HOUSING AND COMMUNITY DEVELOPMENT

IN

EAST KENTUCKY

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Dear Sir,

In partial fulfillment of the requirements for the degree of Bachelor of Architecture, we herewith submit our thesis entitled Housing and Community Development in East Kentucky.

Respectfully submitted,

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ACKNOWLEDGEMENTS

THE AUTHORS WISH TO EXPRESS THEIR APPRECIATION TO THE FOLLOWING FOR THEIR HELP AND COOPERATION:

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ABSTRACT

The object of this thesis is to arrive at a physical plan and architectural solution to the problem of housing and community development in East Kentucky. As in most of Appalachia, this region is characterized by severe poverty and under-development set within a wealthy and technologically advanced nation. This economic disparity stems from a lack of sufficient export-based employment. Simply, there are two possible solutions to this situation:

1. Out-migration to other sources of employment;
2. The development of an export-based economy within the region.

Either solution is costly in its own way. Massive out-migration is restrained by strong inertial forces in that no region can easily abandon the social and economic equity that it builds up over time. Alternatively, economic & community development within Appalachia would encounter some of the most difficult physical problems to be found anywhere.

However, no basis for planning can be achieved without evaluating a wide range of possibilities presented by these two alternatives. Our thesis attempts to evaluate only one possibility to the alternative of development within the region -- namely community development around a limited number of growth points.

East Kentucky's population is presently characterized by its uniform distribution and rapid rate of growth. Though historically isolated, most of the region has been opened to low-speed roads and limited rail access by recent coal mining activity. Current investment in high-speed road construction is rapidly improving the tourist and industrial development potential for certain areas.

As one of the major urban centers in East Kentucky, Prestonsburg (population 4,100) represents one of the first towns to be served by the new Mountain Parkway. We have, therefore, chosen Prestonsburg for detailed study as being representative of a number of potential growth points within East Kentucky.

The topographical constraints on development are of major importance. In considering Prestonsburg and its immediate vicinity, it was found that approximately one hundred acres could be utilized for development as industrial sites. A conversion factor for typical labor intensive industries (two hundred employees per acre) shows that employment for 20,000 persons could exist in the immediate vicinity of Prestonsburg, resulting in a total population of approximately 50,000. The location of this population in proximity to the industrial sites requires that potential land yield be evaluated in terms of accomodating adequate community facilities. Unlike housing, the community has certain basic requirements for supporting facilities, i.e., schools, parks, churches, shops, etc., for which flat land is of utmost importance. Even with flood control, the amount of flat land available is extremely limited (less than 5% of the total area). As a result, the hillsides are primarily available for housing.

Since housing constitutes a major proportion of the cost of community development, and the economic constraints of the region require a low-cost solution to the problem, we have chosen this area as the main focus of the thesis.

INTRODUCTION

East Kentucky represents one of the most difficult socio-economic situations of the United States. The region is characterized by a uniformly dense rural population without any major urban centers. High rates of unemployment, under-employment, and out-migration undermine the stability of the region. In addition to a history of exploitive rather than developmental economic activity, the problem is further complicated by an irregular terrain restricting previous settlement to the bottoms of deep narrow valleys.

The central portion of East Kentucky is distinguished by the economic dominance of the coal industry which exceeds manufacturing in the area at an employment ratio of seven to one. This area presently accounts for ninety per-cent of the bituminous coal production in Eastern Kentucky.

Though the population of this area is presently relatively stable, its predominant dependency upon the coal industry accounted for an out-migration of nearly a third of its total population during the mid-fifties. Due largely to a decreasing national demand during the ten years following 1947, coal output in Eastern Kentucky declined by twenty-six per-cent. During the same period, through

increased mechanization, productivity within the mining industry was increased by thirty-eight per-cent. As a result, nearly two-thirds of those in mining employment were abruptly cut off the payrolls. Since employment related to manufacturing was generally non-existent near the coal fields, the only alternative to welfare was out-migration to low-paying jobs within the prospering industrial centers of the nation. Even this solution showed itself to be of temporary effectiveness as the direction of migration was reversed very quickly during the 1958 recession; loss of jobs and difficulties of adjustment to a foreign urban situation helped breed their discontent. Either of the possibilities open to surplus labor, namely out-migration or welfare, erode the vitality of society. Instead, a system for utilizing the already-developing vocational training facilities in industries within the mountain regions, would stem the tendencies toward continued dependence on welfare and out-migration.

Such a course of action would probably meet with more than the usual difficulties of urbanization. The present scarcity of flat bottom land places it at a premium for industrial sites. The mountain slopes, on the other hand, are generally regarded as being too steep to be built upon. An economically feasible and a socially justifiable way must be found to accomodate a growing population in this region if it is to become a viable segment of the nation.

SELECTION OF STUDY AREA

In order to study further the problems of industrialization in East Kentucky, it seemed appropriate to determine a specific region for case study. It was decided that the Prestonsburgh area be selected. The primary criteria for this selection were as follow:

a) the problems and characteristics of the Prestonsburg area are generally representative of the East Kentucky region;

b) recent completion of the Mountain Parkway has provided Prestonsburg with the advantage of having one of the first highway links out of the mountain region;

c) Prestonsburg represents an area in which the prosperity due to coal mining activity has been declining, thereby requiring a shift of its economic base (e.g., toward light industry).

d) the local initiative of Prestonsburg has displayed an encouraging potential for industrial and social vitality.

GENERAL REGIONAL CHARACTERISTICS

The following portions of this report will attempt to elaborate on the general physical and social characteristics of East Kentucky in order to relate Prestonsburg to its regional setting.

Topography.

The town of Prestonsburg is located in Floyd County, which lies in the heart of the geologic province known as the Cumberland Plateau. This sector of the expansive Appalachian Mountain chain is distinctly different from the rest of Kentucky and is referred to as East Kentucky. Floyd County displays all of the topographical features of the Plateau. There is a severe scarcity of level upland, and the more accessible level lowland exists only in narrow strips along the rivers and creeks. These streams have etched the Plateau into an elaborate branching system of steep-sided valleys separated by narrow winding ridges, 400 to 600 feet high. An overall figure would show the level lowland to be only about five per-cent of the total land area, with the steep slopes of the ridges comprising the remaining portion. Occasional widening of the river bottoms has permitted a certain amount of population clustering, but the string towns develop as the large population flows out into the narrow valleys and hollows. Prestonsburg exists in the Big

Sandy River Basin which is one of the four major drainage basins dividing East Kentucky.

Climate.

Kentucky's climate is temperate without prolonged extremes of heat or cold. Rainfall is abundant and fairly regular throughout the year. The average annual precipitation is between forty and forty-five inches per year in the mountain regions. Late summer is generally the driest part of the year. Winter is relatively open with mid-winter days averaging about thirty-two degrees for about six weeks duration.

Natural Resources.

Forests: Timber was once an important resource of East Kentucky; a few virgin stands remain, but those are being rapidly depleted. Along the western margin of the Cumberland plateau is an area controlled by the Cumberland National Forest; a second growth of good hardwoods is being fostered in this region, while elsewhere in East Kentucky beech and hickory are tending to crowd out the better timber.

Mineral resources: The existence of coal in East Kentucky has had a profound effect on the region's recent history and will undoubtedly have a similarly significant role in the future. Besides coal, the most important mineral resources in the Prestonsburg area are natural gas, petroleum, sand and gravel, clay, and natural brines.

The coal, which has been mined commercially in the southeastern counties, is of a high B.T.U. (Bituminous) content and has thus decreased in importance since the general shift to soft coal for steam-generating plants and the displacement of coal by other fuels in domestic use. The most significant prospects for the use of the coal in the future seems to be for coking, electric power generation within the mountains, and for chemical production.

Water: Outside of areas protected by flood control programs, water has become more of a liability than a resource in East Kentucky. Due partly to irresponsible timbering and mining techniques, but more importantly to the filling of river bottoms for construction purposes, flood damage has become a fearsome threat to the towns of East Kentucky.

Ever since settlement began in Eastern Kentucky, there have been flash floods rising suddenly in the river valleys; these did little damage,except in the most unusual and extreme cases, until recent years when the flood danger has been aggravated. In 1957 East Kentucky experienced a flood that was for many sections the worst in its history. There was serious damage in virtually every major town. Flood heights and flood water velocities had been increased by fill-ins for housing construction, business structures, and road building. A growing concern over the generally worsening flood conditions has spurred numerous flood control efforts such as

the creation of Dewey Lake northeast of Prestonsburg. The continuation of these major flood control programs will reduce significantly the hazards of flooding. Alternatively, the creation of a broad system of small ponds above the major tributaries, while providing a less expensive solution of the control problem might enhance farm and community development in the upper valleys.

While the creation of lakes and ponds can stem the flooding of valleys, the steep slopes which comprise over ninety per-cent of the land area remain vulnerable to rapid run-off, which continues to impair the utilization of these slopes for community development. A solution of this problem is imperative to relieve the existing pressures on land values due to the scarcity of flat land.

Transportation.

One of the most significant aspects of the physical nature of the land is its isolation from the rest of Kentucky and the nation as a whole. To the earliest settlers the isolation was welcome as a protective feature. However, isolation first became a problem with the advent of timbering and mining. The general inaccessibility of the region remained a major obstacle to competition with regions more accessible to the growing industrial centers of the nation.

Until 1910, the major means of transportation within the region consisted of trails, small

dirt "turnpikes", and the rivers which were used primarily for the extraction of timber. For about thirty years thereafter construction of railroads played a most important role in opening the mountain regions to coal mining activity.

Today, largely due to the technological advances in road building, the most significant changes in the region's accessibility have been related to automotive traffic. The earliest roads, developing according to local needs, had little significance outside intermediate access to river and railroad systems. As roads took on a greater importance throughout the nation as carriers of interstate commerce, East Kentucky's isolation became increasingly detrimental to its growth.

During recent years, however, the development of a high-speed highway system tying East Kentucky to the expanding interstate system has brought the resource potentials of this region ever closer to the national economy. The state highway program which is nearing completion in Eastern Kentucky will bring all areas of this previously-isolated region within twenty miles of a high speed (70 mph) roadway and, in turn, within an hour and a half of the interstate highway system. The recent completion of the Mountain Parkway provides the first of three links between Prestonsburg and the interstate system.

The extensive mining activity in East Kentucky has fostered construction of rail lines in virtually all major river valleys. Coal

remains the principle freight to this day.

River transportation, though of primary importance through the early years of railway construction, has subsequently declined to relative insignificance. Numerous studies have in the past shown river transportation to be less practicable than rail and road. Future importance of waterways, however, cannot be totally discounted since new methods, such as containerization and inflatable barges may facilitate economies not previously possible.

Although small airfields are scattered throughout East Kentucky, significance of air transportation, passenger or freight, is minimal. Prospects for the future seem to hold little importance for air traffic.

SOCIAL HISTORY

The problem of Appalachia is not a new one. As early as the Civil War, President Lincoln was concerned with finding aid for the poor mountain people. Already its society had frozen many of the habits and mores of the century before. Though largely ignored by state governments, the Appalachian was nonetheless periodically besieged by electioneering. The uninfluential role of the region within the state and nation, however, historically brought nothing in return to alleviate his problem.

Poor and ignorant as the result of his long isolation, the mountaineer was fertile prey to the wealthy urbanite of our rapidly growing industrial regions. Unaware of his title to vast natural wealth, the mountaineer hastened his own demise by selling at a trifle immense stores of coal, petroleum, and natural gas, within vast areas of richly forested lands, only to become a cheap source of labor for the subsequent development of coal mines, great saw mills and railways that were to haul away these resources. Original ownership of the vast wealth of Appalachia brought a minimal share to the mountaineer. Thus, today, in East Kentucky, rich with natural beauty and

resources, we find six of the poorest counties in the nation serving land companies which are among the most profitable corporations in America.

In a nation where social distinctions can be made largely on the basis of income, the subculture of the mountaineer stands curiously apart; he appears generally unconcerned as a progressive, prosperous nation measures him to be so poor.

Traditionally the mountaineers have shunned as much as possible law, restraint and a government which might impose rule from the top. Their system for leveling and private justice gave equal status to all and did not readily acclimate the mountaineer to authority and outside pressure.

The strong family ties which have fostered the custom of settling close to kin have often extended the domain of a single family throughout a single narrow valley. Consequently, it is not unusual to find four generations of an extended family intermarrying to the extent that only two or three family names occur in a single valley. Though the resulting social and genetic effects are not uncommon in the mountain region, the continuance of this pattern is being rapidly curtailed through decreasing isolation.

The condition of the mountaineer, however, is

not entirely unique. As in Gans's description of the Boston West Enders, much of the population of Southern Appalachia cannot be considered lower class which is defined as being incapable of facing and solving the problems of life in an adequate manner. (Gans, p. 269) Much of mountain society is more adequately described as a "working class" which fits in between the lower and the lower-middle class. (Gans, p.25) Such a folk society "seems to appear wherever people exist in an environment which has limited or defeated them, whether it be Appalachia, rural America, the inner city, or Southern Italy." (Weller, p. 5)

A vigorous program of school construction, together with an extensive system of school busing, has had a profound effect on the mountain children, the growing percentage of whom continue their education through college occasionally to include graduate studies. Unfortunately, due to the fact that few of the college graduates remain or return to this region, the region continues to lack seriously effective leadership. With continued growth of educational and employment facilities in the region, the tendency could be reduced considerably.

PRESTONSBURG AND VICINITY

Principal characteristics.

The criteria for the selection of Prestonsburg and its immediate vicinity as a case study were outlined in the Introduction of this report. In the following section the most important characteristics of this particular region will be discussed in the light of their bearing on the objectives of this study.

Location.

Prestonsburg, the county seat of Floyd County, lies on the Levisa Fork of the Big Sandy River, about seventy-eight miles south of the confluence of the Ohio and the Big Sandy rivers. Floyd County is one of the two northernmost counties in East Kentucky with a history of high coal productivity. The other county, Pike, lies to the east and differs markedly from Floyd in one important respect: Pike County is now experiencing an upsurge of mining prosperity due to the recent opening of new fields to railroad access, while Floyd County's most accessible mining sites have been exhausted. Though both counties were severely jolted by the collapse of the coal industry during the mid-fifties, Pike County has been able to return to relative prosperity on the strength of its mining potential while the Prestonsburg vicinity has had to look primarily toward non-mining oriented industries

for its sustinance. In this respect Prestonsburg is presently representative of a situation which will undoubtedly become more prevalent in most of East Kentucky; in particular, a mining-oriented population is being deprived of employment as automation has come to characterize industry.

Topography.

The physical characteristics of the land around Prestonsburg are typical of the rest of the Cumberland Plateau; steep-sided, winding ridges define the narrow valleys. The region is fortunate to have relatively large expanses of flat land both in the valley of the Levisa Fork and in the lower valleys of Middle and Abbot Creeks which flow into this Levisa Fork just north of Prestonsburg's governmental and business district.

Most of these flat lands have been vulnerable to flooding in the past, but, with the completion of a flood wall in 1959, the central Business District has been made virtually safe from flooding. Flood control projects upstream from Prestonsburg should eliminate most of the danger from the Levisa Fork's flood waters, but the problem of containing Middle and Abbot Creeks must be solved to allow more extensive use of their respective bottom lands. Of the 1,077 acres of land within the city's boundaries, there are approximately 390 acres in slopes of over fifteen per-cent grade, most of them being over thirty per-cent. From these figures it becomes evident that

thirty-six per-cent of the total area within the city boundaries is in fairly steep terrain.

Climate.
See Appendix.

Transportation.
The arrival of the Steamboat at Prestonsburg in 1837 was the first breakthrough in transportation and soon became a regular route of supply for the steadily growing population. In 1902, the railroad reached Prestonsburg, and with it more expansive coal mining operations were initiated. Prestonsburg is presently served from the north by the Ashland Division of the Chesapeake and Ohio Railway. Railroad usage presently consists of 1210 outbound car loads per month (mostly coal) as opposed to 75 inbound per month. Rail transit time from Prestonsburg to a sampling of other cities is given in the appendix.

The Mountain Parkway, completed to Prestonsburg in 1964, should have an important effect on the community for it has drastically cut travel time to areas outside of the mountains to the west. This road tie to the rest of Kentucky and to the interstate highway system is significant, particularly with respect to Prestonsburg's advantages as a prime location for tourist and production-related industries. As can be seen on the map of the Kentucky highway system, Prestonsburg is the first major town in the coal mining counties to to be served by such a facility.

Local Government and Community Activity. The town of Prestonsburg has recently gained much through the leadership of its present Mayor, Dr. George P. Archer. Contrary to the opinion of many state leaders,* but generally in agreement with present Federal policy (Appalachian Regional Commission, and Economic Development Administration), Archer believes that there exists within the local population and economy, a strong potential for the establishment of a viable community through the stimulus of stable industries. To this end Prestonsburg has recently demonstrated, through no small investment of local capital and cooperation, potential for continued community development.

Realizing the importance of providing higher education facilities in order to allow the training of youth in higher skills, the citizens of Prestonsburg contributed $100,000 to procure a site at the north end of town for the local Branch of the University of Kentucky which was completed in 1964. In addition to this facility, a long list of projects have been undertaken during the past five years, all of which have helped to boost the "liveability index" of the region. Among these improvements are a new county court house, a library, and business district parking facilities. One of the most interesting of the town

*Harry M. Caudill, author of Night Comes to the Cumberlands, tends to advocate that government activity in the region at a scale comparable to another TVA, would be the only road to salvation.

projects is presently in the process of completion; the "City Park" has been realized largely through the planning and supervision of Curtis Clark, the City Manager. The work has been carried out by laborers who are part of the Unemployed Fathers program. The "Happy Pappys" (approximately 580 in Floyd County) are eligible for a state-administered, Federal welfare check amounting to about $240 per month, varying with the number of dependents. In return, the man avails himself for full-time work on community projects; it is mandatory that his children regularly attend school and that he also attend weekly school sessions. The value of this program, when administered well is exemplified by the City Park project. This project attests to the potential capabilities of these men,as well as to the benefits they derive from the program in terms of training.

Three miles to the east of Prestonsburg is the Jenny Wiley State Park and the artificially created Dewey Lake which have recently become a major tourist attraction adding substantially to the activity of tourist-related businesses.

Another important community effort has been directed toward the establishment of manufacturing industry in Prestonsburg. The preliminary steps were designed to raise the town's "liveability index"; when this failed to attract new industry to the

region, the community financed a ten-thousand square foot factory and proceeded to search for a firm to set up operations.

The Irwin Airchute Company responded to the town's proposals and subsequently located at the West Prestonsburg site. The plant now employs 165 women as sewing machine operators and has been proved successful in national competition through high productivity and quality control.

Population Characteristics.

Prestonsburg's population of approximately 4,000 is presently increasing at the rate of ten-to-fifteen families per year. Jobs, however, are scarce relative to the potential labor force. Since there is very little coal mining near Prestonsburg now, the working population is generally not involved with mining-related businesses despite the fact that about half of Floyd County's employment is still in mining and quarrying. A certain amount of manufacturing (employing about two hundred) and businesses catering to the tourist population constitute the most important elements of the local economy. Other employment sources in Prestonsburg are related to local construction, utilities, retail trades, finance, insurance, and real estate.

The most important considerations for this thesis involve the potentials for the region with respect to the characteristics of the labor force and the nature of the community in the future.

Labor force. Studies have shown that presently only about half the total potential labor force is working productively. Taking Floyd County as an example which employs 4,590 out of a total population of about 40,000: 1,232 men and 2,928 women, or 4,160 persons, are either unemployed or willing to drop low-paying jobs to enter the labor force if employment were available. (Industrial Resources: Prestonsburg, Kentucky, p. 5) If this study is projected five years into the future, it appears that there will be another 5,500 persons in Floyd County who will have become eighteen years of age by 1972. What is significant about this latter group is the fact that a larger portion than in the past will have graduated from high school,and undoubtedly more than the 1965 mark of 45.3% of these graduates will go on to further years of education in vocational and liberal arts training. The skills of the labor force will thus be widened.

Our basic question, therefore, becomes how to plan for the utilization of this important segment of the mountain population. A source of income, employment, is essential. The two alternatives remain: out-migration to jobs versus importation of industry.

Prestonsburg has demonstrated that labor-intensive industry can operate successfully within the region. It is assumed that more industries can be attracted to take advantage of the low-cost and competent labor force and thus utilize a larger percentage of the

potential labor supply.

Nature of the community. The influences that further industrialization will have on the character of future communities is not clearly defined; however, land use policies must be established soon before much wasteful construction occurs.

Flood control has made more of the flat bottom land available for development. This land is of prime value, and its price reflects this fact ($2-3,000 per acre). Large parcels of flat land (greater than five acres) are difficult to find within the limits of town services such as utilities and fire protection. If industry is going to establish anywhere, it needs these sites as much as major commercial installations, schools, and hospitals. The hills are cheap land ($50-$300 per acre); residences comprising the smallest volume elements of the community structure might most effectively be located on the hillsides within the limits of public services. If so, the capacity of the land to support community growth would be greatly increased.

Some of the prime flat land in several East Kentucky towns, including Prestonsburg, has been devoted to public housing projects. If this procedure continues, there will be few adequate sites remaining for industry. Commercial structures have also developed very loosely in Prestonsburg along the main north-south highway which winds through the town. Regulations in the form of zoning could, in the

future, help pattern a more orderly and better balanced form of growth.

DESIGN APPROACH

The potential for industrial expansion within East Kentucky has been strengthened by the recent successes in Prestonsburg. Having demonstrated the availability of a large low-cost labor force within its present area of influence, together with the adaptability of unskilled labor to industrial growth and the initiative of the community to raise its liveability index, Prestonsburg should, in the future, serve as a focus for both further industrial growth and broad community development. The purpose of this thesis is to explore the physical planning and architectural implications of these objectives within the limits of social and topographical constraints.

Essential to the growth of any developing area is the maintenance of characteristics underlying its economic advantage. In Appalachia one such characteristic is presently dominant: the relative low cost of its labor force. This advantage must be maintained, at least during the early stages, if the vicinity of Prestonsburg is to continue to attract industrial development in competition with other regions of the nation.

The architect and planner, therefore, are faced with the task of improving the quality of life within the region without destroying the

favorable cost differential between the labor force of this region and that of the broader economy. If successful, a general upgrading of the local economy, including housing and community facilities, will gradually occur. Throughout this incremental process of growth, planning decisions must maintain a constant balance between cost-benefit and the region's ability to pay.

In light of these considerations, the housing solution must be based upon a gradual upgrading of the indigenous qualities and standards of the existing housing; consequently, all requirements of the national standards (FHA) can not be satisfied initially. Though government subsidy has permitted limited construction of FHA housing, only a small portion of the total housing need has been affected, largely because design standards based on FHA specifications have been too costly and therefore generally out of reach of the local economy.

The attraction of industrial growth to East Kentucky will create a new urgency for related housing and community development. Though the family income of the typical wage earner will be higher than at the present, it will still be considerably below that of the national average. A new housing type will be required if the growth of a widespread demand is to be met without massive government subsidy.

In a developing region, wealth is generated primarily from exports. It is, therefore, essential to keep to a minimum that sector of the economy which is engaged primarily in serving the local population. Since housing construction falls almost wholly into this latter category, the number of persons engaged in it should be kept to a minimum. It is generally accepted that only through increased industrialization can the quality of housing be improved on a wide scale and the seasonal unemployment of the building industry be eliminated.

We, therefore, propose:

1) to reduce increasingly the portion of work performed on the site and transfer it to the more highly-controlled and productive conditions common to manufacturing industries;
2) to plan site operations carefully and thus reduce the number of men required to work under site conditions under contractor supervision or on a self-help basis;
3) to raise productivity and quality control through assembly-line techniques and improved management.

It will, therefore, be necessary to study new techniques of production, production and erection sequences, and detailing and performance standards. It is both our belief and objective that the systematization of housing construction does not require that all buildings

look alike. Much variation can be achieved through modular coordination of prefabricated elements. Rapid construction of a large number of higher quality units might then be possible to satisfy a surge of demand for housing and community facilities in the vicinity of new industry.

