

1968

**GEORGE MASON COLLEGE
OF THE UNIVERSITY OF VIRGINIA**

MASTER PLAN

**JOHN CARL WARNECKE & ASSOCIATES
ARCHITECTS & PLANNING CONSULTANTS**

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August 23, 1968

G E O R G E M A S O N C O L L E G E

OF THE UNIVERSITY OF VIRGINIA

Dr. Louis A. Thompson
Chancellor
George Mason College
Fairfax, Virginia

Dear Dr. Thompson:

MASTER PLAN

We are pleased to submit our first report on the Master Plan for George Mason College.

During the past several months we have had the unique opportunity of working with you and with the other dedicated individuals concerned with the future of George Mason in developing a physical plan responsive to your vision of a new University to serve the expanding needs of higher education in the State of Virginia.

It has been a most exciting assignment and we are gratified to have been able to make a contribution to the continuing successful growth of the College.

George Mason holds great promise for achieving the highest levels of both educational and architectural excellence. This is a crucial period in the evolution of the institution from a community college to a major university. With continuing creative leadership, and by careful programming and the sensitive implementation of this plan, the highest educational level can be realized.

Respectfully submitted,

JOHN CARL WARNECKE AND ASSOCIATES



Alan H. Rider

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CARL I. WARNECKE
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CARL RUSSELL

August 23, 1968

Dr. Lorin A. Thompson
Chancellor,
George Mason College
Fairfax, Virginia

Dear Dr. Thompson:

We are pleased to submit our final report on the Master Plan for George Mason College.

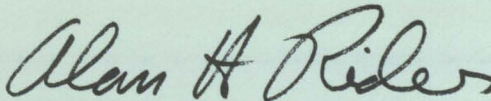
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George Mason holds great promise for achieving the highest levels of both educational and architectural excellence. This is a critical period in the evolution of the institution from a community college to a major university. With continuing creative leadership, and by careful programming and the sensitive implementation of this plan, we believe this potential can be realized.

Respectfully submitted,

JOHN CARL WARNECKE AND ASSOCIATES



Alan H. Rider

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STATEMENT OF PURPOSE

INTRODUCTION

George Mason College is the outgrowth of an extension center established some 20 years ago as the Northern Virginia Branch of the Extension Division of the University of Virginia. In 1956, the Board of Regents authorized the establishment of a two year college at Northern Virginia. The college was opened in the fall of 1956.

George Mason College was established in 1956 as a two year community college to serve the rapidly increasing need for higher education in Northern Virginia. In 1966, the College was elevated to the status of a four year, degree granting institution and now has, by virtue of its proximity to the Nation's Capital, the unique opportunity of becoming a truly great regional university.

This report is a response to the concern expressed by the University Administration that the physical development of George Mason College be directed immediately on a course that would insure the proper accommodation of demands imposed by future growth.

This document represents the organization of an overall plan for the development of the Campus to serve an estimated 15,000 students by the year 1985. The plan is a general guide to the land use and positional relationships of the major site demands including parking, circulation patterns and open space to be preserved. Since it is impossible to foresee precisely the demands of the University as it will grow during the next two decades, the plan must be considered as a flexible guide which will be subjected to continuing refinement as individual projects are developed.

HISTORY OF DEVELOPMENT

George Mason College is the outgrowth of an extension center established some 20 years ago as the Northern Virginia branch of the Extension Division of the University of Virginia. In 1956, the Board of Visitors authorized the establishment of a two year College of the University of Virginia in Northern Virginia which opened the following year at Bailey's Crossroads with 17 students.

The town of Fairfax purchased the present site of 147 acres and donated it to the University of Virginia in 1959. At approximately the same time, the University College at Bailey's Crossroads was officially established as a branch of the University and became known as George Mason College of the University of Virginia.

A Master Plan was prepared in 1960 to accommodate the requirements of a two year junior college serving 2,500 students. The first group of four buildings was completed in September of 1964 and George Mason College moved to its new Campus at that time with a faculty of 36 and a student body of 359.

Early in 1966, the General Assembly, acting on recommendations authorized George Mason College to become a four year college with the right to grant degrees and offer graduate study in various fields. Soon thereafter, the Planning Department of the University of Virginia worked out an expansion program and land requirement based on a projected enrollment of 15,000 students which recommended the acquisition of approximately 450 acres adjacent to the present site. Arlington County, Fairfax County and the cities of Alexandria and Falls Church have subsequently committed a total of \$3,000,000.00 for this acquisition which is now underway.

The present Master Plan Study was authorized in June of 1967 with the objective of providing an overall guide for the continuing expansion of the College in a logical and efficient manner.

SUMMARY OF RECOMMENDATIONS

The academic plan for George Mason College which has been approved by the Board of Visitors of the University of Virginia proposed to divide the student body of 15,000 into six Cluster Colleges each serving approximately 2,500 students. Each College will be composed of academic space, residential dormitories and a student center. Each College will contain complete facilities to teach the basic courses in the lower division and graduate work in the specific fields toward which each College will be oriented. Students in any one College will have the opportunity to elect courses in any of the other Colleges. Certain facilities such as the Library, Research Laboratories, and Administration Building which cannot be economically or functionally decentralized will be provided for the University as a whole.

Recognizing the Library to be one of the most significant central elements in any university plan, it is recommended that the present Library be expanded to form one focal point of the new development.

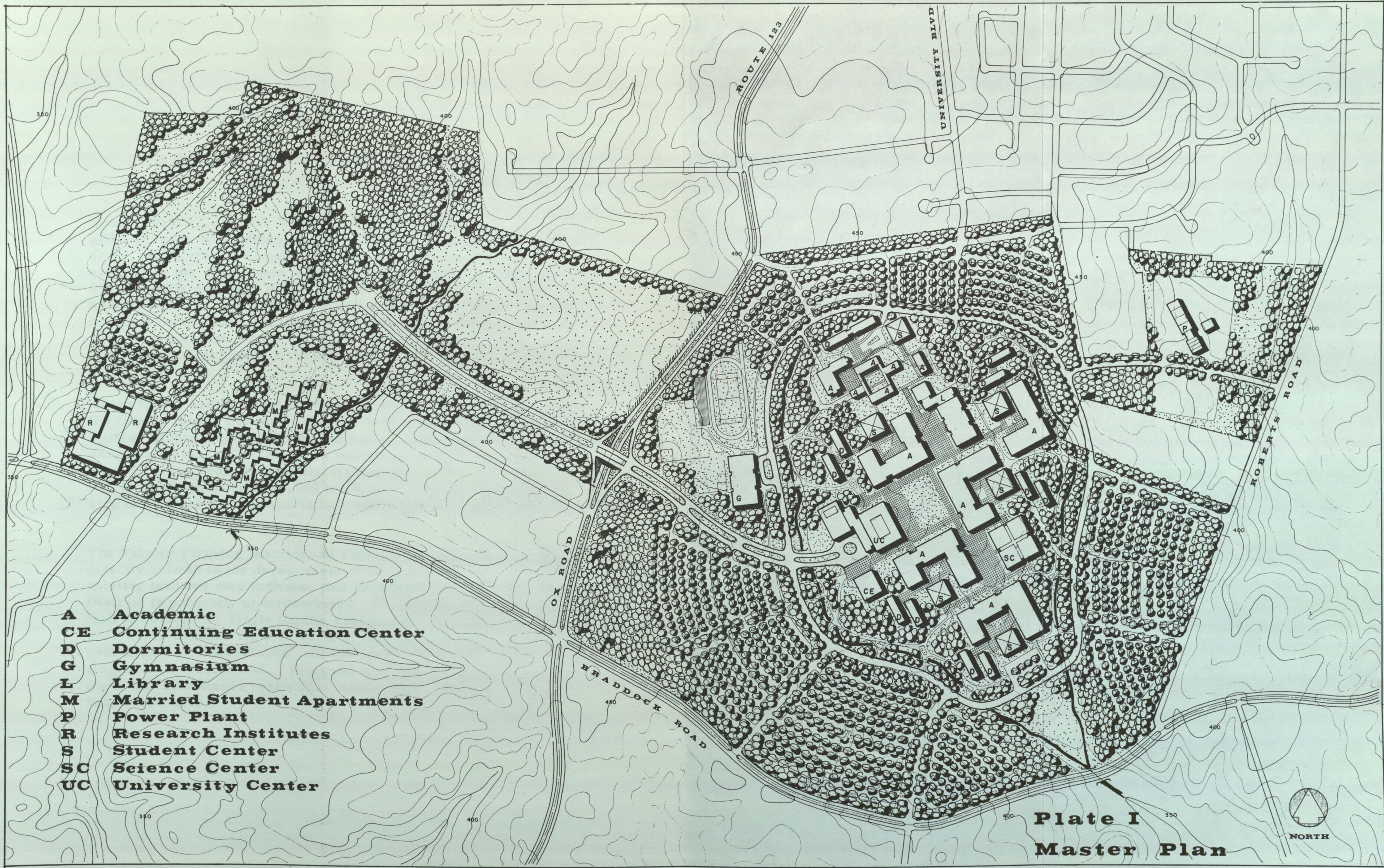
The present buildings, including the new Arts and Sciences Building, will provide adequate space to serve as the nucleus of the first College. The five new Colleges will be located south of the existing buildings and each will be organized around its own quadrangle which will provide a focal point to identify and express the unique character of each individual College. Buildings serving common University functions such as the Library, Science Center and the University Center will separate the Colleges and identify the major open spaces or "Plazas" that will give significance to the physical organization of the Master Plan.

The main entrance to the Campus will be from Ox Road and the drive will terminate in an entrance plaza surrounded on three sides by the University Administration Center, the Northern Virginia Center for Continuing Education, and the Theater. The Theater and Arts Center is strategically located to make it convenient and attractive as a center for the cultural life of Northern Virginia.

The vast areas of parking necessary to accommodate the bulk of the student body have been concentrated at three points on the periphery of the site and separated by areas of open land which can be utilized for athletic fields. The Central Campus will be restricted to pedestrian traffic with only service vehicles and limited staff parking permitted within the inner ring road.

Parking requirements have been estimated from analyses of regional characteristics which point to the continued dependence upon automobiles as the major means of transportation.

Analysis of the topographical characteristics of the site indicates that the high ground in the center of the property is well suited to the expansion of the Central Campus. Parking, circulation and open spaces can be developed on the periphery of the site while preserving the wooded ravines which are one of the most attractive natural features of the property.



GEORGE MASON COLLEGE
OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
SCALE

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WASHINGTON, D.C. JOB NO. 67-024

REGIONAL ANALYSIS

George Mason College is located in Fairfax County, part of the rapidly growing Washington Metropolitan Area. It will primarily serve the Northern Virginia region which accounts for over one quarter of the Washington Area's total population. This region had a population of 800,000 in 1966 and is expected to double this number by 1985. New growth will basically occur on the new urban fringe at increasingly greater distances from the downtown center. New transportation routes are planned which will provide convenient access to all points in the region.

These trends are apparent in an analysis of the area immediate to the George Mason Campus. Located on the south boundary of the Fairfax Planning District, the Campus is bordered by relatively undeveloped land. The District's population in 1966 was estimated 38,000. If the projection for the district is realized, the District will have a population of 75,000 to 80,000. The following discussion of land use and transportation reflect this population growth.

