

BLACKSBURG CENTRE FOR THE ARTS:  
A PROPOSED CULTURAL CENTER AND  
TOWN REDEVELOPMENT

by

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**BLACKSBURG CENTRE  
FOR THE ARTS:**

**A PROPOSED CULTURAL CENTRE AND TOWN  
REDEVELOPMENT**

**MASTERS  
THESIS**

**GT  
BUTLER**

GENERAL  
PROBLEM  
DEFINITION:  
SOLUTION APPROACH



STATEMENT OF THE PROBLEM  
SCOPE OF THE PROBLEM  
THESIS CONTEXT  
GOAL STATEMENT

## STATEMENT OF THE PROBLEM

The importance of this thesis involves the development of a methodology for generating a new environment for towns, using Blacksburg as an example of towns and a cultural center as the vehicle of generation. The idea is to create a center generating a new surrounding micro-environment that, once initiated, changes the status of that town to an urban center. The unique situation of Blacksburg allows for such a growth. Blacksburg has a strong university influence with a resulting diversity of population, thus causing a center to generate itself even without form.

No person lives in a vacuum. All persons--old, young, male, female--all interact and nourish one another. A center of this interaction is the Blacksburg Centre for the Arts, where the language of creativity has universality. This center is to provide a focus for the town, acting as a magnet for the humanistic values which are embodied in the creative arts, and in turn, sparking other disciplines. In this activity--drawing people in and causing interaction--the center for the arts philosophically becomes a microcosm of the town and changes as the town's needs change.

## SCOPE OF THE PROBLEM

This thesis proposes a new cultural center for Blacksburg. The focus of this thesis will be: (1) to initiate a conceptual framework of what an urban cultural center should be and how to integrate that framework into an urban/city fabric to cause new growth and changes; and (2) to propose a cultural center in downtown

Blacksburg as an example of the actual implementation of that framework.

This thesis is composed of three sections: Division One, consisting of two parts, will cover the general introduction and background information of cultural centers. Division Two, also consisting of two parts, will cover the program and its analysis. Division Three is the resulting combination of the other two from which a new center for Blacksburg emerges.

#### THESIS CONTEXT

"Blacksburg is one of the most rapidly growing communities in Virginia. Since 1950, Blacksburg has grown from a population of 3,358 to approximately 31,000 by January 1975. By 1985, Blacksburg is expected to have a population of 45,000."<sup>1</sup> As the town grows so will its need for a community center. The fact that Blacksburg at present does not have a visible center is a sad one. Starting now to develop and build a center will insure that generations to come will have a fulfilled need.

Blacksburg is a college town, and like similar towns, relationships between the college and town are strained. Thus, a specific design problem is to bring together these two communities. In order to have the town and college come together at this joint condition, it is important to know which functions are best suited for this purpose. After much study of the existing functions of both VPI&SU and Blacksburg, it is a firm belief that the social functions and cultural functions would best bring these communities together.

