

Glenn Saunders

PRELIMINARY REPORT

T E C H N I C A L C O L L E G E

At

RESTON, VIRGINIA

DAN COLEMAN ASSOCIATES

Planning • Engineering • Landscape Architecture

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June 7, 1968

Mr. Robert H. Ryan
Chairman of the Board
Gulf Reston, Inc.
Reston, Virginia 22070

Dear Mr. Ryan:

The following preliminary report is a statement of the planning and architectural considerations involved in locating a technical college at Reston, Virginia.

The information presented is general since, at this time, there is apparently no specific information available regarding the character, enrollment, projected program, etc. of the proposed technical college. But rather there is the general information that this college may have 2,000 or 3,000 students, will probably offer courses leading to a Bachelor of Science Degree and will hopefully be closely related to existing and proposed industrial development at Reston.

Planning criteria such as minimum land areas, related facilities, locational requirements, etc., for educational institutions up through the high school level has become pretty well defined and standardized throughout the country. Planning criteria for institutions of higher learning is not only less well defined, but varies to the point where it may be said that there are no national standards. Further, there is little published information available concerning the impact upon, and the relationship between, the institution of higher education and its surrounding community. We do have the practical experience of those who are operating in this field and the history of the evolution of specific institutions and their related communities. We are becoming increasingly aware of the fact that although a campus may start out in a suburban environment, its surroundings will eventually become urbanized. This evolution is based upon the fact that the needs of the institution can realistically only be provided by the related community, but also upon the fact that the forces for the emergence of the related community are inherent in the establishing of an institution of higher learning in any given area.

Since our understanding of the primary function of this preliminary report is to aid management in its decision regarding the establishment of a technical college at Reston, and since this decision goes beyond the consideration of the direct impact of such an institution upon the community, as well as the consideration of the impact of the community upon the institution, this preliminary report and related exhibits addresses itself primarily to the problem of developing information upon which a decision may be made rather than to proposing a detailed solution to a specific site based upon assumed criteria.

Very truly yours,

DAN COLEMAN ASSOCIATES

Dan Coleman

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REGIONAL EDUCATIONAL REQUIREMENTS

"The Regional Development Guide 1966 - 2000" for the Washington D. C. regional area as prepared by the National Capitol Regional Planning Council sets forth the regional need for institutions of higher learning.

The need is based primarily upon the fact that the present two million-plus population of the Washington D. C. region may become five million by the year 2000.

The Guide states that, in addition to the necessary expansion of the American University, Catholic University, George Washington University, Georgetown University, and the University of Maryland, a new major university is needed in the regional area. The Guide suggests that it be located near or within a reasonable distance from the urban core adjacent to highway and transit facilities. The Guide also suggests that a new community might evolve around this new university and that this new institution might be established through a major endowment or private corporate aid.

The Guide proposes that, in addition to the existing George Mason College, additional four-year colleges will be required to serve the regional area. The Guide specifically states that one of these institutions should be located in the Reston - Herndon area.

The Guide also states that junior colleges and technical colleges will be needed throughout the regional area.

INSTITUTIONAL CATEGORIES

UNIVERSITY

Manageable Maximum Size - 25,000 students.

Primary Function - Graduate and professional education and research.

Makeup - Graduate schools, professional schools and one or more undergraduate colleges.

COLLEGE

Manageable Maximum Size - 10,000 students.

Primary Function - Occupational curriculums. Along with junior and technical colleges, four-year colleges should provide higher education for the majority of all college or university level students.

JUNIOR COLLEGE

Manageable Maximum Size - 5,000 students.

Primary Function - Vocational or technical curriculums. Junior colleges should provide terminal education or preparation for college or university admission.

TECHNICAL COLLEGE

Manageable Maximum Size - 5,000 students.

Primary Function - Similar to function of junior college, except that technical college may include courses leading to a Bachelor of Science Degree.

There are benefits to combining junior and technical colleges into one administrative unit where such combination is feasible.

The following represents generalized criteria that may be applied to the establishment of major universities, four-year colleges, junior colleges and technical colleges:

SITE AREA

100 acres / 5,000 students for the academic core.

(Ideal - not often attained).

The academic core includes the academic buildings, sports fields, parking, and some or all of the projected single student housing.

TOPOGRAPHY

Level to less than 10% for the academic core.

Some difference in elevation is necessary for esthetic reasons and drainage, but building construction economies, parking areas and pedestrian walkways suggest a relatively level site.

SITE SHAPE

Square or rectangular.

In order to provide optimum accessibility to central core from all areas.

BUILDING COVERAGE

20% of gross land area.

Balance devoted to sports fields, parking, single student housing, open areas, etc.

BUILDING FLOOR AREAS

200 square foot gross/student.

This assumes significant areas devoted to laboratories and special facilities. Institutions offering non-technical undergraduate courses (liberal arts) would require less space per student.

ATHLETIC FIELDS

15 acres plus 1 acre/1,000 students. Minimum area 15 acres.

This factor may be decreased if student body is all male
or all female.

STUDENT HOUSING ON OR NEAR CAMPUS

One-third of total student body.

(Desirable for students to gain cosmopolitan experience).

Single students represent about 60% of this total one-
third, or about 20% of the total.

STUDENT HOUSING AREA REQUIREMENTS

75 students/acre with parking - single students

50 students/acre with parking - married students

CAMPUS POPULATION

Total students +50%.

