A decent home in a suitable living environment for every American family.

U.S. HOUSING ACT OF 1949.

GOALS

GOALS OF THIS PLAN

The best plan is the one which comes nearest to reaching the goals that you and your fellow citizens want to see accomplished. The General Plan is therefore based on these goals. First is the assumption that space for growth shall be amply provided on the basis of population, employment, and other trends. In accordance with this basic assumption, the following goals are those which will help most to improve the manner in which growth takes place.

Land should be treated as one of our most precious possessions, using efficiently what we need for accommodating expected urban growth, and conserving the rest for the unforeseeable future. Land is too valuable an asset to be heedlessly wasted by allowing it to be developed aimlessly in a scattered pattern. Extravagant "leap-frogging" of development into the countryside and overemphasis on larger and larger residential lots waste the land and establish widespread patterns of land use which become obsolete before they are even fully developed.

Public plans must be realistic in providing enough land for each type of urban development to meet the demands of urban growth. But at the same time public policy should not be used to inflate rural land prices artificially by extending urban zoning beyond realistic estimates of development needs. Equitable treatment of land owners demands that the need for expansion be met by opening land to development in a sequence which enhances orderly operations of the real estate market and reduces unsound speculation, leap-frogging, and excessive requests for rezoning.

Land is the basis of most natural resources, yet the 1960 Census tells us that we have less than 13 acres of it in the United States for each person in the population. This land includes all our farms, forests, mines, oil fields, mountains, deserts and parks as well as our residential, commercial and industrial areas. The total amount of land does not change but the amount per person is decreasing rapidly. With our exploding population and our rising standard of living, there is a potential danger of natural resources shortage. In addition to the land itself, certain special resources such as commercially workable sand and gravel deposits and quarryable stone are relatively scarce at locations near the urbanized area. These resources should be preserved until they are needed and then used efficiently. Resulting savings in transportation costs will be significant to the construction industry and to the consumer. Where possible, the best soils should be preserved for agricultural purposes. In addition, soil and watershed conservation practices should be employed to protect water supplies and topsoil.

Great expanses of open space in and near the urbanized area provide a feeling of freedom and relief to those urbanites who spend much of their time in the hustle and bustle of crowded shopping and working areas. Just to be able to get out and look at large open spaces or to surround oneself with a natural environment away from other people has a very desirable and soothing psychological effect. The inspiration and change of pace given by large open spaces are vital in addition to the enhanced opportunities for outdoor recreation. Furthermore, clean open space is the best environment for the preservation and proper use of natural resources. Maintenance of large amounts of clean open space, uninterrupted by scattered urban development, requires consolidated urbanization. Should it ever become necessary for future generations to urbanize part of the preserved open space, demolition of obsolete urban scatteration will not have to be the first step.

EXPAND OPPORTUNITIES FOR OUTDOOR RECREATION

The phenomenal demand for outdoor recreation, spurred on by rising living standards and increasing leisure time, must be met by utilizing both private and public lands. Many active sports can be enjoyed on local parks and playgrounds within urbanized areas and even in family backyards, but hunting, fishing, camping, hiking, swimming, horseback riding, boating, water skiing and other outdoor sports require more elbow room. Large expanses of water, shore fronts, forests and fields cannot be provided adequately within urban areas. Private property in the rural areas can meet a substantial part of the growing need for outdoor recreation facilities—to the profit of the private owners. Local and regional parks must fill the rest of the need. Government policy should support and encourage the use of both public and private lands in the Regional District for outdoor recreation.

FACILITATE THE ORDERLY AND EFFICIENT ARRANGEMENT OF PUBLIC UTILITIES AND SERVICES

Compact urban development, taking place in orderly stages, utilizes public investments in sewer and water lines, streets and highways, rapid transit, schools, parks, and other community facilities in the most efficient manner. The increased public costs required to bring services to scattered subdivisions should be avoided by not allowing such developments to spring up in areas where the necessary services cannot be efficiently provided.

PROVIDE AN EFFICIENT TRANSPORTATION SYSTEM INCLUDING RAPID TRANSIT An efficient system of transportation must include rapid transit designed to meet a major part of the critical rush-hour need. Without rapid transit, highways and parking garages will consume the downtown areas; the advantages of central locations will decrease; the city will become fragmented and unworkable. The mental frustrations of congested highway travel will take its toll, not to mention the extra costs of second cars and soaring insurance rates. In Los Angeles where an automobile dominated transportation system reigns supreme, there is still a serious commuter problem even though "Approximately two-thirds of the city's downtown section is given over to streets and parking and loading facilities."* There is no future in permitting the Regional District to drift into such a "solution."

^{* &}quot;The Revolt Against Big-City Freeways," U.S.News and World Report, Jan. 1, 1962, p. 49.

ENCOURAGE GREATER VARIETY OF LIVING ENVIRONMENTS

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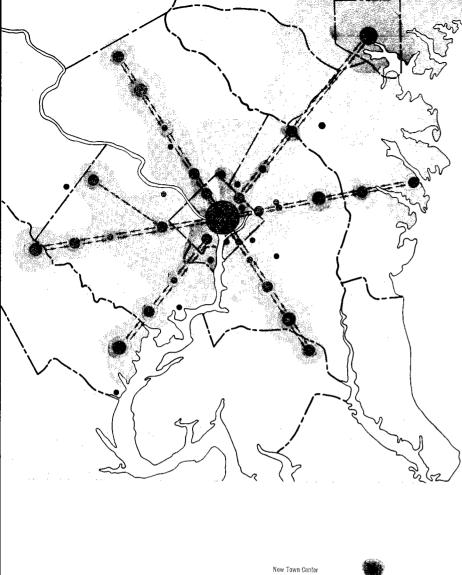
Large populations contain wide varieties of people, some young, some old, some married and some single, some with children and some without, some rich and some poor. These various types of people require different living environments. Provisions must be made for the requirements of all segments of the population and the changing ratios between them.

"New Towns" staged in the corridor plan afford the greatest opportunity to create in a concentrated, efficient and economical manner a range of choice of living environments. Cut from the whole cloth, such towns can be completely divorced from towns that "grew up" around a crossroad, an industry, a rail stop or the local grain and fuel center.

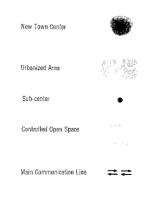
Planned and guided from their conception, new towns can profit by the pitfalls and inconveniences evident in much of our present sprawling urban development.

Residential areas need not consist of row after row of houses on uniformly sized lots or unimaginative blocks of apartments in strict zoning categories. Cluster developments which compatibly integrate single family homes on various sized lots, town houses, garden and high rise apartments, commercial and auxiliary uses can maintain strict density control of the cluster of uses.

A new town could thus be made up of a series of "clusters". The Town providing the employment, major commercial and cultural facilities with the clusters providing the essential variety of living space, local social, cultural and educational facilities—and, above all the physical arrangement of all components into a workable pleasant, and economically feasible whole. The total town would provide the fullest range of commercial services, employment, cultural opportunities, and living arrangements to meet the needs and desires of all segments of the residents, and result in a complex basically sufficient unto itself.



the radial corridor plan



Proper attention to many small refinements and amenities can contribute greatly to the development of pleasing urban communities. Small local parks and conservation strips, shade trees along the streets, proper landscaping of buildings and parking lots, underground power and telephone lines—all such refinements can add greatly to the quality and pleasing appearance of communities.

One of the concepts of design which lends imagination, integrity and identity to an area—whether it be a new town, a cluster development or an isolated existing community is the separation of uses by "greenbelts." These belts could range from rows of trees in a cluster to parklike greenbelts of sparsely used land delineating the shape of a new town.

Basic to the concept of imaginative design is the inclusion in the design of a cultural and social base—a sense of identity and pride—for each and every new town, residential cluster or existing community.

New towns may consider projects as ambitious as a zoo, a botanical garden, the exploitation of a natural resource, exhibition and art museums. Residential clusters could consider art centers, major libraries, concert facilities or even a symphony orchestra.

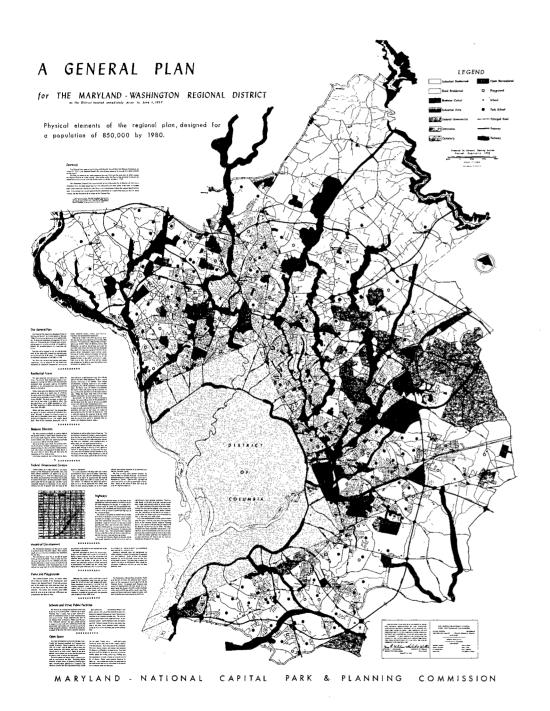
Imaginative design can create an identity for each community, a source of pride for the residents of the community, and establish competition between areas that fosters an appreciation for the betterment of all communities.

To be practical a plan must be acceptable within the framework of existing legal procedures or reasonable extensions of these procedures, and within the framework of financial capabilities. Public policy should provide for the practical implementation of the plan.

In the light of these goals four alternative urban patterns were analyzed: sprawl, average density, satellite, and corridor.



COOPERATION AS AN ACTUAL OF SECURITIES AND SECURITI



GOALS OF THE 1957 GENERAL PLAN

The principal goals adopted in the 1957 General Plan for the Maryland-Washington Regional District are still valid and are supplemented rather than changed by the goals and regional policies stated above. The stated purposes of the 1957 General Plan were to help create—





orderly regional development with residential communities, shopping areas and employment centers built up in a harmonious fashion in relation to each other and with due attention to the preservation of large open spaces—parks, woodlands, and farms;

well designed residential communities, free of scattered commercial and industrial uses, with good street widths and lot sizes and adequate local parks and playgrounds;

well located and designed shopping centers that are convenient to reach and use and have no harmful effect on neighboring properties;

- planned industrial parks which will attract industry to the suburban area without injuring residential uses;
- a logical distribution of school and park facilities, with sites secured well ahead of rising land costs;
- a good regional highway system with well located main arterials and ample rights-of-way for future widening, purchased before roadsides are built up with houses and other uses;
- an improved system of rapid transit joining residential areas to business districts and centers of government and industrial employment.



THE URBAN PATTERN

"Men come together in cities in order to live; they remain together in order to live the good life."

