

**1995 Virginia Tech Master Plan Proposal
Open Space Master Plan
and Long Range Strategies**

for
Virginia Polytechnic Institute & State University
Blacksburg, Virginia

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Paul B. Tubach, Jr.

This senior project is submitted in partial fulfillment of
the requirements for a Bachelor of Landscape Architecture Degree
in
The College of Architecture and Urban Studies
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This book is dedicated to my wife, Susan, rich in patience and understanding. A Proverbs 31 wife whom there is no equal. To my children Jennifer, Joshua, Jonathan and Justin Paul, whose joyful hugs I received every day after school were its own reward.

Fifty years ago, with a population of 2,331 students on campus, no one would have thought to plan for a student population to increase by 20,000. The same is true for today: if Virginia Tech doesn't have a plan for the next 50 years and another hypothetical 20,000 students, we will exhaust our natural resources and impoverish the beauty of the campus. The development of Long Range Strategies and an Open Space Plan will help protect the quality and character of the campus many have come to remember her by.

“To succeed as a work of art, a campus should be the collaborative product of social scientists, planners, architects, landscape designers, scholars and naturalists. But too often a campus’s aesthetic development has more to do with immediate needs, the college administration’s artistic sense (if any), the success of frenetic fund raising, and, sad to say, chance.”

Thomas A. Gaines, The Campus as a Work of Art.

“When we shape a landscape, of any size, we need to place it in a larger perspective, to see the web of relationships and avoid breaking critical strands, and sometimes create new ones.” John Lyle

Table of Contents

I. Open Space and Long Range Strategy Master Plan

Evolution of the Campus Model

- Quadrangle as Form Giver
- History of the American Campus
- Evolution of the Virginia Tech Campus

The Problem

- An analysis of Current Planning Methodology

The Proposal

- The concept and primary objectives

Site Analysis - Physical

- Paths, Edges, Nodes, Districts, Landmarks

District Map

Site Analysis - Functional

- Drill Field as Landmark
- Drill Field as Quad
- Drill Field as Open Space Organizer
- Main Axis and Campus Orientation Map
- Site Planning and Relative Scale

The Open Space Proposal

- Open Landscape Space
- Call for a New Open Space
- New Open Space Map

- Campus Greenway
- The Town/Gown Open Space Interface

Long Range Strategies

- The Concept
- The Proposal

Analysis Map- Existing Buildings

Analysis Map- The Built Environment

II. Master Plan Analysis

Physical and Structural Organization of the Mall

The VPI Mall and the "Bridge"

- Mall as Structural Element
- Mall as Campus and Open Space Organizer
- Mall as Entrance
 - Traffic Studies
 - A New Gateway
- Mall as Urban Construct
- Mall as Functional Element
 - Visual Simulation of the Bridge
- Mall and Relative Scale
 - Scale and Height: Length Ratios
- Memorial Chapel Defense
 - Section/ Elevation Diagram
 - Section/ Elevation Statistics

Evaluating the Master Plan Process

- Public Opinion
 - C.H. Cowgill's Letter of 1951
- Historic Precedent
- Traditional Planning Methodology
- Economic Factors
 - Semi-scenic View of Drill Field

VPI Mall and the "Bridge" Summary

Analysis of Current Design Proposals

- The Creative Arts Building
- A New Village Green
- Residence Halls
- Pritchard Prairie
- Special Purpose Housing
- The Student Services Building
- Parking

Other Master Plan Proposals

- Duck Pond Realignment
- The Golf Course
- Washington Street Realignment
- Trees
- Trees as Landscape Form
- Eggs Were Laid

Executive Planning Summary

III. 1995 Master Plan Maps

Circulation Map

Long Range Strategies

Open Space Map

Land Use Proposals

Evolution of the Campus Model

Quadrangle as Form Giver

The early colleges in Europe were cloistered, dependent upon the monastic tradition for their structure. Typical of the Cambridge and Oxford model, the quadrangle became the basic structural element which consisted of an enclosed square with an interior courtyard. This model represented the introspective and monastic nature of scholasticism: to protect culture and restrict unfavorable influences. These colleges were not part of a larger university system and existed solely for the intentional study of a particular discipline. They were familial in nature "where students and teachers lived and studied together in small, tightly regulated colleges."¹

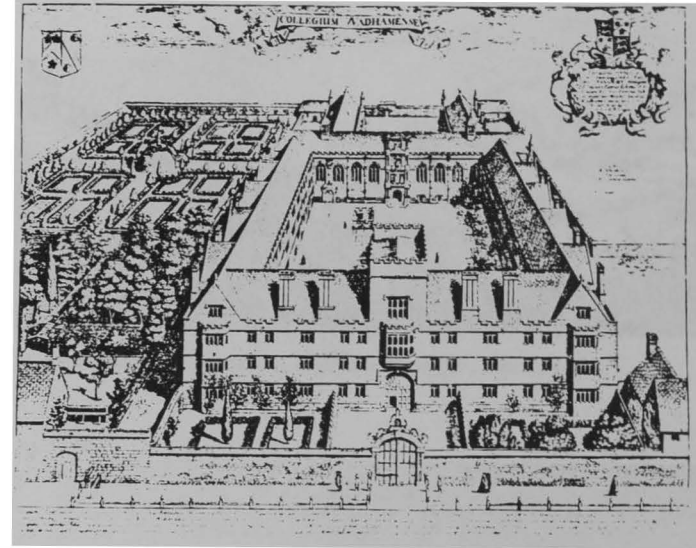
During the Renaissance, attitudes opened up and so did the academic community. The structural elements were still quadrangle in form but the academic tradition developed an outward perspective. Walls which were used to cage knowledge were no longer needed to keep people in either. In the mid 1500's, a new archetype developed in campus planning. Influenced by the French chateau and medical advances necessitating fresh air,² the open quadrangle provided college and universities planners with a distinctly fresh building alternative. Originally a simple wall with a gateway, the three sided quadrangle permitted the outward expression of the university, causing less confinement and greater opportunity for expansion.

Preserving and utilizing all available land within a confined boundary or square no longer restricted the college planner. Becoming less dependent upon internal organization, contextual relationships with other elements (such as vistas, focal points, axial organization³) outside the quadrangle precipitated the development of new building styles which helped to expand the visual and architectural expression of quad formation. This unlimited potential for open quadrangle expression was enthusiastically employed during college development in The New World.

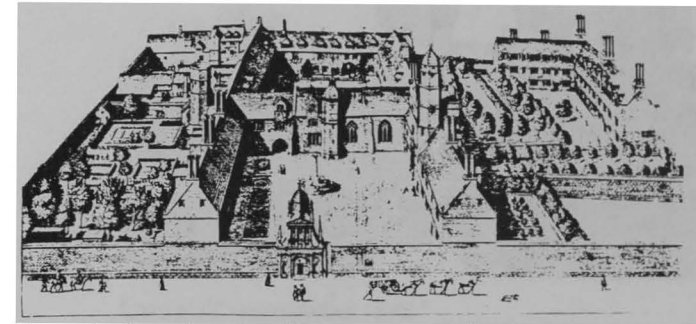
History of the American Campus

The American experience began with the traditional European style but concluded that new opportunities for collegiate expression were possible in the New World. The Colleges of Harvard (1636) and William and Mary (1693) developed building structures consistent with the new open quad model. Almost to be expected, structures began to evolve and disperse. American Colleges were not bound within the urban context of European communities. Wings separated from main buildings and varied in size and configuration.

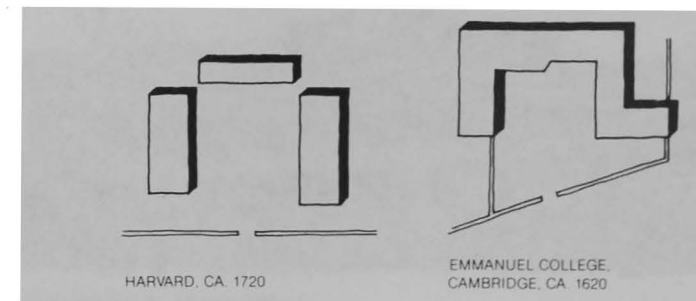
The evolution of the American College was initially characterized by building organization and structural elements. Readily available land did not restrict the location of colleges, hence another style emerged. It was during this time that the word campus was first used. Coming from the Latin CAMPVS, meaning a field or green expanse.⁴ This wealth of land



The enclosed quadrangle, Waldham College, Oxford.¹



Three sided quadrangle with open courtyard and gate, Gonville and Caius College, Cambridge.²



Changing patterns in the American quadrangle.³

and artistic expression must be attributed to the vast land resources of the new America and the fashionable English Landscape School trend at the time. These two main ingredients have given the American College and University a unique and distinctive presence in campus planning.

Buildings followed master plans initially, but as development progressed, the organization of these buildings into some coherent and balanced plan seemed to lose all sense of hierarchy and order. Structures were set upon open expanses with little regard for consistency and construct.

During this time, the American planning tradition can be viewed as void of design intent yet mature in the haphazard acts of random development. Sometimes it was successful; most of the time it wasn't. Arbitrary building sites and arbitrary buildings define this era. It was into this era that the Preston and Olin Institute emerged, eventually becoming the Virginia Agricultural and Mechanical College in 1872 and Virginia Polytechnic Institute in 1896.

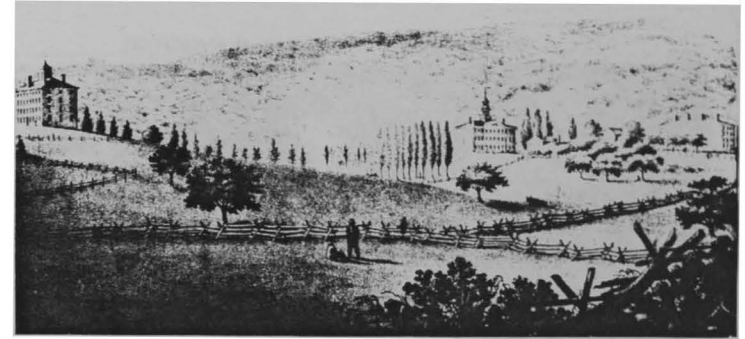
Evolution of the Virginia Tech Campus

The Virginia Agricultural and Mechanical College was originally one building located on five acres of land. The new land grant college acquired hundreds of acres through the sale of public lands afforded by the Morrill Act of 1863. The initial buildings were grouped in military regimen, characteristic of Tech's early beginning. Lane Hall, serving as the focal structure surrounded by four barracks, introduced quad development on the campus.

As new academic buildings and faculty houses were added, the college expanded toward the drill field and fell victim early on to random rural development. Campus formation, for the most part, relied heavily on staying out of the muddy field known later as the Drill Field.⁵ Agriculture and science colleges dispersed from the original core structure permitting future expansion of their facilities. More buildings and crisscrossing paths typified the randomness of a campus lacking in structure and order.

Despite a lack of planning, the campus was bestowed early on with an architectural heritage of Collegiate Gothic structures constructed of quarried limestone that would affectionately be known as "Hokie Stone." These structures dominate the campus and became Virginia Tech's second architectural style.

In the early 1930's, an open space was proposed by Warren Manning, an architect from Boston. His plan pronounced the Drill Field "as an open expanse to be left open for ever."⁶ This open space became the primary organizational element for campus development and provided Blacksburg with a strong landscape form. Locating buildings relative to this open space organizer was used extensively until the 1950's, when rapid



Random rural development, Williams College, Mass, 1830.⁴



Lane Hall, constructed 1888.⁵



Random rural development at Virginia Tech, about 1891.⁶

campus development began to exceed the limitations of available building sites. At this time, Professor Cowgill developed another planning strategy which was simple enough to evolve with future campus development. To the best of my knowledge, sadly enough, none of these plans have been preserved.

There are three main architectural forms on Tech's campus. The first architectural character on campus was the brick military quad. The second architectural character on campus was Collegiate Gothic, constructed of Hokie Stone. During the 1960's, a third archetype was introduced, which significantly altered the architectural landscape of the campus. Modernist buildings of concrete and steel, repeated the sins of random rural development in a crude, urban manner. These buildings defied all connection with the existing landscape fabric and competed with each other for monumentality.

Without the aid of an open space organizer, these structures not only alienated each other and the existing campus framework, they alienated the site they were developed on. Open spaces surrounding these island buildings bore no relation to the actual building. With little hope of these negative open spaces ever articulating a positive figure ground relationship, the functional alternative was reduced to a sea of asphalt parking and arbitrary planting beds. The dysfunctional relationship of buildings void of organized planning and historical context left the university struggling to regain its identity within a fragmented landscape fabric.

Recognizing the need to preserve the architectural character of the university, Master Plans were developed in 1972 and 1983. In the wake of producing documentation of existing structures and services in the 1983 plan, opportunities for development continued to threaten the visual quality of the campus. Dubbed the "infill master plan," quality open spaces were compromised and interpreted as opportunities for building development.

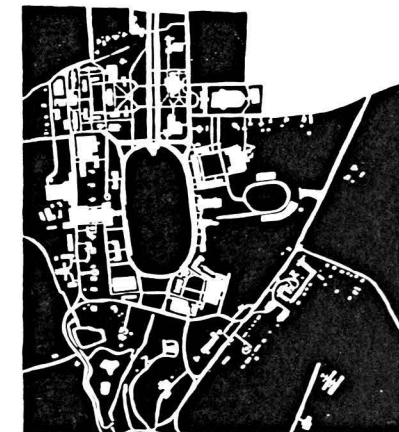
Despite employing great architects and planners, the university failed to produce guidelines and standards which would have prevented some architectural problems during the last 40 years. Campus planners failed to recognize the difference between urban design in an urban context and urban design in a rural context, thereby adopting some urban planning principles which violate Virginia Tech's rural campus heritage. Though not thoroughly documented, four eras in Tech's campus planning include:

- 1872-1930 random rural development
- 1930-1950 the golden age of organized quad and open space planning
- 1950-1980 The Greater VPI expansion plan with modernist sprawl
- 1980-present random urban development and infill.

Infill development created some negative impacts on campus open space, circulation, parking and accessibility in recent years. Although the university initiated a Master Plan in 1994, two critical questions confronting university planning needed to be answered: what is the long term strategy for development and how can we preserve existing open spaces? A new open space organizer, in the Drill Field tradition, was needed.



Aerial view of campus and Drill Field, June 1951.⁷



Campus development in 1954 (note the changes in front of Burruss).⁸

The Problem

Virginia Tech currently has 23,500 students and approximately 6.0 million square feet of facilities. Within the next 6-10 years, 2000 additional students and 1.2 million square feet of development will be proposed for the university. In order to get building funding from the Virginia General Assembly, the university must develop a master plan every 10 years. Current development and growth patterns appear to solve immediate problems and achieve short term goals but lack long range plans.

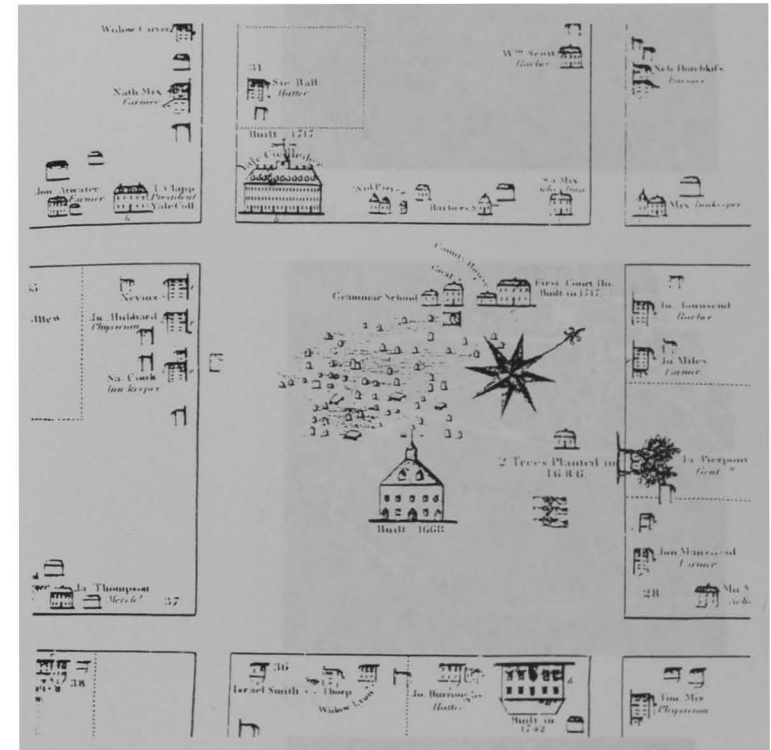
This band aid approach to site planning is fragmenting the landscape fabric, threatening to compromise the visual character of the campus. Buildings are located disrespectful of the surrounding context and campus planning methodologies. Current infill development strategies are perceived as arbitrary, buildings are void of character and the spaces between buildings are ill-defined. How can buildings which alienate the site they are on fit naturally into any environmental context?

Historically, open space planning was the precursor to basic site and project development⁷, but Virginia Tech does not have an open space plan readily available. An Open Space Plan as part of the Master Plan must be developed to preserve the historic character of the campus while providing opportunities for development. "We need to understand that history and environment are the two faces of architecture, that no building stands alone."⁸

Just as there are differences in how architecture is interpreted and applied, so also is landscape architecture and landscape planning the object of much misinterpretation. Landscape planning needs to be differentiated from landscaping, which is naturalistic and gardenesque. Locating plants is not the crux of landscape planning, which employs a greater influence upon the natural and built environment. Resource management, stormwater management, environmental and cultural impact studies, historic preservation, site analysis, master planning and site engineering are but a few landscape planning issues affecting landscape architects.

Lost along the path of modern planning is the contextual relationship of the building to the landscape. Our landscape perspective is out of focus when it is viewed only in terms of its development potential. Society has become too dependent on existing development methodologies contingent on economic and political considerations which dominate the decision making process. When was the last time we ever asked the question, "Is it appropriate to build?" Our dependence has tainted our ability to utilize proper planning strategies. Open space planning helps determine proper land use policies and the appropriateness of design proposals.

Employing a more holistic approach to environmental planning, the historical and contextual landscape determines the practicality and feasibility of site development, not economic or political needs. A more refreshing alternative in the design of buildings would serve to compliment gardens with buildings instead of gardens that compliment



Example of a town commons or village green as an organizational open space, New Haven, Conn.⁹

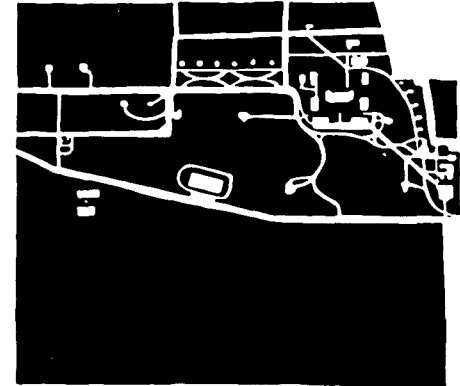
Central part of New Haven, Connecticut, in 1748. At upper left edge of the Green is first Yale College building, constructed 1717 by master builder Henry Caner. Large building in the Green is the town meetinghouse. Detail of an engraving by William Lyvon, of 1806, based on a drawing by James Wadsworth, Yale class of 1748.

unpolished equivalent of open space planning. It doesn't just influence site planning, it dominates the what, where, how, why ... and if ... of site development.

Some questions that need to be asked: how does Tech value the land? what guidelines determine expansion? have any limits been set with regards to restricting growth or development in certain areas? are performance standards a valid means of evaluating development proposals? are there any other planning options or development strategies that offer an alternative to infill development? The landscape around Virginia Tech is changing rapidly because the land is vanishing. The Greater VPI expansion plan is preeminent when land is valued only as a spatially good resource for buildings.

The main issues which need to be addressed consist of the following:

- The recent master plan did not adequately address the key issue: long range planning . After we have maximized our infill potential, what are the long range strategies influencing university development for the next 50 years.
- Virginia Tech must recognize that an open space master plan provides an organized framework for future campus development and an integrated network of open space opportunities which are needed to preserve the historic and environmental qualities of campus.
- Infill planning has been gamefully reduced to circling potential sites and 'name that building.' Although many infill projects have increased the image and beauty of the campus, current infill proposals need to be evaluated after an open space plan is developed. Some infill proposals are consuming quality open spaces on campus without recognizing the quad as the fundamental planning model, the drill field as the main structural element for organization, and open space planning as the precursor to a beautiful and well organized campus. As a result, there are places on campus which are struggling with vagueness, ambiguity and placelessness.
- Develop performance standards and evaluating criteria for current and future development policies and proposals to determine if they are successful.
- Strengthen the participatory design process and make it available to those who are interested in being a part of the process. What do the residents of Virginia Tech want the university to look like in the future and how can they tangibly influence the development process in order to preserve the visual character of the campus? This may involve a strategic plan to assess development qualities which the campus determines is important to maintaining and preserving the character of the campus.



1908



1921



1931

Virginia Tech Campus Development.¹⁰

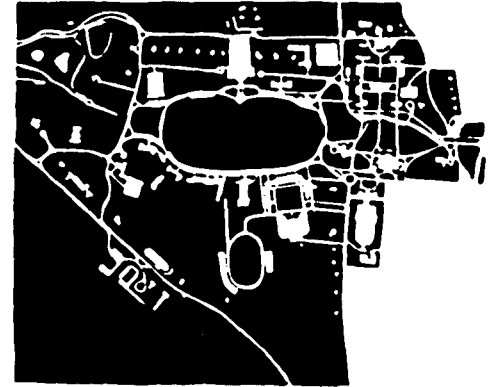
The Program

The concept for doing this master plan, initially, was limited to developing objective criticisms concerning the “bridge” and other proposals in the 1994 Master Plan that didn’t seem to “fit.” After analyzing the nature and planning needs of the VPI Mall relative to the bridge proposal, it became clear the design process affecting campus development represented “a major departure”¹⁰ from the traditional campus planning of the university. Therefore, the objective criticisms of the “bridge” initiated the development of this 1995 Master Plan which is more consistent with the planning heritage of Virginia Tech.

The seeming absence of defined long range planning strategies in both the 1983 and 1994 Master Plans were seen as the main hindrance to the ten year planning cycle because it was never clear whether the desired result was ever achieved. Developing a fifty year long range plan helps prevent conflicts between short term development cycles. This comprehensive approach to planning should be integrated with the Town of Blacksburg comprehensive plan (due in 1996) when environmental considerations are ill affected by political boundaries.

The three primary drivers for the 1995 Master Plan proposal are to:

1. Develop a Long Range Strategy for expansion and campus development.
2. Initiate an Open Space Plan which:
 - develops a new organizational form for future development in the Drill Field tradition
 - introduces new academic and residential districts close to the academic core
 - preserves existing open spaces and traditional quad development patterns while advocating expansion that reduces the need for additional infrastructure and energy resources
 - develops new open space opportunities enhancing open space/wildlife/greenway corridors
 - designates Solitude and the Duck pond as a historic preservation area
 - enhances pedestrian, bicycle and bus circulation patterns
 - establishes a main entrance/gateway for the university
3. Analyze the other 1994 Master Plan proposals with respect to conflicts in the Open Space Plan and Long Range Strategies of this Master Plan proposal.



1945



1954



1962

Virginia Tech Campus Development.¹¹

Site Analysis - Physical

The Virginia Tech campus is located in Blacksburg, a town situated on a plateau between the Blue Ridge and Appalachian Mountains. The physical character of this site mimics the geographic context of the area. Located in a low area between two ridges, it acts as a miniature physiographic version of Blacksburg.