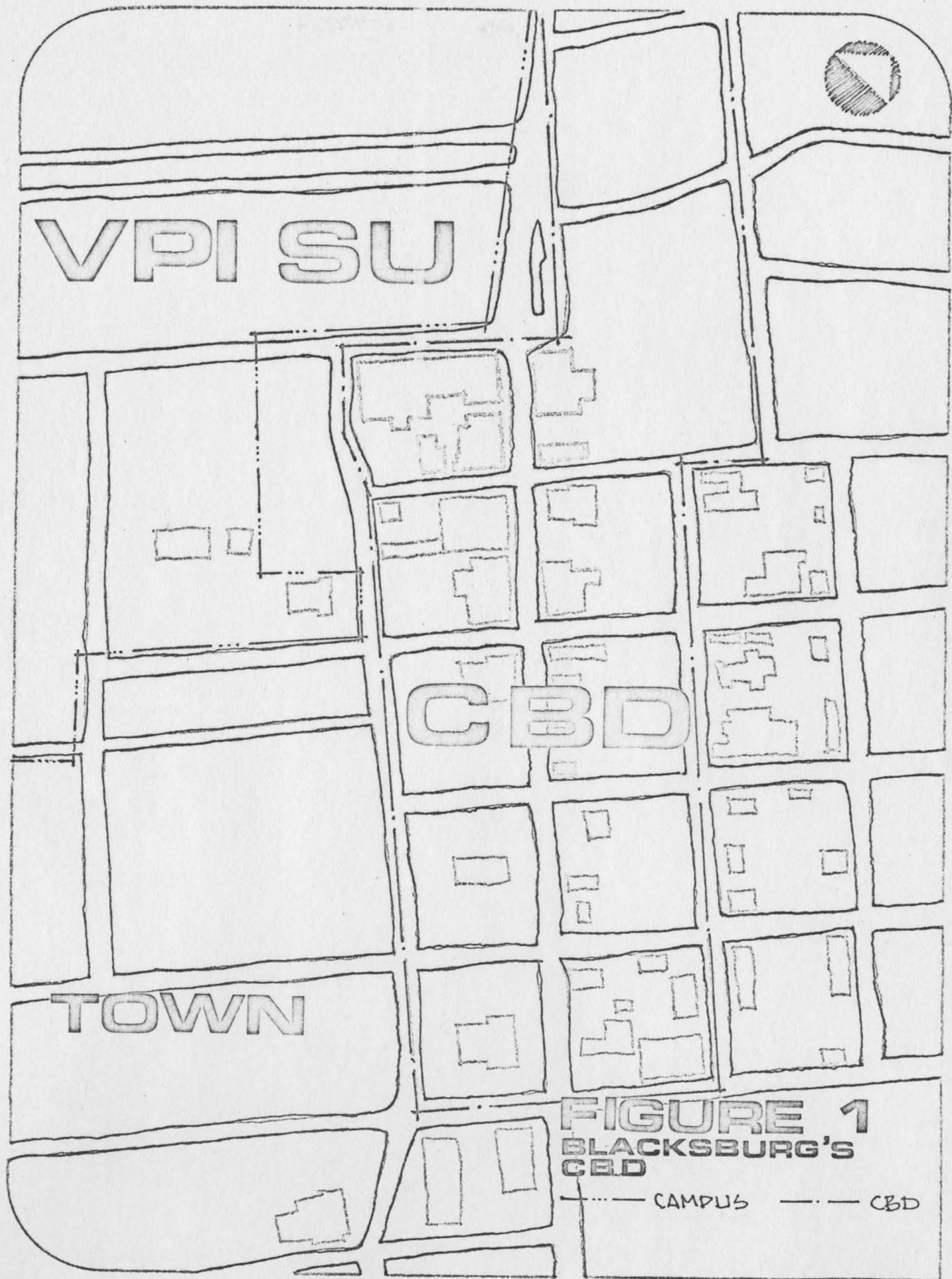
Although several functions may be duplicated, it is felt that the justification comes in having one central location for both college and town. (Figures 1 and 2) This interrelationship will guide the selection of functions and activities for this center.

The place which seems most appropriate for this cultural center is the Central Business District (CBD), which is immediately adjacent to the university. Therefore, the problem of the development of the CBD needs to be strongly considered. Considerations that were studied include:

- (1) Redevelopment of the CBD as a direct result of the new center.
- (2) Increases traffic and parking congestion.
- (3) Possibility of allowing the Blacksburg public to shop free of traffic in the CBD.
- (4) Public awareness of the many cultural, craft, and sports activities available.
- (5) Interaction of all parties using or coming in contact with the center.
- (6) Unification of university and town goals with better community relations.
- (7) Creation of a feeling of pride and respect for one's town.

#### GOAL STATEMENT

The basic intention of a new center is to create a focal point for Blacksburg. This will help to generate a new sense of place, belonging, and community identification. A cultural center serves as a generator of activities and as a link between the city and university life. Thus, it becomes a common ground for the two worlds to





meet and share their experiences.

It is through this competitive mixture of free enterprise, population needs, and functional diversity that a center will have unlimited potential for maximization of human, economic, and energy resources. The basic intention of a center composed of multi-services is to become a reference point in the environment. The reference point theme is a key to the solution concept of this thesis.

The provision of multi-functional spaces for all types of activities is not the intention of this thesis; rather a set of possible activities was selected based on a survey presented to Blacksburg citizens as to their own wants and needs.<sup>2</sup> The following is the set of goals used in the development of the Blacksburg Centre for the Arts (BCA):

- (1) BCA should provide maximum amount of enclosed public space on a minimum amount of land.  
BENEFITS: Shortened travel distances; savings of energy and public funds.
- (2) BCA should be readily accessible by major transportation networks.  
BENEFITS: Maximizing the number of potential users.
- (3) BCA should separate both pedestrian and vehicle traffic and provide maximum efficient interior circulation and communication systems.  
BENEFITS: Safe pedestrian environment.
- (4) BCA's selection of functions must be relative to the center's role. The scale must present and project place and function in its environment.  
BENEFITS: Increased potential for center that fits environment.
- (5) BCA should have a cohesive set of functions.  
BENEFITS: A good workable holistic design, suitable to the university and town environment.
- (6) BCA's functions should be both internally and

externally oriented, displaying difference in functional content and creating visual densities of activity.