Aristotle

Economy, convenience, and pleasant surroundings are the key concepts of the General Plan. Economy arises from the compact form of urban development, easily reached by public services. Most important of these services is transportation, and this is reflected in the radial corridor shape of the urban pattern. This pattern is a simple and direct one with a major focus in downtown Washington. By concentrating most of the new urban development along transportation corridors convenience is maximized. But even though the largest number of people will want to travel along the major corridors, travel between corridors cannot be ignored. Two circumferential freeways and numerous lesser highways tie the whole Regional District together, affording adequate access to all parts of the urban pattern.

Careful study of the existing land use map shows that present development already recognizes the simplicity, convenience, and workability of the radial corridor pattern. By accepting this existing tendency toward radial development and by reenforcing it with public policy, the General Plan takes full advantage of natural forces working toward economy and convenience.

The radial corridor pattern also has inherent advantages which help to establish pleasant surroundings for everyday living. By stretching out along the radial transportation corridors the urban pattern takes on a star shape with rural open spaces

alternating between the points and surrounding the corridor cities. Major rapid transit station locations supply a focus for the core of each of the corridor cities, giving them identities of their own. The brand new corridor cities offer the opportunity to start fresh far enough from the already urbanized area to be unaffected by pre-set urban patterns. Corridor cities in now-rural areas can be planned for pleasant living much better than if development were to occur in a scattered, haphazard, and uncertain pattern. Planning for "pieced-on" development at the edges of already urbanized areas, and running to catch up with unexpected trends of growth, are not satisfactory ways of providing pleasant living conditions compared to starting fresh in a complete, new, comprehensively conceived corridor city.

The centers of new corridor cities are spaced about four miles apart so that they can grow large enough to support a full variety of commercial, cultural, and social services, and still not crowd too tightly against the next city. This spacing will allow convenient rapid transit service with stops about two miles apart at the centers and edges of each corridor city.

The two-mile spacing of stops assures a large enough service area to make each stop worthwhile, yet will not reduce the transit to a slow start-and-stop operation which will exhaust the patience of commuters. Rapid transit, after all, must remain rapid.

generalized land use plan Residential Development Commercial Industrial Extensive Employment Center Public Open Space Greenbelts & Private Open Space Institutional Freeway & Parkway Major Highway

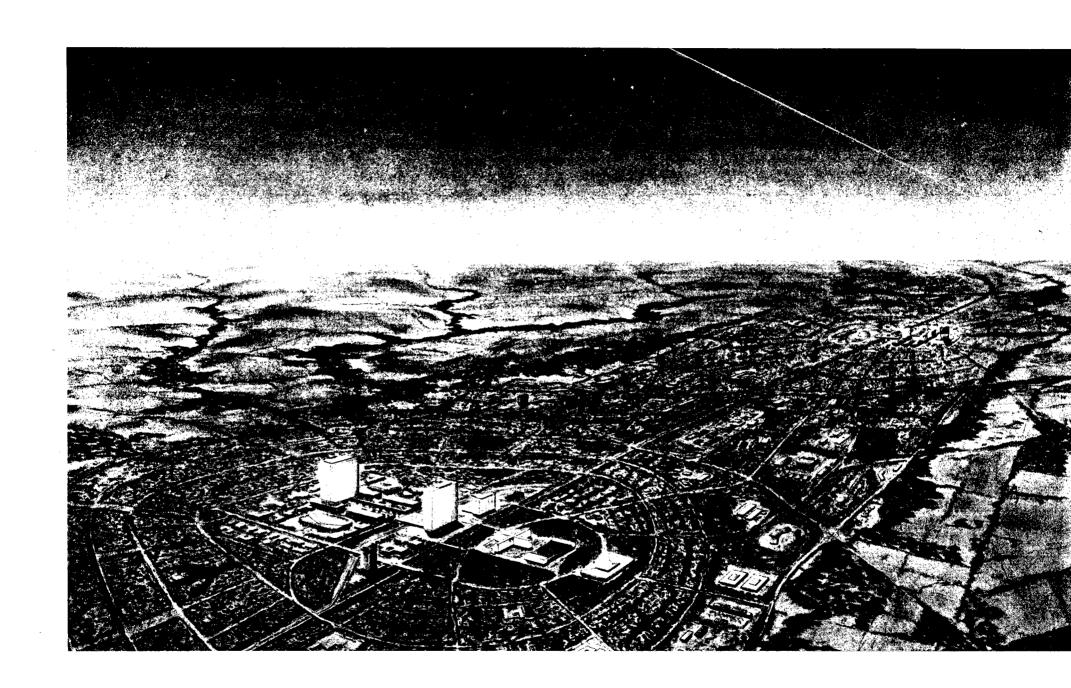
Of the four Maryland corridors the northwest corridor in Montgomery County is the largest and most complex. It will have two rapid transit routes in its broad urbanized base and two new corridor cities beyond Rockville, one at Gaithersburg and the other near Germantown, Considerable room for expansion northward into still another corridor city will be available in the Clarksburg area even after the Year 2000. Interstate Highway 70-S is this corridor's major limited access freeway. Natural corridor development is most pronounced in this corridor. Headquarters sites for the National Bureau of Standards and the Atomic Energy Commission have been chosen along the highway and numerous industrial firms, including I.B.M., Emerson Electronics and Fairchild-Stratos have followed suit.

Progressing clockwise, the next corridor centers around Interstate Highway 95, sometimes known as the third route to Baltimore. Urban development along this rather short corridor will straddle the Montgomery-Prince George's county line. Urbanization has already taken place as far out as the Naval

Ordnance Laboratory, but the fact that sewer service beyond this point is only now becoming available has saved a good site for a new corridor city east of Fairland. A second corridor city will develop around the town of Laurel.

The third urban corridor is rapidly developing along John Hanson Highway (Route 50) toward Annapolis. The Belair portion of the City of Bowie will form the nucleus of a major city beyond the Capital Beltway.

The fourth corridor in the Regional District centers around a newly proposed freeway and rapid transit route southeast of Washington, eventually providing a new Bay crossing and route to the beaches. Development which has hardly begun in this corridor will take place generally between Indianhead Highway and Branch Avenue, with new city centers near Henson Creek, Clinton, and Brandywine. The recently opened Woodrow Wilson Bridge at Jones Point is spurring development in this corridor.



population distribution

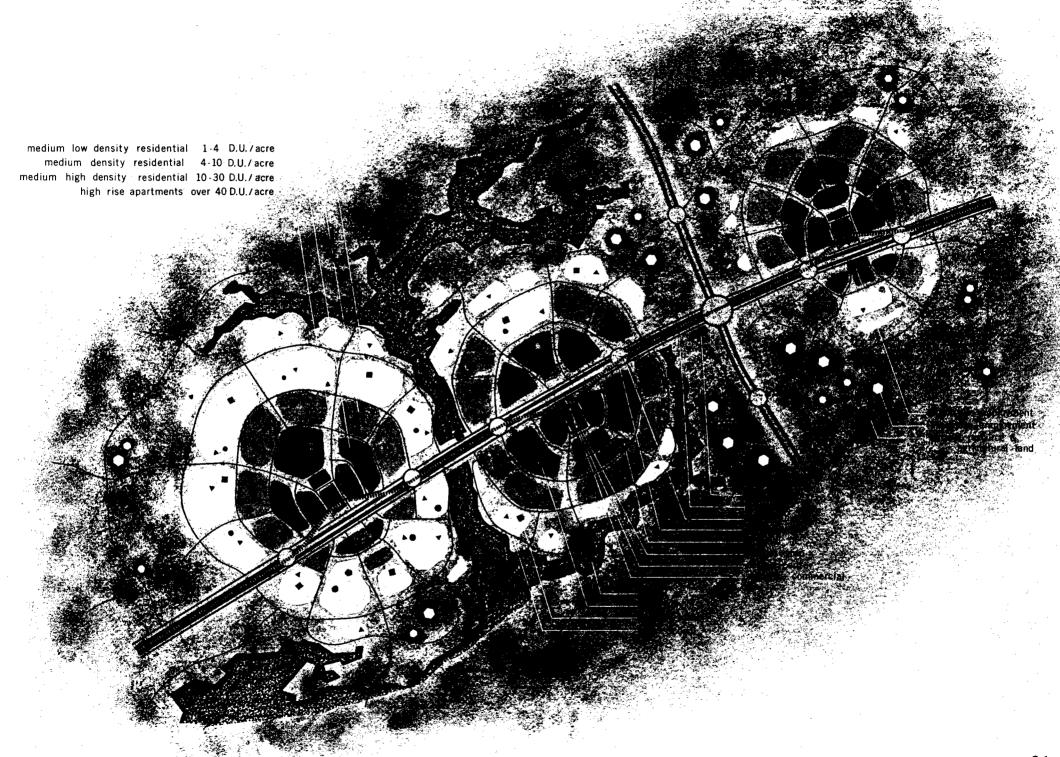
Of course all population growth from this date forward will not be expected to take place in the corridor cities. About 63% of the growth in the next 20 years will take place in the ring of already urbanized land surrounding the District of Columbia, and 24% will occur in the corridor cities. The balance of population will be distributed in satellite communities and at scattered locations in the rural areas.

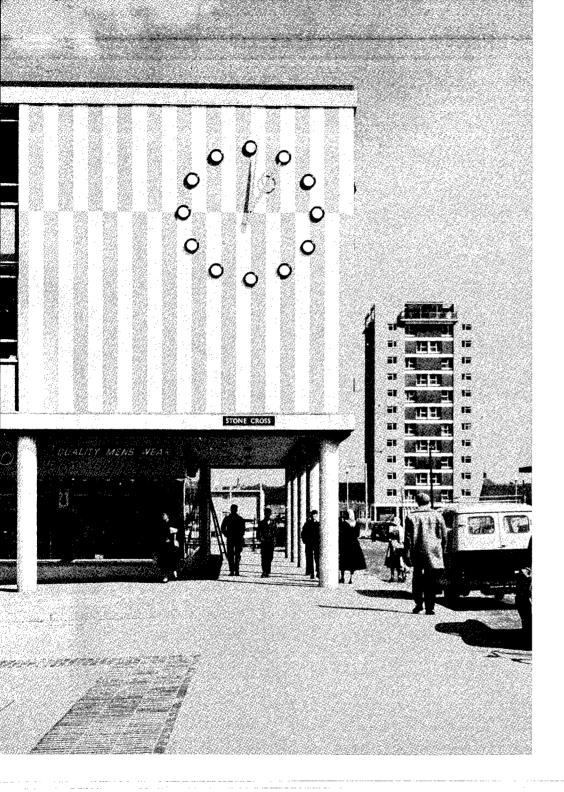
In the period between 1980 and the Year 2000, new growth is located to a much greater extent in the new corridor cities, some of which begin to approach their maximum population ranges of 75,000 to 125,000. (The Baltimore-Washington Interregional Study establishes this as an optimum size for reducing local travel needs.)

The growth of employment centers under this plan would closely parallel the growth of population.