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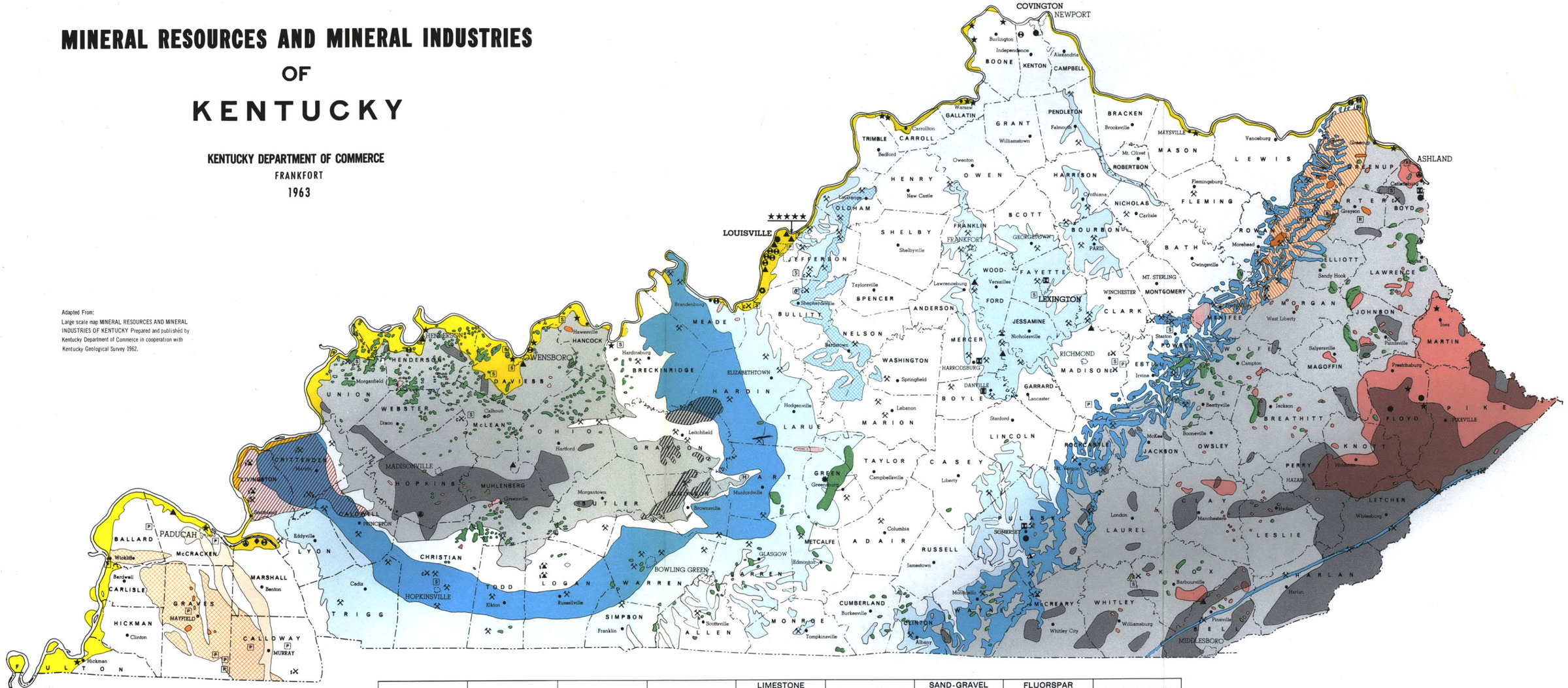
APPENDIX I

GENERAL, PRESTONSBURG AREA

MINERAL RESOURCES AND MINERAL INDUSTRIES OF KENTUCKY

KENTUCKY DEPARTMENT OF COMMERCE
FRANKFORT
1963

Adapted From:
Large scale map MINERAL RESOURCES AND MINERAL INDUSTRIES OF KENTUCKY Prepared and published by Kentucky Department of Commerce in cooperation with Kentucky Geological Survey 1962.



	COAL	PETROLEUM	NATURAL GAS	LIMESTONE AND DOLOMITE	CLAY AND SHALE	SAND-GRAVEL AND SANDSTONE	FLUORSPAR AND OTHER VEIN MINERALS	ROCK ASPHALT
RESOURCES	COAL FIELD	In recent years secondary recovery methods—primarily water flooding—in many of the old fields have become increasingly important in the recovery of oil in Kentucky. The near depleted or abandoned oil fields are not shown.	Ninety percent of Kentucky's annual gas production comes from the Big Sandy gas field in eastern Kentucky. Depleted fields are shown only where they have been converted to gas storage areas.	PRINCIPAL AREAS OF OCCURRENCE LIMESTONE WITH HIGH-CALCIUM ZONES LIMESTONE DOLOMITE	PRINCIPAL AREAS OF OCCURRENCE REFRACTORY CLAY BALL CLAY ABSORBENT CLAY	PRINCIPAL AREAS OF OCCURRENCE MISCELLANEOUS SAND AND GRAVEL [The widespread sand and chert gravel deposits of the region west of Cumberland River are not included.]	WESTERN KENTUCKY FLUORSPAR DISTRICT	PRINCIPAL AREAS OF OCCURRENCE [Not Presently Active]
INDUSTRY	PRINCIPAL PRODUCING AREA	PRINCIPAL PRODUCING AREA	PRINCIPAL PRODUCING AREA STORAGE FIELD	CRUSHED STONE QUARRY DIMENSION STONE QUARRY	PRINCIPAL PRODUCING AREA OPERATION OUTSIDE PRINCIPAL CLAY AREAS	SAND and/or GRAVEL PROCESSING SANDSTONE QUARRY DIMENSION STONE QUARRY GLASS SAND OPERATION	FLUORSPAR MINE FLUORSPAR AND BARITE MINE	Large reserves of natural rock asphalt occur in Kentucky. These deposits once provided considerable quantities of paving material for highway surfacing. Principal commercial development in the past has been in Edmonson County. Deposits have also been mined in Grayson, Breckinridge, Hardin and Logan counties. Research may revive new interest in the commercial aspects of this material.
PRINCIPAL INDUSTRIAL PLANTS	ELECTRIC STEAM GENERATING STATION ELECTRIC STEAM GENERATING STATION [Under Construction] COKING PLANT	REFINERY OTHER HYDROCARBON PLANT	STRIPPING PLANT	CEMENT PLANT	R REFRACTORY P POTTERY S STRUCTURAL	GLASS PLANT	FLUORITE PRODUCTS PLANT	

MINERALS OF KENTUCKY

Compiled By

KENTUCKY DEPARTMENT
OF
ECONOMIC DEVELOPMENT

Frankfort - 1958

L E G E N D

COAL
- OUTLINE OF EASTERN & WESTERN COAL FIELDS
- PRINCIPAL PRODUCING AREA

OIL
- PRINCIPAL PRODUCING AREA

GAS
- PRINCIPAL PRODUCING AREA

LIMESTONE
- GENERALIZED HIGH CALCIUM ZONE
- LIMESTONE OPERATION

CLAY
- PRINCIPAL AREA OF OCCURENCE
- OPERATION

FLUORSPAR
- OUTLINE OF DISTRICT
- OPERATION

ROCK ASPHALT
- * FORMER OPERATION (Inactive since 1957)

89° 88° 87° 86° 85° 84° 83° 82°

39° 38° 37°

COVINGTON NEWPORT BOONE KENTON CAMPBELL GALLATIN GRANT PENDLETON BRACKEN TRIMBLE CARROLL MASON ROBERTSON LEWIS GREENUP ASHLAND HENRY OWEN HARRISON NICHOLAS FLEMING CARTER BOYD OLDHAM LOUISVILLE SHELBY FRANKLIN SCOTT BOURBON ROWAN ELLIOTT JEFFERSON MEADE WOOD-FORD FAYETTE BATH MORGAN LAWRENCE SPENCER ANDERSON LEXINGTON MONTGOMERY MENIFEE BULLITT CLARK JOHNSON MARTIN JESSAMINE POWELL WOLFE HENDERSON DAVIESS HANCOCK BRECKINRIDGE HARDIN NELSON WASHINGTON MERCER GARRARD MADISON ESTILL BREATHITT FLOYD PIKE WEBSTER McLEAN OHIO GRAYSON LARUE MARION BOYLE LINCOLN MAGOFFIN CRITTENDEN LIVINGSTON HOPKINS MUHLENBERG EDMONSON HART TAYLOR CASEY ROCKCASTLE JACKSON OWSLEY KNOTT PERRY LESLIE CLAY LETCHER CALDWELL LYON BUTLER GREEN PULASKI PADUCAH BALLARD McCRACKEN CHRISTIAN TODD LOGAN WARREN BARREN ADAIR RUSSELL LAUREL KNOX HARLAN CARLISLE MARSHALL GRAVES HICKMAN CALLOWAY TRIGG SIMPSON ALLEN METCALFE MONROE CUMBERLAND CLINTON WAYNE McCREARY WHITLEY BELL FULTON

10 0 10 20 30 40 Miles

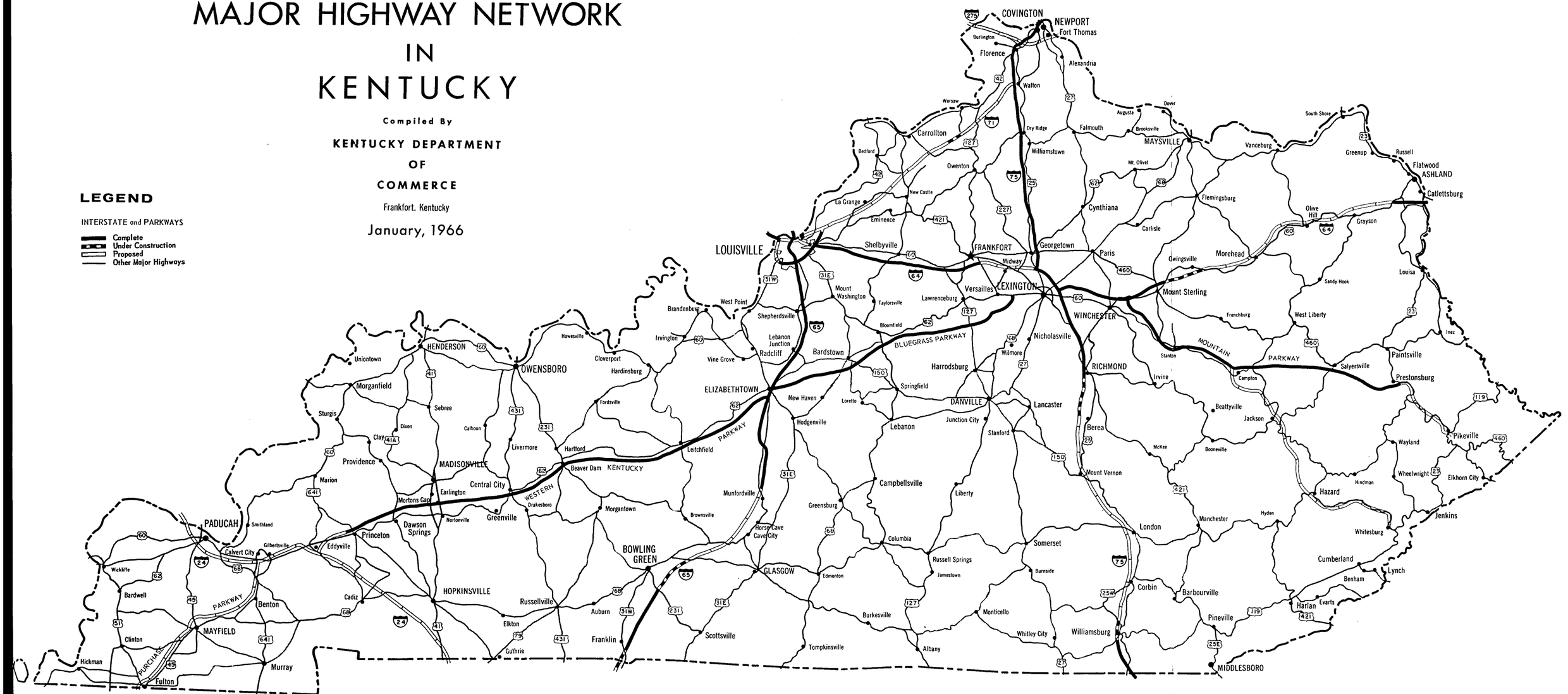
MAJOR HIGHWAY NETWORK IN KENTUCKY

Compiled By

KENTUCKY DEPARTMENT OF COMMERCE

Frankfort, Kentucky

January, 1966



RAILROADS SERVING KENTUCKY

AUG. 1963

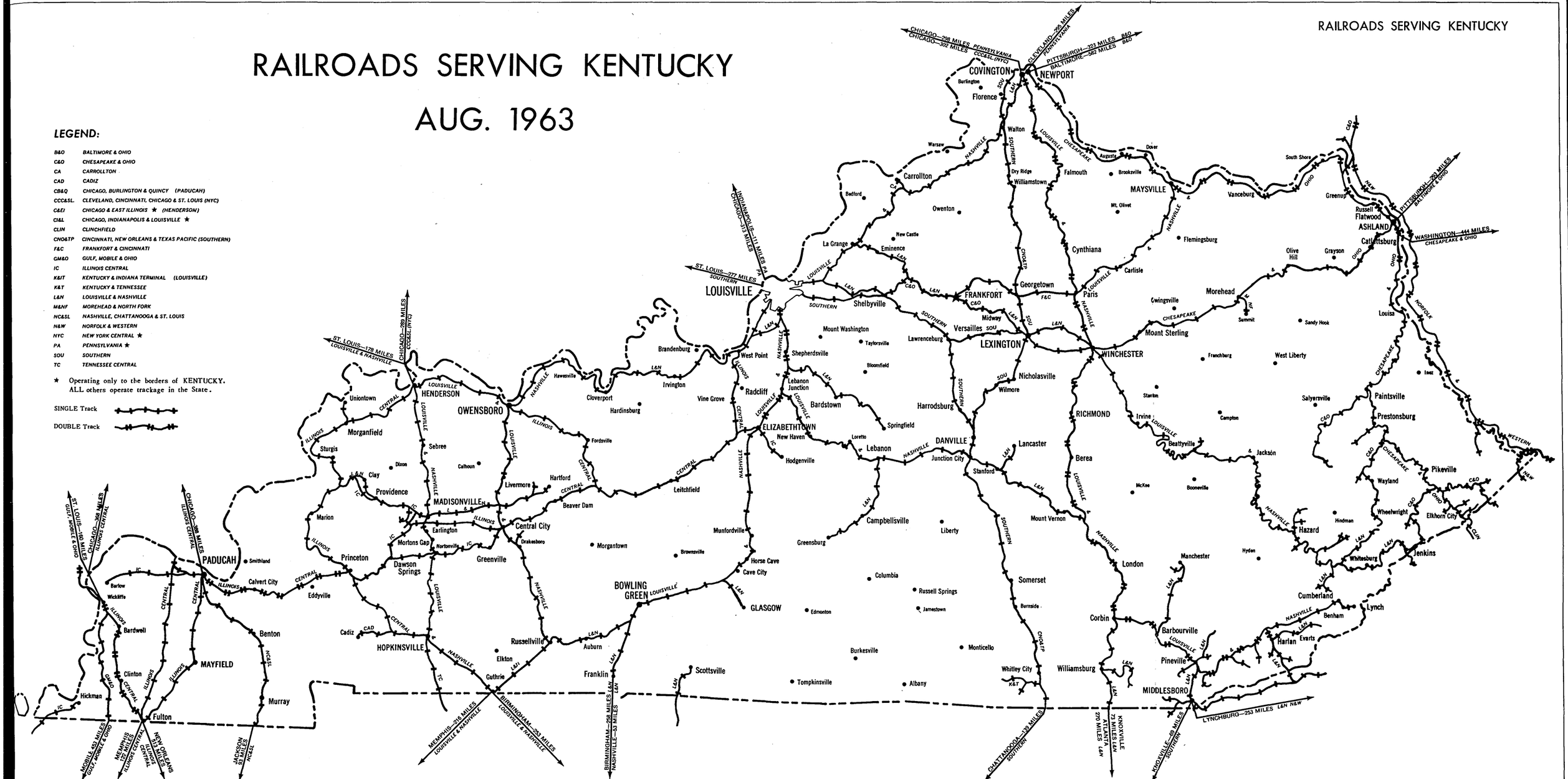
LEGEND:

B&O	BALTIMORE & OHIO
C&O	CHESAPEAKE & OHIO
CA	CARROLLTON
CAD	CADIZ
CB&Q	CHICAGO, BURLINGTON & QUINCY (PADUCAH)
CCC&SL.	CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS (NYC)
C&EI	CHICAGO & EAST ILLINOIS ★ (HENDERSON)
CI&L	CHICAGO, INDIANAPOLIS & LOUISVILLE ★
CLIN	CLINCHFIELD
CNO&TP	CINCINNATI, NEW ORLEANS & TEXAS PACIFIC (SOUTHERN)
F&C	FRANKFORT & CINCINNATI
GM&O	GULF, MOBILE & OHIO
IC	ILLINOIS CENTRAL
K&IT	KENTUCKY & INDIANA TERMINAL (LOUISVILLE)
K&T	KENTUCKY & TENNESSEE
L&N	LOUISVILLE & NASHVILLE
M&NF	MOREHEAD & NORTH FORK
NC&SL	NASHVILLE, CHATTANOOGA & ST. LOUIS
N&W	NORFOLK & WESTERN
NYC	NEW YORK CENTRAL ★
PA	PENNSYLVANIA ★
SOU	SOUTHERN
TC	TENNESSEE CENTRAL

★ Operating only to the borders of KENTUCKY. ALL others operate trackage in the State.

SINGLE Track

DOUBLE Track



DEWEY LAKE STATE PARK

PRESTONSBURG KENTUCKY

EXISTING LAND USE NOV 1965

- SINGLE FAMILY RESIDENCE
- MULTI-FAMILY RESIDENCE
- TRAILER
- BUSINESS
- PUBLIC
- SEMI-PUBLIC
- LIGHT INDUSTRY
- HEAVY INDUSTRY

400 200 0 400 800 1200 1600 2000

GRAPHIC SCALE IN FEET

PREPARED BY

KENTUCKY DEPARTMENT OF ECONOMIC DEVELOPMENT

IN CO-OPERATION WITH

PRESTONSBURG CITY PLANNING COMMISSION

MARCH, 1959

JANUARY 1966

SOURCE OF BASE DATA

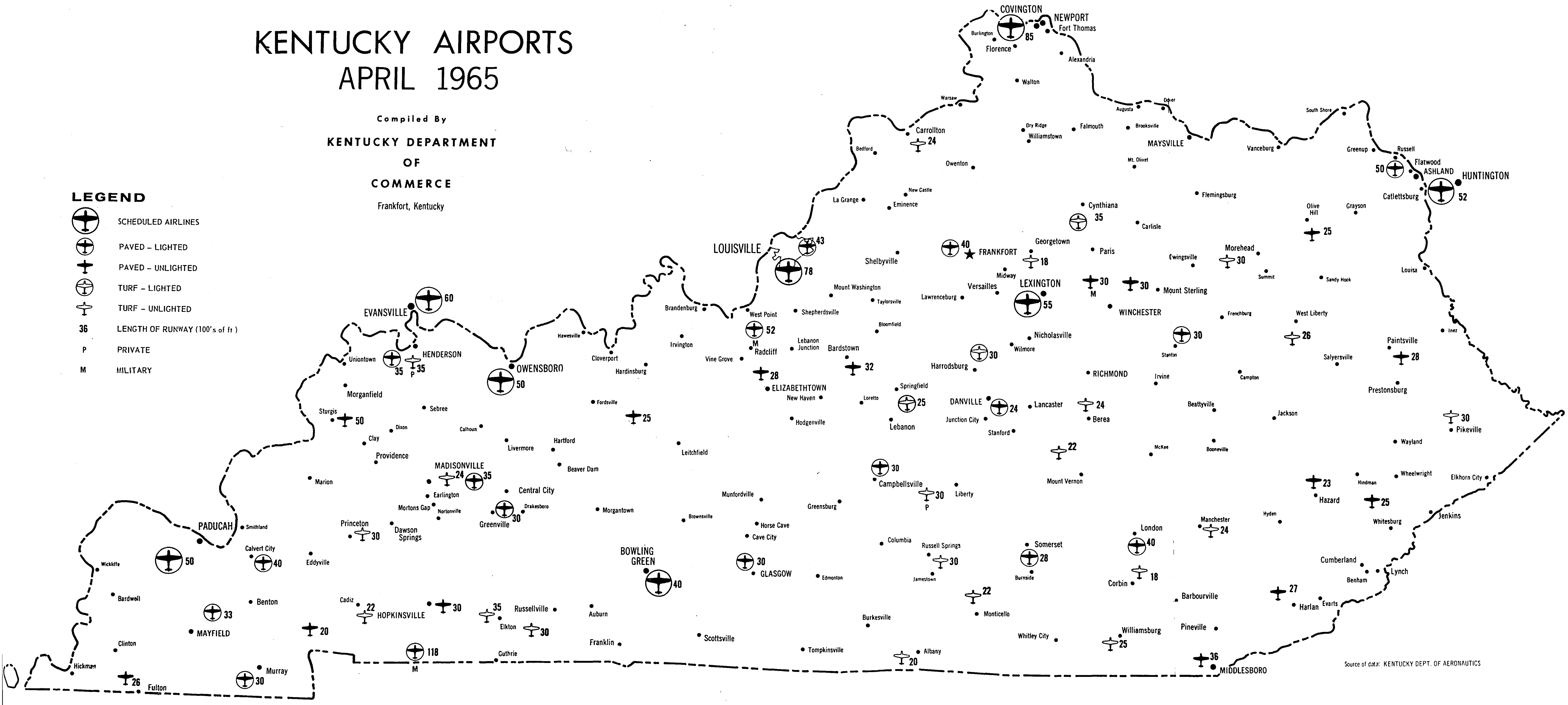
USGS 7.5 minute series topographic mapping, dated 1954 and data furnished by Prestonsburg City Planning Commission