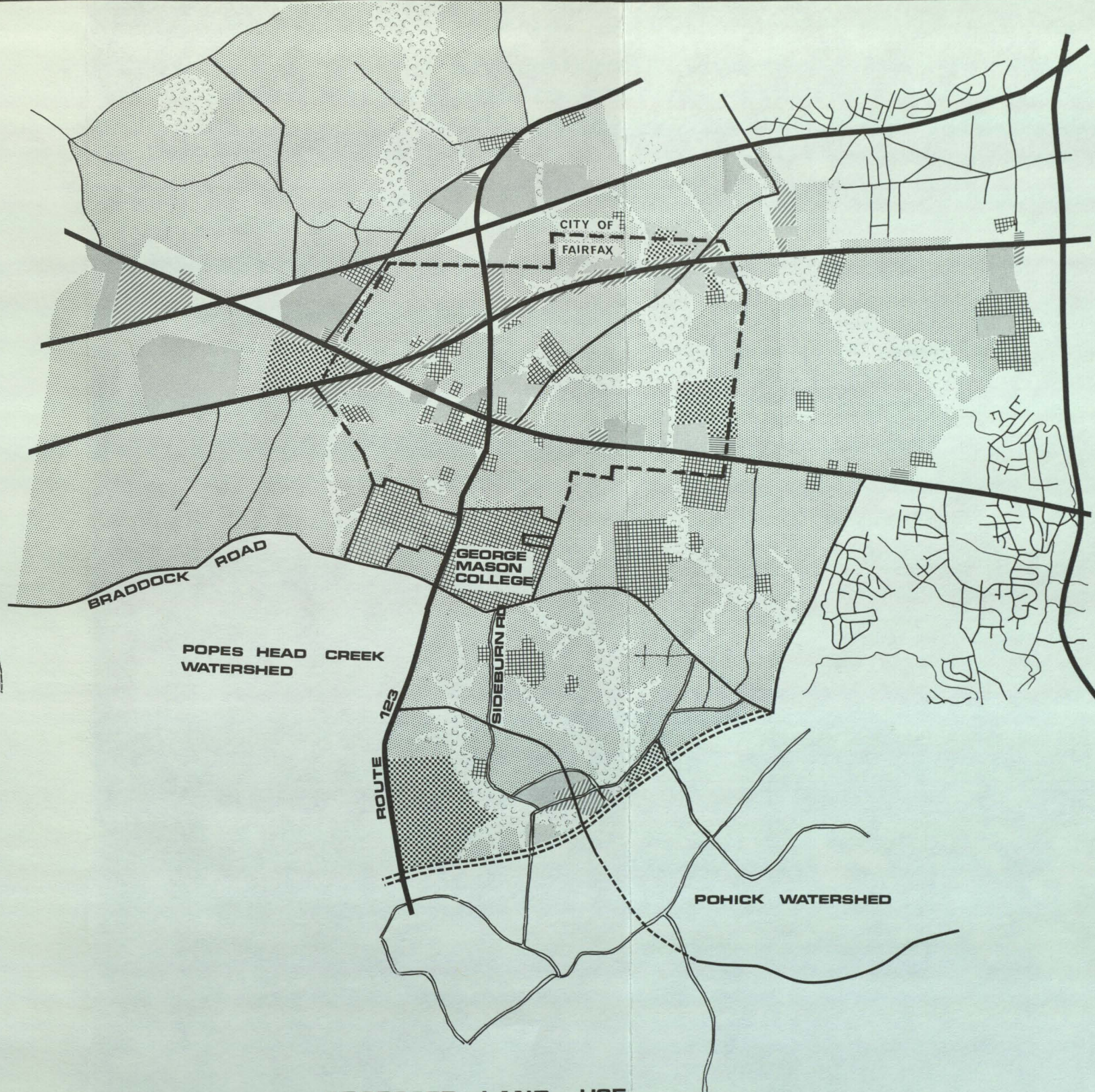
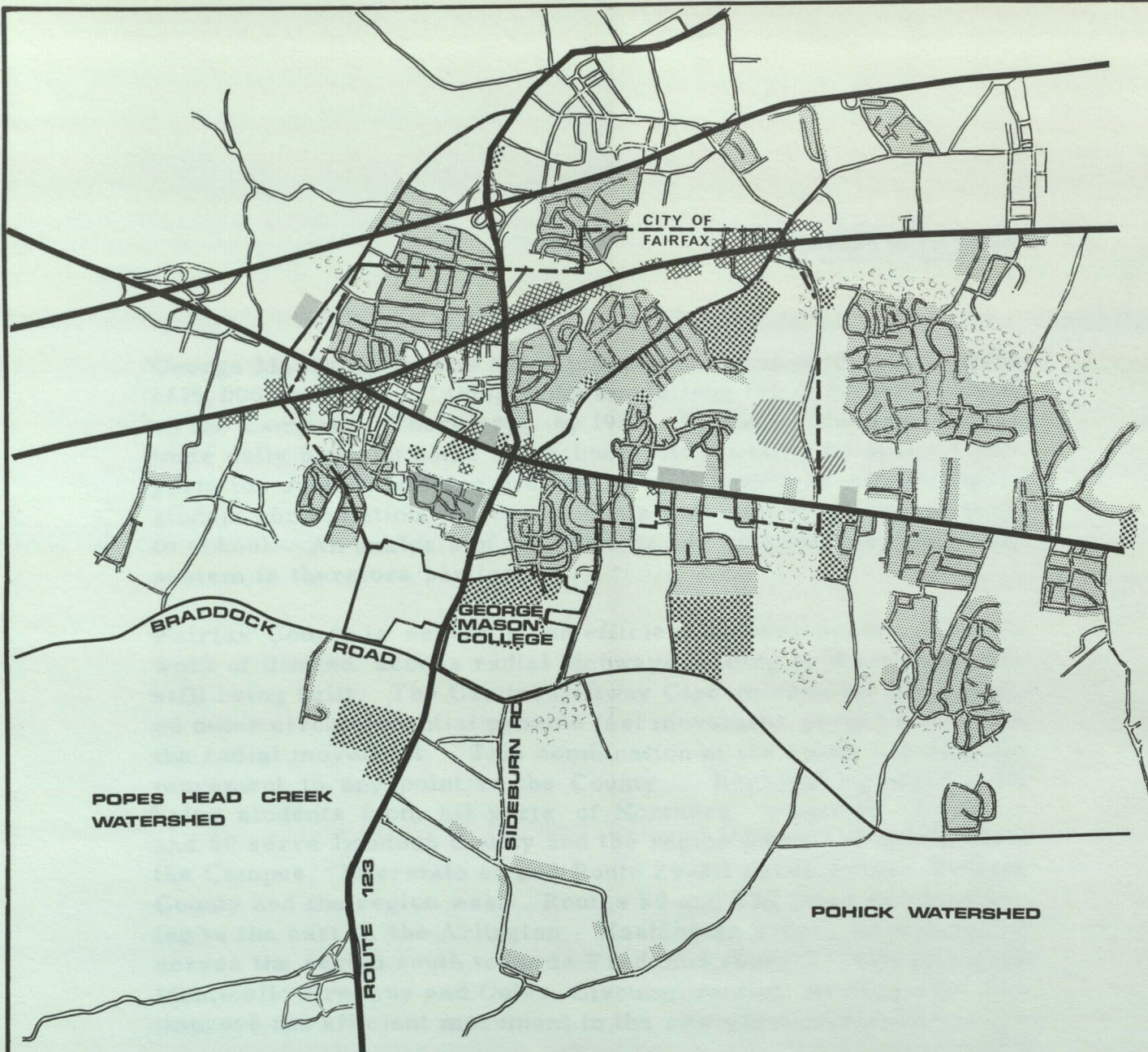
The Fairfax Planning District and Pohick Watershed are the areas directly related to the development of George Mason College. The existing land use map indicates that 63 percent of Fairfax Planning District is presently underdeveloped. 93 percent of the developed land is devoted to single family residential. The Pohick Watershed which includes the land south of the Campus, still has 87 percent of its land undeveloped. Of the developed land 97 percent is single family residential. Proposed land use for these surrounding lands establishes residential zones with a density of 1 to 2.5 houses per acre.

PHYSICAL ANALYSIS

The land west of Route 123 and south of Braddock Road is not being proposed for immediate development by the Fairfax County Planning Commission. This position is being taken due to the lack of sewage facilities and to insure the total development of Pohick Watershed. Therefore, the lands north, east, and south of the Campus will be more densely developed and be a major source of students.


The residential growth of the undeveloped land near the Campus will generate significant commercial and institutional development. Because of the low density character, the automobile will be the primary means of movement within the region. Auto-oriented shopping presently is located along Routes 50-211. This is basically strip commercial development. Proposed land use located regional commercial centers at or close to intersections of the road network. Since the majority of students attending George Mason College commute daily, they will use the auto-oriented community facilities. The growing student body provides an increasing population base.

Community-scaled institutional uses will develop as area needs require. It appears that Sideburn Road will become a community street for the upper part of the Pohick Watershed. A number of sites for schools have been secured along this road. The College, well related to its neighbors and many of its facilities, could be used by the non-student community.

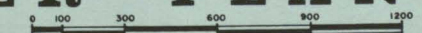


- EXISTING LAND USE**
- RESIDENTIAL
 - SINGLE FAMILY
 - MULTIPLE FAMILY
 - APARTMENTS
 - DUPLEX HOUSING
 - COMMERCIAL
 - INDUSTRIAL
 - INSTITUTIONAL
 - PARKS

- PROPOSED LAND USE**
- RESIDENTIAL
 - SINGLE FAMILY
 - MULTIPLE FAMILY
 - COMMERCIAL
 - NEIGHBORHOOD
 - HIGHWAY
 - INDUSTRIAL
 - INSTITUTIONAL
 - PARKS


Plate II
REGIONAL ANALYSIS

GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE 

JOHN CARL WARNECKE & ASSOCIATES
 ARCHITECTS & PLANNING CONSULTANTS
 WASHINGTON, D. C. JOB NO. 67-024

TRANSPORTATION

George Mason College is being planned to accommodate a capacity of 15,000 students. Living accommodations for 6,000 are planned on the Campus. Therefore, by 1985, 9,000 students would commute daily between home and school. At present, no public transportation system is being proposed which would be convenient for student commutation. Thus, students will depend on the auto to get to school. An analysis of the existing and proposed regional road system is therefore pertinent.

Fairfax County is served by an efficient highway system. A network of limited access radial highways leading to Washington are still being built. The Capital Beltway Circumferential and proposed outer circumferential provide fast movement perpendicular to the radial movement. This combination of the roads permits fast movement to any point in the County. Regional highways will bring students from all parts of Northern Virginia. Routes 7 and 50 serve Loudoun County and the region north and northwest of the Campus. Interstate 66 and Route 29-211 serve Prince William County and the region west. Routes 50 and 236 bring students living to the east in the Arlington - Washington area. Interstate 95 serves the region south towards Fredericksburg. The proposed Monticello Freeway and Outer Circumferential Beltway will also improve the efficient movement to the site when developed.

The problem of peak hour congestion should not effect auto movement to the College. Because it is sited on the western edge of the suburban development, most students will live east of the Campus. Thus, students will move opposite the direction of rush hour traffic generated by commuting of the residential community to and from the District of Columbia.

The existing thoroughfares which link the regional highways to Campus parking will in time become congested unless they are improved. Route 123 is presently the major link between the Campus and Interstate 66, Routes 50, 211-29, and 236. To the South, it will intersect the proposed Monticello Freeway. Braddock Road is the other thoroughfare which serves as a major link. It ties the Campus to the Capital Beltway and will become even more significant with the development of the western leg of the Fairfax Outer Loop which will intersect Braddock Road just west of the Campus Boundary.

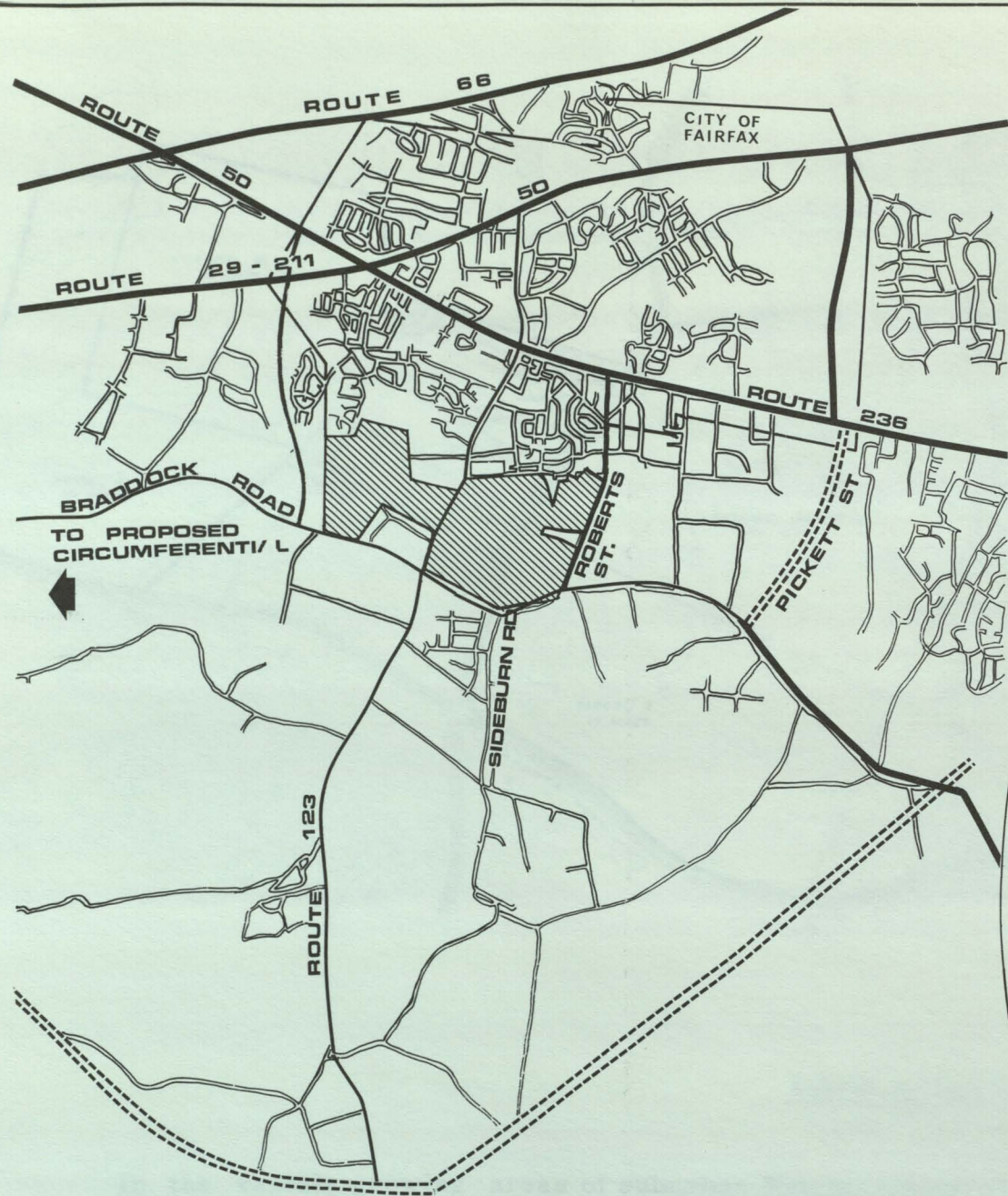
Ox Road and Braddock Road now have a capacity of approximately 500 cars per lane per hour and they are not used to capacity.

As surrounding land is developed into residential use, these roads will become inadequate. For this reason, the Fairfax Planning Commission in their Master Plan Study for the Pohick Watershed propose that both Route 123 and Braddock Road become divided four lane arterial highways. This will double the capacity of each road and help meet the requirements of the Community and College.

There are other roads adjacent to the Campus which will be affected by its growth. Roberts Road which forms the eastern boundary of the Campus has been recommended for widening to thoroughfare standards in the latest Development Plan of the City of Fairfax. It will be an outlet for autos moving north to Route 50 for trips towards Washington. Sideburn Road south of Braddock Road, will develop into an important road as the Pohick Watershed develops and the Monticello Freeway is constructed. It will link the Campus with the Freeway giving the commuting student an alternative to Route 123 moving south. Both Sideburn Road and Roberts Road should in time be improved to handle increasing traffic.

At present, 40 percent of the 1,000 students at George Mason College arrive 8:00 A.M. for classes. This is the peak hour.

The road system easily handles the 440 autos arriving at this time. In September, 1974, with a total enrollment of 5,660, approximately, 1,800 students could arrive at the peak hour. This amount will use all of the capacity of the existing feeder road system. By 1985, when 9,000 students are commuting, the road system will have to be improved to handle 3,000 to 4,000 cars at peak hour. Further study is required to understand which roads will carry the bulk of student commuting. Origin and Destination studies of the present and projected student enrollment will help determine the highway requirements for the region in the next twenty years.