The corridors will not develop overnight. Even by the Year 2000 all the space provided in the recommended urban pattern will not be used to its fullest capacity. This is a very long-range plan and if it is not carefully administered premature development could take place, resulting in undue burdens on public service systems. Orderly community development upon which pleasant living conditions are based, and orderly public budgeting upon which equitable taxation is based, will come about only if the plan is carefully implemented in stages.

Each dot represents 100 persons Black dots indicate 1960 population, color dots 1960-2000 population increase.

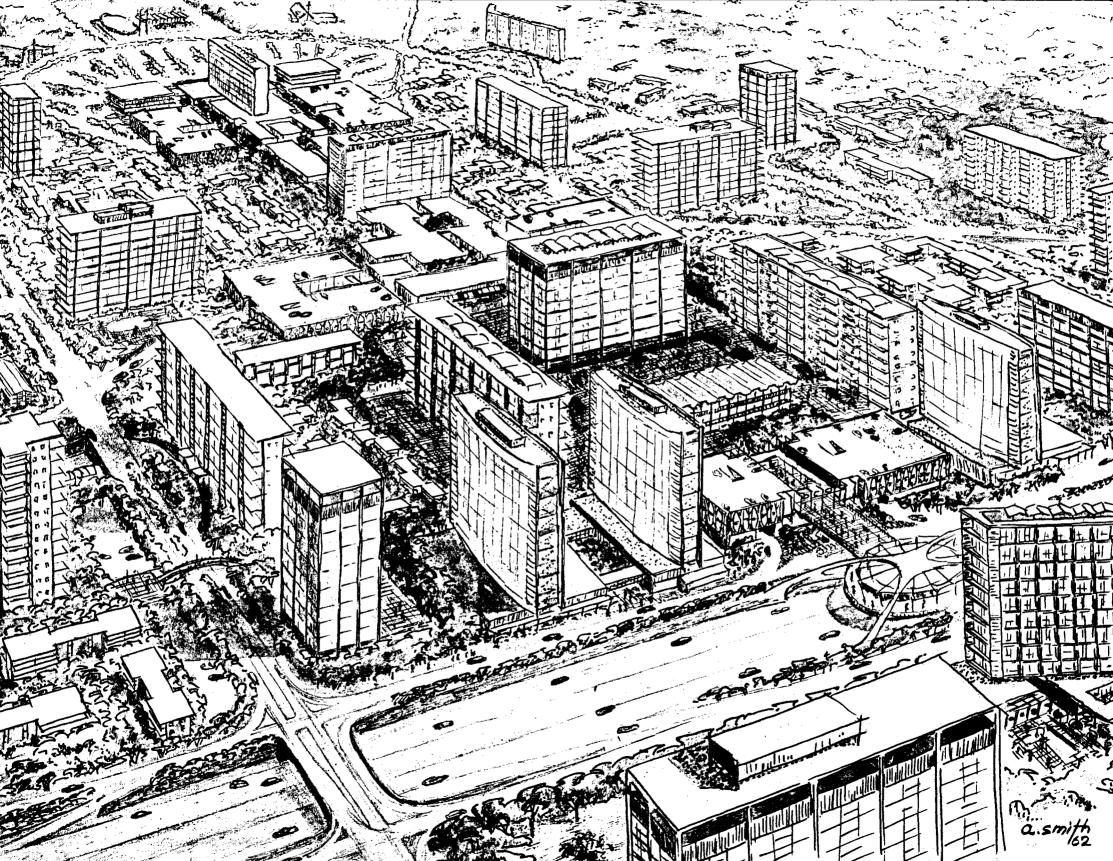




Population densities of the corridor cities will gradually taper off from apartments in and near the core to half-acre and one-acre homesites at the outer edge. At the edge, also, will be found spacious regional parks for extensive outdoor recreation. Still another facility to be found at the edge of corridor cities is the industrial park with its campus-like atmosphere. Large automobile parking lots will be provided around "park and ride" rapid transit stations, also at the edge between corridor cities.

Great care will have to be taken so that these similar features of the corridor cities will not create a "stamped-out-of-the-same-mold" effect. Using natural drainageways instead of piped-in storm drains will give individual character to communities. Encouraging not only architectural harmony but also architectural variety can be most rewarding. Greater emphasis will be placed on flexible regulations such as cluster subdivisions and density control zoning to encourage relief from the monotony of standard rows of dwellings.

Cluster design will require more care in planning, with greater attention paid to natural features of the landscape, but the extra effort will be worth it. With imaginative design it will often be possible to put the same number of houses on a piece of land by pleasantly situating them in relation to a natural hill, a striking view, or a nice stand of trees as by simply lining them up in the wake of a bulldozer. Good planning is a small cost, well worthwhile in the increasingly competitive housing market of today. Values are higher and sales are easier in pleasant communities possessing individuality in landscaping, subdivision design, and architecture.





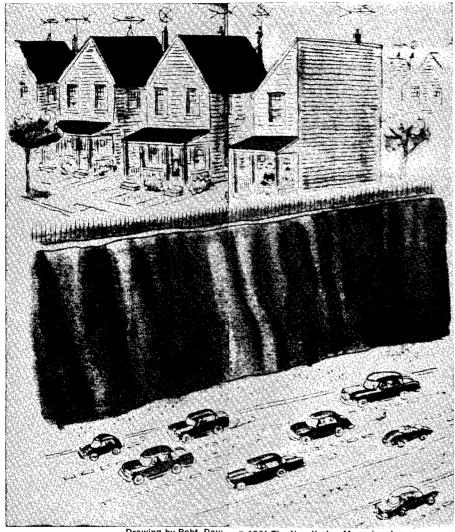
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Ringing the District of Columbia and forming a base for each of the four urban corridors is the more or less solidly built up group of communities where most of us now live. This urban ring has many advantages such as quiet residential neighborhoods, widespread home ownership, and convenient new shopping centers.

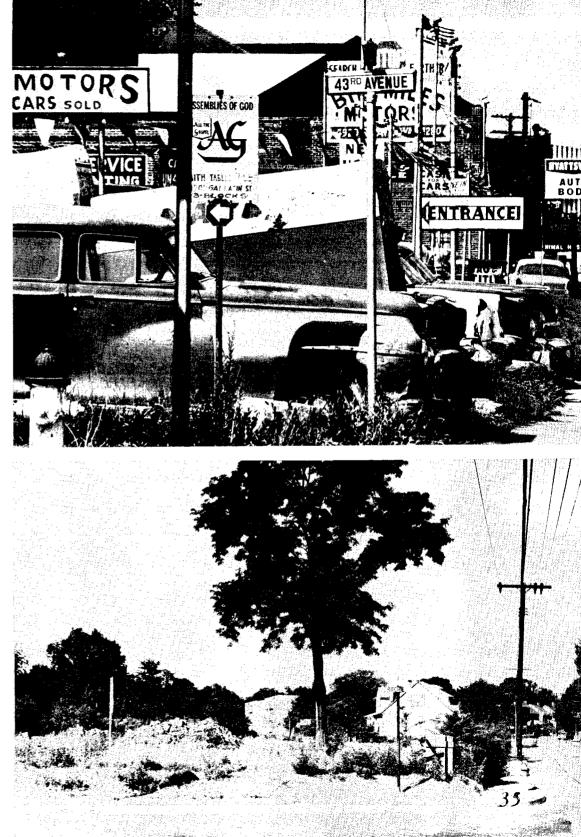
But the urban ring also has its problems. Every time another new subdivision is tacked on a little farther out from what used to be the edge of things, the traffic through the older suburbs gets a little heavier. The new subdivision may be quiet and uncluttered by alien traffic, but the older ones must pay the price. Streets must be widened and by-passes built; an open

field near a newly-important intersection becomes a gas station; old estates along transportation routes become shopping centers or apartment sites. Proper transitions between these new uses and the well established single-family homes surrounding them are often hard to establish, and the neighborhoods along the heavily travelled roads deteriorate. From this beginning, the trend is toward strip zoning. Resulting traffic problems resemble "hardening of the arteries." In recognition of the increased population, long established commercial centers expand into nearby residential neighborhoods, causing more transitional problems. The end result is a disease known as urban blight. This disease is contagious and is almost sure to spread where preventive measures are not taken.

"They were such nice neighbors. We were sorry to see them go."



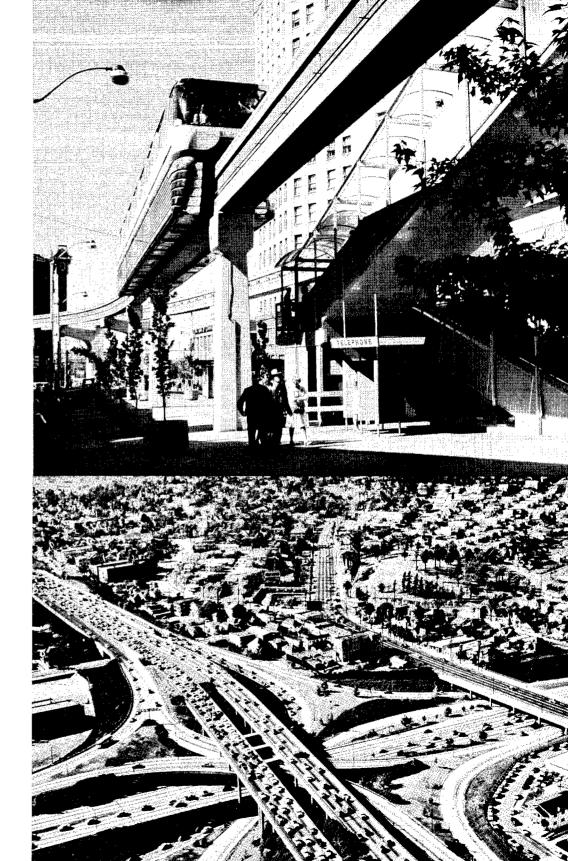
Drawing by Robt. Day; © 1961 The New Yorker Magazine, Inc.