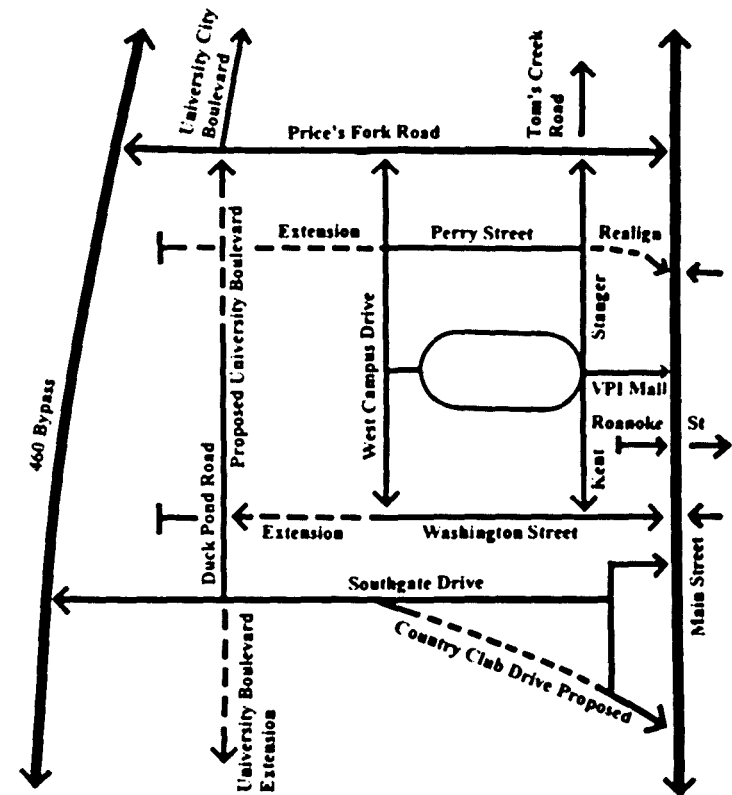
There are several significant forms that give identity to the town and the university. Paths, edges, districts, nodes and landmarks⁹ help to define spatial areas and architectural characteristics to clarify placemaking and placemarking¹⁰ qualities. Understanding these elements assist planners in determining the imageability of built form ... which communicates an unspoken pattern language of inherent meaning, cultural identity and community values. "When man dwells, he is simultaneously located in space and exposed to a certain environmental character. The two psychological functions involved, may be called 'orientation' and 'identification'... he has to know where he is ... but he also has to identify himself with the environment, that is, he has to know how he is in a certain place."¹¹

Paths

At the onset, a disclaimer was intended to establish that most paths are pedestrian oriented and of minimal planning interest. Further analysis revealed the entire university is a network of pedestrian and vehicle paths and channels which people use for navigation, and, in fact, are some of the most easily recognizable landscape forms people use for orientation. Several paths are not pedestrian oriented and were critical to developing a cohesive planning study for the university.

Other than the main arterials of Main Street, Prices Fork Road and the 460 Bypass, the main vehicular paths that access the university are secondary roads: Tom's Creek Road/Stanger Street, Turner Street, The VPI Mall, Kent Street, Duck Pond Drive and West Campus Drive. Roanoke Street is also a primary northern access road but terminates before it enters the university. This information is important and will be applied to planning issues later.

Pedestrian paths dominate the campus. Motorists discover this while trying to access the university with a car between classes. The main paths on campus cross the Drill Field and were laid out in such a manner so as to direct Freshmen students to their classes. Secondary paths act as corridors and connections between open spaces and academic buildings, and informal paths lead students from campus to public parks or open spaces (such as the Duck Pond). This information is invaluable as a means of preparing an open space plan, which is highly dependent upon circulation and way-finding for public perception and orientation of the campus. Interesting enough, there is only one path on the Drill Field that does not lead students from the residential district to an open space system: that path leads to Williams Hall.



Primary road network around campus.¹²

An anecdote concerning paths is proudly circulated among Blacksburg residents

**All roads may lead to Rome....
but all dirt roads lead to Blacksburg**

Edges

Edges are definable boundaries or borders that include walls, roads, water features and the invisible barriers between districts and zones. They can serve as paths or transition areas when changes in land use, geography, building type, or character of place occur. In conjunction with numerous structural edges on the Virginia Tech campus, there are physiographic edges such as ridges and other landform changes. The most significant edges (which also restrict campus expansion) are the downtown, main road arterials (Main Street and the 460 Bypass) and the campus boundary. Larger geographic edges are detailed in the 1983 Master Plan and are not duplicated here.

Nodes

Nodes are easier to perceive than to visually clarify. As residents and visitors enter from Interstate I-81, the first node they experience will be the 460 split, separating the town traffic to the right and university traffic to the left. It is also significant to mention the split at this time, because in terms of way-finding, efforts should be advanced to qualify and promote a formal entrance into the university from this arterial instead of the Main Street corridor.

On the university edge, other nodes include the historic downtown, the VPI Mall and Main Street intersection, the Main Street and College Avenue intersection, and where all the primary vehicular paths enter the university. Almost without exception, other campus nodes are open spaces with pedestrian paths that permit students to congregate between classes. In fact, the Drill Field acts as both a node, a landmark and an open space which defines edges and separates the academic and residential districts. On campus, the most dominant nodes are at either end of the Drill Field: the Duck Pond entrance and the War Memorial Chapel. They provide strong visual egress as portals for critical viewsheds through the campus, but severely limit any congregation or pedestrian circulation.

Districts

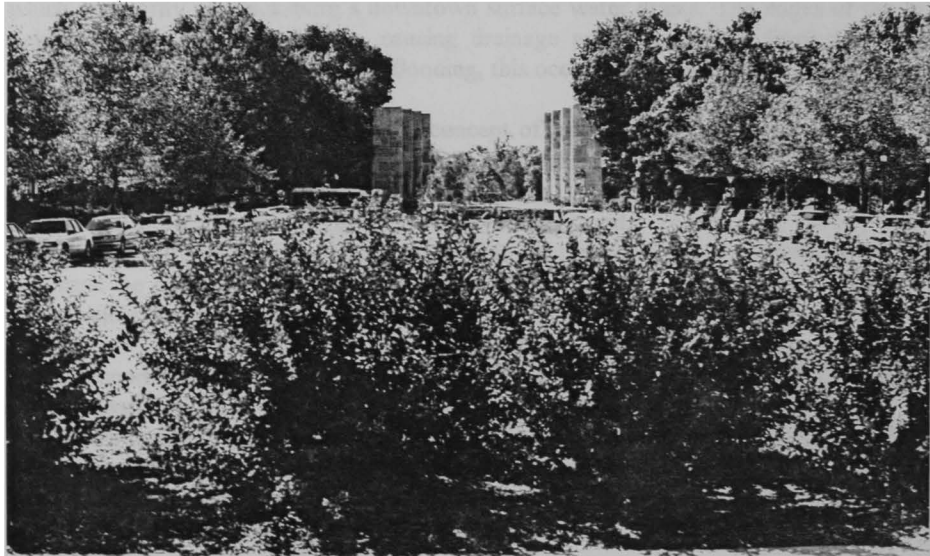
The clearest and most easily discernible districts have common, cohesive and identifiable characteristics. On campus, there are five main districts in the campus core: the academic, residential, administration, student services and athletic districts. Two other districts include the agriculture/life sciences district on the northwest side of the 460 Bypass, and a proposed open space/greenway district consisting of the Duck Pond as an historic preservation area, a relocated golf course and other open space/greenway elements. It is noteworthy for this master plan proposal and future planning studies to recognize the potential implications for future development of this district (see District Map, next page.)

Virginia Tech letterhead with Memorial, 1995.¹³

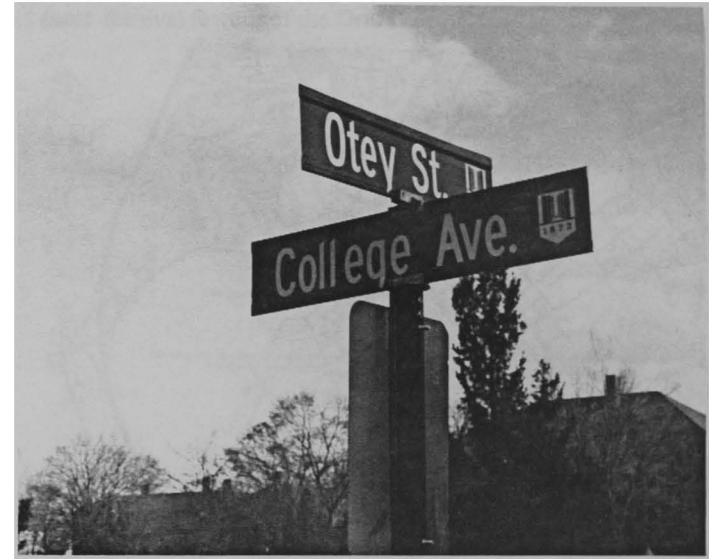
Landmarks

There are clearly two dominant landmarks on campus. The most dominant feature is Burruss Hall, the mainstay of all administration activity on campus. Illuminated at night, it has become an academic beacon and historic monument for all who visit the university. The other, more submissive, landmark structure is the War Memorial Chapel, or simply the Memorial. This is the only building on the Drill Field and acts as the spiritual gateway between the VPI Mall and the Drill Field. It was erected in 1951 to honor those Techmen who died during World Conflicts and represents the heart of the campus. Both these structures have been used symbolically as strong representational images of Virginia Tech. The latter has been used extensively as a logo on all university letterhead and highway signs leading into Tech.

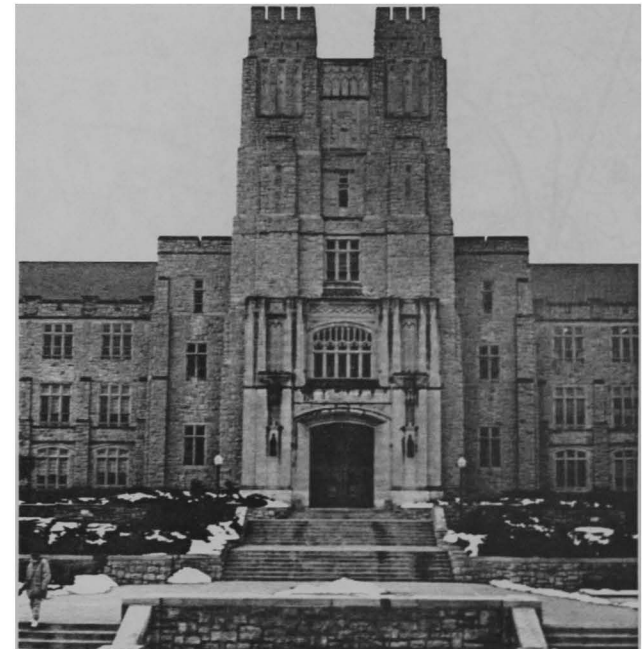
Other landmark structures include Lane Hall, Slusser Tower, Lane Stadium and to a lesser degree, the Electric Plant smoke stack. One criticism of the 1983 Master Plan proposed high rise structures similar to Slusser Tower as landmark features to help create a strong campus image. It is encouraging that this proposal was never implemented. Other types of non-structural landmarks include the golf course, Duck Pond, commuter lot, airport, the VPI Mall and the Drill Field.



View of the Memorial from the Mall, 1995.



Roadway signs on campus with Memorial, 1995.



Primary landmark for Virginia Tech, Burruss Hall, 1995.

Site Analysis - Functional

How a campus functions is just as important as how it is perceived. Evaluating the dynamics of the campus and the interrelationships between various programmatic elements is essential in developing master plan proposals which elevate and celebrate the meaning of campus at Virginia Tech. Understanding how these elements function and respond to the natural and built environment is paramount to creating future development proposals on campus which are dynamic and supportive of the traditional planning heritage of the university.

Drill Field as Landmark

The most significant landscape structure on campus is the Drill Field. In the local context of Blacksburg, its form is clearly distinguishable both in plan view and in elevation. There are numerous landmarks when the campus is perceived in elevation, but only two features are prominent in plan view: the roadway arterials and the Drill Field. The campus is located around the Drill Field which acts as an open space organizer for buildings.

This is the main organizational element giving structure and order to the campus. It is the focal point for many campus recreational and ceremonial activities and has all the characteristics of a “green”. The center of the drill field is completely open and from this location, the architectural beauty of the campus is greatly exposed. The edges of the drill field are surrounded by trees which reveal academic and residential buildings of Collegiate Gothic style architecture built of local limestone.

It’s bowl shaped topography mimics the surrounding geography and represents the lowest point in the campus core. The drill field is poorly located in a drainage basin, through which a majority of Blacksburg’s downtown surface water drains. The edges of the drill field have been built up slightly, causing drainage problems on the Eggleston Quad. Despite considerable care to prevent flooding, this occurs about every 10 years

The Drill Field reflects the fundamental concept of campus, coming from the Latin meaning “field”. It was proposed in the early 1930’s by Warren Manning, from Boston, as “an expanse to be left open for ever.”¹² The architectural, physical and spiritual significance of this space is inestimable and must be preserved as a sacred space, free from any incompatible intrusions.

It also responds as the transition area between the academic and residential districts on campus. There are numerous paths criss-crossing this open space used by thousands of students hourly as they traffic between the residential and academic districts. When classes are finished, various intramural sports and collegiate activities occur in this area.

Map of Blacksburg and Virginia Tech
(note the oval feature of the Drill Field).¹⁴



Panorama view of the Drill Field from the Memorial, 1995.



Drill Field as Quad

As discussed earlier, quadrangles (or quads) are open space areas with development occurring on at least three sides to help spatially define an area. The idea behind preserving open space on campus responds directly to the quadrangle as the architectural model for site planning. There are many significant reasons why open space planning is crucial to the aesthetic beauty and visual enhancement of this university:

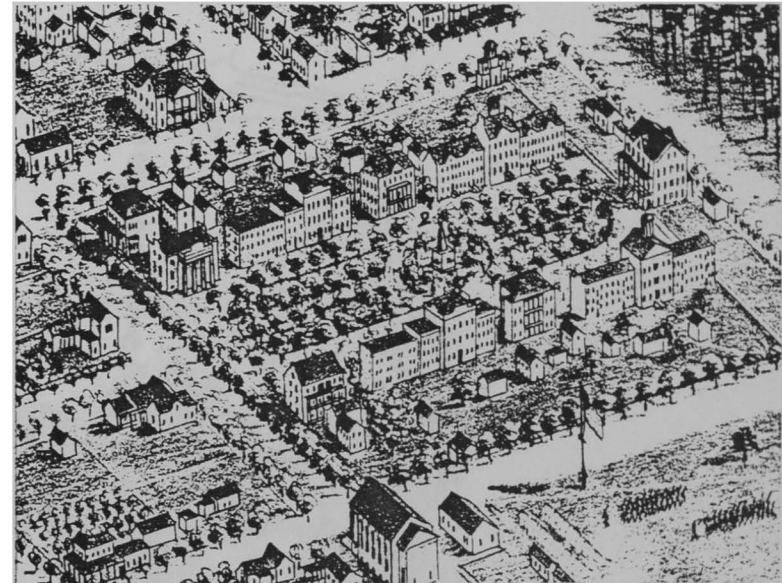
- it orders buildings relative to a common organizational form
- this form is part of a larger network of organizational forms enhancing the functional and spatial qualities of building and landscape relationships
- development is not arbitrary but very dependent upon site, local context and the interrelationship of all buildings and landscape elements into a complementary and unified landscape fabric.

Typical of quadrangle development, this pattern for locating buildings on three sides with one side offering borrowed views is a classic organization style in site planning. This borrowed view is the Duck Pond, which is part of the largest open space area on campus, extending all the way to the 460 Bypass and beyond.

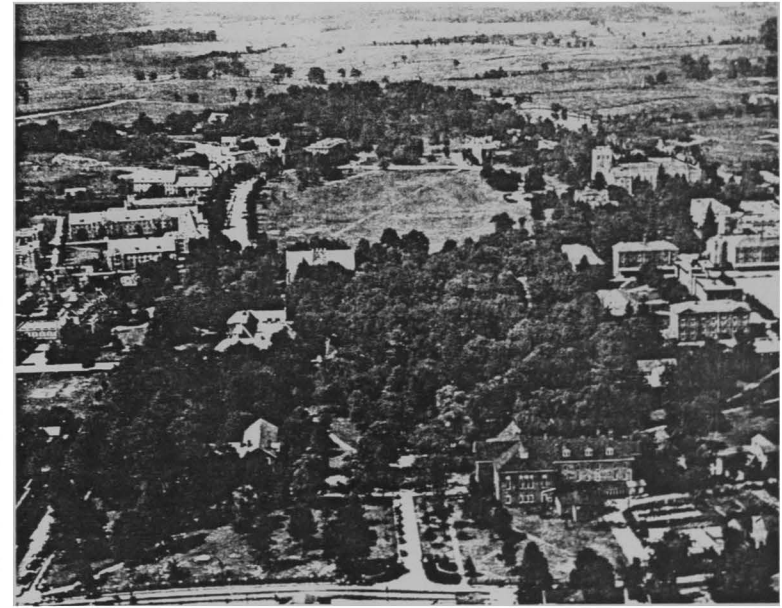
Drill field as Open Space Organizer

Just as the Drill Field is the organizational form for ordering the built environment, it also acts as the organization form for ordering the natural environment and open spaces on campus. As we examine the framework of the university, a major and minor axis can easily be discerned (see map, next page.) Along these axes, buildings, open spaces and land use are structured and efficiently organized into imageable districts by constructing definable spaces.

Either intentional or accidental, the importance for future master plan development is crucial for understanding - and building upon - this simple principle: the axes must be recognized and not compromised. Development along the minor axis is practical while development on or over the main axis will destroy the unique and rare quality of this Virginia Tech open space/greenway corridor. This diagram will be critical for examining the necessity of an open space plan on campus which will contest current master plan proposal for developing across the main axis with a bridge.



Open space as structural organizer, South Carolina College, 1872.¹⁵



Views of the Drill field - before and after the VPI Mall was built in 1951.¹⁶

Main Axis and Campus Orientation

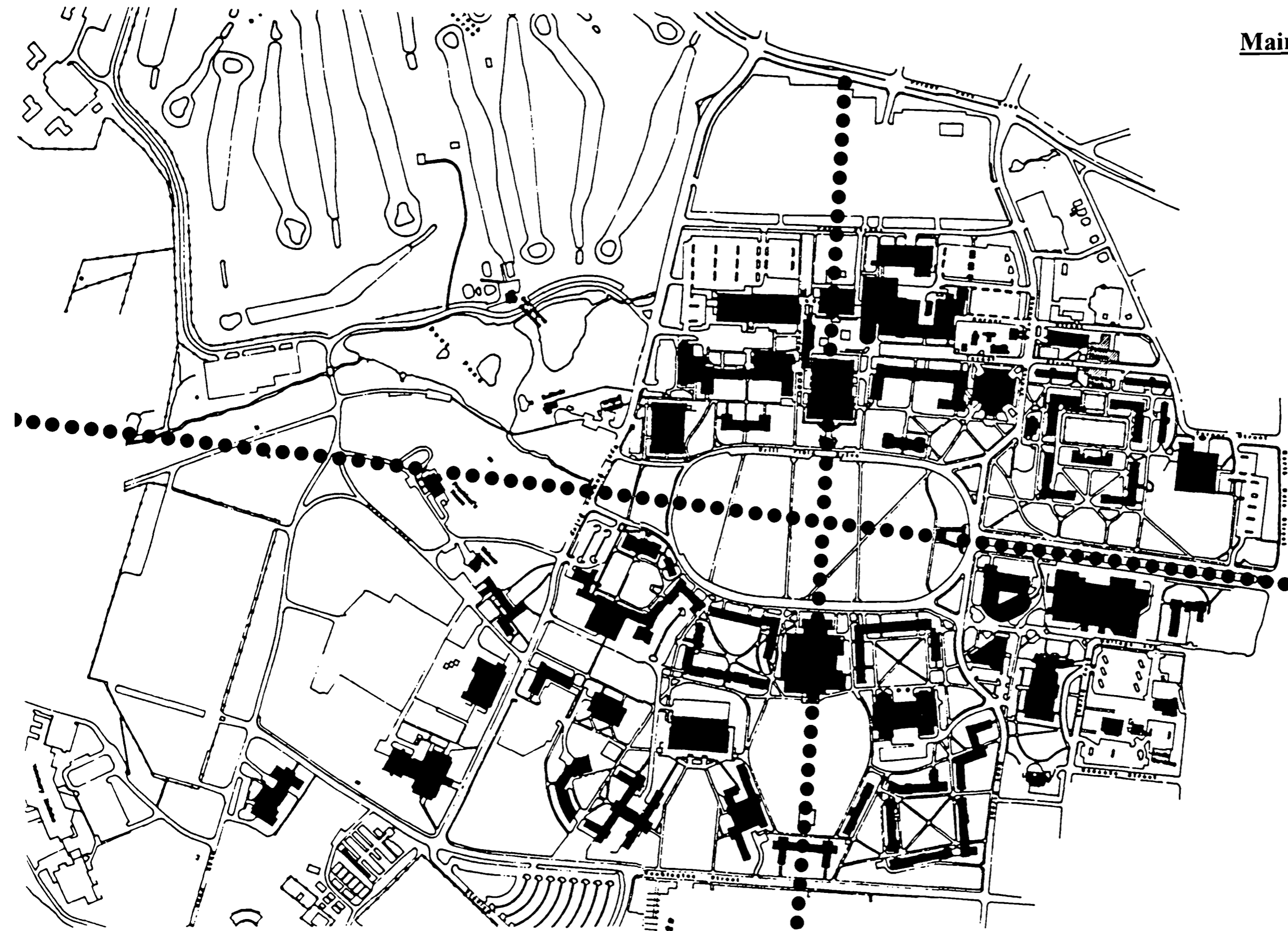
The main axis and minor axis are tangible elements incorporating "the central line around which a structure, pattern, figure is built or formed (Webster's)" Sometimes difficult to perceive, they represent a primary planning tool for organizing environmental elements such as buildings, roads, landmarks and open spaces.

The Main Axis flows from the VPI Mall, through the War Memorial Chapel and runs the length of the Drill Field. The Drill Field dominates open space planning along this axis which organizes and structures the academic core of the campus. It is interesting to note the Presidents house is also aligned with this axis.

The Main Axis

The Minor Axis is at a 95 degree angle to the Main Axis and aligns Burruss Hall with Cowgill Hall, the Memorial Gym, Pritchard Prairie and Lee Dormitory. The potential for future campus expansion and open space integration can be coordinated along this axis.

Another interesting observation is the alignment of the Mall which is three degrees out of square with the Upper Quad whose pivot point is the Memorial Chapel.



Site Planning and Relative Scale

Discovering how campus buildings could be placed in a meaningful manner initiated a study of the American Campus and urban planning. Integrating them together in some form or fashion followed several paths of logic, all dependent upon site context. If structures were placed upon a large, open expanse, the need to integrate them with the site is limited alone to the context of the natural environment. As locations merge and sites become smaller, the integration of natural and structural elements becomes more crucial to proper site design. When locations begin to relate to other locations of similar size and proximity, then harmonious integration becomes another necessary element in the site planning process.

Once locations begin to merge upon one another, the self expression and structural identity of a building becomes linked to surrounding buildings. In other words, a contextual design community begins when buildings share common site criteria. The thoughtful and articulate manner in which buildings are arranged upon the landscape fabric is an essential and important component of site planning. Structures placed within this surrounding location are also bound to this hierarchy of planning. Integrating structures becomes a delicate and dynamic design challenge where context, history and environmental factors are primary design criteria.

As structures begin to merge, typical of urban design, the clash potential becomes critical. Structures in community are not meant to act independently of each other but should develop a harmonious oneness upon the landscape. If structures were given the same ornamental variety imposed upon the landscape fabric, architecture would struggle with eclecticism. And indeed it already does. Can a site or region be an exception to this principle? Some fear random planning and zoning laws prevail at the expense of a contextual landscape. Structures placed randomly upon the landscape defy logic and reason when order, placemaking and placemarking are necessary elements for successful site planning and human enjoyment.



1972



1983

Campus development.¹⁷

The Open Space Proposal

Open Landscape Space

Open space planning- as a spatial organizer- promotes proper land use policies and integrated land uses, giving form and context to all types of architectural expression. From courtyard design to regional and park planning, open space planning is the quintessential element that embodies landscape architecture and the formal organization of the built environment. As mentioned before, the town square or village green was the central organizer for the built environment and needs to serve as the model or standard in open space planning.

The Drill Field on campus functions as the main central organizer, providing a strong axial identity and focus for the campus. It has the strongest identifiable landscape image on campus and functions as the transition element between academic and residential districts. Connected to the Drill Field is the VPI Mall, a linear expression and extension of the Drill Field open space. This open space is continuous from Main Street, through campus, past the Duck Pond and continues beyond the 460 Bypass. The incredible worth of this space is inestimable and must "be left open (*preserved*) for ever."

When open spaces are planned as predetermined places, they provide the context and character for future development. Without open space as the central organizer, the best case scenario produces random development patterns because commonality void of a primary integrative element leads to unsuccessful planning strategies.