MAP INDICATING ROADS WHICH ROUTE CARS BETWEEN CAMPUS PARKING AND REGIONAL HIGHWAYS

- EXISTING REGIONAL HIGHWAYS INTERSTATE FREEWAYS, PARKWAYS & ARTERIAL HIGHWAYS
- PROPOSED REGIONAL HIGHWAYS
- LOCAL MAJOR THOROUGHFARES

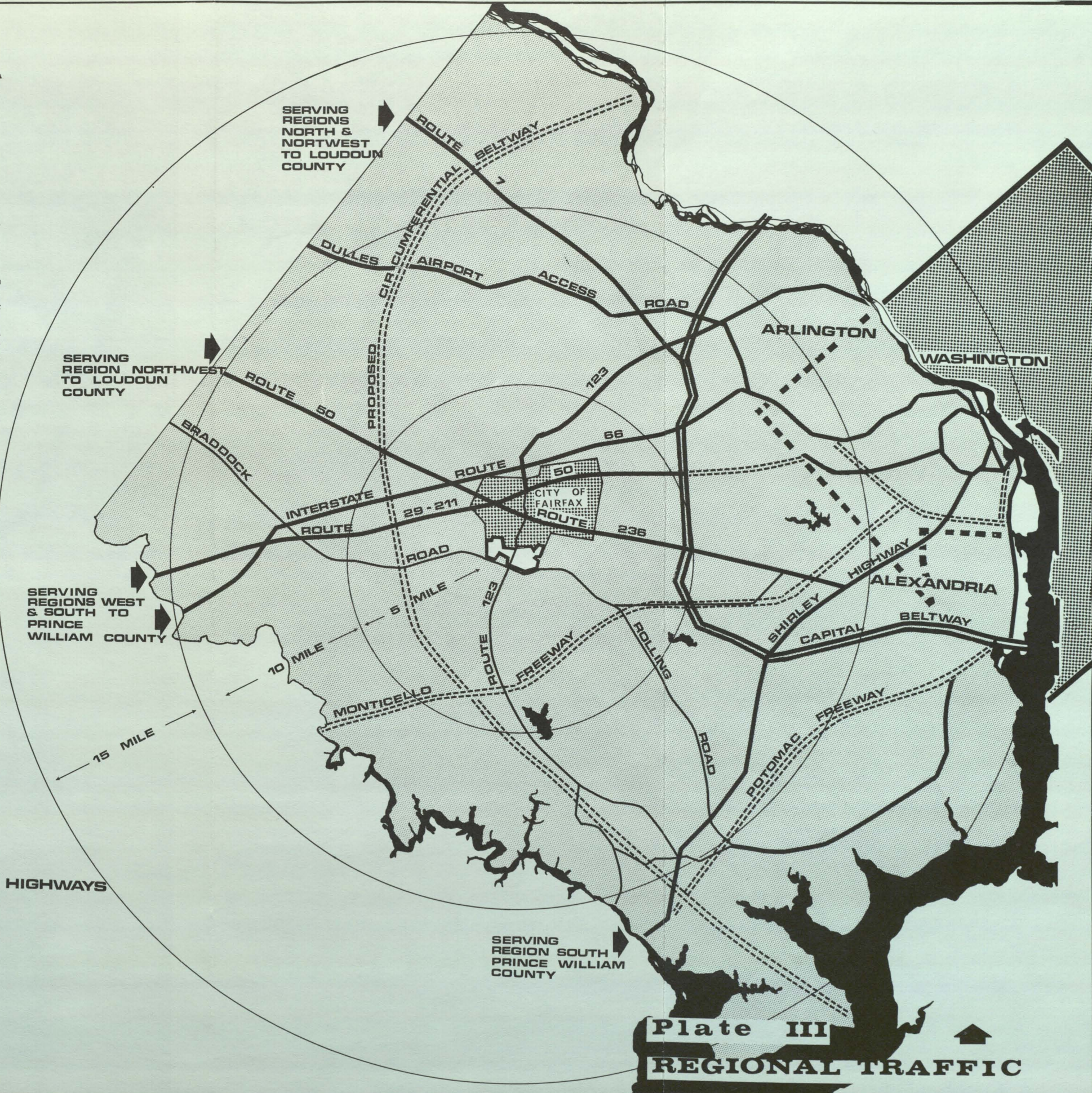
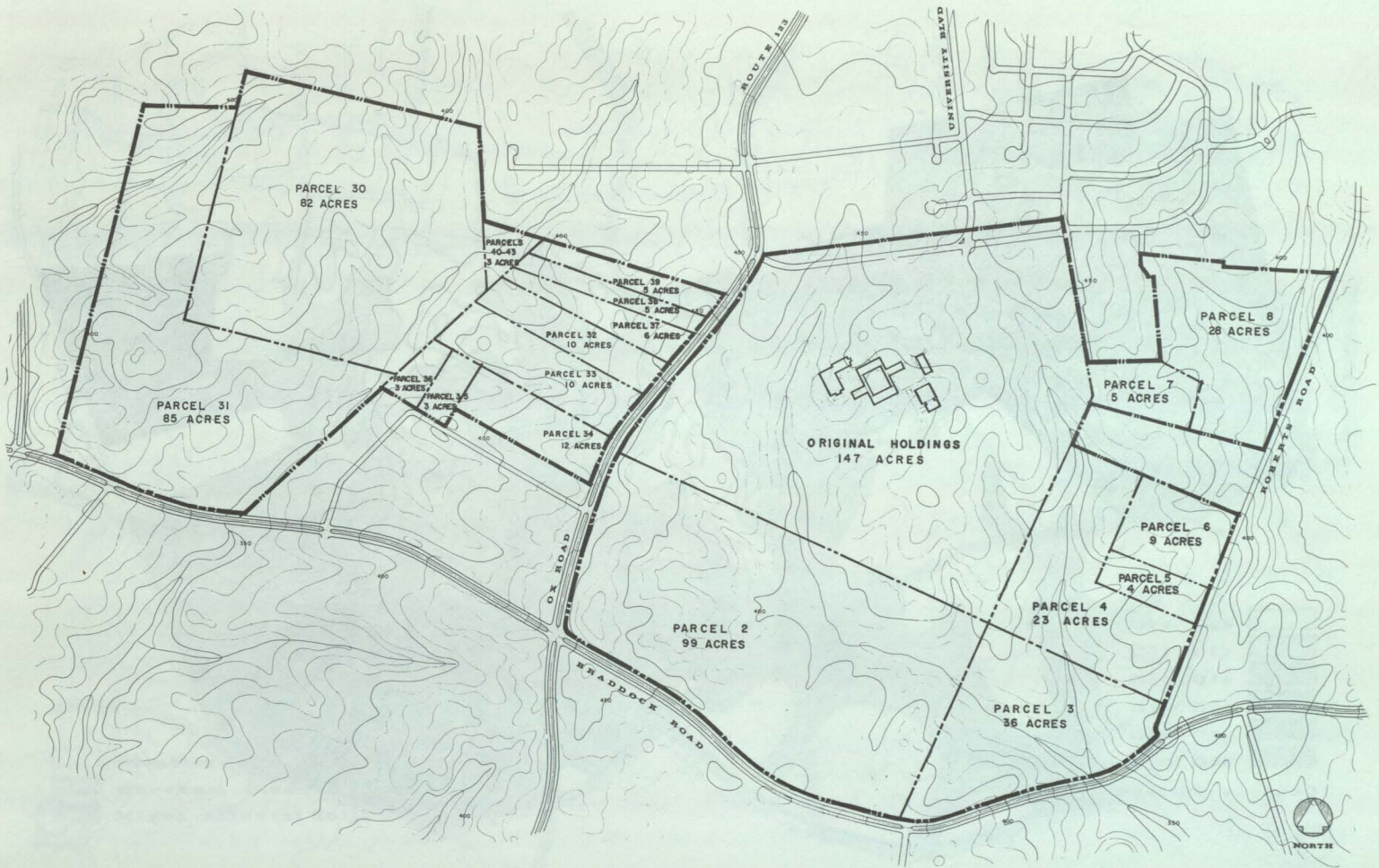


Plate III
REGIONAL TRAFFIC



LAND ACQUISITION

In the rapidly growing areas of suburban Fairfax County it is extremely fortunate that land adjacent to the original campus is available at this time. In the near future, this land would certainly not be available at a favorable price if, in fact, it would be available at all.

These factors were recognized by the University in 1966 when the Board of Control requested the Northern Virginia Regional Planning Commission to prepare recommendations concerning acquisition of land to accommodate the growth of the College. Professional appraisal indicated that \$3,000,000.00 would be required to purchase the necessary land. The counties of Arlington and Fairfax and the cities of Alexandria and Falls Church were asked to contribute a proportionate share according to current population estimates. These communities acted favorable on bond issues supporting George Mason College and the Board of Control was able to take steps toward the acquisition of the land.

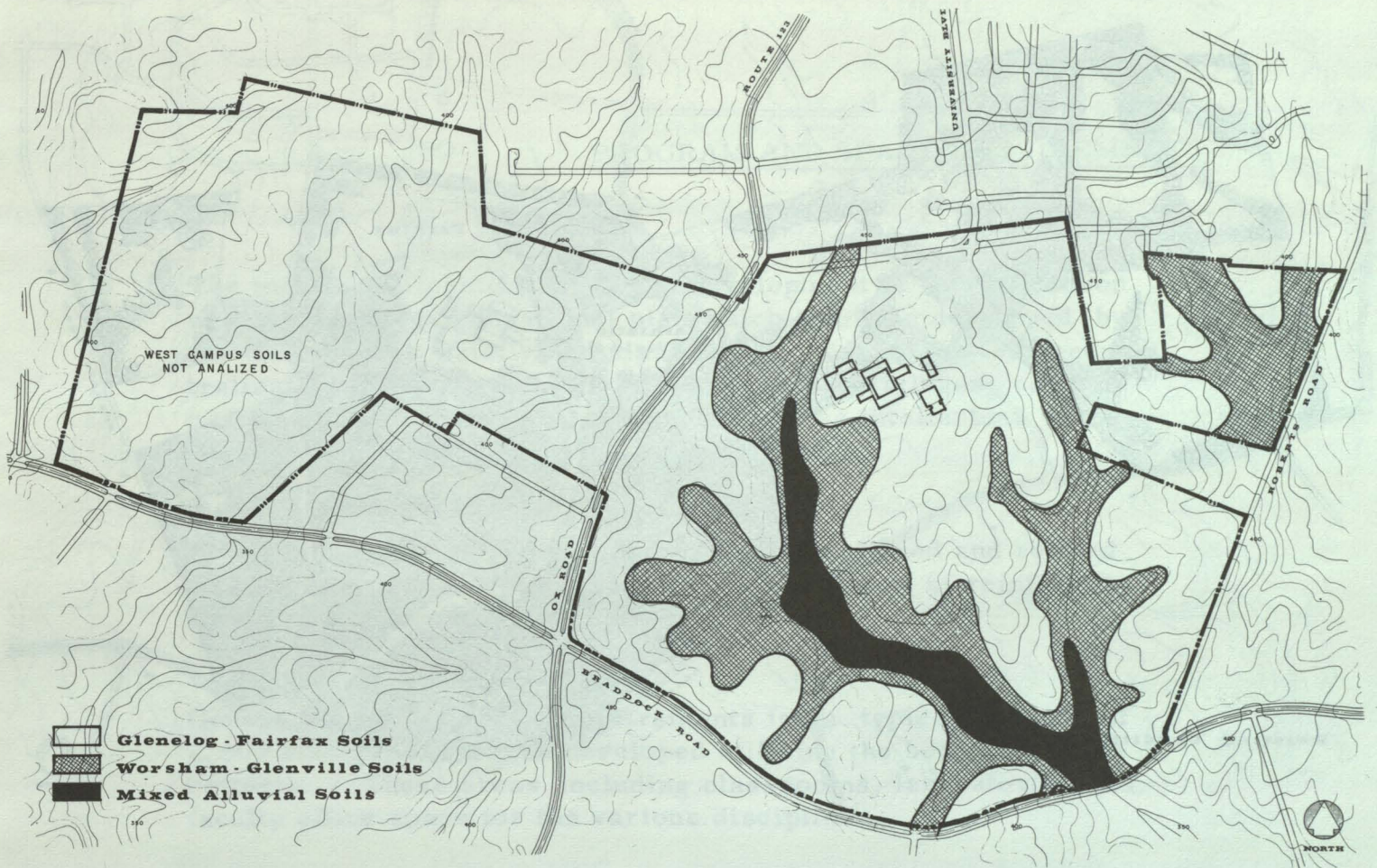


TOPOGRAPHY

Topographically, the property east of Ox Road is roughly trisected by two ravines formed by the uppermost reaches of Pohick Creek. These buildings are situated on the high ground between these ravines and some 120 acres of buildable land are available for the development of the Central Building Complex.

Across the ravines, and adjacent to Ox Road, Braddock Road, and Roberts Road, the land varies in elevation and is considered to be well suited for parking and open space reserve.

To the west of Ox Road, there are approximately 60 acres of relatively open land between the road and a wooded ravine that forms another natural barrier. Beyond the ravine to the west, there are approximately 160 acres of relatively high land which slopes toward ravines on the east and west. It should be noted that the land west of Ox Road is included in the Pope's Head Creek Watershed and has no provision for sewerage in the immediate future.



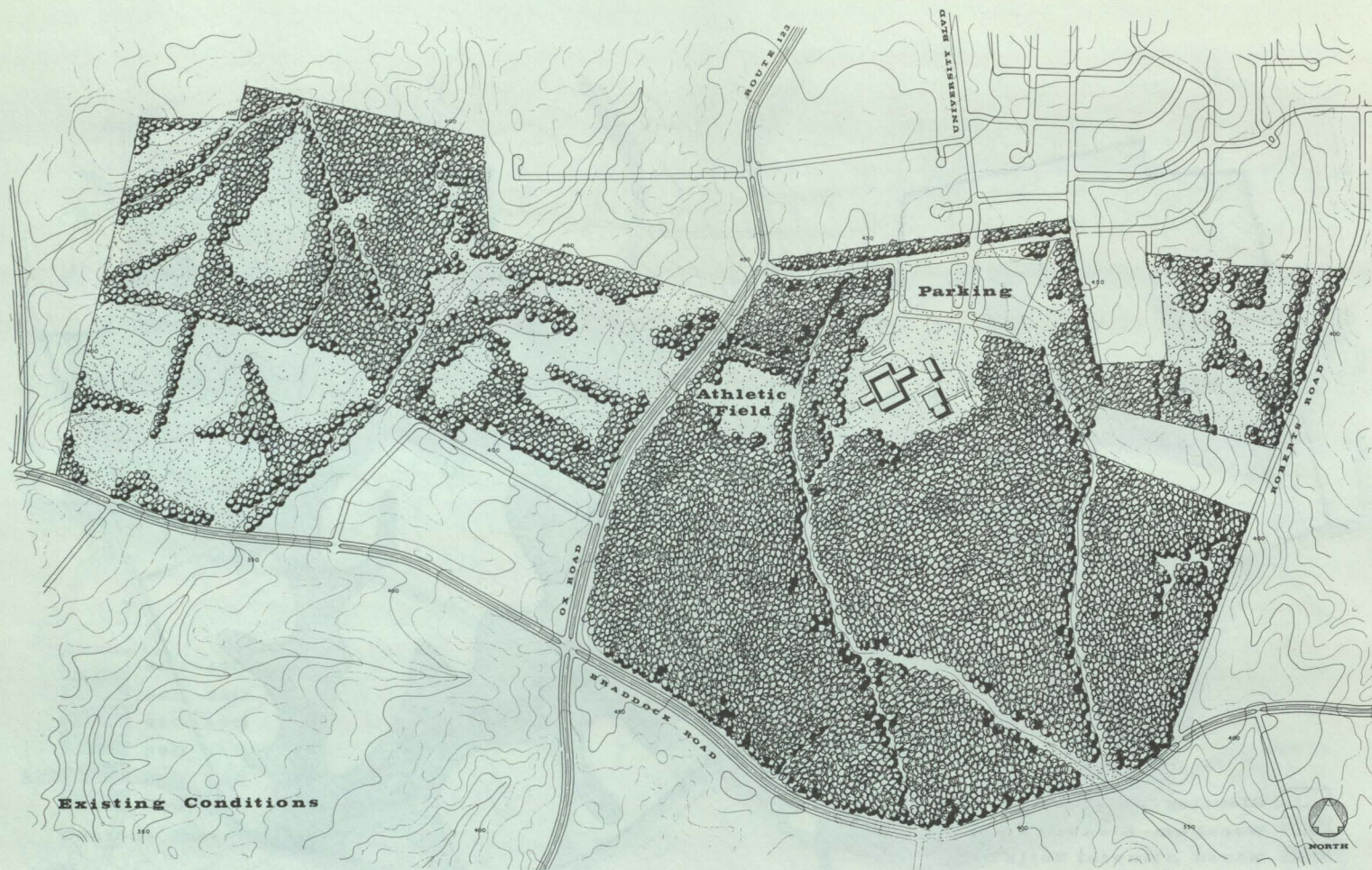
SOIL CONDITIONS

Mr. C. S. Coleman, Fairfax County Soil Scientist has reported that the soils on the George Mason Property are composed of deeply weathered and fine grained mica schist. Cuts of 25 to 30 feet can be made without encountering hard rock material.