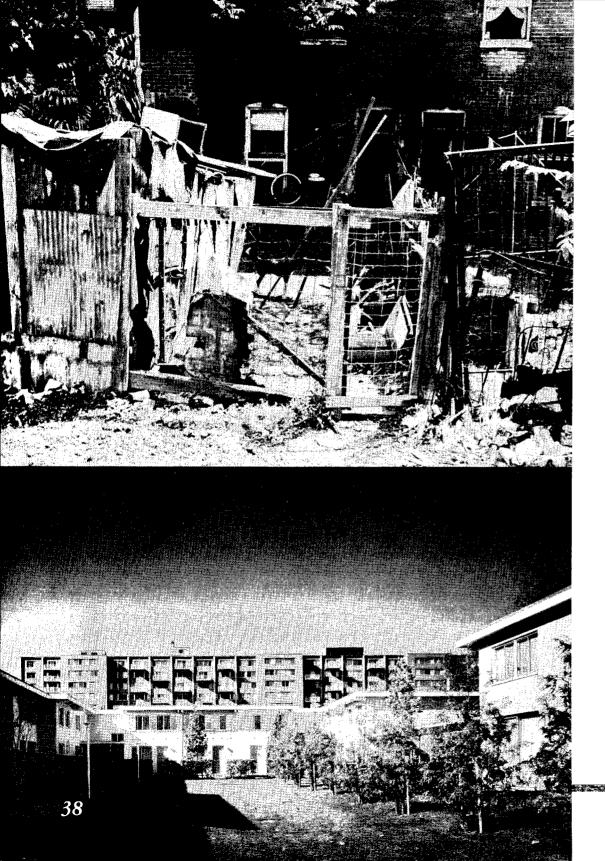
To overcome these problems, many of the refinements described in connection with the new corridor cities can be gradually worked into the communities of the urban ring. Rapid transit and a few high-speed freeways will have to be painfully pushed through the ring, but once done this will keep throughtraffic off the local streets and out of the quiet residential neighborhoods. Constant road-widenings will cease and stability will be returned to the close-in communities. Access to downtown Washington from the urban ring as well as from the new corridor cities will be greatly facilitated, but the major advantage to residents of the ring will come in the form of greatly reduced disruption to their established communities. This advantage cannot be had by freeway expansion alone. One track of rail rapid transit is equal in passenger capacity to 8 or 10 lanes of limited access freeway. Without rapid transit, the amount of land required for highways in the urban ring when Metropolitan Washington reaches a population of 5 million would be unbelievably great.

The high density cores recommended for new corridor cities are not feasible in the urban ring, where community design has already been determined. While the proposed transit lines are located in the most populous parts of the urban ring for convenience, pedestrian access to and from transit stations in the ring will not be so heavily relied upon. Greater emphasis will be placed on "park and ride" stations resembling the fringe parking areas now in use on some bus routes. The highway and transit systems will need to be conveniently tied together to compliment each other.

Like the highway and transit rights-of-way themselves, the required stations and parking lots will take space in the urban ring. Urban renewal may be necessary in some cases to make this space available, and to make the appropriate adjustments in the surrounding community.







RENEWAL IN THE URBAN RING

Urban renewal in the ring communities will be useful in other respects than in making room for transportation systems. Older communities tend to deteriorate in their more vulnerable spots unless something is done to bolster them up. Evidences of blight are already visible here and there in the urban ring.

Until 1954 when the term "renewal" replaced it, "redevelopment" meant the complete clearing and rebuilding of an area. But today, renewal includes the rehabilitation and conservation of urban areas as well as clearance and rebuilding. It is a comprehensive program to halt deterioration of urban communities and stimulate them into renewed and healthy growth.

With the use of urban renewal, planning and zoning mistakes can be rectified, nonconforming uses which existed prior to zoning can be removed; older buildings can be restored before they mar the neighborhood too much; newer buildings can be kept in almost new condition; and most important of all—the missing amenities, including small open spaces, can be added to communities in need of them.

FUTURE GROWTH IN THE URBAN RING

Although the urban ring is substantially developed, it has by no means reached its ultimate population. As many as 460,-000 more people may be finding new homes in the urban ring within the next 20 years. Planning in the urban ring will include new development as well as refinements to the old. As in the case of planning regulations for guiding growth in the corridor cities, improved zoning and subdivision ordinances will be needed in the urban ring to encourage greater flexibility of design in relation to natural views, terrain, and vegetation.

Special attention will have to be given to two other problems: (1) appropriate development of by-passed tracts of land, and (2) forming satisfactory transitions between potentially inharmonious types of land use.

The great danger accompanying by-passed tracts of land is that rezoning is frequently requested for them long after surrounding properties have been built up—with the expectation that development of the by-passed tract will be in harmony. Such expectations are often backed up by publicly adopted master plans. Yet, as long as the by-passed tract remains unused, there is the ever present danger of rezoning for a gasoline

station, shopping center, or apartment project. Speculative bidding-up of such tracts with prices based upon unsound rezoning is common, and must be discouraged by firm public policy upholding adopted zoning plans. In addition, this firm policy should be reinforced by a constructive plan of action including a constant inventory of these danger spots, continuing analyses as to their suitability for inclusion in urban renewal projects or for use by public agencies, and a positive program for acquisition of those tracts which are suitable for public use.

There has already been some success in working out better transitions between potentially inharmonious types of development in the urban ring. Specific setback, screening, and landscaping conditions are being placed in the zoning ordinance to govern special exceptions in residential zones and off-street parking lots in or adjoining residential zones. The industrial park zone has strict performance standards governing smoke, heat, light, noise, and electrical emissions. Extra large setbacks and stringent site plan approval requirements also apply to the industrial park and high-rise apartment zones. With the continuance of such efforts, the transition problem can be overcome to the great benefit of the whole Regional District.



Communities isolated from corridor development have been recognized and accounted for in the plan. Some of these communities scattered throughout the bi-county area, are proud of their "small town" atmosphere and are planned not only to preserve, but enhance, the desirability of small town living.

Upper Marlboro is the only community that has a sufficient degree of employment in the form of the Prince George's County Government, to exhibit the characteristics of a self-contained satellite.

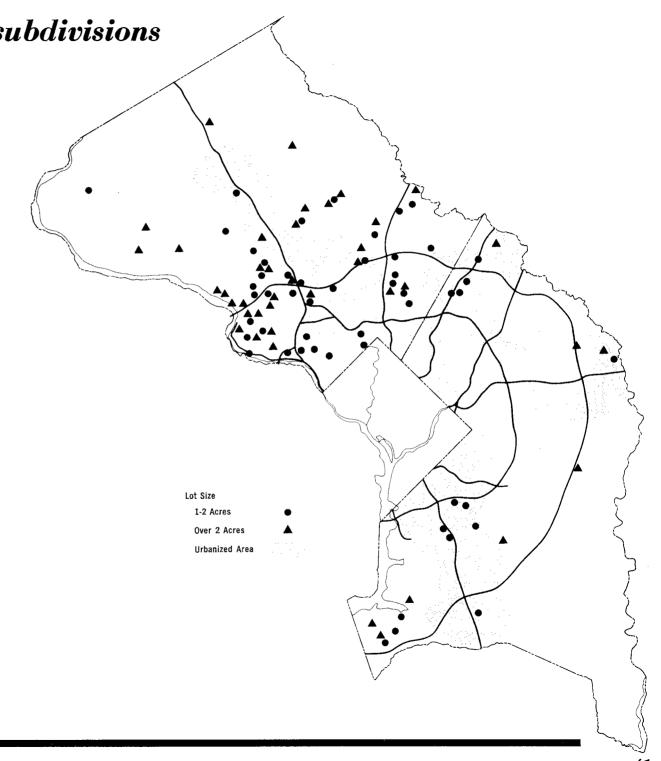
Other communities such as Damascus, Olney and Accokeek will experience gradual growth in both single and multi-family residences but will remain dependent on the central city and the corridor cities for both major employment and shopping facilities.

Geographical isolation from the trends of urban development, the cost and difficulty of providing public utilities, and soil conditions that are not receptive to septic systems are factors that will restrict the development of communities such as Poolesville, Barnesville, Darnestown, Laytonsville, Cheltenham, Naylor, Eagle Harbor and others to small, pleasant rural towns.

large lot residential subdivisions
1961

LARGE-LOT RESIDENTIAL FRINGES

Estate living on one or more acres is well established in the Potomac, Upper Rock Creek, and Upper Northwest Branch areas in Montgomery County, and the Moyaone Reserve area in Prince George's County.





MAKING THE URBAN PATTERN WORK

The following tools will help to achieve successful development of the urban pattern in accordance with the General Plan. They are explained in the chapters of *Part II*, *Carrying Out the Plan*.

- * Adopt detailed master plans for local areas in accordance with the General Plan.
- * Enact new conservation, apartment, town house, shopping center, and core commercial zones.
- * Apply zoning in conformance with detailed master plans and in step with need.
- Improve special exception procedures under the zoning ordinance to help assure better urban design.
- Review all Federal, State, local and utility capital improvement projects to help assure conformance with adopted master plans.

 Improve procedures for preparing and reviewing long-range
- capital improvement budgets.
- Acquire additional parks.
- Appoint a Community Appearance Advisory Committee to act as a community conscience for the Regional District, spurring good public and private design.
- Maintain strict review of applications for all rezonings, subdivisions of land, building permits, and zoning site-plan approvals in order to help assure conformance with master plans and general regulations.
- * Establish an urban renewal program to eliminate pockets of existing blight and to prevent new blight.
- Establish new tax policies relating land assessments to zoning, and extending preferential assessments to all open space uses of land.
- Improve intergovernmental cooperation and coordination.

THE RURAL PATTERN

The rural pattern recommended here has four broad purposes: 1) to help mold the urban pattern into an efficient and pleasant one, 2) to provide and protect large open spaces for the "change of pace" and recreational opportunities needed by present and future generations, 3) to provide a favorable rural environment in which farming, mineral extraction, hunting, fishing and other natural resource activities can be carried on without disruption, and 4) to conserve natural resources and protect the public water supply. Each of these purposes supplements the others. Together they make the rural pattern just as important as the urban pattern.

We must reaffirm our dedication to the sound practices of conservation, which can be defined as the wise use of our natural environment—it is, in the final analysis, the highest form of national thrift—the prevention of waste and despoilment while preserving, improving and renewing the quality and usefulness of all our resources.

PRES. JOHN F. KENNEDY

The facing map shows you the types and extent of rural land uses proposed at the edges of urban development forming the transition to a truly rural environment. Establishment of the rural land pattern will be among the chief concerns of the county legislative bodies and the Park and Planning Commission in the next few years. Once the pressure for continuous haphazard urban expansion is eased and properly guided, the rural environment can be patiently and productively nurtured in its own right.

The use of much of the land on the periphery of corridor developments for public ownership and uses will be an enduring buffer between rural and urban uses. The private rural uses recommended at similar locations will be sufficiently profitable to be equally enduring.

non urban uses Extensive Employment Center, Quasi-Public & Federal Lands Public Open Space Greenbelts Woodland Airfields Military **Other** Extractive Sand & Gravel Stone Quarry Small Watershed Dam Agricultural Dairy Farm Livestock Farm Tobacco Farm

soils and mineral

resources Soils Good Fair Poor Extractive Stone Quarry

The many different land uses appropriate in rural areas usually have two things in common: they require large amounts of land, and they are directly related to natural resources. Therefore the well-being and stability of the rural uses depends upon the conservation and proper development of natural resources.

The intrusion of urban uses works against this end by denuding and eroding the landscape, damaging the water supply, forcing speculative prices to the point where large and efficient tracts of land for resource development are difficult or impos-

> sible to assemble, and preempting land overlying valuable stone, sand, and gravel deposits. Such problems would not arise if urban uses were kept out of rural areas. Public policy should protect rural areas so that their natural resources will remain useable.