KENTUCKY AIRPORTS
APRIL 1965

Compiled By

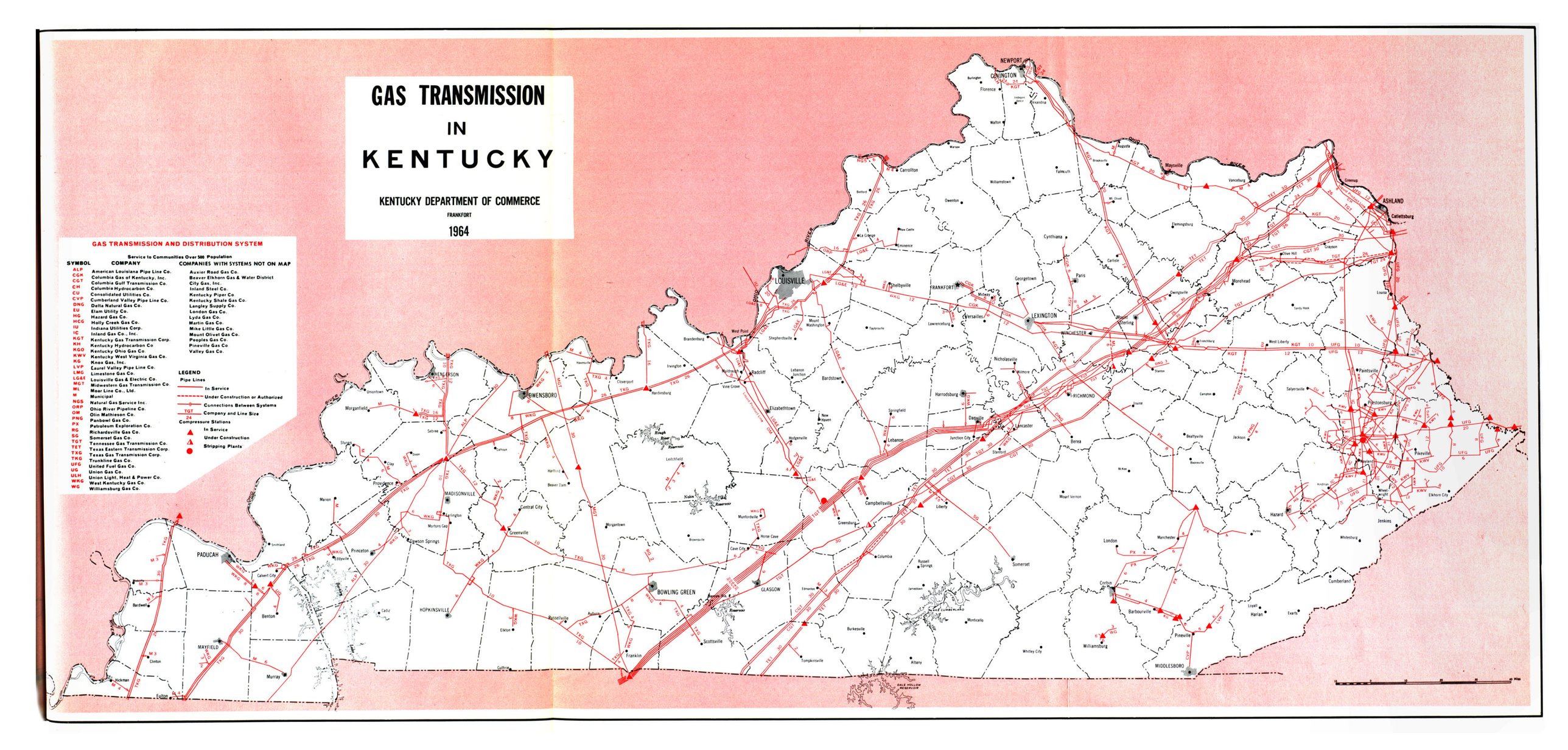
KENTUCKY DEPARTMENT OF COMMERCE

Frankfort, Kentucky



GAS TRANSMISSION IN KENTUCKY

KENTUCKY DEPARTMENT OF COMMERCE
FRANKFORT
1964

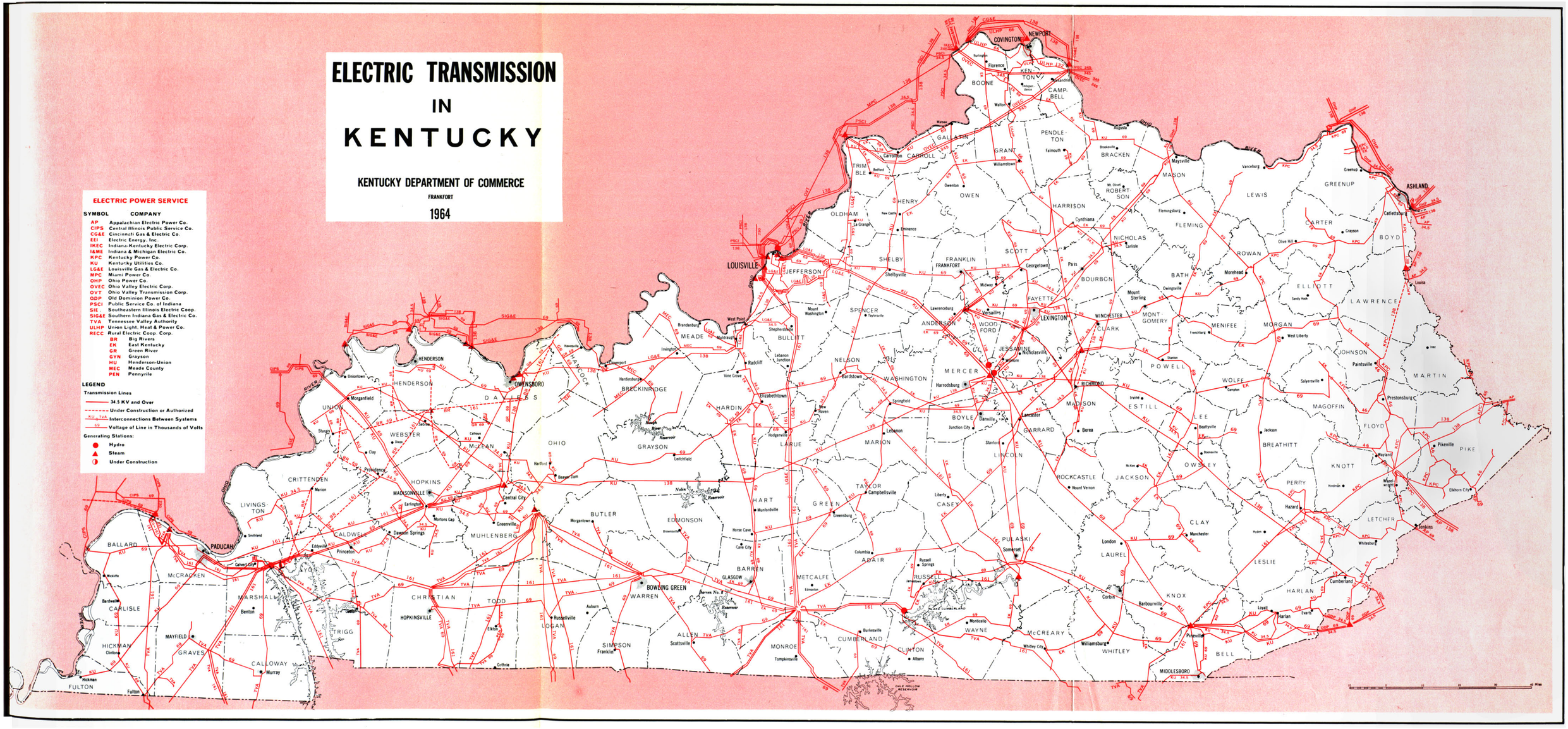


ELECTRIC TRANSMISSION IN KENTUCKY

KENTUCKY DEPARTMENT OF COMMERCE

FRANKFORT

1964

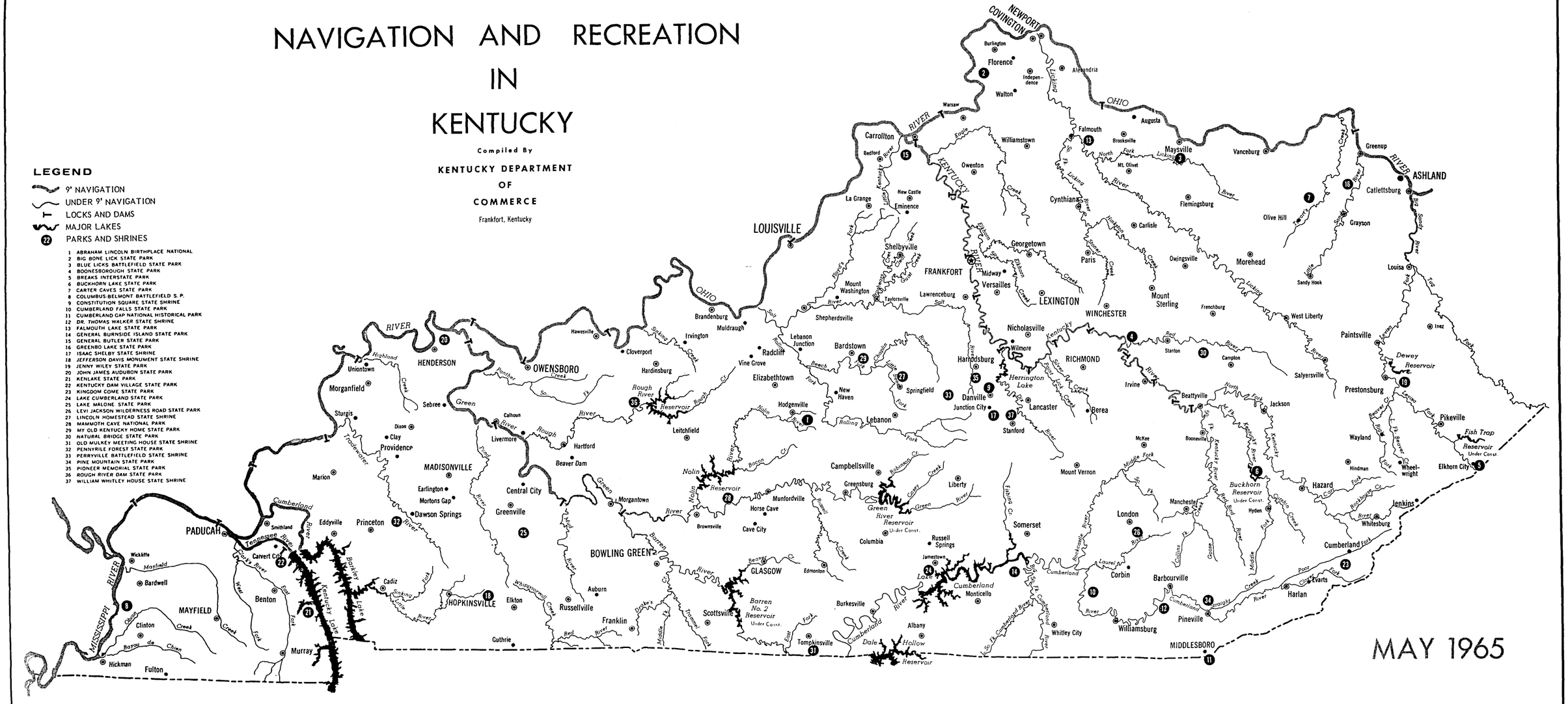


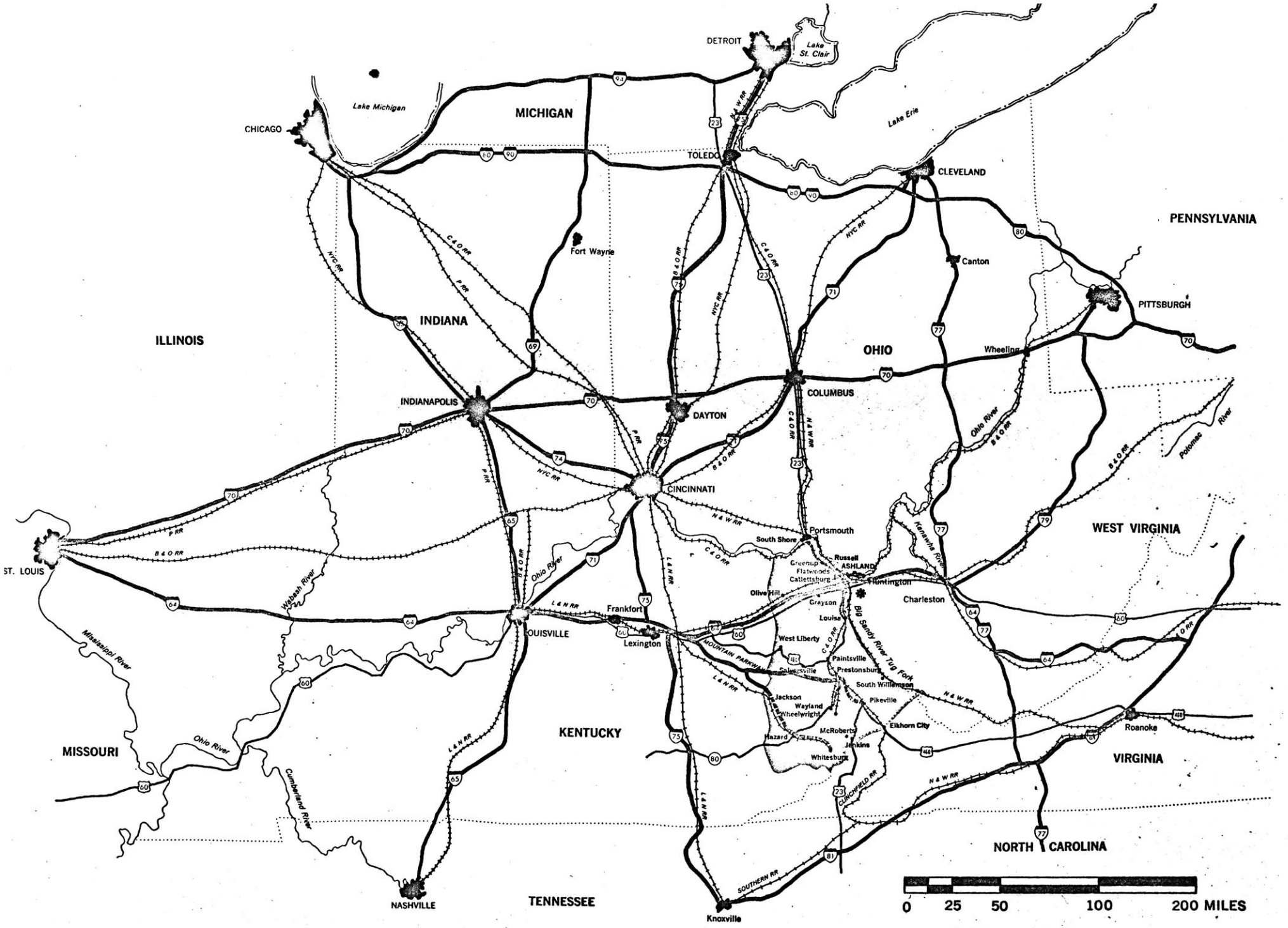
NAVIGATION AND RECREATION IN KENTUCKY

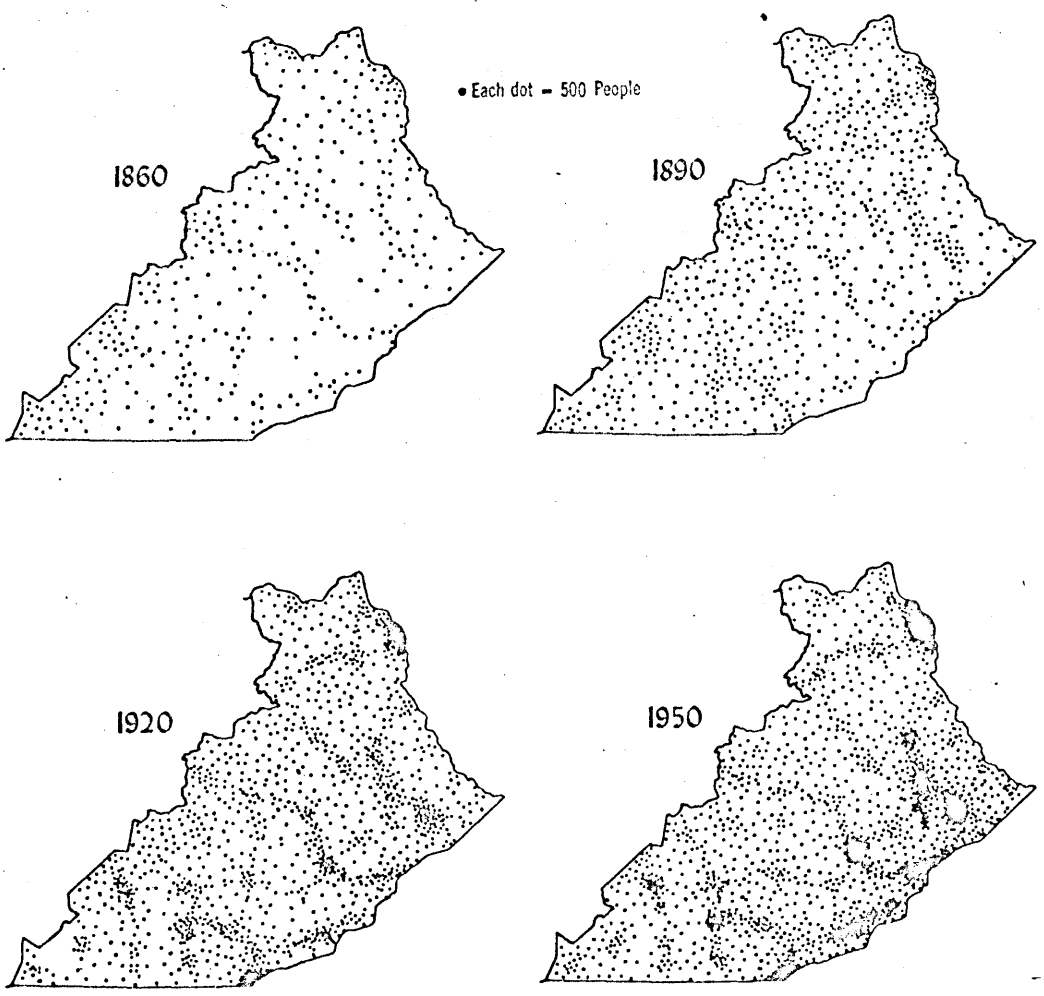
Compiled By

KENTUCKY DEPARTMENT OF COMMERCE

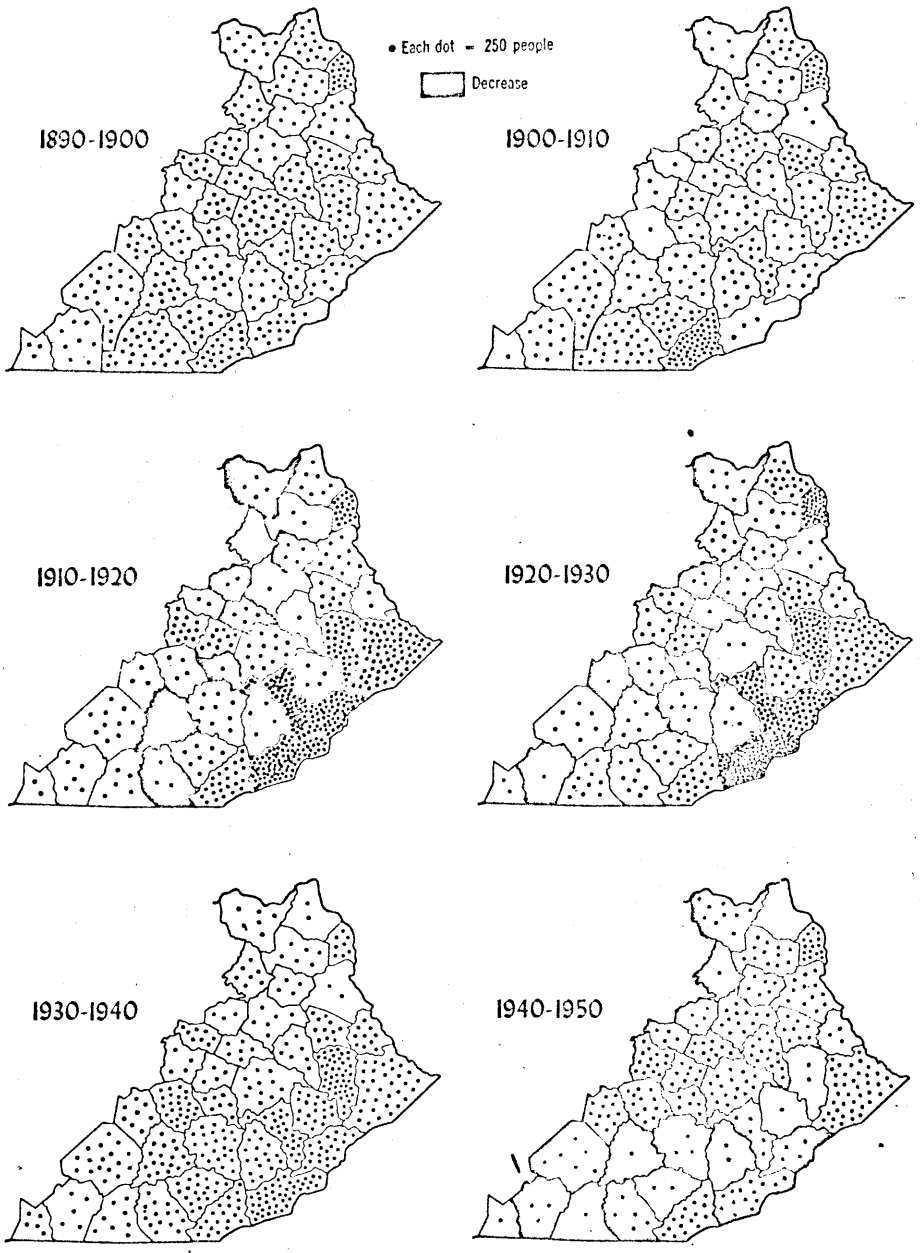
Frankfort, Kentucky



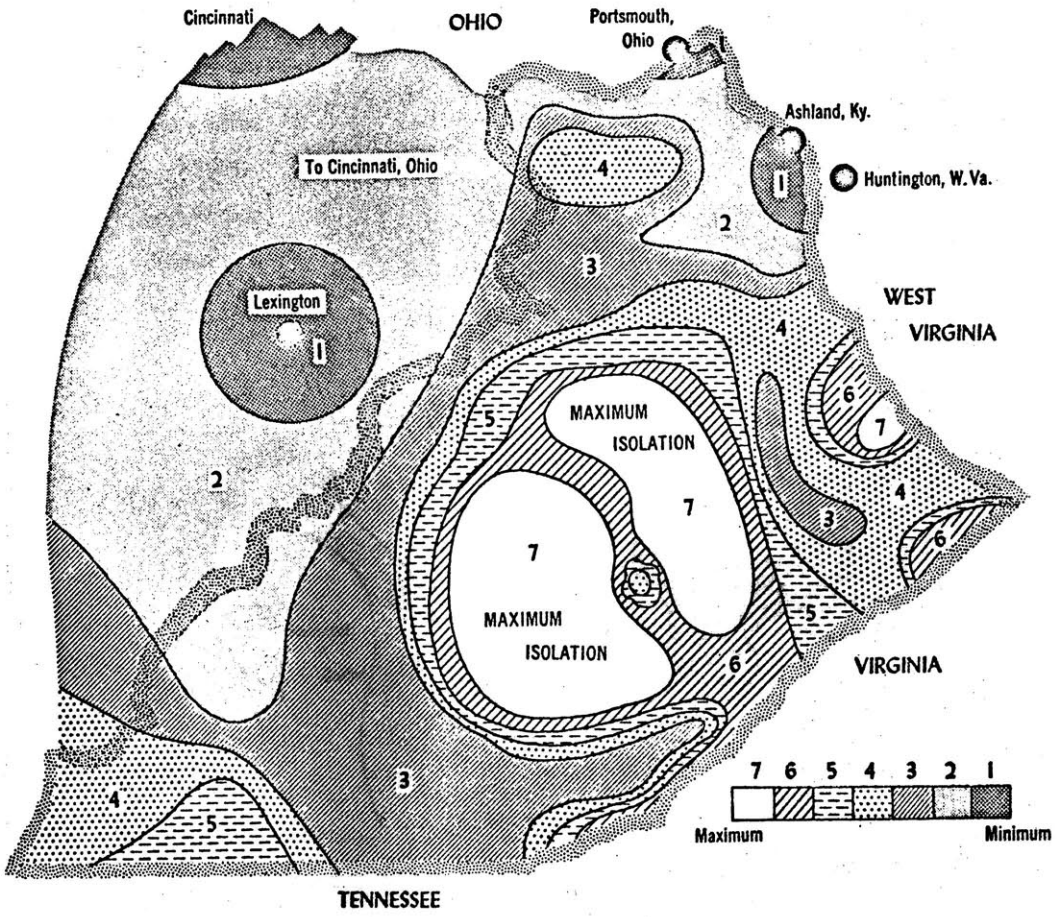

DETROIT
Lake St. Clair
Lake Michigan
MICHIGAN
CHICAGO
Lake Erie
TOLEDO
CLEVELAND
PENNSYLVANIA
Fort Wayne
Canton
PITTSBURGH
INDIANA
ILLINOIS
OHIO
Wheeling
INDIANAPOLIS
COLUMBUS
DAYTON
CINCINNATI
Ohio River
Potomac River
WEST VIRGINIA
Portsmouth
South Shore
Russell
ASHLAND
Greenup
Flatwoods
Catlettsburg
Huntington
Charleston
Olive Hill
Grayson
Louisa
Kanawha River
ST. LOUIS
Wabash River
Frankfort
LOUISVILLE
Lexington
West Liberty
Paintsville
Prestonsburg
South Williamson
Big Sandy River Tug Fork
Mississippi River
Jackson
Wayland
Wheelwright
Pikeville
Elkhorn City
Roanoke
KENTUCKY
Hazard
McRoberts
Jenkins
Whitesburg
MISSOURI
Ohio River
VIRGINIA
Cumberland River
NORTH CAROLINA
NASHVILLE
TENNESSEE
Knoxville
0 25 50 100 200 MILES



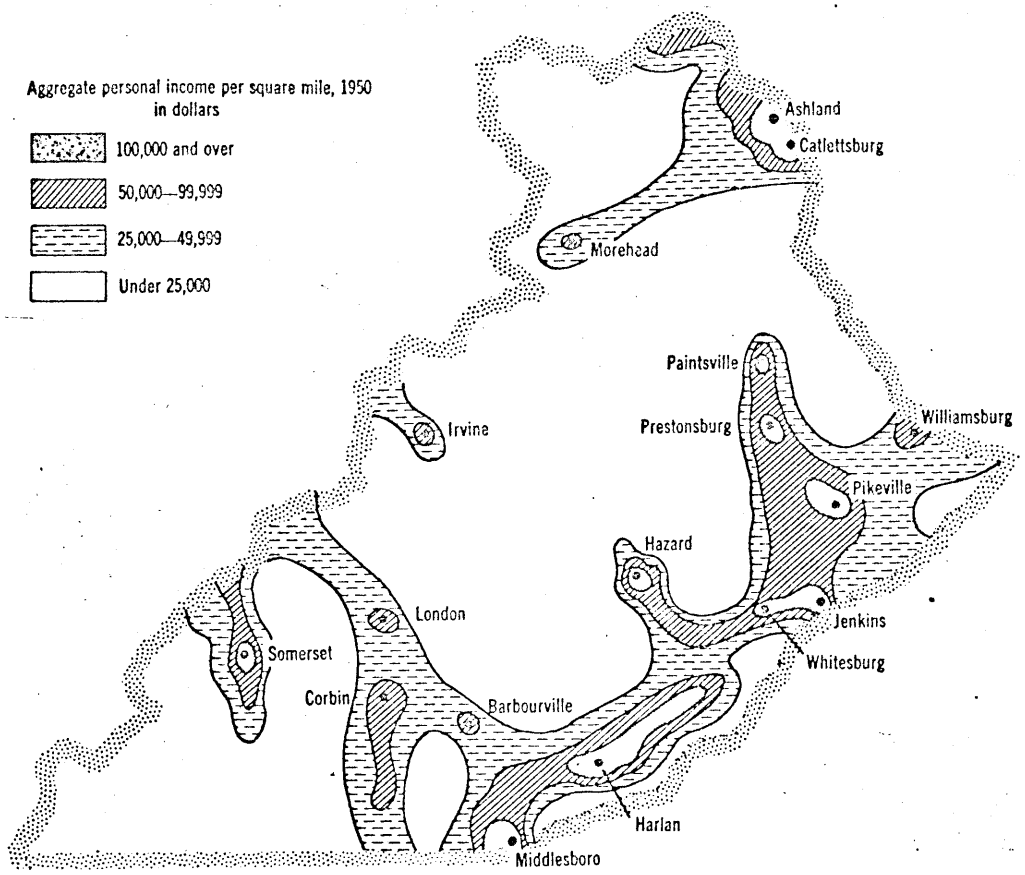
Map 3–1. East Kentucky population 1860, 1890, 1920, and 1950. (*Source:* U.S. decennial population censuses.)