The high ground between the two ravines is composed of soils in the Glenelog Silt Loam and Fairfax Silt Loam classifications which are rated good for supporting large buildings.

The flood plain areas indicated along the stream beds are mixed alluvial soils which are not considered suitable for building sites.

The areas of Worsham Silt Loam and Glenville Silt Loam have a high water table during the wet season and will probably require more sophisticated foundations and drainage systems in the lower areas.



VEGETATION

Most of the land is covered by a dense growth of deciduous trees and efforts should be made to take advantage of this natural resource to screen the large areas of parking and to separate functional areas of the Campus.

CLIMATE

Fairfax County is located at the edge of the Piedmont Plateau east of the Appalachian Mountains. George Mason College will occupy land at an elevation varying between 350 and 450 feet above sea level.

The area enjoys a moderate climate with short winters and long summers. Total precipitation has averaged approximately 40 inches over the past 13 years with an average snowfall of 15 inches including sleet and hail. Occasional heavy snowfalls interrupt the activity of the region but snow seldom remains on the ground for more than a few days. Summer temperatures frequently reach 90 degrees and are usually accompanied by extensive periods of high humidity.

PROGRAM AND SPACE REQUIREMENTS

The most significant factor in the development of George Mason will be the unique educational plan which has been developed by the University. Briefly summarized, it provides for the decentralization of the Campus into a series of six Colleges, each of which will have a distinct physical as well as intellectual identity.

Building space requirements have been determined and related facilities have been grouped together as a means of reinforcing this educational concept.

General academic space requirements for a typical college of 2,500 students have been developed utilizing the best available criteria. These areas including classrooms, laboratories and faculty office space for the various disciplines.

Residential space requirements have been developed on the assumption that 40 percent of the students will choose to live on the Campus.

The Student Center in each College is one of the most important elements that can strengthen the Cluster College Concept at George Mason and help the non-resident student to develop a deeper sense of identity with the institution. Each Center will contain features generally found in a Student Union including dining facilities, recreation and social rooms, and study spaces available for the use of commuters.

General space requirements have also been developed for University Wide facilities including the Library, Gymnasium and Administration Building.

These space requirements are summarized as follows:

Full Time Equivalent Enrollment 15,000

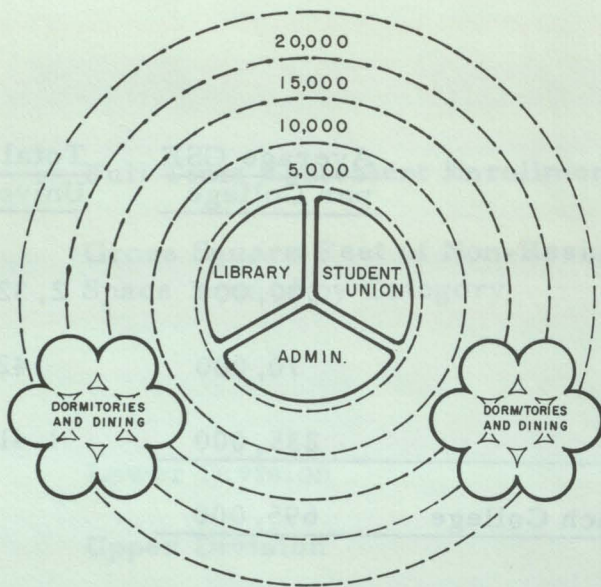
Gross Square Feet of Non-Residence
Space Needed by Category

	GSF	X	FTE	= Total GSF
Lower Division	180 x	6,000		1,080,000
Upper Division	250 x	6,000		1,500,000
Non Science Masters	250 x	1,270		318,000
Science Masters	300 x	290		87,000
Non-Science Doctors	240 x	1,200		238,000
Science Doctors	360 x	240		87,000
Non Science Faculty	150 x	800		120,000
Science Faculty	500 x	200		100,000
Total For University				3,580,000
Average GSF/FTE				250

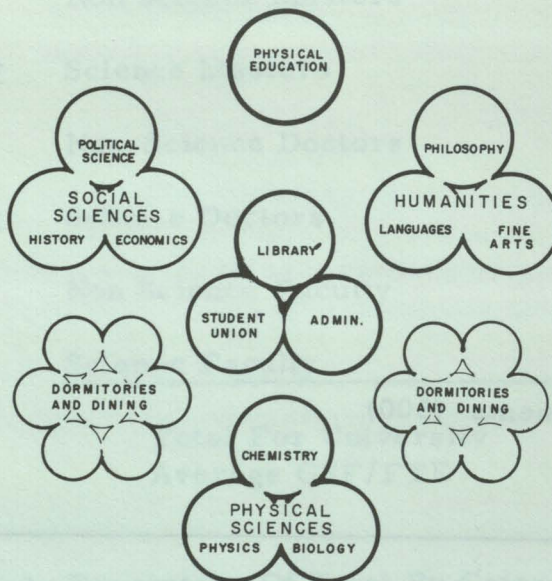
Percentage Of Total By Category Of Use

Instruction	65%	2,320,000
Library	10%	358,000
Physical Education	9%	320,000
Student Activity	8%	285,000
Administration	4%	142,500
Service	4%	142,500

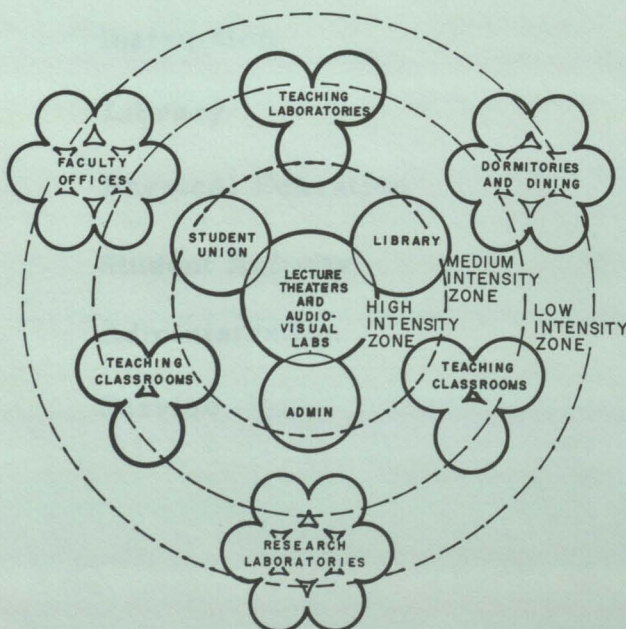
	<u>Average GSF per College</u>	<u>Total GSF for University</u>
Academic Space	390,000	2,320,000
Student Center	70,000	420,000
<u>Residential (1,000)</u>	<u>235,000</u>	<u>1,410,000</u>
<u>Total For Each College</u>	<u>695,000</u>	
Library		358,000
Administration		142,000
Physical Education		320,000
Student Affairs		45,000
Married Students Apartments (500)		350,000
<u>Support Facilities</u>		<u>142,500</u>
<u>Total For University</u>		<u>5,507,000</u>



Typical University Growth Pattern



Departmental Organization



Functional Organization

BASIC PLANNING CONCEPTS

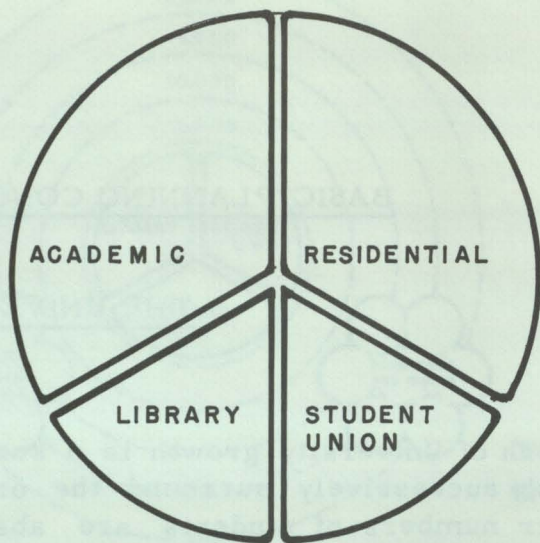
THE UNIVERSITY

The most common pattern of University growth is a series of concentric circles which successively surround the original nucleus as ever larger numbers of students are absorbed. Compounding the problems of physical expansion is the structural organization of the University which is a grouping of buildings occupied exclusively by one of the academic departments - Chemistry, History, Economics, etc.. Planning for this type of university is largely a process of projecting the requirements of each department and finding the means to accommodate them.

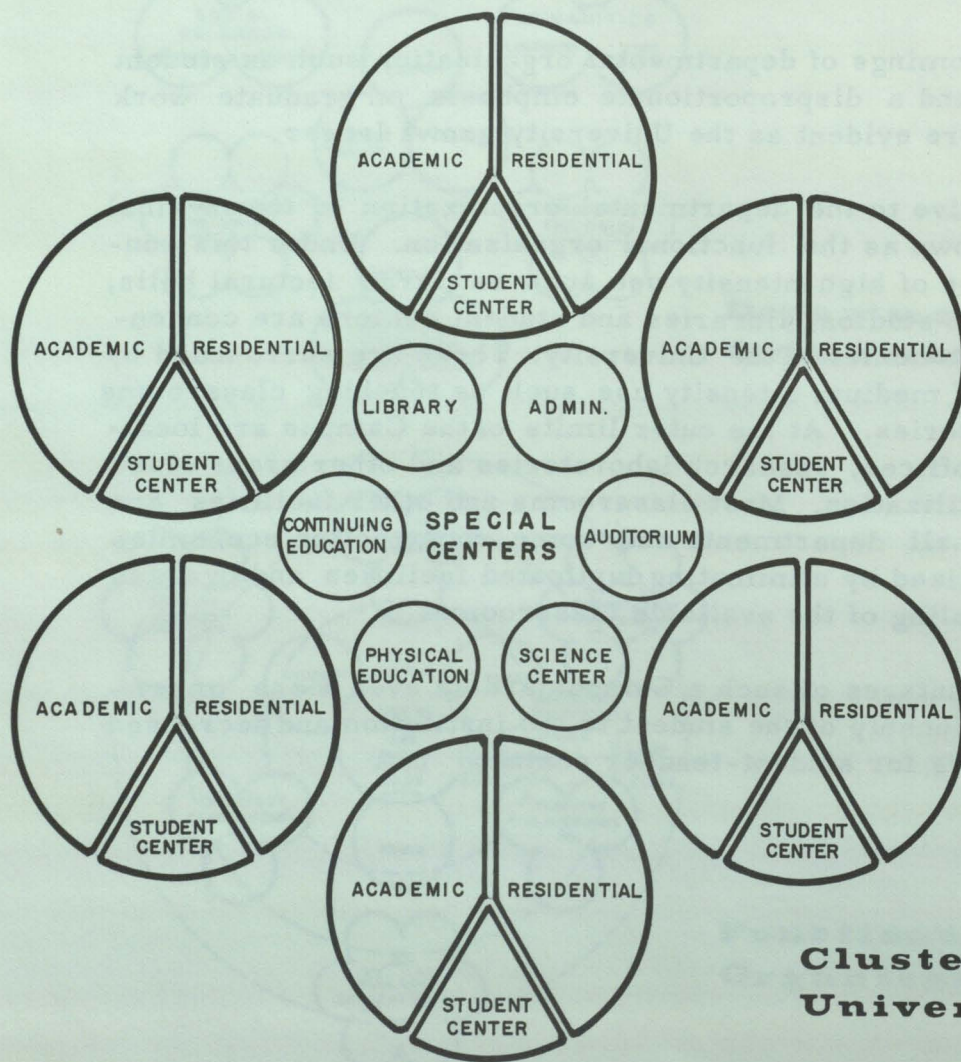
The shortcomings of departmental organization such as student alienation and a disproportionate emphasis on graduate work become more evident as the University grows larger.

An alternative to the departmental organization of the physical plant is known as the functional organization. Under this concept, areas of high intensity use such as large lectural halls, audio visual studios, libraries and student centers are concentrated at the center of the University. These are surrounded by facilities of medium intensity use such as teaching classrooms and laboratories. At the outer limits of the Campus are located faculty offices, research laboratories and other areas of low intensity utilization. Most classrooms and other facilities are utilized by all departments and some construction economies can be realized by eliminating duplicated facilities and by intensive scheduling of the available classrooms.

The disadvantages of such a Campus are an even more impersonal relationship of the student to the institution and decreased opportunities for student-teacher contact.