> Several natural resources in the Regional District support important businesses now and should be encouraged to continue this role. Among these resource businesses are:

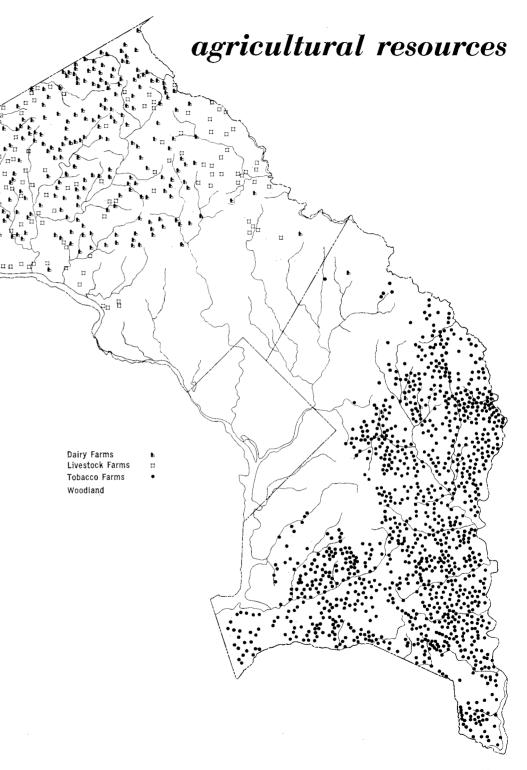
> > Crushed Stone Sand and Gravel Brick Making Dairying Cattle Breeding and Raising Poultry and Egg Production Tobacco Farming Truck Farming Nursery and Greenhouse Operations Sod Farming Tree Farming

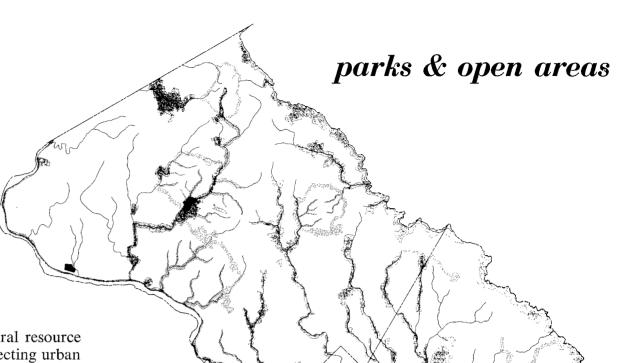
A few of these such as dairying in Montgomery County and sand and gravel near the Montgomery-Prince George's border occur partly within the projected urban pattern, but most fall within the areas to be retained for rural use.

With a proper sequence of zoning, it will be possible to protect the valuable sand and gravel deposits in the Fairland-Laurel corridor until they are used and then rehabilitate extraction areas for profitable and timely urban development.

Despite great national surpluses of food and a slowly declining agricultural acreage in the Regional District, profitable farming can and should continue to be one of the major land uses in the rural wedges between urban corridors. Greater emphasis should be placed on such crops as sod, Christmas trees, landscaping materials, and cut flowers. Tree farming for lumber and wood pulp may also play a more important role in the agriculture of the Regional District.

To encourage the development and proper use of all the natural resources in the Regional District, and especially in the rural parts, the establishment of a Natural Resource Advisory Committee is recommended. Its duties should include promoting resource development, providing technical advice, and recommending sound conservation and rehabilitation procedures. In sum, it will mobilize every possible means of keeping natural resource business in profitable and harmonious operation.





Public Park

Greenbelts

Conservation Area

Wildlife Preserve

CONSERVATION

While conservation is an integral part of natural resource development, it is also a subject in its own right, affecting urban as well as rural areas. It is especially important to the prevention of floods and soil erosion, the safeguarding of public water supplies, the protection of wildlife, and the retention of natural values.

A number of existing and proposed wildlife preserves, wetlands, dams, and stream valley parks are recommended. Apart from specific conservation areas such as these, soil conservation districts and general regulations such as the anti-bulldozer law will be useful in keeping the loss of topsoil and tree cover, and the siltation of streams and flood control dams to a minimum.

The principles and devices employed in soil conservation and watershed protective measures are well understood and are successfully practiced on farm lands, forests, and rural areas throughout the country. This is not the case with soil conservation programs for urbanized and semi-urbanized areas, such as are found in the Regional District, where land uses are more complex and intensified. The particular conditions in these "rurban" areas require modifications and revisions in the standard rural-oriented procedures. It is obvious that land

covered to a substantial degree by rooftops and impervious pavements will have vastly different run-off and erosion conditions than land in rural areas, and that new techniques and special ordinances are required by our present-day civilization. Much work remains to be done in this field, though substantial studies of the special problems involved are now being advanced in the Washington area.

A case in point is the Task Force on Urban Siltation, sponsored by the Interstate Commission on the Potomac River Basin. The Task Force has a twofold purpose: (1) to pinpoint erosion and run-off conditions peculiar to metropolitan areas, and to recommend specific methods of control; (2) to formulate legislative and administrative programs for soil conservation that would become the metropolitan area counterpart to the rural programs of Soil Conservation Districts. Its recommendations are expected to provide useful assistance to conservation programs in Montgomery and Prince George's Counties.

The construction of two impoundments, soon to be bulit by the Soil Conservation Service on the upper reaches of Rock Creek near Gaithersburg, marks another significant step towards meeting the watershed protection needs of the Regional District. These two impoundments will be the first ever built under the provisions of the Small Watershed Act (P.L. 566) in such a highly urbanized watershed as Rock Creek. Other P.L. 566 impoundments which may be built within the Regional District include the following: eight in the Seneca Creek Watershed. one on Muddy Branch, one on Watts Branch, two on the Piscataway, and possibly others on the Northwest and Northeast

Branches of the Anacostia. Many of these have been surveyed and planned by the Soil Conservation Service in cooperation with the Corps of Engineers' Potomac Basin Study. They would be multi-purpose impoundments for flood control and recreation. Land stabilization practices are required by law in the watersheds upstream from P.L. 566 structures, and they would provide incidental downstream erosion benefits.

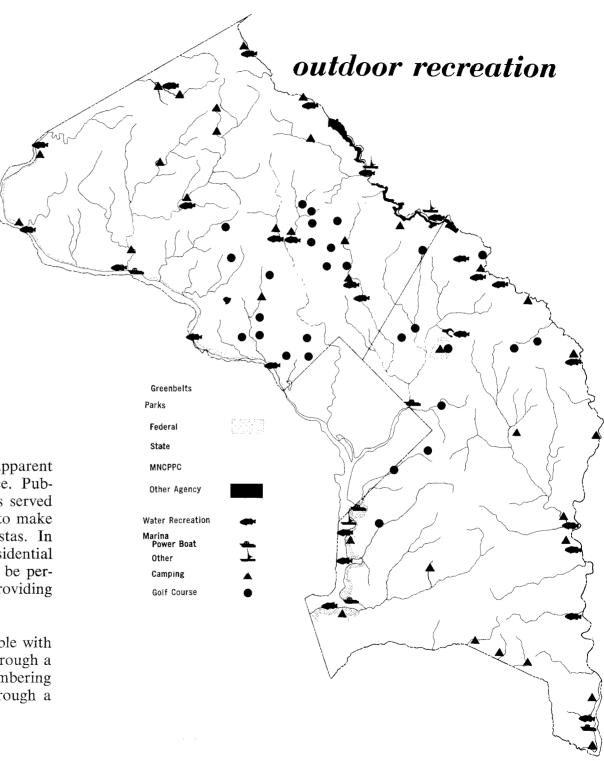
A number of small impoundments, mainly for the containment of silt, will be required on many other streams in the Regional District, where the highly urbanized character of the watersheds precludes silt prevention by the standard land treatment measures recommended for rural areas.

The corridor-wedge plan offers significant opportunities for a new approach to flood and silt control. Small dams to catch silt and control storm water could be located on streams draining run-off from the urban corridor. Highway fills could be used in building such impoundments, and in some cases the highways themselves could form the dam embankments.

It is not the function of the General Plan to specify in any great detail the soil conservation and watershed protection measures that will be employed within the Regional District. These measures will be spelled out as part of the continuing planning process. The Natural Resource Advisory Committee would be expected to take the lead in seeing to it that adequate conservation measures are used in the Regional District, and in bringing about closer coordination between the various federal, state and local programs in this field of endeavor.

watershed protection Steep Slopes (over 15%) Wetland An important source of water supply in the future may be Water Infiltration Zone the tremendous 150 million gallon per day underground supply Small Watershed Dam in Prince George's County. Since this supply is recharged by rainfall seeping into the ground in the area along the fall line between the Piedmont Plateau and the Coastal Plain near the Montgomery-Prince George's boundary, its usefulness will depend upon protection of the recharge area. Further study of how this might be done is needed. Fortunately, as shown on the watershed protection map, many of the conservation needs in the Regional District can be met by the proper use of public open spaces at the edges of urban corridors. This kind of dual use is just one example of the possibilities for multiple use of open space and rural land.





Other striking examples of multiple use become apparent in the consideration of land for recreation and open space. Public ownership of land is not necessary if the purpose is served merely by looking at scenic vistas; it is only necessary to make sure that private uses of the land will not destroy the vistas. In many cases forestry, agriculture, very low density residential development, and other private uses of the land would be perfectly in accord with preservation of the view and with providing a feeling of open space.

Some types of active public recreation are compatible with private ownership and use of the land. A bridle path through a private farm or forest need not hamper agricultural or lumbering operations, nor will a hiking trail across a field or through a wooded meadow have an adverse effect.

The increasing trend toward recreational use of private land is illustrated by the many lumbering companies which open their forest reserves for picnicking, hunting, and camping.

In a nationwide survey, 518 forest products companies holding 58,140,936 acres of timberlands reported 97.4 per cent of these lands open to fishing, 92.3 per cent open to hunting. Through these lands, the survey showed, wind 37,255 miles of streams from which fishermen may try their luck. The survey showed 107 forest products companies operate 146 parks and 157 picnic areas, virtually all open to the public. Eighty-four companies reported definite plans for developing recreational facilities on their lands in the future. Visits by recreationists to all lands included in the survey were estimated at 6,057,660 a year.

Recreation on those managed forests ranges from skiing in New England to big game hunting in the Pacific Northwest.

The managed forest as a recreation area is a frontier hardly tapped or realized. While not every commercial acre of timberland is—or can be—open to recreation, it is the managed forest which holds the key to the recreation needs of the future.*

Many of these recreation uses are provided by public spirited companies, but in order to assure their continuance and expansion in and near the metropolitan area where high land values discourage it, there will be a very definite need for the public to purchase recreational rights on private farm and forest lands as the Maryland Game and Inland Fish Commission is already doing; or in many cases the same purpose could be served by the private owner simply charging recreational fees for the use of his land by members of the general public.