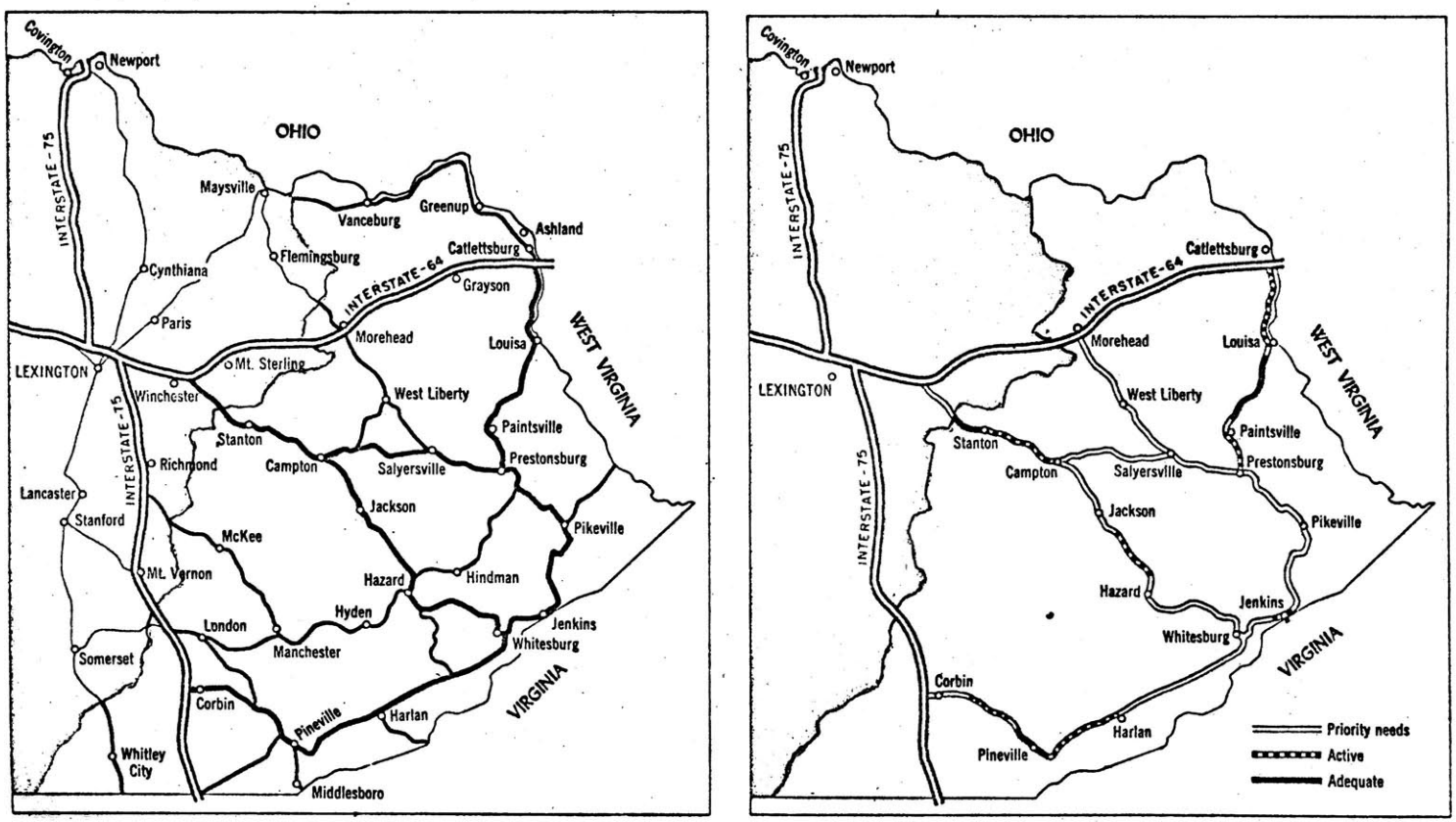
Map 3–2. East Kentucky population changes 1890–1900, 1900–10, 1910–20, 1920–30, 1930–40, 1940–50. (McCreary County was carved out of parts of Pulaski, Wayne, and Whitley counties between the 1910 and 1920 censuses.)



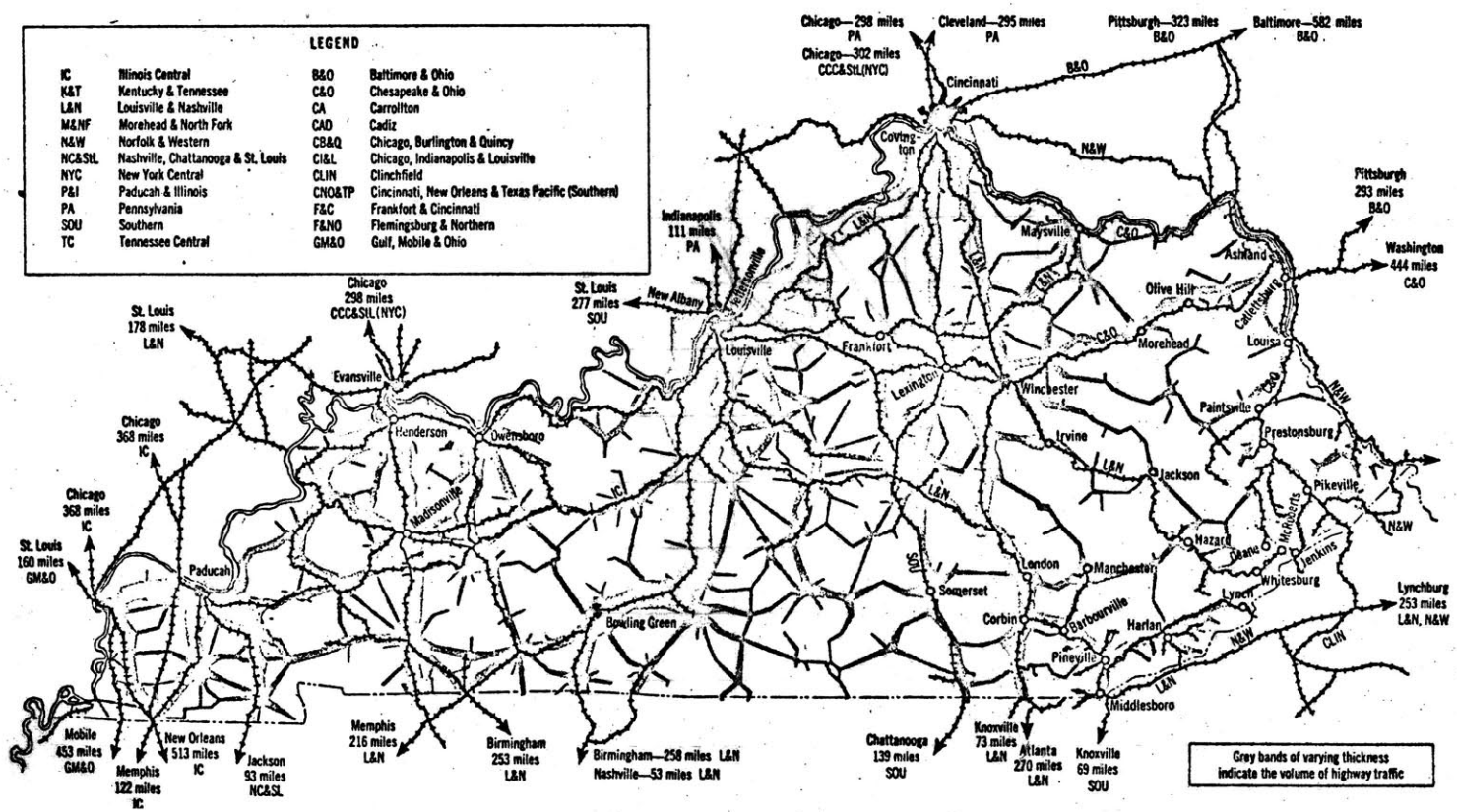
Isolation contours, East Kentucky.



Map 2–2. Market potential contours, East Kentucky.



Road network proposed for East Kentucky (plans developed by the State Highway Department on the basis of recommendations by the Eastern Kentucky Regional Planning Commission). The network proposed for completion ultimately is outlined on the map at left. The map at right shows priority needs for improvement, active highway department projects, and road sections deemed adequate for the present. The East Kentucky boundary was drawn here to exclude Pulaski, Wayne, and Clinton counties in the southwest. (*Source:* Kentucky Department of Highways, 1959.)



Map 2–1. Railways (1954) and highway use (1952), Kentucky. (*Sources:* Railroads based on map compiled by Agricultural and Industrial Development Board of Kentucky, 1954; highway use information from Kentucky Department of Highways.)

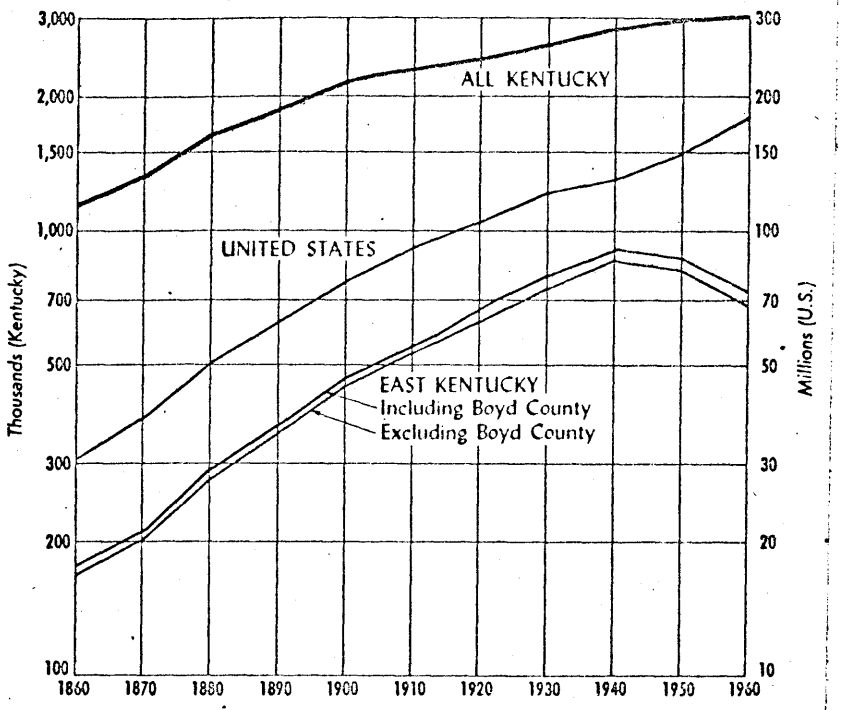


Figure 3–1. Population growth, United States, All Kentucky, and East Kentucky, 1860–1960.

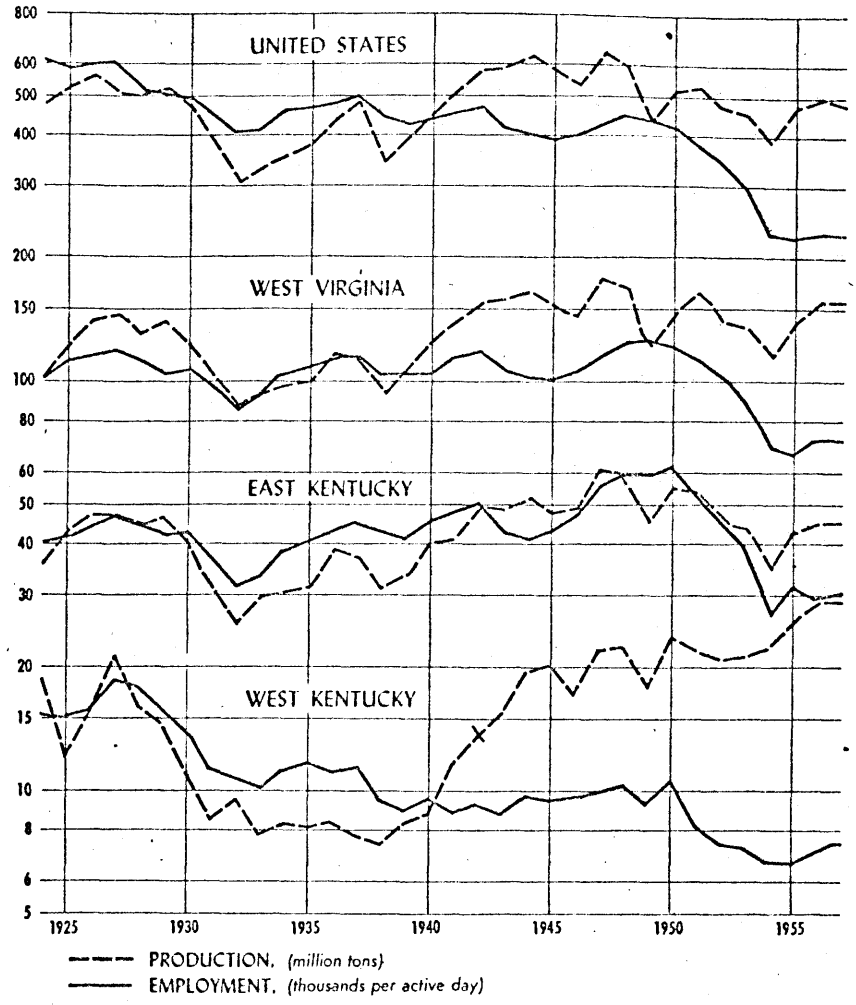


Figure 4–1. Bituminous coal production and employment, United States, West Virginia, East and West Kentucky, 1924–57.

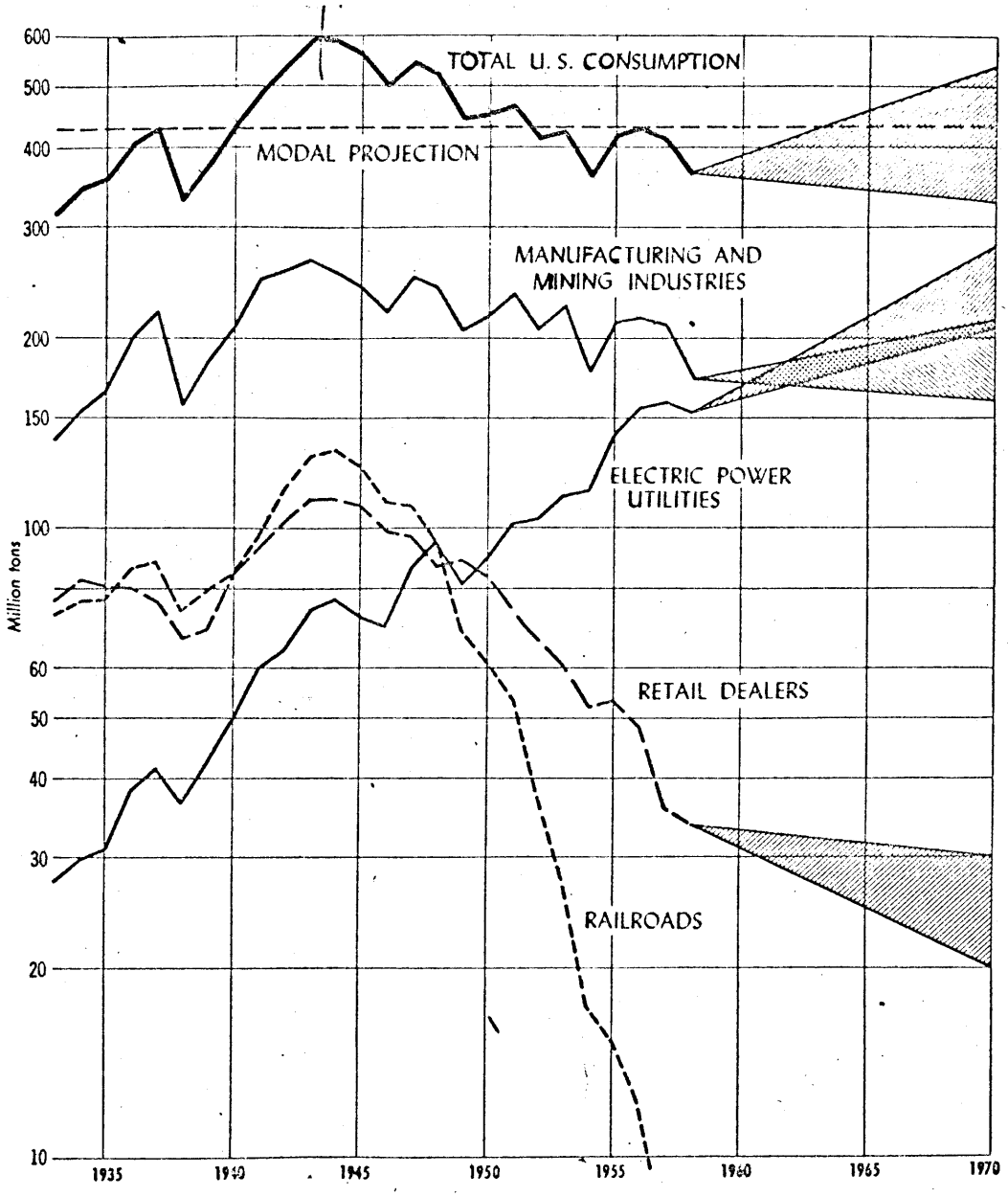


Figure 4–5. United States consumption of bituminous coal and lignite, by major consumption categories, 1933–58, with projections to 1970.

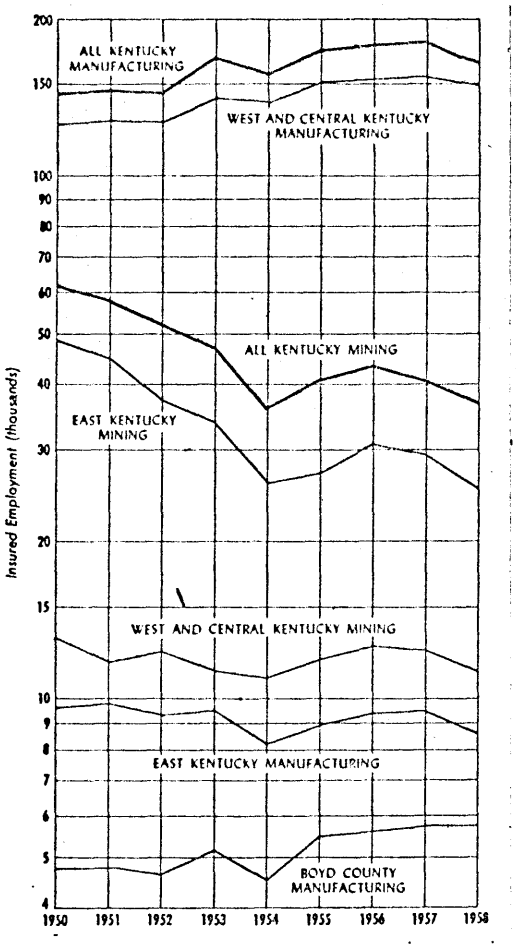


Figure 6–2. Insured employment in mining and manufacturing, Kentucky, 1950–58.

SUMMARY DATA

POPULATION:

1960: Prestonsburg - 3,133 Floyd County - 41,642

PRESTONSBURG LABOR SUPPLY AREA:

Includes Floyd and all adjoining counties. Estimated number of workers available for industrial jobs in the labor supply area: 6,333 men and 11,506 women. Number of workers available from Floyd County: 1,232 men and 2,928 women.

TRANSPORTATION:

Railroads: The Ashland Division of the Chesapeake & Ohio Railway Company, operating between Ashland and Elkhorn City, serves Prestonsburg.

Air: The nearest major airport is the Tri-State Airport at Kenova, West Virginia, 80 miles distant.

Combs Airport, located 5 miles north of Prestonsburg, has 2,800 feet of paved runway.

Trucks: Common carrier truck service is provided by Point Express, Inc., Bell Lines, Inc., and Hogan Storage and Transfer Company.

Bus Lines: Southern Greyhound Bus Lines and Allen Brothers Bus Line serve Prestonsburg.

HIGHWAY DISTANCES FROM PRESTONSBURG, KENTUCKY, TO:

Town	Miles	Town	Miles
Atlanta, Ga.	452	Lexington, Ky.	120
Chicago, Ill.	519	Memphis, Tenn.	571
Cincinnati, Ohio	218	New York, N. Y.	732
Detroit, Mich.	398	St. Louis, Mo.	508

POPULATION AND LABOR MARKET

Population

Prestonsburg has shown a net population increase in each decade in the past 60 years except during the period between 1950 and 1960. Floyd County has shown a net increase in each decade in the past 60 years except between 1950 and 1960.

