

# USE OF THE SITE

## Historical Pattern of Urban Development

Urban centers tend to grow concentrically radiating outward from the heart of the community for approximately equal distances in every direction. At any given time the form may not be symmetrical due to the relative ease or difficulty of access or of providing urban services to one area in contrast to another. There are normally physical features, either natural or man made, which tend to encourage a differential rate of development in various segments of the community. Yet these difficulties are overcome and the development pattern becomes fairly well-balanced around the center.

In such urban centers, development is highly concentrated around the core area. There are few openings in the compact and complete development. Voids begin to appear only at considerable distances from the center. Near the periphery of development wide scatteration occurs, usually blending into the rural scene with a few dwellings sprinkled along the primary highways.

The development of the Cincinnati Metropolitan Area and of Hamilton County shows many signs of following this concentric pattern. However, there are several significant deviations from it caused by the rugged terrain of the county.

The Ohio River Valley bisects the metropolitan area, and development on either side of the river proceeded almost independently until four bridges were built subsequent to the rail building era. Access between these two major sections of the metropolitan area is presently limited to the original bridges and the new Interstate Highway 75 crossing at the center of the urban complex. Therefore, there is no inter-connection of the greater community at its extremities.

The heart of Hamilton County development, as well as that of the entire metropolitan area, is located adjacent to the river at the mouth of the relatively broad Mill Creek Valley. The basin area is confined on both the east and west by the bluffs of Mt. Adams and Price Hill. The bluffs marking the edge of the Mill Creek Valley diverge along the northeasterly course of the valley and become less precipitous as they recede from the Ohio River. These bluff lands have resulted in large undeveloped areas near the center. The line of the bluffs is broken at intervals by valleys of streams such as the West Fork in which the

sharpness of the valley is directly related to the distance from the Ohio. The paths of these watercourses have not only provided convenient access to the plateau above the Mill Creek Valley, but they have also divided the upland plain into a number of distinct areas which at the outset have developed somewhat independently of each other such as Price Hill, Westwood, and Mt. Healthy.

The flat, open Mill Creek Valley provided land that was readily adaptable to urban uses. It also became the primary railroad corridor to the north. These factors in the early days led to the development of Lockland, Reading, Wyoming, and Glendale along the rail line. The more remote of these communities retain their identities, but there is a strong tendency for the entire urban fabric of Hamilton County to become linked together in a relatively complete semicircle around the core area. The rougher lands between Wyoming and Mt. Healthy are currently being developed to provide this linkage.

## Hamilton County - 1960

The county contains 265,000 acres or 414 square miles. The 1960 population of 864,000 was distributed as follows:

	<u>Population</u>		<u>Area</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number of Square Miles</u>	<u>Percent of Total County</u>
Cincinnati	503,000	58	78	19
16 other cities	147,000	17	36	9
18 villages*	45,000	5	49	12
Unincorporated areas*	169,000	20	251	60

\*Villages of Forest Park and Springdale Unincorporated at the time of census.

As has happened in so many metropolitan areas, Cincinnati has not been able to expand its corporate area in proportion to urban expansion. The city occupies most of the area within six miles of the central business district except for a narrow corridor extending another five miles to the west along the Ohio River. Three enclaves, separately incorporated, are surrounded by the city - Norwood, St. Bernard, and Elmwood Place.

To a large extent the urban pattern is a "lineal city" with industry and transportation arteries occupying the Mill Creek Valley. Residential areas also occupied the valley floor at an early date, although it is now evident that this was a shortsighted use of land more valuable for industrial purposes. At considerable expense, residential uses climbed valley slopes and then spread out on the more easily developable ridge top areas. Taking advantage of commuting service on the Baltimore and Ohio Railroad and convenient locations with respect to nearby industrial areas, Wyoming and Glendale were formed in 1870 and 1855 as "bedroom" satellite communities.

The metropolitan area is distinguished by two planned satellite communities. The first was Mariemont laid out by John Nolen and developed in the 1920's. During the late 1930's Greenhills was constructed as a federally sponsored planned satellite community with its own "greenbelt", now a county park.

The largest of the incorporated suburbs is Indian Hill which occupies much of the eastern part of the ridge top between Mill Creek and the Little Miami River and which is characterized by low-density residential occupancy. Amberley is a smaller community with a similar density.

Older, independent municipalities, brought into the metropolitan complex by the march of events include Lockland founded in 1849, Reading in 1851, Cleves, Addyston and North Bend in the late 1800's, Harrison in 1850, Terrace Park in 1872, Loveland in 1887 and Mt. Healthy in 1894. These and other of the suburban municipalities have long traditions and individual characteristics that distinguish them one from another. This adds variety to the urban complex, provides a needed identity, and stimulates citizen interest in community affairs.

Newer incorporations tend to locate near the upper end of the Mill Creek Valley and to include larger land areas. Blue Ash, Evendale, Springdale, Woodlawn and the large recent expansion of Sharonville are examples.

Municipal boundaries are irregular and haphazard, unrelated to topographic features, natural neighborhoods, or changes in land use; nor is there any coordination between municipal and school district boundaries.

In general, most of the incorporated areas are along Mill Creek and between Mill Creek and the Little Miami River. Only since World War II has residential expansion gone into the ridge top areas between Cincinnati and the Great Miami River (Colerain, Green, Delhi, and Miami Townships) to any great extent.

The three townships north and west of the Great Miami River - Whitewater, Crosby, and Harrison - have received the smallest impact from urban expansion to date. However, several new industries including the Fernald Plant of the Atomic Energy Commission, the extensive Miami-Whitewater Forest Park development, the improved access from the expressway system and the largest reservoir of flat usable ground within many miles makes this area susceptible to rapid growth.

The central business district of Cincinnati is the dominant trade center of the metropolitan area. It occupies the original site of the city adjacent to the Ohio River. With only one-sixth of the metropolitan population living on the Kentucky side, the downtown area has an off-center location resulting in obvious traffic difficulties. The city is proceeding with plans designed to better adapt this area to requirements of the automotive age; yet it would appear that, due to geography and the difficulties of such adaptation, a relatively substantial decentralization of some central business district functions will be inevitable.

The natural topography is so rough as to impose severe difficulties in urban expansion. A Cincinnati city manager once estimated that municipal capital improvements were 30 percent more costly because of the steep topography. In many instances, the topography has been misused by careless, unimaginative site planning. The land forms however, are of unusual beauty; the hillside and drainage channels are wooded; views are magnificent, many institutional buildings and churches having exploited advantages of hilltop sites.

Fortunately, the topography has made a monotonous, gridiron residential street layout impractical, and most subdivisions take advantage of the natural features of the land. In many instances, heavy grading and mass destruction of tree growth have left scars that will take decades to heal. In the more outlying areas, new houses are built along existing roads which customarily traverse either valleys or ridge lines. Intervening lands, more difficult to deal with, are left alone - a problem for another generation to work out. In any event, the residential pattern generally, is irregular, haphazard, and frequently quite

charming. Privacy and light traffic are insured in many cases by dead-end or cul-de-sac streets - very popular in the community.

While many features are comparable to other cities, the community as a whole has a unique character and charm of its own quite unlike any other metropolitan area of its size.

#### Land Use Pattern

In order to obtain a comprehensive picture of existing development, a land use survey of the entire county was prepared in 1960. Through use of auditor's records, the 200 scale photogrammetric survey sheets prepared in 1948 were brought up-to-date. Except for the City of Cincinnati, all property was inspected in the field and a new set of 200 foot to the inch maps drawn for all of the county except Cincinnati. These were then photographically reduced to a scale of 800 feet to the inch and 13 base maps prepared on which land use was shown lot by lot. By a comparison of existing conditions with those shown in the 1948 photogrammetric survey, data on changes in land use over the 12-year period was obtained. Computations of land use areas were made from the 800 scale maps. The 800 scale maps then were reduced photographically and new 2000 and 3000 scale base maps prepared.

The framework upon which the urban development of Hamilton County is formed is evident in the land use pattern which is shown on Plate 4. Existing land use has been summarized into four major categories - residential, commercial, industrial and railroad, and public and semi-public uses. The areas of the county which have a slope of 20 percent or more are shown by the pattern of small dots. A significant feature of the map is the manner in which urban development has largely avoided these areas except for large public uses and in spacious residential areas.

#### Railroads and Industry

The location of railroads and industry, and thereby the primary centers of employment, have been greatly influenced by topography. The rail facilities of the area are heavily concentrated in the Mill Creek Valley and the Norwood Trough. These broad valleys provide ideal industrial sites resulting in the primary concentration of such uses in these corridors. The Mill Creek Valley crossing the county north and south has by far the greatest amount of industry although industrial development is broken badly by intervening residential development. The

Norwood industrial complex, on the other hand, is continuous between Ivorydale and Madisonville. Rail lines have also been located along the flood plain of the Ohio, the two Miami's and the Whitewater Rivers. The larger industrial areas located in the valleys of the two Miami Rivers encompass largely sand and gravel extraction activities. Industrial use in these valleys is not too practical, because the flood plain is a very narrow shelf terminating in abrupt slopes or bluffs. A major exception to this is the broad terrace between the Whitewater River Valley and the Miami Valley north of New Baltimore.

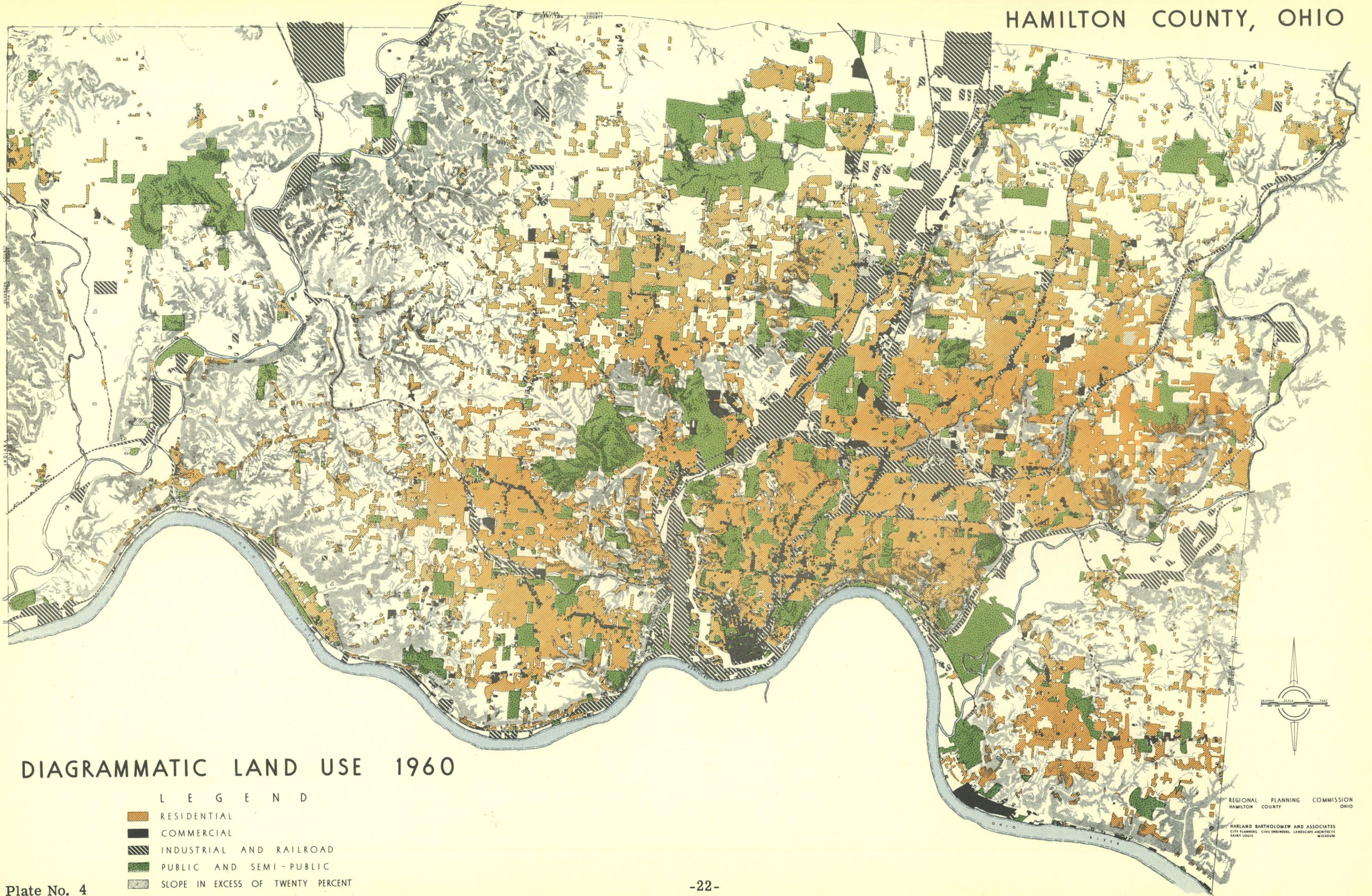
Other rail lines utilize the valleys of some of the primary drainageways, such as Sycamore Creek, as routes to ascend the plateau and descend into another major river valley. The alignment of these routes tends to be tortuous, and through much of their length, they are in deep valleys which do not permit industrial development adjacent to the rail facility.

