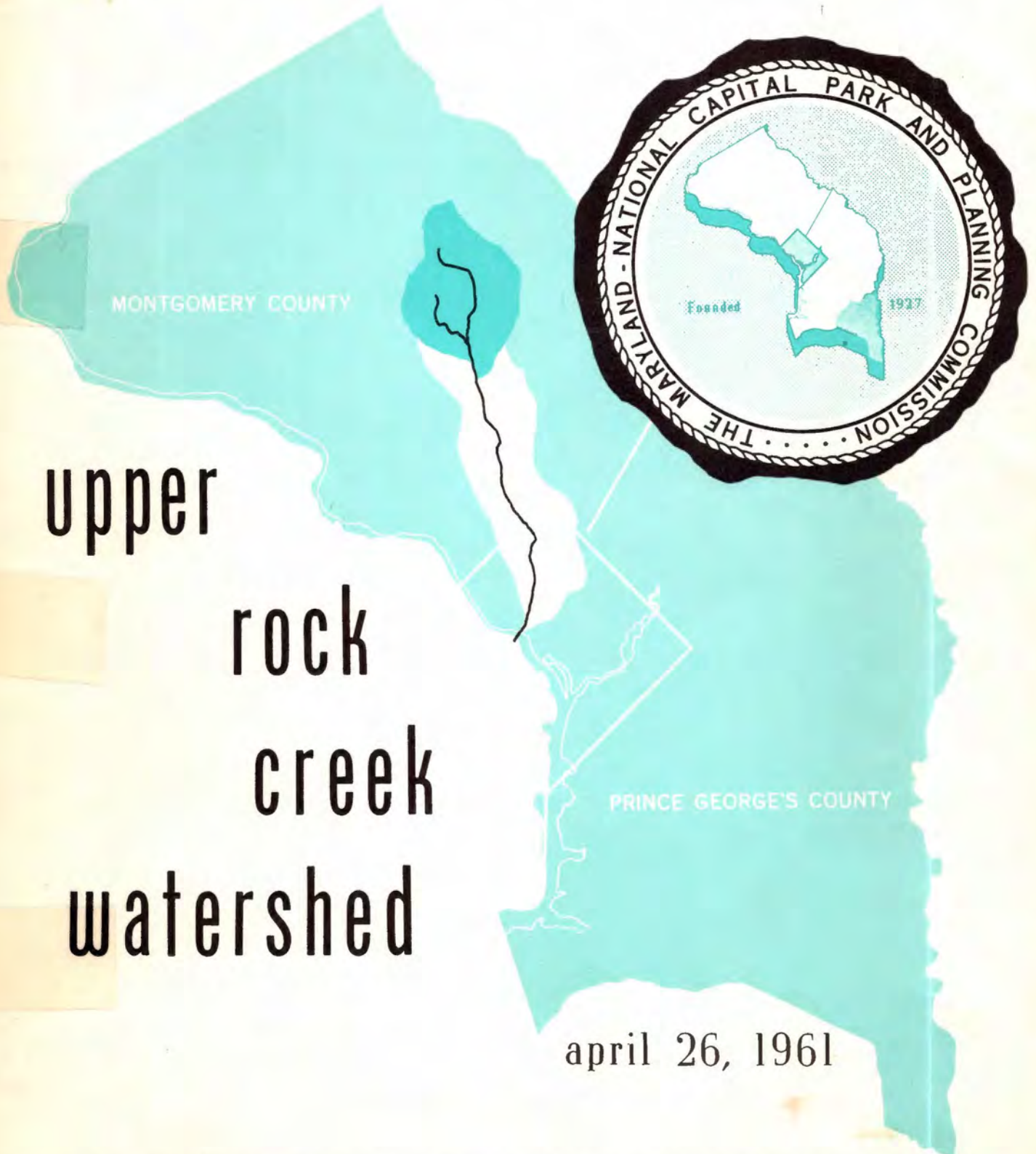


a master plan



upper rock creek watershed

april 26, 1961

1980 will see:

1 THE development of two flood control dams in the Upper Rock Creek Watershed.

* * *

2 THE maintenance of generally low densities throughout the watershed particularly in those areas adjacent to and above the impoundment dams.

* * *

3 THE creation, by local authorities, of two water recreational areas above the impoundment dams.

* * *

4 THE designation of 2,880 acres for park and recreation use with emphasis on full utilization of the water impoundment areas created by the two dams.

* * *

5 THE development of the Gaithersburg-Washington Grove area and the Olney area as satellite communities which would provide the needed commercial centers for the watershed.

* * *

6 THE population increase from 3,800 to approximately 55,000 persons.

* * *

7 THE designation of approximately 1,000 acres for industrial use between Rockville and Gaithersburg along the B & O Railroad.

* * *

8 THE development of a highway network based on eight major, eight arterial, three industrial and eighteen primary roads.

* * *

9 THE provision for one senior high school, three junior high schools and thirteen elementary schools.

Master Plan
of the
UPPER ROCK CREEK WATERSHED
in
Montgomery County, Maryland

CERTIFICATE OF ADOPTION

THE MASTER PLAN OF THE UPPER ROCK CREEK WATERSHED IS A PART OF THE GENERAL PLAN FOR THE PHYSICAL DEVELOPMENT OF THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN MONTGOMERY AND PRINCE GEORGE'S COUNTIES, ADOPTED PURSUANT TO THE PROVISIONS OF CHAPTER 780, LAWS OF MARYLAND, 1959, BY RESOLUTION OF APRIL 26, 1961 AFTER DULY ADVERTISED PUBLIC HEARINGS HELD ON DECEMBER 11 AND 12, 1959.


JESSE F. NICHOLSON
Secretary-Treasurer


HERBERT W. WELLS
Chairman

The Maryland-National Capital Park and Planning Commission

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CHAPTER I

INTRODUCTION

This report and accompanying maps have been adopted by The Maryland-National Capital Park and Planning Commission as a Master Plan for the development of the Upper Rock Creek Watershed, an area of some 29 square miles located in central Montgomery County, Maryland, between the City of Rockville and the Towns of Gaithersburg, Laytonsville, Olney and Norbeck. It is one of a series of area plans recently adopted by the Commission.

The Rock Creek Watershed study began late in 1955 when a number of citizens' associations in the watershed requested the Montgomery County Soil Conservation District to apply for a Federal survey of Rock Creek under the Watershed Protection and Flood Prevention Act. The application was approved and a soil conservation work party examined the area. These engineering studies revealed that two dam sites as shown in this plan would be the most desirable combination for flood prevention, both from the standpoint of available storage area and total area controlled.

Realizing the scarcity of detailed information necessary to guide orderly development for watershed protection, the Commission, in 1958, authorized photogrammetry of the Watershed and directed the staff to prepare a comprehensive plan for development of the area. In undertaking this study, it was recognized that a major consideration in the lower Rock Creek area must be the protection of existing development from expensive and unnecessary flood damage. It was apparent that overall development of the land would have to be at a density consistent with good soil and water conservation practices. Protection of the proposed dams from excessive siltation was an equally important consideration.

Another potent factor influencing the low density character of this plan is the remote position of the area with respect to major employment centers. Furthermore, no limited access radial facility is planned either by State or local officials to serve the watershed—nor are such facilities even contemplated in the Mass Transportation Plan for the National Capital Region.

Since the Upper Rock Creek Valley lies near the path of continuous and relatively high density single family development, we can expect the proposals for planned low density development to come under close scrutiny. The question is asked, if total population of this desirable valley is to be held in check by legislative action, where will people find a place to live?

The Preliminary Residential Land Use Plan—1980, Maryland-Washington Regional District, dated September 2, 1959, prepared by the staff of this Agency, demonstrates that ample space is available in other portions of the County to receive the anticipated population growth. These other areas are equally if not more convenient in terms of access, travel time to places of employment, and are in locations where the necessary public facilities can be more economically and efficiently provided. A revision of this plan will be included in the forthcoming Revised General Plan.

The proposals contained in this Master Plan provide a sound basis for future recommendation by the Commission and local public and private agencies interested in proper development of the watershed. Each proposal has been carefully weighed as to its ultimate effect on the Watershed, the impoundment dams and the down-stream communities during the next 20 years.

CHAPTER II

DESCRIPTION OF AREA

The Upper Rock Creek Watershed is a drainage basin of 29 square miles or approximately 19,000 acres lying in the center of Montgomery County. Specifically this study area is bounded by Maryland Route 28, Aspen Hill Road and Rock Creek Park on the south, Maryland Route 97 on the east, Maryland Route 355 on the west, and Maryland Routes 124 and 108 on the north.

This Watershed is a magnificent portion of the County—a beautiful expanse of heartland territory still largely undeveloped. The terrain is quite rolling with very few large tracts of level ground. The land is divided into a multitude of little valleys created by Rock Creek and its numerous branches. Steep bluffs immediately adjoining the banks of Rock Creek and a number of its tributaries in the southern part of the study area give this portion of the valley a canyon-like appearance. Housing development on this rugged land would be difficult. Elsewhere throughout the watershed, topographic conditions would not materially interfere with building—indeed, it would add to the beauty of residential development.

About four-fifths of the area is open country, chiefly farmland, while one-fifth is in woodland. Some houses are scattered along most of the roads, especially those roads bounding the watershed. However, there are only about one thousand houses in all. A number of subdivisions have been laid out but only three—Williamsburg Village, Sycamore Acres and English Manor—have a substantial number of new houses. The area has three existing schools—Olney Elementary, Aspen Hill Elementary and Robert E. Peary Jr.-Sr. High School. There are no public parks, excepting Rock Creek Park, Unit 7, however, three large country clubs, The Norbeck, The Manor and The Brooke Manor, occupy extensive acreage near the eastern edge of the Watershed.

The Study Area has virtually no commercial or industrial activity. A number of stores are scattered along the boundary roads. Some industry is established at widely spaced locations with a degree of localization near the northern boundary of Rockville.

The area is criss-crossed by a number of roads that are spaced in such fashion as to leave considerable acreage lying more than one-half mile from a road. In general, the roads are narrow and substandard with poor alignments. The stream crossings are few and those that exist are narrow and generally in poor condition.

All in all, the watershed still has a rural stamp with widespread agricultural activity but with evidence of urbanization at the southern and eastern edge.