TABLE 1

POPULATION DATA FOR PRESTONSBURG AND FLOYD COUNTY WITH COMPARISONS TO THE KENTUCKY RATE OF CHANGE, 1900-60

	Prestonsburg		Floyd County		Kentucky
Year	Population	% Change	Population	% Change	% Change
1900	409		15,552		15.5
1910	1,120	173.8	18,623	19.7	6.6
1920	1,667	48.8	27,427	47.3	5.5
1930	2,105	26.3	41,942	52.9	8.2
1940	2,328	10.6	52,986	26.3	8.8
1950	3,585	53.9	53,500	0.9	3.5
1960	3,133	- 12.6	41,642	-22.1	3.2

Source: U. S. Bureau of the Census, U. S. Census of Population: 1960, "General Population Characteristics," Kentucky.

Economic Characteristics

Floyd County is located in the "heart" of the Eastern Kentucky Coal Field, which explains why 2,775 persons were employed in mining and quarrying in September, 1965. Total employment in September, 1965, in all industries was 4,590, excluding those directly employed in agriculture. In the Fall of 1959, 946 workers were reported employed in agriculture.

TABLE 2

FLOYD COUNTY LABOR MARKET, AVERAGE WEEKLY INCOME, TOTAL AND PER CAPITA PERSONAL INCOME

County	Weekly Wages		Personal Income		
	All Industries	Manufacturing	Total (000)	Per Capita	Per Capita Rank*
Floyd	$87.07	$ 82.73	$ 45,139	$1,016	90
Johnson	63.40	57.98	18,096	968	94
Knott	67.81	76.38	12,628	759	111
Magoffin	60.93	34.74	6,639	635	119
Martin	58.87	36.95	4,662	473	120
Pike	85.14	64.89	66,365	1,020	88
KENTUCKY	$93.06	$106.91	$5,566,097	$1,799	--

*County rankings presented here are the per capita personal income for that county among the total 120 Kentucky counties.

Sources: Kentucky Department of Economic Security (Average Weekly Wage for All Industries and Manufacturing, 1964) for Weekly Wages; Bureau of Business Research, College of Commerce, University of Kentucky, Kentucky Personal Income 1963, 1965, for Personal Income.

Labor Market

Supply Area: The Prestonsburg labor supply area is defined for the purpose of this statement to include Floyd and the adjacent counties of Johnson, Knott, Magoffin, Martin, and Pike.

Labor Potential Defined: The total estimated labor supply is composed of three major groups. The first two are currently available for industrial employment, the third group describes the potential for future years.

1. The current unemployed, measured here by unemployment insurance claimants.

2. Men who would shift from low paying jobs such as agriculture and women who would enter the labor force if jobs were available.

3. The future labor supply due to aging of the population and measured here by the number of boys and girls who will become 18 years of age during the next five years (1967-1971).

TABLE 6

PRESTONSBURG AREA MANUFACTURING EMPLOYMENT
SEPTEMBER, 1965

	Area Total	Floyd	Jackson	Knott	Magoffin	Martin	Pike
Total manufacturing	814	226	190	20	60	85	233
Food & kindred products	122	0	41	0	0	0	81
Tobacco	2	0	0	0	0	0	2
Clothing, textile and leather	155	83	72	0	0	0	0
Lumber and furniture	331	34	38	19	60	85	95
Print., pub. and paper	40	6	9	0	0	0	25
Chemicals, petroleum and rubber	37	37	0	0	0	0	0
Stone, clay and glass	58	14	14	0	0	0	30
Primary metals	0	0	0	0	0	0	0
Machinery, metal products and equipment	69	52	16	1	0	0	0
Other	0	0	0	0	0	0	0

Source: Kentucky Department of Economic Security (Number of Workers in Manufacturing Industries Covered by Kentucky Unemployment Insurance Law Classified by Industry and County).

TABLE 7

PRESTONSBURG AREA COVERED EMPLOYMENT,
ALL INDUSTRIES, SEPTEMBER, 1965

	Area Total	Floyd	Johnson	Knott	Magoffin	Martin	Pike
Mining and Quarrying	8,114	2,775	271	401	92	161	4,414
Contract Construction	856	402	95	12	35	11	301
Manufacturing	814	226	190	20	60	85	233
Transportation, Communication and Utilities	922	238	212	44	54	19	355
Wholesale and Retail Trade	2,644	595	626	33	91	36	1,263
Finance, Ins. and Real Estate	430	109	81	9	9	6	216
Services	914	241	296	8	9	2	358
Other	12	4	0	0	0	0	8
Total	14,706	4,590	1,771	527	350	320	7,148

Source: Kentucky Department of Economic Security (Number of Workers Covered by Kentucky Unemployment Insurance Law Classified by Industry and County).

LOCAL MANUFACTURING

An alphabetical listing of the manufacturing facilities in the immediate Prestonsburg area with product and employment data is shown in Table 8.

TABLE 8

PRESTONSBURG MANUFACTURING FIRMS WITH PRODUCTS AND EMPLOYMENT, 1966

Firm	Product	Employment		
		Male	Female	Total
Big Sandy Ready Mix Concrete	Concrete	3	0	3
Coal Bit Co., Inc.	Carbide tip mining machine bits	16	3	19
Kentucky Appalachian Industries, Inc.	Quality sewing			165
May Sign Company	Signs	7	1	8
Prestonsburg Publishing Company	Newspaper publishing, commercial printing	5	0	5

Prevailing Wage Rates

Average weekly wage rate for all industries in 1964 for Floyd County was $87.07, and the average weekly wage for manufacturing was $82.73 for the same period. The state averages for the same period were $106.91 for manufacturing and $93.06 for all industries.

Examples of wages in the Prestonsburg area are:

Classification	Rate Per Hour
Clerical and Secretarial	$1.25 to $2.00
Laborer	1.25 up
Semiskilled	1.25 to 1.75
Skilled	1.75 to 2.75

TRANSPORTATION

Transportation facilities in this eastern Kentucky community have improved vastly in the past few years and are now considered excellent.

The completion of the Mountain Parkway, a modern toll road from Prestonsburg to Winchester where it connects with Interstate 64, gives Prestonsburg modern highway access to all of Kentucky. Construction of the Combs Airport, only 5 miles from Prestonsburg, is another major transportation improvement.

Railroads

Prestonsburg is served by the Ashland Division of the Chesapeake & Ohio Railway Company operating between Ashland and Elkhorn City. There are two through freights and one local freight daily each way. Switching service is provided six days a week with sidings for 40 cars. Outbound carloads average 1,210 per month, consisting almost entirely of coal. Inbound carloads average 75 per month and consist mostly of gas field supplies and government commodities.

TABLE 9

RAILWAY TRANSIT TIME FROM PRESTONSBURG, KENTUCKY, TO:

Town	No. of Days CL	LCL	Town	No. of Days CL	LCL
Atlanta, Ga.	2	6	Louisville, Ky.	1	4
Birmingham, Ala.	3	6	Los Angeles, Calif.	4	12
Chicago, Ill.	1	4	Nashville, Tenn.	2	5
Cincinnati, Ohio	1	4	New Orleans, La.	3	6
Cleveland, Ohio	2	5	New York, N. Y.	3	9
Detroit, Mich.	2	4	Pittsburgh, Pa.	2	6
Knoxville, Tenn.	2	6	St. Louis, Mo.	2	6

Source: Chesapeake & Ohio Railway Company, June 1966

Highways

Prestonsburg is served by U. S. Highway 23, 460, and State Routes 114, 1427, and 1428. The Mountain Parkway, a four-lane toll road that runs from Winchester to Campton, has a two-lane extension to Prestonsburg. This modern highway connects with I-64 at Winchester and gives Prestonsburg modern highway access to all of Kentucky.

TABLE 10

HIGHWAY DISTANCES FROM PRESTONSBURG, KENTUCKY, TO:

Town	Miles	Town	Miles
Atlanta, Ga.	452	Louisville, Ky.	200
Chicago, Ill.	519	Nashville, Tenn.	403
Cincinnati, Ohio	218	New York, N. Y.	732
Detroit, Mich.	398	Pittsburgh, Pa.	370
Lexington, Ky.	120	St. Louis, Mo.	508

Truck Service: Commercial trucking service is provided Prestonsburg by Point Express, Inc., Charleston, West Virginia; Bell Lines, Inc., Lexington, Kentucky; and Hogan Storage and Transfer Co., Williamson, West Virginia.

TABLE 11

TRUCK TRANSIT TIME FROM PRESTONSBURG, KENTUCKY, TO SELECTED MARKET CENTERS

Town	Delivery Time LTL (Days)	TL	Town	Delivery Time LTL (Days)	TL
Atlanta, Ga.	3	2	Louisville, Ky.	3	2
Birmingham, Ala.	3	2	Los Angeles, Calif.	6	5
Chicago, Ill.	3	2	Nashville, Tenn.	3	2
Cincinnati, Ohio	ON*	ON	New Orleans, La.	4	3
Cleveland, Ohio	3	2	New York, N. Y.	3	2
Detroit, Mich.	3	2	Pittsburgh, Pa.	3	2
Knoxville, Tenn.	3	2	St. Louis, Mo.	3	2

*Overnight

Source: Point Express, Inc., Charleston, West Virginia, June 1966

TABLE I

SUMMARY OF PRESTONSBURG'S LAND USE,
NOVEMBER, 1965.

Land Use	Land Use in Acres	Per Cent of Total Area	Per Cent of Developed Area
Residential	187.18	17.4	43.0
Commercial	38.63	3.6	8.9
Industrial	21.61	2.0	5.0
(a) Heavy	(13.96)	(1.3)	(3.2)
(b) Light	(7.65)	(0.7)	(1.8)
Public	84.70	7.8	19.4
Semi-Public	6.25	0.6	1.4
Streets & Highways	89.10	8.3	20.4
R. R. Right-of-Way	8.26	0.8	1.9
Vacant	641.60	59.5	N.A.
TOTALS	1077.33	100.0	100.0

CAPITAL PROJECT

City of Prestonsburg, Kentucky

1966 - 1971

Project Title	Project Class and Number
PUBLIC HOUSING	Public Housing 5-1

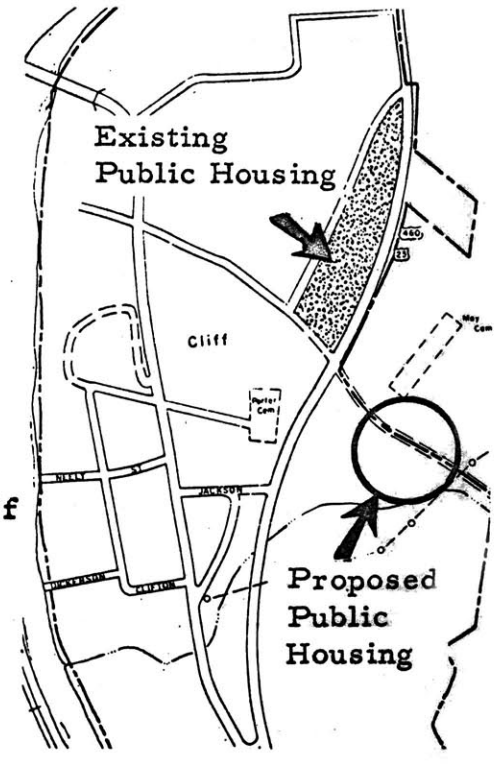
YEAR	DESCRIPTION	ESTIMATED COST
Prior Years		$
Budget 1966	Site acquisition and development, and construction of public housing units	618,894
1967		
1968		
1969		
1970		
1971		
Later Years		

EXPLANATION:

As part of the city's program to eliminate slums and blight, the Municipal Housing Commission plans to construct a second group of public housing units. These will consist of 42 low-rent homes, twenty of which are to be designed for the elderly. Construction cost, including equipment, is estimated at $9,116 average.

FINANCING: This project will be financed by a 100% loan from the U.S. Public Housing Administration. The total cost of $618,894, including interest and administrative costs is repaid to the Federal Government by the sale of bonds; the bonds, in turn, are paid off from the income from rental of the housing units.

TOTAL $618,894



CAPITAL PROJECT

City of Prestonsburg, Kentucky

1966 - 1971

Project Title	Project Class and Number
ELEMENTARY SCHOOL ADDITION	School Buildings 6-1

YEAR	DESCRIPTION	ESTIMATED COST
Prior Years		$
Budget 1966	Preparation of site and detailed specifications.	25,000
1967	Construction of 500 pupil addition.	475,000
1968		
1969		
1970		
1971		
Later Years		
	TOTAL	$500,000

EXPLANATION:

Closing of the schools in the Bull Creek Area outside the city will add about 500 pupils to the elementary school in Prestonsburg. Therefore it is planned to construct an addition to the Prestonsburg Elementary School, including six classrooms, music and art rooms and a multiple purpose room.

FINANCING: The school system is under the control of the Floyd County Board of Education and this addition will be financed by the Board.

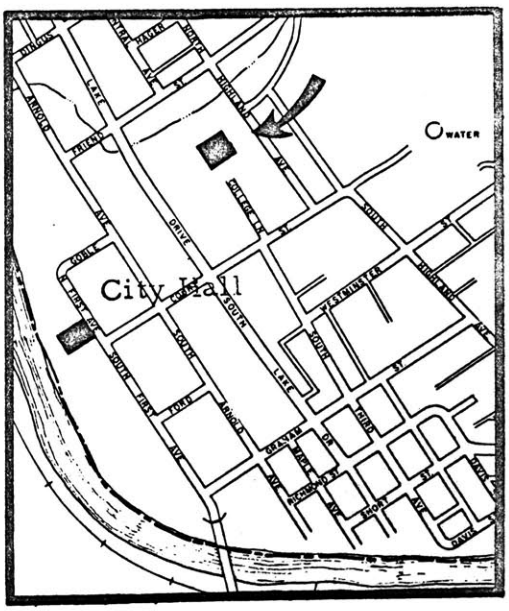


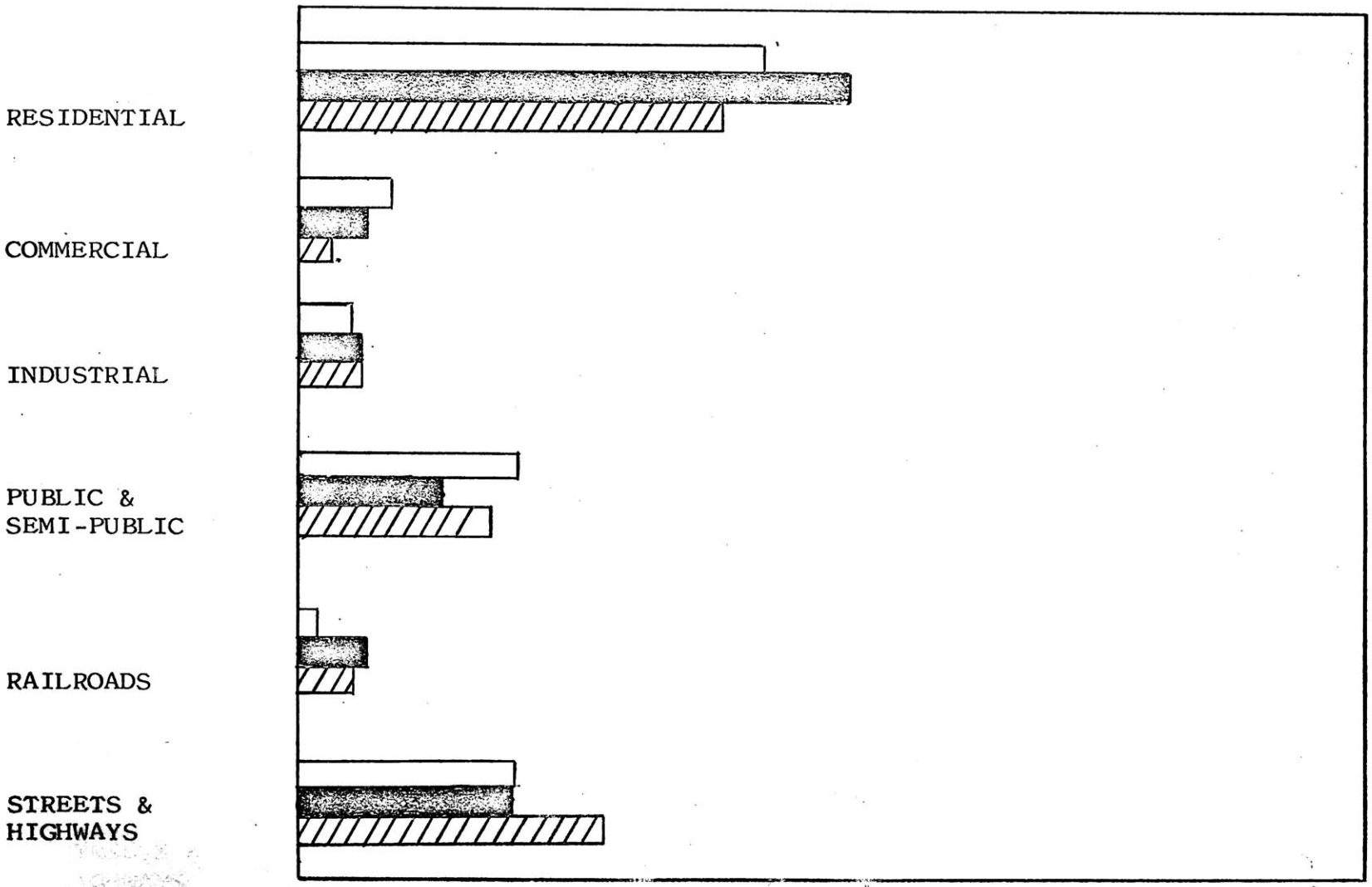
TABLE III

A COMPARISON OF LAND USES IN PRESTONSBURG WITH OTHER KENTUCKY CITIES*

City	Residential	Commercial	Industrial	Public & Semi-Public	Railroads	Streets	Vacant
Prestonsburg	17.4	3.6	2.0	8.4	0.8	8.3	59.5
Catlettsburg	22.5	1.4	0.8	5.9	2.3	5.6	61.4
Irvine	19.4	1.6	1.2	4.8	6.1	9.4	57.6
Martin	23.2	4.9	0.9	3.0	10.1	8.8	49.1
Morehead	11.8	2.8	1.2	4.6	1.4	3.7	74.6
Morganfield	28.0	1.5	2.3	8.8	0.7	12.5	46.2
Nicholasville	22.5	1.9	1.9	4.6	1.9	6.9	60.3
Paintsville	14.1	2.8	1.1	4.1	1.4	6.0	70.5
Pineville	18.6	2.5	0.04	7.6	2.0	11.5	57.7
Vanceburg	19.4	2.6	1.9	2.8	0.8	8.0	64.5
Williamsburg	24.3	3.3	0.57	5.2	1.0	7.6	58.0

* Figures are percentages of the total land area of the cities.

ILLUSTRATION I
PRESTONSBURG'S LAND USE COMPARED WITH OTHER CITIES,
BOTH STATE AND NATIONAL*



* All figures given in Percentage of Developed Area.
** Land Use in American Cities, by Harland Bartholomew, Harvard University Press, Cambridge, 1955.

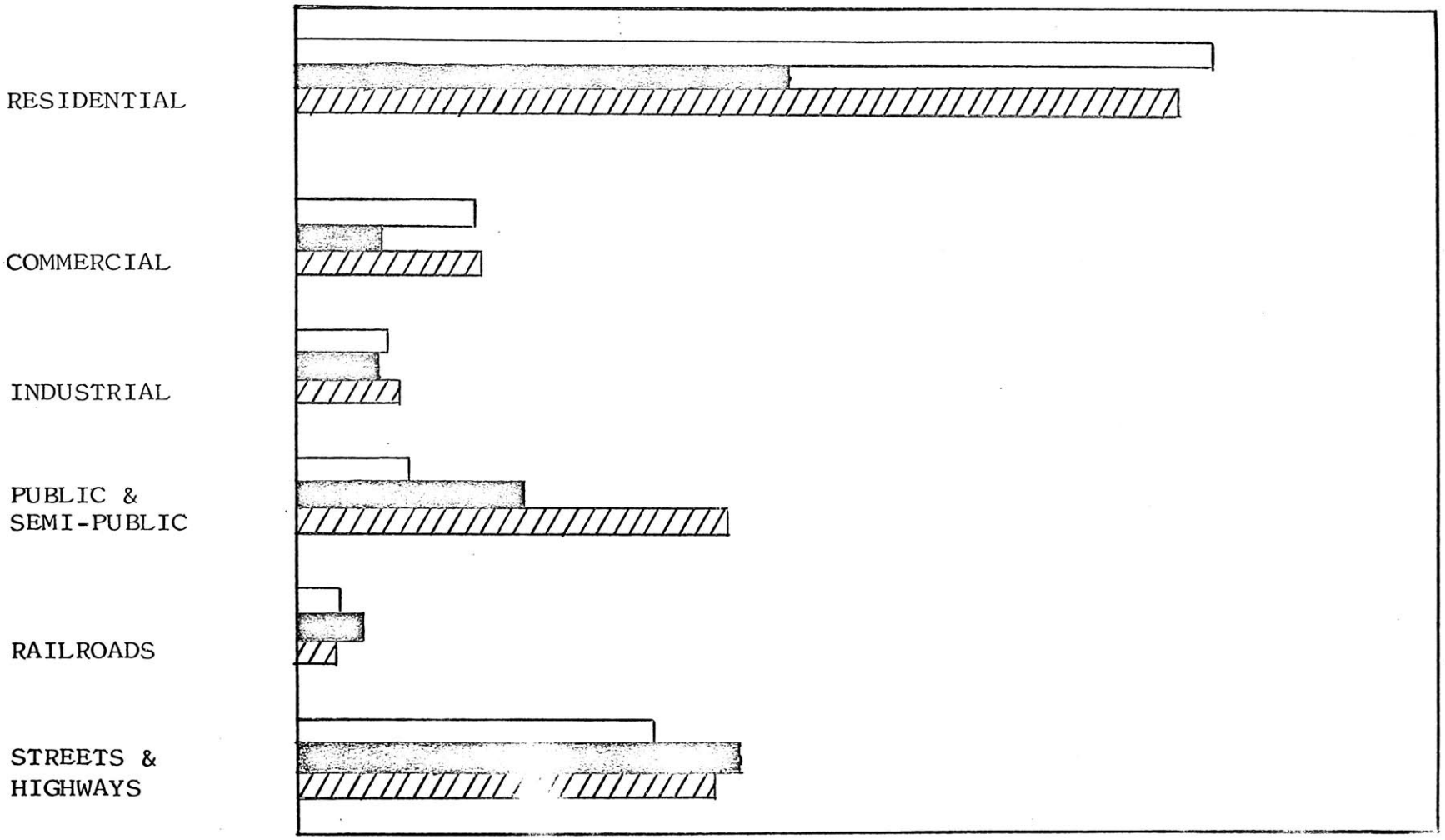
- Prestonsburg
- Average of Ky. Cities given in Table III
- Average American City**

ILLUSTRATION II

PRESTONSBURG LAND-USE COMPARATIVE ANALYSIS

ACRES PER 100 PERSONS - 1960 POPULATION -3,133

1965 POPULATION,EST.-3,463



* The Urban Pattern, by Arthur B. Gallion, D. VanNostrand Co., New York, 1951.

** Existing Land Use Analysis, City of Prestonsburg, Kentucky, Prestonsburg Planning Commission, Offset, 1960.

- Prestonsburg, 1960**
- Accepted American Standard*
- Prestonsburg, 1965

OTHER LOCAL CONSIDERATIONS

Educational Facilities

Graded Schools: There is one high school and one elementary school in Prestonsburg. Both are a part of the Floyd County School System. The budget for 1965-66 is $3,050,000. Prestonsburg High School has a 3,000 seat concrete football stadium and a modern 5,000 seat gymnasium. During the Summer of 1966, a six-room addition will be added to the Prestonsburg Elementary School. The cost of this project will be $200,000, and will consolidate six small elementary schools. The student-teacher ratio in the Prestonsburg Elementary School is 25-1 and 25-1 in the Prestonsburg High School.