#### Commercial Uses

A large part of the total commercial activity of the county is concentrated in the very populous basin area in and around the central business district. The community is plagued by the usual "strip" commercial development along many of the major thoroughfares. A unique and desirable feature of the Hamilton County development is the periodic "node" or concentration along these routes which functions as a well-defined local center for individual communities. Examples of this are seen in Pleasant Ridge and Madisonville. There are also a number of well-confined local centers as Hyde Park and Mt. Lookout which are strategically located to serve a small community.

Other large elements of the commercial land use pattern are: the regional shopping centers of Kenwood, Swifton, Western Hills, and Tri-County; major recreational centers such as River Downs, Coney Island, Cincinnati Gardens, and Kissels Amusement Park and several groups of greenhouses such as those near Spring Grove Cemetery.

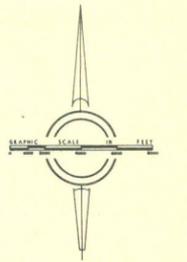
There are a number of continuous strips of commercial development such as those along Reading, Gilbert, and Montgomery. Yet the pattern is relatively unique in the number of concentrations and the amount of intervening residential development along major thoroughfares.



DIAGRAMMATIC LAND USE 1960

L E G E N D

- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL AND RAILROAD
- PUBLIC AND SEMI-PUBLIC
- SLOPE IN EXCESS OF TWENTY PERCENT



REGIONAL PLANNING COMMISSION  
HAMILTON COUNTY OHIO

HARLAND BARTHOLOMEW AND ASSOCIATES  
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SAINT LOUIS MISSOURI

## Residential Uses

A significant feature of the residential development is several major clusters of communities which have developed on plateau areas such as Mt. Healthy, North College Hill, and Groesbeck. These are now much less distinct identities than they were only a few years ago. They are gradually growing together; still there are presently large undeveloped areas within the fabric of these larger agglomerations.

Residential development has been most complete in the area between the Ohio River and the Norwood Trough. Undeveloped land which characterizes much of the use of the residential pattern is essentially lacking here. While development is quite complete northeast of the Norwood Trough, the number and size of voids increase.

Residential development is one of the urban uses which can adapt itself to relatively rough ground. Careful observation of the map will show that the areas of 20 percent slope have largely been by-passed and these account for much of the openness in the development pattern. A few examples of the residential development of these slopes is in the Walnut Hills-Columbia Area, in Wyoming and in Indian Hill.

Another very significant feature is the strip residential pattern along almost every county road in the east side of the watershed of the Great Miami River. This type of arrangement is so wasteful as to be a classic example of "ten acres doing the job of one". The topography does not permit normal and efficient subdivision, and the present pattern does not permit economical provision of urban services.

## Public and Semi-Public Uses

Very extensive areas are devoted to public and semi-public use such as the parks, schools, hospitals and recreation. Most of these may be considered permanent open space reservations which will tend to provide reasonable openness in the urban pattern. Except for the county parks, the number and size of such areas diminish rapidly outside the City of Cincinnati. Large segments of the urban pattern are without such open spaces.

## Recent Evolution of the Pattern

Much of the present pattern has been developed since World War II.

### Trends in Industrial Development

Plate 5 shows the location of industrial uses in Hamilton County and distinguishes between that which occurred in the period 1948 to 1960 and that which occurred prior to 1948. Areas zoned for industry are also shown.

Industry and industrial zoning are heavily concentrated in the Mill Creek Valley and the Norwood Trough. There has been relatively modest addition to the total industrial establishment in the area south of the General Electric Plant. The major additions in this section were: the area along the Pennsylvania Railroad in vicinity of Amberley, and in the Duck Creek District from Lester to Red Bank Road.

The largest concentration of new industrial development is shown in the Woodlawn, Evendale, and Sharonville areas of the Mill Creek Valley. Approximately one-fourth of the new industrial land absorbed between 1948 and 1960 was located in these areas. There are other significant developments along the rail lines in Blue Ash, Loveland and Westwood - Price Hill. The extensive, newly-developed areas in the valleys of the two Miami Rivers are largely extensions of previously established sand and gravel operations.

The unzoned area of the county has experienced industrial growth including the Fernald Plant of the Atomic Energy Commission, the Cincinnati Shaper Company, and uses near Miami Fort Park - all of which are related to the rail system. There are numerous examples of new industrial developments both within the zoned and unzoned areas which are not related to the rail network. The major installations of sort are the Proctor and Gamble units on Center Hill and in northern Colerain Township and the Standard Publishing Company in Mt. Healthy. However, a large part of the scattered industrial uses are storage yards for equipment or automobile salvage and highway oriented uses such as repair garages - uses without a substantial structure. There are also some small machine shops and fabricating centers represented in the widely dispersed fragment of the industrial pattern.

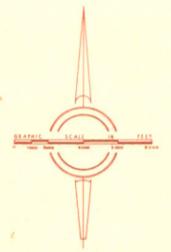
UNZONED

INDUSTRIAL DEVELOPMENT  
1948-1960

LEGEND

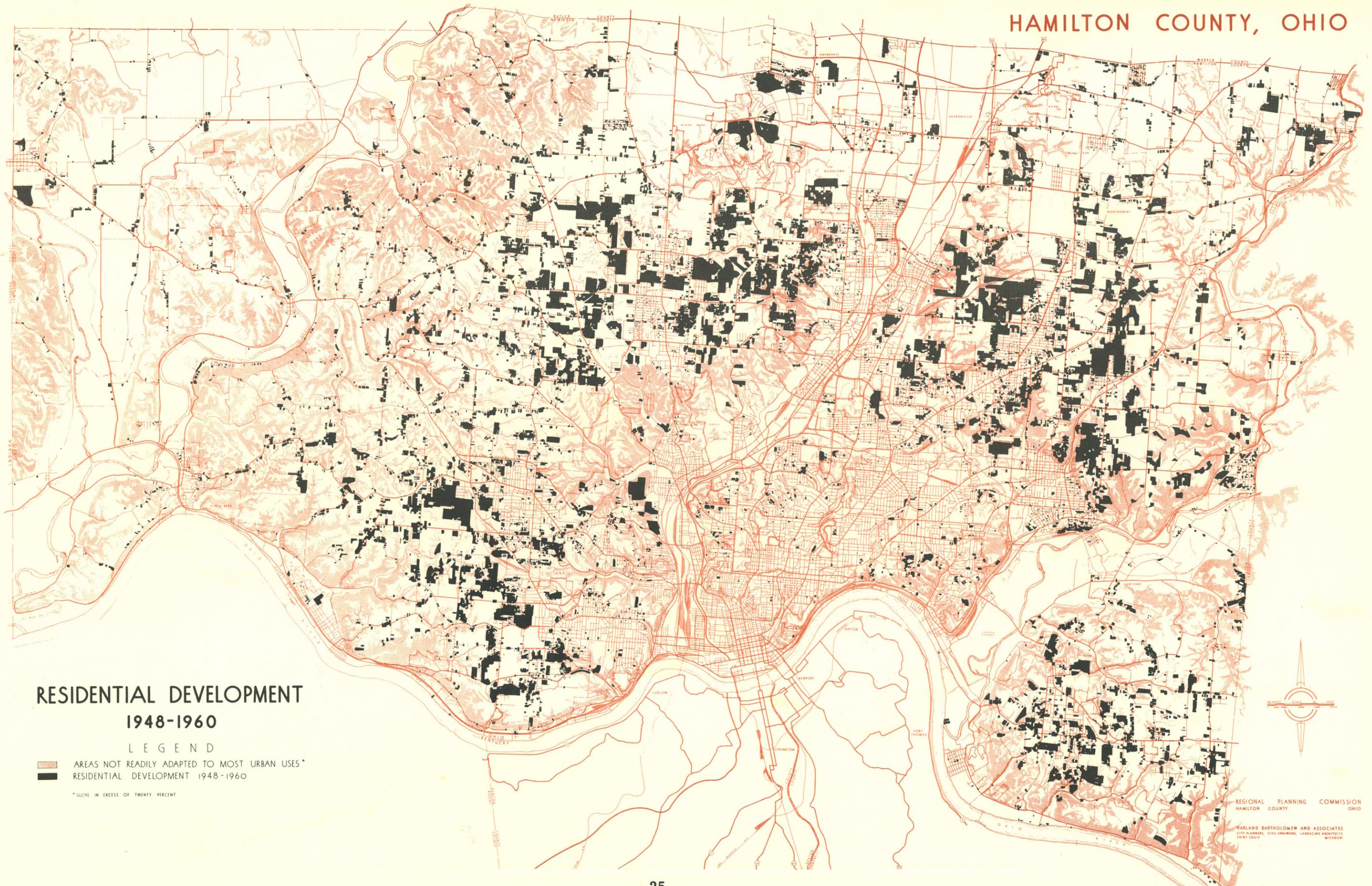
-  AREAS NOT READILY ADAPTED TO MOST URBAN USES\*
-  INDUSTRIAL DEVELOPMENT PRIOR TO 1948
-  INDUSTRIAL DEVELOPMENT 1948-1960
-  INDUSTRIAL ZONING 1960
-  RAILROADS

\*SLOPE IN EXCESS OF TWENTY PERCENT



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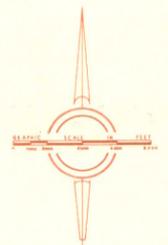