CHAPTER III

ROCK CREEK FLOOD CONTROL PROJECT

Early in 1956 the Rock Creek Watershed Association urged the Montgomery County Soil Conservation District to apply for a study of Rock Creek for the purpose of locating sites to construct dams to abate periodic flooding downstream. The Board of Supervisors of the Montgomery County Soil Conservation District on September 7, 1956 applied to the Department of Agriculture for such a study under Public Law 566 (as amended), commonly called The Watershed Protection and Flood Project Act. This request was co-sponsored by the Montgomery County Council by action taken November 11, 1956. The Maryland-National Capital Park and Planning Commission, the Washington Suburban Sanitary Commission and eleven other public and civic organizations both, in Montgomery and the District of Columbia, endorsed this request.

A steering committee was appointed to meet with and review the progress of the Work Plan Party of the United States Soil Conservation District assigned to this study. Included in the steering committee were representatives from the Park and Planning Commission, Washington Suburban Sanitary Commission, Montgomery County Soil Conservation District, Montgomery County Department of Public Works, the local office of the Soil Conservation Service, and the County Agricultural Agent.

In its investigation of Rock Creek, the Work Plan Party selected eight dam sites. These sites were located on the north and west branches of the creek above the Rockville-Norbeck Road (Md. Rte. 28). The steering committee was advised that to be effective, the dam or dams should control forty percent of the drainage area above the structures. The combination of site No. 1 on the North Branch and site No. 5 on Rock Creek itself were selected, providing control of forty percent of the land area in the watersheds above the dams. This combination would require a total easement area behind the dams of approximately 500 acres.

Under Public Law 566, the Department of Agriculture is authorized to administer funds appropriated by Congress to assist in the construction of flood control structures. These funds are available as follows:

1. If a dam or dams are wholly for flood control purposes, the Federal Government will design the structure and pay the structure costs. The local authorities must then purchase the land or acquire easements for the flood plain behind such structures.

2. If a dam is to be a multi-purpose structure, as in the instance of additional height of

structures to add recreational potential, then the cost allocated to recreation must be paid by local authorities.

3. If the sole purpose of such a dam is for municipal water supply, then the entire cost of the structure must be paid by local authorities.

The sites described above are located within areas proposed for the extension of the Rock Creek Stream Valley Park System. These structures will have very little, if any, effect on private land if this plan is followed.

In order to secure Federal assistance for flood control under Public Law 566, it must be demonstrated that an economic value in terms of annual benefit will be evident in the area downstream from the dams. These annual benefits should be from twenty to twenty-five times greater than the anticipated construction costs. In view of the existing and proposed park development in the Rock Creek Watershed and the benefits that may accrue to County roads which are frequently damaged by storms, etc., it is anticipated that no difficulty will be experienced in justifying the need for this flood control project. This was the consensus of opinion of a special fact-finding committee composed of the County Manager, representatives of the Park and Planning Commission, Washington Suburban Sanitary Commission, and the Montgomery County Department of Public Works which was appointed on July 17, 1958 to evaluate available planning and site studies and to determine if it was essential to acquire the land for constructing both flood control structures. As a result of this study, the committee stated in its report to the County Council, dated August 14, 1958, that a flood control project for Rock Creek is not only in the public interest but is a necessity.

The Work Plan Party has pointed out that substantial added recreational use can be incorporated into the design of both dams at a small percentage of the total costs of the project. These recreational features will be in the form of deeper and larger permanent lakes behind the two structures. In view of the scarcity of extensive recreational water in Montgomery County, these two lakes will more than repay the additional expense necessary at the time of construction. In addition to the benefits received in the area upstream from the dams, park areas downstream will also receive protection that is badly needed and more intense utilization of parkland, now lying idle because of periodic flooding, will be permitted.

One other aspect of the Flood Control Project deserves mention at this time. Previous projects carried out under Public Law 566 have dealt entirely with watersheds that were planned to remain in agricultural use under suitable soil conservation practices for the useable life of the project, normally fifty years. In the Upper Rock Watershed it is expected that a large portion of the affected area will be in residential use within the next forty years. Since this is a new concept in future land use as far as flood control projects are concerned, it is necessary to stress the importance of the recommendations contained in the Master Plan pertaining to residential densities. When the application is submitted to the Department of Agriculture for Federal Assist-

ance under Public Law 566, it will also be necessary to offer assurance that suitable land treatment measures, necessary to prevent siltation of the permanent pool for a fifty year period, will be provided. We believe the best way to insure such treatment is to guide residential development in conformance with a density pattern that will retain the natural characteristics of the area both during and after development. To do otherwise may seriously jeopardize approval of the application for Federal aid.

A recent development concerning this project is the addition of the remainder of the Upper Rock Creek Watershed to the Maryland-Washington Metropolitan District by the 1961 General Assembly, and the appropriation by the Commission for the 1961-62 fiscal year of some \$1,514,000 for acquisition of land needed for the extension of the Rock Creek Stream Valley park system in the area under consideration. Final estimates of the cost of construction of these two flood control structures will be available shortly and it is hoped that an application for Federal assistance can be submitted in the summer of 1961.

CHAPTER IV

POPULATION

The Upper Rock Creek Watershed has a population of approximately 3,827 persons, residing in 1,007 single family dwelling units. Although this area is largely undeveloped, there are some subdivisions with substantial development, yet most of the housing is widely scattered.

The established residential areas are primarily on the extreme southern, eastern and northern borders of the watershed. Sycamore Acres, a subdivision of one acre homesites, is a significant residential development lying just north of Manor Club and east of Muncaster Mill Road. Manor Club, itself, is an established neighborhood with high quality homes. Williamsburg Village, just south of Olney and west of Route 97, is a substantial single family development. Cashell Estates and West Olney Acres lie slightly inside the periphery of the watershed, near its eastern boundary. On the watershed's northern rim the residential development is scattered along Maryland Route 124 between Washington Grove and Emory Grove, with a minor cluster at Redland.

Viewed within the framework of expected population growth for Montgomery County as a whole, the Upper Rock Creek Valley occupies a somewhat central position geographically between the population centers of Gaithersburg and Olney.

In keeping with the thesis that uninterrupted waves of residential development, progressing outward in bands of concentric circles is not a desirable type of expansion, the generalized residential density plan for 1980 suggests wedges of open space penetrating into the suburban fringe separating corridors of major development. Furthermore the residential density

plan recommends a pattern of satellite communities, lying beyond the suburban area and not contiguous with it. The two satellite communities involved in the Rock Creek Watershed are the Gaithersburg-Washington Grove complex and Olney.

A satellite community cannot occur—nor will its benefits be achieved—if it is submerged in the continuous development of surrounding lands. In other words, the satellite must be surrounded by country, or it isn't a satellite.

The Rock Creek Watershed occupies a central position with the County, as well as in the pattern of adjacent planning areas. Actually, the watershed is made up of a portion of several planning areas. (See Chapter 5).

Population—1980

Under the adopted zoning plan the ultimate population that **could** be reached (probably by the year 2000) is 89,243 persons.

Comparing this ultimate population with the 1980 population expectancy for the watershed, we find some striking differences. The population forecasts made in support of the Mass Transportation Survey illustrate this point. For those Origin and Destination Zones of which Rock Creek Watershed is a part, the 1955, 1965 and 1980 predictions are as follows:

O and D Zone (100% each zone)	1955		1965		1980	
	D. U.	Pop.	D. U.	Pop.	D. U.	Pop.
9205 Derwood	90	500	1,850	6,500	2,450	8,800
9211 Laytonsville*	570	2,000	850	3,000	2,300	8,000
9209 Gaithersburg So.	500	1,750	1,150	4,000	3,150	11,000
9204 Olney*	1,000	3,500	1,850	6,500	7,000	24,500
9203 South Norbeck	1,200	4,380	4,300	15,000	6,400	22,000
TOTAL	3,360	12,130	10,000	35,000	21,300	74,300

* Coincident with the Election District.

This 1980 Population of 74,300 is, of course, for a portion of the county much larger than the limits of the watershed.

When the Origin and Destination forecasts are analyzed and totals for the more limited area of the watershed are separated therefrom, the adjusted 1980 population for the watershed is as follows:

Upper Rock Creek Watershed—Population 1980
(Based on estimated percentages of O & D zones)

O & D Zone (est. % in watershed)	1980	
	D. U.s	Pop.
9205 Derwood (100%)	2,450	8,800
9211 Laytonsville (50%)	1,150	4,000
9209 Gaithers. So. (75%)	2,362	8,250
9204 Olney (48%)	3,360	11,000
9203 So. Norbeck (50%)	3,200	11,000
TOTAL	12,522	43,050

It appears likely, therefore, that during the twenty year period from 1960 to 1980 the upper watershed will increase to a population somewhere between 50,000 and 60,000.

This anticipated growth to 1980 is about 60 percent of the ultimate capacity of the watershed. This population growth is summarized below:

Upper Rock Creek Watershed					
Existing 1959		Estimated 1980		Ultimate Estimated 2000*	
D.U.	Pop.	D.U.	Pop.	D.U.	Pop.
1,007	3,827	14,483	54,959	23,485	89,243

* The ultimate population is the maximum possible within the limits of the **adopted zoning plan**.

Distribution of 1980 Population

The 1980 population is not expected to be distributed uniformly throughout the watershed. Due to the extension of the Rock Creek trunk sewer to Gaithersburg (via Mill Creek) and the extension of North Branch sewer upstream along the south shore of North Branch Lake to Muncaster Mill Road, most of the foreseeable increase within the next five to ten years will be concentrated in five major areas:

Planning Area II, F3 and F4. The area south of Norbeck Road (Md. Rte. 28) where 2901 dwelling units are possible on 967 acres of R-90.

Planning Area II, F1. The North Branch Lake Neighborhood where 1,737 dwelling units are possible on 466 acres of R-90 and 226 acres of R-R.

Planning Area III, A. The North Twinbrook Forest Community where 318 dwelling units are possible on 154 acres of R-R and 29 acres of R-90.

Planning Area III, B. The Rockville Industrial Community where 482 dwelling units are possible on 321 acres of land zoned for half-acre (R-R) development.