**BENEFITS:** Internal and external activities are increased, both by density and potential use by visibility. Greater drawing of potential users for university and town. Better economic base.

- (7) BAC must meet its own functional requirements and needs of man and must be public and open all the time, thus not catering to individual groups of people.

**BENEFITS:** Utilization by the whole of Blacksburgs' urban society.

# PROGRAM DESCRIPTION

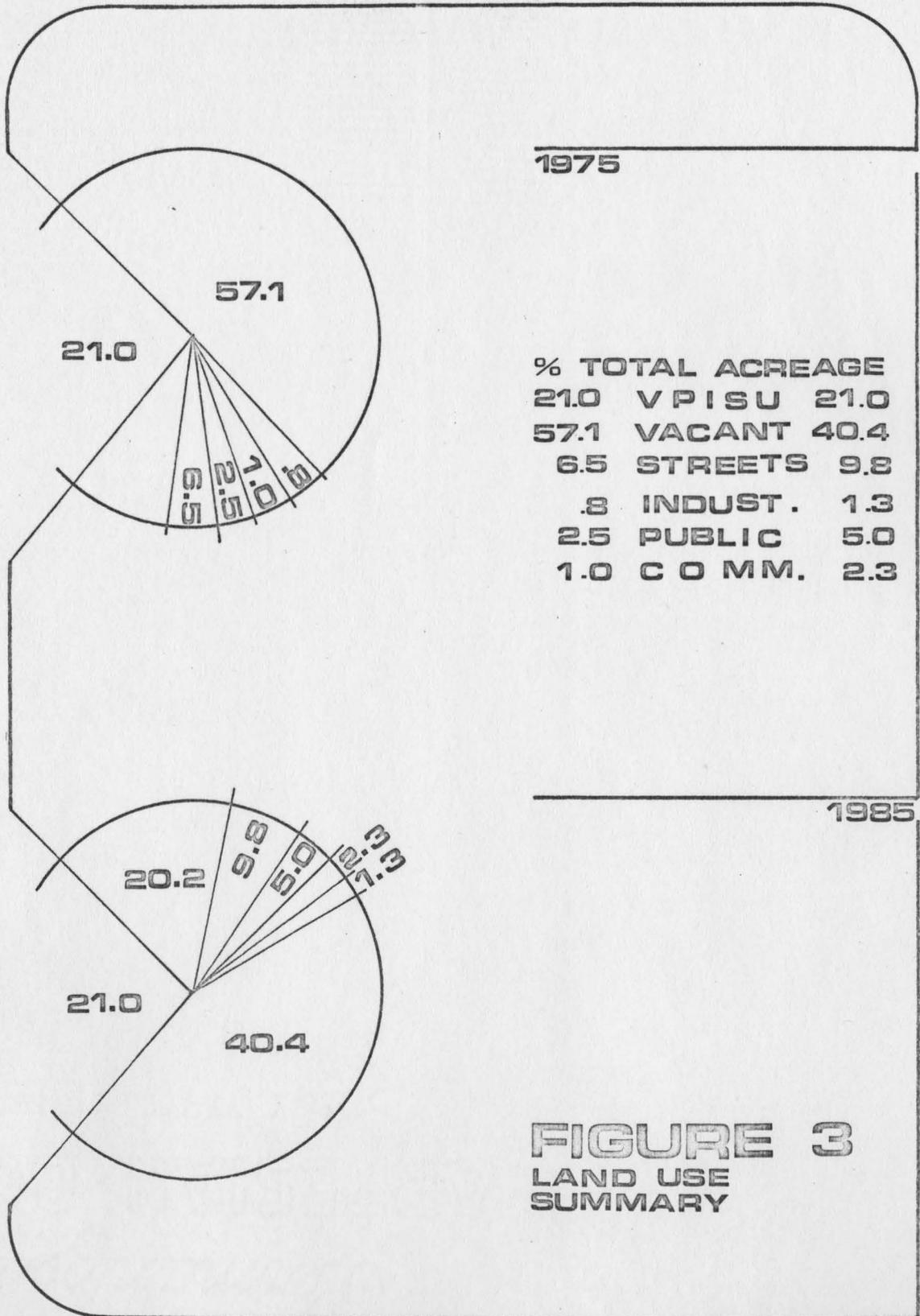
CONCEPT STATEMENT  
PROPOSED REDEVELOPMENT  
ADOPTED REDEVELOPMENT  
ANALYSIS AND FEASIBILITY  
EXISTING FUNCTIONS  
USER IDENTIFICATION  
RECOMMENDATIONS  
INTERATION OF COMMUNITY  
AND FACILITY  
PHILOSOPY

## CONCEPT STATEMENT

Blacksburg is becoming more like other cities as the population continues to grow. (Figure 3) With growth comes added responsibility and a need to take leadership, causing a change in town attitude. Growth also demands added sale of retail goods, emphasis on the shopping centers, and an enlargement of cultural and civic activities. The enlargement of shopping districts and extra activities causes open land to be irreversibly changed.

