.

Lancaster has several gymnasium and auditorium facilities, such as those at Franklin and Marshall College and McCaskey High School. These facilities are too limited in size and scope, however, to serve the potential need which a Sports Center and Public Auditorium should serve.

The Sports Center and Public Auditorium should be included in the Civic Center group, because of the adjacence of transportation facilities, parking, hotels, restaurants, service shops, and the shopping district.

Federal and State Agencies Building—The United States Post Office building in Lancaster provides office space for the following Federal Agencies and officials:

Collector of Internal Revenue
Internal Revenue Agents
Post Office Inspectors
Army Recruiting Station
Navy Recruiting Station
Department of Agriculture
Farm Security Administration
Wage and Hour Stabilization Office

The following Federal Agencies rent space outside of the Post Office Building:

Air Service Command
Department of Commerce
Bureau of the Census
Federal Security Agency
Department of Labor

National Housing Agency
National War Agencies—OPA, WPB, etc.
Treasury Department
War Man-Power Commission

All Federal Agencies rent garage space for government vehicles.

The trend has been for expansion of Federal activities in Lancaster. Some additional offices probably could be accommodated by construction of a third floor over the small second floor area of the present Post Office; but unless there is a reversal after the war of the trend toward expansion of Federal and State activities, it appears that additional office space will soon be necessary for those units of government. It is important that these offices be provided in a central location, and the Civic Center is considered the proper place.

OTHER PUBLIC AND SEMI-PUBLIC BUILDINGS AND FACILITIES

Municipal Markets—The five farmers' markets in Lancaster are important and unique institutions in the community and region. They provide a direct, retail outlet for the excellent farm produce of the county. Only three of the markets are of direct concern in this section of the Lancaster Comprehensive Municipal Plan, namely Southern, Central, and Arcade.

The city owns and operates Central Market according to terms contained in the old Royal Charter. The city leases Southern Market for $12,000 per year, and makes all necessary alterations and repairs. Arcade Market, adjacent to the Post Office, is privately owned and operated. In normal times, each of the Markets operates two or three days each week, but some of the schedules have been reduced during the war due to transportation difficulties.

Central Market seems to be the most successful, probably because it is nearest the central shopping district. Expansion of this market is unlikely, due to the densely built-up area adjacent thereto. Service and parking accommodations are very unsatisfactory, because access is possible only through and from alleys. The annual rent is $125 for a single stand and $250 for a double stand. Operation of Central Market nets the city about $22,500 per year.

Southern Market is less popular for pedestrian shoppers due to the steep grade between the Market and Penn Square—terminal for mass transportation. Southern Market does fill an important need, however, for the residents of the south side. Service and parking accommodations are more readily available at Southern than at Central Market, due to its street-corner location. The city realizes a profit of about $6,000 per year from this Market.

Arcade Market has a large patronage. It is conveniently located in relation to the central shopping district, and service accommodations are readily available from Prince Street or Market Street alley. A large, private parking lot is available along Market Street alley opposite Arcade Market.

As has been indicated in the section of this report dealing with Streets, Highways and Parking, the site of Central Market is proposed for conversion to municipal parking lot use. The immediate objective in that proposal is to secure needed parking space close to the center of the business district. The broad objective, however, is to remove the congestion of market days

from the center of the city. The method suggested for accomplishing this objective is to combine Central and Arcade Markets at the site of the latter; and to operate the combined market throughout the week by leasing each stall to two or three farmers for use on alternate days.

Use of every week-day of the market building and equipment, rather than half time use or less, should produce economies which would be reflected in better display facilities, refrigeration for those foods which require it, better lighting and heating, better circulation space for shoppers, and an attractive building interior.

This location will place a market about equi-distant from the Square on each side of King Street; will relieve congestion close to the Square; and will provide a site for a municipal parking lot where the Central Market now stands. The combined market suggested on the site of Arcade Market is considered to be a part of the Civic Center, being in the quarter block adjoining the Post Office. It is expected that parking facilities proposed as part of the Civic Center will be used by patrons of the new market.

The Interurban Bus Terminal in Lancaster is known as The Village, and waiting room, ticket service, lunch, bar and dining rooms are available. The Greyhound, Safeway, and Reading Bus Lines use the terminal. Present accommodations appear to be adequate. Although the building which houses The Village is old, it is interestingly designed to create a Dutch atmosphere. This general location for the interurban bus terminal is good, being adjacent to major hotels, the shopping district, mass transportation terminals, and the proposed Civic Center.

Other buildings proposed for the Civic Center groups may need the present space of The Village. Inasmuch as this appears to be the proper location for the interurban bus terminal, it is suggested that the space now vacant between The Village and the Brunswick Hotel be set aside for future use as the bus terminal and other services provided by The Village.

Park and Plaza—There is little or no open, green space in the central part of the city. Lancaster should avail itself of the opportunity to create such a plaza in connection with the proposed Civic Center. Many cities, large and small, have gone to considerable expense in downtown areas to "open up" congested districts. Lancaster already has such an open area, and the development thereof is proposed as a setting for the Civic Center. The statement previously made is here reiterated—that the correct placing of imposing buildings around malls or squares embellished with trees, grass, fountains, and sculpture not only increases the dignity of each structure but furnishes opportunity for emphasizing its architectural importance. The Civic Center plaza should be carefully designed to harmonize with the buildings and surroundings and to unify the group, and to provide an ornamental and usable "in-town" park.

Parking—Subsurface—No off-street parking facilities are provided by the city. Those now in use are privately operated and may come or go, at the whim of the operator or the investment of the owner. Many municipalities have realized the need for stabilized off-street parking in their central business dis-

tricts, and have established city-owned parking lots. These facts, together with the proposals for Municipal and County buildings, Auditorium, and a Sports Center, show the need for greatly increased off-street parking facilities. It is proposed, therefore, to establish a large underground parking area under the Civic Center plaza. Favorable topographic conditions exist and entrance and exit lanes are well removed from intersections.

Parking accommodations could be provided in this underground parking area for about 650 cars. These facilities could be amortized in a reasonable length of time by a small parking fee. Half the underground parking might be constructed during erection of the Municipal buildings and the remainder during erection of the Auditorium and Sports Center.

Old City Hall—The Old City Hall does not necessarily enter into the Civic Center proposals, but because it will be vacated by several city offices when the Municipal group is constructed in the Civic Center, it is considered here. The building includes three floors and a basement. It should be maintained and preserved because of its beauty, its historical associations, and its civic significance.

It is suggested that the structure serve as a public sanctuary. Comfort stations have already been installed in the basement by the city. A comfortable lounge on the first floor, a first aid station, and perhaps a reading room might be installed and would undoubtedly be well patronized by shoppers and users of the mass transportation facilities which use the Square as a terminal.

Another suggestion for worthwhile use of this landmark is as a tourist center, for distribution of information and as the point of origin for conducted tours to the many interesting and historic points in the city and county. It is not advocated hereby to commercialize Lancaster's unique scenery, history, and people. It is proposed, however, that adequate opportunity be given for interested people to see for themselves, get accurate information, and thus fully appreciate the many unusual things in Lancaster County.

Ultimate Land Use

PREVIOUS SECTIONS of this part of the Lancaster Comprehensive Municipal Plan have presented the existing physical development of the community and recommendations pertaining to each of the subjects under consideration, namely—Existing Land School; Housing; Schools; Parks; Streets, Highways and Parking Areas; Mass Transportation; Airport System; Street Lighting; Utilities; and the Civic Center.

Reference to the Existing Land Use Map (see Figure 12, Map Section) will show the "spottiness" of existing land uses in the city—heavy manufacturing and commercial establishments mixed in residential neighborhoods; and conversely, dwelling units mixed in manufacturing and commercial areas. Many good citizens of Lancaster have built the wrong thing in the wrong place simply because they were trying to make money by using a piece of land which they own. There has been no comprehensive guide for the type of use to which each part of the city should be put. Unfortunately, one mistake can start the decay of a neighborhood.

An unwholesome condition which the Existing Land Use Map shows is the presence in almost every block of light and/or heavy commercial establishments. This promiscuous development of commercial uses in residential neighborhoods slowly but surely blights the residential areas and the entire community.

The Existing Land Use Map also shows the portions of the city which are devoted to residential uses. In doing so, the facts are brought out that the dominant type of residential use in Lancaster is duplex and row housing; but that single family detached and multiple family dwellings such as apartments are scattered promiscuously through the dominant duplex and row housing areas. The long-range effect of mixing residential uses within an area is deleterious.

The solidly developed character of the city, except in the southeastern and southwestern corners is shown. In spite of the need for residential land close to the center of the city, these available areas within the city limits are being wasted so far as economic and social urban uses are concerned.

The Existing Land Use Map shows the unorganized locations of city schools and the large number thereof. It shows the meager provision for public parks and playgrounds within the city; the lack of an arterial and major street system and the absence of a Civic Center.

This section of the Comprehensive Municipal Plan presents a summary of the ultimate land use objectives recommended for Lancaster—a guide for safe investments and good living. The differences between the uncoordinated, heterogenous, uneconomic uses of land as shown on the Existing Land Use Map and the coordinated, homogenous, efficient uses of land as shown on the Ultimate Land Use Plan (see Figure 92, Map Section) are of great importance to the community.

The population analysis demonstrated that the number of persons per residential acre is too great; and that one basic problem in Lancaster is to redistribute the crowded population. The portion of the city area which should be devoted to each use has been carefully considered, and necessary adjustments have been made for topographic and man-made features and barriers.

The Zoning Map and Report, which are not a part of the Comprehensive Municipal Plan, are a necessary first step to correct existing land uses, in line with ultimate land use objectives.

The Ultimate Land Use Plan shows large areas of the city devoted to one use, thereby eliminating the "spottiness" of existing land uses. Instead,

Figure 93. Unsightly approach to the city—A result of lack of zoning.

large units of land, mostly adjacent to the railroad are devoted only to heavy manufacturing use, and some areas bordering thereon are devoted to light manufacturing use.

Likewise, commercial areas are consolidated in the Ultimate Land Use Plan. Heavy commercial uses are largely confined to the downtown business area, or they form a transition between industrial and residential districts. Particular attention is called to the fact that light commercial areas are pulled together into a few locations to form neighborhood shopping centers (see Figure 94, Map Section). These centers are generally located at the intersection of traffic arteries and major streets, one or both of which provides mass

transportation as well as transportation by private automobile. These shopping centers are intended to serve principally the immediate neighborhood for groceries, drugs, and some personal services. Some of the larger shopping centers will also include neighborhood theatres, restaurants, and a few professional offices.

An outstanding benefit to be derived from the objectives of these studies is indicated in the residential districts on the Ultimate Land Use Plan. Manufacturing and Commercial uses which are now spotted throughout all the residential areas of Lancaster are to be removed over a period of time to special districts provided for each. In addition, each type of residential use is to be located in a district devoted exclusively to that use. Thus, apartments of more than two stories in height will be in a transition zone between commercial areas and individual family houses. Areas will be set aside for duplex

Figure 96. Uncontrolled advertising—Incompatible with residential use.

and row housing and separate areas for single family residential use. Other benefits include reduction of heavy traffic on residential streets and, therefore, greater safety; economy in street construction, due to adjustment of pavement to traffic load; and increased neighborhood unity because intersecting traffic arteries are eliminated. The result will be a general reduction of blighting factors from the environs of each home and business establishment in the city.

The Master Plan (see Figure 95, Map Section) shows pictorially the residential, commercial, and industrial areas proposed for the city; the public and semi-public areas; and the most important thoroughfares, such as the Northern Expressway, Circumferential Greenbelt Highway, arterial highways, major streets, and local parkways. This plan indicates the goal toward which the people of Lancaster should strive in order to retain, and regain, excellent standards of physical development for the community.

PART IV

PUBLIC SAFETY—BUREAU OF FIRE

PUBLIC SAFETY—BUREAU OF POLICE

COMMUNITY WELFARE

COMMUNITY HEALTH

CULTURAL AND CHARACTER-BUILDING SERVICES

Public Safety

BUREAU OF FIRE

THE PEOPLE OF LANCASTER are provided with public safety through the Bureau of Fire and the Bureau of Police. The Bureau of Fire is a function of the office of the Commissioner of Public Safety. The normal personnel complement of the Bureau consists of the Chief, one Assistant Chief, one Battalion Chief, and 60 other firemen. The present complement is only 50 men in addition to the three officers, the reduced force being due to lack of available men.

There are five fire houses in the city, all located within or adjacent to the congested district (see Figure 95). The station locations, and equipment assigned to each, are as follows:

Station Number	*Location*	*Equipment*	*Year Acquired*
1	411 W. King	Service ladder truck	1919
		One 1000 gallon pumper	1925
2	415 S. Queen	One 1000 gallon pumper	1916
		One 750 gallon pumper	1937
3	355 E. King	One 1000 gallon pumper	1924
		One aerial ladder	1910
		One 350 gallon foamite pumper	1920
4	333 N. Queen	One 1000 gallon pumper	1918
5	212 N. Duke	One 750 gallon pumper	1938
		One 1000 gallon pumper	1919

The fire limits in the center of Lancaster extend along East and West King Street for a distance of 4,300 feet and along North and South Queen Street for a distance of 4,800 feet. The fire limits were established by ordinance in 1871, and prohibited erection thereafter of wooden buildings. The area contains 56 blocks and part blocks. It is bounded, generally, on the west by Charlotte and Mulberry Streets, on the north by James and Lemon Streets, on the east by Shippen and Plum Streets, on the southeast by Howard Avenue; on the south by Conestoga Street, and on the southwest by Filbert and Strawberry Streets.

The congested value district lies within the fire limits and contains 17 blocks and part blocks. There are 77 acres in this area, of which 24 per cent is in streets and 69 per cent is built upon. Most of the streets in this area vary from 54 to 66 feet in width; the heavily industrialized Water Street, however, is only 40 feet wide. Alleys, which vary from 14 to 20 feet in width, provide good accessibility to block interiors.

As is shown on the Existing Land Use Map (Figure 12), this area contains the department, clothing, and hardware stores; office buildings and hotels; tobacco and other warehouses; and many dwellings in multiple use structures.

The National Board of Fire Underwriters Report on Lancaster, dated November, 1928, credited the built-on area of the congested value district at that time with only five per cent fireproof construction, which buildings are widely separated, thus adding little more than local fire barriers.

It is significant that value density, rather than population density, together with the number of fires to which service is supplied, are the factors used in determining the location of fire stations. These criteria result in the selection of station locations within a radius of a half of three-quarters of a mile of the congested value district.

The nerve center of a fire department is its fire alarm system. The alarm system in Lancaster was installed in 1882. Improvements have been made from time to time, but the basic system is 63 years old. Each fire station is listed separately in the telephone directory, although all stations may be called simultaneously from Fire Station No. 5. A private fire department telephone system is maintained by the Telephone Company.

There are 88 fire alarm call boxes in the city. The original installation was started in 1882 and much of the system is now in poor condition. In the congested value district, distribution of call boxes is fairly good, with no point more than 550 feet from a box. In the residential area, some persons would have to travel a half mile to reach a box.

The water supply used by the fire department is the municipally owned and operated water system. The source of the supply is Conestoga Creek. The Pumping Station has a capacity of 32 million gallons per day. Major water storage is provided in the six million gallon capacity twin reservoir on East King Street near the city line, and in the 90-foot, six million gallon steel standpipe on the Franklin and Marshall campus. Additional ten million gallon storage for the east end is under consideration.

Distribution from the Pumping Station to storage sites and to the city is provided by one 30-inch and two 36-inch mains. Further distribution is made by 24-inch, 20-inch, 16-inch, and other smaller lines.

Hydrants in the central business district are spaced six to a block alternately on opposite sides of the street. In outlying areas, hydrants are spaced three to the block, alternately insofar as possible.

Water pressure in the central business district is generally 60 pounds, although variations of five pounds may occur. Pressure at the south end of Prince Street is as much as 100 pounds, and pressure in the vicinity of the College is 35 to 40 pounds.

Outstanding among the needs of the Bureau of Fire is a central administration and headquarters building. This building should be adjacent to other municipal buildings, and should include an office for the Fire Chief, where he can maintain essential office records and reports.

Another critical need is for a central electrical bureau, where manual alarms can be relayed over an automatic system. This system would provide police call service and traffic light control in addition to fire alarm service. The central electrical bureau must operate 24 hours a day. On fire alarms the electrical bureau would serve as a reception center, from which the operator could, if necessary, relay the alarm by telephone to the proper fire station. The result would be an increase in efficiency in relaying urgent calls.

Relocation of fire stations is another important need. In this regard, the

recommendation is made that Stations number four and five, which are now located in adjacent blocks, be combined; and that the new station be located adjacent to the present station number five as part of the proposed civic center. Subsequent discussion will present the value of locating a central police station nearby, also as part of the civic center. This central location of the headquarters fire and police stations would afford the opportunity to provide a central electrical system at the same location. Provision should also be made for a drill tower and necessary equipment for establishing a training school where all members may be regularly drilled in modern hose and ladder use.

There is also a growing need for a fire station in the northeast portion of the city in the vicinity of McCaskey High School, the new RCA plant, Stehli Silk Mills, and the adjacent residential developments. This area has become a high value district which deserves and requires complete fire protection.

Another fire station is necessary in the northwest portion of the city to provide service for Franklin and Marshall College, The Hamilton Watch Company, The Bearings Company of America, and adjacent residential properties.

There is considerable high value property outside the Lancaster City boundary. This property receives fire protection from the Lancaster Bureau of Fire as an entirely free service.

In the years since 1938, ten per cent of the fire calls which the city answered were outside the city limits. It is estimated by the Fire Chief that each call which is answered costs the Bureau fifty dollars. The average number of calls for service outside the city during the past six years has been 31 per year. The cost per year to the city has, therefore, averaged $1,550 per year. It is important that sufficient fire stations be provided to protect the entire urban community, and that a mutually satisfactory financial arrangement be initiated for payment to the city for calls outside of the city. The fact that fire protection outside the city limits is inadequate is shown by comparison of Fire Insurance rates within the city with those in Manheim and Lancaster Townships as follows:

District	*Type of Structure*	*Roof*	*Rate—$100 Valuation*	*Remarks*
City	Brick	Approved	.09	
City	Frame	Approved	.13	
Townships	Brick	Approved	.15	Within 600 feet of fire hydrant
Townships	Frame	Approved	.18	Within 600 feet of fire hydrant
Townships	Brick	Approved	.22	More than 600 ft. from fire hydrant
Townships	Frame	Approved	.25	More than 600 ft. from fire hydrant

Outside aid could ordinarily be received if necessary from neighboring communities, as there are a dozen volunteer fire companies within a five mile radius of Lancaster and about 65 in the county.

The fire fighting equipment in Lancaster is in a seriously inadequate condition. The National Board of Fire Underwriters advocates that equipment built before 1930 be retired to a reserve status. Fire apparatus should have

an indefinite life so far as miles traveled or work performed when pumping are concerned. Other conditions make apparatus obsolete, however, such as inadequacy of two-wheel brakes under present traffic conditions; slow pick-up and acceleration, resulting in a tendency for the driver not to slow up for street intersections; body design, including protection of men and capacity and arrangement of equipment; and out-of-date steering gear.

The city has seven pumpers, only two of which have been built since 1930. The urban area of some 75,000 population should have nine pumpers of modern construction. The city has two ladder trucks, one of which was built in 1919. The other is a 1910 model and was originally built to be horse-drawn. The need is for three ladder trucks of modern construction. At least one of these trucks should be equipped with a 75-foot, quick-rising, aerial ladder.

The Bureau of Fire requires a normal complement of 63 men. Appointments are made from the Civil Service eligible list, in the order of respective percentages, ratings being based upon a competitive physical and mental examination. Positions pay $1,700 the first year with an increase of $75 annually for five years. A retirement and pension plan is in operation.

The Bureau operates on a two platoon system. There are eight companies, two of which are now inactive due to lack of personnel. Company Number Four, with headquarters on North Queen Street, and Company Number Five, with headquarters on North Duke Street, are the companies which have been inactivated; thus decreasing the protection available to the northern and northeastern parts of the city. The battalion chief is Fire Marshal and is constantly assigned to fire prevention work.

In summary, it is considered that the water supply is ample, although only fairly reliable. The fire alarm system is obsolete, inadequate, and unreliable, and a new fire alarm system should be installed and operated in accordance with National Board of Fire Underwriters standards.

The fire equipment is practically all obsolete and unsafe, and a program of replacement should be established to provide modern equipment at the earliest possible date. A central administration and headquarters building should be built. New Fire Stations are needed in the northeast and northwest portions of the city.