**RESIDENTIAL DEVELOPMENT  
1948-1960**

**LEGEND**

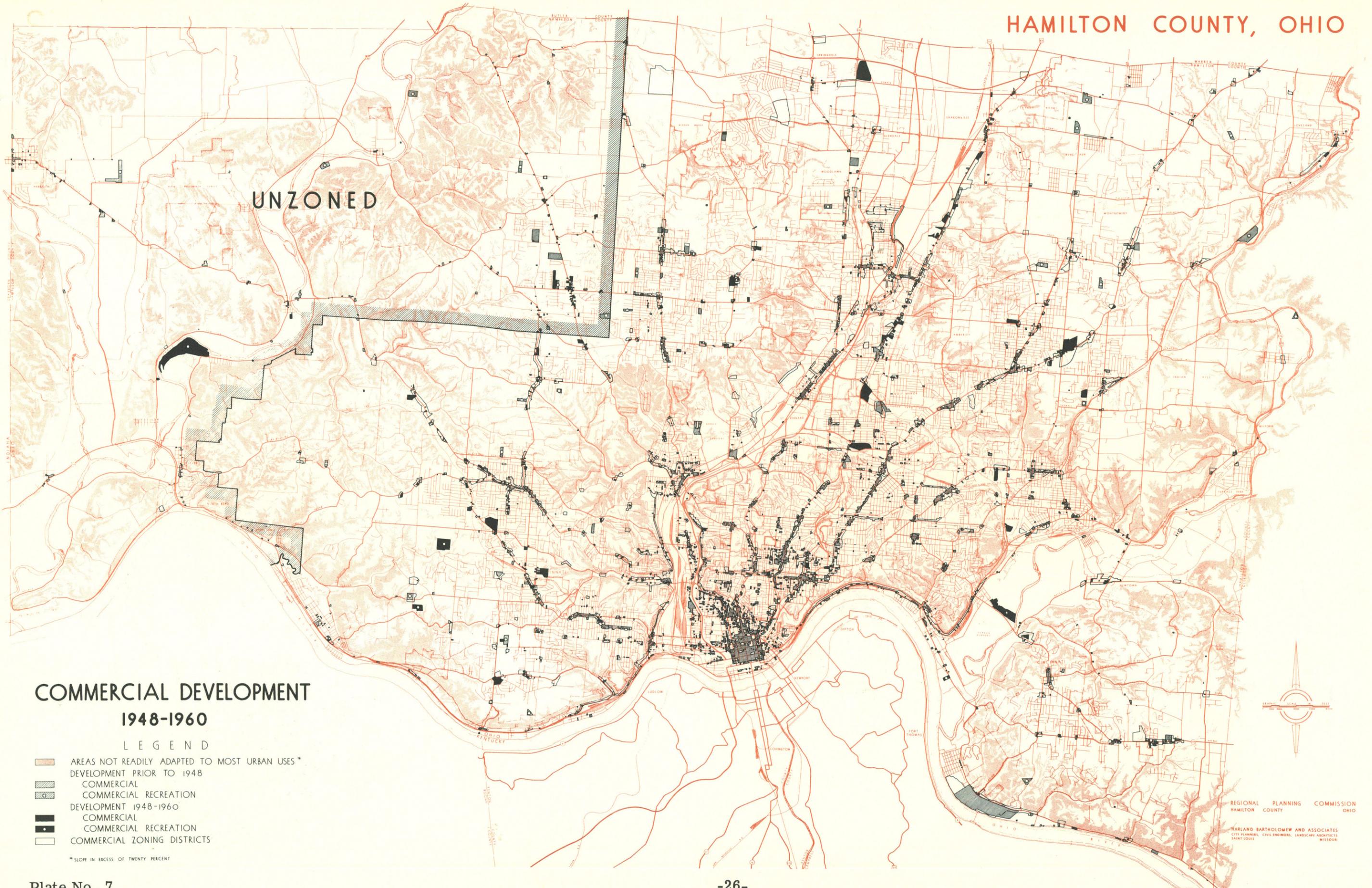
- AREAS NOT READILY ADAPTED TO MOST URBAN USES\*
- RESIDENTIAL DEVELOPMENT 1948-1960

\*SLOPE IN EXCESS OF TWENTY PERCENT



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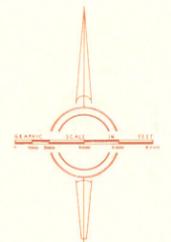
# COMMERCIAL DEVELOPMENT

## 1948-1960

### LEGEND

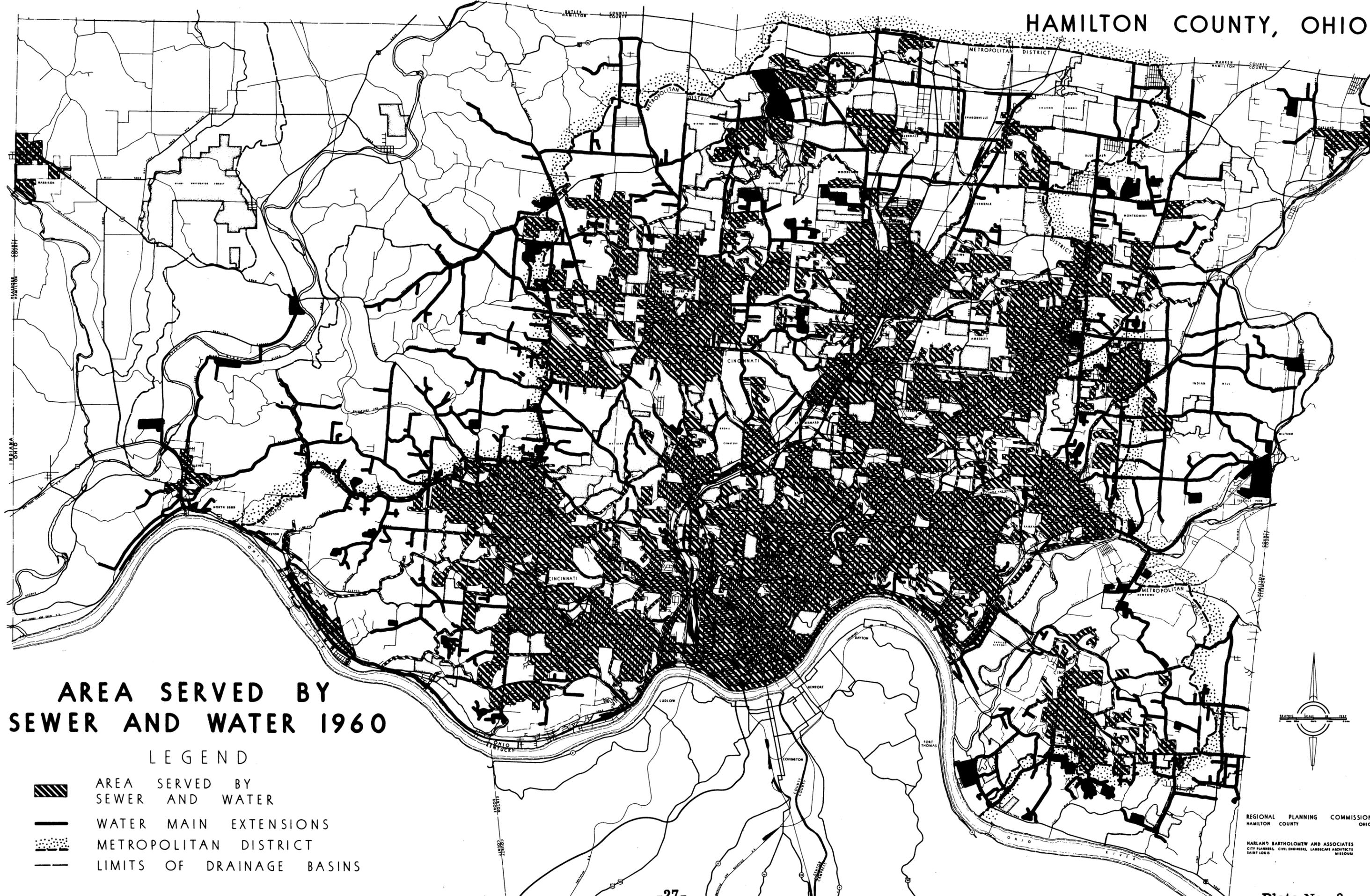
- AREAS NOT READILY ADAPTED TO MOST URBAN USES\*
- DEVELOPMENT PRIOR TO 1948
- COMMERCIAL
- COMMERCIAL RECREATION
- DEVELOPMENT 1948-1960
- COMMERCIAL
- COMMERCIAL RECREATION
- COMMERCIAL ZONING DISTRICTS

\*SLOPE IN EXCESS OF TWENTY PERCENT



REGIONAL PLANNING COMMISSION  
HAMILTON COUNTY OHIO

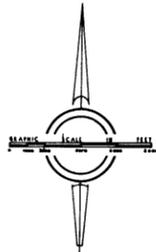
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SAINT LOUIS, MISSOURI



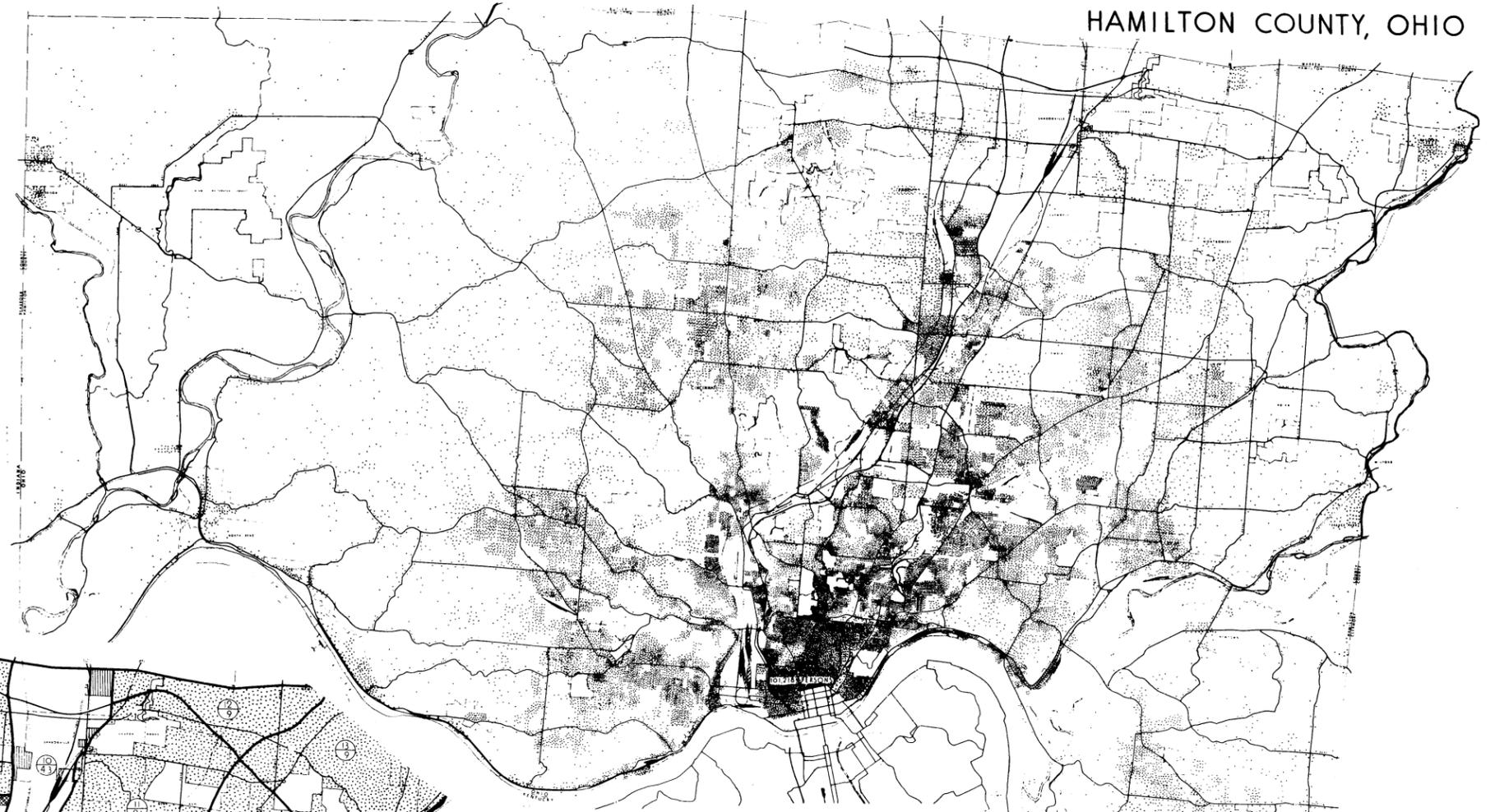
**AREA SERVED BY  
SEWER AND WATER 1960**