Gaithersburg-Washington Grove Area. The Emory Grove Community where 2,077 dwelling units are possible on 521 acres of R-R and 432 acres of R-90.

In terms of total growth for rural Montgomery County, the assignment of 54,959 persons to the Rock Creek Watershed by 1980 seems reasonable.

Dwelling Units by Neighborhoods and Communities

	1959 Dwelling Units	1980 Dwelling Units
Laytonsville Planning area		
A. South Laytonsville Community	102	1,200
Gaithersburg-Wash. Grove Planning Area		
A. Emory Grove Community	96	2,077
B. Redland Community	48	450
C. Needwood Estate Community	110	377
D. Derwood Industrial Community	5	189
II. Olney Planning Area		
F. South Norbeck Community		
F1 North Branch Lake Neighborhood	11	1,737
F2 Manor Club Neighborhood	150	480
F3* Aspen Hill Park Neighborhood	1	2,064
F4* North Aspen Neighborhood	0	837
G. West Olney Community	280	2,768
H. Bowie Mill Community	96	1,250
I. Rock Creek Lake Ests. Community	31	234
III. Rockville Planning Area		
A. North Twinbrook Forest Community	7	318
B. Rockville Industrial Community	70	482
Total	1,007	14,463

* Includes only those portions of the neighborhood within the study area.

CHAPTER V

RESIDENTIAL COMMUNITIES AND NEIGHBORHOODS

The land area of the Watershed is divided among four existing planning areas: 1. Laytonsville; 2. Gaithersburg; 3. Rockville, or Planning Area III; and 4. Olney, or Planning Area II. The decision to subdivide the land into residential communities rather than smaller residential neighborhoods was based on the forecast of population density and the proposed zoning for the area. However, units F-1, F-2, F-3 and F-4, of the Olney Planning Area had already been treated in Technical Bulletin No. 5 as neighborhoods, and are so shown in this plan. Because of lighter population densities in the Watershed area, elementary school facilities are shown in some cases as serving one community rather than one neighborhood.

The planning areas, communities and neighborhoods, are as follows: (See Map, Page 13)

Laytonsville Planning Area

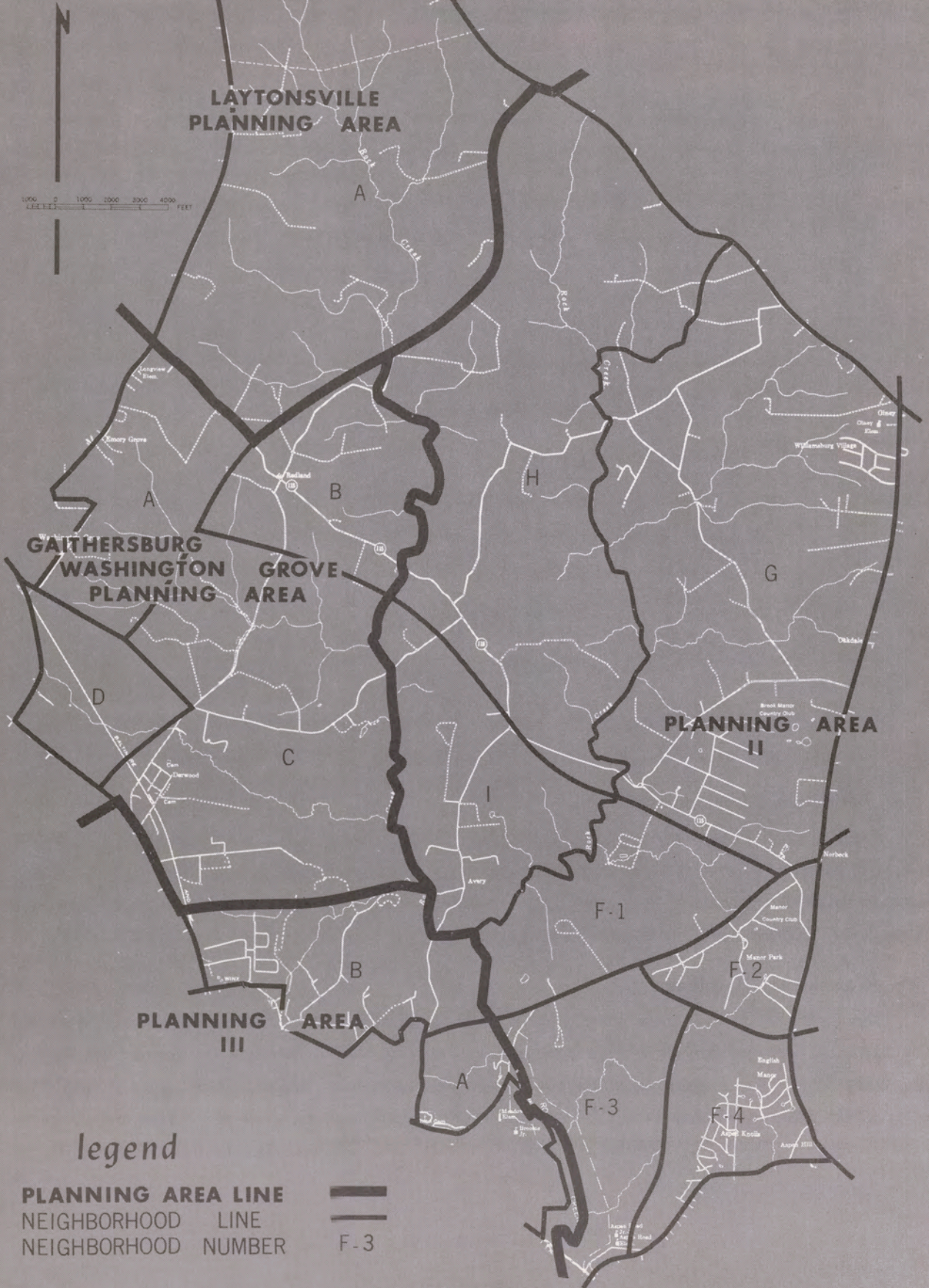
A. South Laytonsville Community

Gaithersburg-Washington Grove Planning Area




A. Emory Grove Community

NEIGHBORHOOD IDENTIFICATION

upper rock creek watershed



legend

- PLANNING AREA LINE 
- NEIGHBORHOOD LINE 
- NEIGHBORHOOD NUMBER 

- B. Redland Community
- C. Needwood Estate Community
- D. Derwood Industrial Community

II Olney Planning Area (southern part only)

- F. South Norbeck Community
 - F-1. North Branch Lake Neighborhood
 - F-2. Manor Club Neighborhood
 - F-3. Aspen Hill Park Neighborhood
 - F-4. North Aspen Neighborhood
- G. West Olney Community
- H. Bowie Mill Community
- I. Rock Creek Lake Estates

III Rockville Planning Area

- A. North Twinbrook Forest Community
- B. Rockville Industrial Community

CHAPTER VI

LAND USE PLAN

The Land Use Plan* anticipates the needs of each community in terms of industrial, commercial and residential expansion over the next twenty years. These needs are as follows:

a. Residential Development.

The adopted Plan recommends 2,083 acres to be zoned R-90, which could yield 6,249 dwelling units. Other than this comparatively high density development, the Plan proposes various residential zones of two acre, one acre and half acre minimum lot size. These are more fully described in the chapter on zoning.

b. Commercial Development.

The partition of the study area among several planning areas is significant. It reflects, for example, the opinion that no major regional commercial facility will be needed in the upper watershed. The watershed study area is divided into four distinct units, each oriented to established planning areas which will provide the major business centers. These major business centers are Rockville, Gaithersburg, Laytonsville and Olney. Residential areas south of

* See Land Use Plan in pocket

Route 28 will be in the trading areas of North Gate Shopping Center at Georgia and Connecticut Avenues.

Some expansion of the existing commercial uses within the watershed is included to provide local shopping services. For example, at Olney, the existing commercial zoning west of Georgia Avenue, has been enlarged to four (4) acres. The existing commercial at Redland was enlarged to five (5) acres, enough to meet the needs of a neighborhood shopping center. Also, the existing commercial at Muncaster Road and State Rte. 108 was enlarged to five (5) acres.

Due to the proposed higher density development along Routes 28 and 115, an additional new commercial area of approximately 10 acres is needed to serve the adjacent communities. This site would provide for a well-planned shopping center at the southwest intersection of re-located Md. Rte. 115 and an arterial highway planned to connect Rte. 115 with Rte. 28.

c. Industrial Development.

The Plan shows an expansion of I-1 zoning in the industrial area north of Rockville, along the B & O Railroad. The industrial nature of this area has already been established. Such permanent installations as Washington Gas Light with its underground storage provide the beginning of a larger industrial complex.

d. Public Facilities.

Of all public facilities, schools are the most important. Within the watershed there are three existing schools, the Olney Elementary School, Aspen Hill Elementary and Robert E. Peary Jr.-Sr. High School. There are several existing schools located just outside of the watershed which are designed to serve their watershed district only if the area remains completely rural.

Due to the proposed higher density development and the expected future population, the land use plan includes an additional 13 elementary schools, 3 junior high schools and one senior high school. These schools will adequately serve the anticipated population. The approximate locations of these facilities are shown on the land use plan map.

e. Parks and Recreation

This use is entirely new in the upper Rock Creek Watershed, and contains approximately 2,880 acres. It is designed to provide Montgomery County with two large inland bodies of water which will have immense recreational value. Along with these lakes, local recreational areas and a large regional park are proposed.

All of the above uses proposed on the land use plan are more fully outlined in their respective chapters in this report.

CHAPTER VII

HIGHWAYS AND STREETS

In preparing a highway plan for the land area contained in the Upper Rock Creek Watershed it was necessary to plan well beyond the limits of the watershed. It would be obviously impractical and foolhardy to attempt to pinpoint the alignment of major and secondary highways within the boundaries of the watershed study area without having some knowledge of how these highways will fit into the overall future road pattern in the upper county area. As a result, classifications and alignments have been assigned for an area of approximately 175 square miles outside the immediate study area. These alignments are, of course, general since detailed topography was not available for this vast area. However, the general locations are reasonably firm and the overall pattern of highway development which emerges will more than adequately meet the needs of the future.

