

*land brochure info*

*expansion factor figures*

# GEORGE MASON COLLEGE EXPANSION REQUIREMENTS



prepared by:

NORTHERN VIRGINIA REGIONAL PLANNING  
AND ECONOMIC DEVELOPMENT COMMISSION

NORTHERN VIRGINIA REGIONAL PLANNING  
AND  
ECONOMIC DEVELOPMENT COMMISSION

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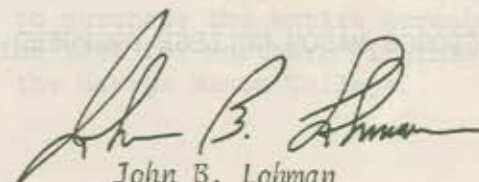
3150 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22201  
524-7171

To the Citizens of Northern Virginia --

The Northern Virginia Regional Planning and Economic Development Commission at its regular meeting of April 28, 1966, endorsed this report and urged that prompt action be taken to acquire the necessary land.

The expansion of George Mason College to a four-year facility will provide direct benefit to all the jurisdictions in this area much beyond the immediate effect of providing an education for our youth.

It is a pleasure to comply with the request of the Board of Control for the Establishment of a Branch College (George Mason) in Northern Virginia and transmit this report to all the jurisdictions in Northern Virginia as well as the many other interested parties concerned.

  
John B. Lohman  
Chairman

NORTHERN VIRGINIA REGIONAL PLANNING  
COMMISSION  
ECONOMIC DEVELOPMENT COMMISSION



**GEORGE MASON COLLEGE EXPANSION REQUIREMENTS**

ARLINGTON COUNTY

CITY OF FALLS CHURCH

DR. JAMES W. BROWN  
DR. J. PAUL GIBSON  
DR. JOHN B. LINDSEY

To the Citizens of Arlington County  
DR. JOHN B. LINDSEY  
DR. J. PAUL GIBSON  
DR. JAMES W. BROWN

FAYETTE COUNTY

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 John B. Lindsey  
 Chairman

1100 Wilson Boulevard  
 Arlington, Virginia 22202

## INTRODUCTION

The Board of Control for the Establishment of a Branch College (George Mason) in Northern Virginia, acting through the local governing bodies, requested the Northern Virginia Regional Planning and Economic Development Commission to prepare a recommendation concerning the amount and location of land to meet the expanded needs of George Mason College in operating as a four-year facility.

In order to determine this need, it has been necessary to make a number of assumptions -- assumptions that are based for the most part on existing standards and ratios at colleges and universities throughout the United States, with particular reference to Virginia. It was further necessary to make adjustments to reflect the conditions in Northern Virginia which were not necessarily typical of those throughout the rest of the State. For example, approximately fifty percent of the high school graduates in Virginia go to college; however, in Northern Virginia the range is as high as seventy-two percent.

A twenty-year projection indicates that enrollment at George Mason College could readily reach 15,000 students as a minimum by 1985. But twenty years is a short time in the life of a college, and it is strongly recommended that sufficient acreage be purchased now to allow for an enrollment of 20,000 and to permit additional types of facilities. Land requirements have been determined using a model of 20,000 students, but acreage requirements also depend on other policy decisions such as building heights, ratio of building site coverage, and curriculum.

It is fortunate that today vacant land may be found adjacent to the present college. This will not be true in the future. It is therefore recommended that the campus be expanded from its present 150 acres to a total of 600 acres. Current appraisals reveal that the acreage will cost approximately three million dollars. Failure to purchase the entire acreage now would be to miss an opportunity to provide best for Northern Virginia's future higher educational needs through the George Mason College.

## ENROLLMENT CONSIDERATIONS

There are a number of general criteria which go into planning for a college. The first planning statistic to be projected is usually enrollment with projections made far enough in advance to allow for the development of a realistic master construction plan. The greater the time span involved, however, the greater flexibility the plan should have.<sup>1</sup>

In projecting enrollment demands for George Mason College, Northern Virginia is fortunate in having the guidance of several recent studies relating to this region. One is a statewide study of prospective college-age population by subregions;<sup>2</sup> another is a study prepared solely to discuss the needs of Northern Virginia.<sup>3</sup> A third study is a statewide review of higher education needs, objectives, and resources.<sup>4</sup> From review of these studies, it becomes quite apparent that the forecasting of prospective enrollment for George Mason College must give some consideration to more than Northern Virginia's needs. The following discussion then, while concentrating on the enrollment demand from Northern Virginia, will delve briefly into these other considerations.