Open space, specifically that relating to a city, is an unique and treasured resource. Even though vacant tracts of land exist in the CBD, there is not any room in the central city to house increased space for commercial facilities, so the retailer is moving to the suburbs. There is need to bring the commercial facilities back into the city where convenience becomes an important factor. There is a need for a place representing the growing commercial and cultural activities.

The new center for Blacksburg should be an upgrade for a new way of life. Considered a breakthrough in conceptual design, the center is hoped to be a viable facility serving the needs of the people much better than existing facilities, yet not in competition with them. There is a need to collect functions and activities in one central location providing for new city convenience. The user wants to observe, socialize, and participate with other people. Finding an architectural concept which provides the above opens the author to many possible forms. A plaza or court concept permits a great range of social possibilities, providing a place to stop



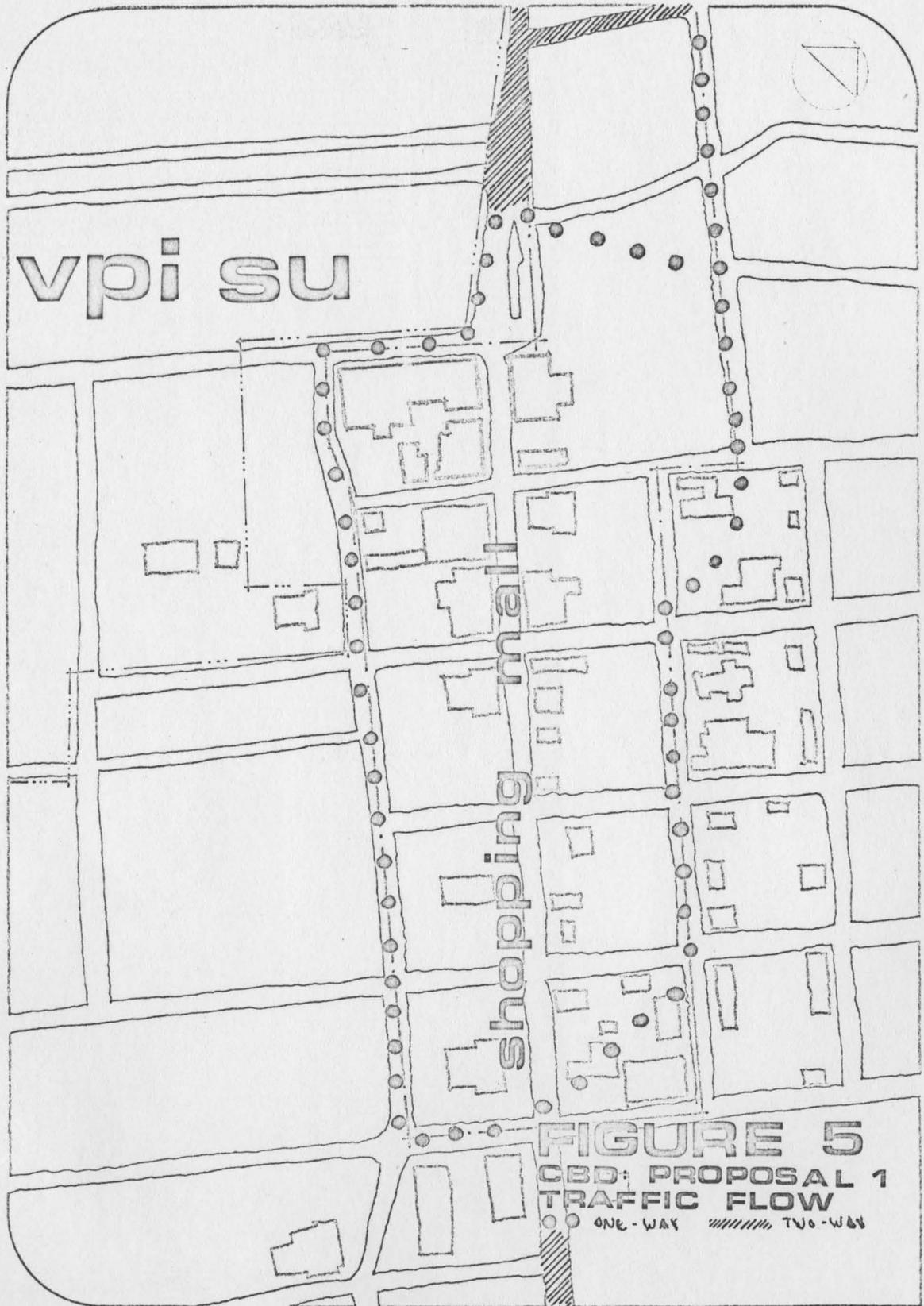
and lounge while not obstructing the main flow of pedestrian traffic. The resulting concept becomes a plaza, and the entrance point to that plaza also serves as a key element.