Public Safety

BUREAU OF POLICE

The Bureau of Police is a function of the Department of Public Affairs, and is under the direction of the Mayor. The normal personnel complement of the Bureau consists of 62 employees, a ratio of less than one police employee per 1,000 persons. The Lancaster ratio is low by comparison with other cities—the usual ratio ranging from less than one, as in Lancaster, to over three police employees per 1,000 population.

The present staff consists of 52 employees, 47 of whom are policemen. The roster includes the Commissioner of Police, the Secretary of Police, the Captain of detectives, two detectives, four lieutenants, six sergeants, one policewoman, 32 patrolmen, a clerk for the Detective Bureau, a garage mechanic, a turnkey and one laborer.

There are three main divisions of the Bureau of Police, namely regular police force, detective division, and records and communication.

The regular police force operates on a three platoon system on eight hour shifts. A lieutenant is in charge of each platoon. Traffic control duties are performed by the regular police force, for there is no separate traffic squad.

The detective division is under the direction of a Captain. Other members of the division are two plain-clothesmen, a policewoman and a secretary. The assignment of the policewoman is concerned primarily with special problems of women in the city and with juvenile delinquents. This officer works closely with other members of the police force and with various public and semi-public agencies of the community.

The Police Station is located on Grant Street, the 20 foot alley between North Queen and North Duke Streets, one-half block north of East King Street. There are no precinct police stations in Lancaster, but 18 police call boxes are distributed over the City. The Police Station serves as headquarters for the Commissioner and all other personnel. It includes radio facilities, a small cell block for short-term use, and a garage for equipment. City prisoners are committed to the County Jail, which is located on East King Street near the City line.

Automotive equipment for the Bureau of Police consists of four automobiles, one ambulance-patrol wagon and seven motorcycles. Two of the automobiles are used as cruisers, one is assigned to the detective squad, and one to the policewoman.

Two police cars are constantly cruising the City. These cars are equipped with three-way radio service—from station to cars, from cars to station and from car to car. Two men are assigned to each patrol car—one as driver, and one as observer and radio operator. The radio operators are licensed by the Federal Communications Commission. The City is divided into two sections for cruising purposes.

The members of the Bureau of Police are employed under local civil service regulations. All new members of the force go to the Pennsylvania State Police Training School at Hershey for three months of "boot" training, then have one month of training under local conditions. Each officer must qualify once a year in target shooting. The policewoman received her training in the Washington (D. C.) Police Department.

A new police station is one of 24 projects which are listed on the program for postwar construction as submitted by City officials to the State Plan-

Figure 97. Municipal Police Headquarters—Long antiquated.

ning Board. The cost estimates shown for the new station was $200,000, and a building site is already available at the corner of Duke and Chestnut Streets. The Commissioner proposes that the new police station include—in addition to the usual office space for the commissioner, detective captain, sergeants, detectives, policewoman's quarters, and cells—space for a small gymnasium, laboratory, identification rooms, adequate space for police records and files, and living accommodations for about ten men. It is proposed in the Comprehensive Municipal Plan to include the Police Station in the proposed Civic Center, with architectural character in harmony with that of the entire group.

Community Welfare

LANCASTER, like other communities, has problems to solve relating to the welfare of children, youth, aged infirm, dependent and unfortunate persons. Social security operates on a nationwide basis, but other measures must be added to meet special public assistance needs which confront the local community.

Welfare services in Lancaster are directed toward reducing factors which cause people to become public charges, toward providing adequate care and comfort for those who are public charges, and toward rehabilitating public charges so that they may become independent and productive to society.

Community welfare services are provided by a number of federal, state and local agencies. The United States Employment Service is typical of a federal agency which handles a particular phase of community welfare. Their assignment is to serve as an employment clearing house between workers and employers in the Lancaster area, and also in areas of critical labor shortage elsewhere throughout the United States.

Community welfare services are provided in Lancaster on the State level by the Department of Public Assistance. The four main categories of assistance furnished by this department are old age assistance, pensions for the blind, aid to dependent children and general assistance. In the latter category is included emergency needs for immediate assistance and relief. A special problem which is handled as general assistance is that caused by dietary deficiency.

Community welfare services at the local level are coordinated by the Welfare Federation which was formed in 1925. The function of the Federation is to organize and conduct the annual financial campaign for funds for 16 community welfare, health and character building agencies, namely:—The Association for the Blind: Boys Club of Lancaster, Inc.; Boy Scouts of America, Lancaster County Council; Community Service Association; Crispus Attucks Recreation and Community Center; Day Nursery; Girl Scout Council of Lancaster County; Guidance Clinic; Lancaster County Society for Crippled Children, Inc.; Lancaster Recreation Association; Rossmere Sanatorium; Salvation Army; Shelter Home for Girls; Social Service Exchange; Visiting Nurse Association; and the Young Women's Christian Association.

The central organization for welfare services in Lancaster is the Community Service Association. The growth of philanthropic activities in Lancaster to consummation in the Community Service Association is interesting.

The first organized adventure in philanthropy in Lancaster was started in 1832 when "The Society for the Promotion of Industry and Prevention of Pauperism" was chartered. Money raised through membership dues was used to purchase wool and flax, which were distributed to poor families for weaving and knitting. These families were paid for their labor. The finished articles were given to those in need who were unable to work.

The next step in Lancaster's adventure in philanthropy was organization

of the Dorcas Society in 1858 by a group of women who for a quarter of a century had met in Trinity Lutheran Church to sew for the poor. No public appeal is made for funds. Voluntary contributions from friends and bequests constitute the Society's sources of income.

In 1904 the Lancaster Charity Society was organized and support for the Society's work was provided through appeals to individuals and by benefits. The purpose of the Society as set forth in their constitution was to "promote effective cooperation between public and private agencies, churches, and individuals; investigate applications for relief to assure that relief when needed be adequate, and to prevent imposition and unwise duplication of relief; to keep permanent records; to organize a body of friendly visitors who shall personally attend upon cases needing counsel and advice; to procure work for poor persons who are capable of being wholly or partially self-supporting; to repress mendicancy—even by prosecuting impostors."

The name of the Society was changed in 1919 to the Lancaster Community Service Association. The change was made because of the stigma attached by many to the word "charity," and because of the ever widening activities and services of the Society.

One of the first noteworthy actions of the new Lancaster Community Service Association was its leadership in organization in 1919 of the Recreation and Playground Association. This latter organization and its successor has been responsible ever since for provision of recreational programs for the people of Lancaster.

Many of the various services of the Lancaster Community Service Association are performed by the Children's Bureau and the Family Bureau.

The Children's Bureau cares for dependent, delinquent and neglected children. During 1943, the Bureau provided care for 448 children. Some are placed in foster homes, some are placed for adoption, some are returned to parents and other relatives, and a few are placed in institutions for feebleminded and for the correction of anti-social behavior.

The Family Bureau is intended to counsel with individuals and families regarding marital and personality problems and behavior problems of children. This Bureau receives the applications for the placement of children, in order that efforts may be made first to keep children in their own homes. While the Bureau does not function as a relief agency, it does provide temporary assistance in cases of emergency need. Another service of the Family Bureau is provided by a home economist and dietician, who not only consults with other staff members but goes into homes to help with budgets and the purchase and preparation of foods.

The Guidance Clinic which the Lancaster Community Service Association sponsors for the Lancaster Mental Hygiene Association diagnoses and treats mental and emotional illnesses of children and adults. A special service given through this Clinic is remedial reading for children who are retarded in school because of inability to learn to read.

The Community Service Association assists in the Day Nursery program by receiving all applications for nursery care and by investigating and making recommendations for disposition of the case.

For 20 years a class in social case work has been offered by the Community Service Association to students of the Seminary of the Reformed Church.

The course is elective and the students receive Seminary credit. The students are thus given an insight into the welfare program of a community and the proper approach to the individual and to the family.

The Community Service Association takes an active interest in problems of juvenile delinquency and improvement of housing conditions in the city.

Community Health

COMMUNITY HEALTH PLANNING should be directed toward creation of the highest possible level of health for the entire community, and for each individual. It is a public responsibility to provide adequate sanitation, inspection and education measures to fight disease and to reduce preventable losses of life and limb. It is also essential that medical care should be available to every individual through adequate doctor, nurse and hospital services.

Due to wartime conditions, some inadequacies in community health service have been tolerated "for the duration." Plans should be formulated now, and aggressive steps should be taken to remove those inadequacies at the earliest possible moment. For instance, in the field of public health service, enforcement has been lax in the matter of unsafe and unsanitary housing conditions, as shown by overcrowded buildings, pit privies in the congested district, use of dwellings unsafe for habitation and shanty dwellings within the City. The methods of garbage collection and disposal are primitive for a metropolitan city. The present shortage of doctors and nurses is a condition which will correct itself at the end of the wartime emergency. Hospital facilities are over-loaded due to the present ability of almost everyone to pay for hospital service, and due to general operation of hospitalization plans.

Public health service agencies include the Pennsylvania Department of Health, Department of Public Assistance, and the City Bureau of Health.

The Pennsylvania Department of Health serves the Lancaster urban area through sanitarian service pertaining to contagious diseases, restaurant hygiene, safe drinking water, nuisances and school medical inspection. In addition, clinic service is provided for children up to school age; venereal disease clinics are operated weekly at St. Joseph's Hospital and General Hospital in Lancaster; and a tuberculosis clinic is operated weekly at St. Joseph's Hospital.

The Pennsylvania Department of Public Assistance administers a program of medical care, and through its general assistance program provides emergency health measures.

The Lancaster City Bureau of Health provides inspection of stores and restaurants; inspection of meat, milk and ice cream from origin to final distribution; supervision of sanitary conditions throughout the City and abatement of nuisances; supplies vaccine to schools for indigent children; and collaborates with the Pennsylvania Department of Health in reports on communicable diseases.

As has been repeatedly stated throughout this Comprehensive Municipal Plan, the City administration should provide adequate building codes, zoning ordinance and specific health ordinances to assure complete coverage of inspection, sanitation and education measures for fighting disease and for reducing preventable hazards to life and limb. Eradication of some of the blighted residential areas, and of many public nuisances, could be accomplished

by enforcement of existing ordinances, and by enactment of other up-to-date health and safety ordinances.

Lancaster has a variety of facilities for medical care. Hospital facilities are provided by the Lancaster General Hospital, the Lancaster Osteopathic Hospital and St. Joseph's Hospital. The American Medical Association has estimated that an area such as Lancaster should have hospital facilities amounting to 5½ beds for each 1,000 persons. Lancaster County has only half the recommended number. Plans are being made for post-war expansion of hospital facilities. The Lancaster General Hospital proposes to build a 100-bed addition, a new nurses home, and additions to kitchen, storage and heating facilities, the cost of which is estimated at $661,000. St. Joseph's Hospital proposes to build an 80-bed addition, a new nurses home, and a home for the Sisters who serve in the hospital. The cost of these improvements is estimated at $695,000.

Special services are available for treatment of tuberculosis patients at Rossmere Sanatorium, which is supported by Welfare Federation and tax funds, and by fees. The Lancaster County Tuberculosis Society contributes to the prevention and control of tuberculosis through health education, and through tuberculosis testing and X-ray services in schools, among low income groups and in home contacts. Rehabilitation service is provided through vocational guidance, training and job placement. The source of financial support for the Tuberculosis Society is through the sale of Christmas Seals. The weekly tuberculosis clinic at St. Joseph's Hospital, sponsored by the Pennsylvania Department of Health, provides free physical examination including tuberculin test and X-ray, medical care, provision for admission to State Sanatoria, and investigation of sources of infection. In general, services offered in Lancaster pertaining to tuberculosis appear to be complete. Additional and widespread health education is essential in order to assure continued public support and to provide service to the greatest possible number of persons.

Special services are also available for those afflicted by infantile paralysis through several community health organizations. The National Foundation for Infantile Paralysis, Inc., provides for treatment, regardless of age, through the Lancaster County Crippled Children's Society. The source of funds is the annual March of Dimes Campaign. Diagnostic, brace, and operative clinics are offered, and posture training and corrective swimming classes are provided. The Pennsylvania Hospital for Crippled Children at Elizabethtown in Lancaster County provides orthopedic care for crippled children, including surgery, physiotherapy, Kenny Treatment, and a brace shop for hospital and clinic patients. Public school instruction is available for hospital patients.

Other special health services are available through the Shelter Home for Girls on the Lititz Pike, which is a detention home for delinquent girls and a temporary home for homeless girls. The Pennsylvania Quarantine Hospital, on Ann Street in Lancaster, is operated by the State Department of Health, and serves as a quarantine and treatment center for women with venereal diseases. Clinics are provided at both St. Joseph's and Lancaster General Hospitals for treatment of venereal diseases and for distribution of educational information.

The Association for the Blind serves Lancaster City and County residents to aid in conserving sight through special education, to provide medical

and social service for persons with eye defects, and to rehabilitate blind persons through vocational training and placement.

Two other associations which make commendable contributions to community health are the Lancaster Chapter of the American Red Cross and the Visiting Nurse Association. Local services of the Red Cross include aid to service personnel and their dependents such as emergency communication and information, family case work, service and financial assistance. Special volunteer services include Nurses' Aides, Canteen, Motor Corps and Production. Educational services include classes in first aid, home nursing, water safety and nutrition.

The Visiting Nurse Association serves the City and County Area. The services include professional nursing, surgical dressings, well-baby clinics and health education. The Association is supported through Welfare Federation and tax funds, contributions and endowments. The Visiting Nurse staff in Lancaster consists of 12 nurses, and the services rendered cost about $20,000 annually.

The Inter-County Hospitalization Plan has been in operation in the City and County of Lancaster for a number of years. The plan provides a service of prepaid hospitalization expenses on an individual or group basis. The plan has enabled many of the residents to avail themselves of hospital services at low cost.

Cultural and Character Building Services

CULTURAL AND CHARACTER BUILDING services in the community are difficult to evaluate and to deal with objectively. Their place in the community is important, however, for through them interest in work and achievement is stimulated and satisfaction in community life is increased. It is desirable for each member of the community, regardless of age, color or creed to have opportunities for self-improvement; to enjoy the achievements of artists, writers and musicians; and to personally participate in cultural activities.

Some of the most important facilities for providing cultural and character building services in the Lancaster community have been presented in the discussions of public, parochial and private schools; Franklin and Marshall College; The Seminary of the Evangelical and Reformed Church; and the parks and playgrounds and the programs operated thereon by the Lancaster Recreation Association.

Lancaster is well supplied with other cultural and character building services. Among the most important of these are the churches of the community. While no study of church adequacy is included in this Municipal Report, certain proposals of the Report will affect the long-range program and location of churches.

The neighborhood residential pattern recommended for development, with the elementary school as the nucleus and traffic arteries as boundaries, suggest the possibility of using the same residential pattern for church units. Furthermore, recommendations for redistribution of the congested population to the less developed sections of the City will affect the constituency of existing churches, and may necessitate construction of a few new church facilities in new locations.

In keeping with its historical background, Lancaster is a church-conscious community. It is significant that when Life Magazine presented a feature article several years ago on the modern methods of instruction used in church schools, a church school in Lancaster was used for illustration.

There are 65 Protestant churches, five Catholic churches, and two Hebrew synagogues in Lancaster, representing approximately one church for each thousand of the urban population. A recent survey of 17,785 Lancaster homes shows that 32,670 persons are affiliated with Protestant churches, 9,510 persons are affiliated with Catholic churches, and 1,103 persons are affiliated with Jewish synagogues. Protestant church schools have an enrollment of about 25,000 persons.

Two important cultural, character building and recreational agencies in Lancaster are the Young Women's Christian Association and the Young Men's Christian Association.

The Y.W.C.A. provides club rooms, auditorium, swimming pool, gym-

nasium and cafeteria. The dormitory section contains 30 rooms which house 50 girls. Girl Reserve Clubs sponsored by the Association have a membership throughout the City of over 1,000 girls. The Association conducts an organized camp program for six weeks each summer. The Lancaster Y.W.C.A. is self-supporting except for about a third of its funds which are derived from the Welfare Federation campaign.

The Y.M.C.A. serves both the City and County area. Attendance at major programs held during 1944 totaled 225,000 persons. The facilities provided by the Y.M.C.A. include two gymnasiums, swimming pool, auditorium for 700 guests, and club rooms. Dormitory rooms are available on the three upper floors. The membership numbers about 2,850, and membership privileges are extended to an additional 500 men in the armed services. The popular Y.M.C.A. cafeteria serves about a thousand meals daily. The Hi-Y Club has a large membership. The Boys' Department of the Y.M.C.A. conducts a program for over 1,000 boys, thus being a factor in reduction of delinquency. One special phase of the program is organized camping during the summer. The Shand Victory Camp was attended by 138 boys for 2,300 camping days during July and August, 1944.

The Water Street Mission and the Salvation Army conduct religious programs primarily, but also provide certain very essential welfare services. The Salvation Army conducts classes for character building, music, crafts and leadership training for boys and girls. War services include a club car and canteen service, and dormitory accommodations for an average of 300 service men each week. These services are made available by financial support through the Welfare Federation and by contributions.

Three organizations which provide character building services for boys and girls are the Girl Scouts, Boy Scouts and Boys' Club.

The Girl Scout Council of Lancaster County conducts a character building and recreational program for girls seven to 18 years of age.

There are 65 troops of Girl Scouts in Lancaster County, 40 troops of which are in the city. Two of the troops are for colored girls. The work of the Council is supported through the Welfare Federation.

The Lancaster County Council of Boy Scouts of America conducts programs which emphasize character building and leadership training. The Boy Scouts own a camp site called Camp Chiquetan, nine miles south of Lancaster. The property contains 118 acres, about 65 per cent of which is wooded. Ten troop camp sites are proposed. Other facilities will include a swimming pool, troop dining halls, water system, and remodeling of a large barn for summer assembly and winter camping quarters. A fund of over $50,000 is available for development of the area for organized camping in the post-war period. The work of the Boy Scouts in Lancaster is financed through the Welfare Federation, contributions, fees and endowments.

The Boys' Club of Lancaster—for boys six to 20 years of age—provides a recreational and character building program, including games, ping pong, volleyball and wood working. Financial support is furnished by the Welfare Federation, contributions and fees.

These are a few of the agencies which provide cultural and character building services to the people of Lancaster. There is a constant conflict between the need for more and better services of this kind and the reluctance

to increase welfare budgets and tax requirements for provision of the services. The conflict may be resolved in part through keeping the public aware of the needs, the way their money is spent, and the benefits derived by individuals and by the entire community. The conflict may be further resolved by effective use of funds available through cooperation of agencies and coordination of services, and through aggressive, capable leadership and administration for each service.

PART V

FINANCIAL STRUCTURE

PROJECT PROGRAMS

ANNEXATION

Financial Structure

FINANCIAL TRENDS—PAST AND PRESENT

- Recent Fiscal Policy
- Short Term Loans
- The Effects of a Low Tax Rate
- Financial Comparison with Other Pennsylvania Communities
- Surplus Revenue
- Land Values

FUTURE FINANCIAL POLICY

BORROWING CAPACITY

FUTURE FISCAL POLICY

MONEY MARKET

CONCLUSION

Financial Structure

FINANCIAL TRENDS—PAST AND PRESENT

WORLD WAR II has had many direct effects upon the financial structure of the City of Lancaster as it has upon many other communities. During the years 1934-1938-1939 and 1940 the City was in a strained financial position with insufficient earnings from the existing six mill tax rate to properly balance expenditures. Figure 98, Trend of Estimated Total Receipts and Expenditures, reveals that in 1934 the expenditures exceeded the

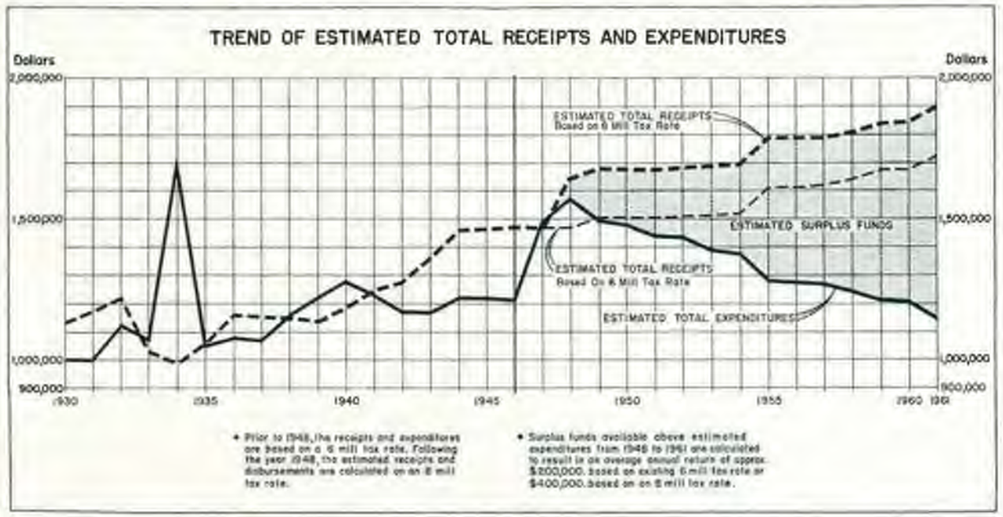


Figure 98.

tax revenues by approximately $700,000. Prior to the end of 1937 expenditures again began to exceed incoming revenues and similar deficits of approximately $85,000 per annum occurred in 1939 and 1940. Near the end of the year 1940, however, revenues began to exceed expenditures in a small degree.