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<sup>1</sup>Casebook on Campus Planning and Institutional Development (OE-51003), U.S. Dept. of Health, Education and Welfare, Office of Education, 1962.

<sup>2</sup>Prospective College-Age Population in Virginia, By Subregions 1960-1985, Staff Report #1, Virginia Higher Education Study Commission, Richmond, 1965.

<sup>3</sup>Post-High School Education Needs in Northern Virginia, prepared by Educational Research Services, Inc., for the NVRP&EDC, March 1965.

<sup>4</sup>Report of the Higher Education Study Commission to the Governor and the General Assembly of Virginia, Virginia Higher Education Study Commission, Richmond, 1965.

## Enrollment Demands for a Four-Year College Program

For the purposes of this report prospective enrollment for a four-year program at George Mason College is discussed from two aspects: needs from within the region and needs from beyond the region.

Northern Virginia Region -- This area ranks first in the State in the number of students attending college, but last in those being served by the State. In 1964 the highest rate of college attendance for high school graduates in the State of Virginia was in the Arlington, Alexandria, and Fairfax area. Of those from this area who continued their education, almost 60 percent attended schools outside the State of Virginia. Conversely, this area had one of the lowest rates of attendance in Virginia institutions of any area in the State.

Recognizing these facts, the 1966 session of the General Assembly authorized the creation of a four-year undergraduate program at George Mason College. The following discussion relates to the enrollment which might be anticipated from the Northern Virginia Region for that four-year program.

The college-age population of Northern Virginia will nearly double by 1985. Based upon 1965 estimates prepared by the University of Virginia, this group will expand from 46,000 to 85,000. Currently about half of all high school graduates in Virginia enter college.<sup>5</sup> During 1965, however, studies conducted for this Commission<sup>6</sup> revealed that 63 percent of this area's high school graduates planned to attend a four-year college or university, with

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<sup>5</sup>"Future Space Requirements for George Mason College," Memorandum from University of Virginia, Office of Campus Planning, Mr. Sensbach, Director, Dec. 15, 1965.

<sup>6</sup>Post-High School Education Needs in Northern Virginia, op. cit.

the percentage running as high as 72 in one jurisdiction. The Northern Virginia study further showed that 22 percent of those planning to attend a four-year would prefer to do so while remaining at home. This latter percentage was substantiated by a Statewide study<sup>7</sup> showing that 24 percent of the college students live at home. The expected college enrollment shown on Table 1 was developed from these percentages.

Table 1

ESTIMATED COLLEGE ATTENDANCE AND LOCATIONAL PREFERENCE  
(Northern Virginia Residents)

Year	College-Age (18-21) <sup>a/</sup>	Plan to Attend a Four-Year College <sup>b/</sup>	Prefer to Attend a Northern Virginia College <sup>c/</sup>
1965	46,236	29,129	6,408
1970	62,489	39,368	8,661
1975	71,854	45,268	9,959
1980	81,034	51,051	11,231
1985	84,740	53,386	11,745

<sup>a/</sup>Estimated by Bureau of Population and Economic Research, University of Virginia, includes the Counties of Arlington, Fairfax, Clark, Fauquier, Loudoun, and Prince William; and the Cities of Alexandria, Fairfax, and Falls Church.

<sup>b/</sup>Based on 63 percent of seniors planning to attend a four-year college or university, as indicated in the 1965 NVRP&EDC study, Post-High School Education Needs in Northern Virginia.

<sup>c/</sup>Based on 22 percent of seniors' preference, as indicated in Post-High School Education Needs in Northern Virginia.

<sup>7</sup>Geographical Origins of Students Attending College in Virginia, Staff Report #3, Virginia Higher Education Study Commission, Richmond, 1965.



It is assumed that in expressing a desire to attend a four-year college in Northern Virginia, a certain number of students in filling out the questionnaire were actually indicating a preference to live at home while attending college. Thus, it can be expected that a certain number would actually attend colleges in the District of Columbia and nearby areas of Maryland. It is further assumed, however, that this loss would more than be offset by the number attending George Mason College from Washington and nearby portions of Maryland.

While projections for college-age population in Northern Virginia were not made beyond 1985, it is anticipated that an increasing percentage of the college-age population will desire to attend college, and that trends for continuing education will grow.