College



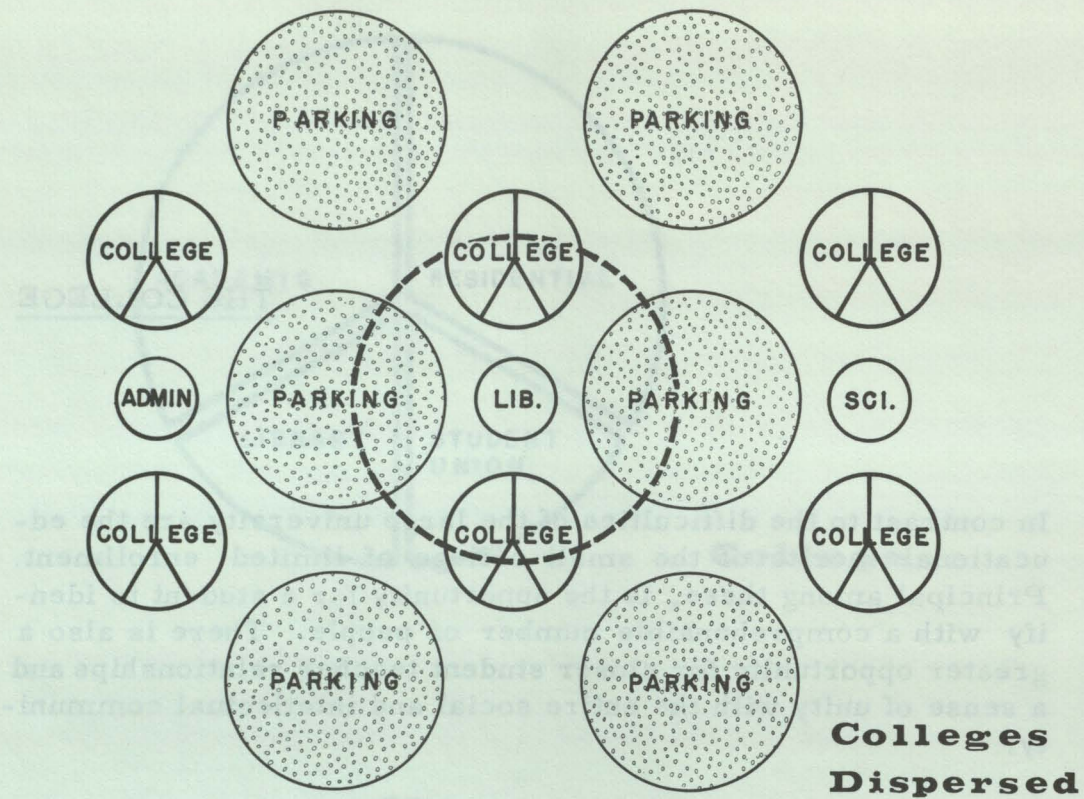
**Cluster College
University**

THE COLLEGE

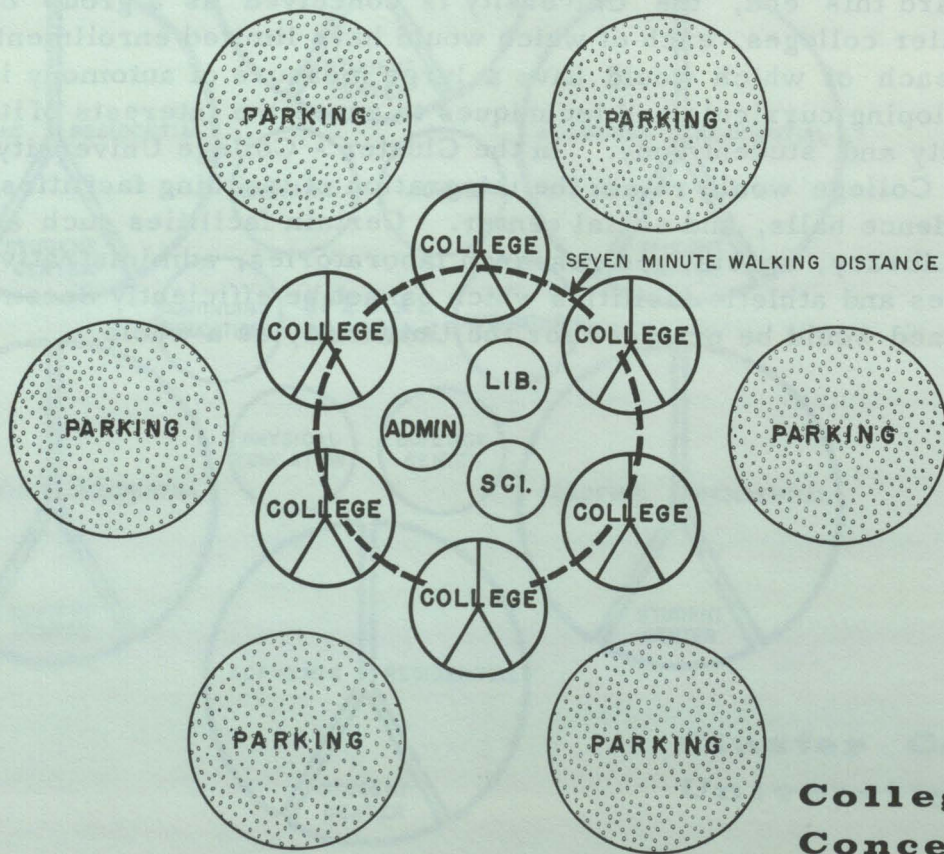
In contrast to the difficulties of the large university are the educational merits of the small college of limited enrollment. Principal among these, is the opportunity for a student to identify with a comprehensible number of people. There is also a greater opportunity for closer student teacher relationships and a sense of unity with the entire social and intellectual community.

The Cluster - College Concept is a response to the desire to preserve the social and educational merits of the limited enrollment college and to gain the intellectual stature and professional opportunities associated with the large University.

Toward this end, the University is conceived as a group of smaller colleges, each of which would have limited enrollment, and each of which would have a large measure of autonomy in developing curricula and techniques to serve the interests of its faculty and student body. In the Cluster - College University, each College would retain the integration of teaching facilities, residence halls, and social center. Certain facilities such as the Library, specialized research laboratories, administrative offices and athletic facilities which cannot be efficiently decentralized would be provided for the University as a whole.



**Colleges
Dispersed**



**Colleges
Concentrated**

GEORGE MASON CONCEPT

In the concept adopted for George Mason, the University will be composed of a group of six semi-autonomous colleges of 2,500 students each. Each College will contain the basic classroom and laboratory space for the teaching of lower division courses in the three main disciplines -- Social Science, Natural Science, and the Humanities - as well as specialized facilities to accommodate the needs of upper division and graduate work in the special fields toward which each individual College will be oriented. In addition, each College will have separate living facilities for its resident students and a student center which will serve the social and recreational needs of both resident and commuting students.

Certain functions which cannot be economically or functionally duplicated will be provided for the University as a whole. These will include a major research library capable of accommodating one million or more volumes, a science center containing the most up-to-date research laboratories, and the University Center which will encompass the University Auditorium, Art Gallery, Administrative Offices and facilities for ceremonial functions.

In the accommodation of the program requirements for George Mason to the physical characteristics of the site, the following objectives have been considered.

- 1.) Maximum advantage should be made of natural features of the site including the wooded ravines and existing tree cover.
- 2.) The educational objectives inherent in the Cluster-College concept should be supported and encouraged by the physical location of buildings on the site.
- 3.) The growth of George Mason should be accommodated in a compact grouping of buildings which will conserve increasingly valuable land and minimize time spent walking between buildings.
- 4.) Vehicular traffic and parking must be adequately provided for but they must be properly separated from the pedestrian sanctuary of the Central Campus.

LAND USE

Building Areas: In accordance with the educational plan and the natural features of the site, it is recommended that the academic and residence facilities for 15,000 students be grouped on the ground extending to the south of the existing college buildings. Approximately 120 acres are available between the ravines for the central academic group.

Parking Areas and Screening: Parking should be accommodated on the perimeter of the site where it will be most convenient to the students arriving by automobile, and separated from the central academic ground by the wooded ravines. 100 acres should be designated for parking, including natural preserve and landscaped area to screen the large parking lots.

Natural Preserve: The wooded ravines should be developed as areas of natural preserve serving as quiet recreation areas as well as a buffer between the parking lots and the central academic buildings. Approximately 35 acres could be devoted to this use.

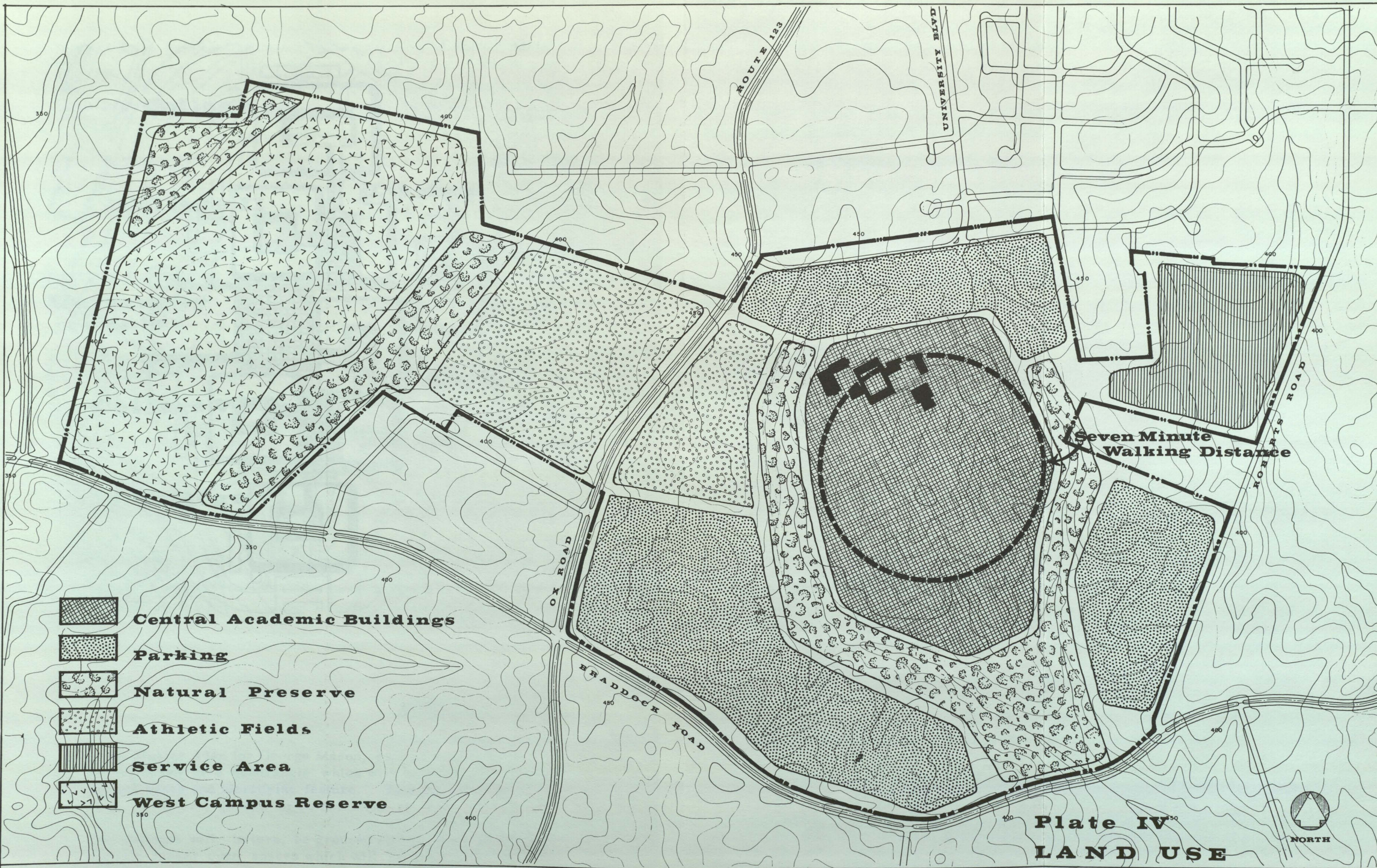
Recreation and Athletic Space: Adjacent to the main entrance from Ox Road, approximately 20 acres should be cleared for use as playing fields and to provide an appropriate entrance vista into the Campus.

Service Areas: The property composed of 35 acres in the northeast corner of the site is partially wooded and is conveniently located for the establishment of the maintenance and storage facilities, and the central heating plant.

West Campus Reserve: The land to the west of Ox Road is included in the Pope's Head Watershed and has no provision for sewerage in the foreseeable future. It is therefore recommended that it be considered for purposes requiring very little development of the utilities.

The 50 acres of relatively open land between Ox Road and the wooded ravine are considered well suited for additional athletic fields.

Beyond the ravine, it is recommended that the 160 acres of land be held in reserve for a number of possible contingencies such as a major medical or technical center, intercollegiate athletic center, or other use which cannot presently be anticipated.








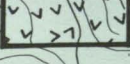
-  **Central Academic Buildings**
-  **Parking**
-  **Natural Preserve**
-  **Athletic Fields**
-  **Service Area**
-  **West Campus Reserve**

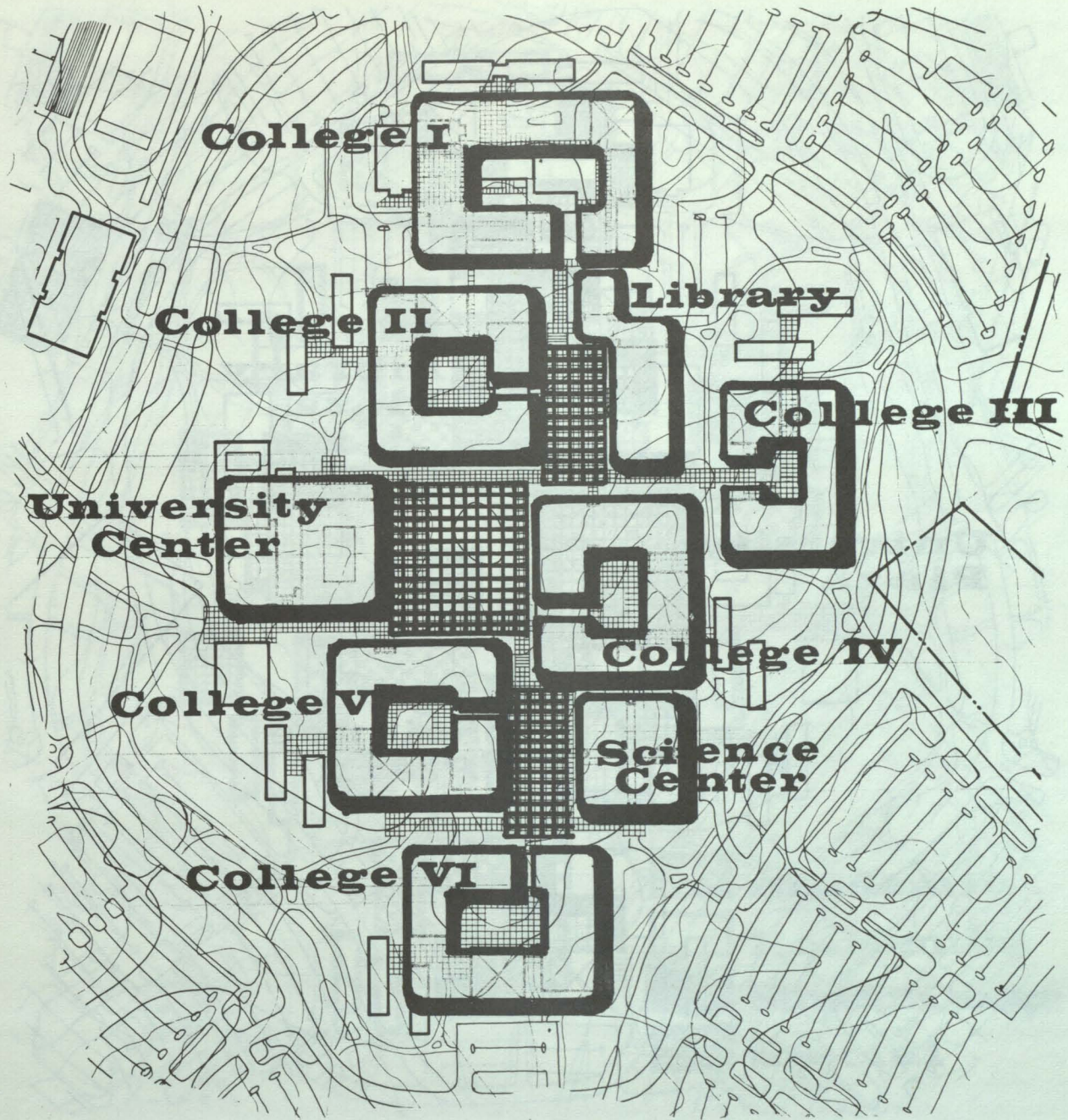
Plate IV
LAND USE

NORTH

GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE 1" = 200'