Fortunately City officials are possessors of sufficient legislative power to correct deficiencies of this type. However, in spite of this power, little or nothing was done to correct conditions—possibly because of the universal poor economic status of many taxpayers. This would have a direct bearing on revenues because increases would have to originate through an increased tax rate, or possibly through a professional reassessment of real estate values within the city. Factors such as tax delinquency and taxpayers' ability to

pay, must be considered before tax increases are made and often indicate that increases are not the best method of solving the problem. The community's reluctance to correct the negative financial picture, however, prevented the innovation of needed municipal improvements and this Comprehensive Municipal Plan now brings to light needed improvements that accrued during the last decade. This condition is not peculiar to the City of Lancaster alone, but it is mentioned here as one reason for the extensive long-range project program recommended for consideration.

Recent Fiscal Policy—By reference again to Figure 98 and the 1933–35 period when annual disbursements exceeded the diminishing revenues, we should recall those years were at the depth of the so-called depression period with subsequent shrinking real estate values. During 1935 there was an increase in the tax levy of two mills which reflected a rise in current revenue in 1936, and additionally a slight increase in real estate values was simultaneously effected which had a similar result. From 1936 to 1937 the City enjoyed a stable financial condition realizing a comfortable working surplus. Apparently the aggressiveness of land owners influenced the City Administration at the end of 1936, resulting in a tax reduction of one-half mill, and even through realty values were slowly staging a comeback, in 1938 Annual Disbursements again exceeded current revenues and continued to mount until 1940 when they began decreasing and continued to do so until 1942.

A characteristic of municipalities and public administrations is that as unexpended balance or surplus funds remain, taxpayers clamor for a reduction of tax rates. This condition reflects a lack of foresight and oftentimes a lack of understanding of contributory facts. In public business a reduction of income for public administrative purposes can result in a reduction of public services which will retard expansion and improvement programs.

Short Term Loans—Short term loans have been superimposed upon financial disbursements as a first mortgage on current incoming revenue for over a period of years. A study of the City's annual financial reports discloses that this has been common practice over a long period of time, and as recently as 1940 the city borrowed $140,000 on a short term basis, presumably for general fund purposes until current revenues were available. The time limits of the short term loans varied in accordance with the needs and were usually for periods from 60 to 120 days at the current banking rate of interest. In private business as in public business the short term method of financing is resorted to many times because of necessity and in cases of emergency; but it is not good practice as an annual expedient. The continuous use of the short term loans is full evidence of the inadequacy of the six mill tax rate because current revenues should provide a sufficient surplus to operate until augmented by scheduled incoming tax monies.

The Effects of a Low Tax Rate—Indirect evidence of the inadequacy of the City's past and present financial structure is the inability to operate and maintain cultural facilities as a museum (Lancaster is rich in historic background), public library facilities, parks and playgrounds; all public services that Lan-

caster citizens now receive only through private enterprise. The city funds allocated to the maintenance of recreational facilities are almost negligible.

Other services, such as garbage, ash and rubbish collection and disposal have proven to be very unsatisfactory to the householder, and certainly modern fire fighting apparatus should have been provided as recommended by the fire underwriters in 1928. Public services of this type should be made available to Lancaster citizens as a part of the Municipal Government operation.

Conservatism in planning rather than a broader concept of the needs and remedies also has resulted in the present Municipal Building continuing to be inadequate to house the Police Department where it rightfully belongs. At a moderate additional cost, the police force should have been housed in the present Municipal Building rather than in a separate structure with the necessary additional capital outlay.

The six mill tax rate, even though inadequate, was retained and held regardless of civic needs.

Financial Comparison with Other Pennsylvania Communities—Table 11 compares cities in Pennsylvania of similar populations, assessed real estate values and tax levies to Lancaster and its real estate tax structure. There is no attempt to justify the need for an increased tax rate on the basis of the differential in the tax levies alone, but rather on the basis that Lancaster citizens are deprived of various public services now enjoyed by the citizens of other communities of comparable size. These services in most cases are provided by City Tax monies and Lancaster has thus far been unable to make them available to its residents because of the limited financial income derived from taxes.

Out of the eight cities considered, five make direct contributions to the maintenance and operation of a Public Library at an average of $20,266 per annum. Lancaster by contrast contributes $4,000 per annum. The eight cities expend an average of $65,517.52 annually on parks and playgrounds for recreational purposes against Lancaster's $16,886 in 1944 for a similar purpose.

Out of the eight cities, three reported on the method of garbage collection and disposal. One disposes of garbage by its own collection and disposal system using the reduction process, one by contractor, and one with the householders' contracting privately for its removal. The City of Harrisburg reported on the ash and refuse collection as a public service. Five of the same eight cities report a total of 132 post-war projects at an estimated cost of $55,202,900 with Lancaster reporting 25 projects at a cost of $1,787,839.

This is a comparison that evidences rather graphically that Lancaster's municipal development program is "bottlenecked" by the six mill tax rate. It is an established fact that new industries, businesses, and individuals are attracted by public services and the competition for post-war expansion by municipalities throughout the nation will be determined largely on that fact.

Surplus Revenue—On the other hand, present tax levies appear adequate by reason of surplus revenue which started to accumulate in 1941 and will in all probability amount to about $225,000 by January 1, 1946. This surplus began pyramiding through the natural temporary decline in the cost of operating City Government during the war period. Highway and street construction and maintenance are pared to a minimum during such periods. Limita-

TABLE 11

Real Estate Values and Tax Levies for Pennsylvania Cities Comparable in Population to the City of Lancaster

Cities of Pennsylvania	Population 1940	Percentage of Assessed Valuation Used for Tax Levy	Assessed Real Estate Values	Tax Rate Levied for General Rev.	Tax Rate Levied for Debt Purposes	Total Tax Levy
Wilkes-Barre	86,236	100	76,667,632	.0115	.003	.0145
Harrisburg	83,893	55	93,372,410	.0017	.0023	.014
Chester	59,285	90	57,801,800	.014		.014
Allentown	96,904		106,169,860	.007501	.004899	.0124
Bethlehem	50,490	50	63,758,205	.00847	.0053	.012
Reading	110,568	100	140,109,244	.008309	.002691	.011
York	55,712	66 2/3	50,494,510	.00825	.00225	.0105
Altoona	80,214	60	71,571,645	.009	.001	.010
Lancaster	61,345	100	90,781,850	.006		.006

Compiled from the 1943 reports filed with the Pennsylvania Department of Internal Affairs

tions established in the purchase and replacement of equipment, and personnel in the Police, Fire and several other departments have been reduced to substandards. A large number of the men who were not drafted into the Armed Services were attracted to better paying wartime jobs and these men are for the most part irreplaceable until after final victory. The salaries of the positions remaining vacant were unexpended at the end of each fiscal year and therefore created surpluses and unexpended balances.

With the ending of the war, however, this surplus revenue will be inadequate to meet the numerous replacements that have been neglected during the war period. The usual tendency in the cost of city government operation has been upward, due to the additional public services desired and necessary, and it is believed that Lancaster is no exception to this rule. Even though it can be pointed out that the bonded indebtedness of Lancaster is being substantially reduced, and larger sums of money are becoming available each year as a result of the reduction in the public debt, no appreciable financial aid will become available until 1949. In the interim there is the problem of contemplated capital expenditures already under consideration. This Comprehensive Municipal Plan and its recommendations should receive serious consideration and immediate provisions made to permit adequate capital outlay on post-war plans.

Land Values—Progressive and community-minded citizens should be motivated by a desire to put the plan into action, provided sufficient financing can be arranged to accomplish the major aims. The question of a Bond Issue immediately arises and the attendant problems of financing the carrying charges and the amortization even for a partial accomplishment of the recommended improvements.

Fundamentally, the best approach would be an equitable reassessment of all real estate within the City of Lancaster. This would determine a definite tax basis and eliminate much of the existent controversies over the subject. Furthermore, it would permit the preparation of a financing program that would be practical and realistic. The equitable assessment of all real estate holdings is a progressive step in the direction of equitable taxation and needed in more communities today than probably any other municipal project. It is true that it would take a courageous city administration to underwrite such a project, but the results would be of tremendous satisfaction to the citizenry as a whole.

FUTURE FINANCIAL POLICY

Future City administrations will inherit financial problems of tremendous magnitude. Operating costs are mounting, necessitating an appropriate increased tax level to provide a sufficient marginal surplus, so that future short term loans would not be necessary to carry the increased bonded indebtedness in the event the first phase of the Comprehensive Municipal Plan is started.

Figure 99, Potential Financial Resources Available Through Taxation and Bonding Plans, 1946–1961, is developed in three phases. The first phase is the amortization of the present bonded indebtedness which will be liquidated in 1961. This is a frozen liability about which the City can do nothing

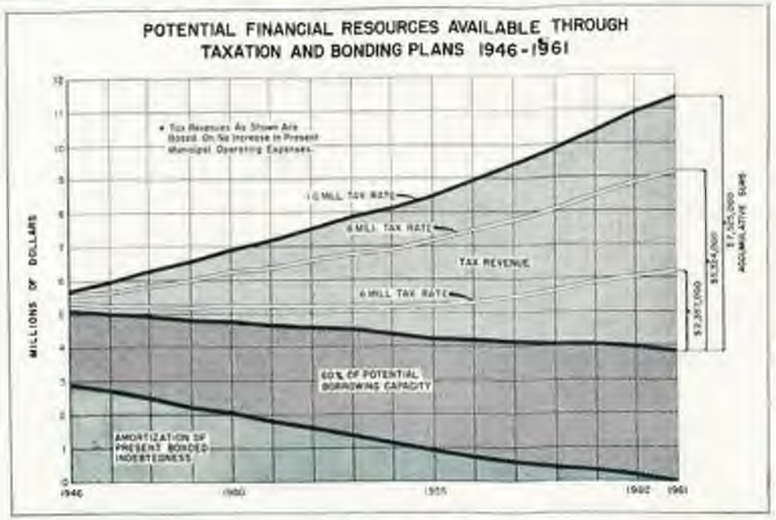


Figure 99.

in the way of liquidation since the bonds are of a serial nature with predetermined maturity dates.

The second phase shows the 60 per cent potential borrowing capacity. It will be noted that the gap between lines of amortization and potential borrowing capacity do not widen as rapidly as if the 100 per cent bonded borrowing ability were utilized. The 60 per cent potential borrowing power will act as a control to hasten the day of every public official's dream of ultimately bringing about a debt-free city. A city, like private business, must have capital reserve. In this instance, it is not cash, but a 40 per cent margin of bonding credit on which future city officials may rely in cases of emergency. The secret in bringing about this ideal condition does not lie in this control alone. The third phase is the greater contributor to future financial security.

Present and future real estate tax rates are the third phase, superimposed upon the potential borrowing ability. These tax structures as shown are cumulative and based on present operating expenditures. In other words, the nominal surplus over and above present expenditures, plus the savings accomplished by the gradual reduction annually in the bonded indebtedness will accomplish the total shown in 1961 or an equivalent ratio at any given year covering a similar span of time.

Since we are certain that present surpluses and operating disbursements will not continue to remain at present levels at the end of world conflict, it is quite evident that present revenue-producing resources are inadequate. With the exception of a few fund-producing bureaus where new and some increased charges could be inaugurated, no additional revenues are available aside from a general tax levy increase on real estate.

A study of the rapidly widening gap created by a two mill tax rate in-

crease seems to be the most feasible program to accomplish the desired facilities for the City and for future financial security.

This program has the advantages of ear-marking a certain percentage of the tax increase for public debt purposes. Under this program the sinking fund could become self-sufficient if properly managed, in perhaps 60 per cent of the time ordinarily required to amortize bonds.

Analysis of Figure 99, the first phase (six mill tax rate), is convincing evidence that if City operating costs were not constantly rising and there was assurance that present receipts and disbursements would remain frozen at today's levels, the City's hopes of accomplishing improvements would be very remote indeed.

Phase two (eight mill tax rate) would appear to be the most feasible plan for all practical purposes without imposing a hardship upon any group of taxpayers, whether it be large property or small property owners. Phase three, on the other hand, would be the most desirable to a progressive and courageous City administration. In this case a ten mill tax rate would prevail although it might prove too startling a departure from the present tax rate.

BORROWING CAPACITY

A bond sales plan is shown as a phase four. In this plan it is attempted to show at the various periods the maximum borrowing capacity of the City. This plan is not recommended for use even to accomplish the Comprehensive Municipal Plan.

Figure 100, Annual Potential Borrowing Capacity 1946-1952, is segregated for a period of seven years, illustrating the maximum potential borrowing capacity of Council and the City Electorate. The combined borrowing capacity in the year 1947 would be $3,877,600. This would provide finances for major capital expenditures and would permit a beginning in the accomplishment of the Municipal Plan. It should be emphasized that it is not recommended that the maximum be utilized, but rather 60 per cent of the total amount. If the 60 per cent suggestion were adopted it would yield the city

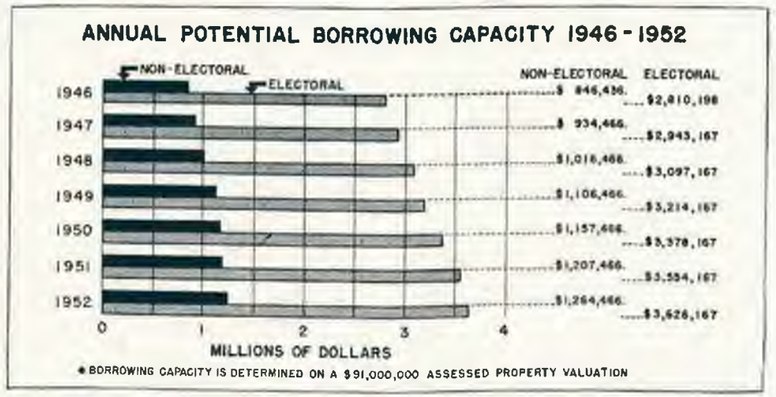


Figure 100.

$2,326,000, leaving a maximum borrowing capacity of $1,551,000 for emergency purposes. With a part of the program accomplished, a few years hence a similar step could safely be taken without endangering the City's borrowing power.

FUTURE FISCAL POLICY

At this point the question arises as to what depth this move would indebt the City, and what would be the potential life of the bonds. Figure 101, Effect of a Bond Sale Plan on Existing Bonded Indebtedness, illustrates the present bonded indebtedness and the time at which it will be amortized.

The gradual decline of the line indicates the balance remaining each year to be amortized and by the same token it indicates the increased borrowing capacity. The answer to this question has already been alluded to previ-

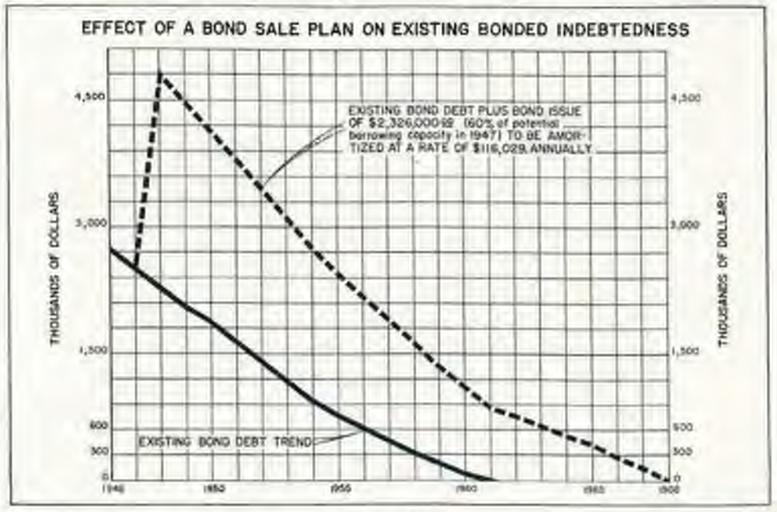


Figure 101.

ously in this section. Fundamentally a reassessment of city real estate and a two mill tax increase, followed by borrowing 60 per cent of the maximum potential or $2,326,000 in 1947, in combination with the present bonded indebtedness would create a maximum in 1948 of $4,816,000. The bonds should be serial in nature and not exceed a 20-year amortization date. The top line and its gradual decline illustrates the complete story for amortization purposes.

Estimated obligations, including the newly acquired bonded indebtedness, and incoming current revenue to meet the increased financial load in accordance with trends and contemplated future requirements would be adequate.

At this point it would be well to consider the surpluses and the overall picture of the City's financial structure. Reference is again made to Figure 98 and the estimates from 1948 on into the future. The estimated gap between income and disbursement increases. The natural rise of income as a result

of bonded amortization and the diminishing of interest charges in combination with the gradual decline of expenditures actuated by the same factor creates this widening gap. The normal average surplus created by this method would amount to $406,000 per annum. If the City's operating expenditure should not continue to mount as anticipated, there might be a happy prospect during this period of reducing the tax levy comparable to nominal operating expense. Although the Pennsylvania statute governing Cities of the Third Class now permits the creation of surplus funds, it is questionable what the policy will be beyond the present war emergency period. A sound future policy would provide for the creation of surpluses for anticipated improvements through sinking fund investment or similar methods. Figure 102, Funds Available from Various Tax Millage and Bond Sale Programs, illustrates what funds would be available from bond sale and six, eight and ten mill tax rate plans for one, six and 15 year programs.

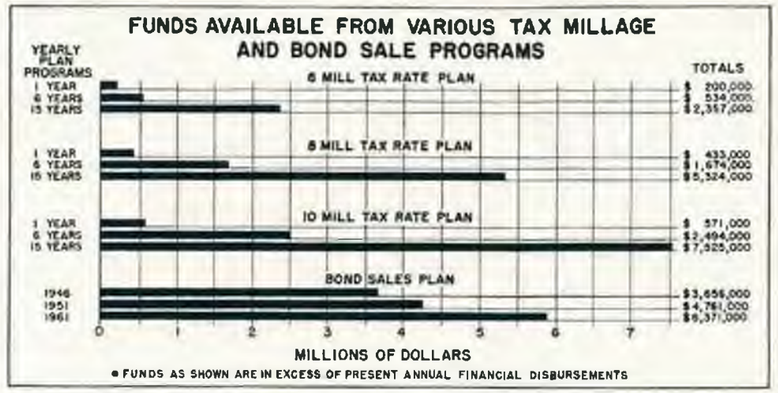


Figure 102.

History, whether it be financial, economic or sociological, has taught us that Society does evolute, indicating that past conditions probably will not be repeated or at least they would not be recurrent. Normal progress and an attempt to accomplish only part of the Comprehensive Municipal Plan would naturally create a demand for a major portion of the surplus funds created by an increased tax rate. The future is one of prognostications, and what future city administrations will do and what the complexion of their policies will be, no one can foretell. It has been necessary, therefore, to set up a hypothetical case without attempting to accentuate either the good or bad points, but rather one that would be feasible under the existing statutes and present monetary system.

MONEY MARKET

With the current cheapness of money, it would appear that for a few years at least, bonds could be floated at 1¾ to 2¼ per cent interest. Under these circumstances it would appear practical and advisable for the City to plan its large capital outlays at an early date, take advantage of the cheap money,

and continue to build their sinking fund, reinvesting these funds at an equal or better interest rate as the money market later dictates.

CONCLUSION

In the review and study of Lancaster's fiscal policy of the past and present plus an attempt to contemplate the future, certain conclusions have been attempted. These conclusions are logical and practical and it is hoped that they will prove acceptable even to a conservative community. From the detailed illustrations and comments, it is hoped that they will serve and assist future public officials in the administration of City affairs.

Time alone will support this discourse on finances, and although the program may not take the identical form as herewith set forth because of varied opinions and conditions, it is believed that the ultimate result will be substantially similar. Time and progress, however lethargical, is the final determining factor and proving ground of any innovation, and future financial programs of the City of Lancaster will not be an exception to this rule.