Beyond the Region -- Virginia is estimated to have had 2.35 percent of the national college-age population (that which is 18-21 years of age) in 1964.<sup>8</sup> Comparatively, enrollment in all institutions of higher education in Virginia was only 1.54 percent of the national total. Clearly, Virginia has been failing to provide higher education facilities to the extent justified by its own internal demands. Nationally and in Virginia, the percentage of college enrollments to college-age population has been increasing for a long period of time, with acceleration in the past decade. There is, therefore, every reason to believe that in the years ahead the rate of college attendance will continue to increase as will the total college-age population.

Statewide study in 1964 revealed that State controlled, four-year institutions in Virginia drew over 80 percent of their students from the State

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<sup>8</sup>Report of the Higher Education Study Commission, op. cit.

itself, the remainder coming from the other states and foreign countries. An additional enrollment of only five percent from the rest of Virginia by 1985 will produce an enrollment of 25 percent from beyond the Northern Virginia Region.

#### Considerations Beyond the Four-Year Curriculum

Although the present intent is to expand George Mason College to a four-year institution, there are a number of factors suggesting the need for providing opportunities beyond this level. More and more a four-year degree is being considered a beginning point, rather than the culmination of a formal education. One factor is an increasing desire of people to become better educated, either for personal edification or job advancement. In addition, numerous types of employment actually require employees to either continue to pursue higher degrees or periodically take refresher courses.

Advanced Degree Program -- The report prepared by the State Higher Education Study Commission while acknowledging that the immediate expansion of George Mason College should be concentrated on an undergraduate program, it also recommended that programs eventually be developed for master's and doctorate degrees in selected fields. The demand for advanced degree programs at George Mason will be brought about by the increased concentration of population, particularly with high incomes, the basic need of research and development industries, and the proximity to the Nation's Capital replete with its educational and cultural advantages.

Adult Education -- One of the most rapidly growing components of higher education involves the continuing education of adults. The Northern Virginia Center of the University of Virginia has an enrollment today of approximately

5,000 students which it is estimated will increase to 8,000 by 1975, and 12,000 by 1985.<sup>9</sup>






Consideration should be given to the number that can and should be accommodated on this campus making maximum use of the library, classrooms, and other facilities. The Center has suggested that perhaps fifteen acres for administrative and special instruction facilities could be allocated at this campus.

This amount of acreage can easily be provided. The number of these students that can be accommodated, however, must be considered in the overall program which would include the students from the graduate program discussed above as well as the number of students to be accommodated from outside of this region.

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<sup>9</sup>Communique of April 5, 1966, from the University of Virginia, School of General Studies, Northern Virginia Center.