Paradoxically, open space planning is treated as positive space, representing a successful relationship between the natural and built environment - and negative when it fails to respond to an adjacent building or land use. It is the responsibility of the building and land use to respond to the land, not the other way around. Typically, land is fundamentally inclusive; buildings are mutually exclusive. "The most basic act in urban landscape design should be to establish the spatial framework of public design "rules" for streets, squares, and open spaces prior to the design of individual buildings,"¹³ "and that architectural solutions however brilliant cannot overcome the limitations of the ... fabric in which they are placed."¹⁴

A New Open Space

As I mentioned earlier, the need for development opportunities necessitates creating an open space organizer in the Drill Field tradition. Included in the long range strategy for campus expansion is a proposal for such a space. The primary spatial organizer for this area is an existing open space in which ecologically sensitive guidelines will program proper land use. The only structures permitted in this area are the existing equestrian barns, and the introduction of greenhouses, which will serve as the new Horticulture Garden and Greenhouse Complex. At this location, the

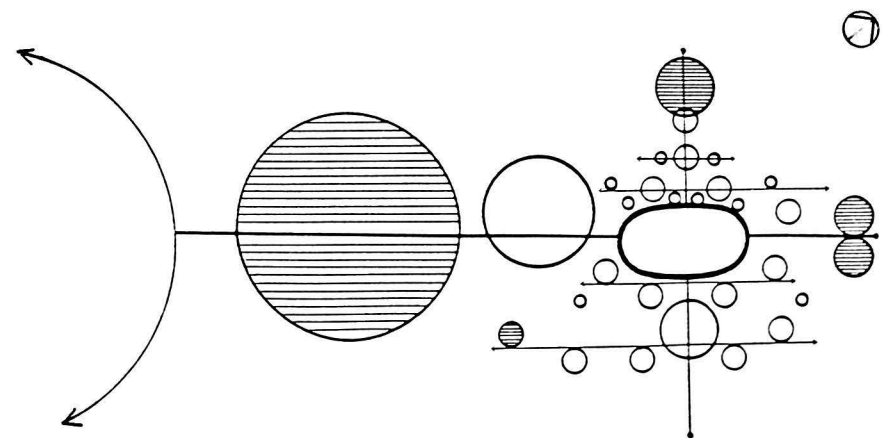
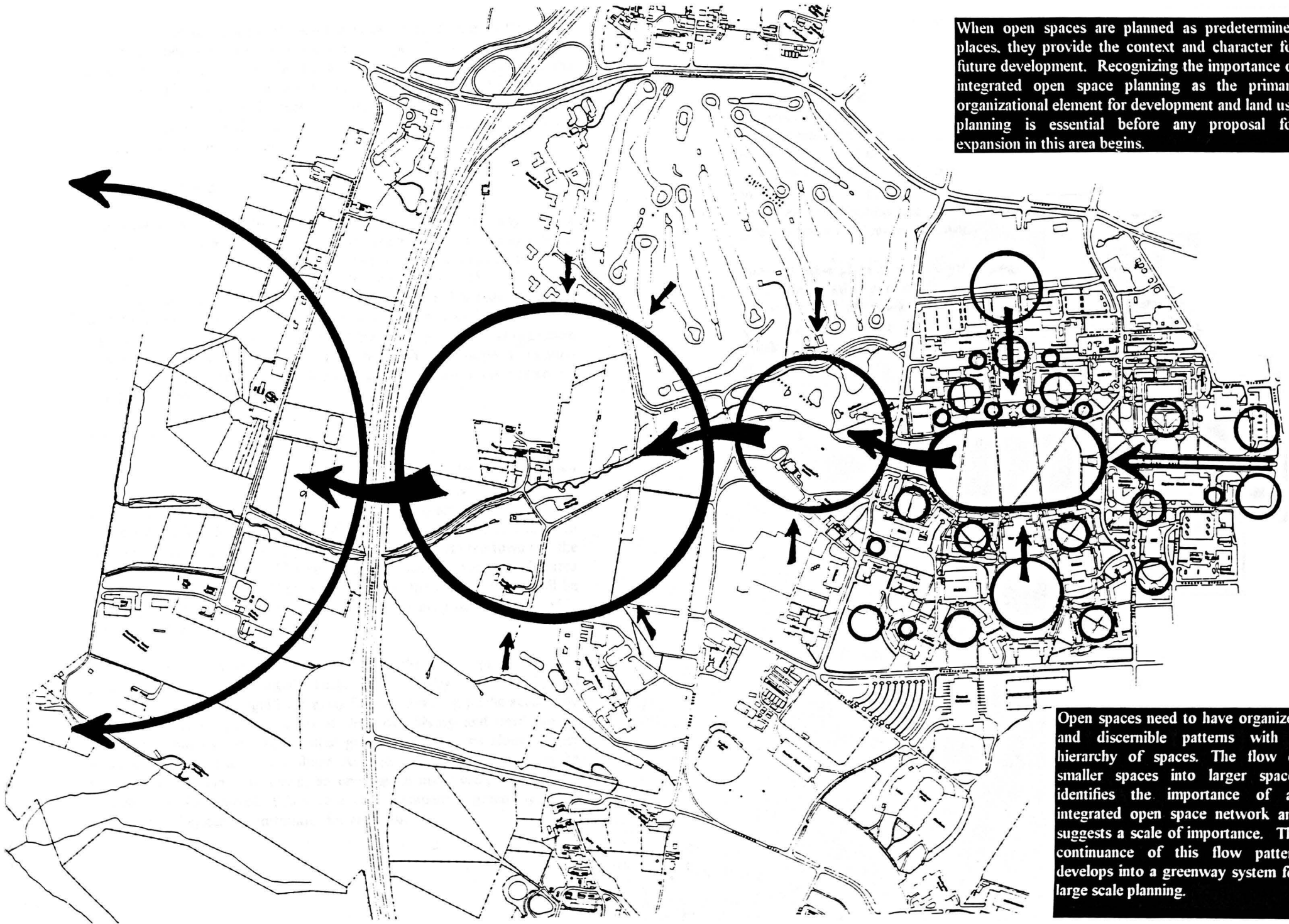


Diagram of Open Spaces at Virginia Tech.

A New Open Space Plan

When open spaces are planned as predetermined places, they provide the context and character for future development. Recognizing the importance of integrated open space planning as the primary organizational element for development and land use planning is essential before any proposal for expansion in this area begins.



Open spaces need to have organized and discernible patterns with a hierarchy of spaces. The flow of smaller spaces into larger spaces identifies the importance of an integrated open space network and suggests a scale of importance. The continuance of this flow pattern develops into a greenway system for large scale planning.

school can also monitor the stormwater quality from Stroubles Creek and provide models which analyze existing and proposed development impacts on the stream. Other uses in this area will remain the same, with the prohibition of any new building development. Nine acres will be set aside for the new Horticulture Gardens along the creek and sections of the golf course will be relocated to make room for the new University Boulevard extension (see Land Use map.)

Campus Greenway

This new open space also functions as the campus greenway with a potential opportunity for extending this green corridor through town towards Harding Avenue (see Land Use map.) As a primary air circulator, it channels southwest winds through campus and the downtown. Migrating birds and other small animals will utilize this greenway as a wildlife corridor. Other programmed activities include bike trails, the Smithfield Plantation, recreational fishing, the proposed Horticulture Gardens, notable vegetation as part of the Tech Arboretum, intramural sport fields and a golf course with opportunities for stormwater retention and flood control.

The Town/Gown Open Space Interface

The university and the town need to respond to this mandate by developing an integrated open space plan before all opportunity to program it succumbs to development pressures. The current green space along Main Street and the VPI Mall represents a classic opportunity for a village green open space, capable of providing public activities for both the town and the university (refer to p. 31). If Virginia Tech proceeds to infill in the area adjacent to Schultz Dining Hall, a golden open space opportunity will be lost to development pressures. An analysis of this proposal is mentioned in the Master Plan Analysis.

Another opportunity exists for incorporating the town open space and greenway systems into Virginia Tech. The Huckleberry Trail, the old railroad into town, has significant plans for incorporating public access and bike trails. This trail terminates at the town library and needs to be extended through town. A potential green corridor exists along Draper Road which terminates on College Avenue. If public access can be provided onto Henderson Lawn, an open space many campus and town residents consider sacred, this would create numerous greenway, open space and trail system opportunities for area residents.

The green space between the Huckleberry Trail and Henderson Lawn would also act as a buffer between the town and university. This open space potential must be seriously considered when plans for the campus Block Development (Refer to Long Range Strategies Map), which includes the Armory and the Architecture Annex, begins. This block is also pivotal to stormwater management and other programs whose importance cannot be underestimated as it is redeveloped. In addition to the green space along the university side of Draper, the area between the farmers market and the back of the Lyric Theater is another finer grain open space corridor that can pass through the Lyric lobby and be axially aligned with the gateway fence on Henderson Lawn.

Some of these plans are 10-20 years away from full realization, but plans must be initiated now if any long term strategies are to be developed. The university must acknowledge this effort and develop a program for open space integration and implementation. Without a long range plan, development will occur and hinder comprehensive efforts to produce an open space plan.

Long Range Strategies

The Concept

Fifty years ago, with a population of 2,331 students on campus, no one would have thought to plan for a student population to increase by 20,000. The same is true for today: if Virginia Tech doesn't have a plan for the next 50 years and another hypothetical 20,000 students, we will exhaust our natural resources and impoverish the beauty of the campus.

The 1983 Master Plan proposed 1 million square feet of infill development to the campus core within 10 years.¹⁵ There are limitations to infill, and if this has been satisfied, then current infill policies need to be reevaluated before excessive development occurs and quality open spaces are compromised. One problem associated with the 1983 Master Plan overlooked the preparing of evaluation criteria to determine where the plan succeeded- or is having a negative effect on open spaces or the campus identity.

The 1994 Master Plan proposed an additional 700,000 square feet in the campus core in addition to projects built since 1983. If development sites have been exhausted and no other campus sites are available, where will future development occur? This is the question both master plans have evaded: where will we develop next and how will it be organized? In order to properly plan for present development, the university needs a strategic long range plan for future campus expansion. Without a plan for the future:

- we will put structures where they don't belong
- we will put roads where they don't belong
- we will develop in ecologically sensitive areas and compromise critical viewsheds
- we will compromise potential open space opportunities of future generations

A simple navigational example seems appropriate to mention. In order to keep from getting lost, three points of reference are needed: your present location, your next location and your future direction. Failure to align these directional points at the same time is a guaranteed planning disaster. Most institutions don't plan to fail, they just fail to plan. In the best interest of Virginia Tech, a moratorium should be proposed on all future campus development until a long range strategy is produced. It should be accomplished every 50 years, with mid cycle evaluations, and should be developed concurrently with the Town of Blacksburg's plan (scheduled for completion in 1996).

The Proposal

This proposal for another open space organizer - in the Drill Field tradition - will permit the university to expand incrementally without compromising the aesthetics of the campus. It maximizes existing infrastructures and encourages sensitive infill patterns without creating urban or rural sprawl development. The basic form will be organized relative to

environmental concerns and utilize the proposed University Boulevard as the primary arterial through this space. Other positive site amenities include:

- increased vehicle circulation opportunities through the campus
- protecting a greenway and other quality open spaces
- proposals for an expanded Arboretum and Horticulture Garden
- improving stormwater retention and water quality of Stroubles Creek
- creating new academic and residential districts
- opening opportunities for public/private partnerships in the Corporate Research Park with the possibility for annexing portions of the University Mall for academic expansion
- proposals for student housing within a 10 minute walking distance of the campus core
- protecting critical viewsheds and ecologically sensitive areas
- and preserving the rural and historic character of the Duck Pond and Solitude.

The Drill Field, as explained earlier, is the primary spatial organizational form for the campus. Quads are spatial elements connected to this form which provide sequential movement through a finer network of public open spaces. Future program development might look like this:

- a central open space will be used to organize various elements into meaningful relationships while acknowledging the contextual identity of the site
- development will occur along the edges of the open space which will reinforce its form and function, and strengthen the spiritual character of the surrounding area
- smaller organizational units of quadrangle character will extend from the primary open space and develop a network of secondary open spaces
- secondary open spaces will disperse from the primary open space until they encounter an edge condition or another primary open space

Where the campus image has been compromised directly relates to the neglect of simple open space planning principles. Buildings by themselves are mutually exclusive and cannot spatially organize a contextual framework for place identity. "The quality of the building is the space within."¹⁶ Buildings can be developed in series to produce an organizational identity without a contextual identity, but only the natural environment can give contextual meaning to the built environment.

The land provides meaning, order and identity to the built environment as well as a sense of spiritual belonging and association with shared values. In order to successfully build on the land, we must first value the land independent of political and economic needs and initiate environmentally sensitive planning methodologies that incorporate designing with nature and open space planning.

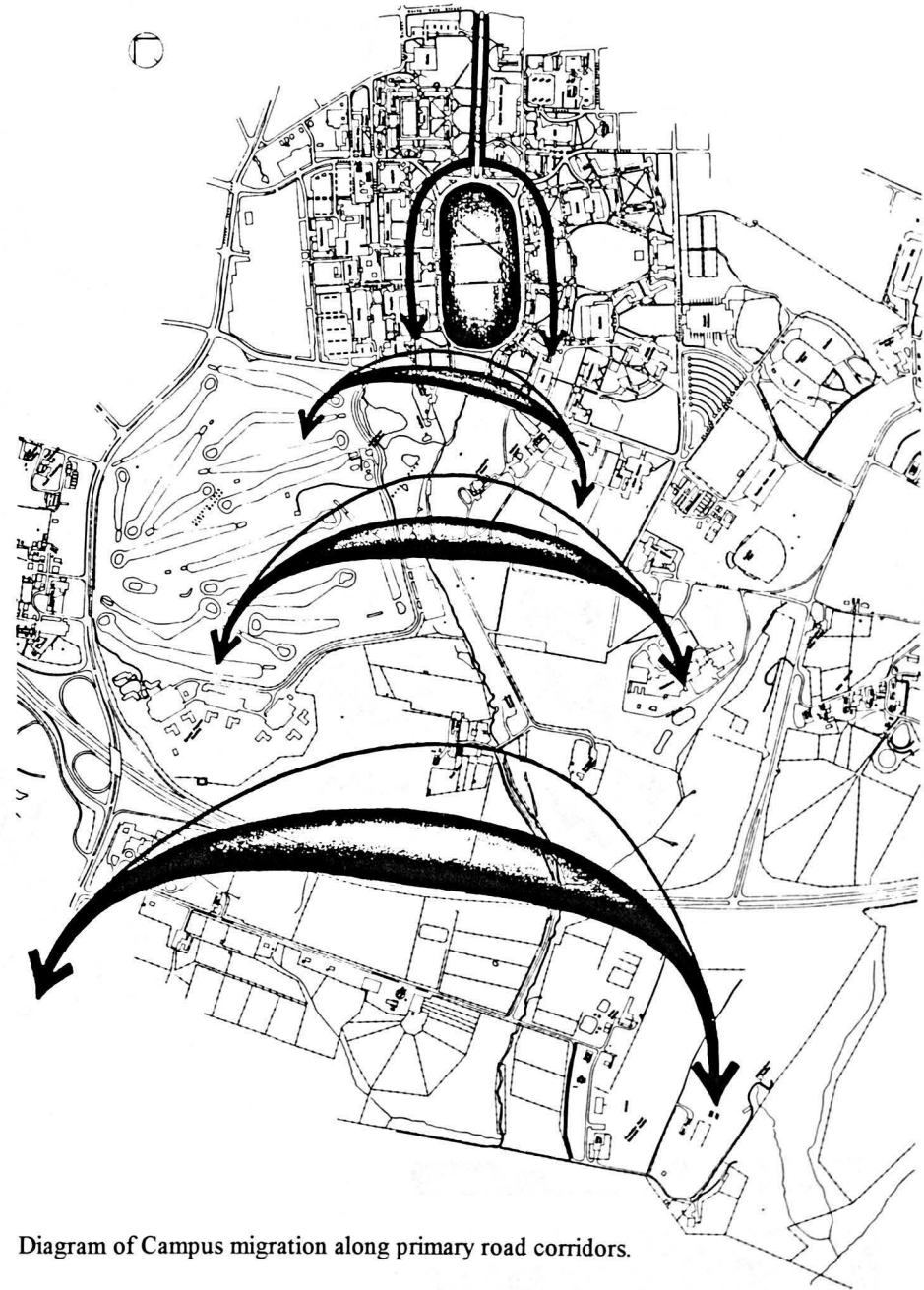


Diagram of Campus migration along primary road corridors.



Existing Buildings On Campus

An analysis map of landscape perception using the figure/ground relationship to determine the spatial quality of buildings upon the landscape.



Built Environment On Campus

An analysis map detailing the built environment on campus, those areas which are urban in nature and the existing open spaces which remain.

Master Plan Analysis

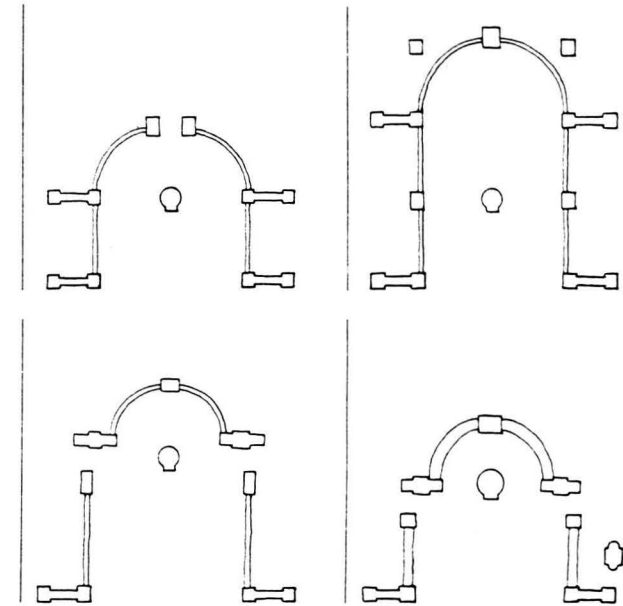
Master Plans are one initial phase of a dynamic design process used for understanding, interpreting and programming site information by recognizing opportunities, analyzing constraints and generating composite design solutions as a comprehensive means of ordering the site for a specific use. Behind every master plan are primary design criteria, or master plan drivers, which determine the general direction and scope of the design process. Master plans are a design tool which can be used as a primary idea/ form generator, a theoretical construct or viewed as one possible alternative to creative problem solving. Master Plans can be implemented over a period of time... or thrown away.

The 1994 Master Plan team initially emphasized historical context, cultural changes, main landscape styles and the ordering of spaces as master plan drivers. Among the issues dealt with were infill development, road alignment, bicycle routes, gateways, the Mall "bridge", stormwater and environmental concerns, wetland areas below the duck pond, reclaiming turf grass areas with natural areas and native plants, lining roadways with trees and vegetation buffers, master plan growth for Tech's academic core and integration of the town/ university edge.

The primary design criteria and focus of the 1994 Master Plan process appears oriented towards solving immediate development needs without resolving long range planning issues. The main landscape component has some environmentally positive proposals but the campus planning and architecture proposals are ineffectual. Producing an open space analysis should not to be interpreted as an open space plan. Long range generalities are not the same as long range strategies. Guidelines are not tangible proposals which can be scrutinized. The failure to initiate an open space plan as a primary part of the 1994 Master Plan has compromised the integrity of that master plan.

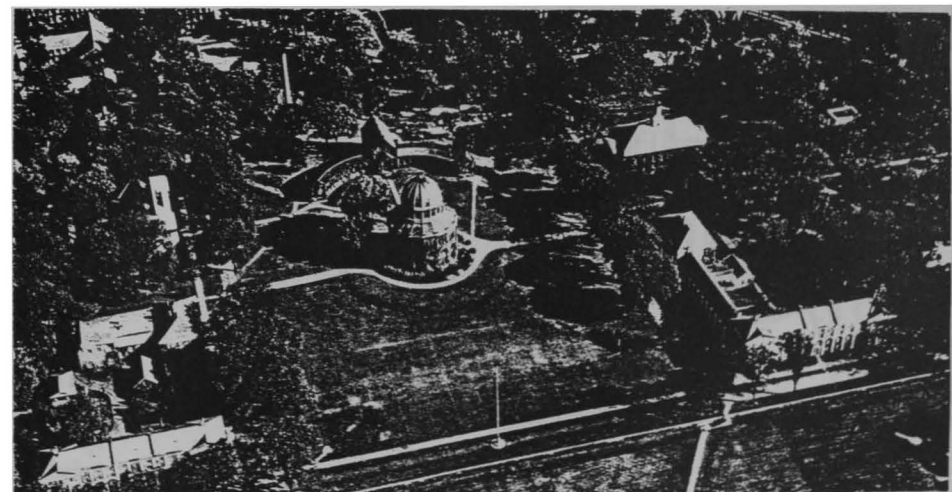
The absence of well defined long range strategies with evaluation criteria to assess master plan and capital improvement proposals hinders the university's goal of maintaining the architectural and aesthetic qualities of the academic core on campus. The architectural image produced in recent years is indicative of a continuing problem in the master plan process which threatens to compromise the historic character of this campus. In addition, the university needs to establish a campus planner position on staff, in an oversight planning capacity, so the University Architect's Office can focus their attention and expertise on building design.

This Master Plan proposal and analysis will examine the physical and structural organization of the Mall, evaluate the design process, and analyze current design proposals (in particular, the "bridge") which threaten to compromise the physical, historical and structural organization of the campus.



Examples of master plan alternatives showing four schematic versions of Ramee's site plans for Union College.¹⁸

Aerial view of Union College, 1950 (note continued design changes).¹⁹



Physical and Structural Organization of the Mall

The Mall was an independent state project proposed in 1947 and coordinated with the War Memorial Chapel. After facing considerable criticism, the project went underground until construction began in 1950 and was completed in 1951. As a precursor to any current development proposals for the Mall, the discovery of the original design concept as the basis for understanding its historical and environmental context became paramount.

During the late 1940's, large numbers of educationally motivated GI veterans flooded university campuses around the country. In response to this influx, the university adopted a development plan, loosely labeled "The Greater VPI" expansion plan. The Mall was one of those proposals. Research indicates the design concept "was designed ... to preserve a broad, tree-shaded grass plot on the old campus, and at the same time to provide two short, straight and wide roads from Main Street to the heart of the campus."¹⁷

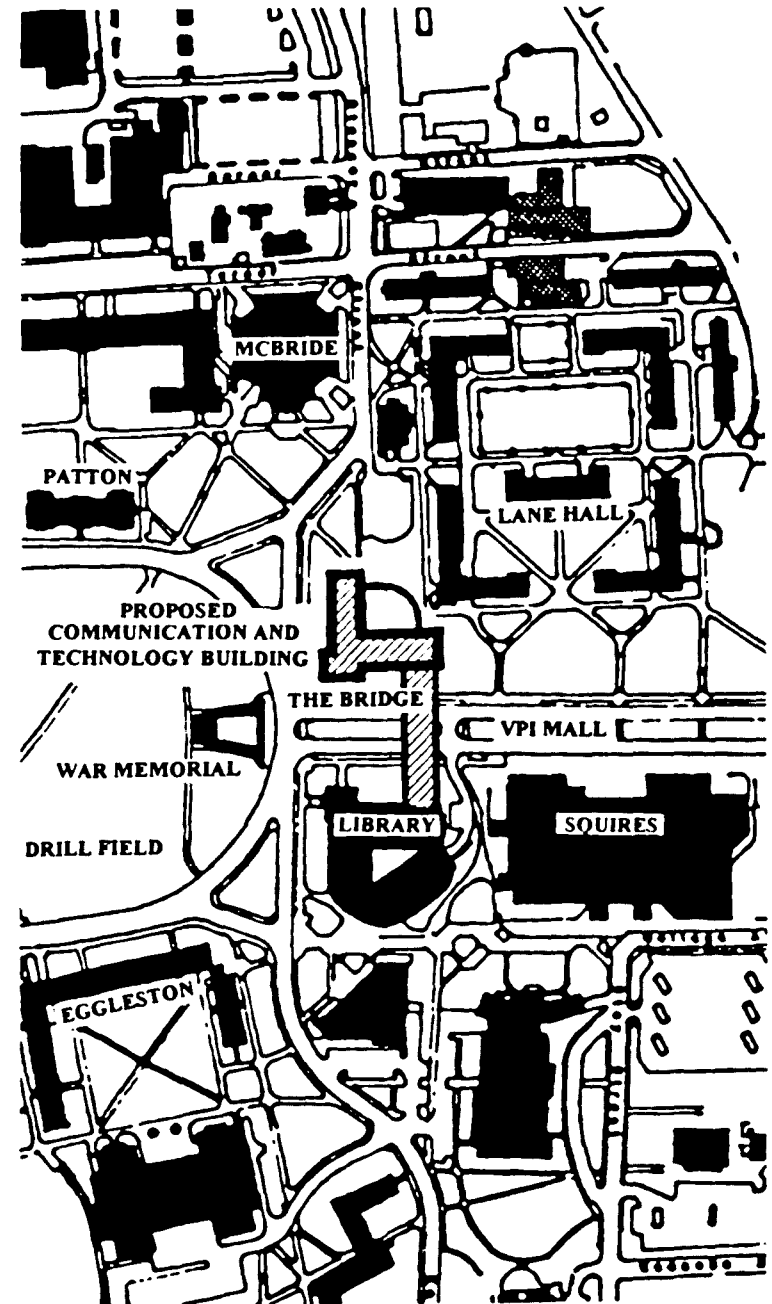
The VPI Mall and the "Bridge"

There is significant objection concerning the recent master plan proposal to build a "bridge" across the Mall, connecting Newman Library to a future Communication and Technology Building. This structure is supposed to be located at the Drill Field end of the VPI Mall facing the War Memorial Chapel.