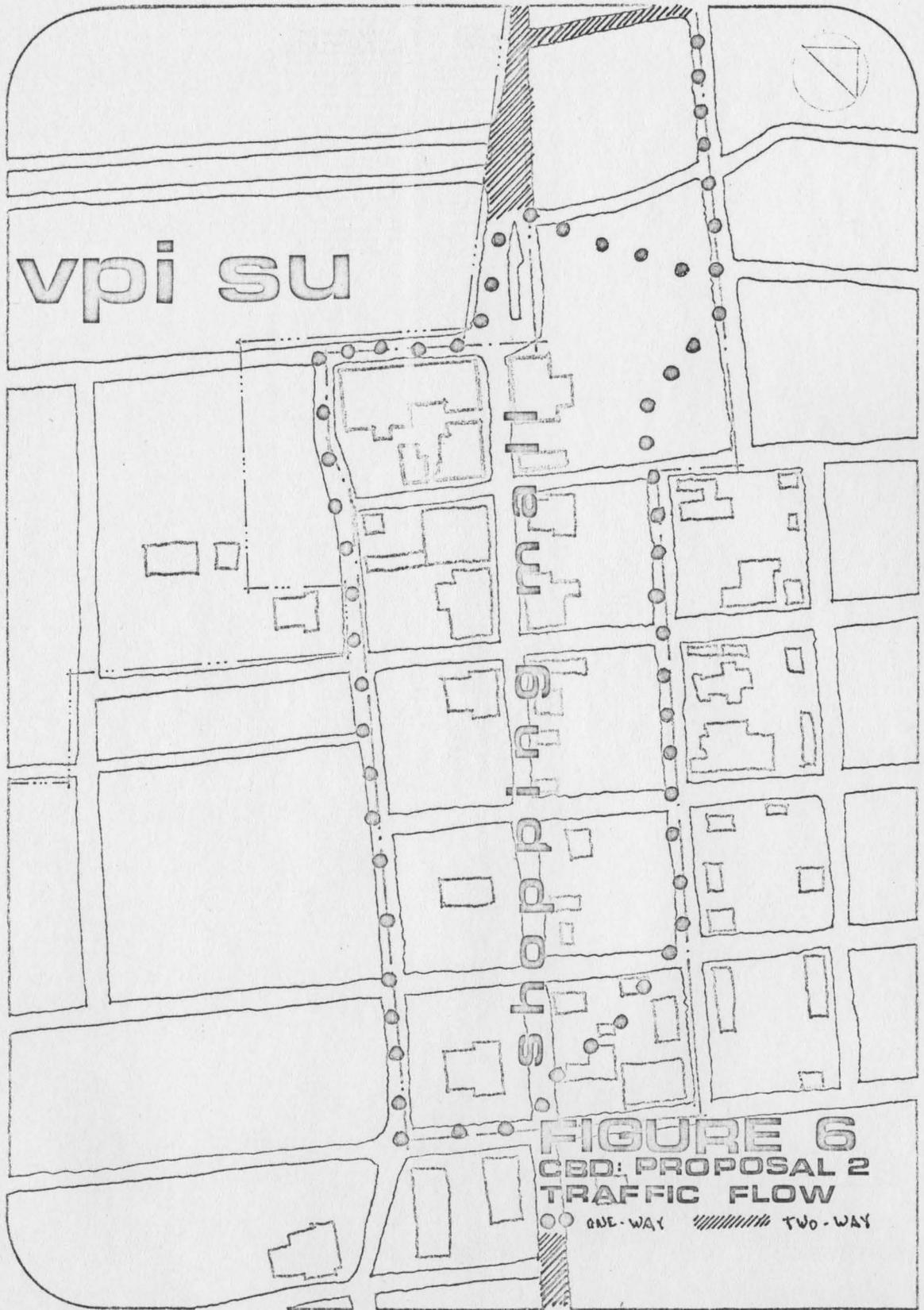
#### PROPOSED REDEVELOPMENT

The proposed Blacksburg Centre for the Arts leads the CBD to many different alternatives. Many small changes in traffic patterns, even without changing street patterns, can open the CBD to a useful pedestrian mall as a means of keeping the business potential there. The following (Figures 4, 5, 6 & 7) are several proposals included as foundational data to form an opinion and come to a workable proposed redevelopment based on the physical position of the BCA. From Figure 5 it can be seen that a natural pedestrian mall is created between the town hall (civic facility) and the BCA (cultural facility).