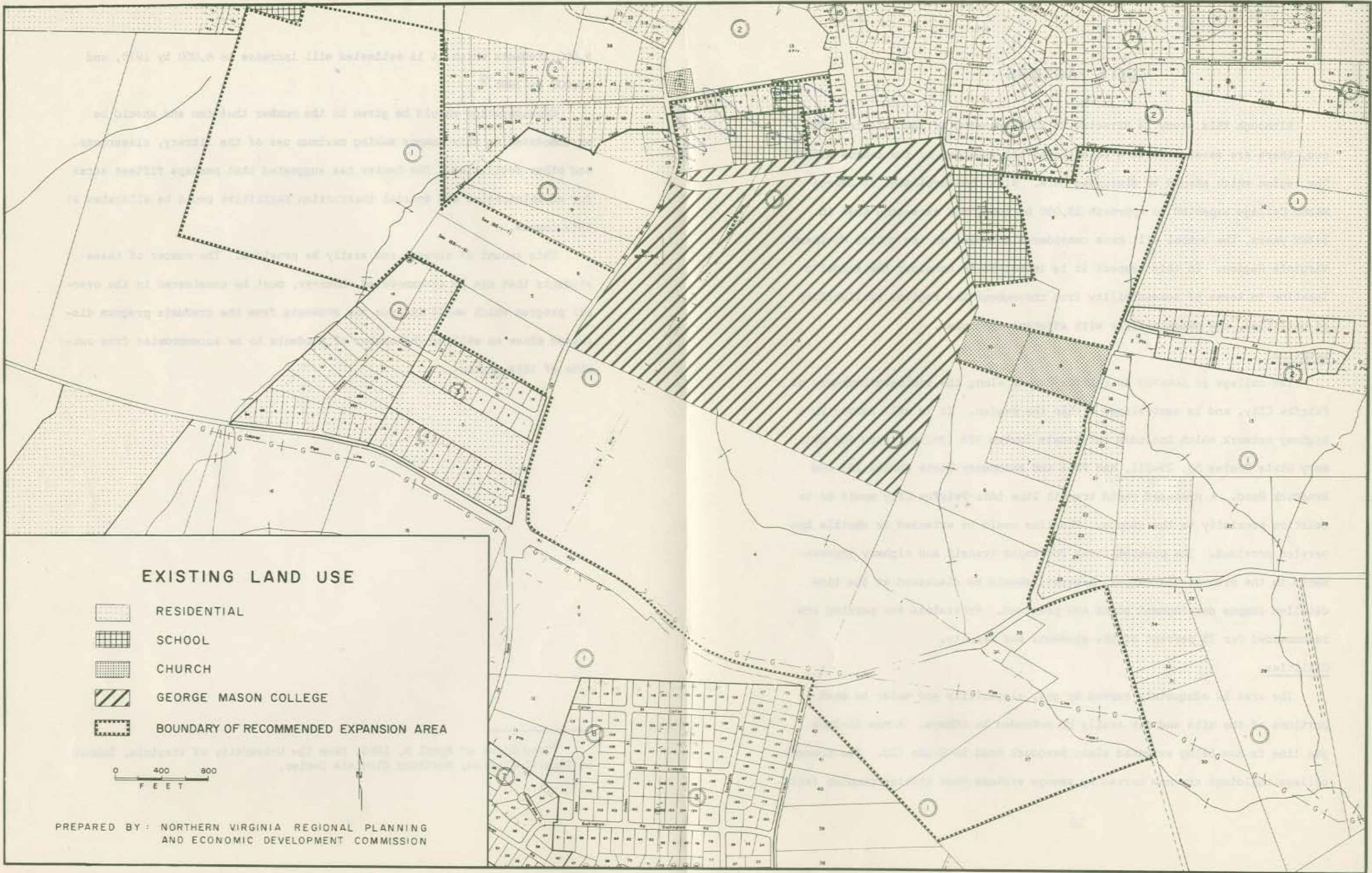
### EXISTING LAND USE

-  RESIDENTIAL
-  SCHOOL
-  CHURCH
-  GEORGE MASON COLLEGE
-  BOUNDARY OF RECOMMENDED EXPANSION AREA

0 400 800  
FEET



PREPARED BY: NORTHERN VIRGINIA REGIONAL PLANNING  
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## SITE FACTORS

Although this study is directed to the expansion of the existing campus, there are several factors relating to the location of the campus within the region which should be discussed here. With the enrollment at George Mason College expected to approach 15,000 by 1985, and exceeding that in later years, the school will have considerable impact on the entire Northern Virginia Region. In this respect it is important to consider the school's location in terms of accessibility from throughout the region, availability of utilities, and compatibility with adjacent land uses.

### Location

The college is located in Fairfax County along the southern boundary of Fairfax City, and is centralized within the region. It is well served by a highway network which includes Interstate Routes 495 (Beltway) and 66; primary State Routes 50, 29-211, and 236; and secondary State Routes 123 and Braddock Road. A proposed rapid transit line into Fairfax City would be in relative proximity to the campus. The line could be extended or shuttle bus service provided. The possibilities for rapid transit and highway improvements in the area of the campus, however, should be discussed at the time detailed campus development plans are prepared. Provisions for parking are recommended for 75 percent of the students and faculty.

### Utilities

The area is adequately served by gas, electricity and water to most portions of the site and may easily be extended to others. A new 12-inch gas line is now being extended along Braddock Road to Route 123. The present college buildings are now served by sewage systems that utilize pumping facil-

ities. Sewers are not available to the rest of the site at present, but the entire area east of Route 123 lies in the Pohick watershed -- an area that will be sewerred as a result of a bond issue approved by the voters of Fairfax County a year ago. Construction of the sewer is now underway and will be completed within two years.

There are no plans to sewer the area in the watershed west of Route 123; however, buildings placed near the road could be served by the Pohick sewer. Land further to the west can be used primarily for athletics, parking and storage until such time as it would be necessary to add campus buildings in the area, when methods of sewerding can again be reviewed.