The decision on August 28, 1995 to develop planning studies for the Advanced Communication and Technology Building (including the "bridge") costing \$550,000.00, without a completed master plan available to the community, was morally and fiscally irresponsible. It is incredible that a university would develop planning studies to begin design of a new building and spend public moneys without the knowledge and consent of its community.

The master plan proposal for the Communication and Technology Building included a single span "bridge" connector that responds metaphorically to the superhighway. The initial concept began as an expansion opportunity for the library but, functionally, will become a planning disaster. The bridge proposal is the primary argument that initiated the development of this 1995 Master Plan proposal. Many agree the new Communication Building is a valid proposal and will help anchor the Mall and balance Newman, but hundreds of faculty, students, alumni and professionals are outraged with the "bridge" proposal and are amazed this project has been considered credible, let alone forcibly pushed along the path of development.

This proposal will dispute the concept of the bridge as inconsistent with the image and architectural heritage of the campus. It violates the open space planning principles and traditional campus patterns of campus; it crosses the main axis of the university, introduces an urban archetype out of context, blocks the processional view of the Memorial from the Mall and compromises the inherent character of the Mall while being proposed in a public right of way. The 1994 Master Plan stipulates the bridge will



Site plan showing proposed Bridge location (shaded outline).

enhance and frame the view of the Memorial as well as provide a scenic view of the campus, but examination of this proposal, combined with photographs and graphic presentations, reveal the contrary will occur.

Mall as Structural Element

Malls are designed around an open space with focal points acting as complimentary termini to anchor the ends. These objects are typically landmarks that help strengthen the identity of place. The strength of a mall is incorporated into its edges which define the nature of the space. Malls are designed to have a strong, continuous built edge (such as buildings) to reinforce the edge condition (of the road) which acts as a visual window.

The problem with the VPI Mall is not the mall. It has specific design considerations which must be adhered to. The main problem with the Mall is the edge condition, which is vague and ambiguous, the result of relatively impotent buildings which are supposed to frame the edges. The VPI Mall has neither a strong nor continuous built edge, lacking the domineering presence afforded by properly scaled buildings along its edges. In fact, the strongest edge on the Mall is the curb and gutter.

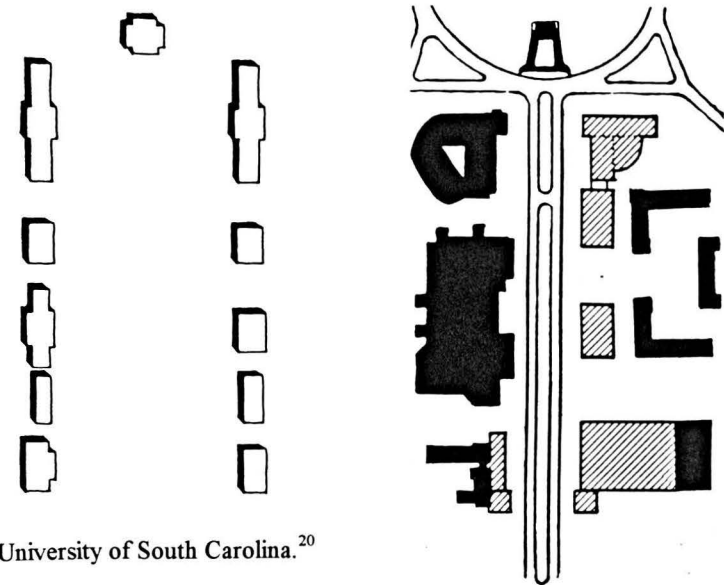
After waiting 45 years for the proper solution to be presented, the 1994 Master Plan successfully proposed more buildings along this corridor. Three problems were created, however, which compromise the structural character and identity of the Mall: the proposal of the “bridge” as a surrogate terminus suffers from “terminal” planning, two residential buildings located along the Mall contradict the trend of Upper Quad towards an administration district, and the introduction of buildings whose facades do not respond architecturally to the Mall as a landscape form generator.

All buildings must front the Mall and be parallel to the curb. Initially, this seems harsh but in reality, this is the only way buildings can thoughtfully respect the character of the Mall. Once an edge condition is strengthened with edge buildings, a softening of the built edge should then be enhanced by tree plantings. Trees assimilate buildings, becoming structural elements themselves. Trees are currently used on the Mall as a alternate structural edge in the absence of buildings which also help to reinforce the edge and soften building facades. A greater tree density along the Mall will enhance the human response to this perceived urban corridor.

Mall as a Campus and Open Space organizer.

Just as the Drill Field is the open space organizational form for building development (refer to the Drill Field as Open Space Organizer, p. 15), the Mall also acts as an open space organizational form for building development. The structural framework of the university was examined and a major and minor axis were discovered, with the Mall incorporating the Main Axis. Along this axis, buildings and open spaces are structured and efficiently organized into definable spaces.

Mall as structural element for building development.



University of South Carolina.²⁰

Virginia Tech with proposed edge buildings shaded.



Edge condition strengthened with buildings, softened with trees. Yale College, 1908.²¹

The importance for future master plan development must understand this simple principle: the axis must not be compromised! Examination of the Campus Orientation Map (page 16) challenges the current master plan proposal for developing across this axis. The “bridge” must not be built! The Memorial is a focal point, and locating any structure between the Memorial and Main Street will create a visual barrier which will dominate, and block, the terminus condition of the Memorial.

Inconsistently reasoned, the master plan consultants properly realized the importance of preserving the open space quality by the Duck Pond but chose to disregard the nature of the open space connection between the Drill Field, Memorial and the Mall. The Drill Field is part of a larger open space system which must not be compromised with built form. The same is true of the Mall.

The 1994 Master Plan recognized the Mall was part of the “central organizing system of the campus core”¹⁸ which was an integral element of “a memorable system of open spaces... (and)... recommended these attributes be maintained as a legacy for the twenty-first century.”¹⁹ The plan further acknowledged the “ideas of open space enhancement for important spaces such as the Mall, Drill Field and Duck Pond area by emphasizing the continuity of those spaces and their function as the central, open space system for the campus as a whole.”²⁰ These valued observations and planning studies are accurate but were not applied to the bridge proposal because they contradict the basis for that proposal. It was known the bridge would compromise the continuity of those open spaces and disrupt the whole-ness of that central system, but the bridge was considered a done deal before the planning studies were completed and were callously disregarded.

The Mall as Entrance

The VPI Mall acts like a grand ceremonial entrance into the university, not a formal gateway. The Mall entrance and subsequent planning proposal to build a “bridge” are dependent upon reinforcing this entrance as a premier gateway into the university. A study of traffic reports and the historic town/university relationship will refute the idea of a “Formal” Main Street Gateway as inconsistent and this entrance as anything more than ceremonial at best.

Traffic studies

The town and the university have been migrating their entrances over the past 30 years. The main evidence supporting this conclusion is the Main Street and 460 Bypass signage. Clearly evidenced, Virginia Tech traffic stays left; downtown Blacksburg traffic keeps right. The only time the town and the university shared a common gateway link was during the Alumni Gate era. The Mall was designed to provide a primary entrance into the campus after the Alumni Gates were dismantled in 1936. This need no longer existed after the 460 Bypass was built in 1968, which provided more direct access into the university. Since then, Main Street has become a business corridor through the downtown, which is why the Mall never succeeded as a dominant entry into the university.



Alumni Gates looking down Main Street, about 1908.²²

Alumni Gates looking toward the Prestin and Olin Building, about 1908.²³



According to the 1991 traffic report of daily averages, 20,000 vehicles traffic the Main Street corridor and only 1775 access the Mall. Observation revealed many vehicles were looking for parking spaces. Over 19,000 vehicles travel the 460 Bypass corridor and almost 10,000 access the Southgate entrance. In comparison, more people traffic the Main Street corridor but less than 2,000 access the Mall. Why should we enhance the Mall entrance as a gateway and treat Southgate Drive as a symbolic entrance?

A New Gateway

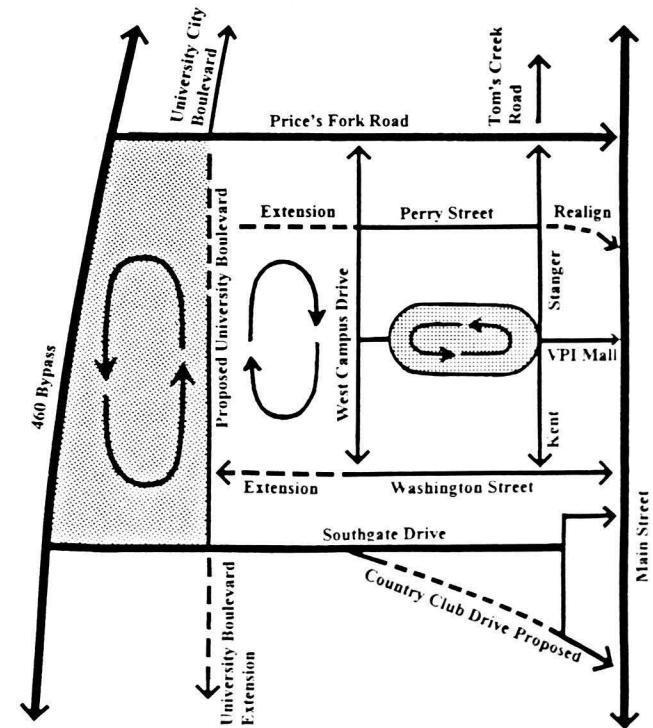
The university has an excellent opportunity for developing the Southgate entrance as "The Formal Gateway" into Tech. Currently, this main entrance corridor is the primary access for on campus residents, visitors and university employees. This evidence contradicts the universities plan for enhancing the VPI Mall as the Formal/ Gateway Entrance and Price's Fork Road as the main entrance, which is the back door entrance into campus. There are numerous influences that mark Southgate Drive as the better choice for a formal gateway:

- it amplifies the rural and agricultural nature of Virginia Tech's beginnings,
- the presence of numerous monumental athletic structures enhance the imageability from the 460 Bypass,
- there are an appropriate number of buildings that clue you into the apparent closeness of the university while maintaining an agricultural aesthetic,
- it harmonizes with the Route 460 split, the entrance corridor from Interstate 81,
- it is the only entrance into Tech in which traffic is predominately Tech oriented,
- it is also consistent with Tech's plan to transform Hillcrest, easily accessed from this entrance, as the Freshman orientation facility,
- and Southgate Drive can easily be strengthened to allow more vehicular access. This would help relieve some of the burden on Price's Fork Road, which is credited with over 30,000 vehicles daily, including 5 of the 10 worst accident intersections around the periphery of the Virginia Tech campus.

As Virginia Tech expands, and the proposed University Boulevard is built, the Price's Fork Road entrance would become the North entrance and Southgate Drive would become the South entrance. This loop (created between these two entrances: the 460 Bypass and University Boulevard) would serve as a primary circulator for future expansion in the Drill Field tradition (see diagram). This would permit the use of Price's Fork Road as another primary entrance without subjecting visitors to the back door entrance of West Campus Drive. Additionally, the visitors center should not be located along West Campus Drive but along the new Main Campus arterial: University Boulevard.



Photo detailing the 460 Bypass split.



Primary road circulation diagram.

In conclusion, I propose the VPI Mall as a Ceremonial entrance, Price's Fork Road as a functional, back door entrance (until University Boulevard is built) and Southgate Drive as the Formal Gateway. Trying to re-institute a gateway entrance on the Mall, building upon the historic nature of that entrance, is sentimental at best. It is my opinion that more monumentality in the form of an arched gateway "bridge" on the Mall is not what that space needs ... and sympathetically, will compromise more than we could ever benefit.

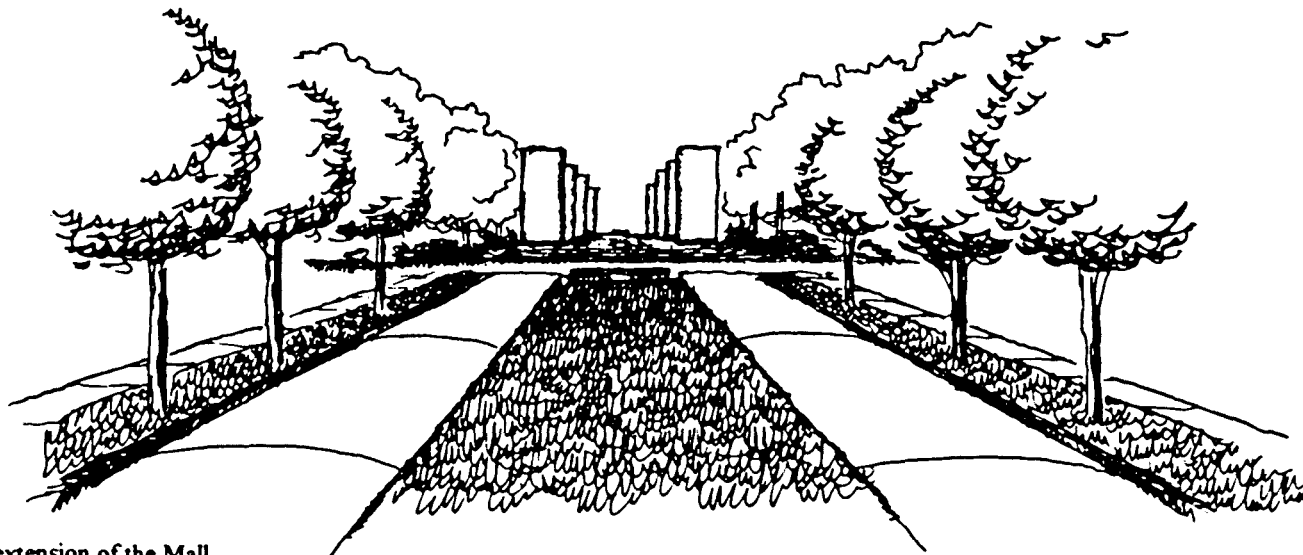
Mall as Urban Construct

There are three main land-use contexts at this university: rural, campus and urban. Structures can help identify the *genus loci* - or spirit of place - through building styles. Houses found in New England are not appropriate next to adobe in the southwest. The same is true with urban design: some urban buildings are entirely dependent on the context of the site. Answer this simple question: how many causeways (buildings built over a road) are you aware of? what is the context of the area? Some urban archetypes, such as pedestrian causeways, are appropriate only in an urban context. Although the Mall is an urban construct, it is located within a rural context. Placing the "bridge" (which is a dominant urban archetype) on the Mall violates the rural context of the Mall. This fact alone should sway even an untrained professional to cancel the bridge proposal.

Mall as Functional Element

When the Mall was originally proposed in 1947, the entrance was naturally assumed but a terminus was needed. The desire for a memorial to recognize, honor and respect those Techmen who gave their lives was the obvious choice for the terminus. The Pylons even speak of the continuous journey of Techmen and acts as a spiritual extension of the roadway itself. Any building or obstacle that compromises this classic piece of architecture must be rejected! As the site analysis indicates, the Memorial serves as a landmark, node, and embodies the Main Axis at the heart of campus.

The Memorial is more than a functional object or landmark feature for the sake of landscape significance. It represents the ideals of our college, imbedded in the lives of all Tech students and exemplified in the honorific traditions of our alumni ... "Ut Prosim", That I May Serve. It is unconscionable that the remembrance of those Techmen who gave their lives are disrespected both in design principle and in proper public procedure. Fellow alumni weren't even properly represented during the master plan participatory design process. The time has come to hold those accountable to the tradition "Ut Prosim" by demanding they serve this institution, and those who promote her, by producing a public display of the master plan.



Memorial as spiritual extension of the Mall.

Bridges can also signify changes in the landscape which need to be punctuated. What significant changes are there in the functional aspects of the Mall that need this level of attention? What is the significance of this bridge? If it were proposed as an Alumni Gateway to the Memorial (which was funded entirely through alumni support), it would have played on the emotions of alumni for immediate approval. But to my astonishment, alumni representatives weren't even involved in the participatory design process. Now, despite being neglected prior to its approval, those same neglected alumni are being solicited to donate funds to destroy the character of the Memorial they built! What is the sense of having the old terminus if a new terminus assumes its place? There isn't a point for having the Memorial if it isn't a necessary element for the Mall - except as an object to frame from the bridge.

Locating the Bridge in this area also violates the cohesiveness of the Mall. The Mall was designed to be an integral part of the Drill Field and Duck Pond open space system. To impose a building that cross-sections the Mall will divide the Mall of one continuous form into three parts: the pre-mall, the after-mall and the maul. How can the bridge enhance the War Memorial if it violates the premise that it is the terminus? To suggest this pass-through frames the Memorial comes dangerously close to equating it with the Arch de Triumph. This walled barrier will block the processional view of the Memorial from the Mall and the town, as one can easily see while looking at the visual simulation (refer to the next page). The bridge is a massive wall which severely limits the view of the Memorial and dominates the Mall. This simulation contrasts tremendously with the artists concept sketch. At this point, without spending any more money on simulations, it is obvious this proposal should be terminated.

The proposed area between the bridge and the Memorial was designed to be a pedestrian gathering space or square. Why would people want to gather in a place congested with cars, bicycles, buses and students hurrying to class? To assume students would gather here must assume people like to gather in negative spaces and/or have no other positive gathering spaces to congregate in. The most popular gathering spaces on campus are located near high pedestrian traffic areas where vehicular traffic does not interfere. This will not happen in the area proposed between the Mall and the Memorial. Or is someone planning benches in the middle of the road?

Where would you put a structure that encourages a ceremonial entrance on the Mall? The entrance along Main St. is the next most logical place. The open space by Henderson Hall, across from the Lyric Theater, must be considered a sacred place, not on the merit of any activity (although the original Mall design concept preserves this space indefinitely), but by virtue of its need by the local community. When the grove was removed, this open space became the only place characteristic of a village green or public open space. Developing this space into a functional open space is both desirable and needed by both the university and the town, and will enhance the "green" image of both.

If any structure is to be proposed which enhances the ceremonial experience of this entrance, it should be located between Henderson Hall and the proposed Creative Arts

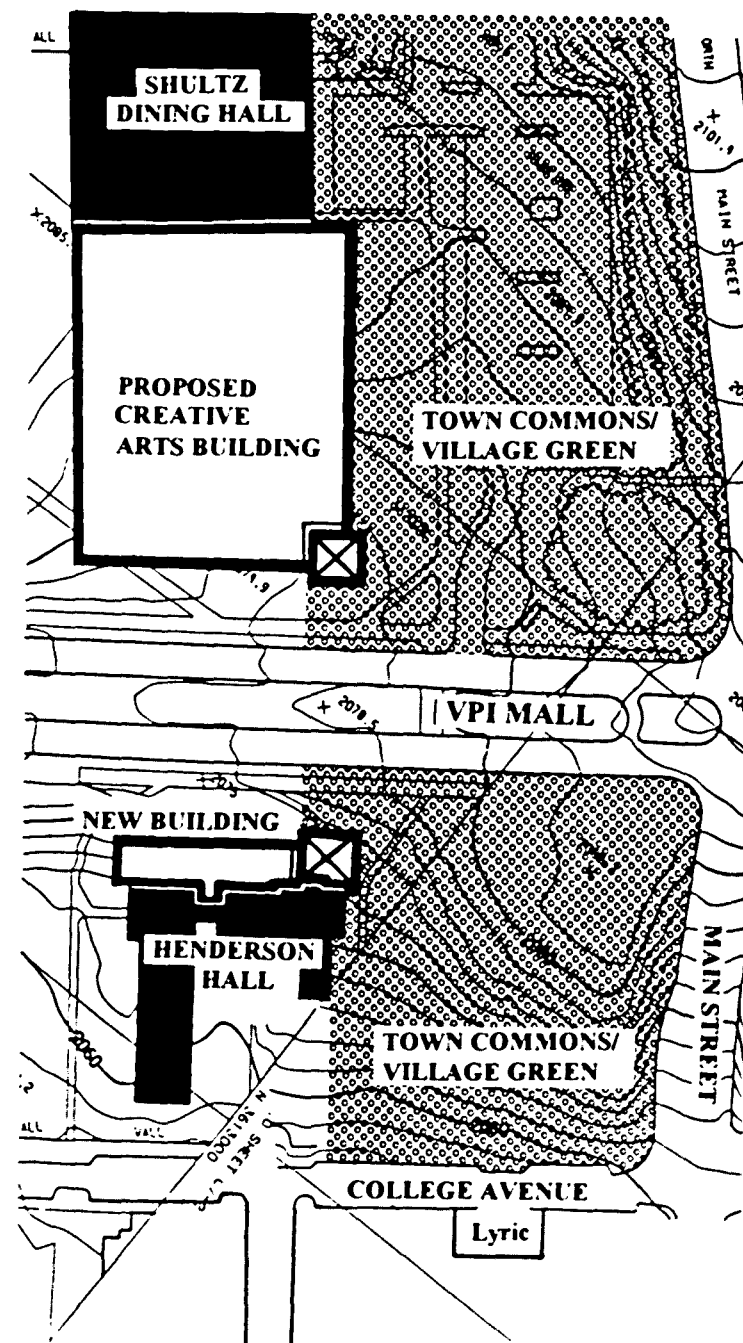
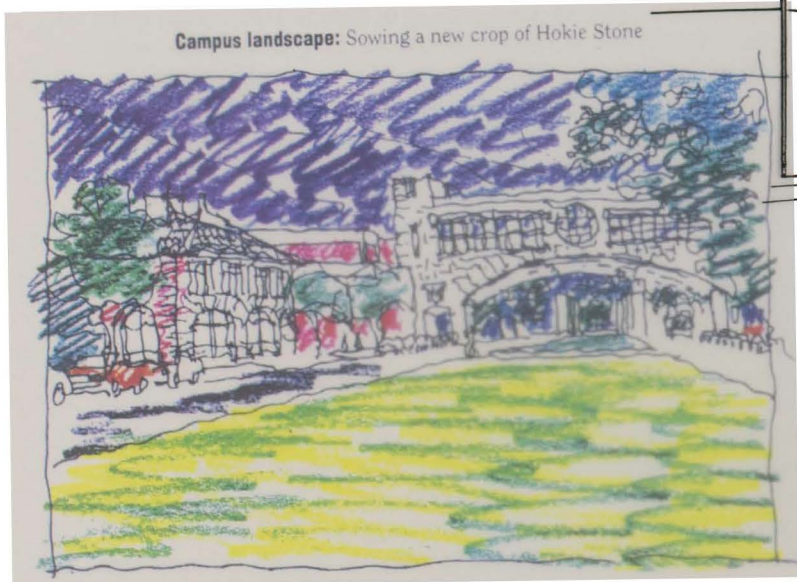
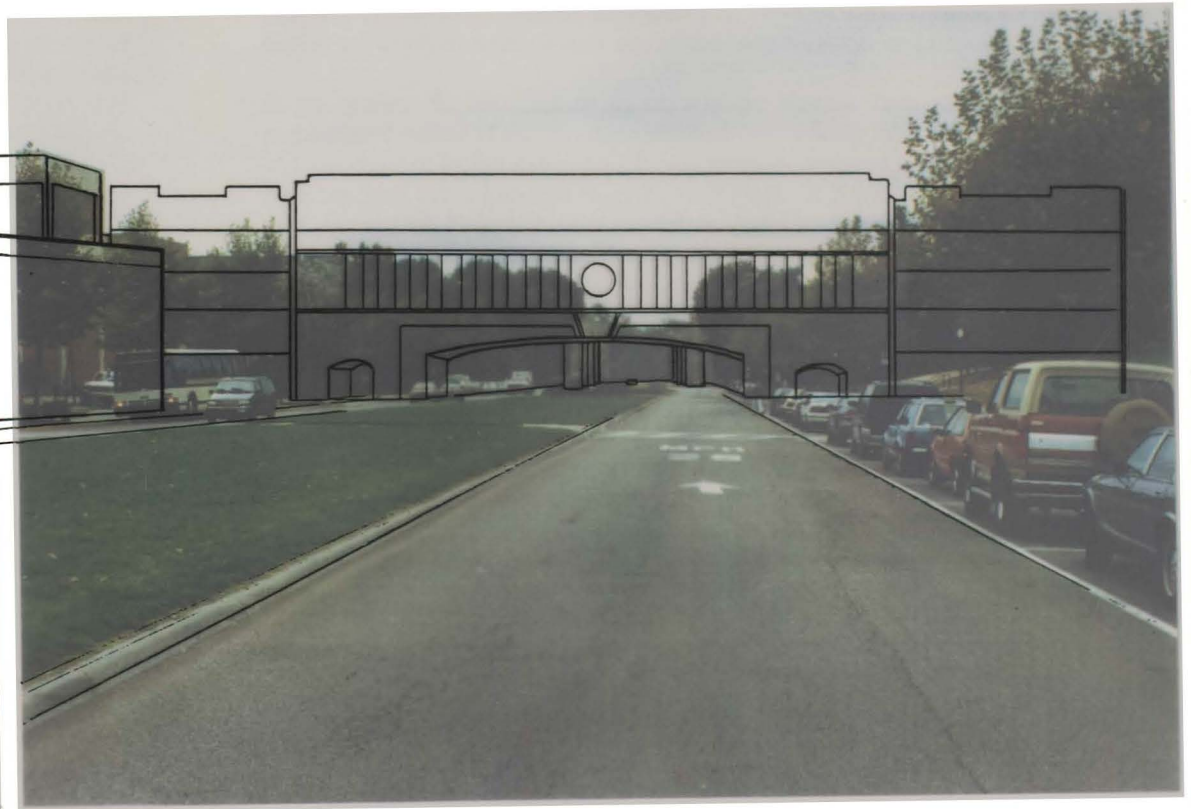