Golf and country clubs, facilities of such organizations as the Isaac Walton League and the Audubon Society, private camps, and other private facilities will also continue to add substantially to recreational opportunities in the Regional District, and they should be encouraged.

Even though private lands can provide a great deal of recreational opportunity and open space, there is a continuing need for expansion of the public park system. This system assures the public complete access to natural areas and to areas developed with specialized recreational features not otherwise available. It makes sure that recreational opportunities are available to the public in all parts of the Regional District, urban as well as rural. Most of the public park system will remain free so that its advantages can be enjoyed by all. And finally, the public park acquisition program can be used at critical points to divide urban areas from rural. Public parks will be a major user of land along the edges of urban corridors and in the rural wedges.

^{*} Our Forest Bounty, Washington, D. C.: American Forest Products Industries, Inc., 1961, p. 11. See also an excellent pamphlet from the same source entitled Why We Must Have Multiple Use Forest Management (1961).



ENAME NAPONE FORMERS OF

It is inevitable that more than half the land in the Regional District will still be rural in the Year 2000. The income of land owners in the rural area will therefore depend upon enhancement of the rural environment by the preservation and development of natural rural values. This will be a principal task of the Natural Resource Advisory Committee.

The United States Department of Agriculture has recently issued a strong policy statement which can help greatly in achieving the rural development goals of the General Plan. Some of the programs proposed by the Department of Agriculture would

... provide for cost sharing with local agencies to acquire and develop recreational facilities around reservoirs, and for easements, cost-sharing, and loans to local organizations for development of selected flood plains, water courses, and other areas for wildlife, game, and recreation uses. And it would authorize loans and technical assistance to groups and individuals in the development of hunting, fishing and other recreational facilities.

This would generate employment and income in rural areas. It would also support the established and well-regarded watershed program of the Department of Agriculture, providing a nucleus of open spaces for public uses . . . The purpose would be twofold: (1) to effect needed land use adjustments by converting some land, preferably cropland, to recreational uses, and (2) to meet a strongly developing need for more public recreational facilities.*

The demand for forest products will increase in

the years ahead . . . Any major increase in forest lands would be useful particularly for recreation, for wildlife, for general use by a growing population and to provide a reserve.

Under the program, owners would agree to plant trees on land taken out of crops and to protect and maintain the tree cover on such lands... The Government would share the cost of planting and would make annual payments to owners... The owner could be permitted to harvest forest products... provided such harvesting was carried out according to approved practices.**

The Department's program includes measures to strengthen family farms, but recognizes that "probably the most promising potential source of new economic opportunities in many rural areas is to be found in providing commercial enterprises, and various services connected with outdoor recreation and tourism."*** This is especially applicable to rural areas lying at the edges of major cities.

Rural income protection and expansion is a basic goal of the Department of Agriculture and likewise should be a basic goal of the public authorities in the Regional District. Success in reaching this goal means success in promoting a healthy rural environment for the open space wedges recommended in this General Plan.

^{*} U. S. Dept. of Agriculture, Food and Agriculture: A Program for the 1960's, January 30, 1962, pp. 8-9.

Another Department of Agriculture program urges conversion of cropland to trees.

^{**} *Ibid.*, p. 11.

^{***} *Ibid.*, p. 13.



Some of the many tools that can be employed to achieve successful development of the rural aspects of the General Plan are listed below and explained in *Part II*, Carrying Out the Plan.

Protect and enhance rural values in the Regional District.

Use limited access sewers to give adequate service to urban areas without encouraging urbanization in rural areas.

Establish a Natural Resources Advisory Committee to

- -reinforce the purposes of rural zoning.
- —make available technical information and advice to encourage the fullest and best use of rural properties, and
- —Initiate special studies of rural problems.

Establish new tax policies relating land assessment to zoning, and extending preferential assessment to all open space uses of land. Deny premature subdivisions that would establish large-scale urban development in rural areas.

Use park acquisition to separate rural areas from urban areas.

Purchase public recreation rights and scenic easements to expand open space beyond publicly owned land.

Encourage private land owners in the rural area to provide recreational opportunities for the public under multiple use, income producing arrangements.

Cooperate with and coordinate the numerous Federal, State and local programs for rural development, conservation, and open space acquisition.

PUBLIC

Our national welfare therefore requires the provisions of good urban transportation . . . to help shape as well as serve urban growth.

PRES. JOHN F. KENNEDY

The pleasantness and convenience of everyday living in a modern urban society is largely dependent upon efficient systems of public service which form the basic framework for community well-being. These systems can be thought of in four groups: transportation, utilities, parks, and community facilities. All required public services should be provided in a logical sequence to facilitate development in accordance with orderly stages fulfilling the General Plan.

TRANSPORTATION

Workday commuting is the biggest problem to be overcome by the transportation system, because the volume of traffic is so much greater during rush-hour than at any other time. Forty per cent of all automobile trips and 50 per cent of all transit trips occur in just four hours of peak traffic.* Thus the

transportation system which is more than adequate most of the time becomes badly overloaded at the rush-hour peaks.

The goal set by the 1959 Mass Transportation Survey was to design a transportation system which would "permit the large majority of the population to reach downtown Washington in 30 to 45 minutes during peak hours. It is also assumed that the transportation system will put each part of the region within a similarly reasonable travel time of most of the other focal points."** Highway and rail rapid transit facilities represent the only two real possibilities for achieving the goal. The recommended system must allow this goal to be reached even with a greatly expanded population and a much larger urbanized

^{*} NCPC and NCRPC, Mass Transportation Survey Report (p. 26).

^{**} *Ibid.*, (p. 20).

Highways. Four types of highways are shown on the General Plan, each having a special purpose: freeways, parkways, major urban highways, and major rural highways. The duallane freeways and parkways are all limited access, with no direct entrances from adjoining properties and having grade-separation interchanges that do away with grade crossings and traffic lights. Freeways and parkways together form a complete, high speed, urban and interstate system of radial and circumferential routes. These two types of limited access roadways differ primarily in that freeways serve all traffic, whereas trucks are forbidden on scenic parkways. A further difference in some cases will be the use of freeway median strips for rapid transit.

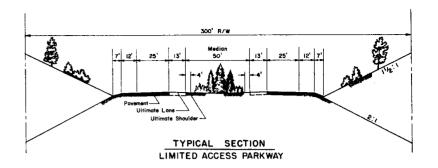
The major urban highways are not designed for high speed travel. Although these highways are divided by median strips and serve large amounts of through traffic, they have numerous cross-streets and traffic lights. Free access from adjoining properties is usually allowed. There are many more major urban highways than freeways and parkways, since they must serve all parts of the urban area rather than just the most heavily traveled routes.

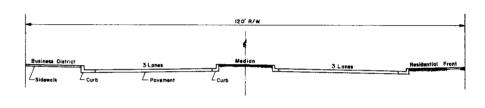
The major rural highways go out into the open space wedges to connect with the small communities such as Upper Marlboro and Damascus, and to encourage the rural economy. Some of these highways also lead to recreational areas. In most cases they will not carry high volumes of traffic for many years to come. Therefore, present plans call for constructing only one side of an eventual dual roadway.

Many local streets must be provided in addition to freeways, parkways, and majors mentioned above, but they are beyond the scope of this plan.

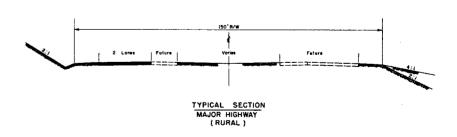
Parking lots, bus loading areas, and facilities for transferring between highway and rapid transit are integral parts of highway planning. These two are beyond the scope of this report, and will appear in more detailed plans.

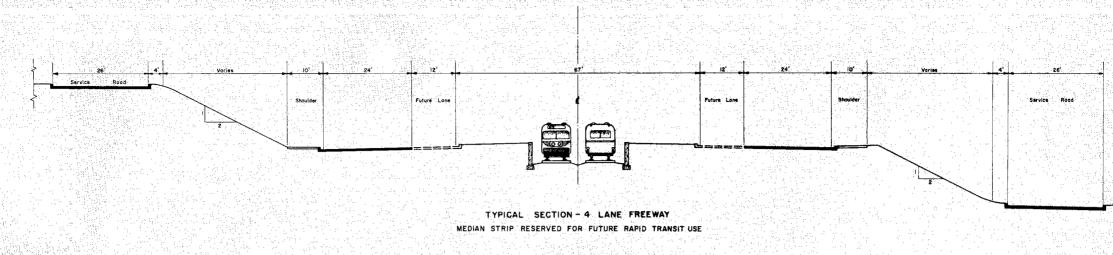
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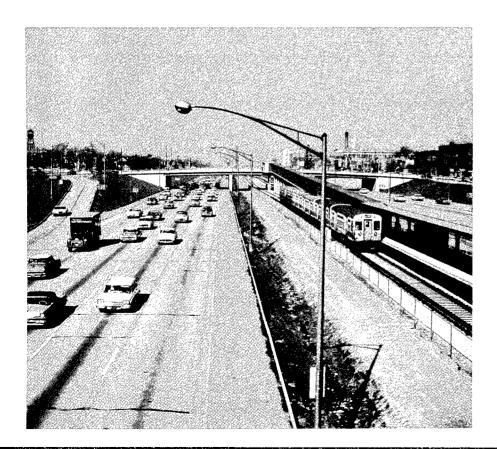




TYPICAL SECTION
MAJOR HIGHWAY
(URBAN)







Rapid Transit. Express buses may serve the function of rapid transit on some freeways, especially for circumferential trips. But the emphasis in this plan is on radial routes for rail rapid transit directly to and from downtown Washington. Rail rapid transit requires separation from highway traffic. This can be accomplished by using median strips between freeway lanes and existing railroad rights-of-way, or by building monorails above ground and subway tunnels underground. Each of the four methods of separating rapid transit from highway traffic may be useful in the Regional District, depending on the particular situation. The choice between them depends upon 1) minimizing the total of right-of-way and construction costs, and 2) minimizing the social disruption to existing communities.

The Planning Commission's responsibility is in helping to find the most appropriate routes for rapid transit, reserving rights-of-way, reserving space for the necessary terminals, parking lots and other facilities along the routes, and in helping to avoid any adverse impact of these facilities on local communities. The National Capital Transportation Agency is responsible for the engineering, financing, construction, and operation of the rapid transit system. The Planning Commission and the State Roads Commission have been designated by the Governor of Maryland as his approving authority for NCTA plans.