LEGEND

-  AREA SERVED BY SEWER AND WATER
-  WATER MAIN EXTENSIONS
-  METROPOLITAN DISTRICT
-  LIMITS OF DRAINAGE BASINS



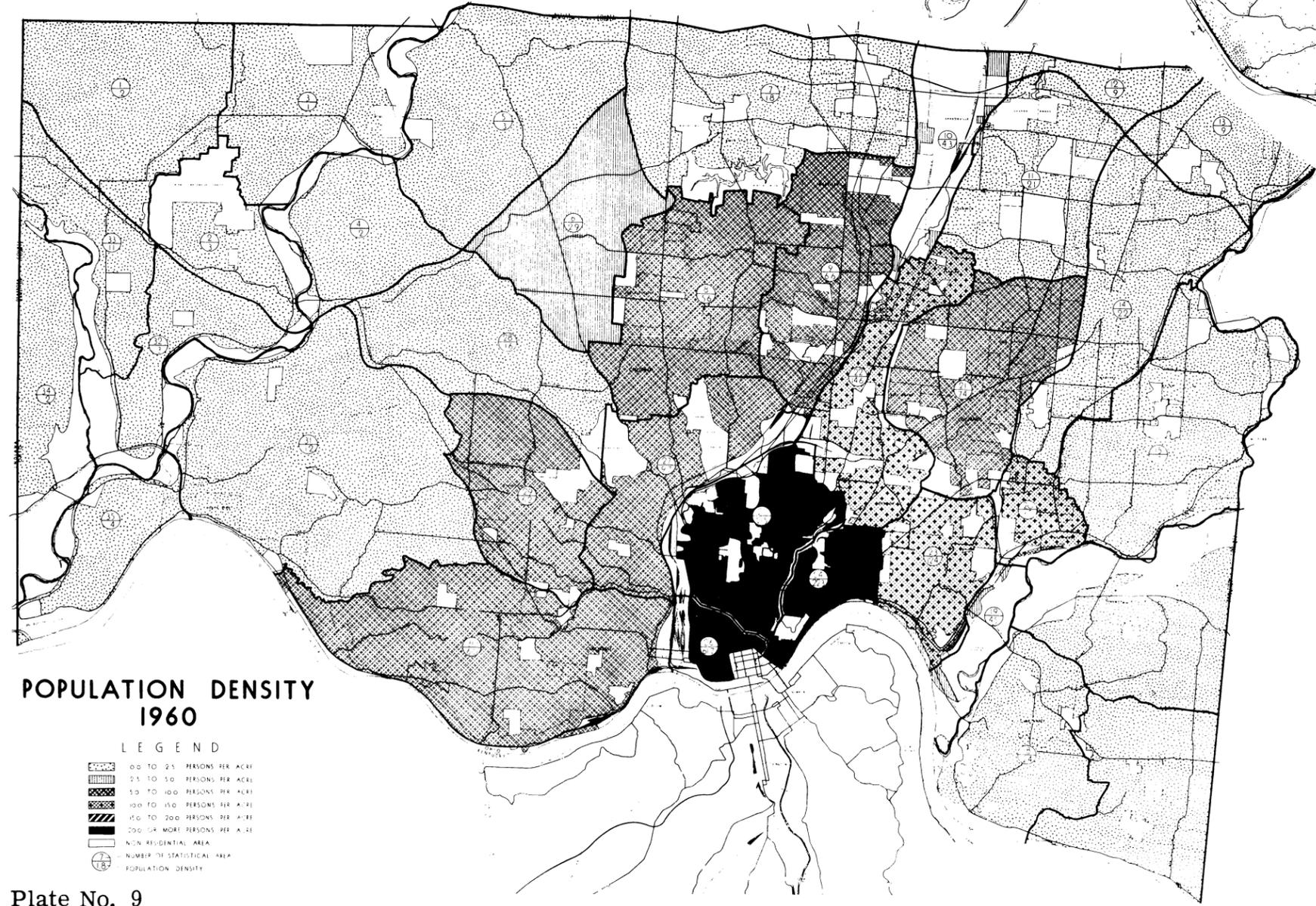
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POPULATION DISTRIBUTION 1960  
ONE DOT REPRESENTS 25 PERSONS



REGIONAL PLANNING COMMISSION  
HAMILTON COUNTY  
OHIO  
PARLAND BATHOLICUS AND ASSOCIATES  
1111 BROADWAY  
NEW YORK, N.Y. 10019



POPULATION DENSITY  
1960

LEGEND

-  0.0 TO 25 PERSONS PER ACRE
-  25 TO 50 PERSONS PER ACRE
-  50 TO 100 PERSONS PER ACRE
-  100 TO 150 PERSONS PER ACRE
-  150 TO 200 PERSONS PER ACRE
-  200 OR MORE PERSONS PER ACRE
-  NON-RESIDENTIAL AREA
-  NUMBER OF STATISTICAL AREA
-  POPULATION DENSITY

There are large areas within existing industrial zoning districts which are not used for industrial purposes. Much of this industrially zoned area is occupied by residential use or major public and semi-public use such as Lunken Airport. A considerable amount of the industrial zoning is in the flood plain where it is of restricted usefulness. The only substantial reserve of land zoned and protected for industry is in the northern end of the Mill Creek Valley and at Blue Ash.

A large industrial district has been set aside in the Forest Park area in the middle of a residential community. To date there has been very limited industrial use of the area.

#### Trend in Residential Development

Plate 6 shows the location of the residential development which occurred between 1948 and 1960. As could be expected, there was little new development either in the City of Cincinnati or within the confines of many of the older communities located in the valley floor or on the plateau. Development occurred in a broad, semicircular band which was interrupted only by the older communities. A significant feature of the development is the manner in which the fan is filling in between Deer Park and Reading or between Wyoming and Mt. Healthy. A similar trend is evident between Groesbeck and Cheviot, though this movement is probably retarded by Mt. Airy Forest and the resultant limitations on direct access to the core area.

By far the most striking feature of the map is the scattering of development evident along the county roads, particularly in the area of rough topography tributary to the Great Miami River. This development is one lot depth from the road with very few instances of new streets platted and developed. An excellent example is in the Taylor Creek Watershed where such development has gone so far that consideration now must be given to provide sanitary facilities for so widely dispersed a population. The primary population distribution in the watershed lies in the vicinity of Cheviot Road making necessary long interceptors to reach enough dwelling units to support the undertaking. Occupancy of land suited to residential use in the more usable upper reaches of a watershed may necessitate carrying a trunk sewer for several miles through the more precipitous and unusable portions of the watershed.

#### Trend in Commercial Development

Plate 7 shows the 1960 commercial development in the county and distinguishes between that which occurred prior or subsequent to 1948. There are extensive areas in the county used for picnicking, fishing, and racing for which a fee is charged. An example is the large acreage near Gieringer. These have been termed commercial recreation, and they are designated by a small open circle to distinguish them from other commercial activities more closely correlated with urban population. The map also shows the commercial zoning districts in the zoned areas of the county.

New commercial uses have developed in a pattern very similar to that of the new residential growth. There have been a number of new units located along trafficways, but the significant feature of the new growth is the number of regional and local shopping centers. There has been very little change within the compact local centers serving the previously developed residential sections.

#### Area Served by Sewer and Water

The areas having public sewers and a public water supply are shown on Plate 8. The bold line defines the extent of the Metropolitan Sewer District. It will be noted that there are few developed areas within these limits that are not adequately served. Outside these limits a few municipalities such as Loveland, Harrison, and Cleves have sanitary sewers, and in the Sycamore Watershed sewers and treatment are provided by Hamilton County. There are a few individual subdivisions outside the metropolitan district that provide independent disposal systems which will, for the most part, be taken over and operated by the county. Within the metropolitan district, a few of the older communities such as Glendale operate their own systems.

Public water supply, like the sanitary sewers, is provided by a number of municipalities, but many of these have arrangements with the Cincinnati Water Department either for their full supply or a supplementary supply. Water lines have been extended beyond the area of sanitary sewers, and in some of these areas, the supply has been adequate only very recently. With inadequate supply, water consumption was kept to a minimum and septic tanks and other individual sanitary disposal systems were functioning without great complication. With

adequate water and increased consumption, the impervious soil has begun to cause major nuisances. Health regulations require a minimum lot of 20,000 square feet for septic tanks, but this is not adequate under the soil and drainage conditions, and serious sanitation problems exist in many parts of the county. Sewerage should be required and provided for all development at urban densities.

### Distribution and Density of Population 1960

#### Distribution of Population

The pattern of population distribution (see Plate 9) reflects the development of residential areas of the county along the several major corridors. The heaviest concentration of population is in the northeast sector. For some distance from the core, there is a relatively even and dense pattern of population, and within this area the individual corridors have no identity. North and east of Arlington Heights, Norwood and Oakley there is distinct concentration along the floor of the Mill Creek Valley, and there are concentrations along Montgomery-Blue Ash Roads and along Madison-Camargo Roads. The population pattern in the intervening areas is uneven and relatively sparse. The identity of corridors to the north and west is readily apparent with the concentrations along Glenway, Harrison, and Hamilton Avenues. Topographic conditions resulted in voids in parts of the distribution pattern between the valleys and the plateaus in these areas, and sparse population generally between these corridors.

Within the corridors the pattern shows periodic concentrations, reflecting the development of individual residential communities such as Lockland, Silverton, Madisonville, and Madiera. The trend in residential development has shown a marked filling in between the corridors in the past 15 years. This is most desirable.

Another major feature of the distribution pattern is the widely scattered population in the outlying portions of the county, particularly in the west. One of the primary objectives of the planning program is to retard uneconomical, sporadic and scattered residential growth and to encourage efficient development of land to bring about a balanced urban community within the limitations of topography.

#### Density of Population

In urban residential areas about half of the land is actually available for residences, the remainder being used for streets, parks,

schools, churches and other uses including land unsuitable for building. Therefore, single-family development on a typical lot size 60 x 125 would result in a density of about three lots or 10 persons per acre. A typical lot size of 12,000 square feet would result in an average density of about six persons per acre. At 3,000 square feet per family, a density of 24 persons per acre could be anticipated as an average.

In large metropolitan areas, such as Cincinnati, high densities can be expected in the core area. The present density, as shown on the plate is 61.7 persons per acre. Outside that area, where there is a high incidence of apartment use mixed with the single-family development, high densities will maintain. The densities of Norwood, St. Bernard and Walnut Hills approximate 20 per acre. Single-family residential areas should maintain an average density of from five to ten persons per acre in order to be economically provided with utilities and municipal services. The following tabulation shows the area and population of major statistical districts classified by density range. For purposes of density calculations, major non-residential areas have been excluded. (See Plate 9.)

#### Classification of Area and Population by Density - 1960

Density Classification in Persons per acre	<u>Area</u>		<u>Population</u>	
	Gross Acres	Percentage	Number	Percentage
0.0 to 2.5	168,691	63.6	139,500	16.2
2.5 to 5.0	14,903	5.6	26,700	3.0
5.0 to 10.0	56,466	21.3	322,025	37.3
10.0 to 15.0	13,574	5.1	140,475	16.3
15.0 to 20.0	-	-	-	-
Over 20.0	11,634	4.4	235,425	27.2
TOTAL	265,268	100.0	864,125	100.0

The tabulation shows that about one-fifth of the population is in areas where densities are below five persons per acre, and 37.3 percent of the population is in areas classified as five to 10 persons per acre. The latter classification occupies about one-fifth of the county.