TABLE 13

SCHOOLS, ENROLLMENT, NUMBER OF TEACHERS, STUDENT-TEACHER RATIO IN PRESTONSBURG AND FLOYD COUNTY

School	Enrollment	No. of Teachers	Student-Teacher Ratio
Prestonsburg Elementary	761	30	25-1
Prestonsburg High	932	37	25-1
Floyd County Elementary (total)	7,989	285	29-1
Floyd County High (total)	3,361	141	24-1

Source: Kentucky Department of Education, Kentucky School Directory, 1965-66.

Vocational Schools: Kentucky's vocational education program utilizes thirteen highly specialized schools, partly integrated with regular secondary education. These special area trade schools prepare Kentuckians for work in a variety of trade and industrial occupations.

The Mayo Vocational School located in Paintsville was established in 1938 by an Act of the Kentucky Legislature and is operated by the State. The Mayo State Vocational-Technical School offers day trade and technical training to adults and boys and girls 16 years of age and over. The period

of training ranges from one to two years, depending upon the trade pursued. The training is carried on in seven buildings, three of which have been built in the past ten years. In addition to the day trade and technical program the school offers a program of evening instruction so the people now working can be upgraded by improving their skills and knowledge of their trade.

The trades taught at Mayo are as follows: auto mechanics, diesel mechanics, auto body mechanics, cosmetology, drafting, electricity, machine shop, mining mechanics, office practice, practical nursing, printing, radio and television, welding, and woodworking. Technical courses taught are industrial electronics, technical communications, and tool and die.

The trade preparatory courses listed above are normally two years in length. In addition, short unit courses are offered on a continuous basis for the upgrading of employed workers. Other short unit courses are provided in all occupations of an industrial nature as needs arise or upon request, when facilities permit.

Colleges: Prestonsburg Community College opened in the Fall of 1964 in a $882,000 building, located on a 40-acre campus. The two-year college is a branch of the University of Kentucky and has twelve classrooms, three laboratories, a library, a room for band and meetings, a seminar room, and 16 offices. The 1966-67 enrollment is expected to be 800 students.

Two additional buildings will be constructed at the college in the near future. The Technical Vocational Building is scheduled to be open for the 1967-68 school year and the student center is to open shortly thereafter.

Other institutions of higher learning in the Prestonsburg area include:

Pikeville College, Pikeville, Kentucky, 30 miles
Morehead State University, Morehead, Kentucky, 87 miles
University of Kentucky, Lexington, Kentucky, 120 miles
Transylvania College, Lexington, Kentucky, 120 miles
Eastern Kentucky University, Richmond, Kentucky, 110 miles
Georgetown College, Georgetown, Kentucky, 125 miles

Health

Hospitals: The fully accredited Prestonsburg General Hospital with 50 beds and 10 bassinets, has complete, modern facilities for major and minor surgery. The hospital also has laboratory and X-ray facilities.

CLIMATE

The average annual precipitation in Kentucky ranges from 38 to 40 inches in the northern part of the state to 50 inches or more in the south-central part. Late summer is normally the driest part of the year.

Winter is relatively open, with midwinter days averaging 32 degrees in the northern parts to 40 degrees in the southern, for about six week's duration.

Midsummer days average 74 degrees in the cooler uplands to 79 degrees in the lowland and southern areas.

The growing season varies from 180 days in the north to 210 in the south. Seasonal heating-degree days average about 4,500 for the state. Sunshine prevails for an average of at least 52 percent of the year and increases to 60 percent or more to the southwest.

Kentucky's climate is temperate. The climatic elements of sunlight, heat, moisture, and winds are all in moderation without prolonged extremes. Rainfall is abundant and fairly regular thoughout the year. Warm-to-cool weather prevails with only short periods of extreme heat and cold.

TABLE 18

CLIMATIC DATA FOR PRESTONSBURG, FLOYD COUNTY, KENTUCKY

Month	Temp. Norm.* Deg. Fahrenheit	Total Prec. Norm.* Inches	Av. Relative Humidity Readings** 7:00 A.M.	7:00 P.M. (EST)
January	33.3	2.75	83	70
February	31.8	4.29	82	63
March	44.6	4.64	81	59
April	56.7	3.60	79	54
May	64.5	2.74	85	59
June	71.4	3.66	86	62
July	74.7	4.29	89	66
August	72.1	3.80	92	68
September	66.2	3.17	89	64
October	52.2	2.21	88	59
November	48.4	2.72	84	61
December	38.2	4.38	83	65
Annual Norm.	54.5	42.25		

*Station Location: Dewey Dam
**Station Location: Bristol, Tennessee
Length of Record: 7:00 A.M. readings 16 years; 7:00 P.M. readings 16 years.

Days cloudy or clear: (27 yrs. of record) 90 clear, 112 partly cloudy, 163 cloudy

Percent of possible sunshine: (16 yrs. of record) 6.2%

Days with precipitation of 0.01 inch or over: (19 yrs. of record) 133

Days with 1.0 inch or more snow, sleet, hail: (21 yrs. of record) 4

Days with thunderstorms: (21 yrs. of record) 46

Days with heavy fog: (21 yrs. of record) 41

Prevailing wind: (9 yrs. of record) West southwest

Seasonal heating-degree days: (29 yrs. of record) Approximate long-term means 4, 143 degree days.

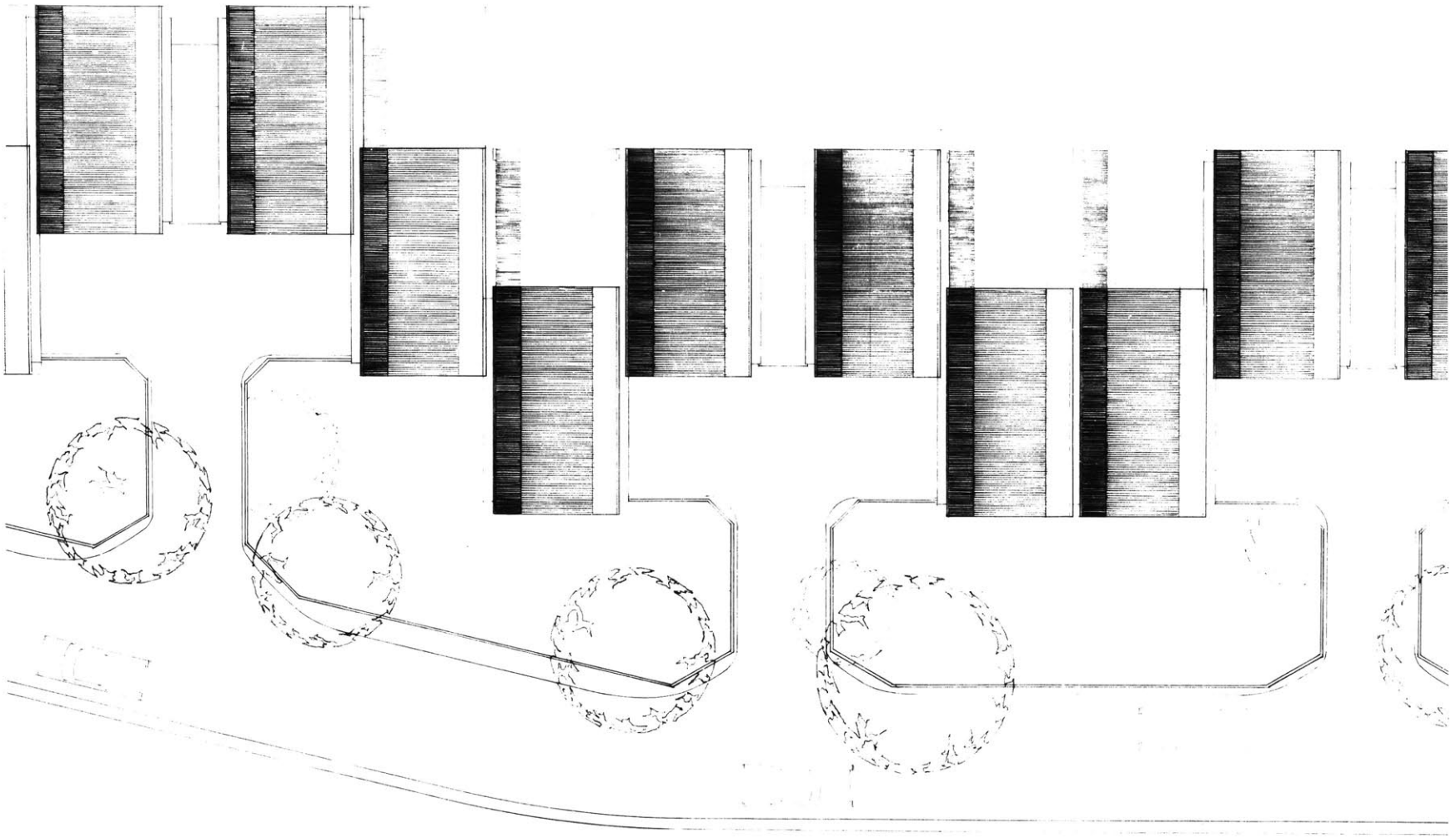
Sources: U. S. Weather Bureau, Climatological Data - Kentucky, 1964; U. S. Weather Bureau, Local Climatical Data - Lexington, Kentucky, 1964.

APPENDIX II

DESIGN SOLUTION, BASIL E. ALFERIEFF

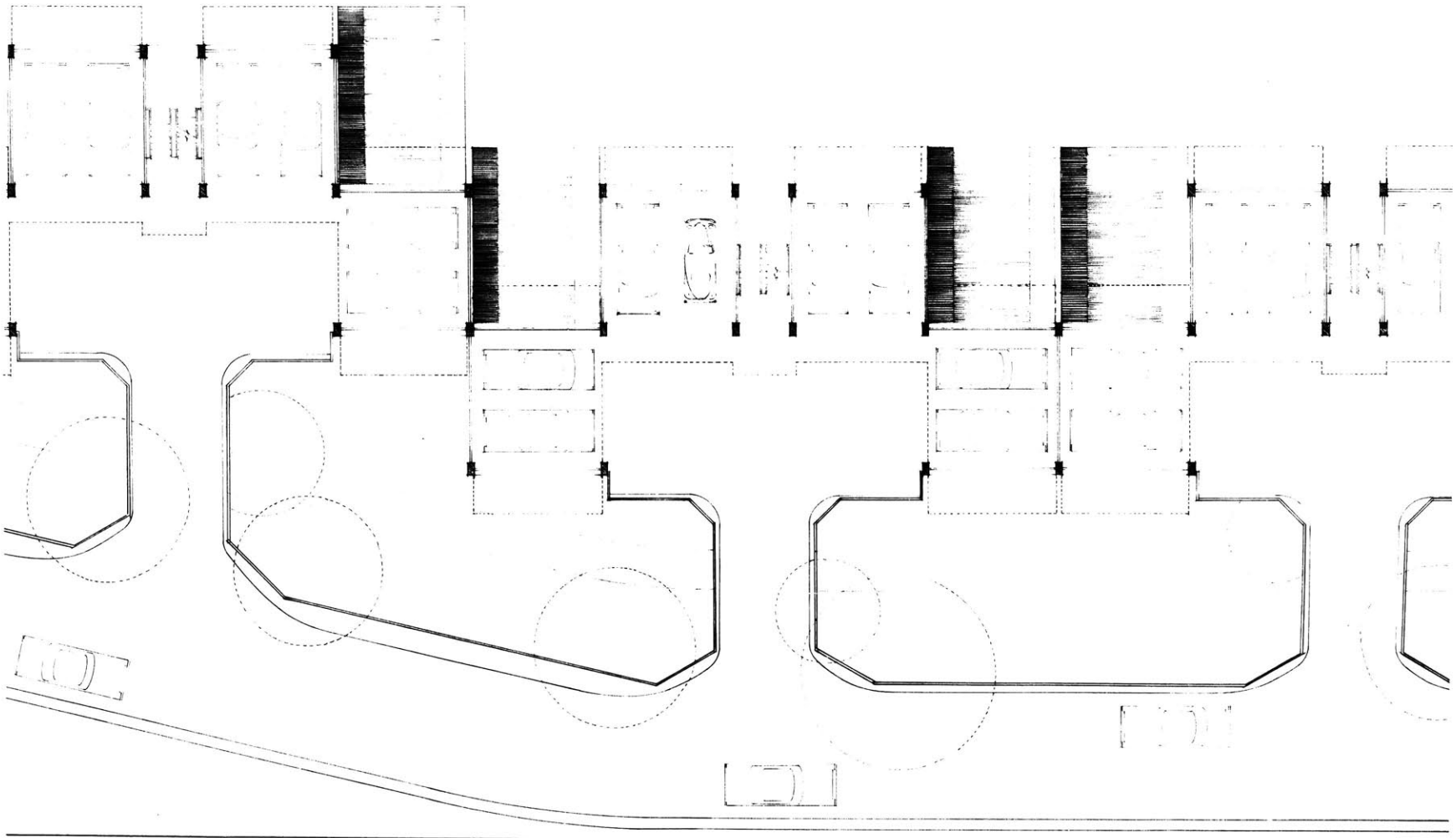
APPENDIX III

DESIGN SOLUTION, HOWARD A. VAN VLECK



MULTI - FAMILY HOUSING - KENTUCKY

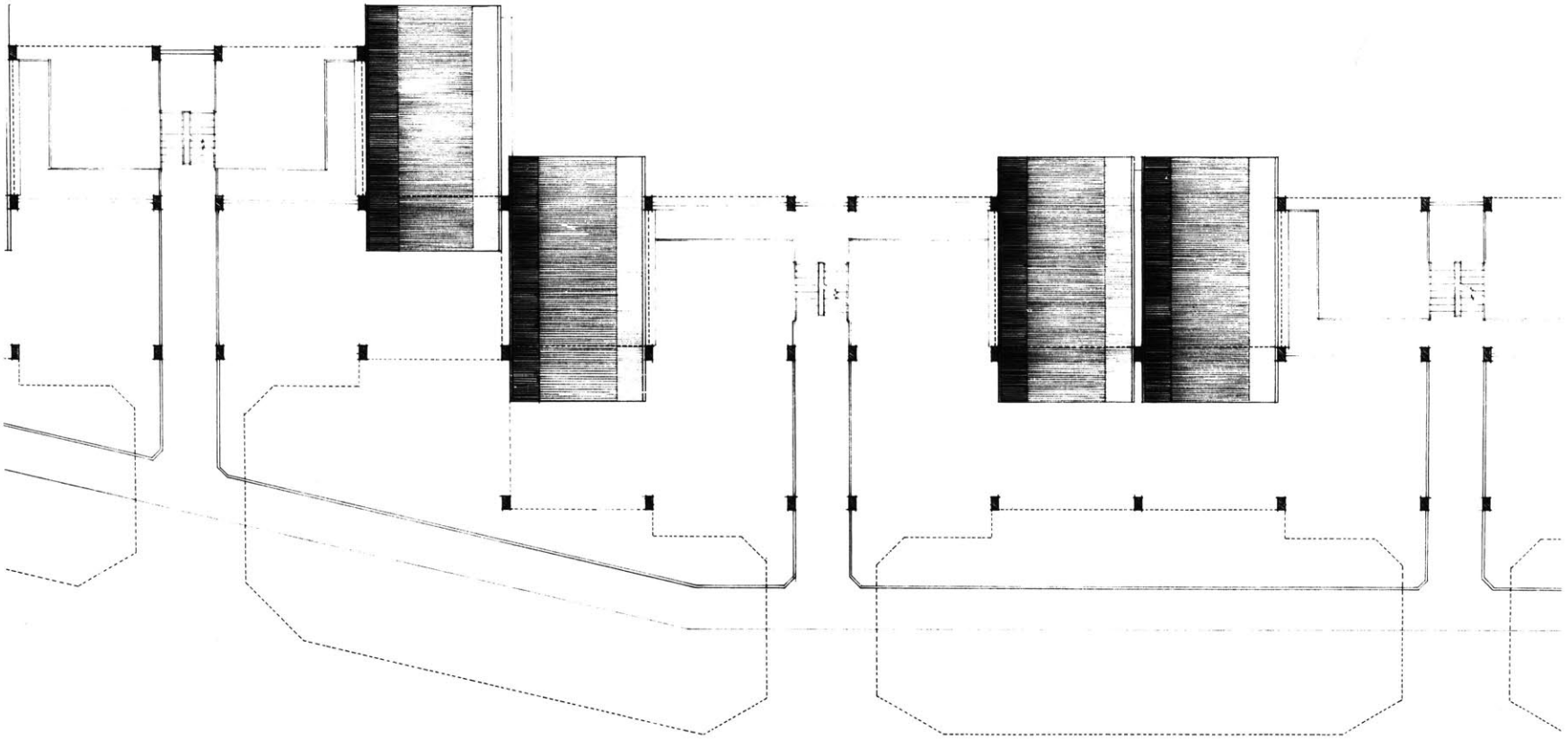
SCHEME I
SCALE
SITE PLAN



MULTI - FAMILY HOUSING - KENTUCKY

SCHEME I
SCALE 1/8" = 1'-0"

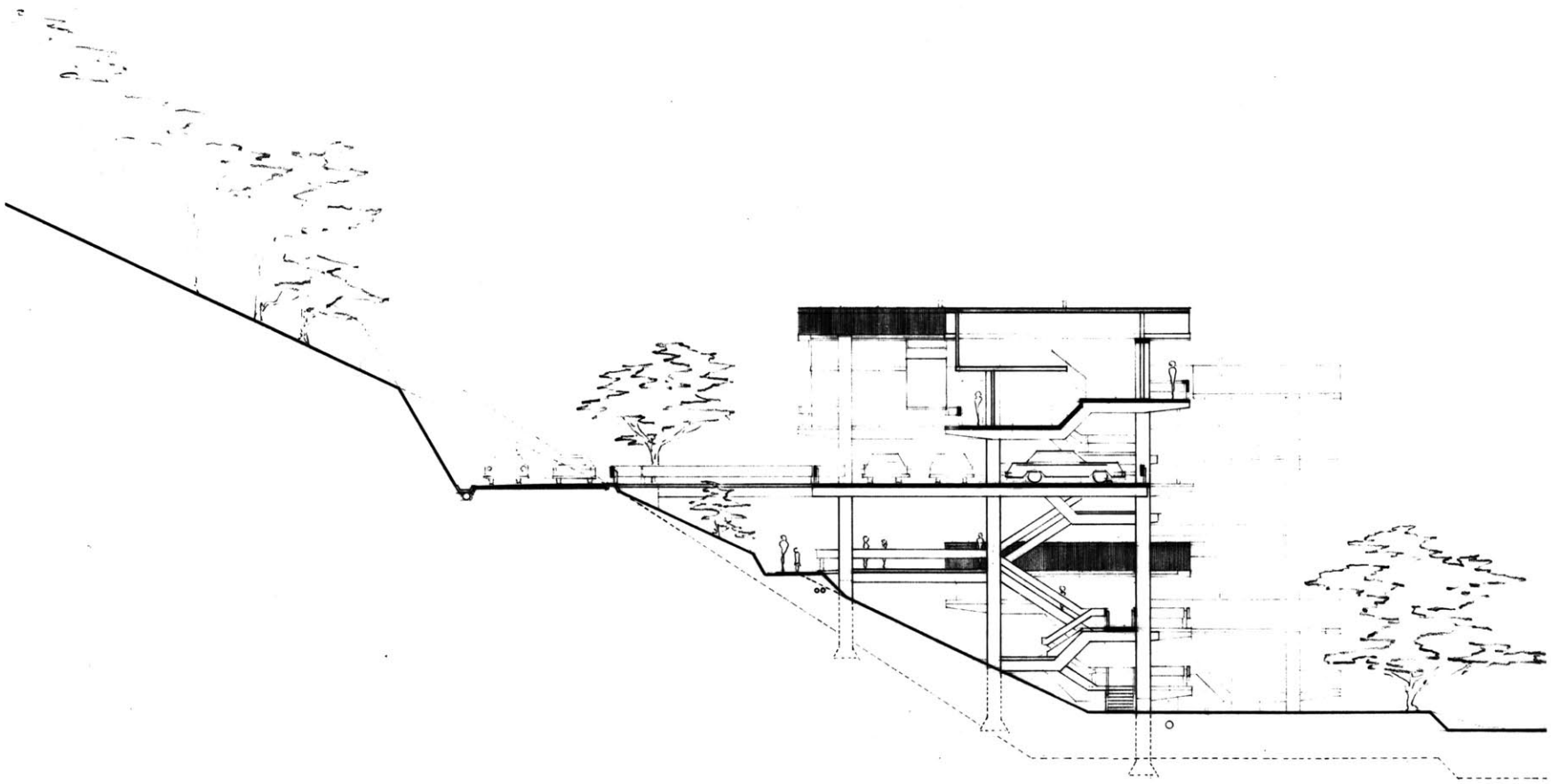
PLAN - PARKING LEVEL
VAN VLECK



MULTI - FAMILY HOUSING - KENTUCKY

SCHEME I
SCALE 1/8" = 1'-0"

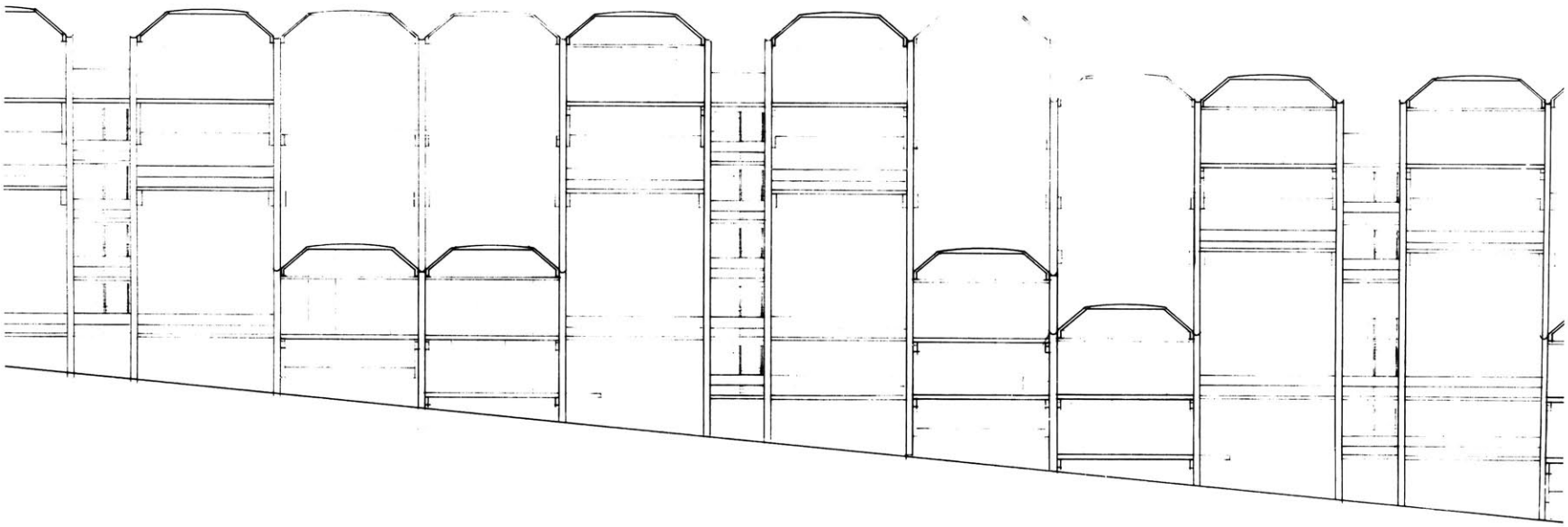
PLAN - PEDESTRIAN LEVEL
VAN VLECK



MULTI-FAMILY HOUSING - KENTUCKY

SCHEME I
SCALE 1/8" = 1'-0"