Project Programs

THE ORGANIZED ACTION STAGE OF PLANNING
- Administration
- Legislation
- Finance

THE PROJECT PROGRAM
- Public Works Projects
  - Highways
  - Housing
  - Airports
  - Miscellaneous
- Manpower

SUMMARY
- Project Programs and Municipal Finance
  - One Year Program
  - Six Year Program
  - Long Range Program

PROJECT LISTS
- One Year
- Six Year
- Long Range

Project Programs

THE ORGANIZED ACTION STAGE OF PLANNING

THE VALUE of a Comprehensive Municipal Plan may be realized only in the establishment of an efficient organization, actual construction work, and expenditure of money. The preparation of any plan is a means toward controlled organization which determines how to accomplish new developments and how to correct problems. Construction is the action step of the plan; it signifies acceptance of the plan by the community citizens who are willing to expend monies to maintain a progressive pace of community betterment.

The planning program gains significance when work projects are actually determined for construction stage. However, these projects cannot start voluntarily, they must be the result of necessary planning in administration, legislation, and finance.

Administration—The existing government administrative body is a bureaucratic organization elected and appointed to administer normal municipal operations. The administrative body is a people's political unit limited in life, legal powers, and budget expenditures.

Planning for the community's future is not entirely the responsibility of this local administration, although indirectly their work must and should be undertaken with a purpose of progressive improvement and community betterment. To do this the administration must be *guided* toward an ultimate goal. Each administrative body should accomplish work that is a step in the direction of the goal. Guided by a Master Development Plan and a technical planning staff all elements of the community program should be achieved.

Legislation—The municipal government is created and functions by the laws of the State Legislative which created it. The State has vested legal powers in the municipal government to appoint agencies to aid its various departments in planning. These agencies should be able to inform the local administration of progressive State and Federal legislation which afford opportunities to local communities to develop its planning program, and many of these problems are not limited to the life of a political administration, but are of a continuing nature. It is necessary, therefore, that these problems should receive continuous attention by technically capable agencies as well as interested civic-minded individuals or communities. The ultimate success of the community growth is dependent upon sincere planning rather than on politics.

Finance—Work and the accomplishment thereof entails the spending of money. This money should be spent intelligently on projects which are carefully planned and needed by the community. The extent of the program development must be limited to what the community can afford and to finances which

may be supplemented by State or Federal aid. Invariably this is the only means whereby needed improvements can be accomplished.

THE PROJECT PROGRAM

Employment, construction programs, and expenditure of money are necessary factors of public and private works programs. Labor, projects, and money expended on construction programs are less by volume in public works programs than that entailed in private enterprise programs. It is a fact that by comparison of public and private works the former constitutes only 7 per cent of the national development program, however, regardless of this fact, our national and local economy is in some measure dependent on continued public works programs.

Although private enterprise controls our national economy, experience has shown that due to tremendous fluctuations in its business cycles, a balance is needed to maintain national economic equilibrium. It is this vital balance that public works can and must assume the responsibility of maintaining. To assume this responsibility the planners of public works need not exert efforts in "dreaming up" projects merely to employ labor or spend money. Projects of this kind are a waste of money and labor which may have been utilized on work projects to increase property values, social betterment, and offer new opportunities for increased private business.

Invariably physical and economic changes in one community will have a direct influence on other neighboring communities. These influences sometimes have adverse effects which, because of financial or physical incapabilities, communities fail to progress with outside improvements or safeguard itself against recessions. For example—highways, airports, and public housing are facilities which cannot be expected to be developed and maintained entirely by local communities. The cost is too great. It is true that many benefits are to be realized from these facilities by local urban areas. It is these benefits which have been magnified to meet the needs in order to maintain regional growth.

Public Works Projects—The physical plan of Lancaster City as recommended in this report proposes projects of improvement which are scheduled for one year, six years, and long range program periods. A scheduled program of development is necessary because all the work cannot be accomplished in a short period of time. Federal, State, County, City, and Private participation will be necessary to accomplish the preparation of plans, construction, and operation of these various projects. In addition, unforeseen conditions may alter the overall program by substituting new projects and cancellation of others already planned. Therefore, it is necessary to visualize short range programs to determine the immediate projects ready for construction which at this stage must be practical and useful for the purpose intended. The long-range programs should be constantly considered with the idea of perhaps making these projects become important for short-range possibilities of construction realization.

Public Works are usually identified with Federal and State participation in the planning and financing stages of development. Highways, bridges, airports, and like projects are costly undertakings for the average American community and if they are to be built these developments must receive State and National government support.

Realizing this condition, Federal and State governments recently have enacted legislation wherein financial appropriations are to be made available to municipalities and authorized agencies to plan and develop important projects necessary to improve many of the communities' ills. Of course, the governments have a two-fold purpose in passing such legislation, (1) to develop projects which comply with a master development plan of improvement which will assure the success of National and State policies; and (2) planning for useful public works to insure against the development of a critical unemployment situation.

Highways. In the development of a national highway system, the Federal government has appropriated funds under the Federal Aid Highway Act of 1944 for the construction of 33,920 miles of interregional highways at an estimated annual cost of $750,000,000. Urban communities of over 10,000 population which are to be directly connected by the proposed highway system represent 82.6 per cent of the total urban population of the nation and the City of Lancaster situated on U. S. 30 (Lincoln Highway) should be considered as an urban community in need of interregional highway study. A study of the volume of traffic moving between Philadelphia, Harrisburg, and Pittsburgh and north from Baltimore to Harrisburg indicates consideration should be given to re-routing of this traffic over routes which will be less detrimental to the city street system.

In order to clarify the Federal-Aid Highway Act and assist in the qualification it has been suggested to State highway departments and municipalities that three points should be considered immediately and jointly by States and Cities.

1. The urban areas are to be established.
2. The highway system in each community must be defined.
3. An interim list of priority projects must be established.

Projects which are on the regular Federal Aid system in the urban areas will be built with the help of $125,000,000 which is specifically earmarked by the Act. The financing of such projects may also be helped by whatever parts of $225,000,000 of regular Federal-Aid system funds which state highway departments elect to spend, with the Public Roads Administration's approval, in and around the larger cities.

To finance Federal-Aid highway projects the Act authorizes expenditure of federal funds and finance up to one-half the planning and construction costs and one-third of the costs of rights-of-way.

In general, it has been declared desirable for municipalities, counties, and states to join in furnishing the matching funds. This matter is left entirely to local and state agencies to work out cooperatively.

The Northern Expressway of 6.5 miles is designed for the Lancaster area to relieve city street thoroughfares of through traffic and increase traffic efficiency between Philadelphia and Harrisburg, at an estimated cost of $4,003,500. This proposed highway should be definitely defined as in an

urban area as it will pass through a populated section containing some 75,000 to 80,000 people in 15 square miles or a density of 5,000 persons per square mile. This density is beyond the Public Roads Administration urban area requirements of 200 per square mile.

The Circumferential Greenbelt highway of 12.5 miles is designed as a peripheral connector of arterial highways entering the city and as a two-way divided highway with sufficient rights-of-way to form a greenbelt insulation strip through the Lancaster urban area. The total estimated cost of the Circumferential highway will be $4,884,700. Because the greater volume of traffic moves within the north half portion of the city area and its urban fringe, the construction program of the Circumferential highway is divided into two parts.

Part I—The section of the Circumferential highway located principally in Manheim Township extends from the Borough of Eden on New Holland Pike westward for a distance of 6.75 miles and connects with U. S. Route 30 west of the city limits. Because of the importance of this section as a connector of the more important highway arterials leading into the city, it is proposed to be a part of the six year project program, at an estimated cost of $2,347,700.

Part II—The remaining section of the Circumferential highway of 5.75 miles extending from U. S. Route 30 west of the city and proceeding eastward, south of the city limits, to connect with U. S. Route 30 at a point three miles east of the city limits shall be included in the long-range project list of the Community Action Program. This section passes through considerable undeveloped land and is not as important a highway connector as the section located north of the city. However, its acceptance at an early date is important for zoning, land acquisition, and prevention of constructing other excessive route systems to serve the same purpose. The estimated design, construction, and land acquisition costs will be $2,537,000.

The war period has curtailed available manpower and materials which would ordinarily have been used in the maintenance and new construction of the city street thoroughfares. A program of "Deferred Maintenance" at a cost of $379,420 with an additional expenditure of $99,230 for improvement to utility service mains is proposed by the City Street Department. The street systems of many communities in the nation are in ill-repair and it is presumed road materials will be one of the first released from federal war restrictions. Its inclusion in the six year program of development is premised on the fact that deferred maintenance projects usually do not require the preparation of plans and specifications for construction and, too, these projects require proportionately large labor forces.

Housing. The Federal Government has formulated a program of public housing improvement, which is designed to eliminate slum housing conditions from the nation's cities. This plan involves the joint action of Federal and Municipal agencies and private investors through the use of federal allocations amounting to approximately $1,000,000,000 investment in three years after the war coupled with annual subsidies of $110,000,000.

Because of inadequate housing in the nation it is estimated private and

public enterprise will be required to produce one million to one and one-half million new homes per year within the next 15 years after the war. These figures may be exaggerated, but nevertheless it indicates from Federal Housing studies and experience that additional housing will be needed.

The housing problem in Lancaster City is one of urban redevelopment and to aid urban communities in need of rectifying their blighted conditions, the Commonwealth of Pennsylvania has passed legislation in 1945 providing for incorporation and regulation of Redevelopment Corporations whereby such agencies can acquire, clear, and rehabilitate substandard housing areas. As an example, insurance companies of the Commonwealth now having an assessed property valuation of $360,000,000 are permitted by law to invest 10 per cent of this valuation in redevelopment programs; which amounts to an expenditure of $36,000,000 from this one agency alone.

The substandard four-block area referred to in the report under the section on Housing was taken as a sample to illustrate what may be expected in costs to accomplish urban redevelopment in the City of Lancaster. An estimate of cost for reconstruction, including acquisition of properties but excluding variables of resale and salvage, amounted to $1,610,000. Assuming that the city would undertake two projects of this kind within the six year program, the total project cost on urban redevelopment from 1946 to 1952 would amount to $3,220,000.

Urban redevelopment projects will not burden the city finances but should increase tax revenue returns as well as eliminate tax delinquent properties, slum areas, and other deterrents of economic and social community factors.

Airports. The City of Lancaster is conscious of expanding its existing airport facilities to meet contemplated increased passenger and cargo transportation which will occur following the war years. An expanded aviation program has also been the concern of the Federal and State Governments. The Federal Congress is studying, for possible approval, a report of the Civil Aeronautics Administration which recommends the expenditure of $100,000,000 a year for the next ten years or a total of $1,000,000,000 to be used for construction of new and expansion of existing airports. In general, the proposed program doubles the existing 3,086 airports of which CAA proposes improvements for 1,625. Only 286 cities in the country have been certified as airline stops and of these, 174 are scheduled for improvement.

This federal money is not to bear the total cost of construction but must be matched by state and municipal funds—pending congressional bills provide that the states pay half the total cost of the proposed airport improvements.

The Pennsylvania State legislature has enacted and approved in 1945 an appropriation of $2,725,000 (Act 821) to start an airport program of development in 1945–47. The appropriation, allocated for planning and construction, will be financed from the general fund to the Department of Commerce and to be used by the Pennsylvania Aeronautics Commission to encourage and develop aeronautics by financial assistance to political subdivisions of the Commonwealth. However, funds expended by the state from this appropriation must be matched by an equal sum contributed by any political subdivision or Federal government or both.

The existing Lancaster Municipal Airport, a class II airfield, located ap-

proximately six miles north of the city on the Lititz Pike, is scheduled for expansion to a class III airfield. It is estimated the expansion program will cost $317,603, the state furnishing part of the funds. Lancaster plans to raise its share of the fund by campaigning for local subscriptions.

Other projects listed in the program for the city such as schools, parks and playgrounds, and institutional developments will be financed and organized from normal State and Local appropriations and subscription funds.

Manpower—On a national scale it is estimated that for full employment this nation, after the war years, must have an income of one hundred and forty billion dollars per year. In addition, a goal for full employment as estimated by the Bureau of Labor Statistics should be 57,000,000 which represents an increase of 17 per cent over 1940.

A generally accepted labor factor determining employment on public works programs has been for every $1,000,000 expenditure an estimated (on-site) 200 man-years will be employed to accomplish construction projects and indirect (off-site) employment of one and a half to two men per man used on-site in the manufacturing and processing materials.

The list of projects proposed for the six year and long-range periods total an estimate of $31,209,728 and labor employment of 1,806,251 man-days. This latter figure is slightly higher than that which may be calculated by the rule-of-thumb method, however, the variance is due to the listing of all types of projects which use a labor force different than that of public works character.

SUMMARY

Project Program and Municipal Finance—Three fundamental principles should necessarily be considered if a Comprehensive Plan is to be accomplished in an orderly manner. First, the proposed projects must be related to the municipality's financial resources through financial planning. Second, the proposed projects must be selected and listed according to general community need. Third, the program must be flexible if it is to be realistic and of continuing value. The growth and development of a community prevents static conditions and changes wherein additions will be ever necessary.

This basic procedure demands a short-range and long-range program of development. Experience has demonstrated that the duration of a short-range program is desirable for six year periods. As each immediate year passes, the six year program is maintained by reorganizing project priorities and adding another year of development from the long-range list of projects. This maintains a constant six year list of improvements which will govern the community's financial expenditures and budgets for its capital improvements.

One Year Program. Assuming that the year 1946 will see the end of all hostilities, government regulations on manpower and materials will, it is presumed, become less restrained. However, the demand for construction materials will be so great that planning for vast construction program undertakings is hardly logical. Therefore, the first year of programming construction projects consideration should be given to those projects using little material or, still better, the use of materials more apt to be obtained and, this is important, use of maximum labor. Naturally, the period of reconversion will necessitate large labor lay-offs at least until equipment adjustments have been made for the production of peacetime goods. As stated before, public works must act as the balance in work programs and employment.

Referring to the six year Project Program, the first seven projects should be scheduled for 1946–1947 construction. The projects were selected and listed in priority importance; first, their importance to the city development at present and in aiding future projects; second, maximum use of manpower; and third, use of available materials. It is possible other projects may be substituted or added and the program listing can be altered because of program flexibility.

Briefly, project one is a city survey and preparation of an up-to-date topographic and street layout plan. This project is necessary if following city improvements are to be made in an efficient technical manner. Projects two, three, and four deal with the city streets and development thereon. The removal of transit lines should be a definite post-war job and undertaken as soon as possible. The repair and laying of new utility lines may be done in conjunction with this project, and in the excavation and resurfacing of the city streets. All the street surfacing cannot be accomplished in the first year but this item may be programmed for a longer period depending on more detailed study by the City Engineer. Project five has been included in the one year program because a State contract has been awarded for immediate construction and improvement of the Dillerville Road. Project six, the impounding of a larger reservoir at the City Water Plant is important because the availability of water is of prime consideration to the city, its industries, and new industries expected which may demand excessive water use in its operations. Additionally, the existing condition at the impounding dam seeks relief from a silt condition now prevalent at the site. Project seven has been discussed previously in the report as the first phase of the school development program which should receive immediate consideration.

Of the total development program, the city will undertake financially $549,900 and other agencies will spend $731,499 or a total of $1,352,581 for the first year program. To accomplish this work, 95,465 man-days is estimated.

Under the present city tax rate of six mills the city can expect only $200,000 for improvements which is insufficient to bear the cost of the program. However, under an eight mill tax rate, the city will have available $433,000 for improvements. This fund does not bear the total cost of the one year program, but then, it is hardly possible that the city will undertake and complete the entire street improvement program.

Except for Phase I of the school program no bond issues will be necessary at the beginning of the program. However, it is recommended that a two mill tax rate increase be given full consideration in the beginning in order to alleviate excessive tax and debt burdens in the future.

The one year improvement program represents four per cent of the total short and long-range program, listed in this report.

Six Year Program. Projects 8 to 41 are listed in order of priority and are to be considered in the six year program of development. The city does not participate, financially, in all the projects; however, it has a vital interest in

every project because it is affected directly or indirectly by actual or lack of construction. Again, succeeding years will alter the program and the changes will be made as each immediate year of directed action is approached.

The six year program, excluding projects one to seven, is 41 per cent of the total program, and totals $12,912,720 in which the city is financially responsible for $2,136,107.

On its present six mill tax rate the city will receive $534,000 (accumulative) for improvements during the next six year period. However, on an eight mill tax rate the city may realize $1,674,000 (accumulative) which is a substantial increase and certainly will lessen the principal on any bond sale plan.

To accomplish the six year program, exclusive of projects one to seven, it will be necessary to expend 913,206 man-days.

The short-range program of project developments indicates the need for increased general financial receipts to the city in order to undertake a program of deferred maintenance and capital improvements. The section on finance clearly indicates what monies may be available from various tax and bond sale plans. Lancaster is enjoying a very low tax rate and if it should adopt an eight or ten mill tax rate, the city will not have a high tax rate as compared to other cities of the third class in Pennsylvania. The improvement program will need the adoption of some increased financial plan if the projects are to be accomplished and an immediate tax increase will lessen bond sales plans which are generally more costly to a city government. Financing construction projects from the general fund is truly a pay-as-you-go plan.

Long Range Program. This program lists projects necessary to the improvement of Lancaster but many of these projects are thought to be of lesser significance as to benefits derived or are of such far reaching development that consideration should be given to further study and investigation. This phase of the program, which is 55 per cent of the total program, is estimated at $17,015,609 of which the city will participate in an amount of $1,237,826. Labor is estimated at 795,580 man-days to accomplish the long-range improvement program.

In summary, the entire short-range and long-range program is estimated to cost, including design, construction, and acquisition of land, $31,209,728. To accomplish this program, labor must expend 1,806,251 man-days. It is needless to say that once established and properly integrated with planning, programming thus becomes a continuing administrative procedure of municipal government for providing public improvements.

Annexation

CONTROL BY THE PEOPLE
- The Lancaster Community
- Sponsors of Annexation

PHYSICAL EXPANSION
- Physical Limitations
- Control by Cooperation
- Control by Annexation
- The Advantages and Disadvantages of Annexation

ECONOMIC EXPANSION

Annexation

CONTROL BY THE PEOPLE

A COMMUNITY exists because individuals are determined to live, worship, work, and fraternize as a group wherein they may benefit from each other's contributions toward a comfortable living. The results of their efforts are exemplified in the community's appearance and productiveness of its inhabitants. The innate materials of this communal group remain or deteriorate as the individuals maintain an interest in those things which they possess. Survival of a community depends on the forward thinking and determined action of its people to continually improve their mode of life not only for themselves but for future generations.

The Lancaster Community—The City of Lancaster has enjoyed a successful community life. Its existence of more than two hundred and score years filled with important historic events conclusively proves the initiative and progressiveness of the city founders and settlers. However, the community growth has not been due to "windfalls" of opportunities but is largely the result of clear, shrewd thinking and an industriousness to produce commodities of unmatched quality. Lancaster is proud of its Conestoga wagons, Kentucky rifles, watches, furniture, glassware, and other nationally famous handcrafts. Many of these commodities are gone because of outer-community advancements in producing articles which have become more desirable to habits of living of coming generations.

The "passing" of many of Lancaster's crafts and commodities does not mean that this community has become decadent. In fact, it is responsible for many of the new products in use in this new generation. The high calibre of skilled workers, thrift, conservatism, and the frank, honest belief in that which is Lancaster prevents this community in rapidly accepting any or all progressive innovations which may alter its customs, physiography, or community thinking.

As in many other communities of the nation, Lancaster as a city and a region functions under the guidance of groups interested in politics, business, welfare, and education. Each group strives to achieve its goal and action by the people.

Sponsors of Annexation—These group endeavors result in factional publicity, closed-door discussions, lobby campaigns, and ultimately their aims are cast to the people for definite decisions. This procedure is necessary and natural in the American way of accomplishing the domestic and governmental affairs of a community.

For more than 20 years the City of Lancaster and its surrounding developed sections have discussed and attempted political annexation of sub-

urban areas to the city for the purpose of creating a "Greater Lancaster City." Thus far all attempts at annexation (1923 and 1930) have failed because the people were not fully decisioned as to the feasibility of such action.

PHYSICAL EXPANSION

The City of Lancaster extends in land area four square miles, which is bounded by two mile linear lines surveyed approximately north-south and east-west.

These arbitrary or political boundary lines do not follow natural land barriers. Its corners and traverses nearly form a symmetrical rectangle plotted without regard to natural boundaries of streams and topography.