#### Land Use

Extensive development has taken place in the portion of Fairfax lying next to the campus. Other development, because of lack of sewers, has been sparse. There is at present, however, sufficient land available to accommodate expansion of the campus with the minimum of disruption to existing development. With the exception of several schools and churches, the developed area around the existing campus is residential (see map on following page), being zoned largely for one-acre lots and several one-half acre subdivisions.

The nearest commercial development now serving the university is the heart of Fairfax City, approximately 1-3/4 miles to the north. Future location of commercial facilities in and around the campus should be given detailed consideration at the time a campus site plan is prepared.

## CAMPUS REQUIREMENTS

The demands for a four-year liberal arts college in Northern Virginia by 1985 will require facilities to accommodate a 15,000-20,000 enrollment. Total acreage needed will be determined by the types of facilities needed and the approximate area required for each. Except where otherwise noted, area requirements have been based on a nationwide survey of facilities in colleges and universities,<sup>10</sup> and are summarized in the table on page 19.

### Central Academic Structures

For the purposes of this report, central academic structures include: classrooms, libraries, physical education structures, and other specialized classrooms as required. Existing classroom buildings at George Mason College are two-story structures. In plans to expand the college, however, it is recommended that additional classrooms be three and possibly four stories high to maximize the use of the site. Where possible, classrooms should be of a general nature to increase their flexibility in use. The standard of 200 square feet per student, as recommended by the University of Virginia, has been used to determine classroom space needs. An additional six square feet per student should be provided for faculty offices. To insure their maximum utility, classrooms should be considered for evening instruction, to part-time students and extension courses offered through the University of Virginia.

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<sup>10</sup>College and University Physical Facilities Series, U.S. Dept. of Health, Education and Welfare, Office of Education:

OE-51004-9A - "Residence Hall Planning Aids," rev. January 1965;

OE-51004-14 - "Gross Area of Non-Residential Buildings, by Facilities Category," Sept. 1962;

OE-51004-16 - "Assignable Area of College and University Buildings, by Facilities Category, Function, and Type of Institution," April 1963.

### Administrative Offices

A central administrative building should be provided at a prominent location on the campus but somewhat away from daily activities of campus life. A total of approximately five square feet of gross building area should be allocated for each student (four square feet for administrative offices and one square foot for infirmary to be located elsewhere).

### Residence Halls

George Mason campus currently has no provision for residence halls. Even in the future the greatest number of students will be daily commuters, but the development of a four-year program will attract a number of students desiring campus residency. In addition to the students who will attend from areas too distant to permit daily commuting, some who are engaged in extra-curricular activities will prefer campus residency.

Having weighed these factors, the land area required for housing on campus has been computed, assuming about 30 percent of the student enrollment will live on campus. Space standards for student housing have been based upon 120 square feet for each male resident and 150 square feet for each female resident. It is anticipated that both the men's and women's housing would include facilities for dining, study, recreation, laundry, and storage. It is possible that student housing could include structures for co-op housing, including sororities and fraternities as well as conventional residence halls. Some consideration might also be given to married students' housing, particularly if graduate study is offered.



## Student Union

A central-campus location should be provided for a student union building which would provide a hub for campus social life and visitor information center. Facilities which should be considered for inclusion are: game and television rooms, public cafeteria, snack bars, music listening rooms, reading and study areas, group meeting rooms, a ballroom, a post office substation, and a large auditorium for student and public functions. As a guide approximately 10 square feet of gross building area should be allocated for each student.

## Stadium

The need for, or desirability of a large capacity stadium for spectator sports is not as clearly ascertained as is the question of residence halls. On the one hand the land acquired for such a facility and its appurtenances, such as practice fields, parking areas, etc., might well be spent in housing the facilities of an expanded campus. This is particularly true in an area such as this where land values are high and little vacant land remains available. On the other hand, the ability to compete in major sports with other colleges gives an identification to the school it might not otherwise receive and serves to strengthen the ties of association between the student and the school. The benefit to the community and the school could be mutually beneficial from numerous standpoints.

## Athletic and Recreational Facilities

Athletic and recreational facilities provide for three basic functions: facilities for physical education instruction, team participation in intra or intermural activities, and informal individual or group activities. The space needs for facilities requiring structures, such as gymnasiums, pools, and field house, have been included previously under the category of academic

classrooms. Outdoor areas required for court or field sports, however, have not been included in the prior space requirements and are estimated to require about four acres per 1,000 students. This latter standard does not include consideration for a stadium or other outdoor spectator sport facilities.