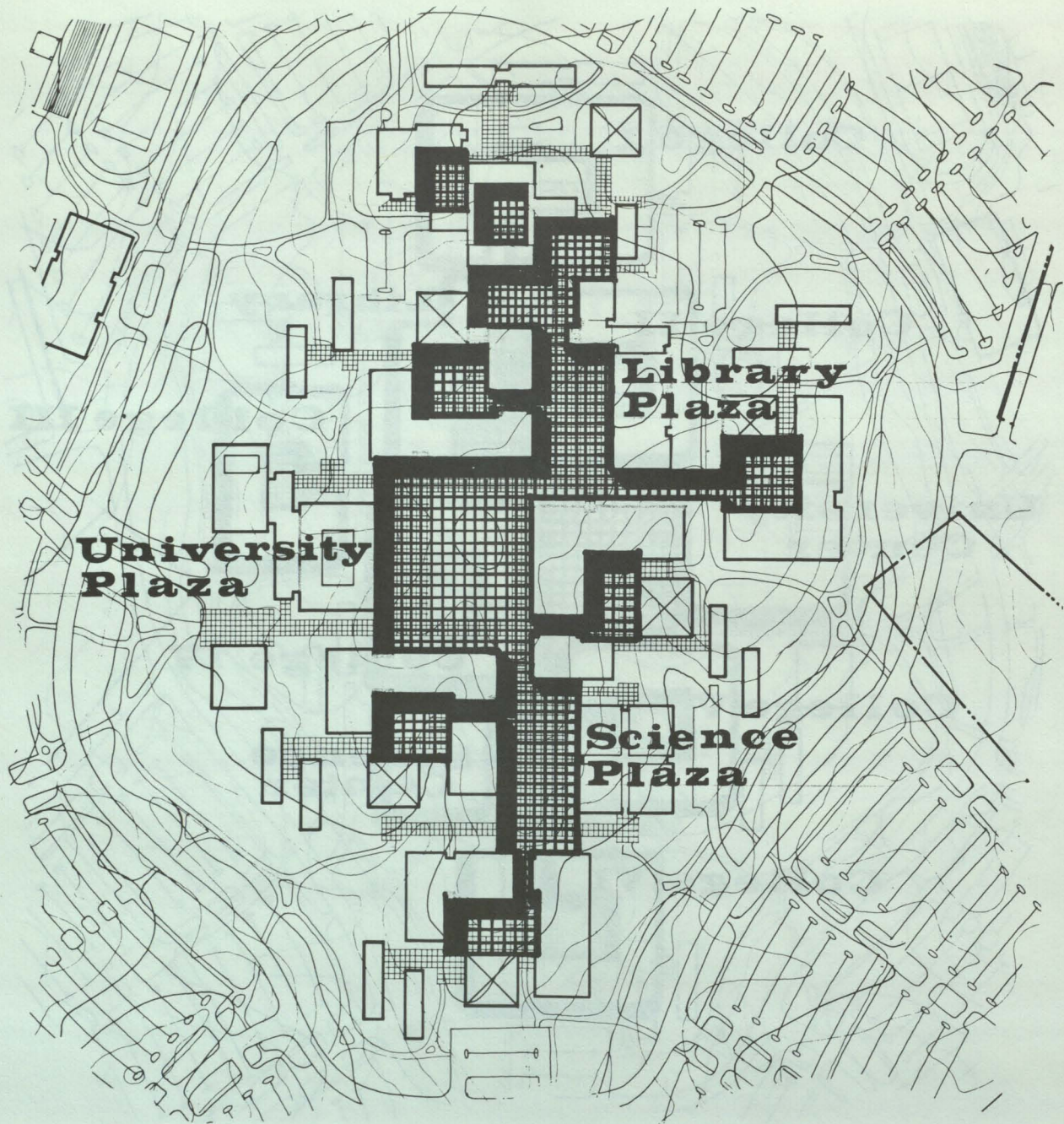
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MASSING CONCEPT

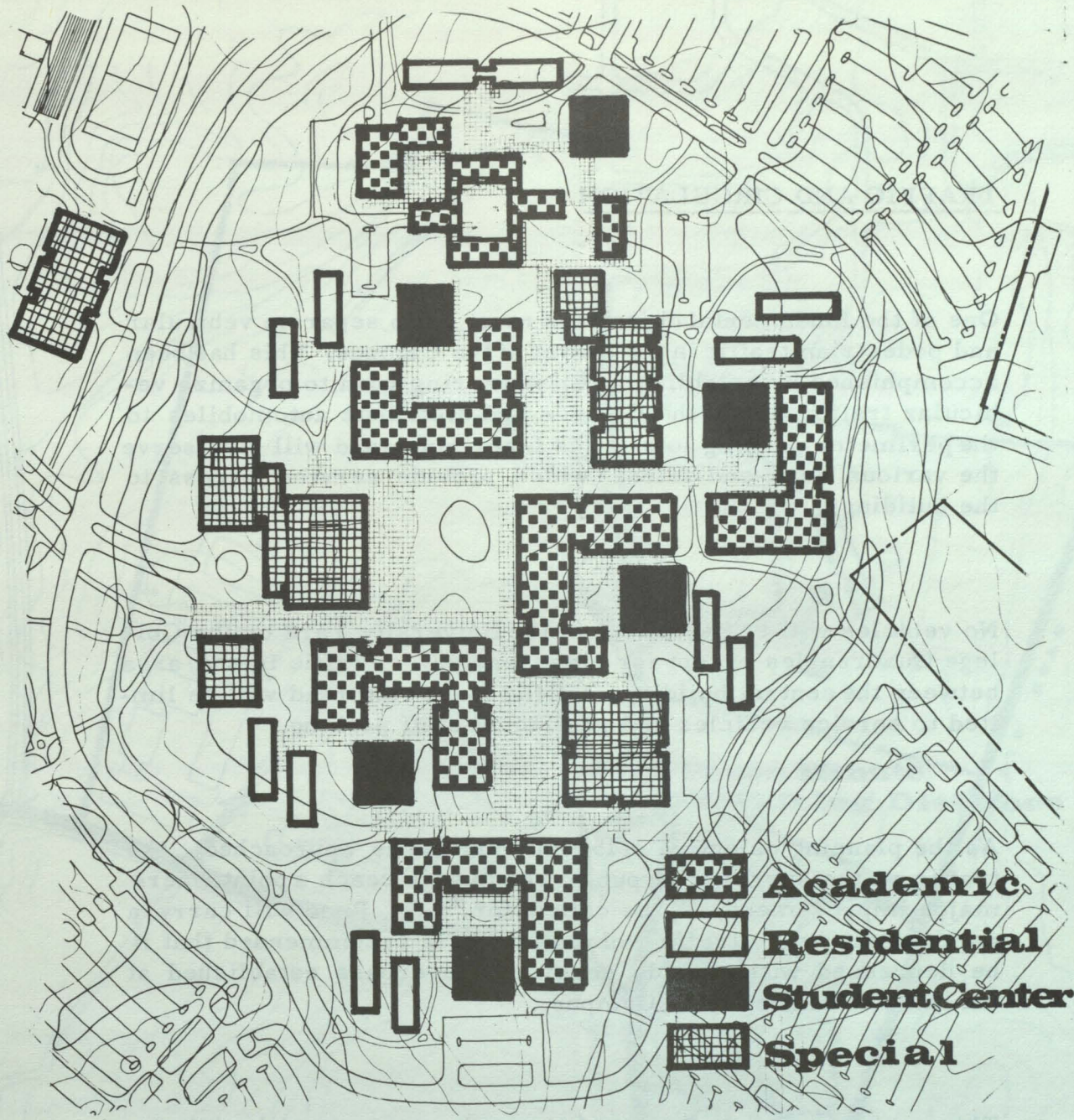
In the Master Plan for George Mason, each of the Colleges will be organized as a quadrangle which will have its own unique central space and identifying feature. This may be a fountain, pool, sculpture, garden or combination of these elements.

The Colleges will, in turn, be grouped with the Special Centers to form larger open spaces which will be identified with the Library, the Science Center, and the University Center.



OPEN SPACE CONCEPT

The resulting open spaces will be organized as a progression in the sizes of the spaces from the more intimate college quadrangles, through the Library and Science Plazas to the most significant University space which will be dominated by the University Center. All of the spaces will be interconnected by pedestrian passages and the movement from one to another will provide for a rich variety of interesting sizes, textures, and scale.



FUNCTIONAL USE

Forming the quadrangle of each new college will be the basic elements - the academic facilities, the residence halls and the Student Center. In each case, the Student Center is located between the academic and residential facilities and is directly related to the open space of the College Quadrangle. This is done to emphasize the uniqueness of each College. Residential facilities are generally located on the periphery of the central campus where they will be more conveniently related to the recreational facilities and quiet surroundings of the natural preserve.

TRAFFIC AND CIRCULATION

One of the fundamental objectives must be to separate vehicular and pedestrian traffic in the center of the Campus. This has been accomplished by establishing an inner ring road to organize vehicular traffic within the Campus and distribute automobiles to the perimeter parking lots. The inner ring road will also serve the various dead-end drives which provide service access to the buildings.

No vehicles will be permitted in the University Yard or the College Quadrangles except for emergencies. Traffic in the area between the central buildings and the inner ring road will be limited to service vehicles and restricted staff parking.

As the planning objective of 15,000 students is approached, the traffic on the surrounding public roads will reach a point where major improvement will be called for. Ox Road will carry a particularly heavy traffic volume and it is recommended that it be depressed with a grade separation overpass established at the main entrance to the Campus.

This separation of Ox Road and the main entrance will minimize the effect of this major barrier between the East and West Campus, and will contribute to the visual and functional unity of the University as the West Campus is developed.

A pedestrian bridge north of the main entrance would greatly improve access to additional athletic fields on the west side of Ox Road.

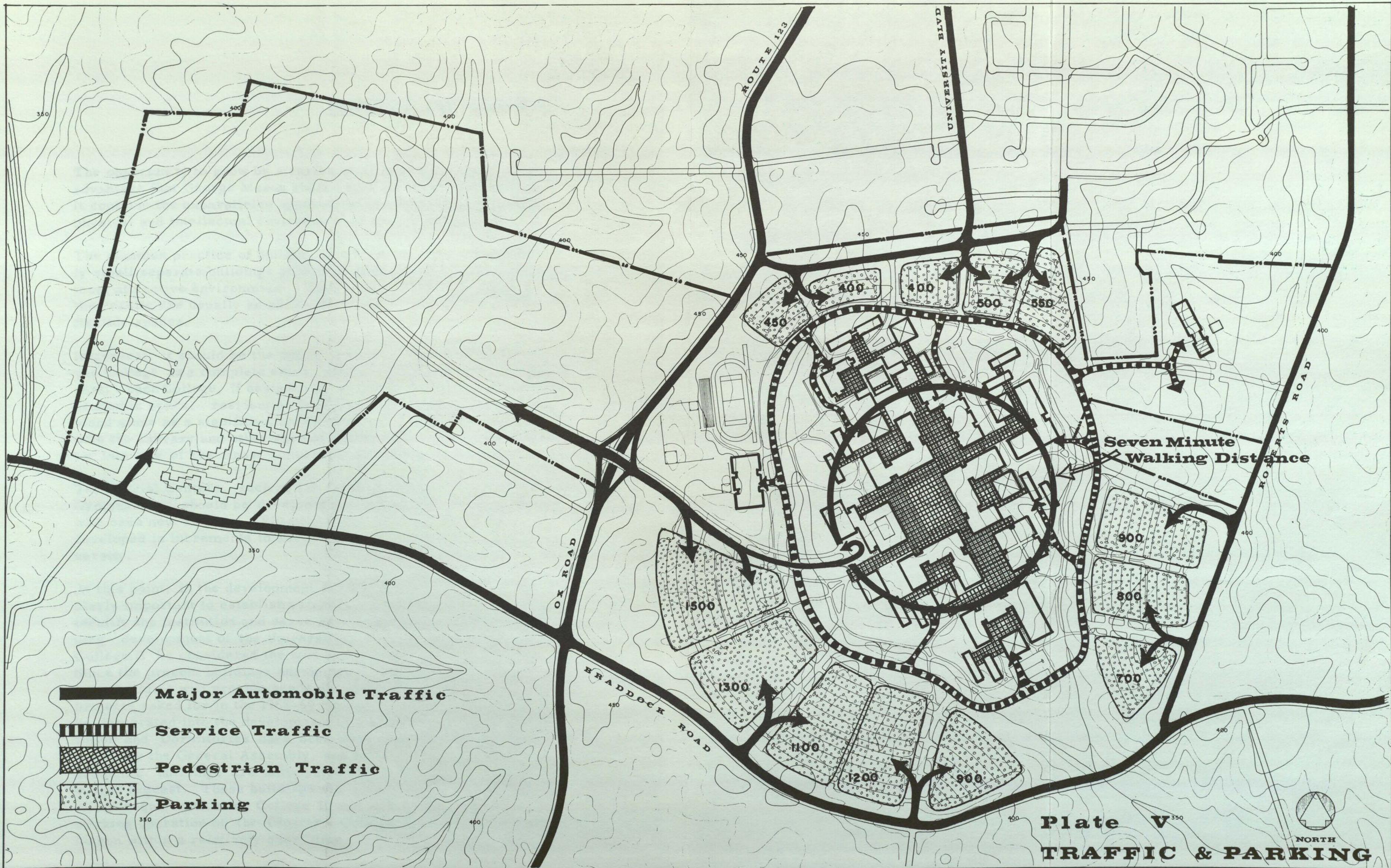


Plate V
TRAFFIC & PARKING

GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE 0 100 200 400 800 1200

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PHASING OF DEVELOPMENT

The opportunity to grow by a series of planned increments is an advantage that George Mason shares with few other institutions. It contains the unparalleled opportunity to create an outstanding physical and intellectual environment of great significance.