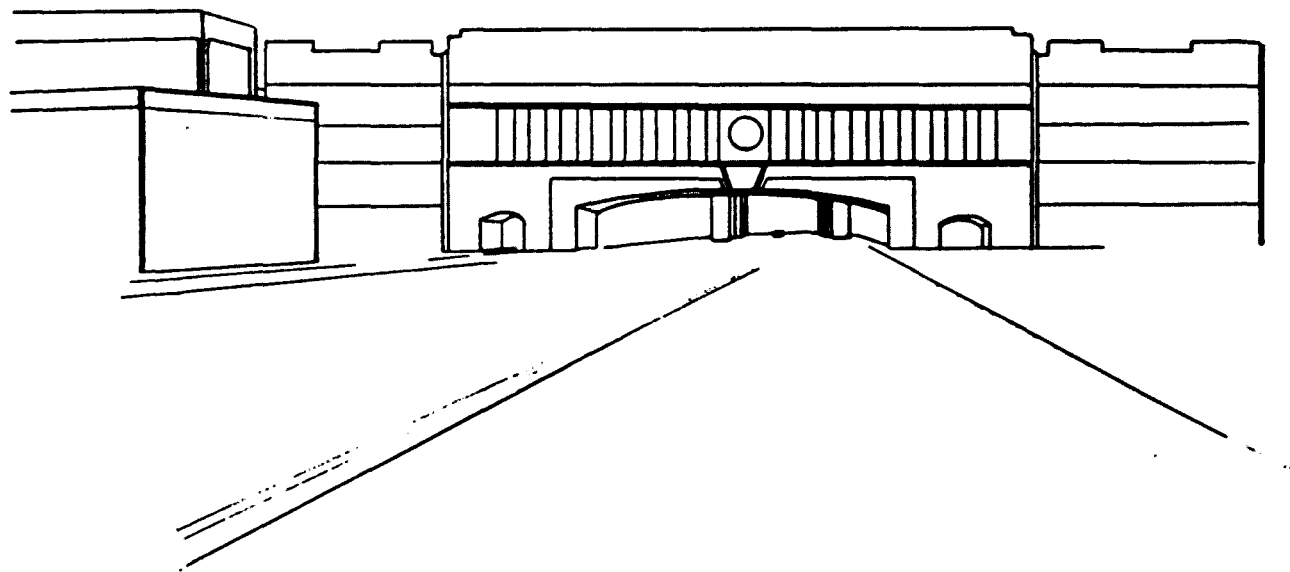
Diagram detailing ceremonial entrance and Village Green.



Master Plan Consultants concept sketch for the bridge.
Virginia Tech Magazine, Winter 1995.



Visual simulation of the bridge as proposed (view from
in front of Squires at location Y)



Campus landscape: Sowing a new crop of Hokie Stone



Master Plan Consultants concept sketch for the bridge.
Virginia Tech Magazine, Winter 1995.



Visual simulation of the bridge as proposed (view from
in front of Squires at location Y)

Building (with the village green between it and Main Street). Henderson will need to be architecturally revised. Squires will also need to be architecturally heightened to 25-35'. Someday, maybe, we will ultimately change Squires for the better and quit fooling with the building Tech loves to change.

Mall and Relative Scale

One of the main problems with the Memorial being out of scale to the VPI Mall is the reasoning. If it were a monument in an urban context, it may be out of scale, though numerous statues which rarely exceed 25' serve as termini on much longer streets. If the scale of the Mall is compared to another site of similar rural context, such as The Duke of Gloucester Street and Wren Building in Williamsburg, the scale is relatively proportional. D.O.G. Street, as it is affectionately known, is nearly a mile long (5200'), compared with the VPI Mall which is only 1,500 feet long. In order to justify the urban bridge proposal, the 1994 Master Plan needed to challenge the contextual character of the Mall by questioning the scale of the Memorial and the surrounding rural context. This was dangerously attempted, using the Mall on Washington, DC as the model for justifying the monumentality of the bridge. On closer examination, research indicates the contrary is true. When the scale of the VPI Mall is compared to the scale of the Mall in Washington, an identical relationship between the height of the terminus to the length of Mall exists which contradicts the master plan assumption the Memorial is out of scale to the Mall (refer to the next page).

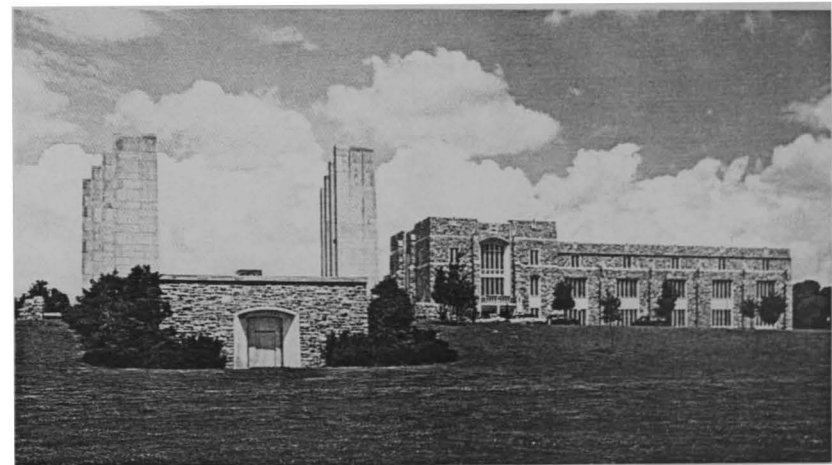
An appropriate scale for building heights reveals many termini have heights less than the surrounding buildings. The height of the Memorial pylons are approximately 32' tall. The surrounding buildings are 35-50' tall. Although a proposal has been made that suggests the Memorial as a terminus should have been larger, its current condition is in scale and does not need an architectural remedy. Evidence suggests the intrusion of the bridge will have a greater negative impact on the physical and visual character of place than preserving the current architectural qualities of the Memorial. Regardless, the only architectural element of the Mall in need of a remedy is the edge condition, not the height of the Memorial! Nor the intrusion of a monumental bridge!

After doing a study of great streets, it became apparent that the 'height of terminus/ length of Mall' ratio was not as important as the 'width/ height of built edge' ratio. Additionally, none of the streets characterized as a great street had an elevated causeway over them. "Entrances can always be open and inviting. Experience of fine streets indicates that entries and exits are not always well done or memorable. The same experience suggests that when they are well done they contribute in significant ways to great streets, though they may not detract all that much when they are less than they might be."²¹ Instead of looking at the architectural condition of the Memorial, a design proposal is needed to develop the VPI Mall into a great street whose terminus must forever be the Memorial.

Memorial Chapel defense

The other argument concerns the Memorial itself. It is not a monument because it was designed as a memorial. Being one of the best designed buildings on campus, the Memorial respects the Mall, the Drill Field, the axial open space design of the campus and the landscape/architectural context of the site. It not only fits into the landscape of the site but it elevates the celebratory meaning of landscape without dominating it. Neither does it dominate the human spirit, which makes it truly one of the finest buildings on campus.

In my opinion, the Memorial is the heart of the Virginia Tech campus. The architectural quality of this structure has been symbolically used as a landmark and a trademark by the university. It was uniquely designed to be memorable from the Mall and submissive from the Drill Field. If it were larger, it would alienate the Drill Field; if it were smaller, it would be inconspicuous from the Mall. Mature trees surrounding the memorial increase the perceived height of the memorial (it is interesting to note, when it was initially constructed, peoples reaction felt it was too tall. Now it is too short. Is this due to the mature trees or current attitude changes in architecture for more monumentality?) To propose a building which will dominate the view along the Mall and destroy the simplicity of its conceptual design is foolish. The Memorial is an integral part of the open space network on campus which will fail architecturally and lose its sense of place if the bridge is built. The original design concept must be preserved, and the Memorial must forever be the terminus of the Mall.



Drill Field view of the Memorial shortly after completion.²⁵

Height : Length Ratios of the Mall

When we compare the height : length ratio of key Monuments to The Mall in Washington, DC, which has an urban context, we see the proportion is very similar to the relationship between the War Memorial and the VPI Mall, which contradicts the current Master Plan premise the Memorial is out of scale to the Mall.

LENGTH OF THE MALL FROM THE WASHINGTON MONUMENT TO THE WHITE HOUSE IS 2900'

LENGTH OF THE MALL FROM THE WASHINGTON MONUMENT TO THE LINCOLN MEMORIAL IS 4150'

LENGTH OF THE MALL FROM THE WASHINGTON MONUMENT TO THE CAPITOL IS 7200'

LENGTH OF THE MALL FROM MAIN STREET TO THE WAR MEMORIAL PYLONS IS 1562'

If we compare the height : length ratio of key buildings to the Palace Green at the College of William and Mary, which has a rural context similar to Virginia Tech, we see the proportion is greater than the War Memorial: VPI Mall ratio. This reinforces the notion that height : width ratio between edge buildings is more important than the height : length ratio of termini for a mall - and that the Memorial is in proper scale.

LENGTH OF DUKE OF GLOUCESTER STREET TO THE GOVERNOR'S PALACE IS 5200'

LENGTH OF DUKE OF GLOUCESTER STREET TO THE WREN BUILDING IS 5200'

LENGTH OF THE MALL FROM MAIN STREET TO THE WAR MEMORIAL PYLONS IS 1562'



URBAN

HEIGHT OF THE WHITE HOUSE IS 60' 60': 2900' = 1: 48.33

HEIGHT OF THE LINCOLN MEMORIAL IS 87' 87': 4150' = 1: 47.70

HEIGHT OF THE CAPITOL IS 150' TO THE TOP OF THE PERGOLA 150': 7200' = 1: 48.0

HEIGHT OF THE WAR MEMORIAL PYLONS ARE APPROX. 32' 32': 1562' = 1: 48.81



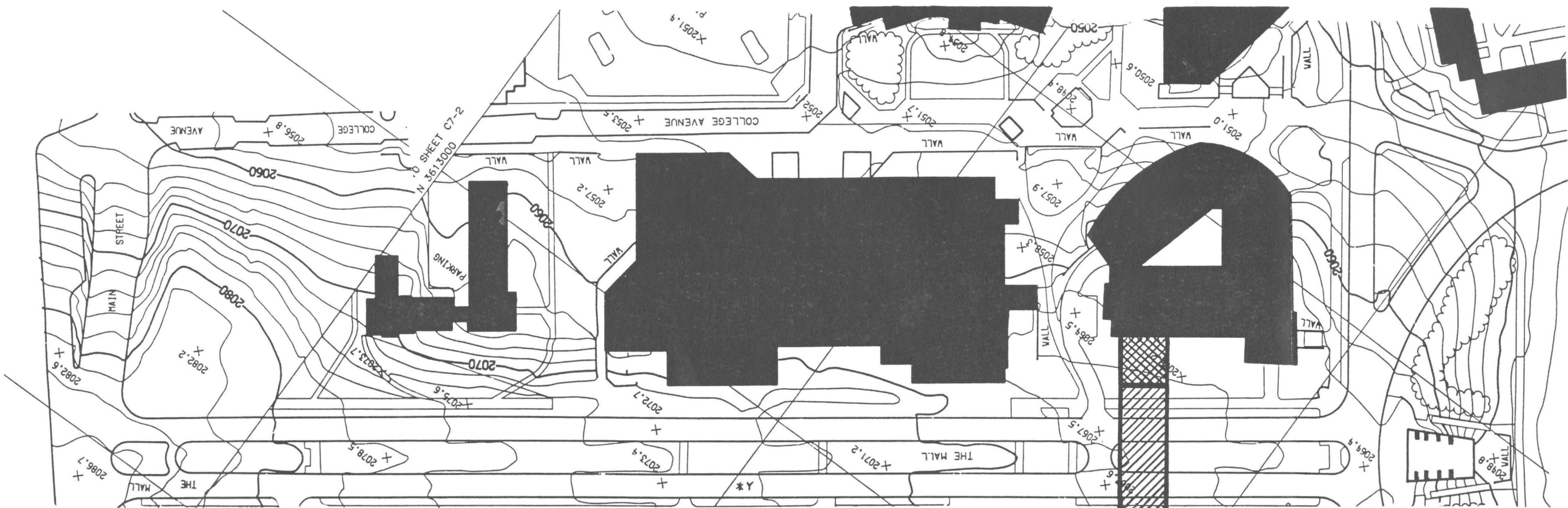
RURAL

HEIGHT OF THE PALACE IS 86' TO THE TOP OF THE CUPOLA (CUPOLA ACCOUNTS FOR 33') 86': 5200' = 1: 60.47

HEIGHT OF THE WREN BUILDING IS 68' TO THE TOP OF CUPOLA (CUPOLA ACCOUNTS FOR 19') 68': 5200' = 1: 76.47

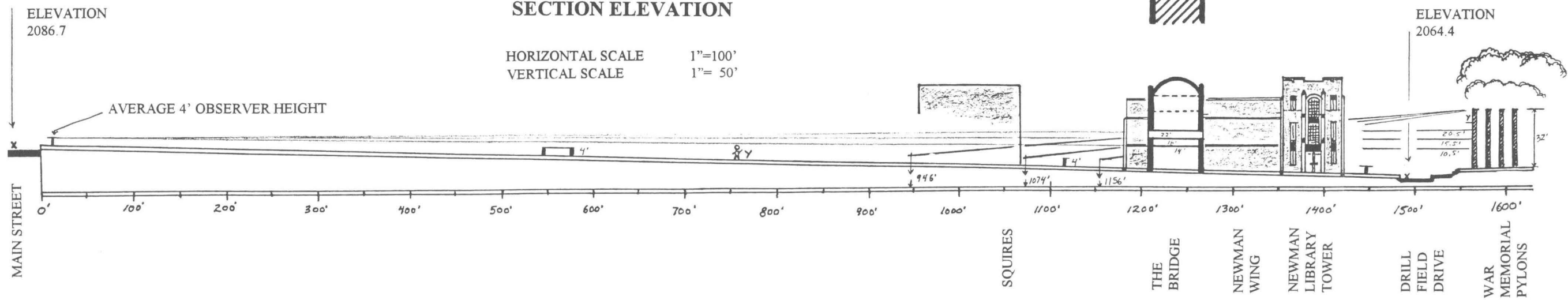
HEIGHT OF THE WAR MEMORIAL PYLONS ARE APPROX. 32' 32': 1562' = 1: 48.81





**PLAN VIEW
SECTION ELEVATION**

HORIZONTAL SCALE 1"=100'
VERTICAL SCALE 1"= 50'



Section/ Elevation Statistics

This section elevation was prepared using scaled measurements from the bridge model produced for the University Architects Office and detailed site plans with building location and spot elevations. The height of the bridge was scaled between 45-50'. The underpass was measured at 18' tall on the sides and 22' to the center of the arch. The height of the Memorial pylons were scaled at 32'. There is a 22.3' elevation change from Main Street to Drill Field Drive and a slight 3' knoll the Memorial is situated on which will cause objects viewed from Main Street to diminish. The object along Main Street is 4' tall and represents the average viewing level of someone in a car. The actual view of the Memorial seen by pedestrians (average 5' eye level) will be 20% less than these estimates.

Since the height of the bridge underpass may vary, and even lowered in order to reduce the mass of the building, another underpass height of 14' was interpreted onto this section elevation. The Maximum, Average and Minimum views represent the center height of the underpass if they are 22', 18' and 14' respectively, and that portion of the Memorial pylons an observer would see. This view will be limited further because the underpass is arched - and these measurements are from the center height of the underpass.

Views from Main Street:

Maximum view of Memorial	20.5'	only 64% can be seen
Average view of Memorial	15.5'	only 48% can be seen
Minimum view of Memorial	10.5'	only 33% can be seen

(Note: in order to see the entire memorial, the underpass height needs to be 30'+)

Distances from Main Street which allow full view of the memorial:

Maximum view of Memorial	946'	or 260' in front of proposed bridge
Average view of Memorial	1074'	or 132' in front of proposed bridge
Minimum view of Memorial	1156'	or 51' in front of proposed bridge

(Note: in the best case scenario, the observer must travel almost 2/3 the length of the VPI Mall (63%) before the top of the pylons are in full view.)

This analysis confirms the majority of views of the Memorial along the VPI Mall will be compromised and significantly blocked by the bridge which contradicts the architects assertion the bridge will frame the Memorial and enhance the view. Many consider the Memorial to signify the heart of the university, and blocking 63% of the view is not, in my humble estimation, enhancing the view of one of the finest buildings on campus. An appropriate illustration may best describe the consequences of placing the bridge in front of the Memorial:

If you want to accent the view of a quality portrait, the frame needs to be diminished in scale and detail. If the portrait is in need of artistic help, a more elaborate and sizable frame is needed to elevate the overall impression and deceive the observer by drawing attention to the frame.

In conclusion, the bridge will block the view of the Memorial and should not be built! Objective arguments have been qualified which contradict the master plan assertion the bridge will frame and enhance the processional view down the Mall. The visual simulation presented accurately reveals what a pedestrian will see while standing in front of the Squires Student Center. These measurements were taken from the model produced by the University Architect's Office. The location has been marked at the 750' mark on the Section/Elevation map (roughly half the length) and on the VPI Mall entrance road located by finding 'Y'. Only 24' (or 75%) of the Memorial is visible - and none of the 65' trees.

Another argument deals with the mass of the building and the amount of surface volume it will visually dominate. Clearly, the bridge dominates the entire view, let alone obstructing our visual connection with the rest of the campus.

This semi-scenic study lounge has one other consideration relative to the overall design. The finish floor elevation for the bridge will be approximately 25' in order to cross over the Mall. At this height, integrating it with the Newman Library will necessitate an elevator tower because it meets Newman in between the second and third floors.

Evaluating the Master Plan Process

Three master plan teams were initially picked by the University Architects Office based upon professional credentials and all three made presentations. One team presentation included post card size sketches depicting various ideas for design development. The main post card, paramount to the team winning the contract, was the "bridge" sketch, which was printed last winter on the front cover of Virginia Tech Magazine¹⁹ (refer to the Visual Simulation, p. 31). This master plan team was chosen with the full expectation of designing the bridge before any planning studies were done to support the proposal. The 1994 Master Plan proposal, which began "a major departure"²⁰ in planning tradition on campus, continues to push the bridge proposal despite new planning studies which contradict the conceptual basis for the proposal.

The university paid the master plan consultants approximately \$400,000 for the 1994 Master Plan. In the draft Master Plan, critical problems affecting future campus development were not clearly addressed. What is the long range strategy for future campus development? How will it be organized? What are the ramifications of current development proposals without an open space plan to preserve the remaining quality open spaces on campus? How will we know if current infill policies are compromising the character of the campus if we don't have any guidelines or performance standards to evaluate the success of this type of development strategy?

Despite numerous projects facing serious opposition at every campus planning meeting (the bridge, Special Purpose Housing, residential housing on Pritchard Prairie, Cowgill Plaza, and the Mall), the proposals - void of any criticisms - were submitted into the preliminary master plan and approved in principle. A sub-committee was appointed to review the master plan and bridge proposal, and report to the Building and Grounds Committee. The sub committee was never given the opportunity to submit their objections prior to the approval of the master plan by the Board of Visitors in August 1994. In the Spring of 1995, concerned citizens, hoping to discover an iterative process, asked members of the Board of Visitors if the current master plan was still open for input. "Still open" was the reply.

Four types of analysis will be used to discredit the misguided nature of the bridge proposal: public opinion, historic precedence, traditional planning methodology and economic factors.

Public Opinion

The intense opposition expressed towards the bridge at the public meetings is irrefutable. This single topic seized the protective interests of faculty and students and dominated the balance of all open forum discussion. Why have

the clients of this university been virtually ignored? Is it because we lack a democratic planning process which permits faculty and staff to speak and be recognized? There are numerous faculty members, Faculty Senators, Board of Visitors, private practitioners and alumni that are quietly opposed to the bridge, and if presented with the proper opportunity, will strongly contest it.

Not only do the master plan consultants appear to be opposed to the historic planning traditions of our school, the university embraces a participatory design process which alienates the university community. The public remains relatively uninformed of the exact nature of these proposals, or the nature of the design process, which is indicative of the two major shortcomings of the current design review process. The participatory design process allows only a small sampling of individuals, who may know nothing about planning issues, to represent the university rather than involve a more representational cross section of the academic community. This rubber stamp approach keeps a few primary people in charge of the design process while the community, and other key individuals, are kept under-informed about the decisions being made. Secondly, the open forum meeting leaders heard our comments but failed to include our opinions in their reports. This reluctance to communicate the concerns and opinions of hundreds of interested university individuals, who have a right to voice their concerns, has tainted the master plan proposal with its previously biased design criteria.

Although the process for building development is theoretically open for input by all university faculty, students, and staff, the apparent lack of knowledge concerning the master plan and building proposals is campus wide. If the process is truly open, then the lack of university information must be viewed as an inherent flaw in the communication process which needs to be reevaluated. This flaw in the design process handicaps future proposals as well if planning decisions don't accurately represent the attitudes of its constituents. If horrendous buildings, such as Hancock, can be implemented under the current architectural design process, a problem obviously exists and demands immediate scrutiny before any other projects are approved.

Professor Cowgill, in a letter written to The Virginia Tech newspaper in 1951,²¹ contested the arbitrary introduction of planning elements to the campus and the inability of planning officials to hear the concerns of university individuals. Things haven't changed! This current master plan, with its numerous planning conflicts and callous disregard for contradictory input, must also be reevaluated before we do significant damage to the campus character.

Additionally, if the 1994 Master Plan was approved in the fall of 1994, why hasn't the community, at the end of 1995, seen a finished copy? Although there has yet to be a public presentation of the completed master plan for the community to review and evaluate, decisions are being made to proceed with projects without public knowledge which may have a negative effect on the quality and character of our campus. The 1994 Master Plan was accepted in principle in order to establish a direction for future campus development, but if these planning proposals and master plan drivers contradict the traditional planning of the campus, then these proposals need to be reevaluated before we proceed further.

One of the main challenges in campus planning is sustaining and maintaining a consistent architectural and landscape aesthetic. "Sustained is the operative word here: loss of direction is often the downfall of an otherwise good start. This is why we do not see some colleges with well composed centers included among the best 13 campuses. Not included at the top are classical Virginia, Gothic Chicago, delicate South Carolina, harmonious Emory, botanical Michigan State, monastic Harvard, exquisite Chapel Hill, and historic Brown."²² Virginia Tech's campus core had a strong sense of direction which began in the 1930's and fell victim to random urban expansion beginning in the 1960's. In order to reverse this trend, long range strategies which are being proposed in this 1995 Master Plan need to be administered in conjunction with a vision statement and definable performance standards for future expansion.