The highways in the study area have been placed in one of four classifications based upon control of access, capacity and relative importance in the overall highway network. These classifications are Major Highways, Secondary Highways, Industrial Roads and Primary Streets. Secondary Highways and Primary Streets are also referred to as arterial roads and collector streets, respectively.

Eight major highways, the highest classification assigned, are in the Plan, with proposed rights of way ranging from 120 to 260 feet. In this category are:

M-1 State Route 115 (Muncaster Mill Road). This is one of the key highway proposals since it will serve as the major east-west artery across the watershed. It is recommended that the entire length of this highway be relocated through the watershed. The proposed new alignment will materially improve grade conditions and will enable a direct connection from State Rte. 28 (Rockville-Norbeck Road) to the proposed Circumferential or by-pass road around Gaithersburg. This relocation will not only provide a more desirable alignment and grade but will also enable better control of access by limiting the number of intersecting streets and highways.

M-2 Shady Grove Road. This proposal is equally important as a key highway improvement since it is the major north-south artery through the watershed. It is proposed to extend Shady Grove Road from State Rte. 355 to a point east of Rock Creek where it will connect with Muncaster Road. This proposal envisions eventual dualization of the highway from Rte. 355 across the study area. This major artery would provide direct access from the Washington National Pike to the Montgomery County line at Brighton Dam.

M-3 State Rte. 97 (Georgia Avenue). Relocation of this route to the east of the present roadway from Aspen Hill Road to Emory Church Lane is recommended as proposed by the State Roads Commission. The existing pavement from Bel-Pre Road to Emory Church Lane will remain as a service drive. From Emory Church Lane

north to State Rte. 108 at Olney the existing roadway will be widened with minor refinement in alignment and grade.

- M-4 State Rte. 108 (Laytonville-Olney Road).** The plan proposes eventual dualization of this highway utilizing the existing pavement. The additional lanes required for dualization would be provided by obtaining right of way on the northern side of the present roadway from Olney to the town limits of Laytonville. This proposal also includes minor adjustments of existing pavement to eliminate substandard curves.
- M-5 State Rte. 124 (Gaithersburg-Laytonville Road).** Proposed improvement of this road generally follows the existing alignment from Warfield Road south to existing State Rte. 115. From this point it is recommended that the road be relocated to the west, by-passing the Town of Washington Grove and connecting with relocated State Rte. 115.
- M-6 State Rte. 28 (Rockville-Norbeck Road).** Within the watershed complete relocation of this road is proposed from Rockville to a point east of Rock Creek as shown on the adopted Highway Plan for Rockville and Vicinity. Further east, at Norbeck, realignment of State Rte. 28 is proposed to provide a direct connection with State Rte. 609. This will eliminate a difficult three-way intersection resulting from the termination of both Route 28 and Route 609 within several hundred feet of each other at Georgia Avenue. A proposed interchange at this point is shown as planned for future construction by the State Roads Commission.
- M-7 State Route 355 (Rockville Pike).** Improvement of this highway is suggested by means of widening and minor adjustments of alignment and grade.
- M-8 Connection between Md. Rte. 355 and Md. Rte. 28 (relocated).** This highway is important as a key improvement connecting two major highways and also serving the industrial area north of Rockville.

Eight highways in the watershed have been assigned the classification of Secondary Highways (Arterial Roads) with rights of way of 80 feet. All of the roads in this category will require additional rights of way and adjustment of alignment and grade to achieve the higher standards. These will serve as connector roads between the major highways. Included in this category are:

- A-1 Warfield Road,** from St. Rte. 124 to St. Rte. 108, providing access from St. Rte. 124 to the town of Laytonville.
- A-2 Bowie Mill Road and Muncaster Mill Road,** from St. Rte. 108 to relocated St. Rte. 115.
- A-3 Avery Road,** from the terminus of Muncaster Mill Road at St. Rte. 115 to a proposed new Major Road referred to as M-8 in this report. The linking of A-2 and A-3 as shown on the map, provides a much needed continuous secondary road across the two proposed park areas in the Watershed Plan.

- A-4 Emory Lane**, from St. Rte. 97 south and west to St. Rte. 28 where it will connect with relocated Bel Pre Road south and east to St. Rte. 97. This will serve the R-90 communities in the area west and south of Norbeck and link them with a commercial center at relocated St. Rte. 115 and with Georgia Ave. (Rte. 97).
- A-5 Southlawn Lane**, from Avery Rd. to Industrial Road I-1, providing a spur connection that will give access to the park and traverse an industrial area.
- A-6 This is an entirely new road** which in effect would be an extension of Twinbrook Parkway from existing St. Rte. 28 to relocated St. Rte. 28. This would serve as a by-pass of the northern edge of the Town of Rockville.
- A-7 Arctic Avenue**, from Aspen Hill Road to Arterial Road, A-4. This will serve as a north-south artery through the R-90 community west of Georgia Ave. Also it will provide access to proposed elementary and secondary schools in the community.
- A-12 Ring road around Olney**—This portion on the Upper Rock Creek Watershed Plan, from St. Rte. 97 (M-3) to St. Rte. 108 (M-4), will serve as a by-pass for the Olney satellite community.

Three industrial roads are planned in the watershed to provide connections between industrial areas and secondary or major highways.

In addition to the above categories, the plan shows a number of primary residential streets (collector streets). These primary streets are based upon the adopted zoning plan and topography. Detailed information on the entire highway and street classification for the watershed appears in the following table.

HIGHWAY AND STREET CLASSIFICATIONS

Major Highways

	Name	Limits	Length (Miles)	R/w	Recommended Paving Width
M-1	St. Rte. 115 (Relocation of existing Muncaster Mill Rd.)	Existing St. Rte. 124 (Gaithersburg-Laytonsville Rd.) to St. Rte. 28 Rockville-Norbeck Rd.)	5.58	150'	4 Lane Div.
M-2	Shady Grove Rd. Extension	St. Rte. 355 (Rockville Pike) to St. Rte. 108 (Laytonsville-Olney Rd.)	5.97	120'	4 Lane Div.
M-3	St. Rte. 97-Ga. Ave.	Aspen Hill Rd. to St. Rte. 108 (Laytonsville-Olney Rd.)	5.17	varies 120' to 260'	4 Lane Div.
M-4	St. Rte. 108 Laytonsville-Olney Rd.	Town limits of Laytonsville to St. Rte. 97 (Ga. Ave.)	5.30	150'	4 Lane Div.
M-5	St. Rte. 124 Gaithersburg-Laytonsville Rd.	Existing St. Rte. 115 (Muncaster Mill Rd.) to Warfield Rd.	5.11	120'	4 Lane Div.
M-6	St. Rte. 28 Relocated Norbeck Road	Town limits of Rockville to St. Rte. 97 (Ga. Ave.)	2.95	150'	4 Lane Div.
M-7	St. Rte. 355 Rockville Pike	Town limits of Rockville to Shady Grove Rd.	2.26	120'	4 Lane Div.
M-8		Md. St. Rte. 355 (M-7) to Md. St. Rte. 28 Relocated (M-6)	2.17	120'	4 Lane Div.

Secondary Highways (Arterial Roads)

A-1	Warfield Road	St. Rte. 124 Gaithersburg-Laytonsville Rd.) to Town limits of Laytonsville	1.00	80'	44' Min.
A-2	Bowie Mill Rd.-Muncaster Mill Rd.	St. Rte. 108 (Laytonsville-Olney Rd.) to St. Rte. 115 Relocation	4.16	80'	44' Min.
A-3	Avery Road	St. Rte. 115 Relocation to Major Highway M-8	2:18	80'	44' Min.
A-4	Emory Lane	St. Rte. 97 (Ga. Ave.) to St. Rte. 97 at Bel-Pre Road	4.14	80'	44' Min.
A-5	Southlawn Lane	Industrial Rd. I-1 to Avery Rd. A-3.	0.70	80'	44' Min.
A-6		Existing St. Rte. 28 (Rockville-Norbeck Rd.) to Md. St. Rte. 28 relocated M-6.	.66	80'	44' Min.
A-7	Arctic Avenue	Aspen Hill Rd. to Arterial Rd. No. 4	1.73	80'	44' Min.
A-12		St. Rte. 97 (Ga. Ave.) to St. Rte. 108 (Laytonsville-Olney Rd.)	1.78	80'	44' Min.

NOTE: Arterial Roads in Rural Areas to be 24' Paving and 12' Shoulders.

Industrial Roads

Name	Limits	Length (Miles)	R/w	Recommended Paving Width
I-1 Southlawn Lane	Horners Lane, I-3, to end of industrial zoning approx. .5 mi. north of M-8	1.00	80'	48' Min.
I-2	St. Rte. 355 (Rockville Pike) M-7, to 800' east of B & O RR.	.43	80'	48' Min.
I-3 Westmore Rd. Horners Lane	St. Rte. 355 (Rockville Pike) to Southlawn Lane, I-1.	.85	80'	48' Min.

Primary Residential Road (Collector Streets)

P-1 Dorsey Rd.	Warfield Rd., A-1 to St. Rte. 108 (Laytonsville-Olney Rd.)	0.75	70'	36' Min.
P-2	P-1 Dorsey Rd. to P-3	0.87	70'	36' Min.
P-3	St. Rte. 124 (Gaithersburg-Laytonsville Rd.) to Muncaster Rd.	1.87	70'	36' Min.
P-4	Muncaster Rd. to St. Rte. 108 (Laytonsville-Olney Rd.)	1.13	70'	36' Min.
P-5 Cashell Road	P-4 to Emory Lane, A-4	3.71	70'	36' Min.
P-6	St. Rte. 124 (Gaithersburg-Laytonsville Rd.) to Bowie Mill Rd. A-2	2.93	70'	36' Min.
P-7 Existing Muncaster Mill Rd.	St. Rte. 124 (Gaithersburg-Laytonsville Rd.) relocation to St. Rte. 115 relocation	2.22	70'	36' Min.
P-8	A-2 to St. Rte. 97 (Ga. Ave.)	2.74	70'	36' Min.
P-9 Redland Road	P-7 (Existing Muncaster Mill Rd.) to 800' east of B & O RR.	2.13	70'	36' Min.
P-10	Existing St. Rte. 124 (Gaithersburg-Laytonsville Road) to Shady Grove Rd. Extension	1.06	70'	36' Min.
P-11 Existing St. Rte. 124 (Gaithersburg-Laytonsville Rd.)	Town limits Washington Grove to Existing St. Rte. 115 (Muncaster Mill Rd.)	1.23	70'	36' Min.
P-12 Needwood Rd.	Shady Grove Rd. Ext. M-2 to A-2 (Existing Muncaster Mill Rd.)	2.62	70'	36' Min.
P-13	A-4 to St. Rte. 115 Relocation	1.00	70'	36' Min.
P-14 Existing Norbeck Rd.	Town limits of Rockville to A-4	2.17	70'	36' Min.
P-15	P-13 to St. Rte. 28 (Norbeck Rd.)	0.19	70'	36' Min.
P-16	Town limits of Rockville to M-8	.47	70'	36' Min.