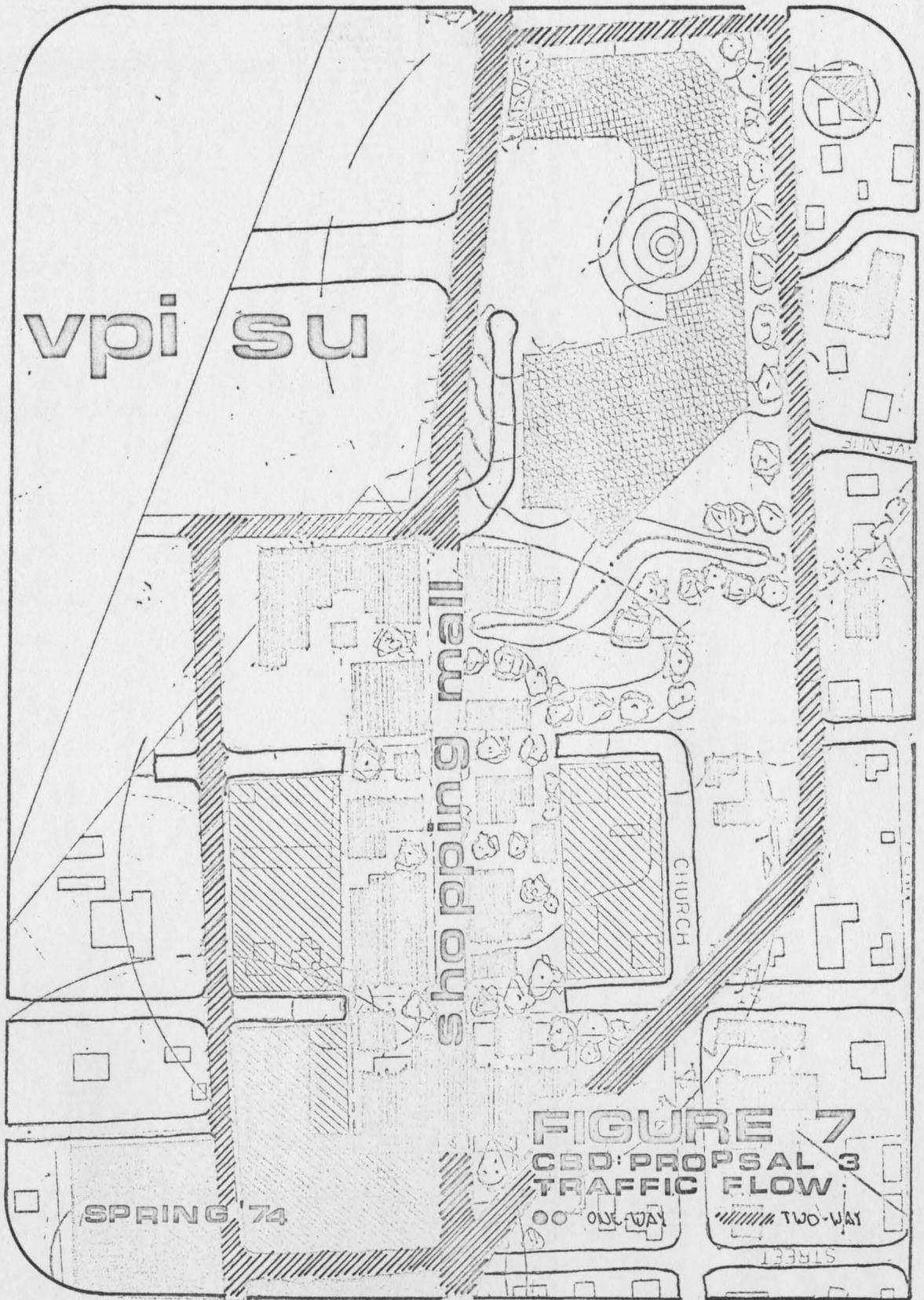
There should be a division of traffic between Washington Street and the center. Progress Street and Draper Road should be used as one-way streets for main city flow. To keep the traffic on a town scale, right angle turns should be used, thus slowing traffic to a city speed. Bringing pedestrians back to the CBD will improve the tax base and promote a better commercial atmosphere. All of these proposals create a natural cradle bringing the town, university, and pedestrian flow back into the proper perspective.