Expansion of Lancaster City has followed the use of desirable land more suited for building purposes. The Conestoga Creek, located east and southeast of the city limits, has created a deeply carved ravine that presents problems of construction retarding domestic and industrial development. In the study of land use, the City of Lancaster has exceeded its percentage of development in industrial and commercial uses of existing areas. Its population has unwisely settled itself in structure developments that have caused high density conditions of habitation. With 20 per cent of the existing city area now vacant, the natural course of land use would be for residential development of that area to alleviate the existing high density occupation of city properties.

Physical Limitations—New industry and commerce will develop along or near transportation lines and on land areas which tend to minimize construction and problems of development. In Lancaster these desirable areas lie to the north and northeast of the city. North of this north-easterly industrial belt lie agricultural lands which may grow into ideal suburban residential uses. To the east and west of the city limits lie lands suitable for suburban residential development spotted with satellite commercial centers. To the south of the city limits the land, cut by sharp ravines, lends itself to park and restricted residential developments. However, land use within and without the city limits is governed by taxes, utility services, and accessibility.

Political boundaries do not and should not prohibit the expansion of utilities, transportation, land use, and public services. Public developments and services can be realized for the benefit of all through cooperation or unity —by solidifying all communities.

Control by Cooperation—Political entities and subdivisions in general are determined to keep their individuality and remain under the community government in which they were founded and developed. Nevertheless, because of close proximity to a large urban settlement, some communities have become dependent on the urban area for its many services—real and unreal. Legally, the urban center is not permitted to extend its services to outside communities at the expense of the city taxpayers. However, government is a business and as a business it can sell utility services. These services can be sold to communities which enter into agreements agreed to by both agencies. This method accomplishes the immediate community wants but there will always be the continued feeling of selfish possessions put to the use of others that

will further aggravate this unnecessary isolationism. Cooperation failing, the communities may resort to annexation.

Control by Annexation—An individual or group will sustain an interest in goods or property as long as there is retained an ownership or equity therein. By possessing a financial interest in property the individual or group determines the right to use that property to the best interests of the owner. The use of public property often presents perplexing problems of whether these uses are being exploited to the maximum benefits of the community populace. Naturally, residents living close to available public services but receiving no benefits therefrom, agitate for extensions to their properties. These desires and understandable but the burden of accomplishment is on the individual rather than on the municipality—legally limited in the use of taxpayers' money to furnish these services.

The City of Lancaster, grown to a community of 65,000 persons, has developed a government business which furnishes its inhabitants services financed by taxes. Therefore, others seeking service benefits which are available in the city should, by logical conclusion, become a part of the city. However, this step is not easily undertaken. Many items such as adjustments in taxation, valuation of properties, increased utility services, increased welfare services, schools, streets, etc., are a few of the problems to be solved before actual annexation occurs. The City of Lancaster, since its incorporation in 1818, has undertaken two actions to extend its present boundaries. In 1923 and again in 1930 small sections attempted city annexation only to be defeated by vote of the people. Definite legal[1] action must be taken to extend city boundaries, and the burden of approval rests with the residents of the section desiring annexation.

The Advantages and Disadvantages of Annexation—The problems are many and profound in considering annexation. First, consider the advantages and disadvantages to the City of Lancaster.

ADVANTAGES

1. Addition of land area—developed and undeveloped.
2. Increase in population.
3. Increase in tax revenues.
4. Addition of valuable industrial and residential properties which increases city property assessed valuations.
5. Release from furnishing free police and fire protection.
6. Facilitates future planning of "Greater Lancaster."
7. Direct control of responsibility in furnishing utility services to areas considered to be annexed.
8. Afford residents an opportunity to seek habitable sites elsewhere and remain within the city limits.
9. Direct control of subdivision and utility layouts in those areas desiring city utility services.

[1]Acts relating to third class cities—Article V—sections 501–568—Acts of the General Assembly of Pennsylvania.

DISADVANTAGES

1. Added burden on existing city services.
2. Immediate burden of heavy expenditures for new construction of facilities.
3. Increase of government personnel.
4. Possible abnormal increase in city tax rate.
5. Assumes proportionate indebtedness of section to be annexed.

Secondly, consider the advantages and disadvantages to the section to be annexed to the City of Lancaster.

ADVANTAGES

1. Benefit of direct city service.
2. Mandatory improvements to existing utility services.
3. Reduced insurance rates on individual properties due to direct fire and police protection.
4. Intensive subdivision control.
5. Assured of future installation of adequate utility services.
6. Representation in the city government.
7. Existing indebtedness to be borne less proportionately by the city.

DISADVANTAGES

1. Probable increased tax rate.
2. Increased urban responsibilities of bearing direct aid to existing city area.
3. Subject to more complex regulations of government organization.
4. Possible readjustment of school districts.
5. Added burden of existing city indebtedness.

The aforementioned advantages and disadvantages to land sections and city considering annexation does not conclusively determine the question of annexation. It is necessary that the citizens of both communities decide to sacrifice some existing benefits which may be temporary for a more progressive future. A determined program of development will assure a Greater Lancaster of unity which at present resolves itself into an aged urban community struggling to improve itself and a number of progressive satellite communities whose many activities and services are interwoven with the existing city functions.

The annexing of additional physical properties to the existing city area introduces an additional advantage of economic expansion.

ECONOMIC EXPANSION

A people living together must work together. Jobs, income, and spending are activities that in terms of volume indicate the assets and wealth of a community. The influence of these economic assets is not confined to a particular political area but instead determine what may be classed as trading areas or metropolitan areas.

The citizens of the City of Lancaster and surrounding townships live in the area because work is provided for them. Their places of work may be in industrial plants, retail stores, or farms located distantly from home. The

juxtaposition of home and place of work in the area evolves into an individual living in one political section and earning his livelihood in another section. The individual is the bond determining the existence of industry and community life. Without one the other can hardly endure.

Industry and home property contribute financially to community governments for the administrative and operational functions that are necessary to maintain a correlated, balanced governmental system. A logical conclusion presupposes that the political community encompass areas which directly are interlocked with one another socially, economically, and physiographically. Determination of areas to be congealed into a unified community changes according to the growth occurring in progressive eras of development. The citizen should, to the advantage of the majority, organize his direct benefits whereby his investments and future are safeguarded for many generations. His thoughts and actions are the salvation of the entire community life.

Residential subdivisions and industrial areas closely adjacent to the city periphery have become a contiguous part of the city pattern of streets, utilities, and other services. It is these areas that physiographically determine Lancaster City but politically are separate communities. The Lancaster zone of development will probably progress and expand cautiously but, nevertheless, it will develop into a more complex system of community life. It is at this time that the city and areas in the urban fringe should decide to unify into a greater community and thereby prepare for future developments that will insure and assure a Lancaster of today for tomorrow.

SIX YEAR IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

1946–1947

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
1	City Engineering Survey	Survey and preparation of basic maps, boundary survey and topography and street layout triangulated. Area—4 sq. miles.	$ 21,250	City	—	—	2,400	$ 21,250
2	Improvements to Street Service Mains	Repairs to utility mains and service distribution lines in conjunction with city street re-surfacing program.	99,230	City	—	—	9,925	99,230
3	City Street Repair	Excavate and re-surface various city streets as determined by City Street Department.	379,420	City	—	—	37,940	379,420
4	Removal of Transit Lines	Removal of approximately 17 miles of transit lines from city streets.	35,700	State and Federal	—	—	2,700	35,700
5	Construction of Dillerville Road	Regrade and widen existing Dillerville Road between Harrisburg and Manheim Pikes. Length 0.32 miles.	261,049	State and Federal	36,000	State and Federal	20,000	297,049
6	Impounding Reservoir	Improve impounded water reservoir immediately north of existing pumping station.	50,000	City	—	—	5,000	50,000
7	School Program — Phase I	Constructing new school in District A and razing the existing Wharton School building.	391,875	School Board	6,875 (Includes sales credits of existing properties.)	School Board	17,500	398,750
	One-Year Program Totals		$1,238,524		$42,875		95,465	$1,281,399

SIX YEAR IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

1947–1952

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
8	City Engineering Survey	Survey and preparation of street and utility layout and grade maps. Length — approximately 85 miles.	$ 42,500	City	—	—	4,800	$ 42,500
9	Storm Sewer Construction	New storm sewer construction in District No. 9 in the northwestern section of the city.	50,162	City	$ 500	City	5,016	50,662
10	Storm Sewer Construction	Replace existing combined storm and sanitary sewers.	52,252	City	—	—	5,225	52,252
11	Improvements to Water Plant	Replace equipment at pumping station and filter plant; construct cyclone fence at pumping station and filter plant; and install fuel oil tanks and floodlighting system.	41,250	City	—	—	4,120	41,250
12	Construction of the proposed Northern Expressway	Construction of a 4-lane divided highway 6.5 miles in length, extending from U. S. 30, 3 miles east of the city to the Manheim Pike immediately north of the Lancaster Airport.	3,536,900	State and Federal	466,600	State and Local	354,000	4,003,500
13	Improvements and Extensions to Water Distribution Systems	Connecting dead-ends on distribution system; locate, excavate, and repair buried valves.	22,000	City	—	—	2,200	22,000
14	New Equipment at Water Plant	Replacing equipment at pumping station and filter plant.	50,000	City	—	—	2,500	50,000

SIX YEAR IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

1947–1952

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
15	Improvements to Sewage Treatment Plants	Construct new sludge-drying beds at north plant; cover present sludge-drying beds at north and south plants; construct new sludge digestion and storage tanks at north and south plants; surfacing of roads and driveways.	$ 349,025	City	——	——	26,025	$ 349,025
16	Property Re-assessment Survey	Survey and preparation of property maps for assessment purposes.	46,610	City	——	——	5,200	46,610
17	Fire Prevention Equipment	Purchase of one new 750-gallon pumper and service ladder truck and three new 1000-gallon pumpers.	——	City	——	——	——	62,800
18	Police Station	Relocation and new construction of police station.	200,000	City	Land Purchased		15,000	200,000
19	Fire Station	Construction of new fire house.	43,600	City	5,000	City	3,270	48,600
20	Street Lighting System	Installation of an entire city street lighting system.	135,800	Private	——	——	6,950	135,800
21	New Fire and Police Alarm Systems	Installation of new alarm system utilizing existing facilities where practicable.	140,000	City	——	——	10,600	140,000
22	Lancaster General Hospital Expansion Program	Addition of a 100-bed hospital unit, new nurses' home and boiler house.	1,200,000	Private and State	Not determined		53,000	1,200,000

SIX YEAR IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

1947–1952

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
23	St. Joseph's Hospital Expansion Program	Addition of an 80-bed hospital unit, new nurses' home, sisters' home, and an addition to the laundry unit.	$ 900,000	Private	——	——	40,000	$ 900,000
24	Construction of Circumferential Greenbelt Highway—Part I	Construction of a 4-lane divided highway 6.75 miles from Borough of Eden, north on New Holland Pike, westward to U. S. 30 at Maple Grove junction.	2,104,700	State and Federal	$243,000	State and Local	210,470	2,347,700
25	School Program — Phase II	Construction of a new school in District D, expansion of Wickersham School in District E, and purchase of land for Ross School.	404,250	School Board	88,660	School Board	18,000	492,910
26	Traffic connector on East King Street and East Orange Street	Approximately 1,000 feet of new construction through Reservoir Park.	24,500	State	98,500	City	2,450	123,000
27	Lancaster Municipal Airport (Class 2)	Acquisition of land; extension and widening of existing runways and taxiways to conform to Class 3 airport requirements.	317,603	State	60,000	City	31,760	377,603
			(Major revision of entire airport estimated as a $900,000 expenditure.)					
28	Playground — District B	Acquisition of 3.6 acres between N. Duke and N. Prince Streets.	45,000	City	144,600	City	7,000	189,600
29	Playground — District H	Expansion of John Farnum playground—1.8 acres.	2,000	City	18,000	City	400	20,000
30	Playground — District J	Acquisition of 3.7 acres in 7th Ward.	50,000	City	210,900	City	8,000	260,900

SIX YEAR IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

1947–1952

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
31	Playground — District E	Acquisition of Grubb Estate.	$100,000	In Trust	Gift to the city		15,000	$100,000
32	Playfield — District L	Acquisition of 12.4 acres for future development.	——	——	$5,208	City	——	5,208
33	Neighborhood Lots	Acquisition of 2.8 acres in three parcels in vicinity of (1) Marshall and Walnut Sts. (2) Lime and Lemon Sts. (3) Mulberry and Vine Sts.	6,000	City	2,100	City	900	8,100
34	Expansion of Thaddeus Stevens School	Proposed addition of dormitories for capacity of 250 boys. Replacement of obsolete shop equipment.	800,000	State	——	——	35,000	800,000
35	Repairs at Buchanan Park (City)	Construct new cyclone fence enclosure at Buchanan Park.	2,300	City	——	——	150	2,300
36	New Sanitary Sewers	Construction of new sanitary sewers in the southwestern section of the city.	22,300	City	——	——	2,230	22,300
37	New Water Tanks	Construction of steel towers on the existing reservoir site for storage of 10,000,000 gallons of filtered water.	360,000	City	——	——	27,000	360,000
38	Water Shed Planting	Planting of trees in the vicinity of proposed improved water reservoir.	3,500	City	——	——	350	3,500

SIX YEAR IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

1947–1952

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
39	Removal of Transit Lines on Interurban System	Removal of single track transit lines on Lancaster-Ephrata highway—approximately 13 miles in length.	$ 54,600	State and Federal	——	——	4,090	$ 54,600
40	Lancaster Country Day School	Development of the Country Day School with an immediate program of land acquisition and construction of a school plant.	100,000	Private	Not determined		4,500	100,000
41	Lancaster Public Library	Expansion, construction, and equipping a new public library on N. Duke Street.	300,000 ($190,000 fund available.)	Private	Acquisition completed		10,000	300,000
1947–1952 Program Totals			$11,506,852		$1,343,068		915,206	$12,912,720

LONG RANGE IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
42	New Fire and Police Alarm	Contiguous to city alarm system located in developed sections of the urban fringe area.	$ 60,000	City	——	——	6,000	$ 60,000
43	Construction of Circumferential Greenbelt Highway	Construction of a 4-lane divided highway 5.75 miles from Maple Grove at U. S. 30 west of the city limits to U. S. 30 three miles east of city limits.	2,327,000	State and Federal	$210,000	State and Local	232,700	2,537,000
44	Construction of Local East Side Parkway	Construction 4-lane divided highway 3.83 miles from Greenbelt Highway north of the city to S. Duke Street near Williamson Park.	782,700	State and Federal	195,000	Local	97,800	977,700
45	Re-alignment of College Avenue and Pearl Street	Intersection on Columbia Avenue to be improved for alignment and sight distances—length, 200 feet.	4,900	City	47,800	City	1,500	52,700
46	Re-alignment of N. Lime Street	Improve North Lime Street at East Liberty Street to facilitate direct traffic to Lititz Pike—length, 300 feet.	7,300	City	77,200	City	1,730	84,500
47	Extension of Stevens Avenue	New street construction of 1,700 feet between Schuylkill and Dauphin Streets.	50,500	City	2,000	City	5,050	52,500
48	Re-alignment of Stevens Street	New locations of Stevens Street from East End Avenue to East King Street to intersect with Franklin Street—length, 400 ft.	9,750	City	40,600	City	2,000	50,350

LONG RANGE IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition		Estimated Man Days	Total Project Cost
					Estimated Cost	By Whom		
49	Extension of Hager Street	New location of Hager Street between South Queen Street and South Duke Street — length, 2,250 feet.	$ 52,800	City	$ 1,600	City	5,300	$ 54,400
50	Extension of Fairview Avenue	Extend Fairview Avenue west to Fourth Street at the intersection of Pearl Street—length, 500 feet.	12,100	City	53,200	City	2,200	65,300
51	School Program—Phase III	Construction of new school in District F and expansion of Washington School.	587,813	School Board	21,670	School Board	26,000	609,483
52	Proposed Playgrounds—Districts D, G, and K	Expansion of playground areas. Total acreage, 8.4.	95,000	City	268,676	City	14,300	363,676
53	Proposed Neighborhood Parks	Neighborhood park developments utilizing undeveloped sites and razed school building properties—total acreage, 41.7.	80,000	City	139,400	City	12,000	219,400
54	Proposed Country Park	Recommended country park developments which are located outside city limits—total acreage, 257.0.	129,000	City	75,600	City	19,400	204,600
55	South Duke Street Bridge and Approaches	Proposed to relocate South Duke Street approaches and construct a new bridge structure over the Conestoga Creek—length, 1,100 feet.	144,000	State	200	City	14,400	144,200

LONG RANGE IMPROVEMENT PROGRAM

LANCASTER, PENNSYLVANIA

Item No.	PROJECT	DESCRIPTION	Estimated Design and Construction Cost	Source of Funds	Land Acquisition: Estimated Cost	Land Acquisition: By Whom	Estimated Man Days	Total Project Cost
56	Conversion of Rocky Springs Transit line to vehicular traffic way	Existing transit line to Rocky Springs Park converted to use of vehicular traffic thoroughfare. Length, approximately 5,200 ft.	$ 118,500	State and City	—	—	12,000	$ 118,500
57	South Prince Street Interchange	Proposed interchange at city line of South Prince Street and Circumferential Greenbelt Highway —length, approximately 3,000 ft.	71,100	State	$ 30,200	City	7,200	101,300
58	Franklin and Marshall College Program of Development	Twenty-year expansion program. Construction of seven additional buildings.	1,500,000	Private	—	—	66,000	1,500,000
59	Post-war Private Construction Programs	Estimated expenditures for private development of business institutions, churches, etc.	2,600,000	Private	Not determined		104,000	2,600,000
60	Post-war Housing Programs	(a) Urban redevelopment of two four-block unit areas designated as "blighted." (b) Private enterprise housing, one hundred units per year.	1,510,000	Private, State and Federal	1,710,000	Private, State and Federal	66,000	3,220,000
			3,000,000	Private	1,000,000	Private	100,000	4,000,000
		Long Range Program Totals	$13,142,463		$3,873,146		795,580	$17,015,609
		GRAND TOTALS	$25,887,839		$5,259,089		1,806,251	$31,146,928
61	Lancaster Civic Center Development*	(a) Civic Center development for municipal offices. (b) Civic Center development for county offices and community auditorium.	1,380,000	City	919,600	City	60,000	2,299,600
			1,600,000	City and County	1,514,100	City and County	70,000	3,114,100

*Civic Center development excluded from the Project Program.