Name	Limits	Length (Miles)	R/w	Recommended Paving Width
P-17	St. Rte. 28 (Rockville-Norbeck Rd.) to Arterial Road No. 7	1.55	70'	36' Min.
P-18	St. Rte. 28 (Rockville-Norbeck Rd.) to Heathfield Rd.	1.55	70'	36' Min.

NOTE: Primary Roads in Rural Areas to be 24' Paving and 8" Shoulders.

In addition to highways and streets specifically classified in the preceding table, the three general provisions below shall be binding where applicable:

1. All street rights-of-way (not otherwise classified) in commercial areas shall be a minimum of 80 feet in width whether the commercial zoning (C-0, C-1 and /or C-2) lies on one or both sides of the street.
2. All street rights-of-way (not otherwise classified) in industrial areas shall be a minimum of 80 feet in width whether the industrial zoning (I-1, I-2 and/or I-3) lies on one or both sides of the street.
3. All street rights-of-way (not otherwise classified) in multi-family residential areas shall be a minimum of 70 feet in width whether the multi-family zoning (R-10, R-20 and/or R-30) lies on one or both sides of the street.

CHAPTER VIII

SCHOOLS

In any area that is largely undeveloped, the impact of new population on existing school facilities is a serious and far-reaching one.

In 1959 the 1,007 dwelling units in the Rock Creek Watershed provided an estimated elementary school enrollment of 700 pupils. By 1980 we anticipate some 14,463 dwelling units and a population of about 55,000 persons, with around 10,000 children of elementary school age. Many new schools will be needed to serve these students. These schools should be located in such a manner so that future facilities—after 1980—can be well planned with respect to their ultimate service areas.

Existing School Service Areas—1960

The Laytonsville Elementary School serves the northern portion of the watershed, north of Muncaster Road and east of Muncaster Mill Road.

Olney Elementary School serves the eastern portion of the watershed, east of Rock Creek, east of Muncaster Mill Road (between Bowie Mill Road and Redland), and east of Muncaster Road. The Olney School also serves the area to the south of Norbeck Road (Md. Rte. 28), including all of Manor Club Subdivision and a portion of the rural area immediately south and west of Manor Club.

To the south, the Harmony Hills, Wheaton Woods and Aspen Hill Road Elementary Schools presently serve the built-up portions of North Wheaton in the south portion of the study area. As this area continues to develop, their respective service areas will be altered as new schools are built. Maryvale Elementary School in the City of Rockville serves the area west of Rock Creek and south of Derwood and Needwood Roads. Meadowhall Elementary School serves the southeast end of the City of Rockville, primarily in the built-up portions of Twinbrook Forest south of Md. Rte. 28.

On the west, the Washington Grove Elementary and Longview Elementary serve that portion of the watershed west of Muncaster Mill Road and north of Derwood and Needwood Roads.

All of these schools are designed to serve their respective watershed districts only if the undeveloped portion of the watershed remains completely rural. Obviously it is necessary to plan for additional elementary school facilities where they will be needed as development occurs.

Proposed School Service Areas—1980

The initial demand for new elementary schools has already been felt due to the expanding subdivisions north of Aspen Hill Road. When the outfall sewer is constructed up a tributary of Rock Creek to service Manor Club, nearly 1,000 acres of presently undeveloped land will open up for development. As proposed in the zoning plan, an additional 2901 dwellings (in neighborhoods II-F3 and II-F4) could be built in the R-90 zone.

These 2901 homes alone could add from 1800 to 2300 elementary pupils to the public school system. Therefore, in anticipation of this development, two elementary schools are proposed in neighborhood II-F4, and two more elementary schools in II-F3. Sites for these facilities have already been selected by the Board of Education. Each school should be designed for eventual expansion to 16 classrooms, the normal capacity of each facility being 480 pupils. Approximately 10 acres should be reserved at each of the four sites.

The second wave of development will occur when the Rock Creek trunk sewer is extended north from Norbeck Road. This sewer extension up North Branch to Muncaster Mill Road will open up this area for additional development.

The extension of these utilities will serve R-90 development on 466 acres and R-R development on 226 acres in neighborhood II-F1. Ultimately 1737 dwellings could be contained in this neighborhood; therefore, planning two elementary schools is necessary to accommodate an expected enrollment of over 1200 pupils. Norbeck Road should be the southern boundary of these two school districts.

An additional facility is proposed in Community B of the Rockville Planning Area III. as

the area develops in accordance with the adopted Zoning Plan.

An expansion of residential development is likely to occur in the eastern sector of the Gaithersburg-Washington Grove satellite community, particularly after the Mill Creek trunk sewer is constructed to its authorized terminus. When this occurs, some 432 acres of R-90 and 521 acres of R-R could be developed, providing an ultimate 2077 dwelling units in Community A of the Gaithersburg-Washington Grove Planning Area. Here again two elementary schools will be required to serve an estimated 1400 to 1500 pupils from Community A. The existing facilities at Longview and Washington Grove Elementary Schools could help meet the initial needs of this growing community.

In Community B, Redland, of the Gaithersburg Planning Area, about 900 dwelling units could be built on the 602 acres proposed for half-acre, R-R zoning, and ultimately some 600 to 700 pupils could come from these dwellings. The 30 acre site now owned by the Board of Education, on the north side of Muncaster Mill Road just west of Rock Creek, could provide enough land for both the elementary and junior high requirements for this area. Here again it is unlikely that this community will reach ultimate capacity by 1980. If it is only half developed, however, a 10 classroom elementary school would be needed to accommodate 300 pupils. This facility like all schools, could be expanded to meet future needs as the area developed beyond the 1980 expectancy.

In Community C, Needwood Estates of the Gaithersburg Planning Area, about 692 dwelling units could be built and some 400 to 500 pupils could come from these dwellings. Here again, it is unlikely that this community will reach capacity by 1980. If it is only half developed, however, a 10 classroom elementary school would be needed. This facility, like all schools, could be expanded to meet future needs as the area develops.

In the North Branch, the existing facility at Olney should take care of the proposed half-acre and R-90 areas forming part of the satellite community at Olney. At some future date an additional facility will likely be needed at Olney, but this would be built outside of the present watershed.

South of this service area, but still in Community G of the North Branch, there is a site on Cashell Road just south of Norbeck Country Club. A school here could meet the remaining requirements in this area until 1980.

In Community H of the Olney Planning Area No. II, the total possible number of dwelling units on 3,331 acres of R-R zoning is 4,997. Since this area lies toward the northern end of the watershed, it is not likely to develop very extensively before 1980. Assuming only 25 percent development by 1980, one new school will be needed prior to this date to serve an expected enrollment of 800 to 900 pupils. A site is recommended on proposed Primary Road P-5, approximately halfway between Olney and Laytonsville Elementary Schools.

South Laytonsville Community A is the only other major area requiring a school by 1980. The 3,190 acres of R-R zoning in this area could ultimately yield 4,785 dwelling units. However, assuming 25 percent development by 1980, 1200 dwelling units would produce 700 to 800 pupils of elementary school age. Therefore, a new site has been selected for this area on Primary Road P-6. The existing Laytonsville Elementary School (just north of the study area) would continue to serve this community, and even after another facility is built in the South Laytonsville Community, the existing school could continue to serve the area north of the PEPCO power line.

In summary, the existing elementary schools now serving the study area are as follows:

School	Existing or Budgeted		Actual
	No. of Classrooms	Classroom Capacity	Enrollment 9/30/60
Gaithersburg	22	675	825
Longview	12	280	¹
Washington Grove	12	325	340
Laytonsville	13	450	366
Olney	21	550	494
Meadow Hall	22	720	781
Maryvale	25	810	769
Aspen Hill	20	630	566

¹ Enrollment combined with Gaithersburg Elementary

Recommendations for additional elementary schools by 1980 are as follows:

Area	Dwelling Units	1980 Estimated Enrollment	No. of New Schools Required
Olney			
II F-1 North Branch Lake	1,737	1,216	2
II F-3 Aspen Hill Park ¹	2,064	1,445	2
II F-4 North Aspen	837 + 263*	769	2
II G West Olney ³	2,768	1,938	1
II H Bowie Mill	1,250	875	1
Gaithersburg-Washington Grove			
Community A—Emory Grove ²	2,077	1,454	1
Community B—Redland	450	315	1
Community C—Needwood Estates	377	264	1
Laytonsville			
Community A—South Laytonsville	1,200	840	1
Rockville			
Community B—Rockville Industrial Comm.	482	337	1

¹ Partially served by Aspen Hill Road Elementary School.

² Also partially served by Washington Grove and Longview Elementary. A new 24 classroom school plus a 12 room addition to Longview would adequately serve the community.

³ One facility, Olney Elementary, already provided. Other new facility will be on Cashell Road.

* 263 dwellings in II F4 outside study area

SECONDARY SCHOOLS

Existing Schools

At present the entire watershed is serviced by junior and senior high schools located outside of the study area with the exception of the Robert E. Peary Jr.-Sr. High School at the extreme southern end.

The Board of Education's 30 acre site on Muncaster Mill Road (P-7) just west of Rock Creek is recommended as a dual purpose site—for an elementary school (previously discussed) and a junior high school.

Recommendations for 1980

The 14,463 dwelling units expected by 1980 could yield 3,600 to 3,700 secondary school students.