#### Parking and Streets

Due to the rather urban character of the Northern Virginia Region, from which the majority of students will come, it will be necessary to provide a high ratio of parking spaces to enrollment. In addition consideration must also be given to parking needs for faculty and visitors. As a guide a minimum of .75 spaces should be provided for each student and faculty member. By applying a standard of 300 square feet per parking space, a total of 145 cars can be accommodated per acre.

As a policy, student parking areas should be located only on the periphery of the campus. A central roadway should be provided, however, through the campus to accommodate visitors, access to all services and delivery buildings. Faculty and staff parking should be provided adjacent to administration, classroom, and service buildings on an assigned basis.

#### Service Facilities

There are numerous service activities performed on a campus for which adequate space must be required, some of these include: garages and maintenance yards for equipment, general storage areas, maintenance service shops, heating plant, incinerator and a laundry. The scope of services and number of personnel required to carry out these services will vary depending upon the size of the campus and its enrollment.

## General Considerations

Height of Buildings -- At the present time there are only two structures on the campus housing classrooms, a library, and administration offices. Both of these structures are two stories high. In order to retain the feel of a fairly spacious campus, it is recommended that future buildings, where possible, be built to three stories or even four where the placing of buildings on the varied topography would allow multiple level entrances and yet permit easy access. Special buildings such as the infirmary, the auditorium, and the student union could in some instances vary in construction from one story to over four stories.

Site Coverage -- Regardless of how many stories a structure may have, it is recommended that a ratio be established for the amount of land coverage to total building site. No more than 20 percent of any building site should be covered by a structure. This will prevent the campus from becoming cluttered. The technique of clustering buildings in a tight grouping also can provide an increased aura of open space.

Park and Buffer Area -- Although the above techniques are useful, there is no substitute for a park to obtain a park-like setting. Certain wooded, rolling sections along the streams should be preserved. A buffer strip twenty to thirty feet wide along the campus perimeter will screen objectionable views and enhance others. Skillful handling of planting and fencing will be required.

Mr. Jefferson's intimate association with the University of Virginia produced a design of enduring beauty. We can afford to do no less in Northern Virginia.

Table 2

CAMPUS NEEDS BASED ON POTENTIAL STUDENT ENROLLMENT

STUDENT ENROLLMENT	10,000	15,000	20,000
FACULTY AND STAFF	910	1,365	1,815

ACREAGE NEEDS

Area for Academic Structures	80	120	160
Student Union	6	9	12
Library	4	6	8
Administrative Offices	2	2	3
Infirmary	2	2	2
Parking Area	56	85	113
Streets and Roads	10	10	10
Athletic Fields and Courts	40	60	80
Service Areas and Facilities	12	15	20
Residence Halls	18	26	37
Stadium	55	55	55
Park and Buffer	29	39	50
Contingency	29	39	50
TOTAL	343	468	600

General Considerations

Review of Buildings -- At the present time there are only two struc-

tural on the campus housing classroom, a library, and administrative

offices. Both of these buildings are in need of major renovation.

**FINDINGS AND RECOMMENDATIONS**

With the goal of a primary education campus, it is recommended that future

- The percentage of college-age population attending four-year under-graduate institutions is higher for Northern Virginia than for the rest of the State.
- Currently sixty percent of the students attending college from Northern Virginia attend schools outside of the State.
- By 1985 it is anticipated that a minimum of 15,000 students will be enrolled in George Mason College: nearly 12,000 from Northern Virginia jurisdictions, and over 3,000 from the rest of Virginia and out of State. The land area required for the campus has been estimated on an enrollment of 20,000 to allow for some flexibility prior to and beyond 1985.
- Approximately 600 acres will be required to accommodate the needs of 20,000 students. With 150 acres currently owned, this will necessitate the purchase of an additional 450 acres.
- On the basis of estimates donated by the American Real Estate Appraisal Corporation, the proposed 450 acres will cost about three million dollars.



**EXPAND THE CAMPUS TO 600 ACRES TODAY!**

**THE AVAILABLE LAND WILL NOT BE VACANT TOMORROW!**

Dr. Jeffrey's Institute in association with the University of Virginia

produced a design of enduring beauty. We can afford to do no less in Northern Virginia.

# GEORGE MASON COLLEGE PROPOSED CAMPUS EXPANSION

-  EXISTING CAMPUS  
147 ACRES
-  RECOMMENDED EXPANSION AREA  
455 ACRES