TABLE 6

URBAN LAND USE AND ABSORPTION  
CITIES, VILLAGES AND TOWNSHIPS  
HAMILTON COUNTY OHIO 1948-1960

CITIES AND VILLAGES	RESIDENTIAL AND RELATED					INDUSTRY AND RAILROADS				COMMERCE	STREETS	TOTAL DEVELOPED	VACANT AND WATER	TOTAL AREA
	Single-Family	Two Family	Multiple Family	Parks, Public & Semi-Public	Sub-total	Light Industry	Heavy Industry	Rail-roads	Sub-total					
<b>ADDYSTON</b>														
1960 Land Use in Acres	42	3	2	13	60	3	66	28	97	2	67	226	425	651
Percent of Developed Area	18.6	1.3	.9	5.7	26.5	1.3	29.2	12.4	42.9	.9	29.7	100.0		
1948-60 Absorption in Acres	5	-	-	3	8	1	-	-	1	-	-	9		
<b>AMBERLY</b>														
1960 Land Use in Acres	766.	-	-	400	1166	90	-	-	90.	-	160	1416	796	2212
Percent of Developed Area	54.1	-	-	28.2	82.3	6.4	-	-	6.4	-	11.3	100.0		
1948-60 Absorption in Acres	507	-	-	14	521	83	-	-	83	-	84	688		
<b>ARLINGTON HEIGHTS</b>														
1960 Land Use in Acres	39	8	1	1	49	23	7	5	35	3	38	125	39	164
Percent of Developed Area	31.2	6.4	.8	.8	39.2	18.4	5.6	4	28.0	2.4	30.4	100.0		
1948-60 Absorption in Acres	1	-	-	-	1	7	1	-	8	2	18	29		
<b>BLUE ASH</b>														
1960 Land Use in Acres	797	3	-	276	1076	103	6	34	143	45 (a)	320	1584	3295	4879
Percent of Developed Area	50.3	.2	-	17.5	68.0	6.5	.4	2.1	9.0	2.8 <sup>a</sup> (a)	20.2	100.0		
1948-60 Absorption in Acres	385	1	-	24	410	66	4	7	77	4	74	565		
<b>CHEVIOT</b>														
1960 Land Use in Acres	393	67	13	33	506	4	-	-	4	35	127	672	40	712
Percent of Developed Area	58.5	10.0	1.9	4.9	75.3	.6	-	-	.6	5.2	18.9	100.0		
1948-60 Absorption in Acres	80	5	5	-	90	-	-	-	-	9	15	114		
<b>CINCINNATI</b>														
1960 Land Use in Acres	11455	2356	1820	9073	24704	1054	1777	1371	4202	1495 (b)	6800	37201	12535	49736
Percent of Developed Area	30.8	6.3	4.9	24.4	66.4	2.8	4.7	3.7	11.2	4.1 (b)	18.3	100		
1948-60 Absorption Acres	1627	68	520	349	2564	182	147	-	329	303 (b)	867	4063		
<b>CLEVELS</b>														
1960 Land Use in Acres	116	8	6	5	135	3	-	21	24	6	100	265	451	716
Percent of Developed Area	43.8	3.0	2.3	1.9	51.0	1.1	-	7.9	9.0	2.3	37.7	100		
1948-60 Absorption in Acres	18	-	-	1	19	-	-	-	-	1	17	37		
<b>DEER PARK</b>														
1960 Land Use in Acres	337	8	14	39	398	7	-	4	11	16	100	525	12	537
Percent of Developed Area	64.1	1.5	2.7	7.5	75.8	1.3	-	.8	2.1	3.0	19.1	100		
1948-60 Absorption in Acres	47	2	9	19	77	-	-	-	-	4	10	91		
<b>ELMWOOD PLACE</b>														
1960 Land Use in Acres	42	29	3	5	79	23	17	24	64	10	38	191	15	206
Percent of Developed Area	22.0	15.2	1.6	2.6	41.4	12.0	8.9	12.6	33.5	5.2	19.9	100		
1948-60 Absorption Acres	1	-	-	-	1	-	-	-	-	-	8	9		
<b>EVENDALE</b>														
1960 Land Use in Acres	172	-	-	169	341	88	524	131	743	47	230	1361	1717	3078
Percent of Developed Area	12.6	-	-	12.4	25.0	6.5	38.5	9.6	54.6	3.5	16.9	100		
1948-60 Absorption in Acres	110	-	-	19	129	82	185	-	267	26	157	579		
<b>FAIRFAX</b>														
1960 Land Use in Acres	101	3	-	17	121	22	57	12	91	20	104	336	169	505
Percent of Developed Area	30.0	1.0	-	5.2	36.2	6.6	16.8	3.5	26.9	5.9	31.0	100		
1948-60 Absorption in Acres	14	1	-	-	15	13	-	-	13	14	46	88		
<b>GLENDALE</b>														
1960 Land Use in Acres	383	3	-	78	464	1	1	6	8	5	126	603	431	1034
Percent of Developed Area	63.5	.5	-	12.9	76.9	.2	.2	1.0	1.4	.8	20.9	100		
1948-60 Absorption Acres	42	-	-	-	42	1	1	-	2	-	13	57		
<b>GOLF MANOR</b>														
1960 Land Use in Acres	150	11	16	55	232	43	1	10	54	4	56	346	30	376
Percent of Developed Area	43.3	3.2	4.6	15.9	67.0	12.4	.3	2.9	15.6	1.2	16.2	100.0		
1948-60 Absorption in Acres	30	7	13	3	53	11	-	-	11	2	4	70		
<b>GREENHILLS</b>														
1960 Land Use in Acres	154	15	65	156	390	-	-	-	-	8	84	482	296	778
Percent of Developed Area	32.0	3.1	13.5	32.4	81.0	-	-	-	-	1.6	17.4	100.0		
1948-60 Absorption Acres	121	-	-	99	220	-	-	-	-	3	28	251		
<b>HARRISON</b>														
1960 Land Use in Acres	201	7	2	21	231	8	3	-	11	16	76	334	396	730
Percent of Developed Area	60.2	2.1	.6	6.3	69.2	2.4	.9	-	3.3	4.8	22.7	100.0		
1948-60 Absorption Acres	107	-	-	4	111	1	3	-	4	4	14	133		
<b>INDIAN HILL</b>														
1960 Land Use in Acres	4013	1	-	830	4844	16	8	57	81	-	425	5350	6642	11992
Percent of Developed Area	75.0	-	-	15.5	90.5	.3	.2	1.1	1.6	-	7.9	100.0		
1948-60 Absorption Acres	1395	1	-	447	1843	-	8	-	8	-	53	1904		
<b>LINCOLN HEIGHTS</b>														
1960 Land Use in Acres	128	11	39	62	240	3	2	-	5	6	101	352	111	463
Percent of Developed Area	36.4	3.1	11.1	17.5	68.1	.9	.6	-	1.5	1.7	28.7	100.0		
1948-60 Absorption Acres	28	3	9	11	51	1	1	-	2	2	17	72		
<b>LOCKLAND</b>														
1960 Land Use in Acres	166	19	4	50	239	36	159.	26	221	22	114	596	179	775
Percent of Developed Area	27.8	3.2	.7	8.4	40.1	6.0	26.7	4.4	37.1	3.7	19.1	100.0		
1948-60 Absorption Acres	8	-	-	12	20	12	26	-	38	3	24	85		
<b>LOVELAND</b>														
1960 Land Use in Acres	248	1	1	29	279	6	2	13	21	11	83	394	596	990
Percent of Developed Area	62.9	.3	.3	7.3	70.8	1.6	.5	3.3	5.4	2.8	21.0	100.0		
1948-60 Absorption Acres	145	-	1	14	160	4	-	-	4	9	28	201		
<b>MADEIRA</b>														
1960 Land Use in Acres	442	1	2	35	480	9	-	14	23	12	107	622	115	737
Percent of Developed Area	71.1	.2	.3	5.5	77.1	1.5	-	2.3	3.8	1.9	17.2	100.0		
1948-60 Absorption Acres	261	-	2	15	278	5	-	-	5	3	47	333		
<b>MARIEMONT</b>														
1960 Land Use in Acres	159	6	25	78	268	3	32	1	36	7	92	403	32	435
Percent of Developed Area	39.3	1.5	6.2	19.3	66.3	.8	8	.3	9.1	1.7	22.9	100		
1948-60 Absorption Acres	60	2	7	-	69	-	-	-	-	3	-	72		
<b>MILFORD</b>														
1960 Land Use in Acres	4	-	-	1	5	3	-	7	10	1	13	29	76	105
Percent of Developed Area	13.8	-	-	3.5	17.3	10.3	-	24.1	34.4	3.5	44.8	100.0		
1948-60 Absorption Acres	-	-	-	-	-	2	-	-	2	-	-	2		
<b>MONTGOMERY</b>														
1960 Land Use in Acres	504	2	2	176	684	5	1	-	6	19 (c)	117	826	692	1518
Percent of Developed Area	61.1	.2	.2	21.3	82.8	.6	.1	-	.7	2.3 (c)	14.2	100.0		
1948-60 Absorption Acres	363	2	1	10	376	4	-	-	4	6 <sup>c</sup>	44	430		
<b>MT. HEALTHY</b>														
1960 Land Use in Acres	354	9	11	59	433	5	6	-	11	35 (d)	117	596	131	727
Percent of Developed Area	59.3	1.5	1.9	10.0	72.7	.8	1.0	-	1.8	5.9 (d)	19.6	100.0		
1948-60 Absorption Acres	71	1	8	18	98	-	-	-	-	2	15	115		
<b>NEWTOWN</b>														
1960 Land Use in Acres	130	3	-	68	201	33	175	12	220	7	58	486	929	1415
Percent of Developed Area	26.8	.6	-	13.9	41.3	6.8	36.0	2.5	45.3	1.4	12.0	100.0		
1948-60 Absorption Acres	21	1	-	2	24	10	15	-	25	1	-	50		
<b>NORTH BEND</b>														
1960 Land Use in Acres	51	1	-	28	80	3	10	35	48	9	87	224	482	706
Percent of Developed Area	22.8	.5	-	12.4	35.7	1.4	4.5	15.6	21.5	4.0	38.8	100.0		
1948-60 Absorption Acres	4	-	-	1	5	-	1	-	1	-	6	12		
<b>NORTH COLLEGE HILL</b>														
1960 Land Use in Acres	562	8	6	178	754	6	1	-	7	26 (e)	169	956	134	1090
Percent of Developed Area	58.7	.8	.6	18.7	78.8	.6	.1	-	.7	2.7 (e)	17.8	100.0		
1948-60 Absorption Acres	222	3	6	5	236	-	-	-	-	10	30	276		