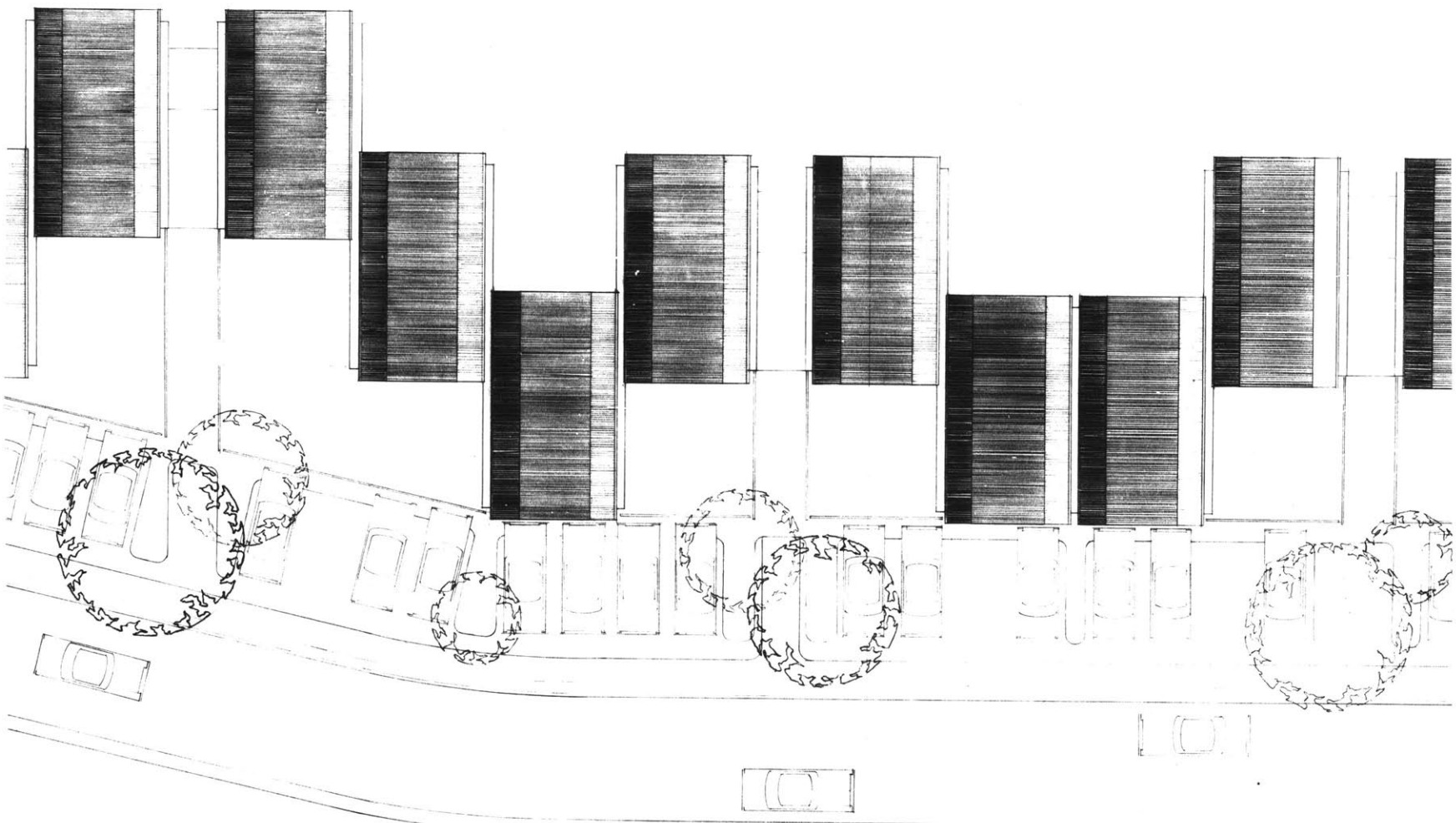
SECTION
VAN VLECK



MULTI - FAMILY HOUSING - KENTUCKY

SCHEME I
SCALE 1/16" = 1'-0"

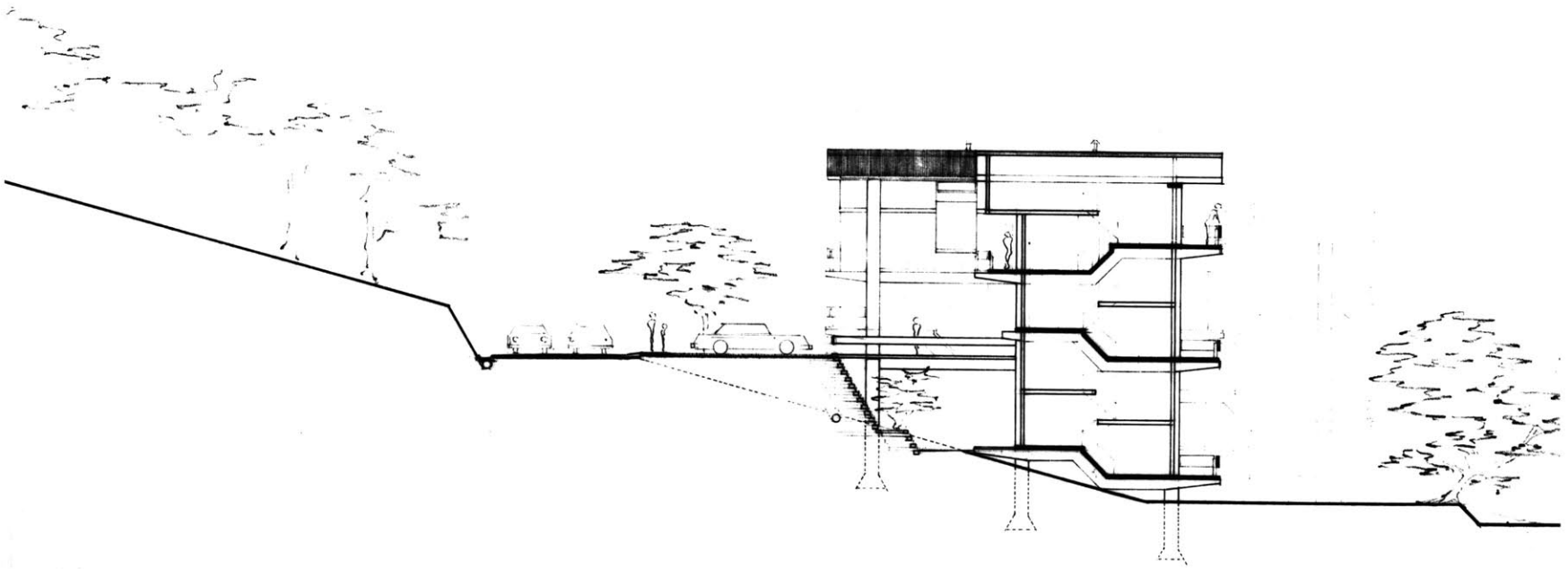
PARTIAL ELEVATION
VAN VLECK



MULTI - FAMILY HOUSING - KENTUCKY

SCHEME II
SCALE 1/8" = 1'-0"

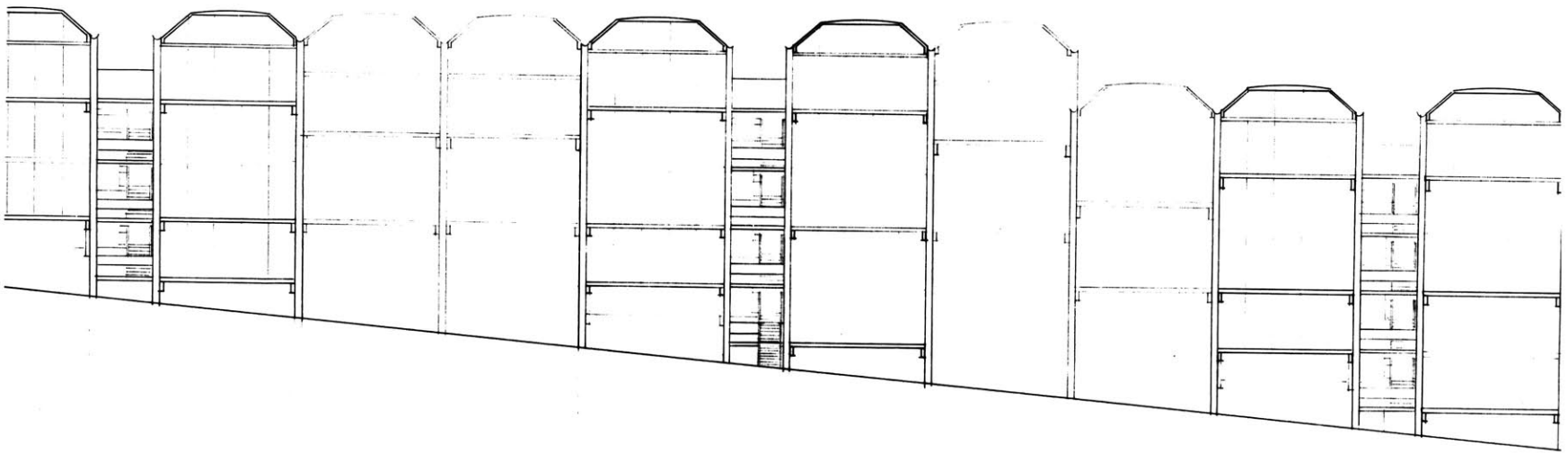
SITE PLAN
VAN VLECK



MULTI-FAMILY HOUSING - KENTUCKY

SCHEME II
SCALE 1/8" = 1'-0"

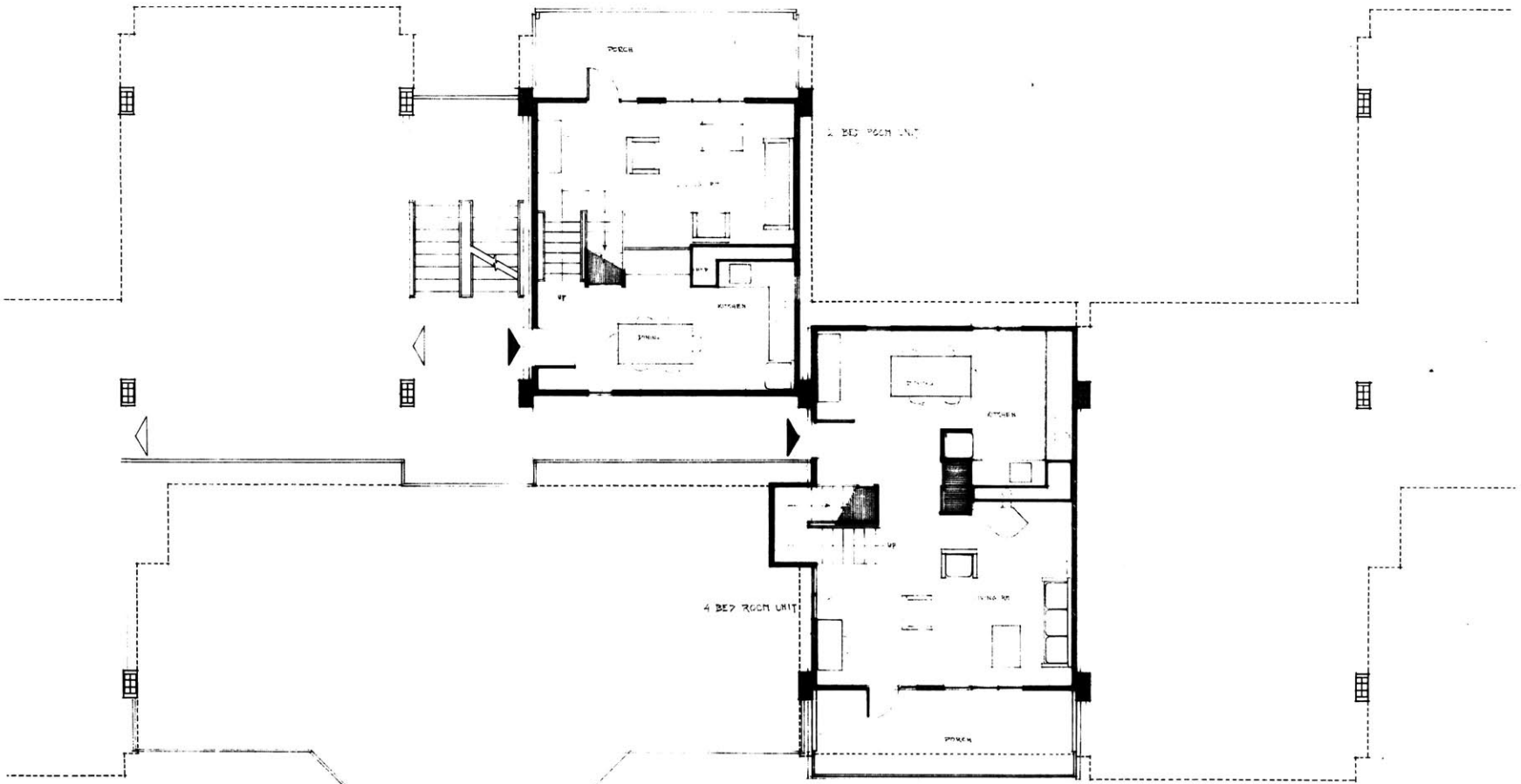
SECTION
VAN VLECK



MULTI FAMILY HOUSING - KENTUCKY

SCHEME II
SCALE 1/8" = 1'-0"

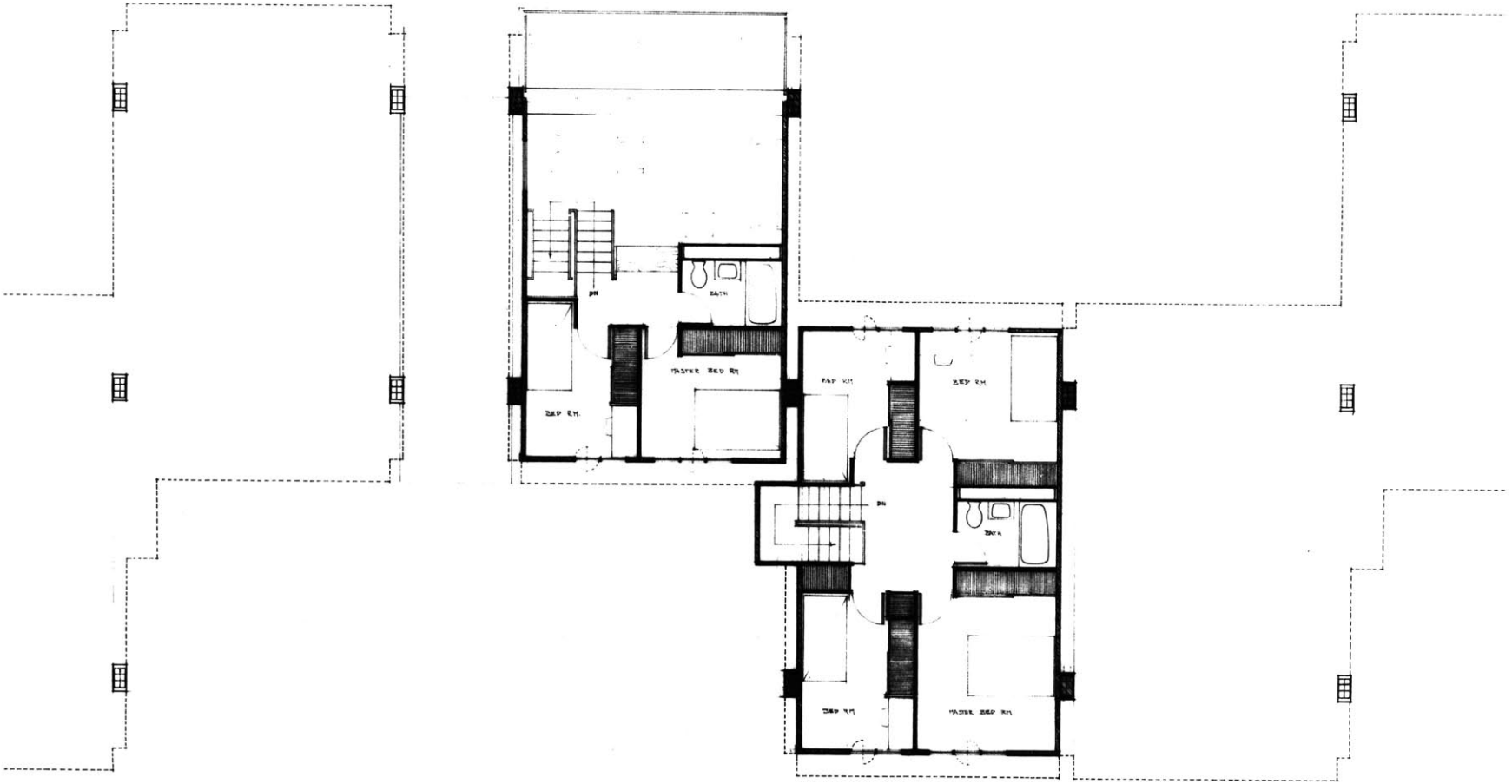
PARTIAL ELEVATION
VAN VLECK



MULTI - FAMILY HOUSING - KENTUCKY

LIVING UNIT PLANS ENTRY LEVEL
SCALE ¼" - 1'-0"

VAN VLECK

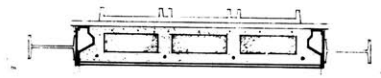


MULTI - FAMILY HOUSING - KENTUCKY

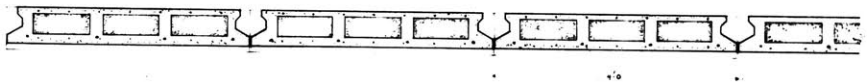
UNIT PLANS BED ROOM LEVEL
SCALE 1/4" = 1'-0"
VAN VLECK

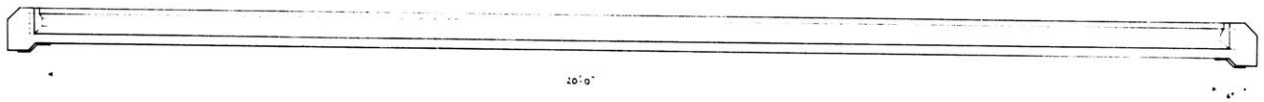
FORMWORK FOR PLATFORM SLABS
WELDED STEEL PLATE