In addition to the junior high school recommended on the 30 acre site now owned by the Board, an additional 30 acre site for a combined junior-senior high school (which might later revert to senior only) is proposed on the east side of Muncaster Mill Road (A-2) just south of its intersection with Needwood Road.

Another junior high school will ultimately be needed in the Olney satellite community area. No site has been selected in the study area.

The plan proposes two junior high schools, one south of Route 28 in neighborhood II F3 and in II F4. Each school will be located on a 20 acre site, enough land to make them park schools. With the construction of these two schools, the present Robert E. Peary Jr.-Sr. High School would become a senior high. These two proposed junior high schools will serve the needs of neighborhoods II F2, F3, and F4; the northernmost facility also will serve a portion of II F1, north of Maryland Route 28.

CHAPTER IX

PARKS AND RECREATION

The park plan for the upper reaches of Rock Creek is intended to provide a basic concept of what can and should be done in the way of preserving and developing approximately 2,900 acres of land as a combination flood control project and recreation area in the Upper Rock Creek Watershed.

Flood Control

One of the primary values of this project will be the protection of existing development along lower Rock Creek from expensive and unnecessary flood damage, not only in park lands

but in nearby subdivisions as well. It is imperative that this flood control project be accelerated to insure against premature development in the upper watershed which could encroach upon strategic stream-valley land there.

This Commission's General Plan for the Maryland-Washington Regional District, illustrates the necessity of careful control over residential and commercial development in this watershed. We quote, "*The amount of rainfall the ground can absorb depends on the state of natural vegetation. In 1933, an 8.5 inch rainfall produced an eleven foot flood in Rock Creek. By 1952, the absorbent quality of the watershed has been damaged to the extent that 5 inches could produce an eleven foot flood. The concomitants of flooding are costly to the community: roads are washed out, culverts clogged with debris, and the beauty of the stream spoiled by bank-cutting and gullyng. Further deterioration of streams is caused when sites are cleared and left bare for six months to a year. Erosion and deposition of silt and mud in stream channels generally follows*". It should be noted here that in anticipation of the flood control project, \$180,000. has been allocated to re-routing the trunk sewer in the vicinity of dam site No. 5; \$120,000. by the Washington Suburban Sanitary Commission and the remaining \$60,000. by Montgomery County. These financial commitments are in anticipation of the project becoming a reality in the near future.

Recreation—Rock Creek Regional Park

Although the stream valley parks are a great asset to the Metropolitan Area, they are not adequate for all our park and playground needs since some residential areas are far removed from the streams. To supplement the stream valley system, therefore, a number of regional parks are planned for Montgomery County with a total of some 2,320 acres. The Wagner Report* to this Commission emphasizes the importance of acquiring larger holdings outside of stream valleys to supplement the park system.

This need was recognized by the Commission in its adopted Master Plan of Schools, Parks and Recreation. The revised plan, in addition to the three new but smaller regional parks, (Cabin John, Northwest Branch and Wheaton Regional), retains the large 1,000 acre regional park proposed along Rock Creek north of Southlawn Lane. It is necessary to provide for this facility to better balance the distribution of regional parks throughout Montgomery County as a whole. This portion of the Rock Creek valley is quite picturesque and provides an interesting variety of landscapes and physical features. An adequate cover of vegetation currently protects this scenic area and an effort should be made to preserve it in any development plans.

It is recommended in this plan that the 1,000 acre regional park be a combination of the flood control project and adjoining stream valley, and include about 300 acres of land lying on a plateau southwest of the impoundment dam north of Southlawn Lane.

* H. S. Wagner, Survey Report and Recommendation on the Park Function of the Maryland-National Capital Park & Planning Commission, 1956.

Park Areas

The recommendations in this plan deal with the delineation of boundaries for the completion of Rock Creek as a stream valley park. The total area proposed for park land along Upper Rock Creek (north of Viers Mill Road) is 2,880 acres. This includes 280 acres between Viers Mill Road and Rockville-Norbeck Road, most of which has already been acquired under the Capper-Cramton Act. The extension of Rock Creek Park north from Rockville-Norbeck Road to the proposed dam sites comprises an area of approximately 300 acres. North of Southlawn Lane the park taking lines encompass an area of 1,400 acres bordering the main stream of Rock Creek. The park line was expanded to the west in this area, providing a large regional park adjacent to the impoundment area to be created by the proposed dam. The park lines established along the North Branch of Rock Creek east of Avery Road comprise an area of 900 acres. With the exception of the proposed regional park area, the stream valley park lines have been set in compliance with Capper-Cramton standards. With or without the flood control projects these lines should be considered as being minimum in most areas.

Nearly 1,300 acres of Rock Creek Valley (245 of which are included in this plan), have already been acquired from the District of Columbia to Rockville-Norbeck Road under the Capper-Cramton Act. Development of this park land is a continuous operation which has been going on since the first acquisition occurred in April, 1931. However, it is becoming apparent that unless the recommended flood control measures are undertaken, damages to park areas already developed may become so costly that the construction of future facilities would necessarily be delayed or even prevented altogether.

Recreational Facilities*

Among the facilities proposed in this plan are 14 baseball fields, 21 softball fields, 8 football fields, 25 tennis courts, 9 multi-use courts, 130 acres for boating and fishing, 1,000 acres suitable for camping, 200 acres for picnic sites, and 15 miles of park roads. Also included are a major equestrian center with stables, riding rings, bridle trails, and a number of other recreation buildings.

It is apparent that the principal value of this proposed park, in addition to providing open space, will be advantages offered by the flood control dams. Besides giving protection to residences and park land downstream, they will provide Montgomery County with two large inland bodies of water which will have immense recreational value. These lakes will have an area wide attraction and should not be regarded as being important only to the Rock Creek Watershed. These proposed features should provide a sound basis for the future development of recreational facilities in the Upper Rock Creek Watershed along the stream itself.

Due to the open type of development proposed in this area, no local recreation centers are suggested in this plan at the present time. Such needs can be met through the use of proposed school facilities and developed portions of the stream valley system.

* See Park Development Plan Map in pocket.

CHAPTER X

ZONING

The existing zoning pattern in the watershed is largely R-R (one-half acre zoning). On the eastern side of the watershed, the land has been recorded in larger lots. Three country clubs are located in this area. The recommended change from R-R to R-E zoning on the eastern side is designed to maintain the present character of the development. A review of the proposed zoning and the reasoning behind these recommendations follows:

1. **R-A Zoning (Rural Agricultural)**—A total of 2301 acres lying entirely in the south central portion of the watershed is in this classification. This area is bounded on the north by relocated St. Rte. 115 (Muncaster Mill Rd. (M-1), on the east by the North Branch of Rock Creek, on the south by Rock Creek and the area indicated for Industrial use, and on the west by the industrial zone 800 feet west of the Baltimore and Ohio Railroad, and a line 150' east of the extension of Shady Grove Road (M-2).

In establishing these boundaries for the R-A zone, the Commission recognized the existence of over 1,700 acres of land in this area in the R-A classification; the existing pattern of development; and the need for open type land use in the immediate vicinity of the flood control projects. The area between the two lakes is especially adaptable to estate-type development, and two-acre zoning here would prevent excessive and rapid runoff, and will slow up siltation of the lakes.

2. **R-E Zoning (Residential Estate)**—A large portion of the eastern watershed area is in this classification. This area is bounded on the west by the North Branch of Rock Creek, on the north by Bowie Mill Road A-2, east by Cashell Road P-5, the east boundary of the Norbeck Country Club and St. Rte. 97 (Georgia Ave. M-3) and south by the relocated St. Rte. 115 (Muncaster Mill Rd. M-1).

Existing development in this area and recorded subdivisions have set the pattern for this portion of the watershed. Lot sizes are one acre or more. Added to this is the influence of the two country clubs which provide a natural setting for a prestige community of large, spacious home sites.

3. **R-R Zoning (Rural Residential)**—This classification has been distributed among six areas of the watershed, comprising a total area of 9,638 acres.

Area A—A belt beginning 600 feet east of Industrial Road I-1, following the northern boundary of the Town of Rockville and the North Branch of Rock Creek. It is wedged between the large area of R-A zoning to the west and R-90 zoning to the east. This belt terminates at relocated St. Rte. 115.

Area B—A large tract comprising the entire northwest and central portions of the Watershed lying north of relocated St. Rte. 115 (Muncaster Mill Rd. M-1) and

portion of Bowie Mill Rd. (A-2), west of North Branch of Rock Creek and St. Rte. 108 (Laytonsville-Olney Rd. M-4), south of Warfield Rd. A-1 and east of St. Rte. 124 (Gaithersburg-Laytonsville Rd. M-5).

Area C—The tract on the southwest quadrant of Olney lying south of St. Rte. 108 (Laytonsville-Olney Road), M-4, and Bowie Mill Rd. A-2, west of St. Rte. 97 (Georgia Ave. (M-3) and the R-90 zoning east of Cashell Rd. P-5 and the east boundary of the Norbeck Country Club and north of the southern limits of the Cherry Valley Subdivision.

Area D—A band 300 feet wide adjoining the northern and eastern town limits of Washington Grove.

Area E—A band 300 feet wide north of Norbeck Road adjacent to the Manor Club development.

Area F—All of Manor Club Subdivision and a band 250 feet wide on the south side of Layhill Road.

In proposing these areas for Rural Residential zoning, the Commission again took into consideration the pattern of development which had already begun and the need to protect the immediate areas of the flood control project.

A recently adopted amendment to the Zoning Ordinance permits (under R-R classification) lots with a minimum net area of 15,000 square feet where all lots in the subdivision average at least 20,000 square feet. No subdivision under this subsection shall be permitted unless public water and sewer will be available prior to occupancy of building lots, and no building permit shall be issued until such water and sewers are available.

4. **R-90 Zoning (Restricted Residential)**—Five areas in the watershed totalling 2,083 acres are recommended for this more intensive residential land use.

Area A—A narrow band at the northern boundary of the Town of Rockville wedged between the town limits and the belt of R-R zoning.

Area B—A large parcel lying south of relocated St. Rte. 115 (Muncaster Mill Rd. M-1) west from a line 150 feet east of the extension of Shady Grove Rd. (M-2), north of the industrial area north of the B & O Railroad and east 300 feet around the town limits of Washington Grove.