<b>MT. HEALTHY</b>															
1960 Land Use in Acres	354	9	11	59	433	5	6	-	11	35 (d)	117	596	131	727	
Percent of Developed Area	59.3	1.5	1.9	10.0	72.7	.8	1.0	-	1.8	5.9 (d)	19.6	100.0			
1948-60 Absorption Acres	71	1	8	18	98	-	-	-	-	2	15	115			
<b>NEWTOWN</b>															
1960 Land Use in Acres	130	3	-	68	201	33	175	12	220	7	58	486	929	1415	
Percent of Developed Area	26.8	.6	-	13.9	41.3	6.8	36.0	2.5	45.3	1.4	12.0	100.0			
1948-60 Absorption Acres	21	1	-	2	24	10	15	-	25	1	-	50			
<b>NORTH BEND</b>															
1960 Land Use in Acres	51	1	-	28	80	3	10	35	48	9	87	224	482	706	
Percent of Developed Area	22.8	.5	-	12.4	35.7	1.4	4.5	15.6	21.5	4.0	38.8	100.0			
1948-60 Absorption Acres	4	-	-	1	5	-	1	-	1	-	6	12			
<b>NORTH COLLEGE HILL</b>															
1960 Land Use in Acres	562	8	6	178	754	6	1	-	7	26 (e)	169	956	134	1090	
Percent of Developed Area	58.7	.8	.6	18.7	78.8	.6	.1	-	.7	2.7 (e)	17.8	100.0			
1948-60 Absorption Acres	222	3	6	5	236	-	-	-	-	10	30	276			
<b>NORWOOD</b>															
1960 Land Use in Acres	576	270	72	124	1042	97	239	77	413	71	382	1908	118	2026	
Percent of Developed Area	30.2	14.2	3.8	6.4	54.6	5.1	12.5	4.1	21.7	3.7	20.0	100.0			
1948-60 Absorption Acres	24	3	4	14	45	13	5	-	18	6	4	73			
<b>READING</b>															
1960 Land Use in Acres	503	19	17	180	719	72	106	15	193	54	217	1183	633	1816	
Percent of Developed Area	42.5	1.6	1.4	15.0	60.5	6.2	9.0	1.3	16.5	4.6	18.4	100.0			
1948-60 Absorption in Acres	276	3	7	49	335	23	1	-	24	35	59	453			
<b>ST. BERNARD</b>															
1960 Land Use in Acres	113	65	8	177	363	74	281	86	441	14	133	951	45	996	
Percent of Developed Area	11.9	6.8	.8	18.6	38.1	7.8	29.6	9.0	46.4	1.5	14.0	100.0			
1948-60 Absorption in Acres	19	2	1	-	22	1	23	-	24	1	28	75			
<b>SHARONVILLE</b>															
1960 Land Use in Acres	316	7	1	652	976	149	325	110	584	17	460	2037	1642	3679	
Percent of Developed Area	15.5	.3	.1	32.0	47.9	7.4	15.9	5.4	28.7	.8	22.6	100.0			
1948-60 Absorption in Acres	192	1	1	71	265	145	261	8	414	6	313	998			
<b>SILVERTON</b>															
1960 Land Use in Acres	302	13	27	25	367	5	3	5	13	20	84	484	119	603	
Percent of Developed Area	62.4	2.7	5.6	5.1	75.8	1.0	.6	1.0	2.6	4.2	17.4	100.0			
1948-60 Absorption in Acres	96	7	8	15	126	-	-	-	-	5	12	143			
<b>SPRINGDALE</b>															
1960 Land Use in Acres	346	-	-	359	705	7	-	19	26	133 (f)	353	1217	1842	3059	
Percent of Developed Area	28.4	-	-	29.5	57.9	.6	-	1.6	2.2	10.9 (f)	29.0	100.0			
1948-60 Absorption in Acres	185	-	-	83	268	-	-	-	-	67	249	584			
<b>TERRACE PARK</b>															
1960 Land Use in Acres	275	2	-	20	297	-	5	27	32	4	98	431	352	783	
Percent of Developed Area	63.7	.5	-	4.7	68.9	-	1.2	6.3	7.5	.9	22.7	100.0			
1948-60 Absorption in Acres	113	-	-	8	121	-	1	-	1	1	9	132			
<b>WOODLAWN</b>															
1960 Land Use in Acres	258	2	1	47	308	139	1	17	157	38 (g)	110	613	1011	1624	
Percent of Developed Area	42.1	.3	.2	7.7	50.3	22.6	.2	2.8	25.6	6.2 (g)	17.9	100.0			
1948-60 Absorption in Acres	146	-	1	9	156	132	-	-	132	3	15	306			
<b>WYOMING</b>															
1960 Land Use in Acres	940	14	13	124	1091	1	4	8	13	9	184	1297	430	1727	
Percent of Developed Area	72.5	1.1	1	9.5	84.1	.1	.3	.6	1	.7	14.2	100.0			
1948-60 Absorption in Acres	368	3	2	12	385	-	-	-	-	2	15	402			
<b>TOWNSHIPS (Including Political Subdivisions)</b>															
<b>ANDERSON</b>															
1960 Land Use in Acres	2650	8	3	699	3360	48	462	67	577	289 (h)	850	5076	16749	21825	
Percent of Developed Area	52.2	.2	.1	13.8	66.3	.9	9.1	1.3	11.3	5.7 (h)	16.7	100.0			
1948-60 Absorption in Acres	1246	1	3	428	1678	9	238	-	247	32	175	2132			
<b>COLERAIN</b>															
1960 Land Use in Acres	2877	12	14	429	3332	164	514	63	741	215 (i)	1168	5456	23068	28524	
Percent of Developed Area	52.7	.2	.3	7.9	61.1	3.0	9.4	1.2	13.6	3.9 (i)	21.4	100.0			
1948-60 Absorption in Acres	2010	8	14	146	2178	120	268	-	388	89 <sup>1</sup> (j)	250	2905			
<b>COLUMBIA</b>															
1960 Land Use in Acres	4739	36	58	1159	5992	175	95	190	460	95 (k)	958	7505	5138	12643	
Percent of Developed Area	63.1	.5	.8	15.4	79.8	2.3	1.3	2.5	6.1	1.3 <sup>k</sup> (k)	12.8	100.0			
1948-60 Absorption in Acres	1777	20	30	279	2106	51	-	-	51	46	162	2365			
<b>CROSBY</b>															
1960 Land Use in Acres	149	-	1	1424	1574	5	963	40	1008	4	323	2909	10222	13131	
Percent of Developed Area	5.1	-	-	49.0	54.1	.2	33.1	1.4	34.7	.1	11.1	100.0			
1948-60 Absorption in Acres	63	-	-	1215	1278	1	919	-	920	-	4	2202			
<b>DELHI</b>															
1960 Land Use in Acres	1095	22	8	400	1525	97	2	-	99	76 <sup>1</sup> (l)	364	2064	4511	6575	
Percent of Developed Area	53.0	1.1	.4	19.4	73.9	4.7	.1	-	4.8	3.9 <sup>1</sup> (l)	17.6	100.0			
1948-60 Absorption in Acres	567	4	6	3	580	3	9	1	13	39 <sup>m</sup> (m)	116	748			
<b>GREEN</b>															
1960 Land Use in Acres	4145	97	28	924	5194	100	61	81	242	195 <sup>n</sup> (n)	1096	6727	12720	19447	
Percent of Developed Area	61.6	1.5	.4	13.7	77.2	1.5	.9	1.2	3.6	2.9 <sup>n</sup> (n)	16.3	100.0			
1948-60 Absorption in Acres	2233	25	15	136	2409	59	13	-	72	96 (o)	250	2827			
<b>HARRISON</b>															
1960 Land Use in Acres	377	9	2	205	593	12	135	39	186	65 (p)	328	1172	10376	11548	
Percent of Developed Area	32.2	.8	.2	17.5	50.7	1.0	11.5	3.3	15.8	5.5 (p)	28.0	100.0			
1948-60 Absorption in Acres	234	-	-	158	392	3	128	-	131	9	14	546			
<b>MIAMI</b>															
1960 Land Use in Acres	811	12	13	345	1181	17	408	155	580	195 (q)	590	2546	12780	15326	
Percent of Developed Area	31.8	.5	.5	13.5	46.3	.7	16.0	6.1	22.8	7.7 (q)	23.2	100.0			
1948-60 Absorption in Acres	316	-	5	36	357	4	66	-	70	98 (r)	45	570			
<b>SPRINGFIELD</b>															
1960 Land Use in Acres	5680	86	140	4382	10288	313	160	72	545	356 (r)	2247	13436	12471	25907	
Percent of Developed Area	42.3	.6	1.1	32.6	76.6	2.3	1.2	.5	4	2.7 (r)	16.7	100.0			
1948-60 Absorption in Acres	3011	9	25	1338	4383	184	19	-	203	135	782	5503			
<b>SYCAMORE</b>															
1960 Land Use in Acres	5911	68	110	2411	8500	556	1466	344	2366	364 (s)	2424	13654	13356	27010	
Percent of Developed Area	43.3	.5	.8	17.7	62.3	4.1	10.7	2.5	17.3	2.7 (s)	17.7	100.0			
1948-60 Absorption in Acres	3267	19	76	351	3713	421	464	15	900	155 (t)	1062	5830			
<b>SYMMES</b>															
1960 Land Use in Acres	1514	2	1	1077	2594	15	236	126	377	86 (u)	551	3608	9801	13409	
Percent of Developed Area	42.0	.1	-	29.8	71.9	.4	6.5	3.5	10.4	2.4 (u)	15.3	100.0			
1948-60 Absorption in Acres	650	-	1	579	1230	6	205	-	211	14	70	1525			
<b>WHITewater</b>															
1960 Land Use in Acres	247	2	2	832	1083	8	235	99	342	24	470	1919	15038	16957	
Percent of Developed Area	12.9	.1	.1	43.3	56.4	.4	12.2	5.2	17.8	1.3	24.5	100.0			
1948-60 Absorption in Acres	103	-	-	775	878	4	71	-	75	7	45	1005			
<b>TOTAL HAMILTON COUNTY</b>															
1960 Land Use in Acres	42381	3074	2283	23666	71404	2758	7051	2834	12643	3554 (v)	18722	106323	158943	265266	
Percent of Developed Area	39.9	2.9	2.1	22.3	67.2	2.6	6.6	2.7	11.9	3.3 (v)	17.6	100.0			
1948-60 Absorption in Acres	17148	159	700	5807	23814	1070	2567	15	3652	1030 (w)	3882	32378			

(a) includes 31 acres of Commercial Recreation  
(b) includes 56 acres of Commercial Recreation  
(c) includes 3 acres of Commercial Recreation  
(d) includes 9 acres of Commercial Recreation  
(e) includes 5 acres of Commercial Recreation  
(f) includes 60 acres of Commercial Recreation  
(g) includes 10 acres of Commercial Recreation  
(h) includes 28 acres of Commercial Recreation

(i) includes 64 acres of Commercial Recreation  
(j) includes 4 acres of Commercial Recreation  
(k) includes 6 acres of Commercial Recreation  
(l) includes 52 acres of Commercial Recreation  
(m) includes 17 acres of Commercial Recreation  
(n) includes 67 acres of Commercial Recreation  
(o) includes 43 acres of Commercial Recreation  
(v) includes 33 acres of Commercial Recreation

(q) includes 170 acres of Commercial Recreation  
(r) includes 95 acres of Commercial Recreation  
(s) includes 68 acres of Commercial Recreation  
(t) includes 3 acres of Commercial Recreation  
(u) includes 61 acres of Commercial Recreation  
(v) includes 700 acres of Commercial Recreation  
(w) includes 218 acres of Commercial Recreation

## Land Use Problems

The primary problems indicated by the study of the developing land use pattern are:

### 1. Adequate Industrial Sites.

Industrial requirements are among the most rigid and most exacting of all urban uses. The previous discussion has shown that large sites on relatively flat ground with availability to transportation, both rail and highway, and all utilities, including an ample water supply, have been most attractive to industry in the past. The trend in recent years has been toward single-storied plants on extensive sites. The Mill Creek Valley is developing rapidly, and there are few large sites presently available. The only other significant area zoned and protected for this use is in the Blue Ash vicinity. Few other desirable sites exist in the county, and the primary ones are not protected for this use by zoning. It is unfortunate that land ideally suited for industry is also very readily adaptable to high-density residential use. Residential uses "move" faster than industrial development and usurp areas which should logically be devoted to the industrial use. The future growth of the Cincinnati area is dependent almost completely upon providing desirable sites for new industry. These may be provided only by vigorous planning and zoning measures.