The common practice of building an infinite number of relatively small separate buildings seldom results in the creation of the most attractive environment. Even with the best of intentions the results are usually an assembly of conflicting styles and inflexible spaces.

In general, it should be the policy of George Mason to construct one College as a complete entity before beginning work on the next. Each College, if designed as an integrated composition of academic space, residential facilities and student center can stand alone as a significant entity. Six such Colleges, combined with the Library and other special Centers can very well develop into one of the finest University Campuses in the Country.

The Special Centers, such as the Library, Science Center and Gymnasium, should be developed in increments to keep pace with each new College. Roadways and parking should also be developed in increments to serve the needs of the growing University.

At this point, in the development of George Mason, it is particularly important to establish a standard of excellence which will identify the institution and serve as an inspiration of the continuing development of the University. It is recommended that College II be considered the next increment to be constructed. Since the present buildings augmented by the new Arts and Science Building will provide academic space for College I, those projects asked for in the 1968-69 capital outlay request, should be integrated into the development of College II. The Student Union and Dormitories have been approved for revenue bond issues by the General Assembly, and funds for three additional academic buildings are anticipated to be included in the next budget request. These buildings will satisfy the basic space facility requirements for College II and will make possible the working operation of the Cluster - College Concept at George Mason within a relatively short time.

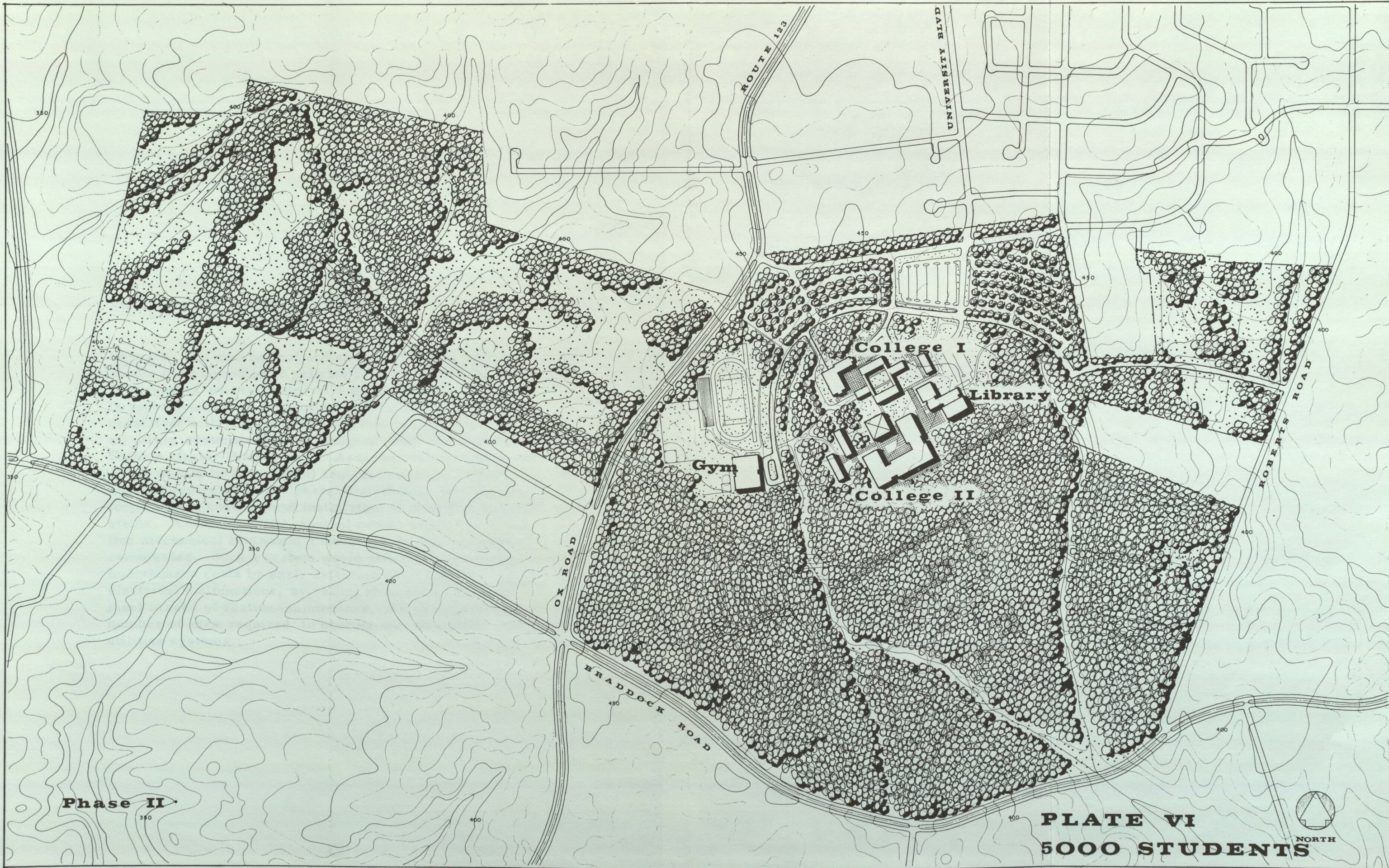
PHASES OF DEVELOPMENT

The design of the new buildings should recognize that they will be part of the total composition of the new College, and care must be exercised to make certain that they will function properly in that context.

For the additional colleges, early attention should be given to the problem of defining their academic character and steps taken to develop the detailed space and equipment programs needed to meet these academic requirements.

For a project of the magnitude of one complete college, a minimum of four to five years must be allowed for design and construction. Two years will be required for construction alone. This must be preceded by at least one year for the preparation of working drawings and specifications. Programming and design of the Complex will require an additional year at the minimum.

Since the Library will always occupy such a significant position in the fabric of the University, it is important that great care be taken to relate the immediately projected, rapid expansion to the ultimate requirements of the Library and of the University. Programming should begin now to determine more clearly the needs of a major University Library serving the needs of 15,000 students and a diverse faculty. A Master Plan for construction of the Library should be developed which will guide its expansion in a series of co-ordinated increments.



Phase II

PLATE VI
5000 STUDENTS



GEORGE MASON COLLEGE
OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
SCALE 0 100 300 600 900 1200

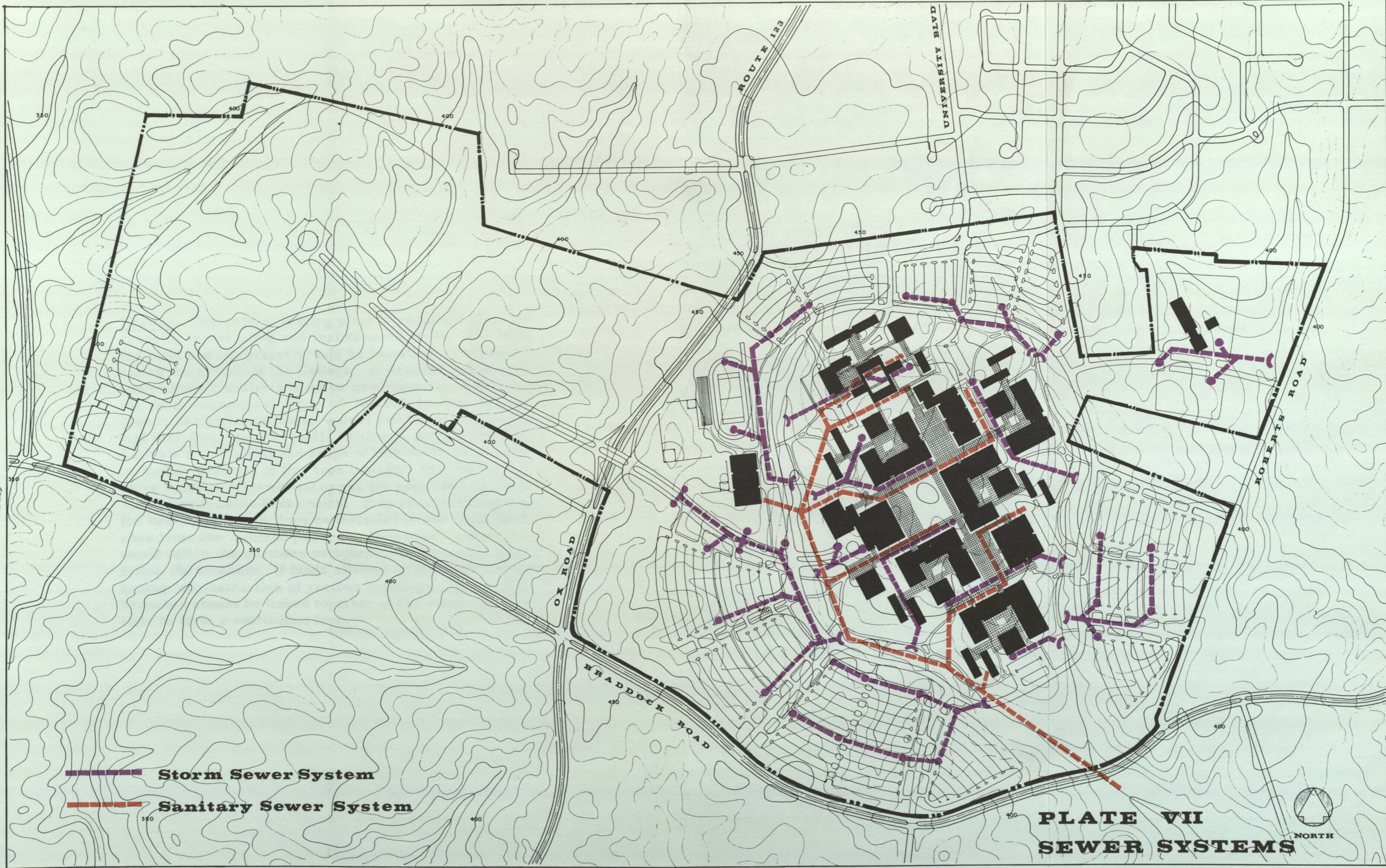
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ENGINEERING ASPECTS

General: All mechanical and electrical utility systems should be designed to be reliable in service, economical in operation, adaptable for future expansion, unobtrusive in appearance and as economical in first cost as possible, consistent with good design. To achieve these objectives, all utility systems must be designed with the ultimate College Master Plan in mind. As far as possible, the systems should incorporate 1) central metering, supervision and control, 2) peripheral distribution with closed loops and 3) underground installation of distribution systems. A central utilities control center which can monitor mechanical equipment throughout the College is recommended. Such a system would reduce operating and maintenance costs by early detection of mechanical and electrical malfunctions, by calling attention to the equipment in need of routine maintenance, and by reducing the number of men required to operate and supervise the utilities systems.

Storm Sewers: The natural surface drainage at this site flows into two main gulleys, one to the east and one to the west of the main Campus areas. This natural drainage system will adequately handle the storm water runoff at the site. All paved surfaces, including roadways, parking lots and plazas, should be drained by catch basins, curb inlets, etc., which are piped to discharge into the natural drainage ditches. All building roof drainage should also be piped to these on-site storm sewers. Manholes will be required at all major sewer junctions and changes in direction.

Sanitary Sewers: Since the existing municipal sanitary sewer system in this area will adequately handle the anticipated sewerage flow from this project, connection to this system is recommended. The trunk sanitary sewer lines on the site should follow the general contour of the ground to avoid excessive depth. Main sewer laterals from these trunk lines should be run between the major groups of buildings so that each lateral will pick up as many buildings as possible with the shortest possible run. Manholes should be constructed at all changes in direction and at all major junction points.



- - - - - Storm Sewer System
- - - - - Sanitary Sewer System

PLATE VII
SEWER SYSTEMS



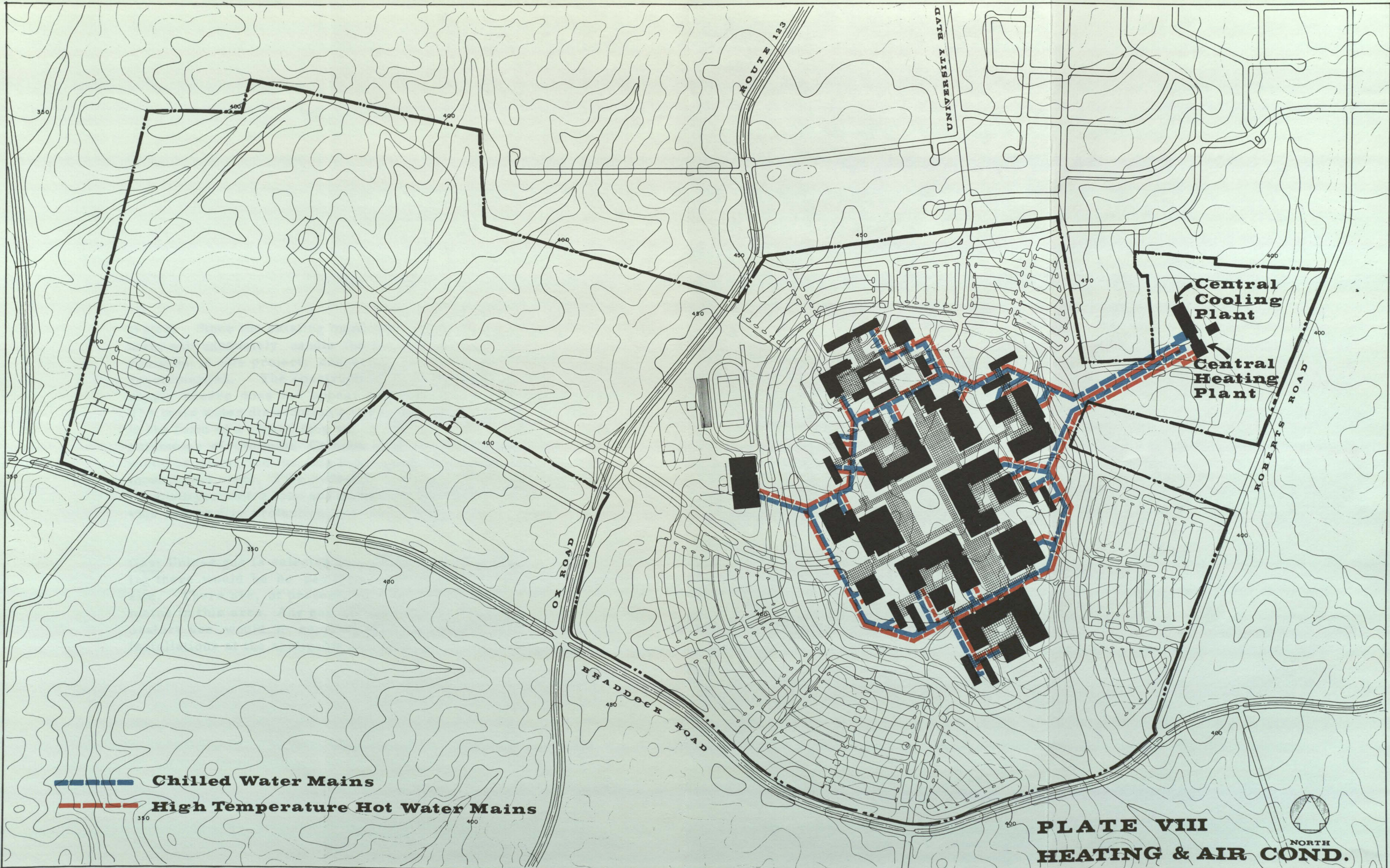
GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE

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Heating: One central heating plant is recommended for economy in operating and maintenance costs. The heating plant and equipment should be installed in stages to match the growth of the College. A detailed engineering and economic analysis must be undertaken to determine the most economical type of central heating system (steam or hightemperature water) and the most economical fuel (oil, gas or coal). Although such a detailed analysis is not within the scope of this study, experience with other systems of this type indicates that high temperature water system with oil or gas (or possible both fuels) may prove to be the best choice. It is recommended that the heat distribution lines be installed in two main branches from the central plant. Basically, one branch would follow the northern periphery and the other would follow the southern. If funds allowed or if dictated by the timing of construction of various buildings, the two main branches should be linked together at the outer (western) ends to form a continuous loop.