Area C—A pie-shaped wedge beginning at the intersection of relocated St. Rte. 28 (Norbeck Rd. M-6) and primary road P-14 and extending northward to relocated St. Rte. 115 (Muncaster Mill Rd. M-1).

Area D—A large tract of land lying south of Manor Club and St. Rte. 28 (Norbeck Rd. M-6) extending west to Rock Creek and south and east to existing subdivisions.

Area E—A small parcel in the southwest quadrant of Olney.

The availability of sewer service, of course, has played a part in determining the area in-

cluded in this more intensive type of residential land use. Area B is in the R-90 classification because it is considered a logical extension of the eventual development of the Gaithersburg-Washington Grove complex as a satellite community. Area D is in the R-90 classification due to the availability of sewer service and the established pattern of R-90 development already found in part of the Area. In addition, the proximity of this portion of the watershed (as in Area C) to Rockville and to the rapidly growing subdivisions to the south, justifies the inclusion of Area D and Area C in the R-90 zone.

The new density control subsection provides for a minimum net lot area of 8,000 square feet and an average of 9,000 square feet. General averaging requirements for R-90 density control are the same as those of the R-150 zone.

5. **C-1 & C-2 Zone**—These areas in commercial use on the plan follow the pattern already established. A new site of 10 acres is proposed at the southeast corner of relocated St. Rte. 115 (Muncaster Mill Rd. M-1) and Emory Lane, A-4, extended. This is a fine location for serving the R-90 zone and the surrounding areas. The other commercial areas are already existing and have been enlarged on the Plan to accommodate future commercial expansion—Redland, Olney, and the site on St. Rte. 108 (Laytonsville-Olney Rd. M-4) at Shady Grove Rd. M-2. These local shopping centers will not conflict with other established or proposed shopping centers. Particular attention was given to the location of these areas in order that they would not adversely affect surrounding residential development.

For information and details for North Gate Shopping Center, see Northwest Branch Watershed Report.

6. **I-1 Zone**—A large expansion of this zone is shown on the western portion of the watershed between Rockville and Gaithersburg on the zoning plan. This area is bounded by St. Rte. 355 (Rockville Pike M-7) on the west, north by Oakmont Road, east by a line 800 feet east of B & O Railroad, and south by the city limits of Rockville.

7. **I-2 zone**—A small parcel lying north of Southlawn Lane (I-1) and on both sides of road M-8.

The following table shows the acreage for each zoning classification, with community and watershed totals given for each zone.

AREA IN ACRES BY COMMUNITY & NEIGHBORHOOD UNITS
WITH ESTIMATED NUMBER OF DWELLINGS
ROCK CREEK WATERSHED
ZONING DISTRICT CLASSIFICATION

Planning Area Communities	R-A	R-E	R-R	R-90	C-1	I-1	I-2	Existing D.U.s	Estimated Future D.U.s (Ultimate)
Laytonsville									
A			3,190		1			102	4,785
Gaithersburg									
A			521	432				96	2,077
B			602		5			48	903
C	1,565			22		181		110	692
D	151			43		401		5	189
Rockville									
A			154	29				7	318
B			321			377	135	70	482
Olney									
F1			226	466	10			11	1,737
F2			290	15	3			150	480
F3*				688				1	2,064
F4*				279				0	837
G		2,065	1,003	109	4	2		280	3,690
H			3,331		5			96	4,997
I	585							31	234
Totals	2,301	2,065	9,638	2,083	28	961	135	1,007	23,485

NOTE: Lands developed as golf courses and proposed to be used for stream valley parks have been excluded from above computations.

* Includes only those portions of the neighborhoods within the study area.

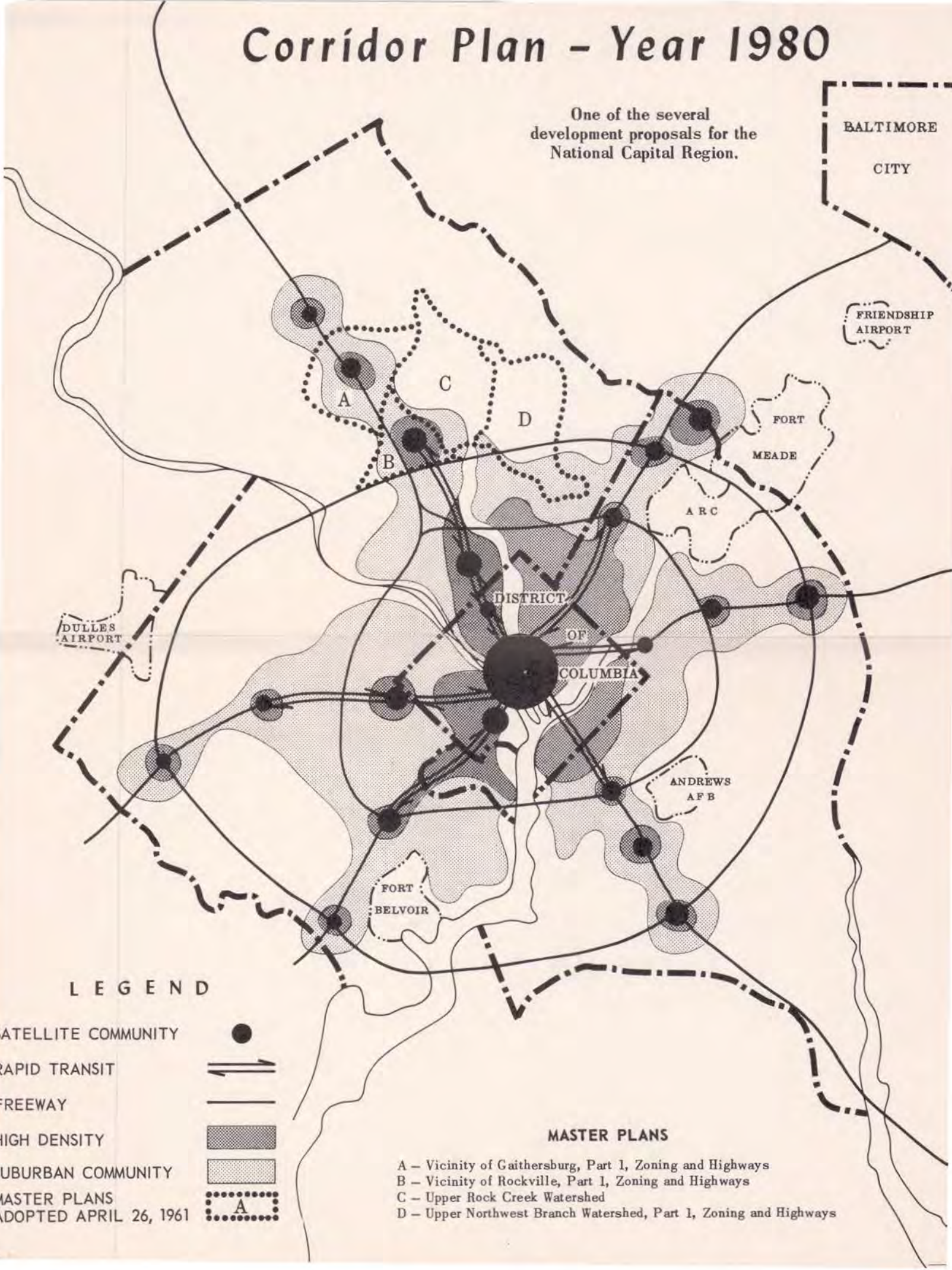
Estimated Population, 1959—3,827

Estimated Ultimate Future Population—89,152

Total Increase—85,325 persons (based on average of 3.8 persons per family)

Corridor Plan - Year 1980

One of the several development proposals for the National Capital Region.



BALTIMORE CITY

FRIENDSHIP AIRPORT

A B C D

FORT MEADE

A R C

DISTRICT OF COLUMBIA

ANDREWS AFB

FORT BELVOIR

DULLES AIRPORT

LEGEND

SATELLITE COMMUNITY



RAPID TRANSIT



FREEWAY



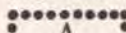
HIGH DENSITY



SUBURBAN COMMUNITY



MASTER PLANS



ADOPTED APRIL 26, 1961

MASTER PLANS

- A - Vicinity of Gaithersburg, Part 1, Zoning and Highways
- B - Vicinity of Rockville, Part 1, Zoning and Highways
- C - Upper Rock Creek Watershed
- D - Upper Northwest Branch Watershed, Part 1, Zoning and Highways

PARK DEVELOPMENT PLAN FOR UPPER ROCK CREEK

DEPARTMENT OF PARKS
MONTGOMERY COUNTY
PRINCE GEORGES COUNTY

APRIL 26, 1961



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

SILVER SPRING RIVERDALE

HERBERT W. WELLS, Chairman
J. NEWTON BREWER, JR., Vice-Chairman

JOHN A. FLOYD DONALD E. GINGERY LOUIS A. GRAVELLE W. LAWSON KING

JOHN L. PYLES JOHN A. SCHEBEL JOHN B. LAUER MRS. RUSSELL WILTBANK

JESSE F. NICHOLSON
Executive Director & Secretary-Treasurer

CERTIFICATE OF ADOPTION

THE MASTER PLAN OF THE UPPER ROCK CREEK WATERSHED IS A PART OF THE GENERAL PLAN FOR THE PHYSICAL DEVELOPMENT OF THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN MONTGOMERY AND PRINCE GEORGE'S COUNTIES, ADOPTED PURSUANT TO THE PROVISIONS OF CHAPTER 780, LAWS OF MARYLAND, 1959, BY RESOLUTION OF APRIL 26, 1961 AFTER DULY ADVERTISED PUBLIC HEARINGS HELD ON DECEMBER 11 AND 12, 1959.