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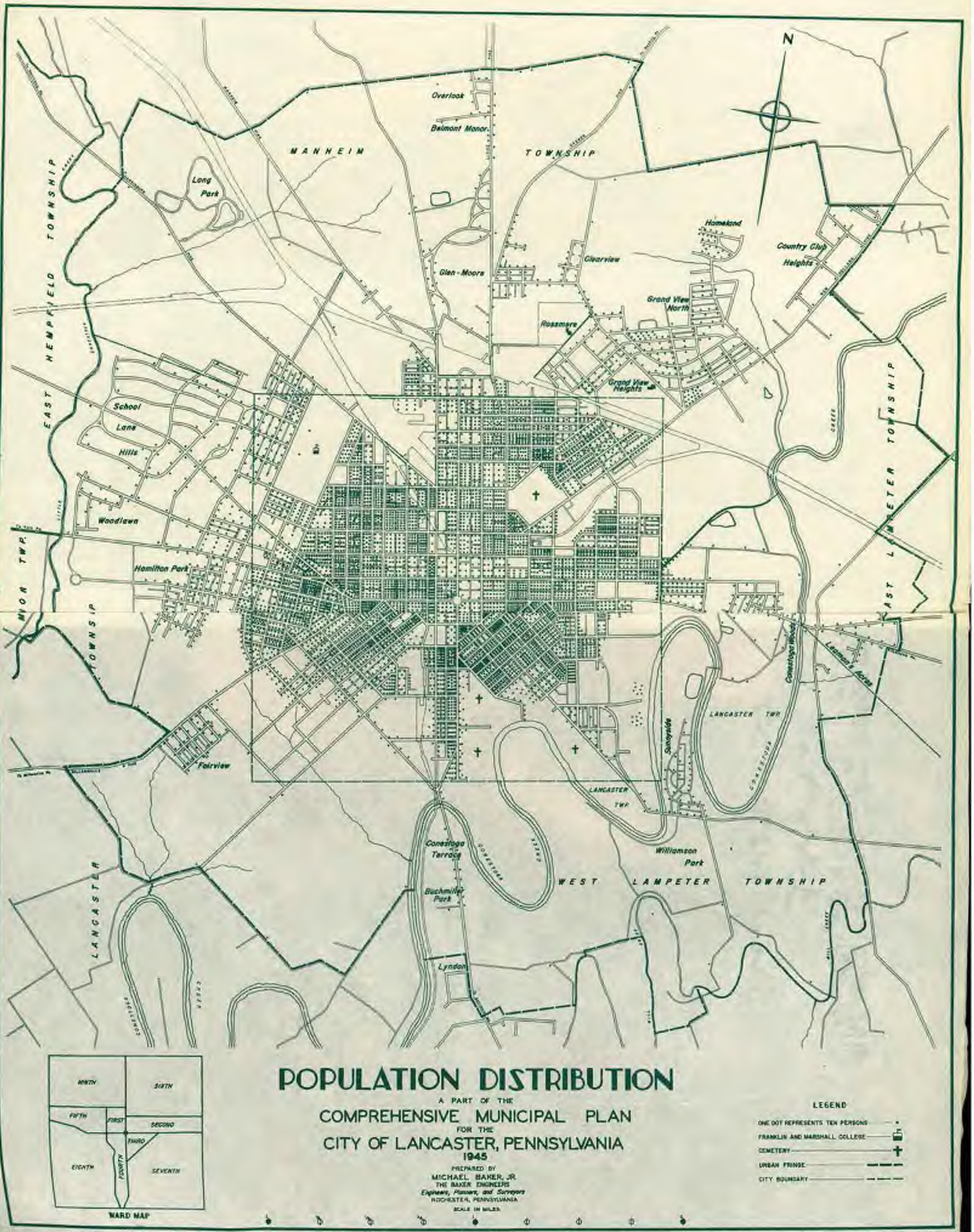
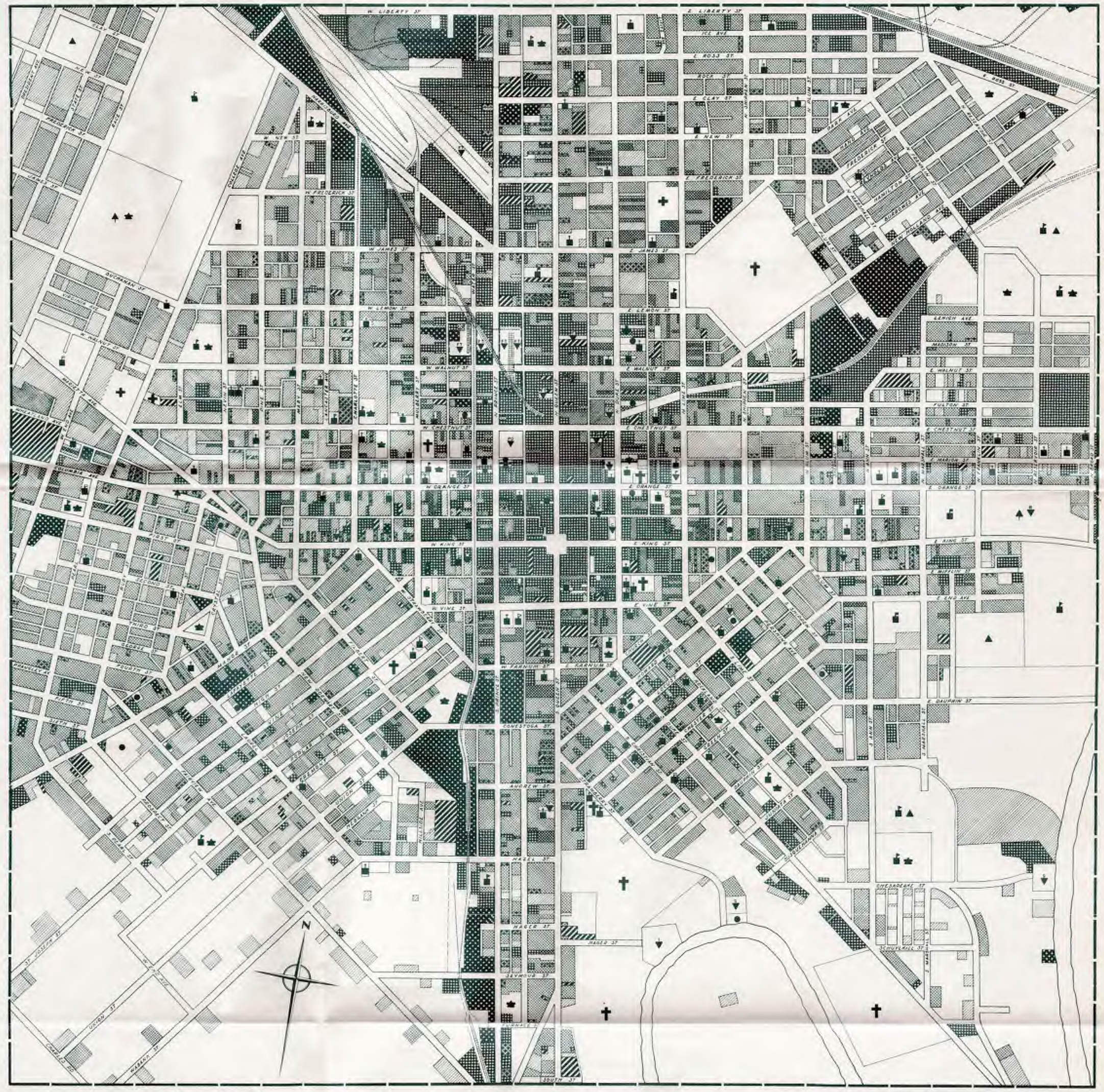

N
MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MYON TWP.
LANCASTER TOWNSHIP
WEST LAMPETER TOWNSHIP
LANCASTER TWP
Overlook
Belmont Manor
Long Park
Glen-Moore
Clearview
Homeland
Country Club Heights
Grand View North
Rossmere
Grand View Heights
School Lane Hills
Woodlawn
Hamilton Park
Fairview
Conestoga Terrace
Buchmiller Park
Lyndon
Sunnyside
Conestoga Woods
Lemmon's Acres
Williamson Park
NINTH
SIXTH
FIRST
SECOND
THIRD
FOURTH
SEVENTH
EIGHTH
WARD MAP
POPULATION DISTRIBUTION
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
PREPARED BY
MICHAEL BAKER, JR.
THE BAKER ENGINEERS
Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA
SCALE IN MILES
LEGEND
ONE DOT REPRESENTS TEN PERSONS
FRANKLIN AND MARSHALL COLLEGE
CEMETERY
URBAN FRINGE
CITY BOUNDARY

Figure 11.



LEGEND

- CITY BOUNDARY
- RAILROAD TRACK
- RAILROAD RIGHT OF WAY
- VACANT LAND
- RESIDENTIAL, SINGLE FAMILY DETACHED
- RESIDENTIAL, SINGLE FAMILY SEMI DETACHED AND ATTACHED
- RESIDENTIAL, MULTIPLE FAMILY
- COMMERCIAL, LIGHT
- COMMERCIAL, PARKING
- COMMERCIAL, HEAVY
- MANUFACTURING, LIGHT
- MANUFACTURING, HEAVY
- PUBLIC PARKS
- PUBLIC PLAYGROUNDS
- PUBLIC PLAYFIELDS
- CEMETERIES
- CHURCHES

EXISTING LAND USE

A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945

PREPARED BY
MICHAEL BAKER, JR.
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Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA

SCALE IN FEET

0 200 400 600 800 1000 1200 1400 1600 1800 2000

LEGEND

- HOSPITALS
- PUBLIC SCHOOLS AND COLLEGES
- PRIVATE SCHOOLS AND COLLEGES
- POLICE STATIONS
- FIRE STATIONS
- MUNICIPAL BUILDING
- COURT HOUSE
- TRANSPORTATION TERMINALS AND STATIONS
- FREIGHT TERMINALS
- POST OFFICE
- PUBLIC LIBRARIES
- CITY INCINERATOR
- SEWAGE PUMPING STATIONS
- RESERVOIR
- PUBLIC INSTITUTIONS
- PRIVATE INSTITUTIONS
- PRIVATE CLUBS

Figure 12.

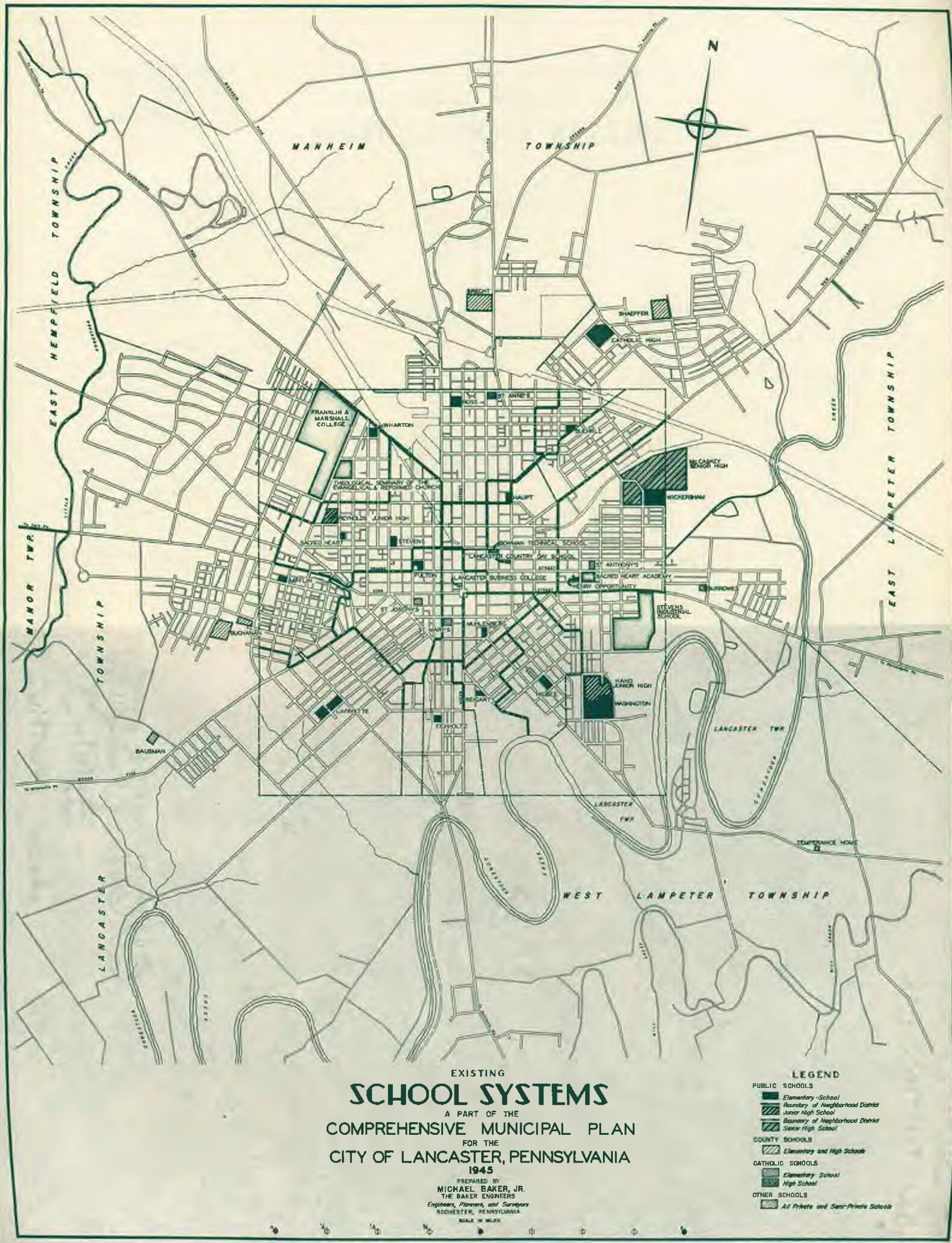
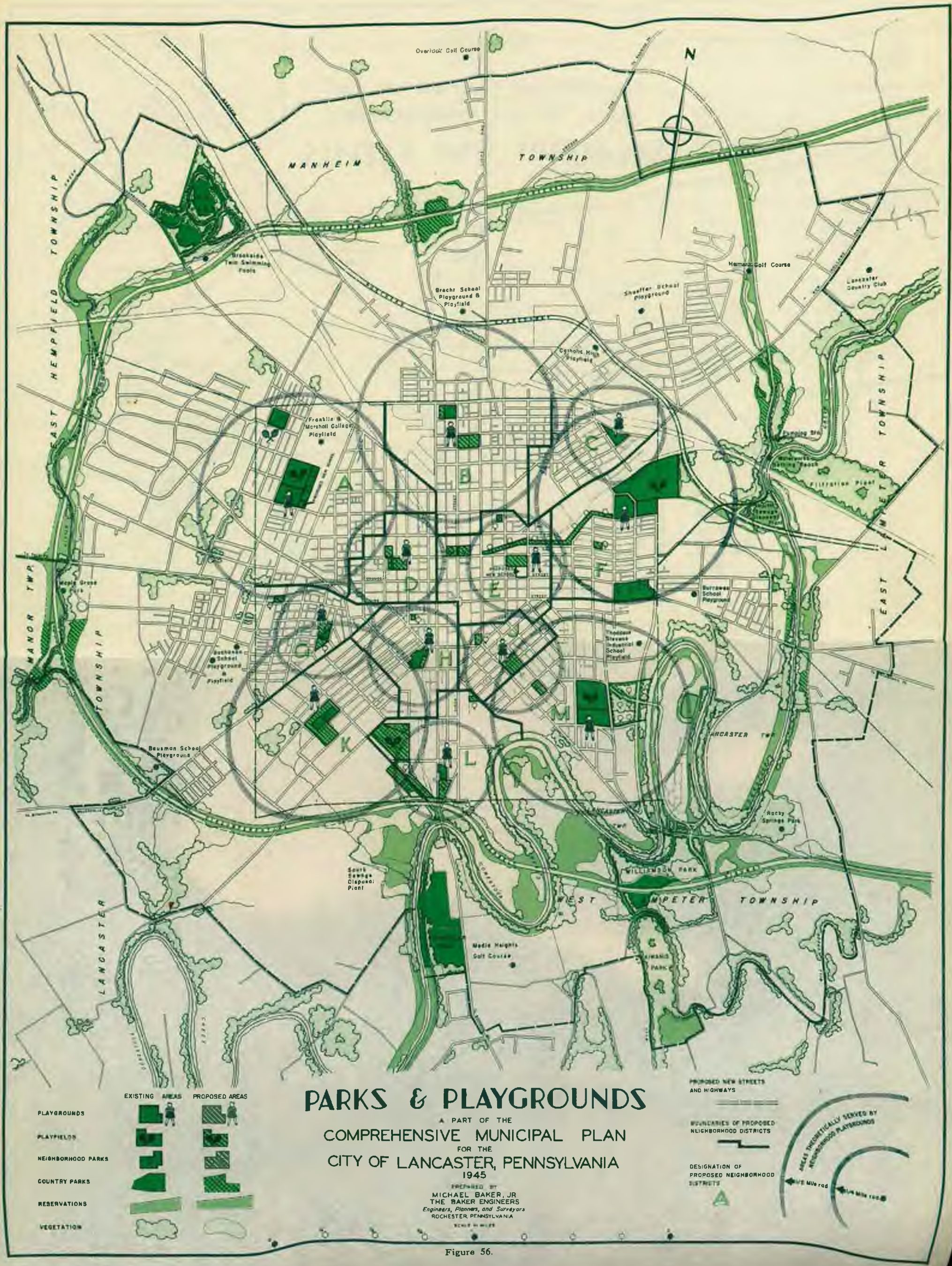

MANHEIM
TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
LANCASTER TOWNSHIP
EAST LAMPETER TOWNSHIP
WEST LAMPETER TOWNSHIP
LANCASTER TWP.
LANCASTER
N
FRANKLIN & MARSHALL COLLEGE
THEOLOGICAL SEMINARY OF THE EVANGELICAL & REFORMED CHURCH
WHARTON
REYNOLDS JUNIOR HIGH
SACRED HEART
STEVENS
FULTON
BUCHANAN
LAFAYETTE
BAUSMAN
ST JOSEPH'S
ST MARY'S
EDGMONT
REGART
HOBART
ST ANNE'S
BRIGHT
SHAEFFER
CATHOLIC HIGH
HALIPT
BOWMAN TECHNICAL SCHOOL
LANCASTER COUNTRY DAY SCHOOL
LANCASTER BUSINESS COLLEGE
ST ANTHONY'S
SACRED HEART ACADEMY
HENRY OPPORTUNITY
STEVENS INDUSTRIAL SCHOOL
HAND JUNIOR HIGH
WASHINGTON
WICKERSHAM
TEMPERANCE HOME
EXISTING
SCHOOL SYSTEMS
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
PREPARED BY
MICHAEL BAKER, JR.
THE BAKER ENGINEERS
Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA
LEGEND
PUBLIC SCHOOLS
Elementary School
Boundary of Neighborhood District
Junior High School
Boundary of Neighborhood District
Senior High School
COUNTY SCHOOLS
Elementary and High Schools
CATHOLIC SCHOOLS
Elementary School
High School
OTHER SCHOOLS
All Private and Semi-Private Schools

Figure 43.


N
MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
LANCASTER TWP.
EAST LAMPETER TOWNSHIP
WEST LAMPETER TOWNSHIP
LANCASTER TWR
LANCASTER TWR
SCHOOL
SCHOOL
SCHOOL
SCHOOL
SCHOOL
TEMPERANCE HOME SCHOOL
A
B
C
D
E
F
F
G
NOTES
Theoretical walking distances indicated by circles scribed with centers at schools and radii of:
¼ Mile from elementary schools
1 Mile from junior high schools
1¼ Miles from the senior high school.
This indication shows the areas within the neighborhood districts which lie beyond the one-half mile theoretical walking distance from the elementary schools.
PROPOSED
PUBLIC SCHOOL SYSTEM
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
PREPARED BY
MICHAEL BAKER, JR.
THE BAKER ENGINEERS
Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA
SCALE IN MILES
LEGEND
NEIGHBORHOOD DISTRICT BOUNDARY
Elementary Schools
Junior High Schools
SCHOOL PROPERTIES
Elementary
Junior High
Senior High
Heavy Traffic Arteries
Proposed Circumferential Highway
Proposed Northern Expressway

Figure 46.



PARKS & PLAYGROUNDS

A PART OF THE

COMPREHENSIVE MUNICIPAL PLAN

FOR THE

CITY OF LANCASTER, PENNSYLVANIA

1945

PREPARED BY

MICHAEL BAKER, JR

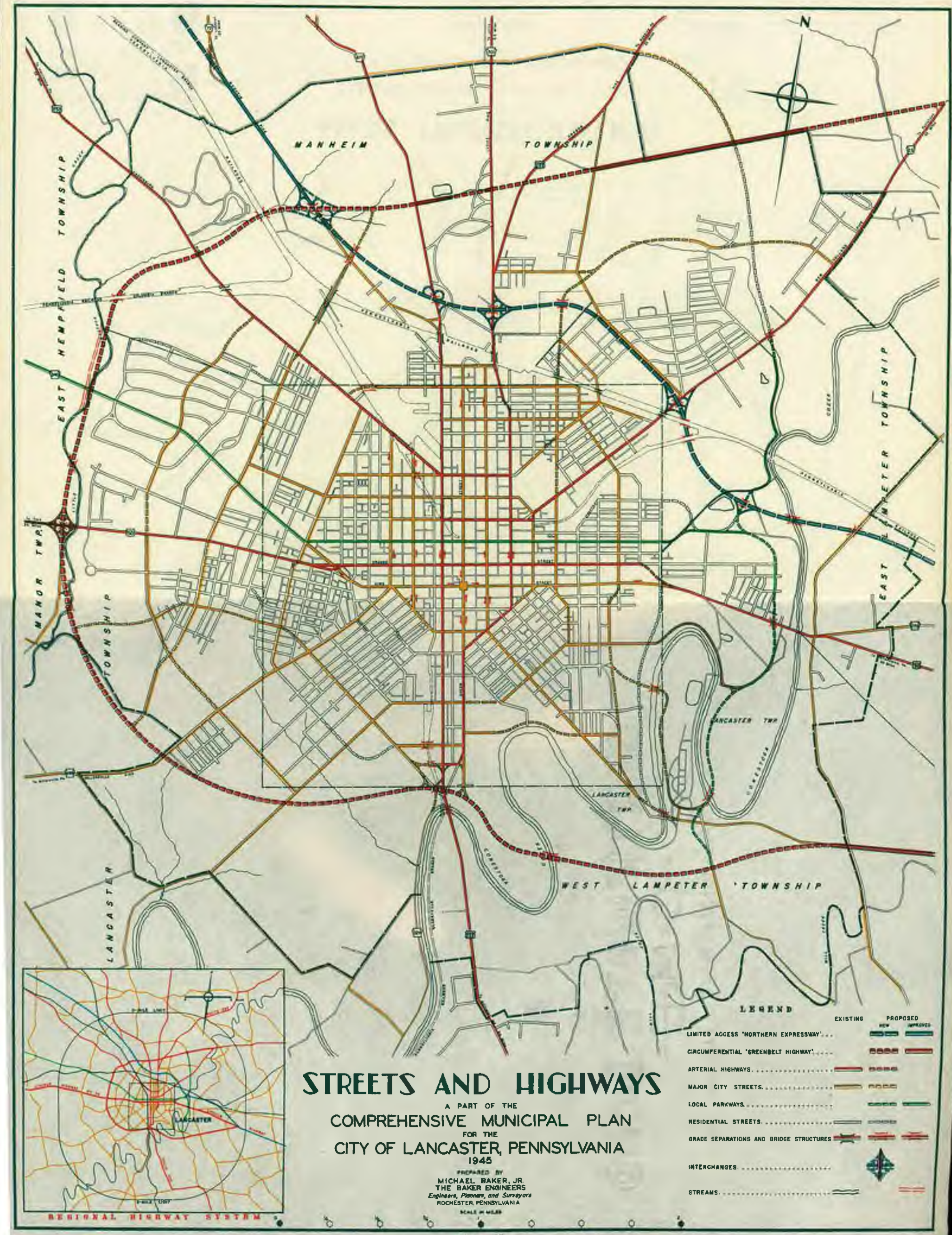
THE BAKER ENGINEERS

Engineers, Planners, and Surveyors

ROCHESTER, PENNSYLVANIA

SCALE IN MILES

Figure 56.