Air Conditioning: Since it is anticipated that most of the college buildings will be air conditioned, it appears that a central cooling plant would be desirable from an economic point of view. As with the heating plant, several possibilities must be studied by a detailed analysis to determine the most suitable type of equipment for the generation of chilled water for air conditioning. These include centrifugal refrigeration machines with electric-motor or steam turbine drives or absorption machines using steam or high temperature water. The central cooling plant should be built together with the central plant for obvious reasons of construction and operating economies. The chilled water distribution system should follow the same general layout plan suggested for the heat distribution. The chilled water lines should be directly buried and probably uninsulated for the most part. Valve manholes and drainage points will also be required.



----- Chilled Water Mains
----- High Temperature Hot Water Mains

PLATE VIII
HEATING & AIR COND.

GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE 0 100 300 600 900 1200

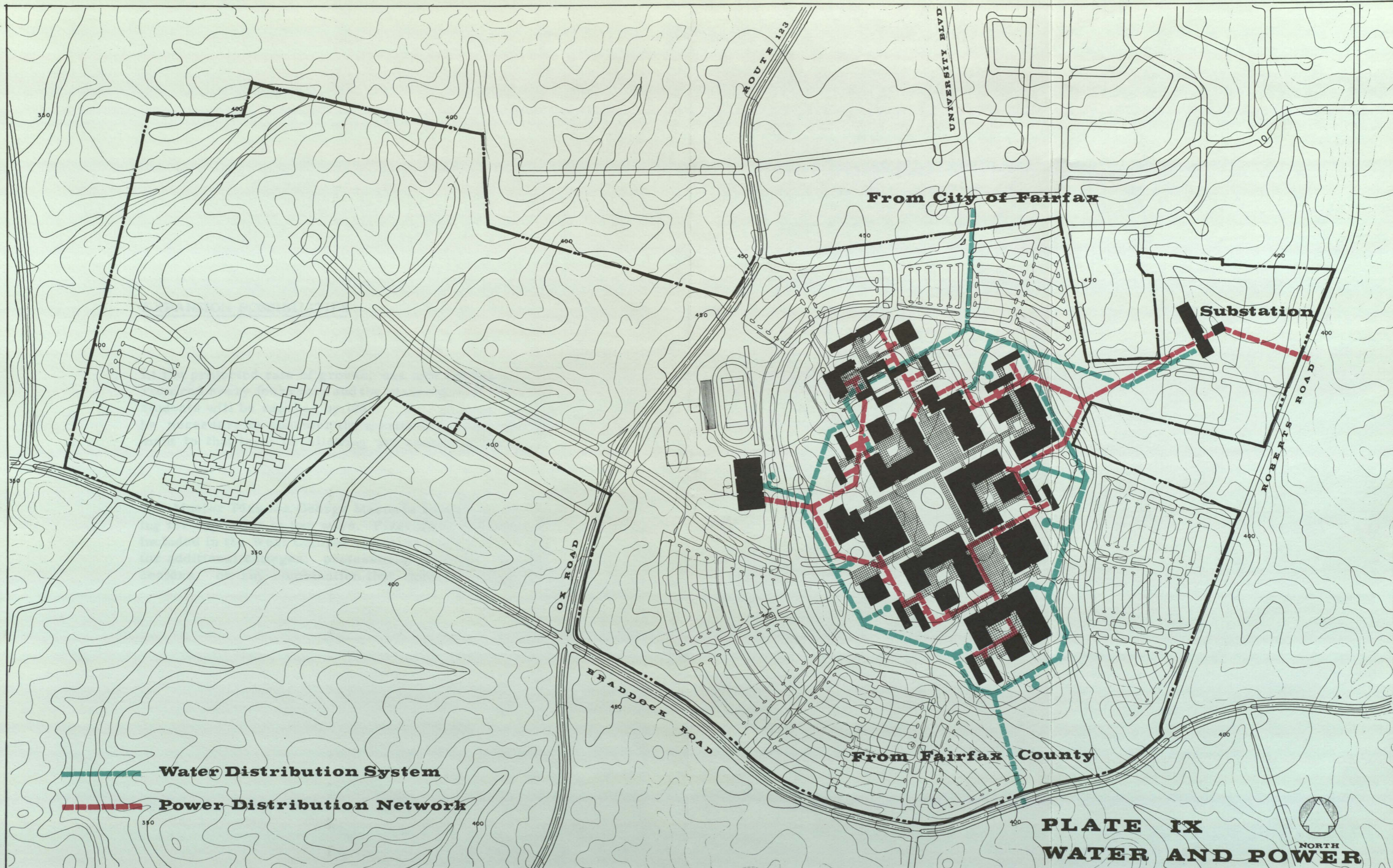
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Water: Since the existing municipal water supply system will adequately handle the anticipated water consumption at this project, connection to this system is recommended. The construction of a private water supply source does not appear economically feasible. The main water distribution system should be installed in the form of a closed loop which basically follows the perimeter of the main Campus area. All buildings would be connected to this loop by lateral lines by the most direct route. Fire hydrants would be installed on the main perimeter loop and on certain laterals to provide proper fire protection.

Gas: Unless gas is selected as a primary fuel for heating there would be no gas distribution system on this site. There are, at present, no existing natural gas mains in this area. Any gas which is required for laboratory use would be supplied by propane bottled gas installations at the applicable buildings.

Electrical Service: The existing electrical service from the west side of the Campus will be discontinued since it is inadequate and the utility company plans to discontinue the existing overhead trunk line in the future and replace it with a high voltage distribution line. The new service will be provided from a future high voltage line to the east of the Campus. A substation provided by the utility company, located between the overhead lines and the Campus distribution system will be situated near the central heating-chilling plant. This substation will be of the new "low-silhouette" type currently used by the Virginia Electric Power Company. This substation will provide power to the heating-chilling plant at 4,160 volts and distribution to the Campus at 13,200 volts. Transformers in the basement of each building will provide the proper utilization voltage. The modified loop distribution will operate normally at an open loop with switches to allow the open section to be located at any point along the circuit. This will allow continuation of operation to all buildings in the event of a cable failure at any location along the loop. Manholes will be provided along the loop to permit servicing of the cables and to allow the required connections to be made to various buildings. The underground ducts will consist of non-metallic conduits placed in a suitable trench. Concrete encasement will be provided where the conduits are placed beneath paved areas.

Telephone System: The telephone distribution system will parallel the electrical distribution ducts. The selection of a telephone system will have to be evaluated to select between a central switchboard system or an individual automatic dialing system for each building.



GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE 0 100 300 600 900 1200

PLATE IX
WATER AND POWER

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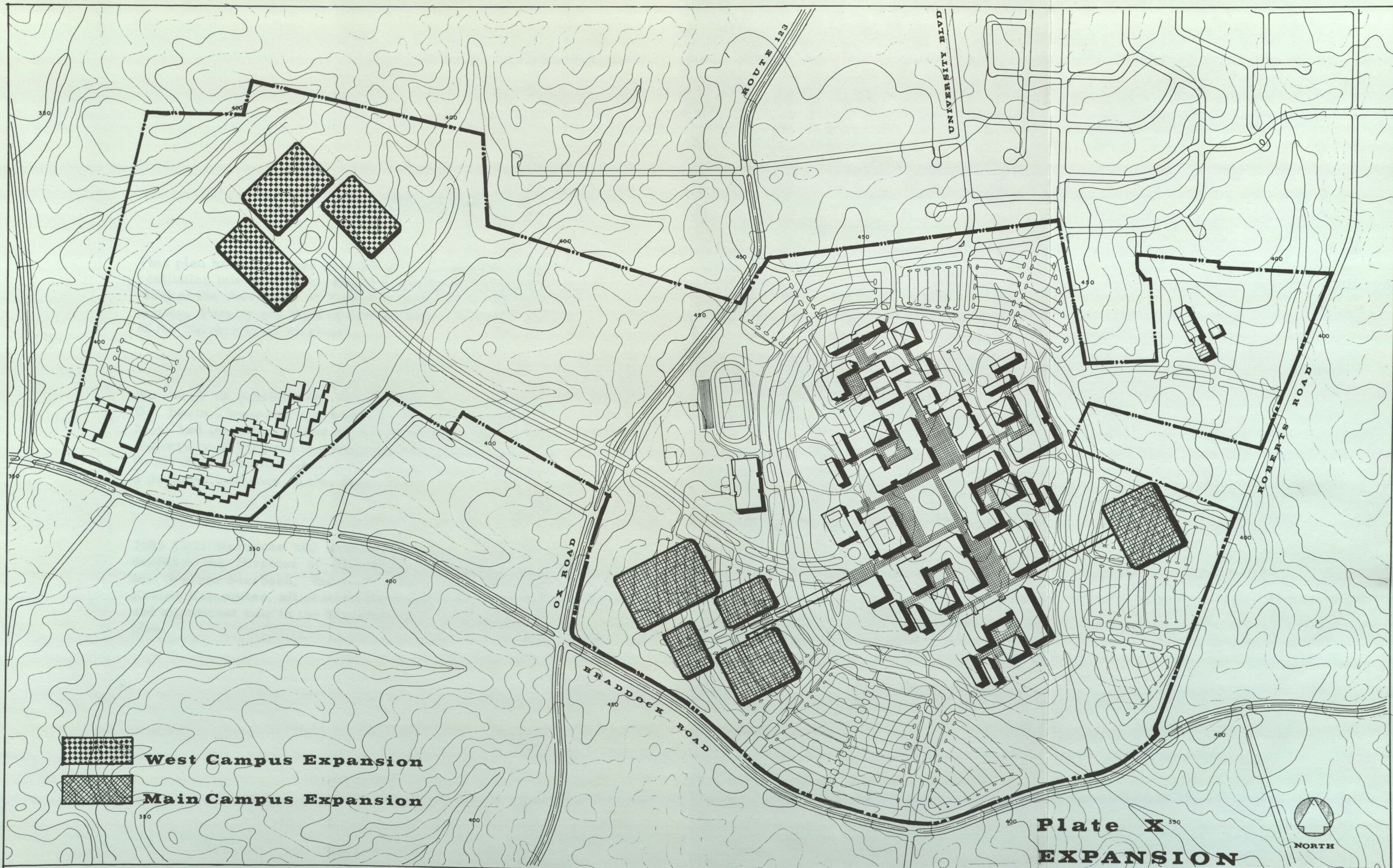
EXPANSION POSSIBILITIES

At the projected rate of growth, one new college will be required every four years and the planning level of 15,000 students will be reached by 1985. At that time, it will be necessary to consider the merits of limiting enrollment to that level or allowing for continued expansion.

The Master Plan for George Mason is capable of providing for expansion in two ways. First of all, the property included in the West Campus Reserve can be developed for additional colleges, professional schools, special centers, or any combination that may be necessary.

EXPLANATION OF POSSIBILITIES

On the Central Campus, additional buildings can be constructed only at the expense of open space or at the expense of parking space. A limited amount of open space can be eliminated without seriously hampering the requirements for athletic fields. The amount of land necessary for parking can, however, be greatly reduced by the construction of multilevel parking structures. While these are considerably more expensive than surface parking lots, the increasing cost of land will substantially reduce the differential by 1985 and make parking structures increasingly attractive.

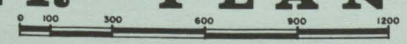


 **West Campus Expansion**
 **Main Campus Expansion**

Plate X
EXPANSION

GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE 1"=200'



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ACKNOWLEDGEMENTS

This plan has been made possible by the enthusiasm and continuing interest of Dr. Edgar F. Shannon, Jr., President of the University of Virginia, and by the Administration, Faculty and Staff of George Mason College and of the University of Virginia.

We wish to particularly acknowledge the efforts of Dr. Lorin Thompson, Chancellor of George Mason College, and Dr. Alan Williams, Assistant Provost of the University of Virginia in developing the unique educational objectives for George Mason which have had such a profound influence on the planning.

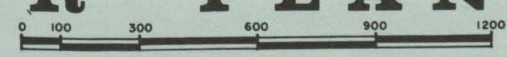
John Carl Warnecke and Associates is also greatly indebted to the Director of Planning for the University, Mr. Werner Sensbach, his staff, and the Master Plan Review Committee, all of whom have played a valuable and significant role in the development of the physical plan.



- A Academic**
- CE Continuing Education Center**
- D Dormitories**
- G Gymnasium**
- L Library**
- M Married Student Apartments**
- P Power Plant**
- R Research Institutes**
- S Student Center**
- SC Science Center**
- UC University Center**

GEORGE MASON COLLEGE
 OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

MASTER PLAN
 SCALE 1" = 200'



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