Opinion letter to The Virginia Tech newspaper.²⁶

Shades Of An Old Campus: A Defense For Our Trees

by Professor C H. Cowgill

No one really hates trees! Like dogs and horses, trees are considered to be friends of man. They serve as shelter from sun, rain, and wind. Their ever-changing beauty excites our admiration. We watch them grow from generation to generation of the human life cycle. They live through, or are broken by, the same natural vicissitudes which we experience. After their life has ceased, they continue to serve man as structural timber, finished wood, crating or firewood.

Great People Influenced

But we are not sentimental! Great decisions must be made affecting the utilization of natural resources for the benefit of man. Not only living trees are involved, but also the lives of people. Sacrifices must be made for the sake of the general plan. Minds like Hitler's, Napoleon's, Caesar's or Stalin's are not concerned with the needs and desires of individuals. They must be ruthless in adherence to a general plan, and not be swerved from a predetermined course. Under Napoleon, Paris was remodeled, broad straight boulevards extending radially from strategic points so that people could be silenced with cannon!

There is a more human approach to planning. It is slower, and requires more tact and more skill and human relations on the part of planners. It also calls for confidence in the planners on the part of people who are interested in planning projects, and it also calls for the exercise of a spirit of tolerance by everyone.

Data Presented

First, everyone should be informed of general needs for which the plans are intended to provide, while the plans are in a formative stage. Thus everyone interested is alerted and invited to become intelligently informed. Complicated data must be presented graphically for easy assimilation. No data should be concealed or given less prominence than it deserves, regardless of whether it supports arguments in favor of the preferred plan or vice versa. Those who are sufficiently interested should be invited to public meetings in which what is proposed is fully illustrated and explained. Additional data furnished by those attending such meetings should be given open-minded consideration, and such things as the emotions and desires of individual persons are pertinent data.

There is no place for stubbornness in such a program, either on the part of the planners or on the part of interested individuals. Insofar as is possible, reason should be given for tentative decisions and for objections, and for any possible suggestions, however, that planning is in part an intuitive process. The skilled designer cannot always give a logical reason for preferences which involve aesthetics.

Plans Studied

After this process has been repeated several times, the general plans being re-studied by the planners each time that new data is submitted, the second stage of planning may be undertaken. This consists of more detailed studies. Here, the data submitted by individuals concerned may really pay off. Large plans can now be broken into smaller parts and brought down to a human scale. A much loved tree, or even a building, may be saved for sentimental reasons. Ugliness may be effectively screened. It may be necessary to depart from a straight line or even grade, or even to break out in free-flowing curves (such as found in nature), but probably the result will all be the more satisfactory because of this.

People Happier

Not only are planning results apt to be better as a result of this slower process, but people are certain to be happier. They feel they are a part of the community in which they live, and that their lives are significant. Those who are intolerant, or unreasonable, or suspicious, will still be unhappy, of course, but the number of these should diminish under the influence of a more democratic process and planning.

Trees are of little importance in large planning projects as elements of design, but they may be of great importance in the minds and hearts of people. It can't be possible that anyone really hates trees! It just appears that way, because the importance of trees to people who love them is sometimes overlooked.

If everything proceeds as currently planned, the campus will be burdened with several buildings, including the bridge, that violate the historic planning and integral beauty of the campus. In summary, we need to reevaluate the design review process advocating greater professional accountability, a public oriented and democratic participatory design process that permits and responds to public opinion, and the development of design guidelines to ensure the physical beauty of the campus is not further compromised. (See the Planning Summary following this document)

Historic Precedent

History repeats itself. A significant event occurred during the planning of the Mall and Memorial Chapel 50 years ago which parallels our current predicament. The alumni association requested a memorial to those Techmen who died during World War II and the concept of a chapel was approved. The actual design was submitted to the alumni during Homecoming in 1946 for approval, but when construction began in 1950, many students and faculty (refer to Cowgill's letter) were alienated because the university failed to properly communicate these plans.

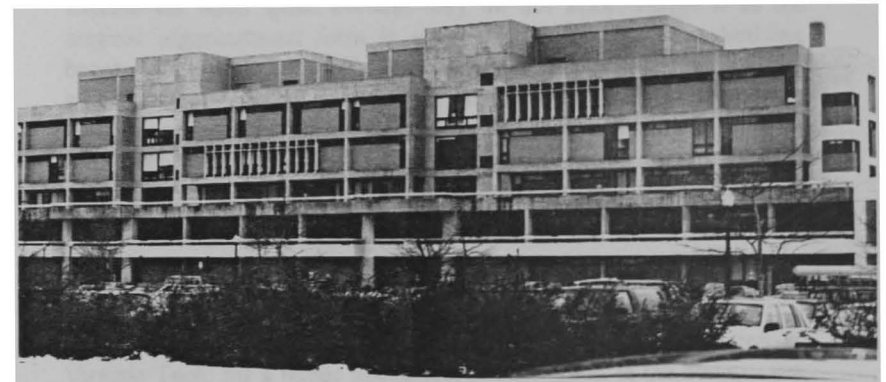
There need to be more checks and balances along the way to evaluate planning proposals in order to avert the fiscal mismanagement of university funds. No decisions to proceed with the bridge or other master plan proposals were described in the Collegiate Times and planning studies were loosely interpreted as ideas 'being kicked around', not as part of design development. Considering the opposition this project caused at the open forum meetings, no one took it seriously. Those public meetings are being ignored and now the bridge is being pushed through design development. If the master plan actually had been open to input, the bridge proposal should have been reevaluated, and terminated, in light of numerous economic and planning warnings by the community. Isn't it ironic, that an Advanced Communication Building is the basis of such dysfunctional communication?

Virginia Tech can't afford more buildings that destroy the aesthetic and historical beauty of the campus. The most flagrant violation is Derring Hall, whose architectural features mimic the old computer punch card bearing the architects name. This building thoroughly alienates the site and the surrounding context, and establishes a crude biologic slum aesthetic for the campus back door. The 1995 Master Plan proposes a wrap around building with an interior parking structure to screen Derring from Price's Fork and West Campus Drive. Hancock is another architectural blunder, whose reckless form subverted Collegiate Gothic to an elevated architectural expression of modernist ugly. Perhaps, if we were more patient with the design process, this could have been prevented.

Another classic oversight is Cowgill Plaza. It was designed as an open space to organize buildings respectful of the site. Now the plaza doesn't relate to the buildings because the buildings were not designed to respect the plaza. "Awareness of the ageless quality of the piazza prepares one for its unspoken testimonial to the role of outdoor space as a sort of transparent cosmic cement. Where can one find a more positive compelling example of the power of an outdoor space to hold together and unify a group of highly disparate buildings?"²⁶ The current plan is to turn this space into a building, the ultimate open space



Close up of the Memorial, Winter 1995.



Derring Hall.

insult of building alienation until it eventually is 'elevated' to building status. One should wonder how the rooftop plaza will respect the surrounding buildings? or if the building will respect the needs of this open space? Will it act like a roof or will it respond like a piazza, the way it was originally intended to? One thing is certain, when this two story underground structure is built, it will represent the urban core of the academic district.

Does anybody like the library addition by Venturi? It was so controversial, it was shoved behind a drawer for about ten years until they could no longer afford to keep university books in storage facilities. This project was criticized as visually offensive and was sharply opposed when the presentation model was unveiled in Roanoke. Harry Temple predicted the horrendous effects it would have on the aesthetic character of the university. Alas, he was ignored and history proves who was right. We are now stuck with the only example of non-Collegiate Gothic 'warchitecture'²⁷ along the Drill Field! Eventually, even Venturi bastardized the building, claiming it wasn't his because significant changes compromised the original design. Why is modern architecture afraid of square buildings which properly respect roads, buildings and the site?

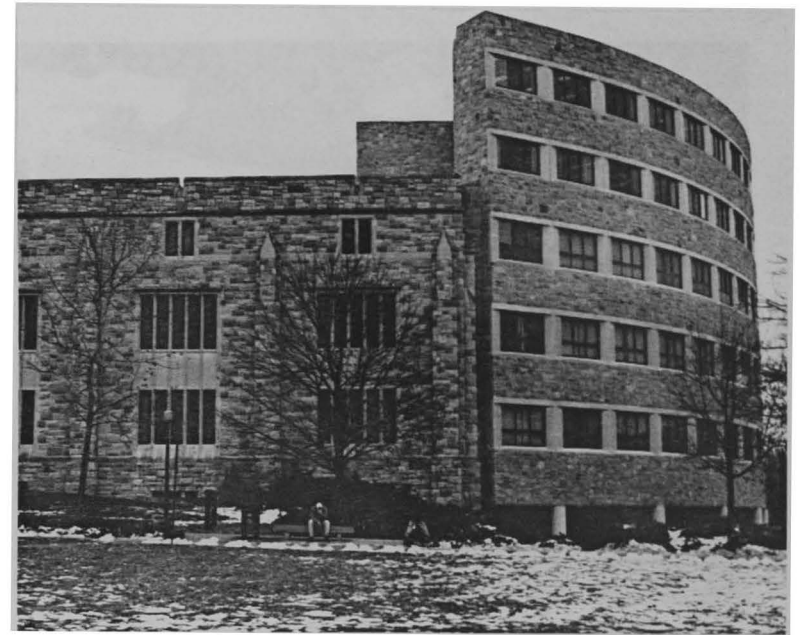
One suggestion must be made at this point for the Communication building: copy the Newman Library as a sister structure. The hardest choice for an architect is not to build a building; the second hardest choice is to copy a building that already exists - because design is predetermined novelty, as if there is something impure about copying a good building. Copy the structure - change the programming! An additional criteria for new buildings along the Drill Field, including the Communication Building, would require the Collegiate Gothic archetype.

Faculty, students and alumni are determined not to let this campus become an eclectic montage of modern architecture edifices that compromise the inherent aesthetic beauty of this campus. Never before has there been so great a need at Virginia Tech, for design criteria and performance standards that preserve and protect the inherent architectural qualities and historic planning heritage of this campus, than now.

Traditional Planning Methodology

Historically, open space planning was the precursor to basic site planning and project development. The village green serves as the historic model for open space planning which respectfully organized land use and building development around a community commons. Lost along the path of modern planning is the contextual relationship of the building to the landscape. Our landscape perspective has become out of focus when land is viewed only in terms of its development potential! Society has become too dependent on existing development methodologies contingent on economic and political considerations which dominate the decision making process.

When was the last time we ever asked the question, "Is it appropriate to build?" Our dependence on building has tainted our ability to utilize proper planning strategies. Open space planning helps determine proper land use policies. Proper land use policies help



Newman Library and Venturi addition, as seen from the Drill Field, 1995.

in order to preserve the historic character of the campus while providing opportunities for development.

What ultimately occurs is prototypical of architecture dominating the planning process. Those buildings, designed around an open space, alienate the open space because they do not acknowledge it as the original organizational form in open space planning. The building becomes dominant and any left over space is viewed as negative space, a potential site waiting to be used for building development. Or worse, even, as an opportunity for pretty plants and bushes surrounded by a sea of asphalt. Land must not be valued solely as an opportunity for development, but must be viewed as an environmental resource which sometimes needs to be preserved.

Economic Factors and the University Image

Higher education is taking a beating in Virginia. Student tuition at Virginia Tech, for a public institution, is 4th highest in the country yet ranks 43rd in state support. If we are serious about Phase II initiatives and streamlining the academic enterprise, then we need to engineer

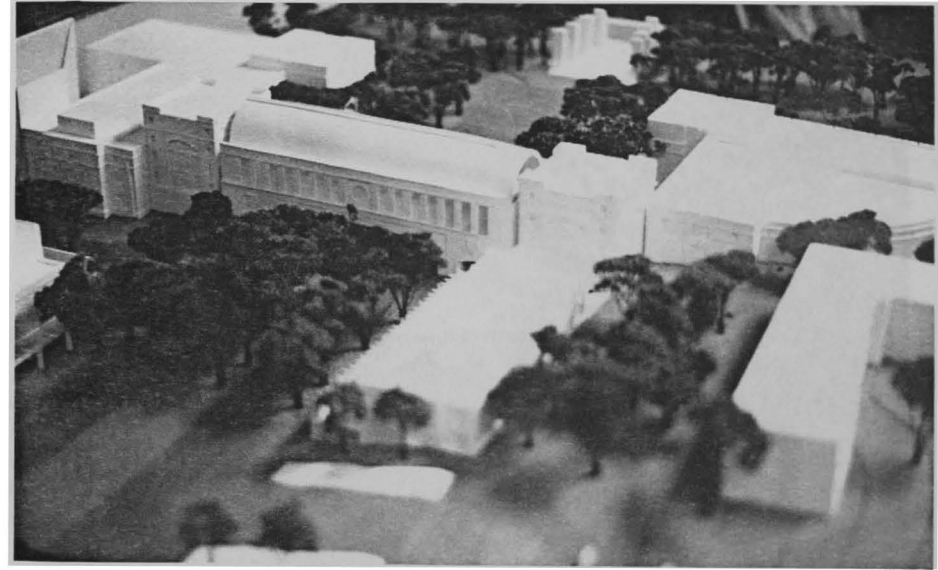
more conservative capital improvement projects. Otherwise, what image are we sending to Richmond when we propose monumental buildings like the bridge? We cannot afford to be architecturally irresponsible during this period of retrenchment if we intend to keep some of our time honored programs at Tech.

The creation of a strong academic image is the message we want sent to Virginians and the Governor, not an architectural image through monumental building development. This project sends a mixed message to everyone: we are not the lean, mean conservative academic institution suffering from budget cuts and non-support. If we can't financially operate our programs while proposing these kinds of extravagant projects, why should we be given any more state money for education? The introduction of elaborate, monumental architecture on campus reflects an ivory tower image contradictory of our conservative heritage. Economically, we can't afford a structure which compromises our academic image especially when so many projects and departments, threatened with cutbacks, are in need of space, equipment and financial assistance.

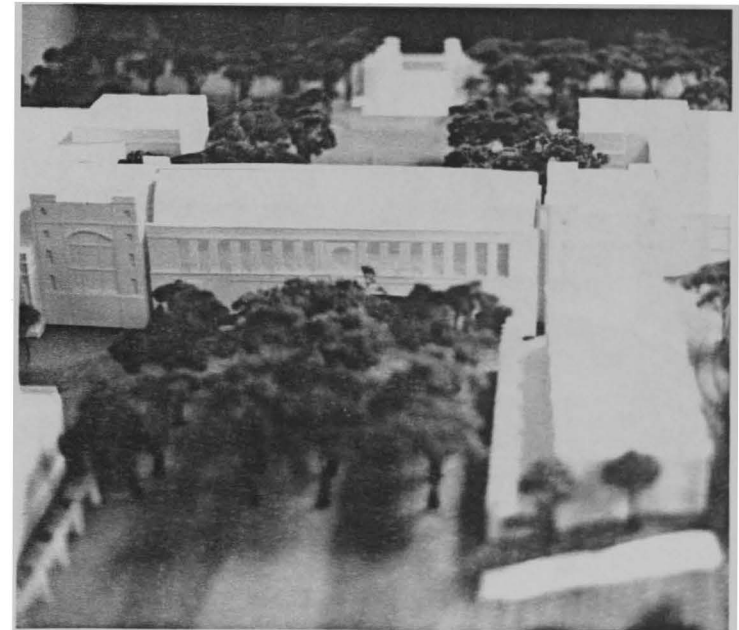
Regardless of where the money for building development comes from, this project clearly compromises our conservative, hard working, and poorly supported image. The university must protect its educational image by keeping quality academic and research programs on campus while preserving existing campus qualities and enhancing our facilities with traditional structures in keeping with our conservative heritage. Therefore, the Communications Building is a proposal that models this image while the bridge represents a luxury we can't afford.

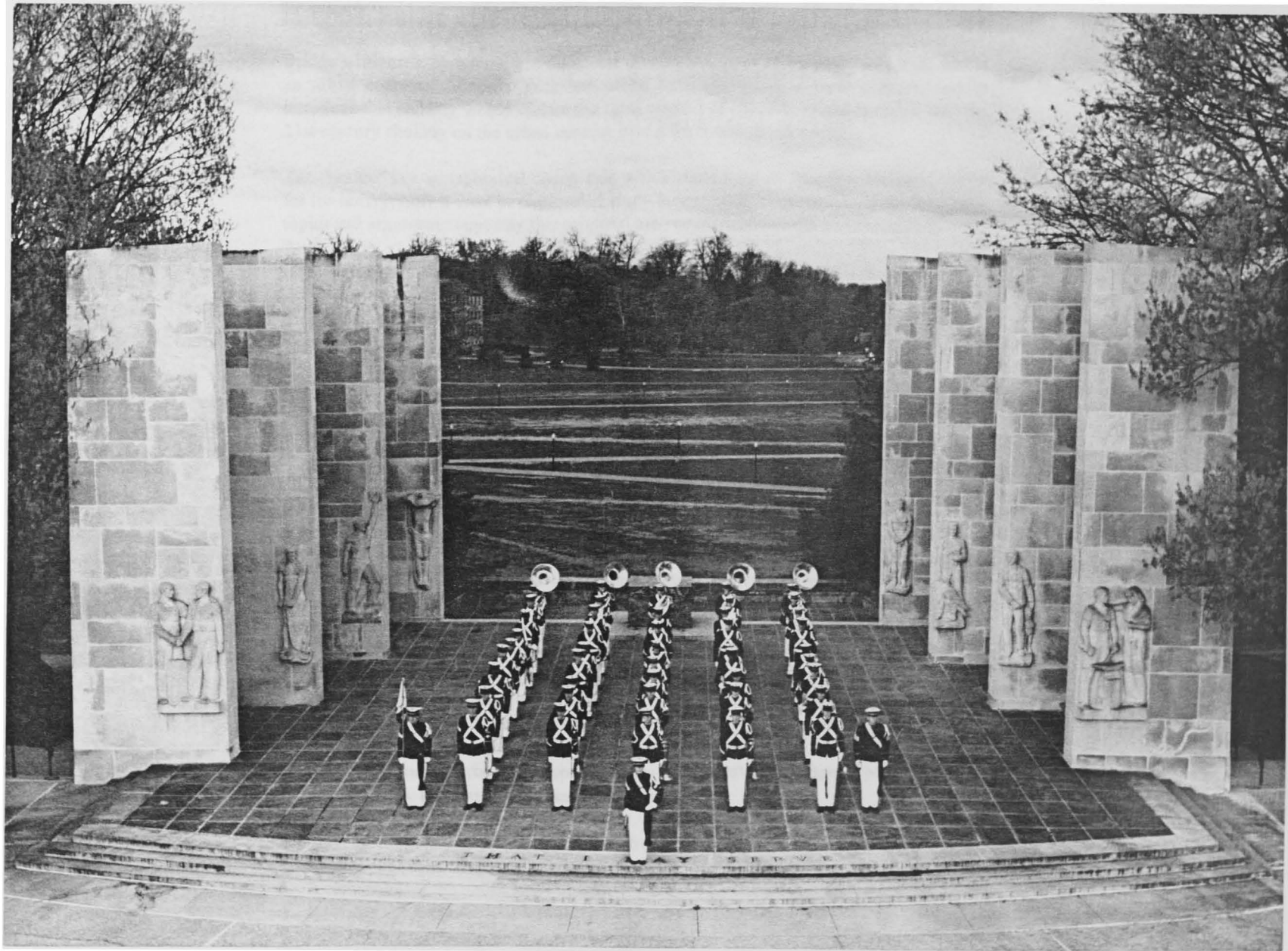
The economic costs for this building, based on 12,000 SF (Square Foot) estimates, will be in excess of \$2 Million. If compared to similar structures like the Hotel Roanoke project, costs could exceed \$5 Million. The master plan consultants indicated that bridge construction would cost a premium because of the complex engineering involved to produce a single span arch over 100' across. Recent square foot estimates project the size at 30,000 SF and could cost as much as \$9 Million.

The Hotel Roanoke bridge responds to safety issues which merit that proposal. What are the safety concerns for the "bridge?" This is an extremely inefficient building because we only get a semi-scenic second floor study lounge (refer to view of the Mall from 32') while forfeiting the first floor to traffic. The net square foot useable space is extremely low and the overall efficiency of this building is approximately 25%. The idea of a \$5 Million dollar study lounge can hardly be taken seriously in light of the many arguable facts that refute the basis of this proposal, and burying these costs in the Communications Building only serves to undermine the quality of that proposal.



Photographs of the Bridge and Proposed Communication and Technology model with the Memorial in the background.²⁷





Semi-scenic views of the Campus (as seen from the proposed Bridge - approximately 30' in the air). Views to the left and right are obstructed by 40-60' trees. View is not high enough to offer good panoramic views of the campus. Courtesy of Gentry Studios. Photo taken by John Kline.

VPI Mall and "Bridge" Summary

Bridge structures, by nature, are dominant urban archetypes and are typically built within an urban context. Virginia Tech has urban buildings within a rural context, and to introduce this building would violate the rural context of Blacksburg and launch it into the 21st century choking on the urban context model for future development.

The "bridge" is a metaphorical connection which started out as an expansion opportunity for the library; now it is an over-glorified study lounge with a semi-scenic view. The main topics and arguments opposing this proposal are summarized below:

- it becomes a surrogate terminus that gives contradictory meaning and expression to the historic character and nature of the Mall
- it dominates the Mall and blocks the view - instead of framing it - from Main Street
- it compromises open space planning methods by fragmenting and dividing the linear axis of the Mall which is structurally the Main Axis for the campus
- it blocks the linear open space of the Mall as an integral member of the Drill Field open space system
- the "bridge" proposal is an urban archetype for an urban context (ex. Reston Town Center is an urban design in a suburban context) and is inconsistent with Blacksburg's strong rural context, which needs to be preserved.
- it negates current traffic and circulation patterns as a main entrance corridor,
- the argument with scale being an important factor in determining the location of the bridge is dependent upon refuting three false assumptions: the Mall is not part of an urban context which necessitates monumentality; the Memorial was not designed to be a monument; and the Memorial is in proper scale with the Mall.
- it produces a high traffic, negative open space between the bridge and the memorial,
- it contradicts the purpose and function of the ceremonial approach to the Memorial,
- no visual simulations have been done. No realistic renderings have been done.
- despite the public being under-informed, there was significant opposition to this proposal at all open forum discussions which has largely been ignored.
- it is a capital improvement project that it is more expensive than its worth,
- it is a monumental project that compromises the conservative image of our campus,
- nobody really know what its going to look like.

Whenever a causeway or bridge is proposed over a roadway, several things happen:

1. it takes pedestrian traffic off the street,
2. it compromises the public right of way,
3. it divides the axial corridor into three parts: before, after and under,
4. it becomes a visual destination and termination,
5. a negative space develops under it.

Analysis of Current Design Proposals

The Creative Arts Building

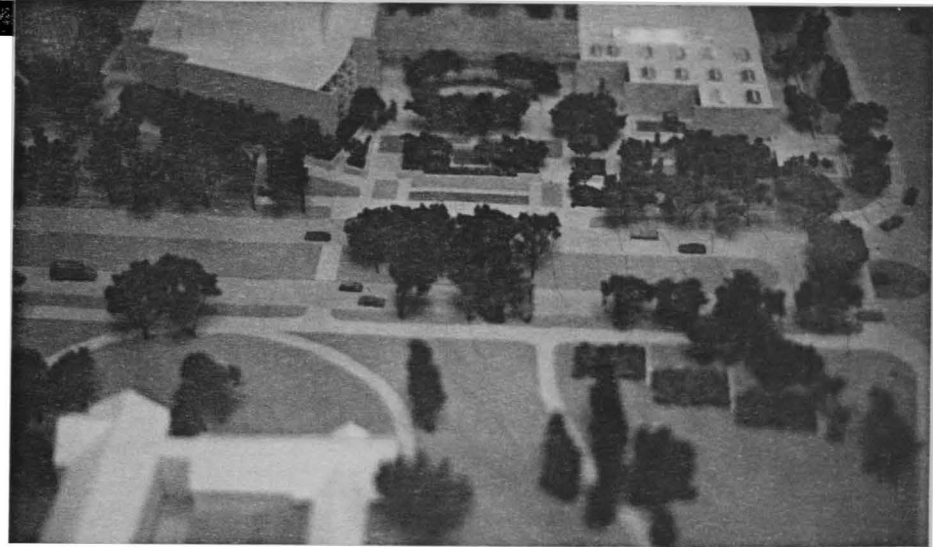
A Creative Arts Building is being proposed along the Mall in front of Shultz Dining Hall. There have been two primary ideas for this site, neither of which are appealing. Both plans extend towards Main Street: one proposes a parking garage, the other proposes a tower. Do Blacksburg residents like the idea of a parking garage along Main Street or buildings which act like a 'wall' around campus? or a tower building which may be two to three times the height of the surrounding buildings in town? These proposals need to be developed with the Town of Blacksburg's Planning Department and have local community support before this project proceeds any further. Both proposals include development in an area which should be preserved as an open space/ village green.