STEP I - CASTING PROCESS
RIGID PLYCYVERVE ALIGNED - REBARS IN PLACE.
POUR CONCRETE TO LEVEL SHOWN - SET

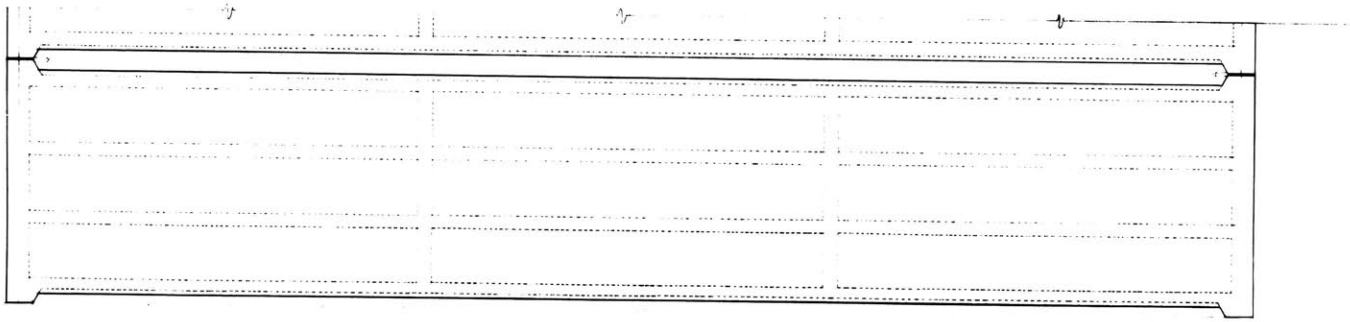


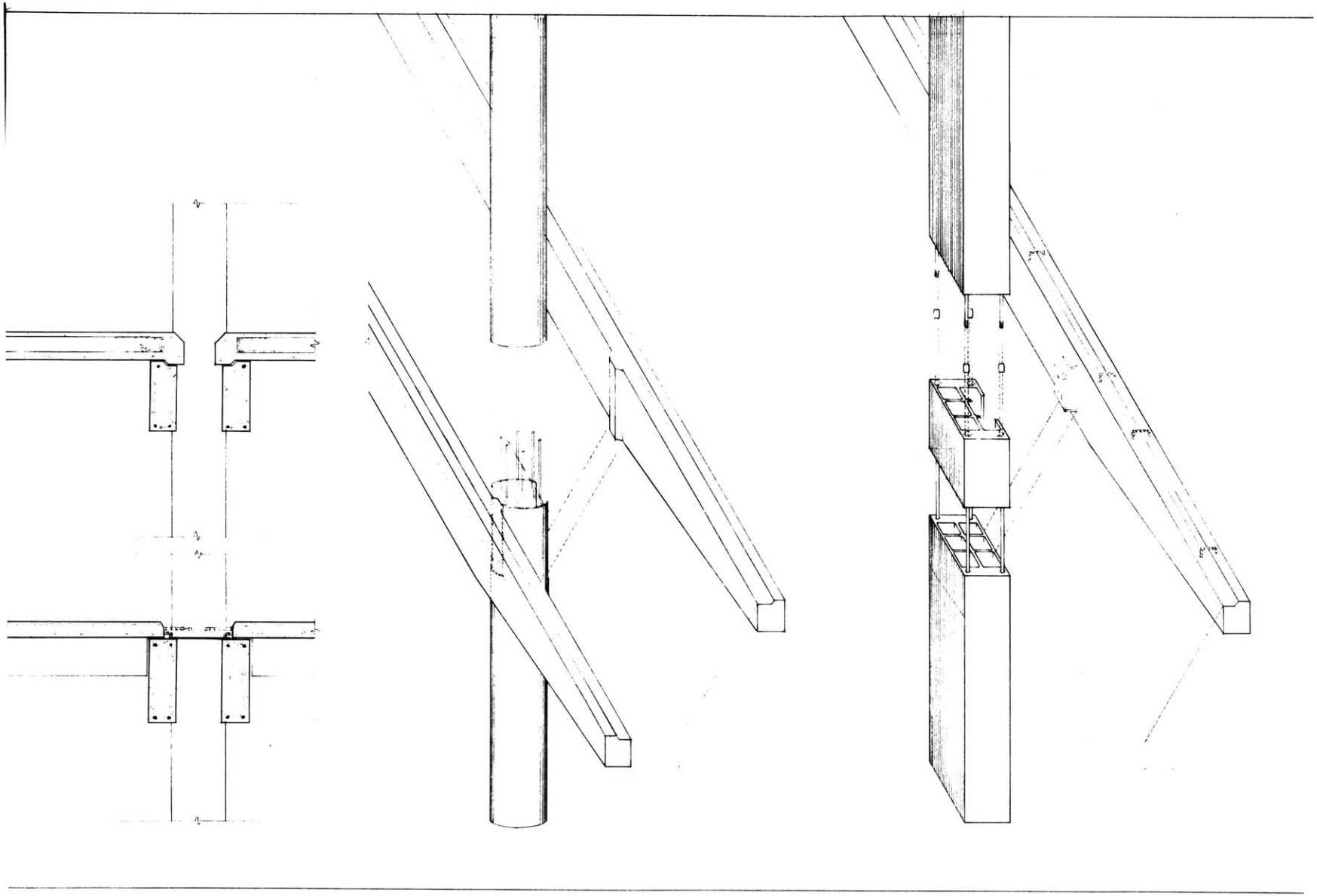
STEP II - CASTING PROCESS
REMOVE FORM ALIGNMENT
FINISH POUR & SCREED

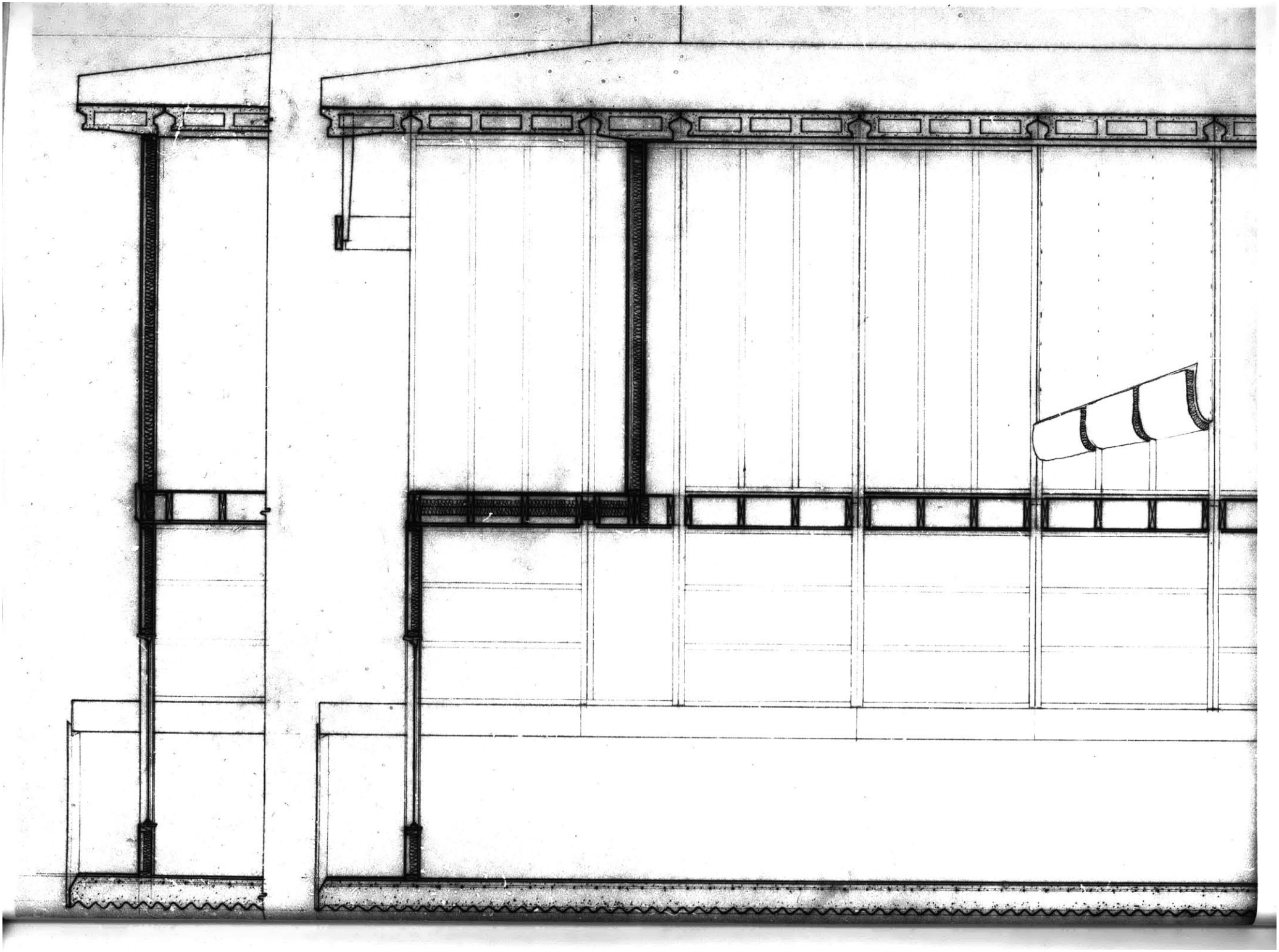


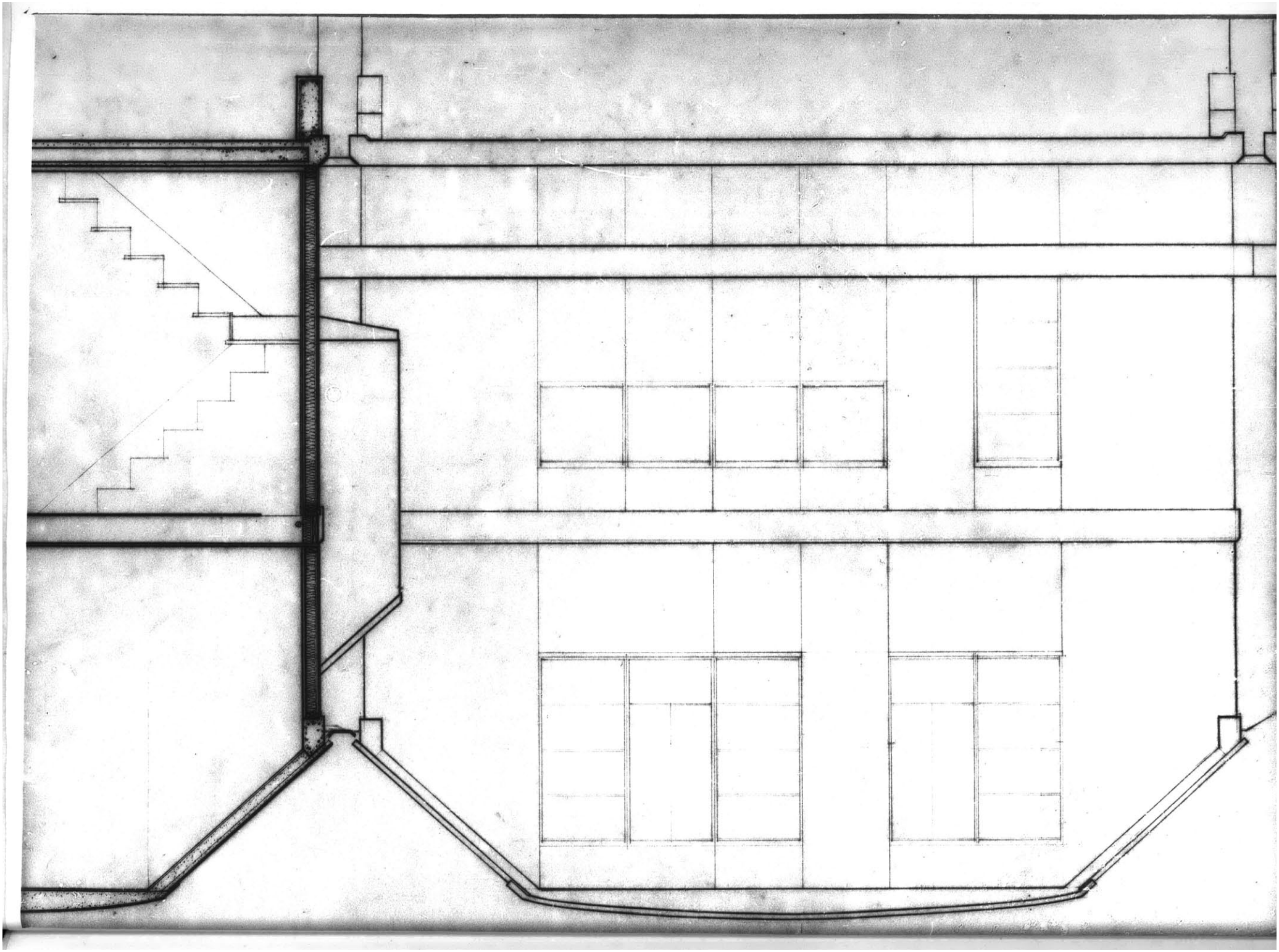


20'-0"









TOTALS- MULTIFAMILY HOUSING IN KENTUCKY — SCHEME I

1-SITE WORK		4235.00
2-FOOTINGS AND COLUMNS		15567.00
Footings	3600.00	
Col. Posttensioned	9577.00	
+25%	2390.00	
	11967.00	
Col. Cast-in-place	8200.00	
+25%	2050.00	
	10250.00	
3-CONCRETE PRECASTING		20406.00
4-PARKING LEVEL DECK (excl. beams and col's.)		6018.00
5-CARPENTRY- PREFABRICATION/INSTALLATION/ FINISH		32140.00
6-HEATING/PLUMBING FIXTURES AND APPLIANCES		24750.00
		103116.00

8 units = 7040 SF floor area

$\frac{103116}{7040}$ = 14.60/SF

-SITE WORK

SCHEME I

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTALS
SURVEY/STAKEOUT							
GRADE PEDESTRIAN WAY	LF	95		19.00		21.40	40.40
Dozer (1140/mo)	HR	4	4.75	19.00			
Operator	HR	4			5.35	21.40	
EXCAVATE ROAD BED	CY	695	1.22	845.00			845.00
PREPARE ROUGH ROAD SURF.	LF	95		847.80			847.80
Curb/Gutter	LF	95	5.00	475.00			
Subgrade	SY	233	.50	116.50			
4" Macadam pen.	SY	233	1.10	256.30			
FINISH ROAD	LF	95		498.50		57.00	555.50
Bituminous pav. 1½"	SY	233	1.20	280.00			
Guard rail	LF	95	2.30	218.50	.60	57.00	
FINISH PEDESTRIAN WAY	LF	95		146.30			146.30
Finish grade	SY	74	.18	13.30			
Bituminous pav. 1½"	SF	665	.20	133.00			
LAY WATER MAINS	LF	95		530.00			530.00
6" Pipe in place	LF		4.50				
6" Gate valve	EA		125.00				
Fire hydrant ea.500	EA		250.00				
3/4" copper pipe	LF		1.50				
LAY SEWER MAIN/FEEDERS	LF	95		168.00		147.00	315.00
12" Vit.clay pipe	LF	95	1.60	152.00	1.40	133.00	
6" " " "	LF	20	.55	11.00	.70	14.00	
Y's				5.00			
							3280.00
						+25%	820.00
							4100.00
LAND (100'x 160')	ACRE	.27	500.00	135.00			135.00
							4235.00

-FOOTINGS AND COLUMNS

SCHEME I

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTALS
FOOTINGS (PRESSURE INJECTED)	EA	18	200.00	3600.00			3600.00
POSTTENSIONED COLUMN	LF	880	9.70	8500.00			8500.00
Extruded A-C sect.	LF	1	7.20	7.20			
Cut/Drill (1.50/10')	LF	1	.15	.15			
Tensioning hardware	LF	1	1.00	1.00			
Concrete Fill/Reb'rs	LF	1	1.35	1.35			
ASSEMBLY OF COLUMN (TENS'NGS)		84	1.90	160.00	3.84	322.00	482.00
Placement	HR	.25	7.50	1.90	5.35	1.34	
Tensioning (2 men)	HR	.25			10.00	2.50	
PIERCAPS	EA	16	17.25	275.00	20.00	320.00	595.00
1' Extruded A-C	LF	1	7.20	7.20			
Cut/Drill	LF	1	.15	.15			
Tensioning anchor	EA	1	1.00	1.00			
Rough formwork	EA	1	2.00	2.00			
Alignment/Cast	EA	1			20.00	20.00	
Concrete	CY	.4	17.25	6.90			
							9577.00
CAST - IN - PLACE COLUMN	LF	880	9.34	8200.00			8200.00
Sonotube 14" diam. 1.07CF/LF	LF		.95				

CONCRETE PRECASTING

SCHEME I

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTAL
PRECAST BEAMS							
#7 Rebars/tied	TON	.084	165.00	13.80	80.00	6.70	
A Concrete in place	CY	.78	17.25	13.40			
Steel formwork	SFCA	126	4.00	504/200	.15	19/200	
Strip/Clean forms	HR	1.5			4.80	7.20	
#7 Rebars/tied	TON	.094	165.00	15.50	80.00	7.50	
B Concrete in place	CY	1.27	17.25	22.00			
Steel formwork	SFCA	160	4.00	640/200	.15	24/200	
Strip/Clean forms	HR	1.92			4.80	9.20	
Placement crane	HR	.75	7.50	5.60	5.35	4.00	
Crew (2 men)	HR	.75			10.00	7.50	
PRECAST BEAMS IN PLACE	EA	44		1725.00		1165.00	2890.00
Type A	EA	28	35.32	1000.00	25.50	710.00	
Type B	EA	16	46.30	725.00	28.32	455.00	
PRECAST PLATFORM SLABS	EA	56	67.04	3750.00	18.94	1060.00	4810.00
Rebars/Mesh 2.5#/SF	TON	.1	165	16.50	80.00	8.00	
Concrete in place	CY	1	17.25	17.25			
Polystyrene 4"	SF	60	.44	26.40			
Steel formwork	SFCA	121	4.00	484/200	.15	18/200	
Strip/Clean forms	HR	1.45			4.80	7.00	
Placement crane	HR	.25	7.50	1.87	5.35	1.34	
Crew (2 men)	HR	.25			10.00	2.50	
Grout	CY	.13	20.00	2.60			
PRECAST TRANSVERSE TIES	LF	896		1280.00		568.00	1848.00
Rebars	TON	.05	165.00	8.30	80.00	4.00	
Concrete in place	CY	.1	17.25	17.25			
Steel formwork	SFCA	66	4.00	264/200	.15	10/200	
Strip/Clean forms	HR	.72			4.80	3.45	
Placement crane	HR	.25	7.50	1.87	5.35	1.34	
Crew (2 men)	HR	.25			10.00	2.50	
PRECAST STAIR LANDINGS 4'	LF	160	2.87	460.00	1.13	181.00	641.00
							10189.00
						+25%	2550.00
							12739.00

CONCRETE PRECASTING- ROOF / STAIRS

SCHEME I

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTAL
PRECAST ROOF PANELS	ROOF	6	730.82	4400.00	133.02	780.00	5180.00
Corrugated A-C	SF	828	.32	265.00			
Lap cement/fastners	SF	828	.07	58.00			
Expanded aggr.conc.	CY	8.3	25.00	207.00			
Insulation board	SF	828	.08	66.00			
Reinforcing	SF	828	.10	82.80			
Precast stiffner	EA	2	22.16	44.52	2.96	5.92	
Rebars	TON	.08	165.00	13.20	75.00	6.00	
Concrete in place	CY	.445	17.25	7.68			
Steel formwork	SFCA	64	4.00	256/200	.15	9.6/200	
Strip/Clean forms	HR	.77			4.80	3.70	
Prepare/cast panels	HR	16			5.15	82.00	
Placement crane	HR	1	7.50	7.50	5.35	5.35	
Crew (2 men)	HR	3			10.00	30.00	
PRECAST EXTERIOR STAIR 1/2 FLIGHTS	EA	11	38.45	423.00	47.68	524.44	947.44
Prefab riser, stringer/reinf.	LF	4.25	3.50	14.90			
Concrete in place	CY	.85	17.25	14.70			
Railings/finish	EA	3	2.00	6.00	5.00	15.00	
Placement crane	HR	.5	7.50	3.75	5.35	2.68	
Crew (2 men)	HR	3			10.00	30.00	
							6127.00
						+25%	1540.00
							7667.00

PARKING LEVEL STRUCTURE — SCHEME 1

ITEM	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTALS
PARKING DECK	SF	2880		3378.00		1436.00	4814.00
Precast Double T	SF	2560	.95	2430.00	.35	900.00	
Bridge Double T	SF	320	.95	304.00	.35	112.00	
Grout connections	SF	2560			.10	256.00	
Guard rails	LF	280	2.30	644.00	.60	168.00	
							4814.00
						+25%	1204.00
							6018.00
SUPPORTING BEAMS (see sheet 3 - CONCRETE PRECASTING)							1180.00
COLUMNS 15 @ 9' (see sheet 2 - FOOTINGS AND COLUMNS) EXTRA 45 KIPS IN EACH COLUMN AND FOOTING							1350.00

CARPENTRY- PREFABRICATION/INSTALLATION/FINISH SCHEME I

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTAL
WALLS-EXTERIOR/PARTY							
2x4 studs (40')	BF	27	.105	2.85			(1)
Fiberglass insul.3"	SF	32	.05	1.60	.04	1.28	(2)
3/8" Gypsum board	SF	32	.05	1.60	.06	1.92	(3)
2x4 Sill/Anchors	BF	2.67	.15	.40			(4)
Weatherseal Al.	SF	3	.30	.90	.40	1.20	(5)
8'xl"xl/16"PVC seal	SF	.7	.55	.39	.25	.17	(6)
Sealed gutter Al.	SF	8	.30	2.40	.40	3.20	(7)
Install	HR	1			10.00	10.00	(8)
I Tempered hardboard	SF	32	.11	3.52	.14	4.48	.94/SF
II Asbestos cement	SF	32	.16	5.12	.15	4.80	1.00/SF
III 1/2"Gypsumboard	SF	64	.06	3.84	.07	4.48	.95/SF
I -(1)(2)(3)(4)(5)(6)(8)							
II -(1)(2)(3)(4)(5)(6)(8)							
III-(1)(3)(4)(7)(8)							
TOTAL WALLS	SF	5392	.96	5140.00			5140.00
GUTTERS	LF	288	.35	100.00	.45	130.00	230.00
STRESSED SKIN FLOOR	SF	1920	.43	830.00	.03	61.00	891.00
2x8x20'joists (4)	BF	107	.105	11.20			
3/4" Plywood	SF	80	.08	6.40			
Glue and nail	HR	.5			5.10	2.55	
FLOORING ON 2nd FLOORS	SF	1920	.20	384.00	.20	384.00	768.00
5/8" Particleboard	SF		.20		.20		
FLOORING ON PLATFORM	SF	4400	.20	880.00	.20	880.00	1760.00
5/8" Particleboard	SF		.20		.20		
INTERIOR PARTITIONS	SF	1920	.162	310.00	.56	1080.00	1390.00
2x3 studs	BF	16	.105	1.68			
3/8"Gypsumboard	SF	64	.05	3.20	.06	3.85	
Install/tape	SF		.01		.16		
DRY GYPSUM CEILING	SF	1520	.06	91.20	.24	364.80	456.00
INTERIOR STAIRS	EA	8	100.00	800.00	70.00	560.00	1360.00
DOORS INTERIOR	EA	28	27.70	775.00	22.95	640.00	1415.00
DOORS EXTERIOR	EA	8	82.00	656.00	22.95	183.00	839.00
							14249.00
						+25%	3560.00
							17809.00

-CARPENTRY- PREFABRICATION/INSTALLATION/FINISH SCHEME I

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTALS
WINDOWS	SF	1824					4788.00
Operable	SF	456	3.00	1368.00			
Fixed	SF	1368	2.50	3420.00			
PLUMBING STACK	EA	8	400.00	3200.00			3200.00
Hot/cold water pipe							
Waste			150.00				
Vents							
Air exhausts							
Flue			100.00				
Electric supp/distr			150.00				
CABINETS/COUNTERS	EA	8	300.00	2400.00			2400.00
PAINT/INT.WALL FINISH	SF	13408	.02	268.16	.06	804.48	1073.00
							11461.00
						+25%	2870.00
							14331.00

HEATING /PLUMBING FIXTURES AND APPLIANCES

SCHEME 1

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTALS
BATHROOM FIXTURES			4680.00		1680.00		6360.00
Bathtub 5'	EA	8	255.00	2040.00	80.00	640.00	
Lavatory (wall hung)	EA	8	125.00	1000.00	60.00	480.00	
Toilet (wall hung)	EA	8	205.00	1640.00	70.00	560.00	
KITCHEN APPLIANCES			4080.00				4080.00
Range	EA	8	100.00	800.00			
Refrigerator	EA	8	150.00	1200.00			
Sink (42"x25")	EA	8	210.00	1680.00			
Garbage disposal	EA	8	50.00	400.00			
(Washing machine)	EA		160.00				
(Dryer)	EA		85.00				
HEATING			9360.00				9360.00
Gas fired boiler	EA	8	300.00	2400.00			
40'Fintube @ 20/LF	EA	8	800.00	6400.00			
Water heater	EA	8	70.00	560.00			
(Prefab Fireplace)	EA		100-300		50.00		
							19800.00
						+25%	4950.00
							24750.00

TOTALS- MULTIFAMILY HOUSING IN KENTUCKY — SCHEME II

1-SITE WORK		3508.00
2-FOOTINGS AND COLUMNS		11933.00
Footings	3200.00	
Col. Postensioned	6993.00	
+25%	1740.00	
	8733.00	
Col. Cast-in-place	5800.00	
+25%	1450.00	
	7250.00	
3-CONCRETE PRECASTING		18172.00
4-PARKING ON FILL W/ RETAINING WALL		6525.00
5-CARPENTRY- PREFABRICATION/INSTALLATION/ FINISH		47399.00
6-HEATING/PLUMBING FIXTURES AND APPLIANCES		30950.00
		118487.00

10 units = 9280 SF floor area

$\frac{118487}{9280}$ = 12.80/SF

SUMMARY SHEET

SCHEME II

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTALS
-PARKING ON FILL				5225.00			5225.00
Retaining wall 12'	SF	1140	4.00	4560.00			
Paving	SF	265	.25	665.00			
							5225.00
						+25%	1300.00
							6525.00
-CARPENTRY- PREFABRICATION/ INSTALLATION/FINISH							
WALLS-EXTERIOR/PARTY	SF	8030	.96	7700.00			7700.00
GUTTERS	LF	172	.35	60.00	.45	77.50	137.50
STRESSED SKIN FLOOR	SF	3360	.43	1440.00	.03	100.00	1540.00
FLOORING	SF	8080	.20	1616.00	.20	1616.00	3232.00
INTERIOR PARTITIONS	SF	2400	.162	390.00	.561	340.00	1730.00
DRY GYPSUM CEILING	SF	8800	.06	530.00	.24	2110.00	2640.00
INTERIOR STAIRS	EA	10	100.00	1000.00	70.00	700.00	1700.00
DOORS INTERIOR	EA	35	27.70	970.00	22.95	800.00	1770.00
DOORS EXTERIOR	EA	10	82.00	820.00	22.95	229.50	1049.50
WINDOWS							
Operable	SF	724	3.00	2172.00			2172.00
Fixed	SF	2172	2.50	5400.00			5400.00
PLUMBING STACK	EA	10	400.00	4000.00			4000.00
CABINETS/COUNTERS	EA	10	300.00	3000.00			3000.00
PAINT/INT.WALL FINISH	SF	17000	.02	340.00	.06	1020.00	1360.00
							37899.00
						+25%	9500.00
							47399.00
HEATING/PLUMBING FIXTURES AND APPLIANCES							
BATHROOM FIXTURES	EA	10	585.00	5850.00	210.00	2100.00	7950.00
KITCHEN APPLIANCES	EA	10	510.00	5100.00			5100.00
HEATING	EA	10	1170.00	11700.00			11700.00
							24750.00
						+25%	6200.00
							30950.00

SUMMARY SHEET

SCHEME II

ITEMS	UNIT	TOTAL QUANTITY	EQUIPMENT MATERIALS ea.	EQUIPMENT MATERIALS tot.	LABOR ea.	LABOR tot.	TOTALS
SITE WORK							
EXCAVATE ROAD BED	CY	370	1.22	450.00			450.00
PREPARE ROUGH ROAD SURF.	LF	95		847.80			847.80
FINISH ROAD	LF	95		498.50		57.00	555.50
LAY WATER MAINS	LF	95		530.00			530.00
LAY SEWER MAIN/FEEDERS	LF	95		168.00		147.00	315.00
							2698.30
						+25%	675.00
							3373.30
LAND (100'x160')	ACRE	.27	500.00	135.00			135.00
							3508.30
FOOTINGS AND COLUMNS							
FOOTINGS (PRESSURE INJECTED)	EA	16	200.00	3200.00			3200.00
POSTTENSIONED COLUMN	LF	620	9.70	6000.00			6000.00
ASSEMBLY OF COLUMN (TENS'NGS)		70	1.90	130.00	3.84	268.00	398.00
PIERCAPS	EA	16	17.25	275.00	20.00	320.00	595.00
CAST - IN - PLACE COLUMN	LF	620	9.34	5800.00			5800.00
CONCRETE PRECASTING							
PRECAST BEAMS (Type A)	EA	36	35.32	1270.00	25.50	920.00	2190.00
PRECAST PLATFORM SLABS	EA	66	67.04	4420.00	18.94	1250.00	5670.00
PRECAST TRANSVERSE TIES	LF	972	1.44	1400.00	.63	620.00	2020.00
PRECAST STAIR LANDINGS/ WALKWAY	LF	128	2.87	437.00	1.13	172.00	609.00
PRECAST ROOF PANELS	ROOF	4	730.82	2920.00	133.02	530.00	3450.00
PRECAST EXTERIOR STAIR 1/2 FLIGHTS	EA	7	38.45	270.00	47.68	333.00	603.00
							14542.00
						+25%	3630.00
							18172.00