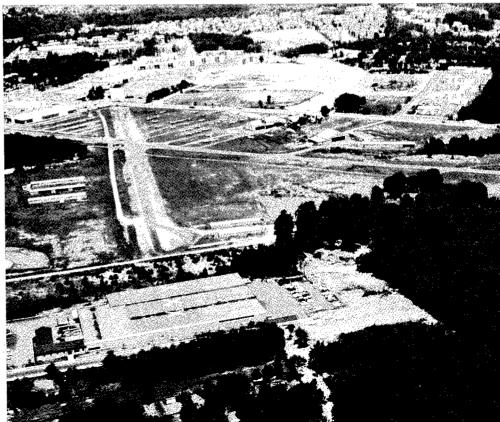


Airports. Andrews Air Force Base, an important defense installation is the only large airport in the Regional District. It is not available to the general public, but it provides important military and diplomatic transportation services for the Federal government and is one of the largest employers in the Regional District. Highway transportation to the airport is well provided for by a parkway and two major highways. The big problem in keeping this airport serviceable is one of protecting the flight paths and noise areas against urban encroachment. Andrews is at the edge of the southeast urban corridor and will benefit greatly from the rural surroundings proposed in this General Plan. In addition, special airport zoning and the purchase of noise easements will be required both for the protection of the airport and the protection of the general public which might otherwise be induced to buy homesites too close to the inevitable noise in the flight paths. These flight paths are shown on the General Plan map as a warning.

There are also several small airfields in the Regional District to serve pleasure-craft and business planes. These small fields provide a great convenience because of their locations close to the urban area, and because of the scheduling difficulties brought about by heavy traffic at the crowded commercial airports. As in the case of Andrews, these small airports must be accessible by highways but protected from urban encroachment.

Small airports at the edge of urban corridor cities will play an important role in commuter transportation if helicopters or other vertical take-off vehicles come into wide use. All new airports must be very carefully located so as not to conflict with planned urban development. The Federal Government airfield on the Beltsville Agriculture Research Center is proposed for general aviation purposes, and a new airfield to replace Hyde Field near Clinton is proposed to complement the planned corridor city south of Clinton.





The presence or absence of utilities can determine where urban growth will occur and where it will not. This is particularly true of sewer systems.

Electricity and telephone service are seldom controlling factors, since they are the easiest and cheapest utilities to install and can be made available anywhere in the Regional District. Water and gas lines are somewhat more restrictive, but are available in most areas. Sewers, however, are another matter. They can *not* be made available anywhere a developer might wish.

Even a small, gravity-flow sewer system is relatively expensive. If the system must cross watershed divides, requiring pumps and force mains, the cost is greatly increased; it is increased still more if the area to be served is far distant from an existing trunk sewer. In many such cases the cost is prohibitive.

Whenever a trunk sewer is extended to serve a newly-developing subdivision beyond the previous limits of urbanization, an on-rush of construction is sure to follow. Frequently large amounts of surrounding land can be connected to the same sewer and a whole group of new subdivisions springs up.

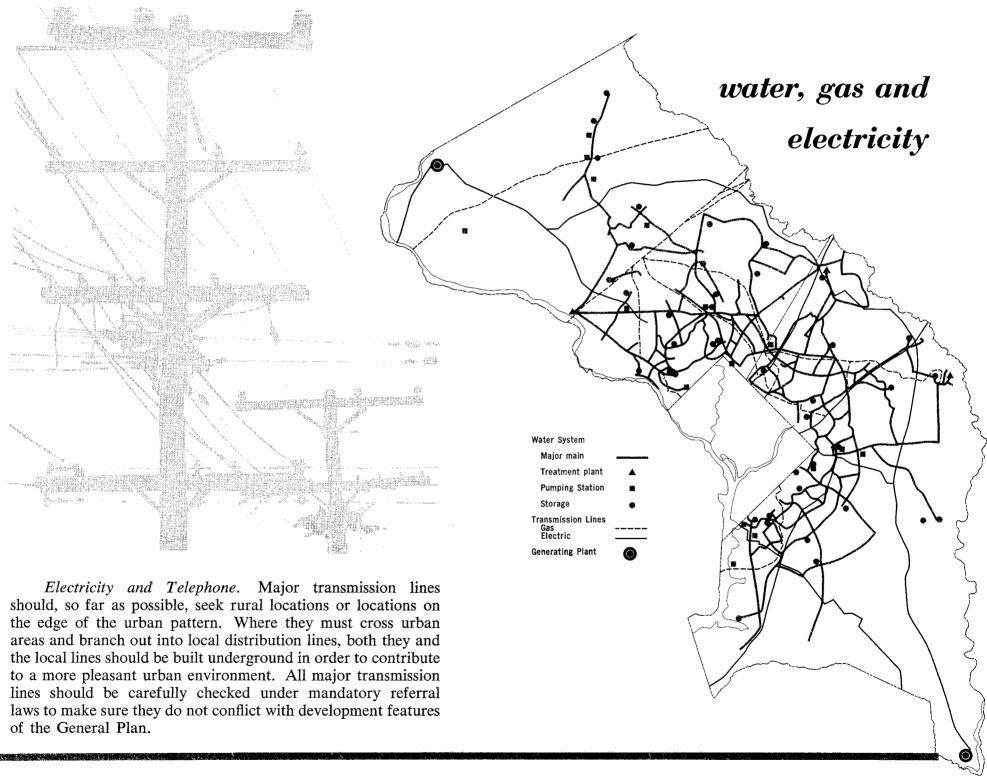
Obviously, then, the decision as to where and when construction of sewer lines should take place can be as powerful a factor in shaping urban development as zoning and subdivision regulations.

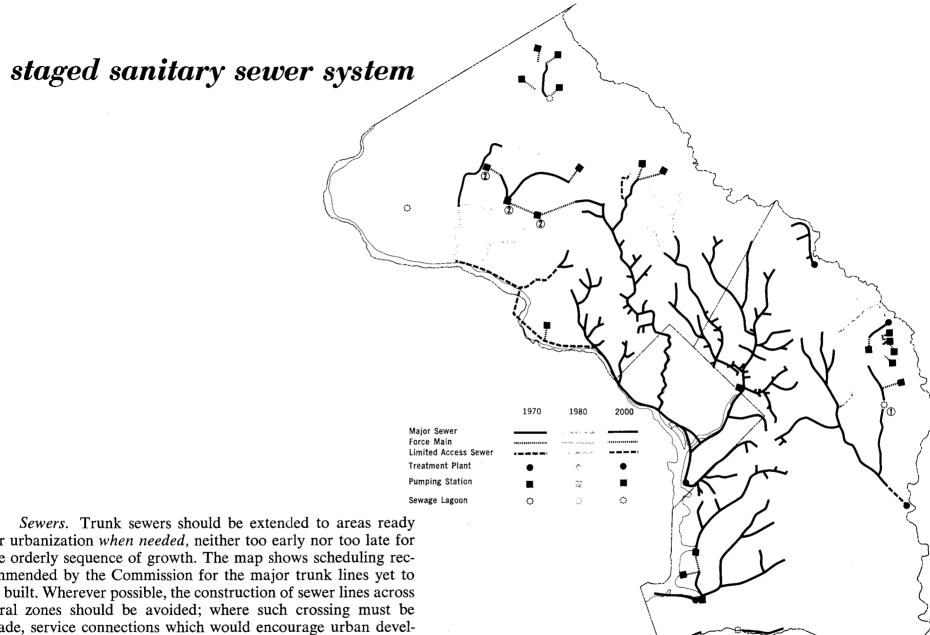
All three of these controls must be coordinated for maximum effectiveness in creating the urban pattern contemplated in the General Plan.

The utilities needed to serve developments recommended in the General Plan should be constructed with the following considerations in mind:

Water. Water lines should be provided wherever necessary, but always in direct relation to the population distribution recommended by the General Plan.

Gas. New storage facilities, needed to reinforce supplies during months of peak demand and hold down costs to consumers, should be located at the edges of the urban pattern to aid the transition between urban and rural uses. Care in placing major new pipelines around rather than through new corridor cities will save costly relocations as intensive development takes place.





for urbanization when needed, neither too early nor too late for the orderly sequence of growth. The map shows scheduling recommended by the Commission for the major trunk lines yet to be built. Wherever possible, the construction of sewer lines across rural zones should be avoided; where such crossing must be made, service connections which would encourage urban development should be prohibited by the use of limited access sewers. Storm sewers can be relatively short, emptying into natural drainage channels controlled by small dams and silt reservoirs at the edges of urban developments.

① Sewage lagoon to be abandoned when downstream sewer is built.

PARKS

The Park and Planning Commission has direct responsibility for the provision of parks and recreation centers. Stream valley parks acquired with the aid of Federal funds, granted under the Capper-Cramton Act to assure an appropriate system of metropolitan parks in the Nation's Capital, have been the mainstay of the park system in the Regional District until recently. Large regional parks are now becoming important supplements to the stream valley system. Youth centers are growing popular in bright-light locations, providing facilities for club meetings, dances, and other indoor activities on either an individual or group basis. Besides serving teen-agers, these centers are also proving attractive during the day for the activities of retired people.

Close cooperation with the Board of Education has resulted in the park-school concept. Under this concept park land is added to school sites to provide large playfields. This not only benefits the schools, but also provides local recreation facilities for the general public after school hours. Washrooms and even general purpose rooms in the school building sometimes can be made available to the public in connection with these park facilities.

Acquisition. Land for regional, local, and stream valley parks is reserved through the administration of subdivision regulations, and is acquired largely with funds raised by special park taxes. State parks along the Patuxent River and Seneca Creek and at Cedarville in lower Prince George's County are also part of the Regional District's public park system, as are Federal parks such as Greenbelt Regional and the George Washington Memorial Parkway. The acquisition program is being stepped-up; additional State and Federal funds are being sought.

In general, local parks, park schools, and youth centers will be in the urban communities where the people are; stream valley parks will be (as the name implies) where the major streams are; and regional parks will be where they can form a boundary between urban and rural environments.

Development. The development of recreational facilities on park lands is as important as acquisition and is therefore being stepped up to keep pace with population growth.