The first proposal locates the Creative Arts building at an angle to the Mall, compromising the functional integrity of the Mall (it should be parallel to the road). The second proposal includes a tower/landmark structure which is designed to act as a visual beacon for approaching traffic from North and South Main. Everyone who travels the Main Street corridor knows where Virginia Tech is, despite the fact there hasn't been a sign out front since 1936. The idea of a parking garage along Main Street is completely illogical for a town with a rural context which needs positive archetypal buildings to reinforce its rural downtown identity. (Please review the recommended parking garage standards in the next few sections)

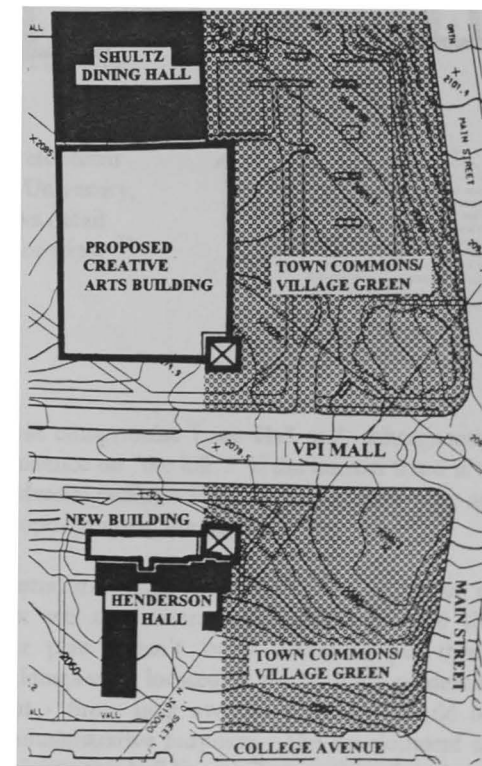
A New Village Green

The old notion of the village green or town square can serve as both the transitional space between the town and university and as the place making/ landscape marker needed to identify both the town and university edge? The idea of a village green and a landmark structure are both valid ideas for creating identity and placemaking in the landscape, yet the building is promoted more than the open space in the 1994 Plan because architecture dominates the planning process. Historically, the village green or town square (also called the town commons) symbolized the central focus of community life for the exchange of commerce and information (refer to p. 7). It is often called "sacred" because it has an intrinsic value that exceeds the economic benefit of any building proposal. Development in this area should be challenged before the opportunity for a village green is lost.

How would the citizens in New York City react if Central Park were developed? An absolute revolt would occur! Why, then, are the citizens of Blacksburg and Virginia Tech not in an uproar concerning these planning proposals? Because the community at large has been under-informed. No one has seen the 1994 Master Plan yet projects are being approved without the full knowledge and consent of its community.



Photograph of the proposed Creative Arts building (looking north). Model shows structure is at an angle to the Mall. Henderson is in the foreground. Main Street is to the right.²⁸



Plan showing proposed village green (Note: Creative Arts building is parallel to the Mall).

The impetus behind developing most master plans are to generate primary drivers and design possibilities, as well as public design “rules”. The impetus behind most regional planning studies are initiated by addressing one significant concern. The impetus behind the 1983 and 1994 Master Plans appear primarily motivated to locate building site proposals for future development, so much so, that the 1983 Master Plan even became recognized as “the infill plan”. Princeton University incorporated quad development patterns and an infill development strategy, but in a more architecturally thoughtful and environmentally sensitive manner.

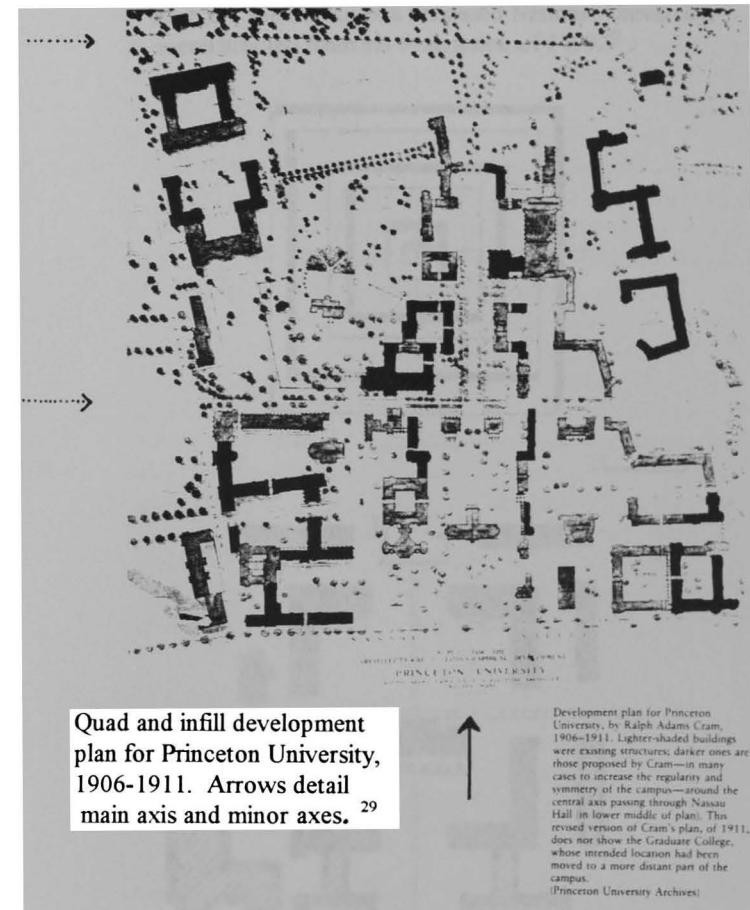
Both master plans were decidedly prejudicial, actively viewing sites as opportunities for building development without recognizing the need to prepare an open space policy or plan. The University Architects Office has become too product oriented without recognizing contextual landscape issues advocating long term development strategies. This explains why we have buildings bearing no relationship to the rest of the campus or each other, let alone the environmental and historical context. This band aid approach to planning and site development fragments the landscape fabric, regardless of whether it is rural, urban or suburban.

Blacksburg and Virginia Tech must endeavor to protect its rural character by preventing rural sprawl and random urban development. This paradoxical tension between development and preservation needs to be fully examined before any more quality open space ‘places’ are compromised. In the case against the tower as a landscape structure, the town has a decidedly rural character, which is neither urban nor suburban. The landscape on either side of the VPI Mall needs to be expressed as a village green within a rural town context, not as a commercial enterprise, academic building or urban outcrop; certainly not the substance for a parking garage or a landmark tower!

When the technology of built environments is used to steal the very purpose and function of natural systems, one has to wonder how we ever got into this mess. The landscape is a living system that supplies life to our communities. More than just an environmental resource that sustains us, it provides spiritual and emotional meaning to a technologic and synthetic society which is increasingly more adapted to silicone, wires and chips. Unless we preserve the quality of our remaining open space and the natural environment, “the gods of concrete, steel, petroleum and chemicals”²⁸ will reign supreme, even in Blacksburg. This is a perfect opportunity to claim and release the Public Open Space at both ends of the Mall and create a village green, open space, town/gown transition space.

Residence Halls

The shortage of residential housing on campus has become a major planning issue. The increased need for administration and academic space has also threatened the renovation of upper quad residence halls into administration use. If the university continues to eliminate residential opportunities in the Upper Quad, in favor of annexed administration needs, it will jeopardize the historic significance of Upper Quad as the Military Quad. The 1994 proposal, which some preservationists feel undermines the historic heritage of this



university, will compromise Lane Hall and, subsequently, lose its prominence on “the hill”? If the current trend is to phase out residential facilities from the upper quad, why are more being proposed along the Mall?

Placing residential structures along the Mall is indicative of two problems: we need more residential areas and the current master plan doesn’t know where to put them. Additional buildings were located on the Mall for residential purposes - but - these long awaited buildings should be designed for administrative purposes. The development of these two administrative buildings will serve three functions:

- it will remove the renovation costs associated from phasing residential use to administration use,
- it will greatly enhance the character and image of the Mall with well defined edges. In addition, the general layout for Upper Quad will be architecturally reinforced and similar the original 1799 layout design for the National University,
- it will help the Military program operate more effectively if segregated from the civilian community, making Upper Quad uses compatible with administration uses. This integrated use will help provide security to the Upper Quad during post-administration hours. Lane Hall should be reclaimed as the Headquarters for the Corps with the Commandant's office and Special Collections Museum on the first floor.

Pritchard Prairie

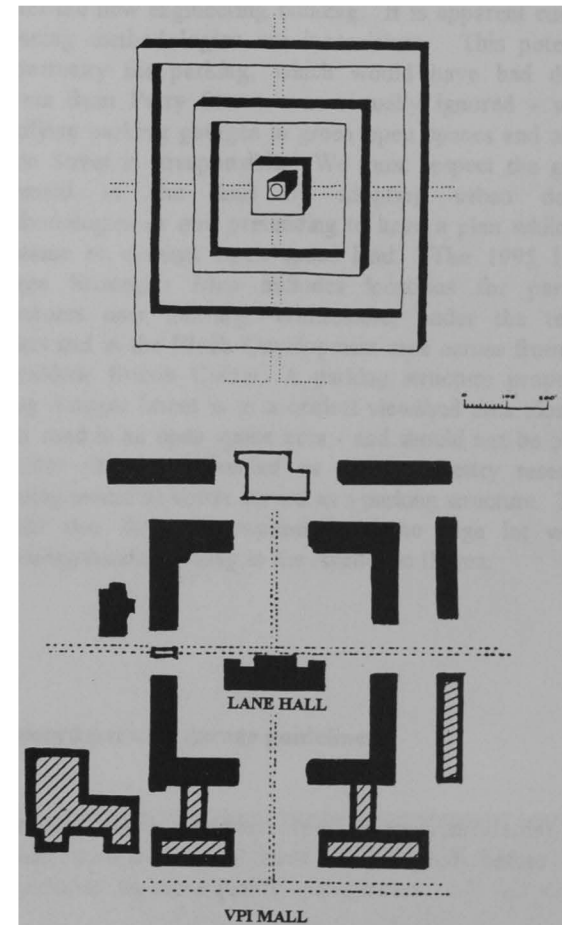
Additionally, the introduction of more residential facilities on the Pritchard Prairie will compromise the quality open space of that quad and reduce available intramural recreational opportunities for students.. The 1983 Master Plan correctly analyzed the need for this quad: plant more trees. Not every architectural deficiency needs to be corrected with a building. In this case, trees are the appropriate corrective solution. In response to more residential needs, both on and off campus, a new residential district on campus and future housing development off campus are detailed in this 1995 Master Plan proposal (refer to the Long Range Strategy and Land Use Map). The open space potential for this site outweighs the need for more residential structures which were initiated by the conversion of residence halls in Upper Quad (refer to the Open Space Map).

Special Purpose Housing

The 1994 Plan proposed more buildings in the greenway area next to Special Purpose housing which places them within 200 feet of the 460 Bypass. The quality of this agricultural viewshed will be significantly impacted when this housing development is surrounded by a sea of parking lots. Proposing a vegetative buffer to screen these buildings is just another band aid approach to insensitive environmental planning. Is this the initial image we want to project from our main entrance? Once this critical viewshed is broken, a campus precedent for expansion in this agricultural area is inevitable.

The 1994 plan was "predicated on maintenance of the village/countryside balance as an essential expression"²⁹ of Virginia Tech. Furthermore, that plan indicated this zone spatially "lacks an overall unifying concept or theme."³⁰ One of the long range concepts for the 1994 plan includes the eventual expansion into the golf course. Why does the 1994 plan expand into the greenway when they could expand into the golf course? Expanding the housing proposal into the greenway contradicts their own long range plan and design guidelines for preservation in this zone, indicating they haven't formed a

Plan of Samuel Knox's proposed National University, reconstructed from his description of 1799.³⁰



47. Plan view of Upper Quad with proposed buildings showing a unique similarity to the plan for National University.

unifying concept or theme for this zone yet. Meanwhile, a unified concept for development in this area is included in the 1995 Long Range Strategy plan.

The 1995 Master Plan provides an opportunity to preserve the agricultural viewshed along the 460 Bypass while proposing academic and residential opportunities out of this critical viewshed. This quality open space surrounding Smithfield Plantation, currently agricultural in nature, would be preserved as a greenway, golf course, Tech Arboretum and wetland area - and designed in such a manner so as to emulate the rural and agricultural heritage of Virginia Tech, as well as the "village/countryside balance".

Student Services Building

How will the proposed Student Services Building appear, sitting on top a ridge in an athletic district, while dominating the Southgate entrance viewshed? Can we decide in advance whether to build in Hokie Stone or brick without creating a morbid hybrid? It is recommended the materials incorporated into the design not include any brick, thereby limiting the introduction of any brick academic structures on campus to the Upper Quad and the proposed Wallace/Hillcrest Quad. Where does this building really belong? These planning questions need to be addressed to determine the appropriate location.

If this building is going to be financed using student fees, students should have a voice in where it will be located and how it will look. Since Cassell Coliseum can be seen from a mile away, the proposed location for this building might compromise the agricultural viewshed along the 460 Bypass. An alternative location for the Student Services Building would be on the other side of the coliseum where the tennis courts are currently. This would align the building along the minor axis on campus and located proximal to the residential district core. If this structure is located at the terminus of West Campus Drive, it should be interpreted as a landmark structure and include a portal entry/arrival sequence from West Campus Drive and the Washington Street realignment.

Parking

One critical component of any new development plan wrestles with the parking issue. There are two main solutions to this problem: reduce the dependence upon private transportation for Tech commuters and secondly, develop parking structures that reduce the ocean of asphalt needed for parking. If parking structures are also going to be funded with student fees, students should have a voice in where they will be located and how they will be built.

In order to properly value the land as a parking resource, we must address current development patterns. If we consider rural sprawl an issue for restraint, we need to adopt urban design planning methodologies in order to provide growth and development opportunities while preserving rural land. These urban development strategies need to be aligned contextually within the rural character of Virginia Tech. Integrating parking structures with buildings and is one component of achieving this goal, but its implementation recently has been ignored.

The university found it necessary to approve an underground building (the Cowgill addition) as part of the infill mandate, yet failed to incorporate a parking structure under the new engineering building. It is apparent current planning methodologies are inconsistent. This potential opportunity for parking, which would have had direct access from Perry Street, was virtually ignored - while justifying parking garages in green open spaces and along Main Street is irresponsible. We must respect the green potential of the land by adopting urban design methodologies or quit pretending to have a plan while we continue to damage open space land. The 1995 Long Range Strategies Map includes locations for parking structures near Derring, Whittemore, under the tennis courts and in the Block Development area across from the Donaldson Brown Center. A parking structure proposed along Stanger Street is in a critical viewshed area along a main road in an open space area - and should not be built. Another site recommended as an Ag/Forestry research building would be better served as a parking structure. This would also limit the expansion of the cage lot while providing faculty parking in the Academic II area.

Proposed parking garage guidelines.

There are some guidelines (performance standards) for parking garages which must be adopted before we compromise any more quality open spaces:

- keep all parking structures out of critical viewsheds
- locate them on block interiors and not on edge conditions affecting the community
- prohibit development in open space areas. Once a parcel of land has been developed, it is practically a toxic waste site, almost impossible to re-naturalize
- design them to look like buildings and not slums for cars

Other Master Plan Proposals

Duck Pond Realignment

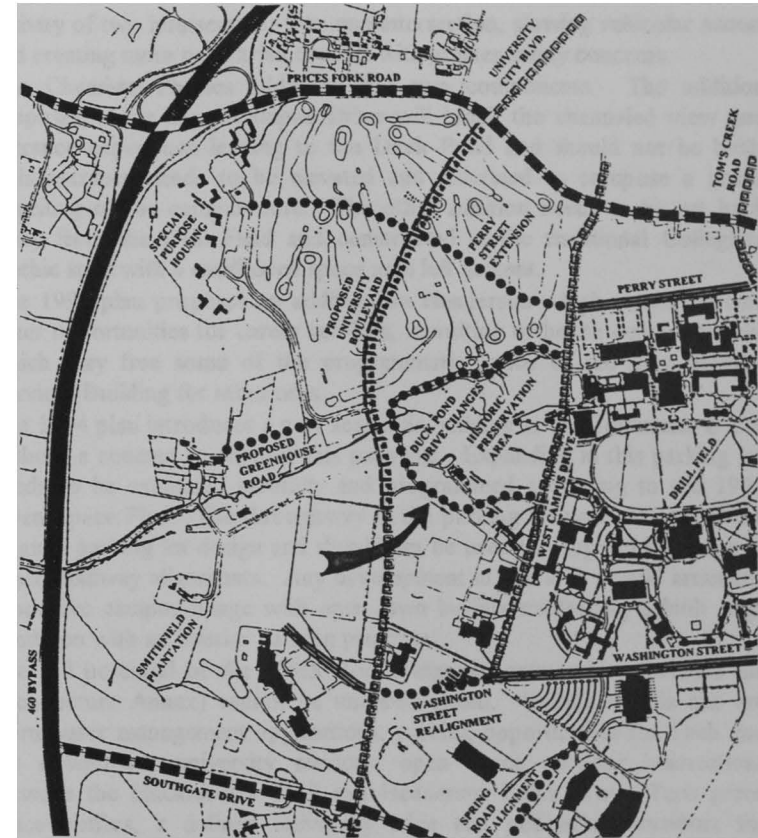
Another benefit for initiating a new organizational open space for campus development would be the realignment of Duck Pond Road. This 1995 Master Plan proposes an open space plan extending Duck Pond Road to Price's Fork Road through the Golf Course. This alternate route connects Duck Pond Road with University City Boulevard and creates a separate roadway around the Duck pond. The existing Duck Pond Road would be renamed University Boulevard and incorporate a tree-lined roadway.

Among the many benefits, it would clear up many traffic problems along West Campus Drive, supply the university with more master plan opportunities, provide a link for the Cross Campus Connector and help preserve the beauty and landscape character surrounding the Duck Pond. This corridor would serve in the same capacity as Kent/Stanger Street and West Campus Drive. All three would serve as primary corridors into the university (refer to the Primary Road Network, p. 7). If Duck Pond Drive were realigned, this would also create more opportunities for academic and residential campus facilities, enhance the Hethwood potential with an underpass for bicycle and pedestrian access while alleviating both current and proposed congestion along Price's Fork Road.

One of the best results of this proposal makes Duck Pond Drive an independent roadway system around the Duck Pond, incorporating the access road to the Presidents house as a visitor/scenic tour road and the area around Solitude as a Historic Preservation Area. It would prohibit heavy feeder traffic and commuters as well as prohibit all development in this natural area. The road would be open to one way traffic, providing students, visitors and Blacksburg residents with on road parking and direct access to the Duck Pond while accommodating a jogging and bike trail within a greenway system. What remains to be found is a sensitive alternative for relocating the golf course.

The Golf Course

The migration of golf courses is historically consistent with expansion pressures and ever changing land use policies. As land becomes more valuable, programmed uses and surrounding land uses change to reflect both development and environmental preservation pressures. Modern land analysis and site planning strategies seek to program the best possible land types with compatible and environmentally sustainable land uses. This proposal locates the golf course within a greenway system which will preserve the rural and agricultural viewshed along the 460 Bypass, as well as create stormwater management and other recreational opportunities in a flood plain. Expanding into the golf course has been considered by some 'a golden cow' which limited the full recognition of long range opportunities. The relocated golf course will be used for "preserving and enhancing the major and secondary open space system around which the core is organized"³² while protecting the greenway and agricultural viewshed along the 460 Bypass.



The proposed golf course would become part of a larger greenway system which extends from the Drill Field to the other side of the 460 Bypass ... and beyond (refer to the Long Range Strategies Map). The area being considered is the Equestrian Farm, which will be relocated into the Agriculture/ Life Sciences District on the other side of the 460 Bypass. One possible location for the Club House is near the Smithfield Plantation, which could incorporate receptions, tours and other cultural activities without compromising the historical character of the site.

Washington Street Realignment

There are two groups of buildings which do not conform to the Hokie Stone template: Upper Quad and the Wallace/ Hillcrest cluster. These buildings have their own unique brick characteristic which should not be integrated with limestone. One building which seems to get lost in the plan is the Food Science Building. Washington Street can be

realigned to include the Food Science Building and will transform this cluster into a new brick quad, creating more opportunities for academic development. This realignment will also remove the blind intersection which currently exists at Duck Pond Drive. The current Cage parking lot could also accommodate commuter parking.

The Horticulture gardens would be relocated to a nine acre site along Stroubles Creek between the Duck Pond and Smithfield Plantation. This site would also incorporate areas around the Presidents house and in front of the Veterinary Science Building. The greenhouses would be relocated to the horse barns and an extensive Horticulture Garden complex would provide sheds, facilities and growing areas for Virginia Tech's horticultural needs. As mentioned before, the Equestrian Farm will be relocated to the Agriculture and Life Sciences District on the other side of the 460 Bypass.

Analysis of Other Master Plan Proposals

- The proposed Livestock Arena needs to be relocated out of the agriculture viewshed and proposed greenway along the 460 Bypass. Putting more structures in this critical viewshed and greenway would change the first impression/ front door image of Virginia Tech into a stockyard. Numerous alternate locations are available in the Agricultural District without compromising the 460 viewshed.
- Pamplin Hall is scheduled to have an elevator retrofitted into its internal programming. The addition proposed in both the 1994 and 1995 would permit the introduction of an elevator without structurally changing Patton and incurring those additional costs. The 1995 plan preserves more of the open space within this quad while the 1994 proposal would disrupt it. The portals through this addition should mimic a portal near Hahn Hall.
- A separate structure proposed near Price Hall would not be as beneficial as an addition to the side of Price Hall. A common elevator between the two buildings would eliminate the unsightly fire escape stairwell upon entering the Drill Field. This structure should not block the open space connection between the Ag. Quad and the Duck Pond and be oriented at a 30-45 degree angle to enhance the entrance view into the Drill Field core.
- An Ag/Forestry Research Building could be added onto Seitz and Agnew Hall, creating an opportunity on the site west of the Fralin Building for a parking structure.
- The conversion of residence halls on upper quad should be halted in lieu of the high costs associated with renovating these structures and the compromised historical image of the Military Quad. Two proposed buildings on the Mall should be administration or library expansion.
- The realignment of Stanger Street is unjustified. It is supposed to reduce the number of pedestrian crossings but it will concentrate the negotiated

activity of two intersections into one intersection, slowing vehicular access and creating more pedestrian conflict with greater safety concerns.

- The Chemistry/Physics addition has two components. The addition proposed along West Campus Drive will block the channeled view and entrance experience leading to the Duck Pond and should not be built. This entrance needs to be elevated and redefined to compose a grand unveiling of the campus core. The other addition needs to be set back away from the Drill Field and constructed in the traditional Collegiate Gothic style with a small open space area left in front.
- The 1995 plan proposes an addition on Henderson which would provide other opportunities for career services, recruiting or health center services which may free some of the programmatic space of the new Student Services Building for other uses.
- The 1994 plan introduces a new academic building in the Commuter B Lot without a concept to support this proposal. Expanding in this parking lot needs to be examined carefully and programmed according to the 1995 Open Space Plan. The throughway in the parking lot was not part of the original parking lot design and should not be used to program buildings or other roadway alignments. Any development in this area should articulate a positive campus image with open lawn buffers reinforcing a built edge condition with an interior parking program.
- The full potential of the Block Redevelopment area (which includes the Architecture Annex) cannot be underestimated. Unique to this site are stormwater management applications, parking opportunities for Tech and the downtown, university services, open space corridor connections between the Huckleberry Trail and Henderson Lawn, Town/Tech green space buffers, a defined university edge and pedestrian corridors for students into the downtown commercial area. University acquisition of the Armory building would help in the block redesign for better mid-block access and parking. Program relocation of the Annex should be proximal to the College of Architecture, possibly in the back of Burruss.
- Creation of a new on/off campus housing development is proposed where the turf farm is currently relocated. The turf farm would be relocated to the Tech Landfill, complimenting the 1994 plan for research, demonstration projects and land reclamation initiatives on the landfill. A separate report has been prepared for this proposal.
- Placing a tunnel under the expanded airport to accommodate Tech Center Drive is ridiculous. Expansion would be accommodated via the new University Boulevard extension (see Circulation Map).
- Bank improvements to the Duck Pond and Stroubles Creek were also mentioned without any recommendations. Rip-rap placed randomly around the perimeter of the Duck Pond is a low quality, unsuitable application for both situations. Other alternatives, including bioengineering or check walls, need to be examined before rubber-stamping the rip-rap option.