This includes students, faculty, and staff, but not
members of their families.

PARKING

1 space/2 total campus population - includes student housing parking.

COMMUTE TIME

30 minutes.

Based upon experience, 30 minutes represents the limiting commute time for the majority of students.

PHYSICAL FACTORS

Soil - proper support for foundations and capable of supporting plant life.

Utilities - All available in sufficient quantity.

Drainage - No serious drainage problems.

ENVIRONMENTAL FACTORS

Climate - Free from excessive heat or cold, smog and high intensity wind conditions.

Noise - Free from airport, highway, industrial or other excessive noise nuisance.

Esthetics - Inspiring site with outstanding view, stands of natural trees near lakes and streams, or other attractive physical features.

EXPANSION

Whatever is available - up to double the area required. This safety factor provides for possible development in now unviewable fields of teaching and research.

RELATED COMMUNITY

High on the list of critical considerations in establishing a campus in any given area is the community existing or destined to emerge around the college or university campus.

RELATED COMMUNITY, continued

Those responsible for campus site selection must carefully consider how development, redevelopment or evolution of surrounding open lands or existing communities may be controlled through zoning, master planning, deed restrictions or outright purchase.

Following is a quote from a privately circulated report by the Administrative Committee of the University of California on "New Campus Location Criteria". This section of the report is under the heading of "Desirable Characteristics of the University (or college) Community":

"By providing organically complex and closely interrelated facilities for education, research, residence and service, the University campus virtually becomes a city within itself. Despite this, however, it is far from being self sufficient and is heavily dependent upon the surrounding community to provide many of its total requirements."

RELATED COMMUNITY, continued

"While it has long been recognized that a student and faculty-in-residence program contributes to the educational process, assures more complete utilization of physical plant, and generally increases the vitality of the University, it is highly improbable that the University would ever provide on-campus housing for the majority of students or any significant number of the faculty and staff, consequently the community should be able to provide a wide range of living accommodations for a substantial number of students, faculty and staff."

"The key to high-quality performance is a distinguished faculty and a select student body. Assembly of such men and women is critically important and difficult. Competition for scholars and scientists will become increasingly keen all over the country. Recruitment of faculty and students for a new institution that is without local tradition and in a community that is new to a

RELATED COMMUNITY, continued

university will be difficult at best. This, coupled with the need for rapid expansion, makes it clear that every tangible and intangible asset that may present an appeal to members of a potentially strong faculty and student body should be used to attract them."

THE IMPACT ON RESTON

The impact on Reston of an institution of higher learning being located within the town limits will produce both positive and negative results. The analysis of these effects must obviously be general and cursory since few of the critical characteristics of the projected institution are known. However, there are parallels that may be drawn based upon the known history of existing institutions and their effect on related communities. Therefore, a technical college being located in Reston should:

1. Appease the Reston Cultural Syndrome.
2. Become an "industry" in that it would create jobs for faculty, staff and service employees.
3. Attract institutionally related industries and business enterprises which, in turn, would create jobs and improve the tax base.
4. Result in more job opportunities in the construction of on-campus buildings and facilities.

5. Result in the need for the construction of off-campus housing for married students, faculty, service staff as well as housing for all new residents generated by new institutionally related or created enterprise.
6. Provide additional purchasing power and support for Reston commercial facilities.
7. Increase traffic and parking problems.
8. Place additional demands on community services, i.e. fire, police, refuse collection, etc.
9. To some degree diminish residential values in the immediate vicinity of off-campus single student housing. These units must additionally be developed at low cost.
10. In regard to public institutions, remove additional lands from the tax roles.

The sum of the positive and negative factors weighs heavily in favor of the establishment of a college at Reston.

The number of job opportunities that would be created, the related businesses and industries that would be attracted, the number of dwelling units needed, and the purchasing power of the campus population are factors that are directly related to the size, scope and time of development of the proposed institution. When a more detailed program is determined, all of these factors can be more realistically projected. It is sufficient to say at this time that the college or university campus is for all practical purposes a "basic industry".

BENEFITS TO THE INSTITUTION

Benefits to the institution locating at Reston, Virginia, are both tangible and significant. Some of the more important benefits are as follows:

1. The college or university's primary goal which is "to advance man's understanding of the natural world and to interpret man's history and great creations" has a parallel in the underlying purpose of Reston, Virginia, which is to "advance man's understanding of how man should live in today's and tomorrow's world and to have Reston itself become one of man's greatest creations".
2. The Reston concept of the preservation of open space, the full development of recreational and cultural facilities, the separation of pedestrian and vehicular traffic, and the search for excellence in design are again all goals of the institution of higher learning. Therefore, Reston itself is the ideal extension of the college or university campus.

3. All the campus commercial needs can be served by existing or proposed Reston commercial centers.
4. The Reston industrial complex provides the ideal setting for exchange of ideas and services between institution and industry.
5. A full range of housing facilities for faculty, staff and students can be developed in direct relationship to all of the potential college sites.
6. Reston is readily accessible to transportation arteries and proposed transit facilities.
7. Reston is blest with a beautiful landscape.
8. All utilities are available to all of the potential college sites.
9. Soil conditions are favorable at all of the potential college sites.
10. Reston's citizenry is education-oriented.