N
MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
LANCASTER TOWNSHIP
EAST LAMPETER TOWNSHIP
LANCASTER TWP.
LANCASTER TWP.
WEST LAMPETER TOWNSHIP
LANCASTER
REGIONAL HIGHWAY SYSTEM
LEGEND
EXISTING
PROPOSED
NEW
IMPROVED
LIMITED ACCESS 'NORTHERN EXPRESSWAY'
CIRCUMFERENTIAL 'GREENBELT HIGHWAY'
ARTERIAL HIGHWAYS
MAJOR CITY STREETS
LOCAL PARKWAYS
RESIDENTIAL STREETS
GRADE SEPARATIONS AND BRIDGE STRUCTURES
INTERCHANGES
STREAMS
STREETS AND HIGHWAYS
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
PREPARED BY
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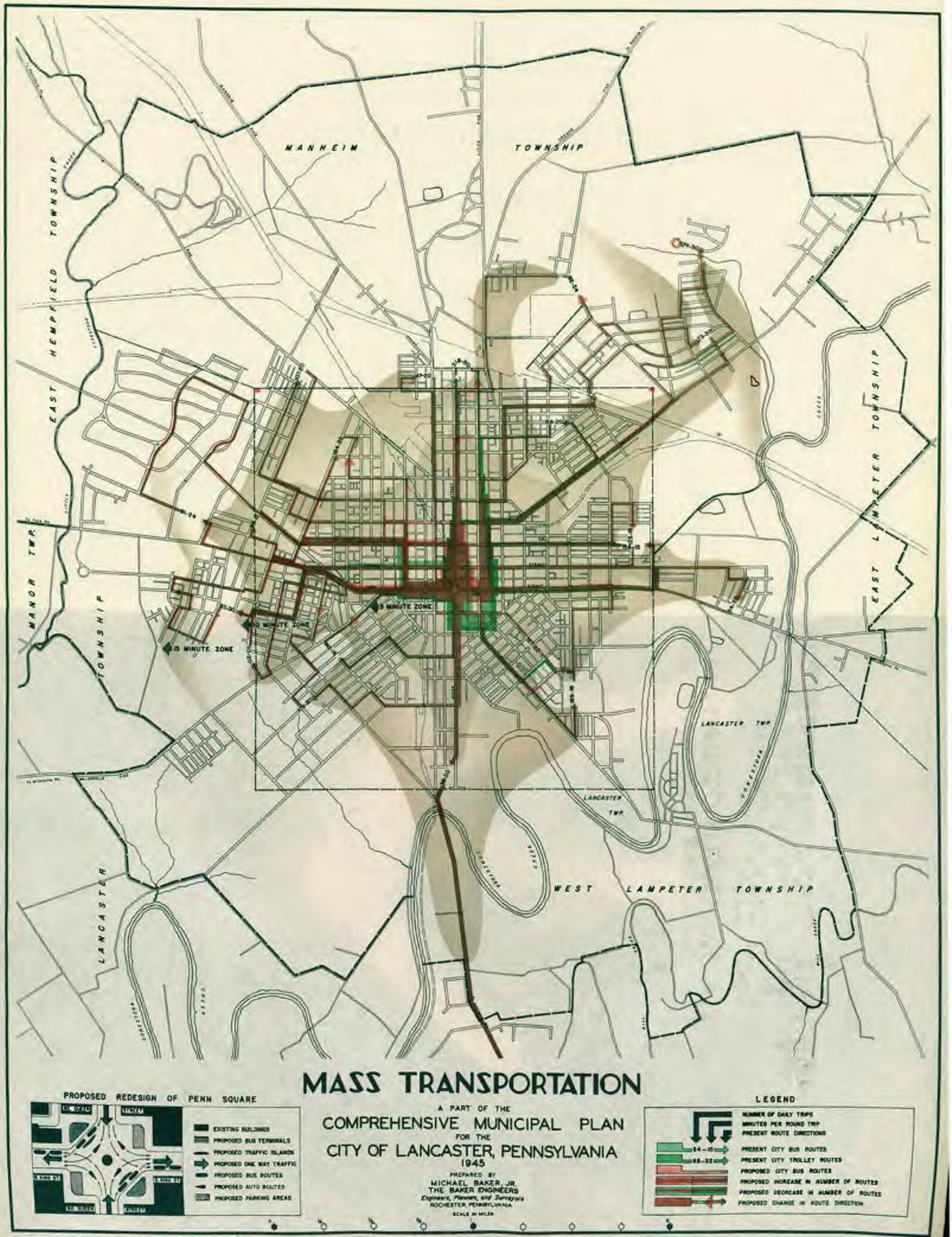
Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA
SCALE IN MILES

Figure 65.


MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
LANCASTER TOWNSHIP
LANCASTER TWP.
LANCASTER TWP.
WEST LAMPETER TOWNSHIP
EAST LAMPETER TOWNSHIP
5 MINUTE ZONE
10 MINUTE ZONE
15 MINUTE ZONE
MASS TRANSPORTATION
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
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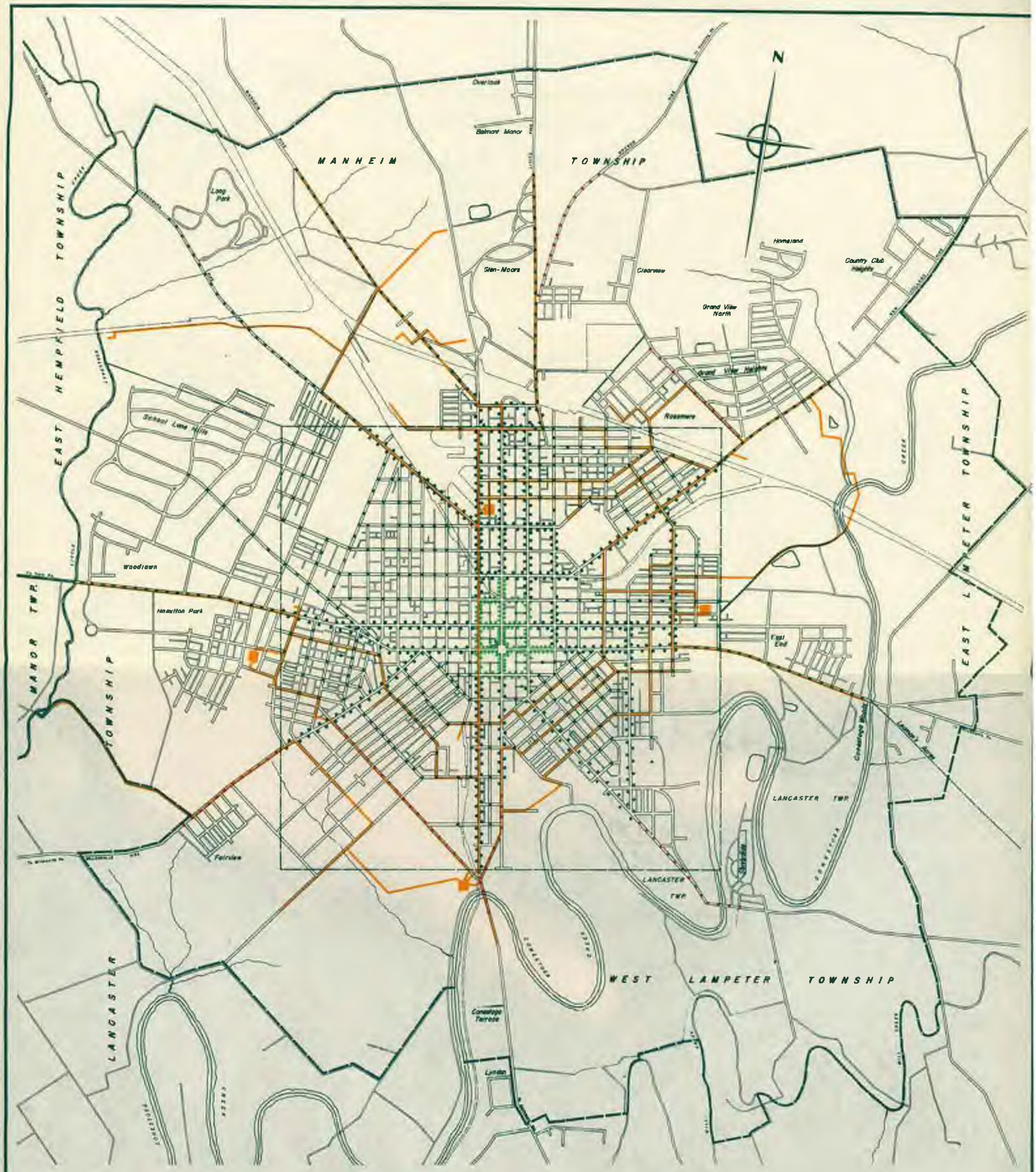
SCALE IN MILES
PROPOSED REDESIGN OF PENN SQUARE
EXISTING BUILDINGS
PROPOSED BUS TERMINALS
PROPOSED TRAFFIC ISLANDS
PROPOSED ONE WAY TRAFFIC
PROPOSED BUS ROUTES
PROPOSED AUTO ROUTES
PROPOSED PARKING AREAS
LEGEND
NUMBER OF DAILY TRIPS
MINUTES PER ROUND TRIP
PRESENT ROUTE DIRECTIONS
PRESENT CITY BUS ROUTES
PRESENT CITY TROLLEY ROUTES
PROPOSED CITY BUS ROUTES
PROPOSED INCREASE IN NUMBER OF ROUTES
PROPOSED DECREASE IN NUMBER OF ROUTES
PROPOSED CHANGE IN ROUTE DIRECTION

Figure 78.


MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
LANCASTER TOWNSHIP
LANCASTER TWP.
LANCASTER TWP.
WEST LAMPETER TOWNSHIP
EAST LAMPETER TOWNSHIP
N
Overlook
Belmont Manor
Long Park
Glen-Moore
Clearview
Homeland
Country Club Heights
Grand View North
Grand View Heights
Rossmore
School Lane Hills
Woodlawn
Hamilton Park
Fairview
Eggi End
Conestoga Terrace
Linden
Conestoga Road
- LEGEND -
600 CANDLEPOWER LUMINAIRE
400 CANDLEPOWER LUMINAIRE
250 CANDLEPOWER LUMINAIRE
SUB STATION
POWER SERVICE LINE
STREET LIGHTING SYSTEM
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
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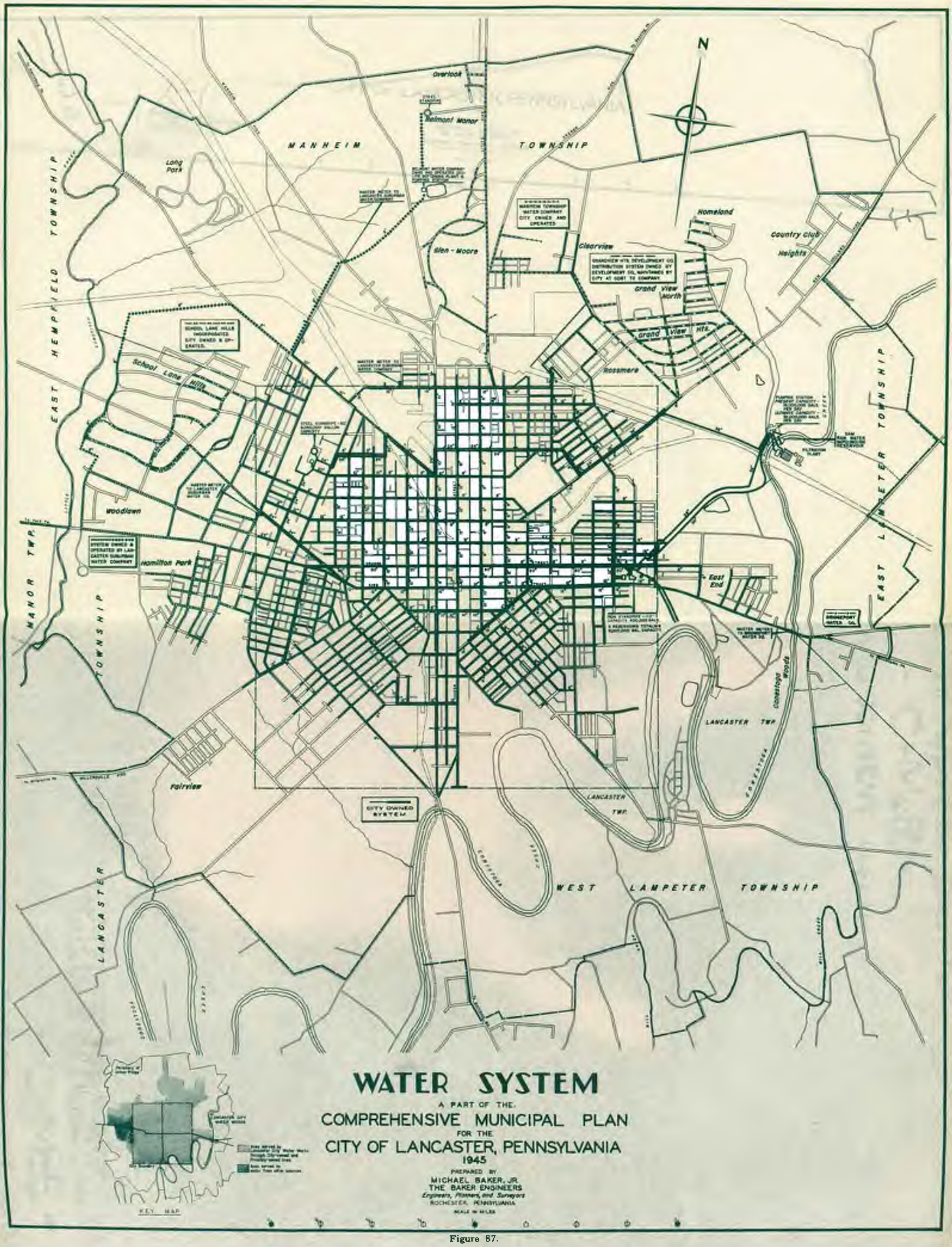
Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA
SCALE IN MILES

Figure 83.


N
MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
LANCASTER TOWNSHIP
EAST LAMPETER TOWNSHIP
WEST LAMPETER TOWNSHIP
LANCASTER TWP.
Overlook
Belmont Manor
Long Park
Glen - Moore
Clearview
Homeland
Country Club Heights
Grand View North
Grand View Hts.
Rosemare
School Lane Hills
Woodlawn
Hamilton Park
East End
Fairview
Conestoga
CITY OWNED SYSTEM
WATER SYSTEM
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
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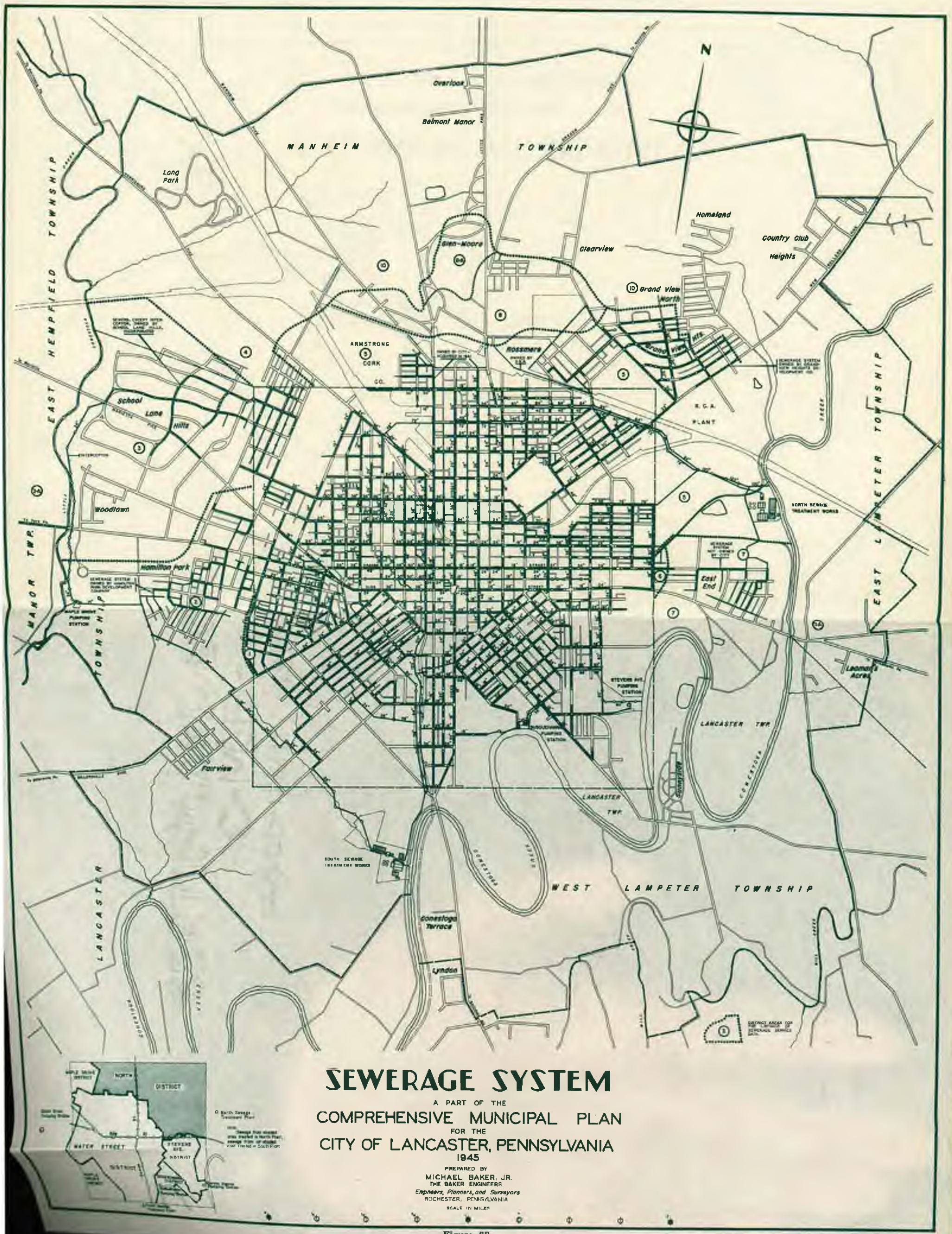
ROCHESTER, PENNSYLVANIA
KEY MAP

Figure 87.