Trees

Trees were mentioned in a visual and romantic way but proposals are needed to replace inferior trees with sustainable tree types damaged during the last three storms. The role of vegetation as it relates to habitat diversity and preservation must also be mentioned. Did anyone notice the correlation between certain plant species and their ability to withstand the ice storm? Some of us did.

A question which needs to be addressed is the durability of certain plants before we systematically replace them with similar, if not identical, plant types. A university survey indicates that, during the last major ice storms in 1994, a majority of our tree losses (68%) were from maples (28%), elms, white pines and ornamentals. In contrast, oak, spruce, hemlock and dogwood trees sustained minimal damage.

If we view this in economic terms alone, by choosing more durable tree types, there will be less preventative maintenance, debris removal and potentially hazardous fallout from future storms. If we view the intangible worth of our scenic campus, we must strive to rethink the inferior plant position. The recent ice storms and tremendous wind storm in the summer of '93 left our campus suffering badly for mature trees. To make matters worse, the inferior tree types were reintroduced - and replanted as small whips.

Our university must make changes to its' tree selection process. The main request is to make oaks the primary tree base for the university and allow maples and other natives to serve as secondary plantings. In this manner, the primary tree species will provide the campus with a healthy and mature visual landscape while allowing species diversity in the secondary plantings. Additionally, the university must adopt a plan for initiating second generation tree plantings for a succession landscape. In doing so, the future visual character of our university will not be interrupted by damaging storms.

Trees as Landscape Form

At the time of its construction in 1950, a beautiful grove of trees, affectionately known as "Lovers Lane," succumbed to the urbanist plan and the bulldozers blade as part of "The Greater VPI" expansion plan. University administrators guaranteed the 100 trees removed during construction would be replaced with 300 new trees, but this promise has yet to be implemented. Professor Cowgill, in a letter to the student newspaper in 1951, lamented the loss of the trees, not so much for the love of tree-ness, but because planners were willing to compromise the visual cohesiveness of the university which lacked a democratic planning process that respected the needs of faculty and students. The site to reintroduce these trees is a proposed open space park/ Village Green where Shultz parking lot is currently located.

Trees can be used as structural elements along university roadways, especially along the proposed University Boulevard. Reintroducing tree outcrops, vegetation buffers, native plants and naturalized areas is one master plan proposal which warrants immediate approval. Trees are also used to define the spatial and organizational orders of paths, streets, malls and allees. One excellent example which amplifies the importance of trees is The Mall in Washington, DC. Lined with four rows of trees which soften and enhance the buildings, these trees help define the edge to give it functional order and strength. If you notice carefully, there are four parallel rows of trees except where the Smithsonian has encroached the realm of the Mall. This fourth row of trees, which assumes the built relationship of the Smithsonian, is absent at the Smithsonian and helps to disguise a major planning blunder of the Smithsonian when it encroached the realm of the Mall.

Eggs Were Laid

Every master plan, regardless, will produce an egg or two. The 1983 eggs were the high rise, Slusher type buildings along the southern ridge of the Drill Field and the Squires addition. If that master plan properly understood the Mall before Squires was developed, we would not be stuck with an arbitrary addition. The 1994 eggs are the "bridge" across the Mall, Special Purpose Housing in a greenway and more dorms on Pritchard Prairie. The Cowgill plaza building is a bonus because in this instance, we have buildings arranged in quad format which alienate the plaza space - and the only way to successfully arbitrate this open space is to transform it into another building. The consequence of poor planning is: alienate the site ...then put a building on it. Perhaps if we do this enough, we will learn how to contextualize our buildings and make them submissive to site planning, open space planning and the *genus loci* - hopefully before we sacrifice all quality open spaces left on campus.

Executive Planning Summary

Virginia Tech needs to employ a more holistic approach to environmental planning to determine the practicality and feasibility of site development. In addition, Virginia Tech:

- needs to develop ways to value the land and other landscape/natural resources,
- establish design rules and guidelines for future development
- establish guidelines that restrict expansion or development in open space areas,
- develop an open space master plan and policies for future master plan use,
- set growth limits on development in certain campus areas,
- develop long range strategies for wise land use and environmental sensitivity,
- develop performance standards as a valid means of evaluating the success of future development proposals,
- and be cognizant of both the internal image of the campus and the external image we project outside the university.

Virginia Tech needs a campus planner and a design process with more checks and balances to provide sustainable planning proposals which protect the character and beauty of our campus. A more democratic planning method is needed which respects the needs and concerns of faculty, students and alumni to voice their concerns so they will not be callously ignored. In addition, more planners and landscape architects need to be involved with the master plan process and appointed on the Building and Grounds Committee.

The landscape around Virginia Tech is changing rapidly because the land is vanishing. The Greater VPI expansion plan is preeminent when land is valued as a spatially good resource for building development. Land must not be valued solely as an opportunity for development, but must be viewed as an environmental resource which sometimes needs to be preserved.

FOOTNOTES

- ¹ Paul Venable Turner, Campus - An American Planning Tradition, page 3.
- ² *Ibid.*, p. 12.
- ³ *Ibid.*, p. 12.
- ⁴ *Ibid.*, p. 4.
- ⁵ Virginia Tech 1983 Master Plan, p. 6.
- ⁶ Quotation found by Harry Temple, Corps of Cadets historian.
- ⁷ Open space as a public space - Carr, Francis, Rivlin, Stone, Public Space, p. 1,2.
- ⁸ Ada Louise Huxtable, "The Troubled State of Modern Architecture," AD 1/2, London, 1981, p.16.
- ⁹ Peter Karp, VPI&SU University Architect, New River Current, Roanoke Times, Nov. 6, 1994, p. 14.
- ⁹ Kevin Lynch, The Image of the City, p. 46-54.
- ¹⁰ Richard P. Dober, Campus Design, p. 4.
- ¹¹ Christian Norberg-Schulz, Genius Loci, p. 19.
- ¹² Quotation found by Harry Temple, Corps of Cadets Historian.
- ¹³ Roger Trancik, Finding Lost Space, p.19.
- ¹⁴ Charles Jencks, Modern Movements in Architecture, p. 299.
- ¹⁵ Virginia Tech 1983 Master Plan, p. 21.
- ¹⁶ Lao-Tsu, seventh-century BC. Chinese philosopher.
- ¹⁷ Special Collections, University Archives, Virginia Tech.
- ¹⁸ 1994 Master Plan, Executive Summary, p. xviii.
- ¹⁹ *Ibid.*, p. xx.
- ²⁰ *Ibid.*, p. 27, section 3.1.1.
- ²¹ Alan B. Jacobs, Great Streets, p. 297.
- ²² Virginia Tech Magazine, Volume 17, Number 2, Winter 1995.
- ²³ Peter Karp, VPI&SU University Architect, New River Current, Roanoke Times, Nov. 6, 1996, p.14.
- ²⁴ The Virginia Tech newspaper, editorial by Professor C.H.Cowgill, VPI&SU, Fall 1951.
- ²⁵ Thomas A. Gaines, The Campus as a Work of Art, p. 121.
- ²⁶ Norman T. Newton, Design on the Land, p. 146.
- ²⁷ the evidence of two disparate buildings at war with each others architectural identity.
- ²⁸ Quote from John Lyle, origin unknown.
- ²⁹ 1994 Master Plan, p. 30, section 3.3.1.
- ³⁰ *Ibid.*, p. 6, section 1.1.3.
- ³¹ *Ibid.*, p. 31.

GRAPHIC NOTES

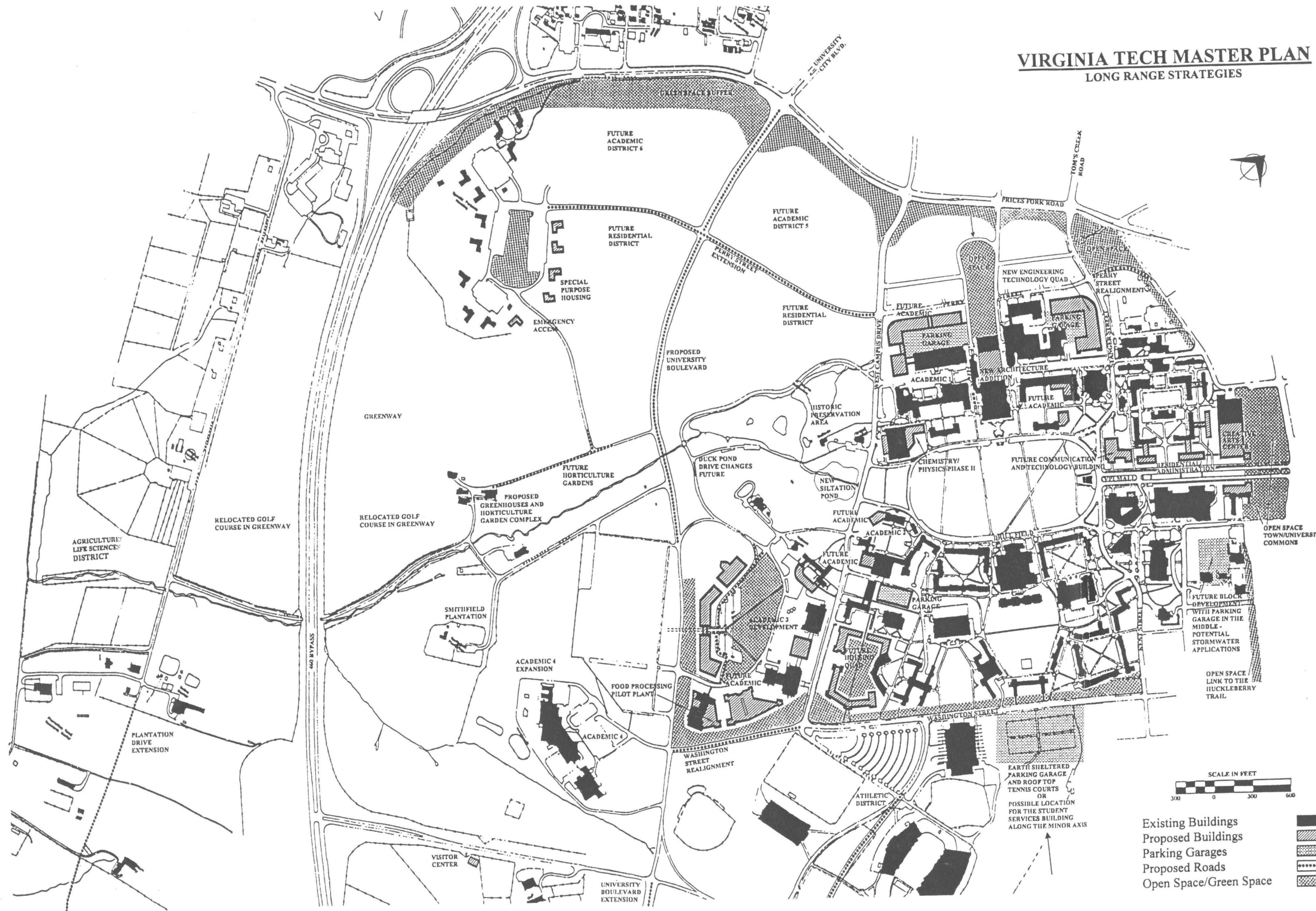
- ¹ Paul Venable Turner, Campus- An American Tradition, p. 14.
- ² *Ibid.*, p. 13.
- ³ *Ibid.*, p. 29.
- ⁴ *Ibid.*, p. 53.
- ⁵ Virginia Tech 1983 Master Plan, p. 65.
- ⁶ *Ibid.*, p. 6.
- ⁷ Photograph from The Techgram newspaper, Virginia Tech, printed in June 1951.
- ⁸ Virginia Tech 1983 Master Plan, p. 7.
- ⁹ Turner, p. 39.
- ¹⁰ Virginia Tech 1983 Master Plan, p. 6.
- ¹¹ *Ibid.*, p. 7.
- ¹² Adapted from the 1983 Master Plan, p. 56.
- ¹³ Courtesy of Virginia Tech, standard letterhead.
- ¹⁴ Standard Geologic Survey Map. 1:24,000.
- ¹⁵ Paul Venable Turner, Campus- An American Tradition, p. 58.
- ¹⁶ Virginia Tech 1983 Master Plan, p. 27.
- ¹⁷ *Ibid.*, p. 7.
- ¹⁸ Turner, p. 73.
- ¹⁹ *Ibid.*, p. 72.
- ²⁰ *Ibid.*, p. 58.
- ²¹ *Ibid.*, p. 218.
- ²² Photo courtesy of John Kline.
- ²³ Virginia Tech 1983 Master Plan, p.7.
- ²⁴ Virginia Tech, Volume 17, Number 2.
- ²⁵ Photo postcard by W.A. Shaw, Jr. Blacksburg.
- ²⁶ The Virginia Tech, Fall 1951.
- ²⁷ Model produced by the University Architect's Office.
- ²⁸ *Ibid.*
- ²⁹ Turner, p. 232.
- ³⁰ *Ibid.*, p. 59.

Special thanks to MIT Press for permission to copy from Paul Turner, CAMPVS, An American Planning Tradition.

This Footnote section is in lieu of a Bibliography.

VIRGINIA TECH MASTER PLAN

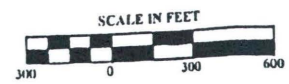
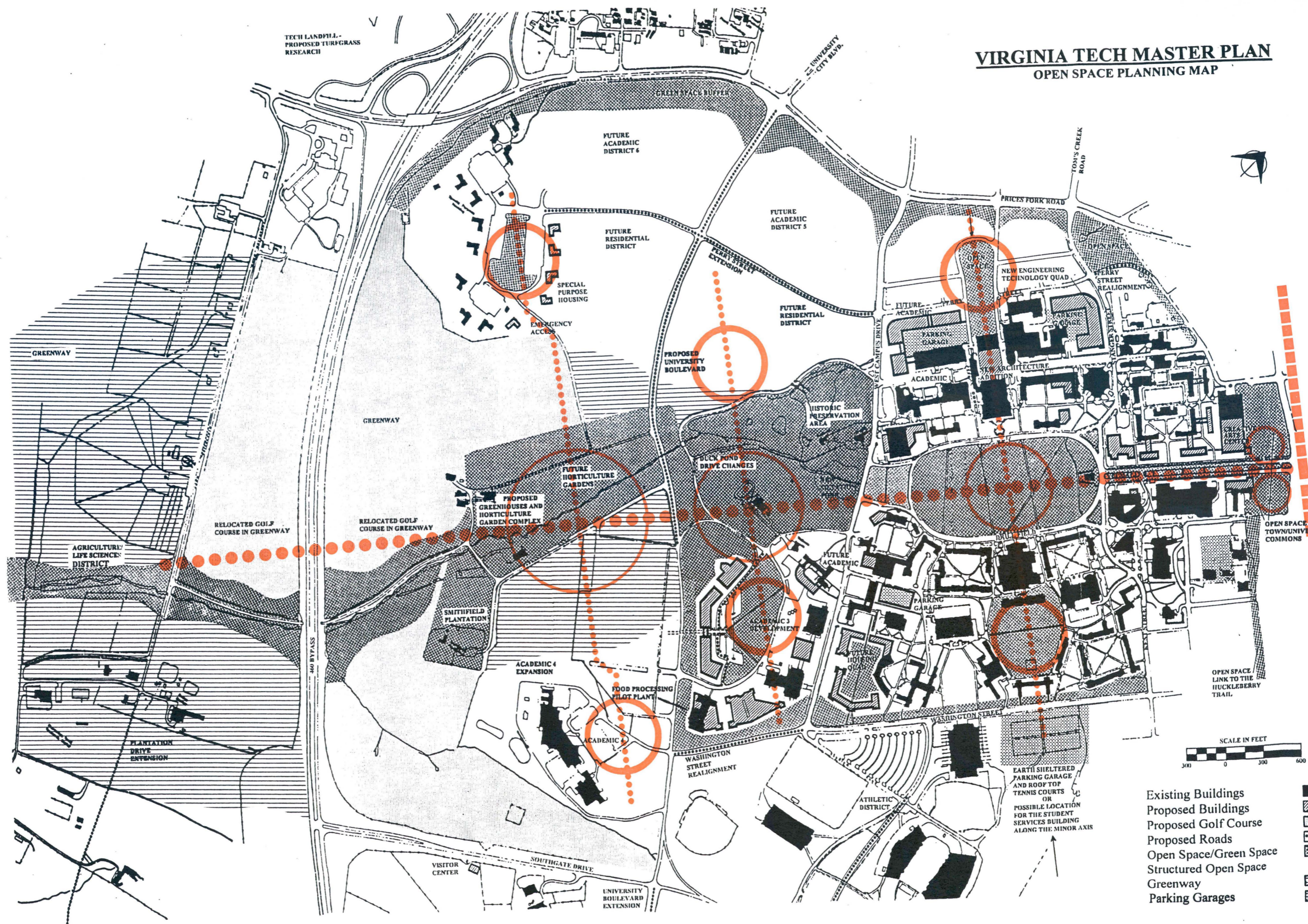
LONG RANGE STRATEGIES



- Existing Buildings
- Proposed Buildings
- Parking Garages
- Proposed Roads
- Open Space/Green Space

VIRGINIA TECH MASTER PLAN

OPEN SPACE PLANNING MAP



- Existing Buildings
- Proposed Buildings
- Proposed Golf Course
- Proposed Roads
- Open Space/Green Space
- Structured Open Space
- Greenway
- Parking Garages

TECH LANDFILL - PROPOSED TURFGRASS RESEARCH

FUTURE ACADEMIC DISTRICT 6

FUTURE ACADEMIC DISTRICT 5

FUTURE RESIDENTIAL DISTRICT

SPECIAL PURPOSE HOUSING

EMERGENCY ACCESS

PROPOSED UNIVERSITY BOULEVARD

FUTURE RESIDENTIAL DISTRICT

PRICES FORK ROAD

NEW ENGINEERING TECHNOLOGY QUAD

FUTURE ACADEMIC

PARKING GARAGE

ACADEMIC

NEW ARCHITECTURE FACILITY

HISTORIC PRESERVATION AREA

DUCK FOND DRIVE CHANGES

FUTURE HORTICULTURE GARDENS

PROPOSED GREENHOUSES AND HORTICULTURE GARDEN COMPLEX

RELOCATED GOLF COURSE IN GREENWAY

RELOCATED GOLF COURSE IN GREENWAY

AGRICULTURE/LIFE SCIENCES DISTRICT

GREENWAY

GREENWAY

400 BYPASS

SMITHFIELD PLANTATION

ACADEMIC 4 EXPANSION

ACADEMIC 4

FOOD PROCESSING PILOT PLANT

WASHINGTON STREET REALIGNMENT

FUTURE ACADEMIC

PARKING GARAGE

ACADEMIC

WASHINGTON STREET

ATHLETIC DISTRICT

EARTH SHELTERED PARKING GARAGE AND ROOF TOP TENNIS COURTS OR POSSIBLE LOCATION FOR THE STUDENT SERVICES BUILDING ALONG THE MINOR AXIS

OPEN SPACE TOWN/UNIVERSITY COMMONS

OPEN SPACE LINK TO THE HUCKLEBERRY TRAIL

VISITOR CENTER

SOUTHGATE DRIVE

UNIVERSITY BOULEVARD EXTENSION

TONY'S CREEK ROAD

UNIVERSITY CITY BLVD.

GREENWAY BUFFER

OPEN SPACE

PERY STREET REALIGNMENT

OPEN SPACE

OPEN SPACE

OPEN SPACE

OPEN SPACE

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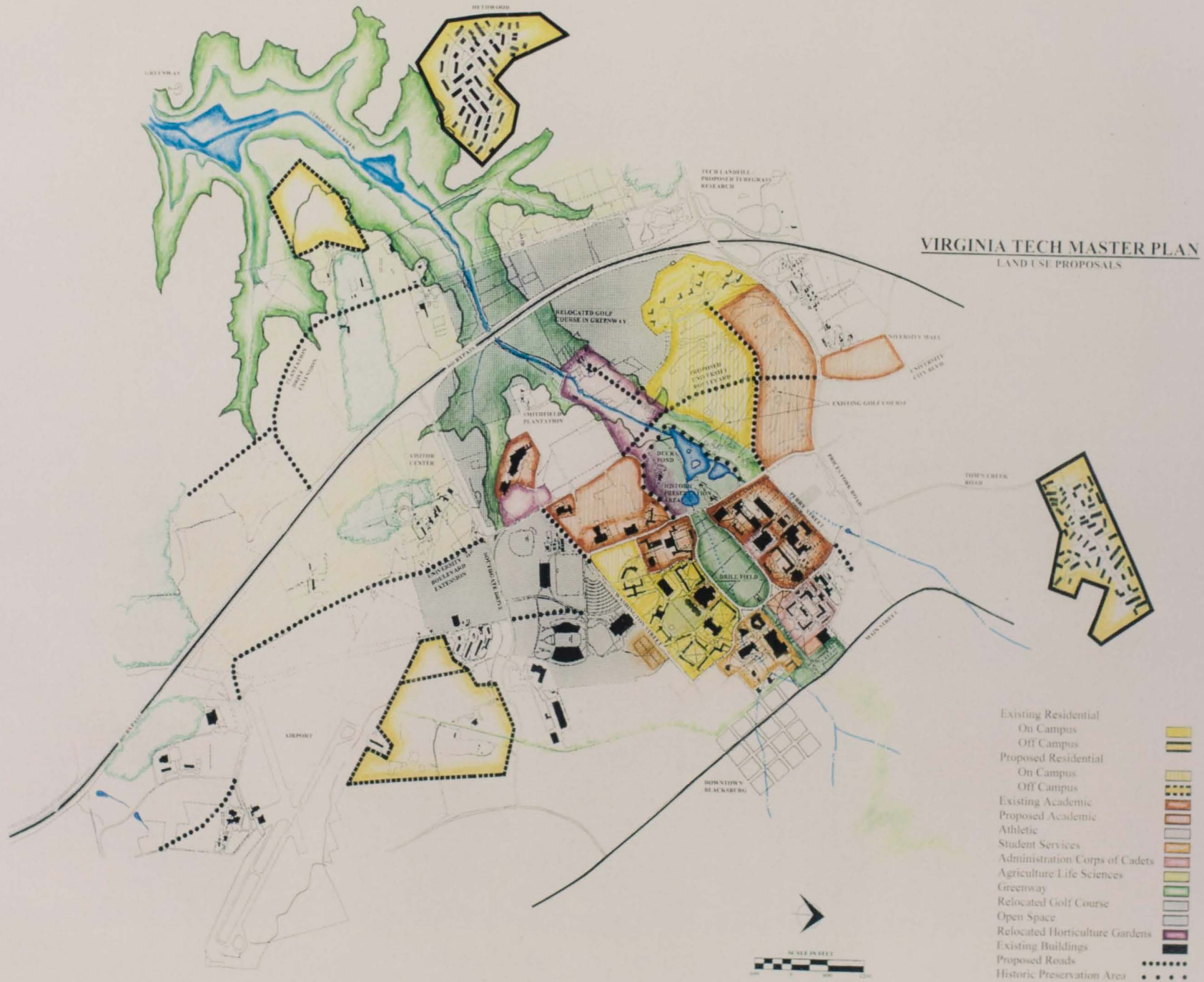
OPEN SPACE

OPEN SPACE

OPEN SPACE

VIRGINIA TECH MASTER PLAN

LAND USE PROPOSALS



- Existing Residential On Campus
- Existing Residential Off Campus
- Proposed Residential On Campus
- Proposed Residential Off Campus
- Existing Academic
- Proposed Academic
- Athletic
- Student Services
- Administration/Corps of Cadets
- Agriculture/Life Sciences
- Greenway
- Relocated Golf Course
- Open Space
- Relocated Horticulture Gardens
- Existing Buildings
- Proposed Roads
- Historic Preservation Area