### 2. Areas for Intensive Residential Use.

The qualities of land and the services required for high-density residential areas and industrial areas are not too dissimilar. The residential requirement is somewhat more flexible, but small-lot development cannot utilize extremely rough sites. Careful study must be given the location and amount of land that is allocated for this purpose. It is normally assumed that this type of residential development and industrial employment progress hand in hand. The family income pattern of the county necessitates a substantial development of low-income housing.

### 3. Scattered Residential Development.

The inefficient use of land, and the resultant wide scattering of residential areas are both wasteful of our land resource and expensive from the standpoint of local public service costs. Careful consideration

and design of future subdivisions are necessary to effectively utilize the rougher ground and particularly that which is accessible to places of employment.

### 4. Preservation of Open Space.

The suburban pattern in Hamilton County badly lacks small permanent open spaces for recreation and other purposes. The urban fabric is rapidly being knit together, eliminating the opportunity to provide primary open areas between the mile on mile of residences set side by side. The rough terrain has provided time for action, which time, however, is running out. With the increasing value of land, greater effort is being made to adapt the previously by-passed areas to urban development. Recent storms have placed an additional emphasis on the need to preserve open drainageways in all of the valleys. These areas, properly maintained, will not only serve the drainage functions but can become important elements in the preservation of residential amenity. Flood plains should be kept open also, both as a protection and as a means of recharging ground water supply.

### 5. Small Estate Development.

Land use trends show that a large amount of land has been absorbed for small estates. This type of use is particularly adaptable to the rougher portions of the county. Extensive areas have been set aside for estates in Indian Hill; elsewhere large lot zoning is provided in Amberley, Wyoming and Woodlawn. It is as important to preserve land for this caliber of development as for high-density use.

## Land Use Areas

The area presently occupied by urban land uses in Hamilton County was carefully measured to provide up-to-date land use data for each municipality, township, watershed, and for the county as a whole. Table 6 contains data on land use and land use trends for each jurisdiction.

### 1960 Land Use in Hamilton County

The table shows that all urban uses of the county occupied 106,300 acres, or about 40 percent of the total area. Development within the

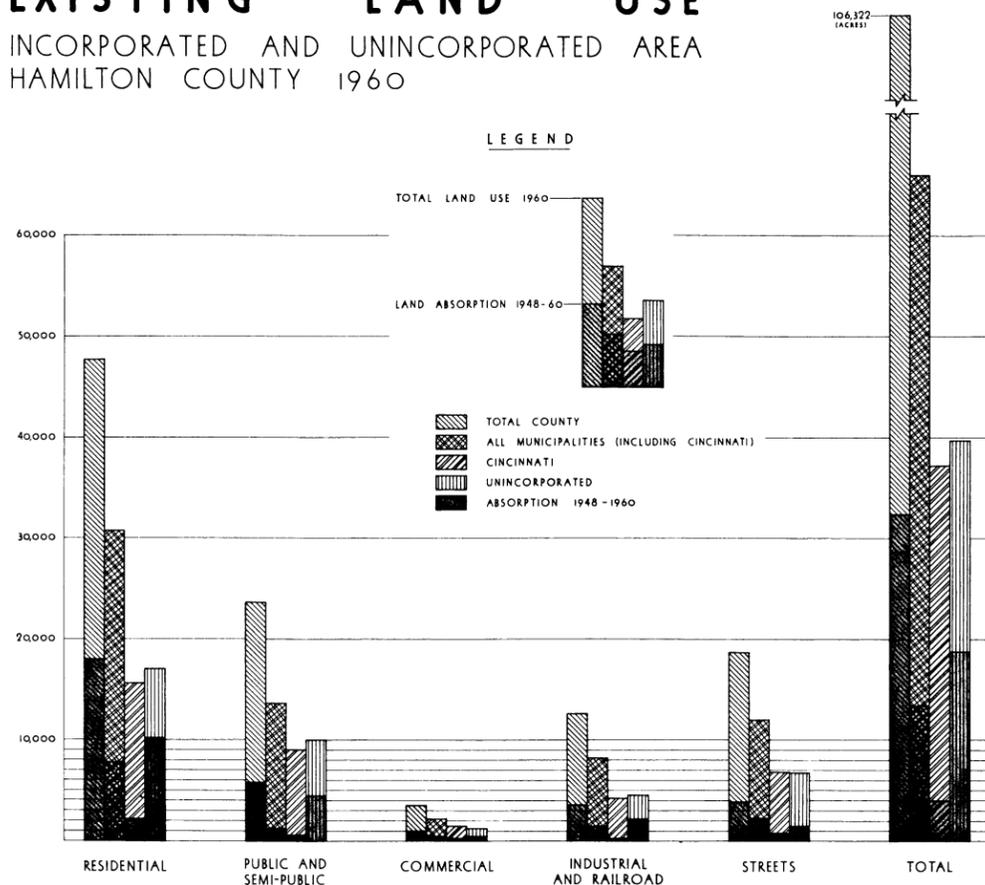
City of Cincinnati represented about one-third of the total area in urban use. The other cities and villages in the county also represented nearly a third, leaving the remaining one-third in the unincorporated areas. In the period 1949 to 1960, a total of 32,400 acres of land was absorbed by urban uses. Approximately one-eighth of the newly-developed land was in Cincinnati. Development in all municipalities, including Cincinnati accounted for little more than half of the total new development, the remainder locating in the unincorporated portions of the county.

### Ratio of Land Use to Population

Relating land use to population affords valuable information for estimating future land use requirements. Table 7 shows the ratio of the area occupied by each of the 15 land use categories in relation to each 100 persons of the population. This table shows the 1948 and 1960 ratios for the county and the absorption rate per 100 persons during that period. It also shows the 1960 ratios for Cincinnati and for all incorporated areas combined.

## EXISTING LAND USE

INCORPORATED AND UNINCORPORATED AREA  
HAMILTON COUNTY 1960



REGIONAL PLANNING COMMISSION  
HAMILTON COUNTY  
OHIO

HARLAND BATHOLOMEW AND ASSOCIATES  
CITY PLANNERS, CIVIL ENGINEERS, LANDSCAPE ARCHITECTS  
2841 OLVEN

TABLE 7  
LAND USE IN ACRES PER 100 PERSONS HAMILTON COUNTY, OHIO  
1948 - 1960

Land Use Category	Hamilton County		City of Cincinnati	All Municipalities	Total County* Absorption
	1948	1960	1960	1960	1948-1960
Single-Family Residence	3.6	4.9	2.2	3.8	10.4
Two-Family Residence	.4	.4	.5	.4	.1
Multiple-Family	.2	.3	.4	.3	.4
<b>Total Residence</b>	<b>4.2</b>	<b>5.6</b>	<b>3.1</b>	<b>4.5</b>	<b>10.9</b>
Education	.3	.3	.2	.3	.6
Recreation	1.0	1.2	.7	.8	2.2
Public	.2	.2	.2	.2	.1
Semi-Public	1.1	1.0	.7	.8	.6
<b>Total Residence and Allied</b>	<b>6.8</b>	<b>8.3</b>	<b>4.9</b>	<b>6.6</b>	<b>14.4</b>
Commercial	.3	.3	.3	.3	.5
Extractive Industry	.1	.2	-	-	.5
Greenhouses	-	-	-	-	-
Light Industry	.2	.3	.2	.3	.6
Heavy Industry	.6	.6	.3	.6	1.1
Railroads	.4	.3	.3	.3	-
<b>Total Industry and Railroads</b>	<b>1.3</b>	<b>1.4</b>	<b>.8</b>	<b>1.2</b>	<b>2.2</b>
Commercial Recreation	-	.1	-	.1	-
Streets	2.1	2.2	1.4	1.8	2.3
<b>Total Urban Uses</b>	<b>10.5</b>	<b>12.3</b>	<b>7.4</b>	<b>9.9</b>	<b>19.5</b>

\*An estimated 165,000 persons were added to the county population in this period.

As would be expected, Cincinnati has a much lower ratio of land use to population than is found in the county. The ratio of 7.4 acres of urban land per 100 persons does not indicate abnormally intensive development for a City of Cincinnati's size - study of 11 other cities of 150,000 population and over showed an average ratio of 6.11 and Dayton in 1952, had a ratio of 5.7.

Development in the county as a whole is somewhat more spacious. In 1948, only 10.5 acres were utilized to meet the urban requirements of 100 persons. In 1960, 12.3 acres were needed per 100 persons for homes, parks, schools, business and industrial use. The trend is to more spacious development, and it seems reasonable to assume that future land use requirements will more closely approximate the standard established during the 1948-1960 period.

For each 100 persons added to the county population between 1948 and 1960, 19.5 acres in urban land uses were added. Of this total 10.9 acres were required for residential uses alone, and another 3.5 acres were required for schools, parks, and institutional uses normally developed in conjunction with residential areas. Another 5.1 acres were needed for streets, commercial, and industrial pursuits. This is a development so spacious as to be almost wasteful by any set of standards. It has resulted from utilization of land which is not susceptible to intensive development as well as the trend toward more spaciousness in the urban pattern. Much of the land area which will have to be utilized in the future will be even more difficult to use intensively. The present standard can be maintained, therefore, only by more careful land utilization policies. Our open-handed generosity in occupancy of land cannot, and should not, be continued.

Probable Future Land Use Requirements

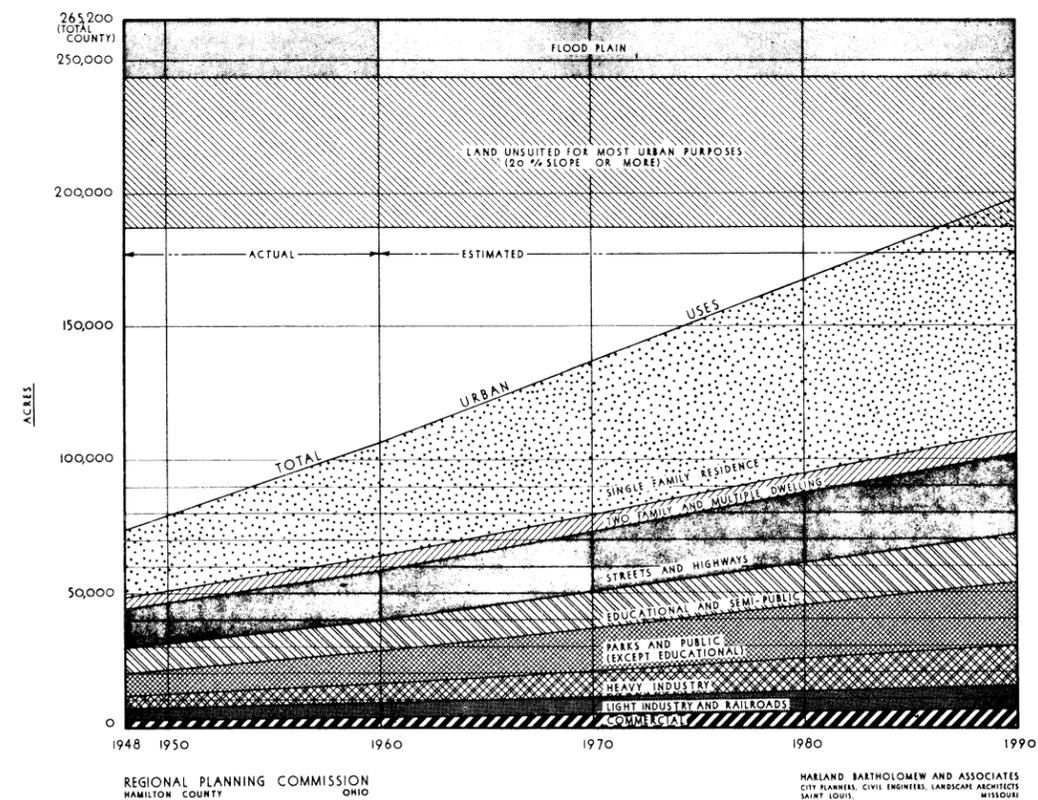
Assuming the addition of 440,000 people to the present population of the county and absorption of land at the rate of 19.5 acres per 100 persons, 86,000 additional urban acres would be required. (See Table 8.) Total land use in the county in 1990 would be about 192,300 acres and, at that time, about 72 percent of the total acreage and virtually all of the usable area of the county would be developed.