SEWERAGE SYSTEM

A PART OF THE

COMPREHENSIVE MUNICIPAL PLAN

FOR THE

CITY OF LANCASTER, PENNSYLVANIA

1945

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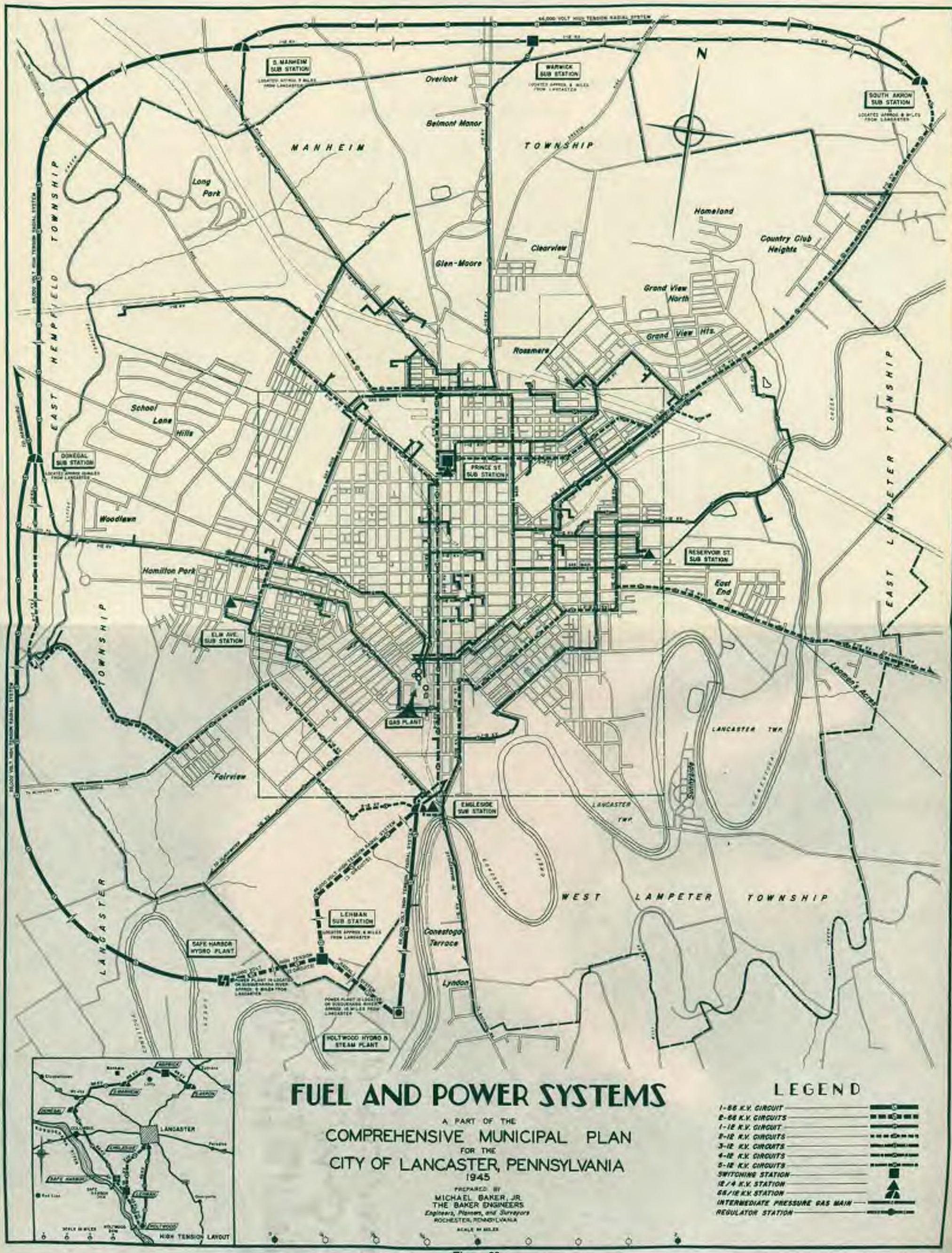
SCALE IN MILES

Figure 88.


64,000 VOLT HIGH TENSION RADIAL SYSTEM
S. MANHEIM SUB STATION
WARWICK SUB STATION
SOUTH AKRON SUB STATION
Overlook
Belmont Manor
MANHEIM TOWNSHIP
Long Park
Homeland
Clearview
Country Club Heights
Glen-Moore
Grand View North
Grand View Hts.
Rossmere
EAST HEMPFIELD TOWNSHIP
School Lane Hills
DONEGAL SUB STATION
PRINCE ST. SUB STATION
Woodlawn
Hamilton Park
RESERVOIR ST. SUB STATION
East End
EAST LAMPETER TOWNSHIP
ELM AVE. SUB STATION
GAS PLANT
Leaman's Acres
LANCASTER TWP.
Fairview
ENGLESIDE SUB STATION
LANCASTER
LEHMAN SUB STATION
SAFE HARBOR HYDRO PLANT
Conestoga Terrace
Lyndon
WEST LAMPETER TOWNSHIP
HOLTWOOD HYDRO & STEAM PLANT
HIGH TENSION LAYOUT
FUEL AND POWER SYSTEMS
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
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ROCHESTER, PENNSYLVANIA
LEGEND
1-66 K.V. CIRCUIT
2-66 K.V. CIRCUITS
1-12 K.V. CIRCUIT
2-12 K.V. CIRCUITS
3-12 K.V. CIRCUITS
4-12 K.V. CIRCUITS
5-12 K.V. CIRCUITS
SWITCHING STATION
12/4 K.V. STATION
66/12 K.V. STATION
INTERMEDIATE PRESSURE GAS MAIN
REGULATOR STATION

Figure 90.

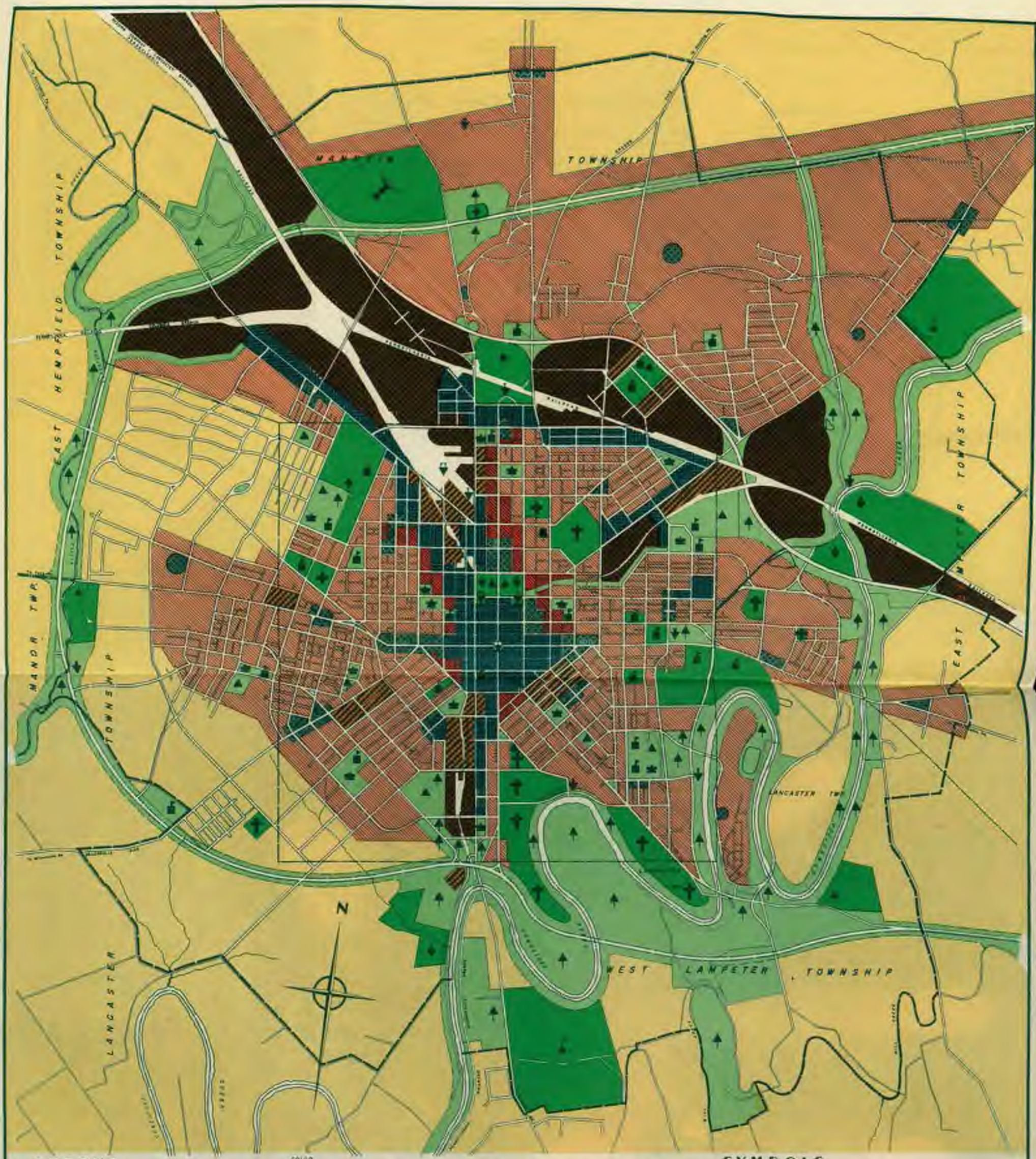
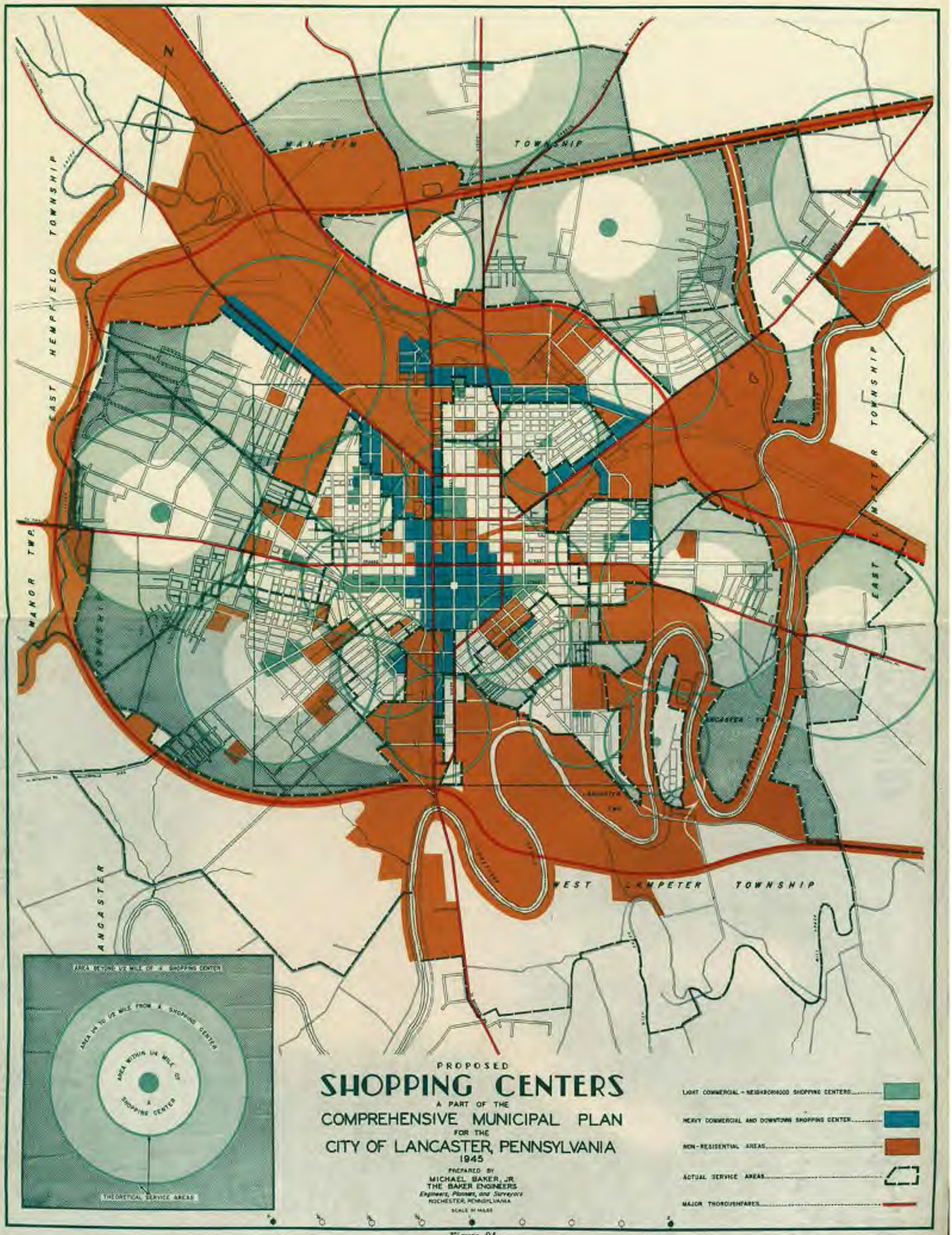

MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
EAST
TOWNSHIP
LANCASTER
LANCASTER TWP.
WEST LAMPETER TOWNSHIP
N
LEGEND
COLOR INDEX
R-1, SINGLE FAMILY RESIDENTIAL, AGRICULTURAL, OR OPEN AREAS
YELLOW
R-2, R-3, R-4, SINGLE FAMILY, DUPLEX, ROW, AND APARTMENTS - TWO STORIES OR LESS
LIGHT RED
R-4, APARTMENTS EXCEEDING TWO STORIES IN HEIGHT
RED
C-1, LIGHT COMMERCIAL AREAS — NEIGHBORHOOD BUSINESS
LIGHT BLUE
C-2, HEAVY COMMERCIAL AND DOWNTOWN BUSINESS AREAS
DARK BLUE
M-1, LIGHT MANUFACTURING AREAS
LIGHT BROWN
M-2, HEAVY MANUFACTURING AREAS
DARK BROWN
PUBLIC AREAS
LIGHT GREEN
SEMI-PUBLIC AREAS
ULTIMATE LAND USE
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
PREPARED BY
MICHAEL BAKER, JR.
THE BAKER ENGINEERS
Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA
SCALE IN MILES
SYMBOLS
PUBLIC PARK OR RESERVATION
PRIVATE PARK OR RESERVATION
PUBLIC PLAYFIELD
PUBLIC PLAYGROUND
PUBLIC SCHOOL
PRIVATE SCHOOL
PUBLIC INSTITUTION
PRIVATE INSTITUTION
PASSENGER TERMINALS
FREIGHT TERMINALS
HOSPITALS
MUNICIPAL OFFICE BUILDINGS
COUNTY COURT AND OFFICE BUILDINGS
POST OFFICE BUILDING
WATER SUPPLY SYSTEM
SEWAGE DISPOSAL SYSTEM
PRIVATE GOLF COURSE
CEMETERY
PRIVATE AIRPORT

Figure 92.


MANHEIM TOWNSHIP
EAST HEMPFIELD TOWNSHIP
MANOR TWP.
EAST LAMPETER TOWNSHIP
WEST LAMPETER TOWNSHIP
AREA 1/4 TO 1/2 MILE FROM A SHOPPING CENTER
AREA WITHIN 1/4 MILE OF A SHOPPING CENTER
THEORETICAL SERVICE AREAS
PROPOSED
SHOPPING CENTERS
A PART OF THE
COMPREHENSIVE MUNICIPAL PLAN
FOR THE
CITY OF LANCASTER, PENNSYLVANIA
1945
PREPARED BY
MICHAEL BAKER, JR.
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Engineers, Planners, and Surveyors
ROCHESTER, PENNSYLVANIA
LIGHT COMMERCIAL - NEIGHBORHOOD SHOPPING CENTERS
HEAVY COMMERCIAL AND DOWNTOWN SHOPPING CENTER
NON-RESIDENTIAL AREAS
ACTUAL SERVICE AREAS
MAJOR THOROUGHFARES

Figure 94.

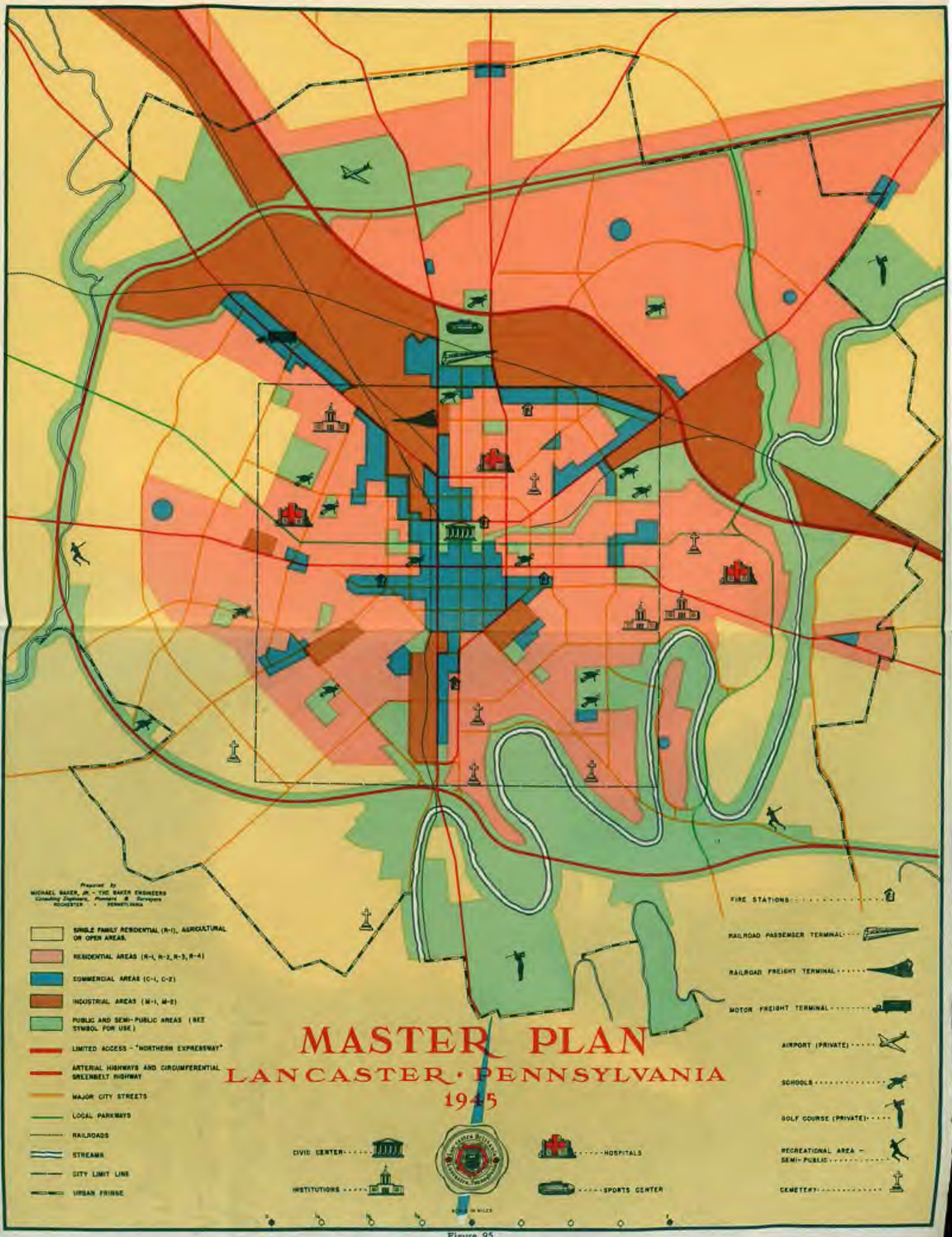
Prepared by
MICHAEL BAKER, JR. - THE BAKER ENGINEERS
Consulting Engineers, Planners & Surveyors
ROCHESTER - PENNSYLVANIA
SINGLE FAMILY RESIDENTIAL (R-1), AGRICULTURAL OR OPEN AREAS.
RESIDENTIAL AREAS (R-1, R-2, R-3, R-4)
COMMERCIAL AREAS (C-1, C-2)
INDUSTRIAL AREAS (M-1, M-2)
PUBLIC AND SEMI-PUBLIC AREAS (SEE SYMBOL FOR USE)
LIMITED ACCESS - "NORTHERN EXPRESSWAY"
ARTERIAL HIGHWAYS AND CIRCUMFERENTIAL GREENBELT HIGHWAY
MAJOR CITY STREETS
LOCAL PARKWAYS
RAILROADS
STREAMS
CITY LIMIT LINE
URBAN FRINGE
MASTER PLAN
LANCASTER · PENNSYLVANIA
1945
CIVIC CENTER
INSTITUTIONS
HOSPITALS
SPORTS CENTER
FIRE STATIONS
RAILROAD PASSENGER TERMINAL
RAILROAD FREIGHT TERMINAL
MOTOR FREIGHT TERMINAL
AIRPORT (PRIVATE)
SCHOOLS
GOLF COURSE (PRIVATE)
RECREATIONAL AREA - SEMI-PUBLIC
CEMETERY

Figure 95.


Lan-castra Britania
Lancastra, Pennsylvania