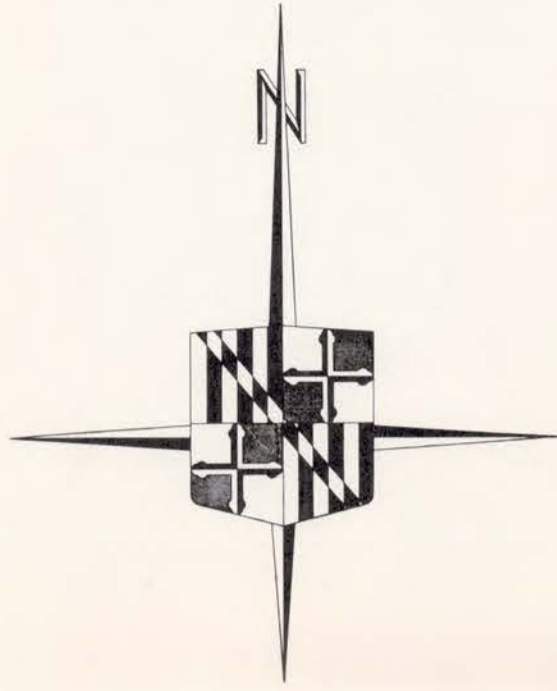
Jesse F. Nicholson
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Secretary-Treasurer

Herbert W. Wells
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Chairman

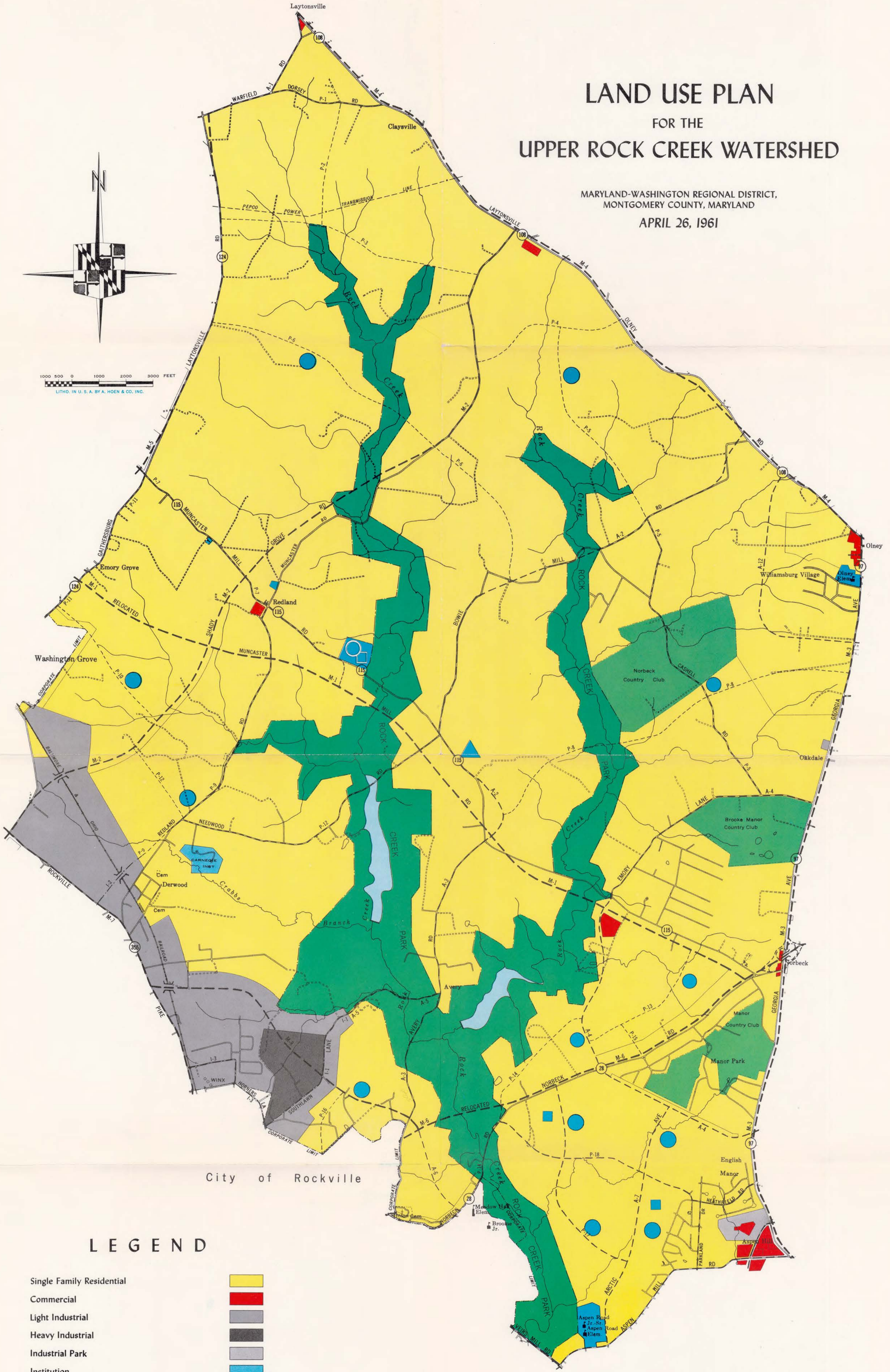
LAND USE PLAN FOR THE UPPER ROCK CREEK WATERSHED

MARYLAND-WASHINGTON REGIONAL DISTRICT,
MONTGOMERY COUNTY, MARYLAND

APRIL 26, 1961



1000 500 0 1000 2000 3000 FEET
LITHO. IN U. S. A. BY A. HOEN & CO., INC.



City of Rockville

LEGEND

Single Family Residential	
Commercial	
Light Industrial	
Heavy Industrial	
Industrial Park	
Institution	
Park	
Country Club	
Church	
Elementary School	
Junior High School	
Senior High School	

EXISTING	PROPOSED

CERTIFICATE OF ADOPTION

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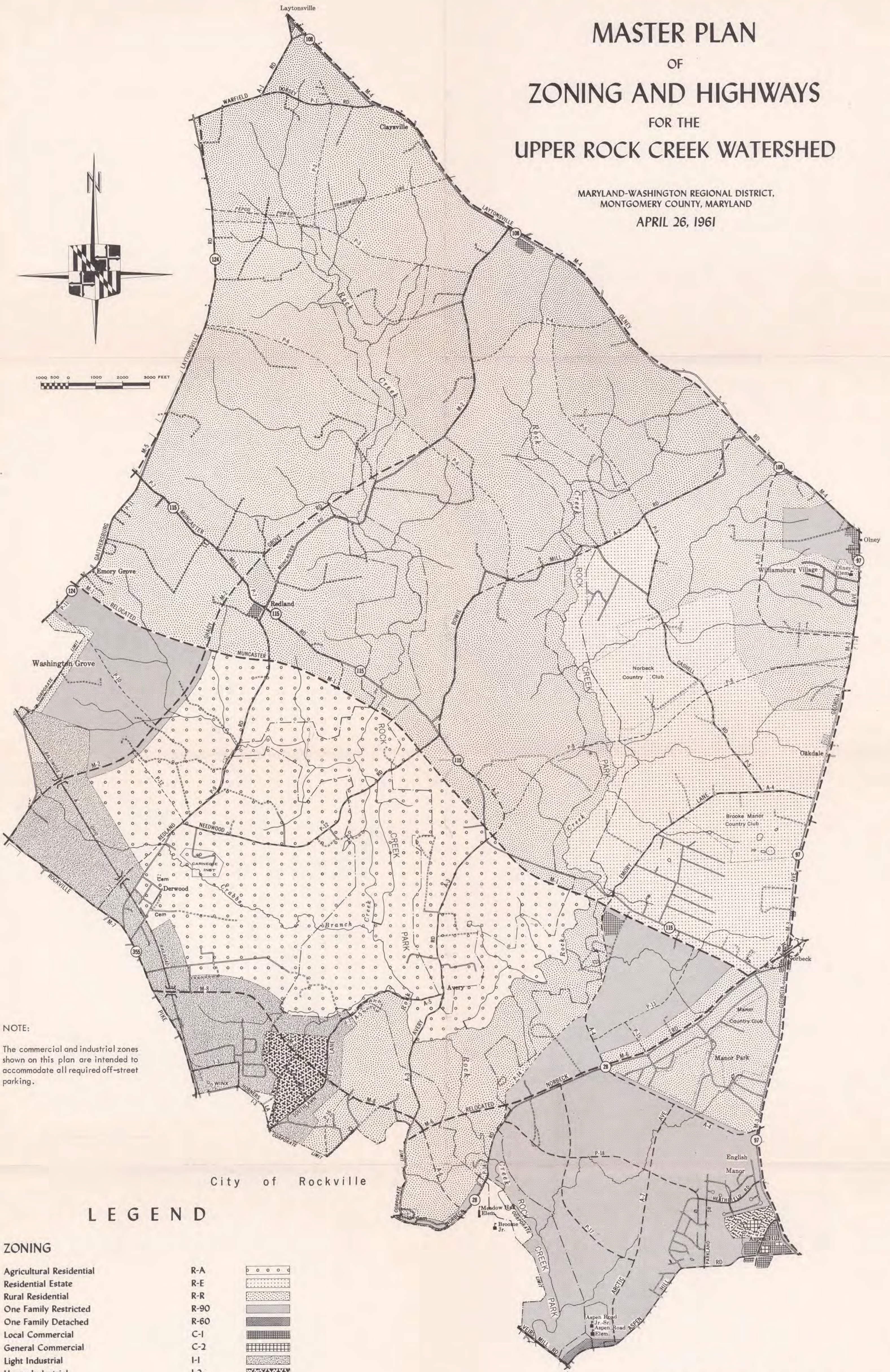
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MRS. RUSSELL WILT BANK

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Executive Director & Secretary-Treasurer

MASTER PLAN OF ZONING AND HIGHWAYS FOR THE UPPER ROCK CREEK WATERSHED

MARYLAND-WASHINGTON REGIONAL DISTRICT,
MONTGOMERY COUNTY, MARYLAND

APRIL 26, 1961



NOTE:
The commercial and industrial zones shown on this plan are intended to accommodate all required off-street parking.

LEGEND

ZONING	
Agricultural Residential	R-A
Residential Estate	R-E
Rural Residential	R-R
One Family Restricted	R-90
One Family Detached	R-60
Local Commercial	C-1
General Commercial	C-2
Light Industrial	I-1
Heavy Industrial	I-2
Industrial Park	I-3

HIGHWAYS	
Major	M-2
Arterial (Secondary)	A-4
Industrial	I-1
Primary (Collector Street)	P-2
State Route	

CERTIFICATE OF ADOPTION

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