Park Standards. Six types of park areas will be acquired and developed as recommended by the Outdoor Recreation Resources Review Commission and defined as follows:*

- Class I. High Density Recreation Areas

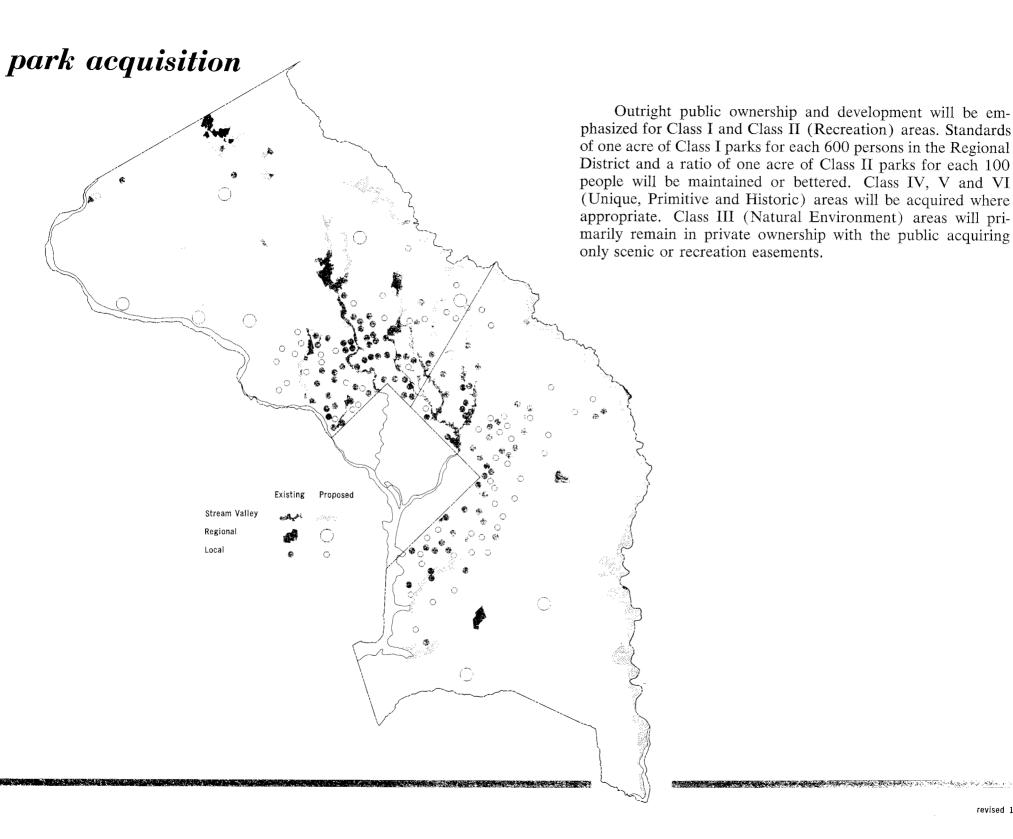
 Areas intensively developed and managed for mass use, including playgrounds, playfields, swimming beaches, and any other facilities designed for intensive recreation.
- Class II. General Outdoor Recreation Areas

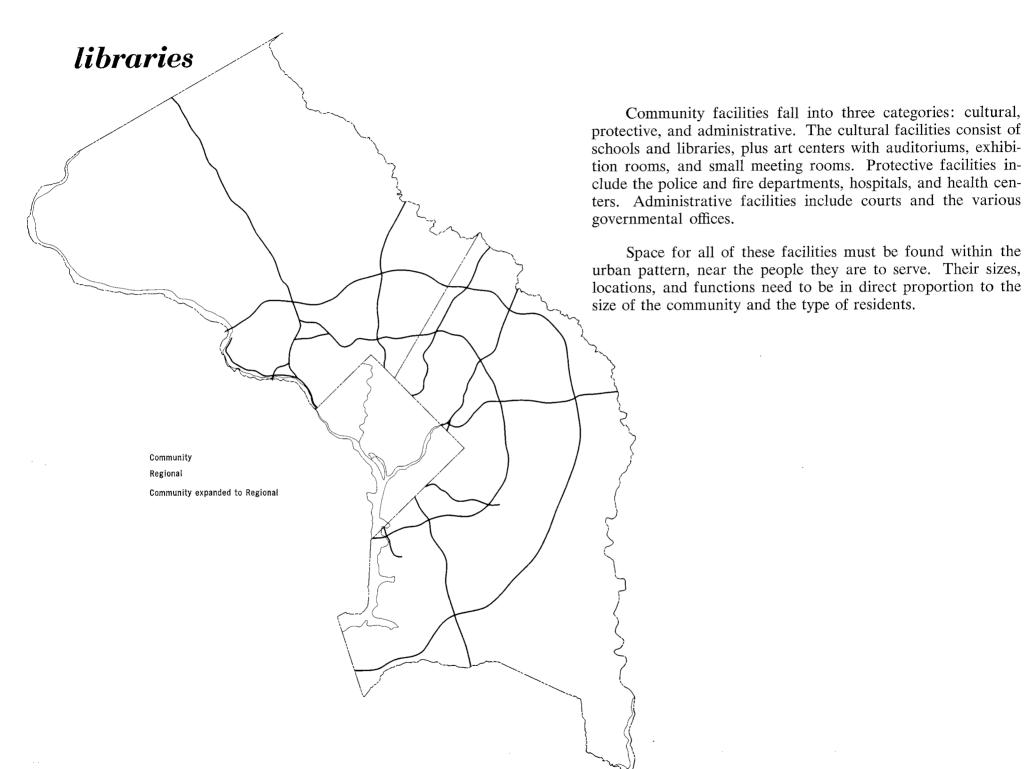
 Areas subject to substantial development for a wide variety of specific recreation uses, and as camping, picnicking, fishing, water sports and nature walks.
- Class III. Natural Environment Areas

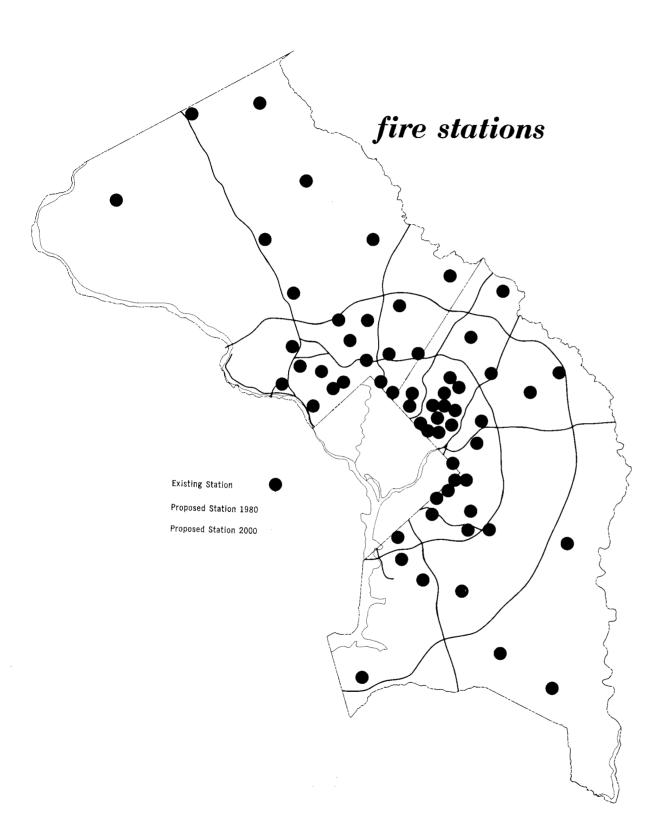
 Various types of areas that are suitable for recreation in a natural environment and usually in combination with non-residential uses such as forestry.
- Class IV. Unique Natural Areas

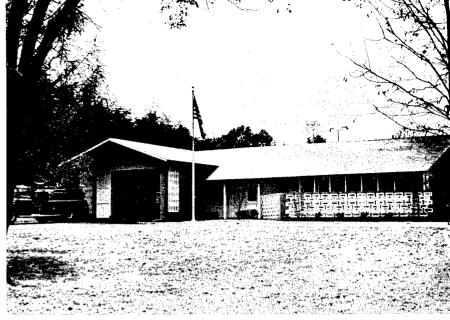
 Areas of outstanding scenic splendor, natural wonder, or scientific importance.
- Class V. Primitive Areas
 Undisturbed roadless areas, characterized by
 natural wild conditions, including "wilderness
 areas."
- Class VI. Historic and Cultural Sites
 Sites of major historic or cultural significance.

^{*} For a fuller explanation, see "Chap. 6 Guidelines for Management," Out-door Recreation for America, pp. 95-120.







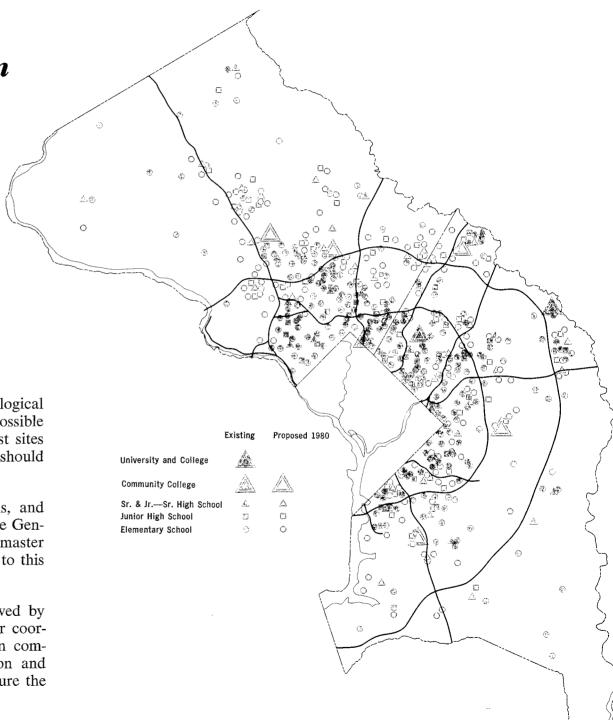


public school system

Directing new urban growth into preplanned and logical patterns, as this General Plan recommends, will make it possible to select and acquire in advance of development the best sites for community facilities as well as parks. This procedure should result in substantial savings for the taxpayer.

The distributions of schools, libraries, fire stations, and health centers in the Regional District are indicated in the General Plan. They represent previous studies, including the master plans of schools and libraries, which have been adapted to this plan.

Individual sites for community facilities are reviewed by the Commission under mandatory referral legislation for coordination with adopted plans. A permanent site selection committee made up of staff members from the Commission and various other public agencies meets regularly to help assure the best choices for public building sites.



PROVIDING BETTER PUBLIC SERVICES

Better public services in accordance with the General Plan can be achieved by using the procedures listed below and explained in Part II, Carrying Out the Plan.

Transportation

- Coordinate the Master Plan of Highways with the corridor pattern of development.
- Cooperate with the National Capital Transporation Agency in establishing an efficient rapid transit system.
- Incorporate the General Plan transportation recommendations into detailed master plans, including provision for automobile parking, bus loading, and highway-to-transit transfer facilities.
- Protect airports with rural and airport zoning, and encourage noise studies to define areas unsuitable for residential subdivision.

Utilities

- Use the General Plan as a major criterion in County reviews of programs for the extension of water and sewer lines.
- Limit access to sewers where rural areas must be crossed.
- Strengthen mandatory referral authority over gas and electric utilities to avoid conflicts.
- Encourage the use of underground electrical and telephone wires.

Parks

- Coordinate the park acquisition program with the corridorwedge form of development.
- Seek additional State and Federal matching funds for park acquisition.
- Use subdivision powers to better advantage for reserving and acquiring park land.
- Keep park development in step with growing population.

Community Facilities

- Continue the preparation of plans for community facilities in the Regional District, based upon the corridor-wedge distribution of population.
- Improve capital budgeting for community facilities by
 - —automatic data processing for land use and population figures.
 - —more thorough review by the Commission of individual capital budgets
 - —a yearly capital improvements report combining all capital budgets in each county.
- Continue and strengthen individual reviews of mandatory referrals.