These projections indicate that the land use plan should provide for the addition of 45,800 acres for new single-family dwellings and 2,200 acres of new area for two-family and multiple dwellings. An

additional 15,500 acres would be required for schools, parks, public and institutional uses. Commercial land uses are expected to absorb 2,200 acres and 9,700 acres should be provided for industrial expansion. Streets and highways can be expected to absorb 10,000 acres.

The graph shows the trends of land use and estimated future urban use requirements as they relate to the total area of the county and to the inherent limiting topographic features. The vertical dimensions of the graph represent the total area of the county. At the bottom of the graph the existing land uses and future requirements have been plotted, and the areas which do not lend themselves to urbanization (flood plain and 20 percent slope) have been plotted at the top. The intervening area represents the land in the county suitable for normal urbanization.

LAND USE TRENDS RELATED TO  
LIMITING TOPOGRAPHIC FEATURES  
HAMILTON COUNTY 1948-1990



The flood plain and 20 percent slope account for nearly 30 percent of the county area or 78,000 acres. Urban land uses, in 1948 occupied 74,000 acres and by 1960, this was increased to 106,000 acres, or 40 percent of the total. The total urban land use by 1990 should approximate 192,300 acres. The chart shows that all the usable land will be absorbed before we attain the population growth here anticipated. In other words, for all practical purposes, Hamilton County will be completely occupied by urban uses (the future city) by about 1985. Although this prediction will be somewhat qualified subsequently, it emphasizes the almost appalling magnitude of the land use problem confronting the county.

Occupancy of the 20 Percent Slope Area

A study of the 20 percent slope area of the county shows that urban uses now occupy 7,000 acres of land in this classification. Nearly half of this is used for parks (Mt. Airy, Miami-Whitewater, Eden, etc.) institutions (Mt. St. Joseph, country clubs) and other such uses. The remainder is utilized by other urban uses such as the spacious residential development along Grandin Road in the Mt. Lookout Area. Less effort is made to convert the rougher terrain in the present than in the past. The automobile has broken the bonds earlier imposed by public transportation making it easier to move farther out than to adapt difficult land to urban needs.

If these same general conditions prevail in the future, utilization of the 20 percent slope area on the order of 13,500 acres can be anticipated and the anticipated land use requirements can be met within the county. This cannot be done without using parts of the steep slopes, however.

Requirements for Various Types of Residential Areas

The above projections reasonably define the overall requirements for major categories of land use. The wide variety of dwelling types and residential densities require refinement of this particular category.

Analysis of Lot Sizes. Platting and residential construction in the county were analyzed as a yardstick by which the need for specific types of residential development could be established. Table 9 was compiled to show: the number of lots platted in each of four lot size categories; the acreage involved; the number of lots occupied and those

TABLE 8  
FUTURE LAND USE REQUIREMENTS

Land Use Category	Land Use Requirements in Acres			
	Absorbed per 100 persons 1948-1960	Projected Requirement for 440,000 Persons	1960 Land Use	Total Requirement 1990
Single-Family Residence	10.37	45,800	42,380	88,200
Two-Family Residence	.09	400	3,074	3,500
Multi-Family Residence	.42	1,800	2,283	4,000
Educational	.60	2,700	2,823	5,500
Recreational	2.18	9,500	10,637	20,200
Public	.10	500	1,693	2,200
Semi-Public	.61	2,800	8,513	11,300
<b>Total Residence &amp; Allied</b>	<b>14.37</b>	<b>63,500</b>	<b>71,403</b>	<b>134,900</b>
Commercial	.50	2,200	2,854	5,000
Extractive Industry	.47	2,000	1,361	3,400
Greenhouses	-	-	354	400
Light Industrial	.64	2,800	2,404	5,200
Heavy Industrial	1.07	4,900	5,690	10,600
Railroads	-	-	2,834	2,800
<b>Total Industry &amp; Railroads</b>	<b>2.18</b>	<b>9,700</b>	<b>12,643</b>	<b>22,400</b>
Commercial Recreation	.13	500	700	1,200
Streets	2.34	10,100	18,722	28,800
<b>Total Urban Uses</b>	<b>19.52</b>	<b>86,000</b>	<b>106,322</b>	<b>192,300</b>

that were vacant in April of 1960. The total acreage is shown only for subdivisions containing 10 lots or more since these are more definitive of the development trends, but analysis was made of all the lots that were platted.

The significant data developed by this study is that 37,240 lots, 59.1 percent of all lots platted, were in the 9,000 square foot category but these lots occupied only 38.6 percent of the total area. The major subdivisions showed a "yield" of 3.95 lots per acre for the small lots. Eleven percent of all lots and 10.4 percent of the platted area were in the 12,000 square foot category. There was a "yield" of 2.46 lots per acre shown in this group. The 17.7 percent of the lots platted in the 20,000 square foot classification utilized 26.7 percent of the land. This largest classification utilized 24.3 percent of the land and provided 12.2 percent of the lots. A further analysis of the 9,000 square foot classification determined that 90 percent of the lots in this group were below 7,500 square feet.

Appropriate allocation of land area for various residential densities can be made from this study.

Dwelling Units Needed. Assuming a family size of 3.0 and the addition of 440,000 persons to the total population of the county, the addition of 145,000 dwelling units to the present housing supply is indicated. This, however, is not the total requirement. The preliminary 1960 census showed 280,000 dwelling units in the entire county of which 3.1 percent were dilapidated. During the last five years an average of over 3,000 dwelling units - slightly over one percent of the total supply - have been demolished each year, and in 1963 nearly 3,800 units were demolished. An assumption of demolition on the order of 3,500 per year over the planning period would add another 105,000 dwelling units to the total requirement in order to rehouse the families displaced by such action. Hence, there would be a total demand for 250,000 new dwelling units.

Type of Dwelling Structure. In the period 1948 to 1960 building records indicate that 26.7 percent of all units built were multiple dwellings. In the last five years (1959-1963), multiple dwellings have accounted for 40 percent of the total units built. This current ratio of multiple dwelling construction is exceptionally high, and it is assumed that approximately 30 percent of the new dwelling unit demand would be met with this type of facility. This would mean 75,000 units in multiple-dwelling structure and 175,000 in single-family structures needed between 1960 and 1990.

TABLE 9  
ANALYSIS OF LOT SIZES  
Hamilton County, Ohio 1948-1960

	Typical Lot Size in Square Feet				Total
	Under 9,000	12,000	20,000	Over 20,000	
<u>636 Subdivisions with 10 or more lots each</u>					
Number of subdivisions	242	76	190	128	636
Acreage	8,240	2,215	5,701	5,195	21,351
Lots built upon 1948 - April, 1960	26,116	4,209	6,149	3,396	39,870
Vacant lots April, 1960	6,654	1,221	2,980	1,249	12,104
Total lots in subdivisions	32,770	5,430	9,129	4,645	51,974
Percent vacant	20.3	22.5	32.6	26.7	23.4
Number of lots per acre	3.95	2.46	1.60	0.89	-
Percentage of acreage	38.6	10.6	26.7	24.3	100.0
<u>Subdivisions having less than 10 lots each</u>					
Lots occupied 1948 - April, 1960	4,260	1,329	1,654	2,440	9,683
Vacant Lots, April, 1960	210	195	423	587	1,415
Total Lots	4,470	1,524	2,077	3,027	11,098
Percent vacant	4.7	12.8	20.4	19.4	14.6
Total Lots - All Subdivisions	37,240	6,954	11,206	7,672	63,072
Percent	59.1	11.0	17.7	12.2	100.0
<u>Vacant Lots</u>					
Developed 1948-1960	6,864	1,416	3,403	1,836	13,519
Developed prior to 1948 (Not Shown Above)	6,995	1,023	1,007	334	9,359
Total	13,859	2,439	4,410	2,170	23,878

TABLE 10

RESIDENTIAL AREA REQUIREMENTS  
Hamilton County, Ohio 1960-1990

<u>Dwelling Units Needed</u>	
From new growth (440,000 persons ÷ 3 (A) =	145,000
Demolitions (3,500 (B) per year x 30 years) =	105,000
Total	250,000(C)
Multiple Units (30% - 1948 to 1960 was 26.7%) =	75,000
Single-Family Units	175,000
Total	250,000

<u>Location of New Units</u>	
Multiple dwellings on central sites 80% (D) =	60,000
Multiple dwellings in new area 20% =	15,000
Total multiple dwelling units	75,000
Single-family residence-replacement in established areas	35,000(E)
Single-family residence in new areas	140,000
Total single-family residences	175,000

<u>In New Areas</u>	Units	Acres(F)
Multiple dwellings(@ 10 per acre)	15,000 -	1,500
Single-family dwellings	140,000 -	60,000
Lots of 7,500 sq. ft. or less (56% @ 4.1 per acre)	78,500 -	19,200
Lots of 9,000 sq. ft. (5% @ 3.5 per acre)	7,000 -	2,000
Lots of 12,000 sq. ft. (11% @ 2.5 per acre)	15,400 -	6,200
Lots of 20,000 sq. ft. (15% @ 1.6 per acre)	22,400 -	14,000
Lots of more than 20,000 sq. ft. (12% @ 0.9 per acre)	16,800 -	18,600

- (A) Ratio shown by 1950 and 1960 census changes in county.
- (B) 277,000 dwelling units in county in 1960 - 1% depreciation would call for 2,700 demolitions per year, 1.5% for 4,155; 3,800 actually demolished in 1962, 3,050 units demolished annually on the average 1959-1963.
- (C) This is an average of 8,300 per year. Actually 7,600 were built in 1963, 7,900 per year on the average 1959-1963.
- (D) Of land absorbed for rental housing 1948-1960, 70% was in City of Cincinnati.
- (E) Assumed figure.
- (F) Gross acres, including streets, in comparison with the net acreages of future land use requirements estimated in Table 8.

Location of New Units. The land use survey showed that 70 percent of the land absorbed by multiple dwelling in the 1948-1960 period occurred in Cincinnati. Building permits indicate that an average of 84 percent of all multiple dwelling units have been constructed in Cincinnati since 1959. This is the most logical location for these uses in the county, and it is estimated that 80 percent of the new multiple-dwelling construction would occur in the corporate area of Cincinnati. Provision should be made for 15,000 units of new multiple dwellings in the remaining parts of the county.

Area Requirements for New Residential Growth

Based upon the findings of Tables 9 and 10 and zoning requirements it will be necessary to provide 1,500 acres of vacant land for multiple dwellings and 60,000 acres for single-family homes over the next 30 years. The breakdown of the latter figure is shown on Table 10. These figures establish the amount of land which should be provided for each density and type of residential use in the land use plan.

ST. BERNARD - NORWOOD LATERAL