**FIGURE 6**  
**CBD: PROPOSAL 2**  
**TRAFFIC FLOW**  
○ ONE-WAY    // TWO-WAY



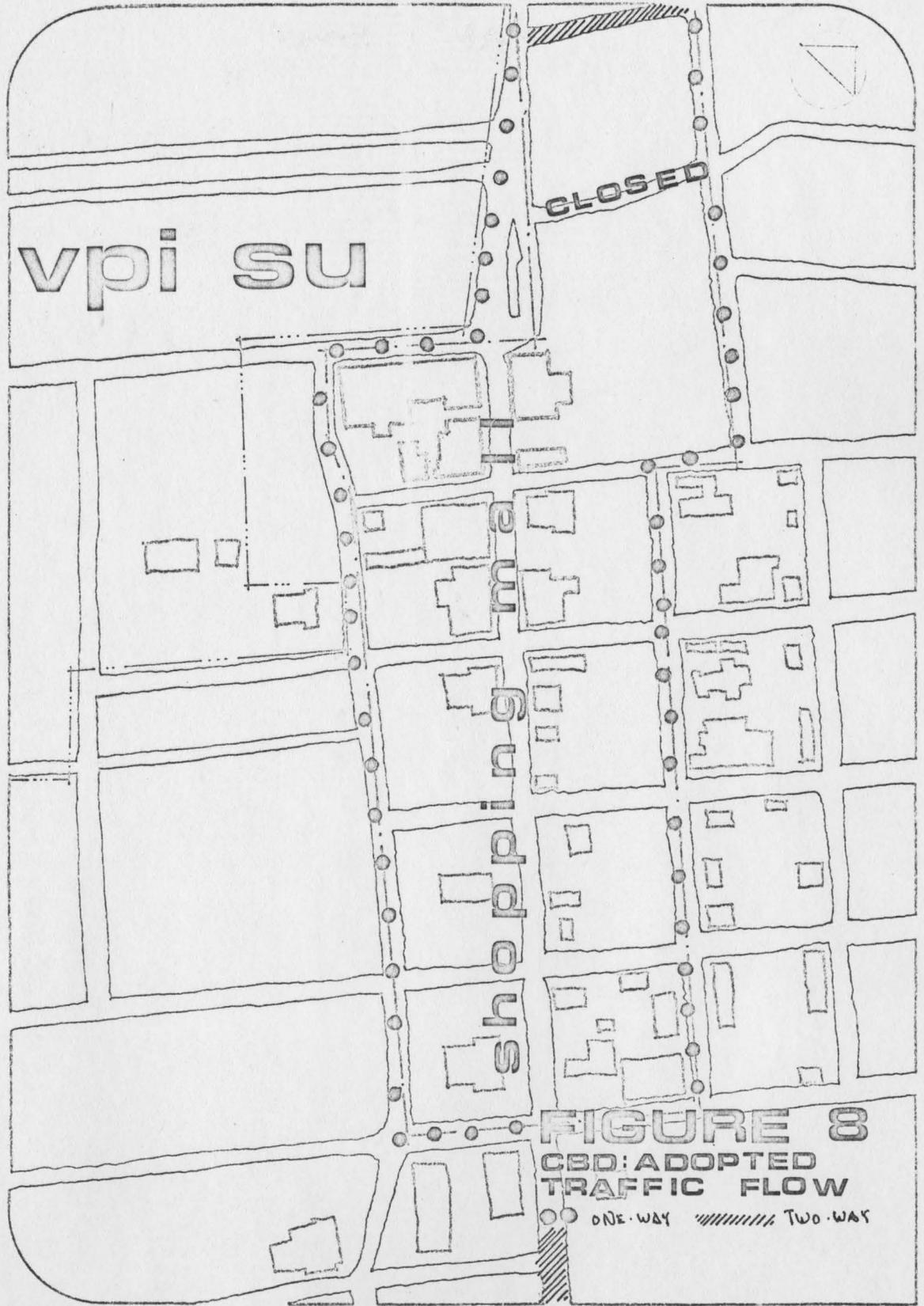
## ADOPTED REDEVELOPMENT

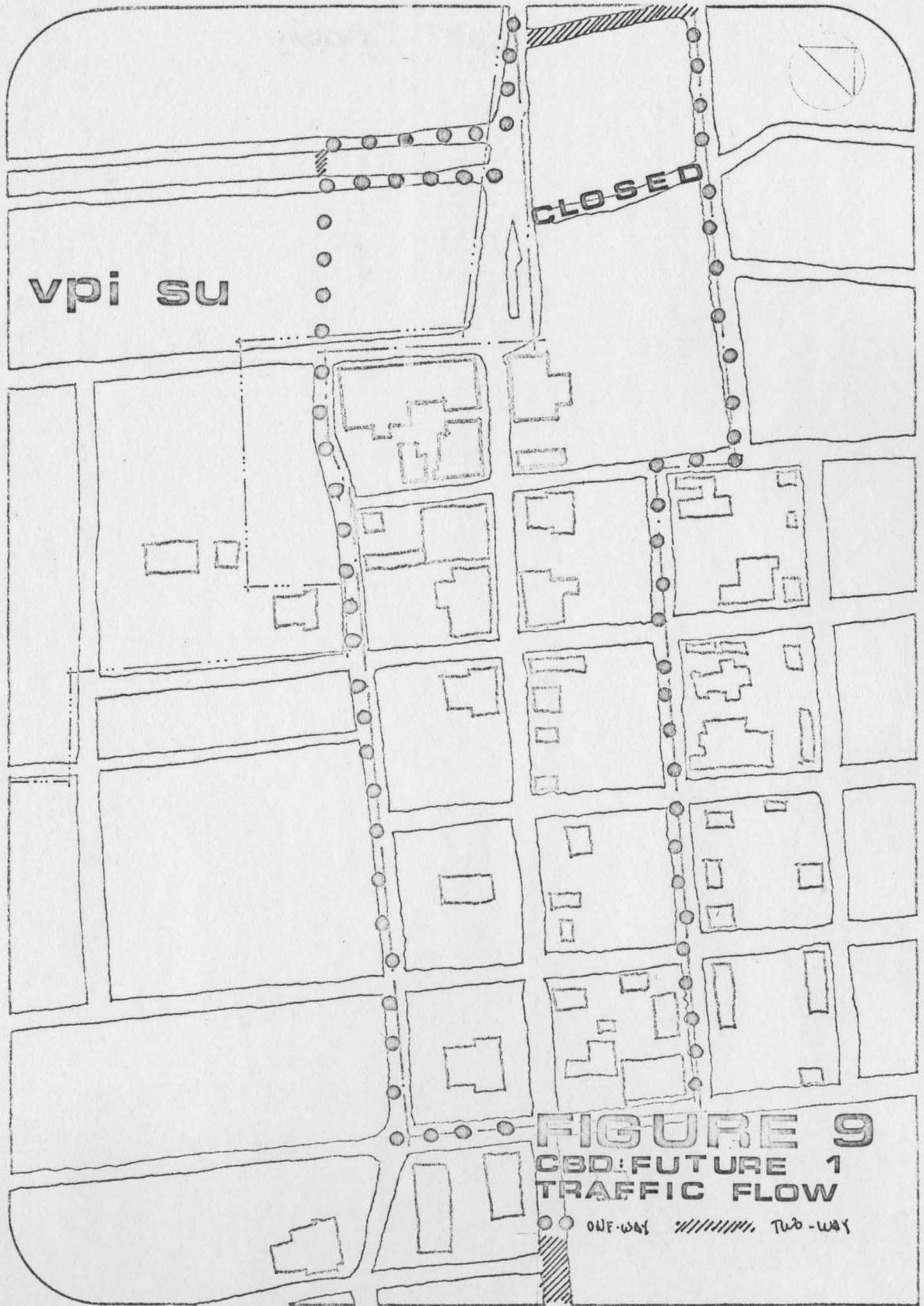
After careful study of proposed redevelopment plans, it becomes apparent that some total master plan is needed for the effective growth and development of Blacksburg. Blacksburg is one of the few expanding areas in Virginia. (Figure 3) In order for this town to move into its urban role, it needs to develop a total overall plan of growth, development, and direction.

The Planning Department of Blacksburg in several publications has outlined many steps for the redevelopment of the CBD. They have also tried to shape the traffic patterns of the inner city to handle the rise in population. Those steps need to be implemented now. To carry out this task, it is recommended that the following changes be adopted by the town of Blacksburg, not later than 1980. For the purposes of this thesis, it is assumed that the adopted redevelopment does become the master plan of Blacksburg. The author also takes the liberty of assuming total cooperation between the town and the university, resulting in the following adopted redevelopment for Blacksburg. (Figures 8 & 9)

## ANALYSIS AND FEASIBILITY

The redevelopment plan for Blacksburg creates a very large one-way circle around the CBD. Because of the many side streets (Lee, Roanoke, etc.), there should be no problem with penetration within the CBD. (Figure 10) These streets, that will become alleys, can be used for off-street parking, service, and entrance/exit ways to parking areas.

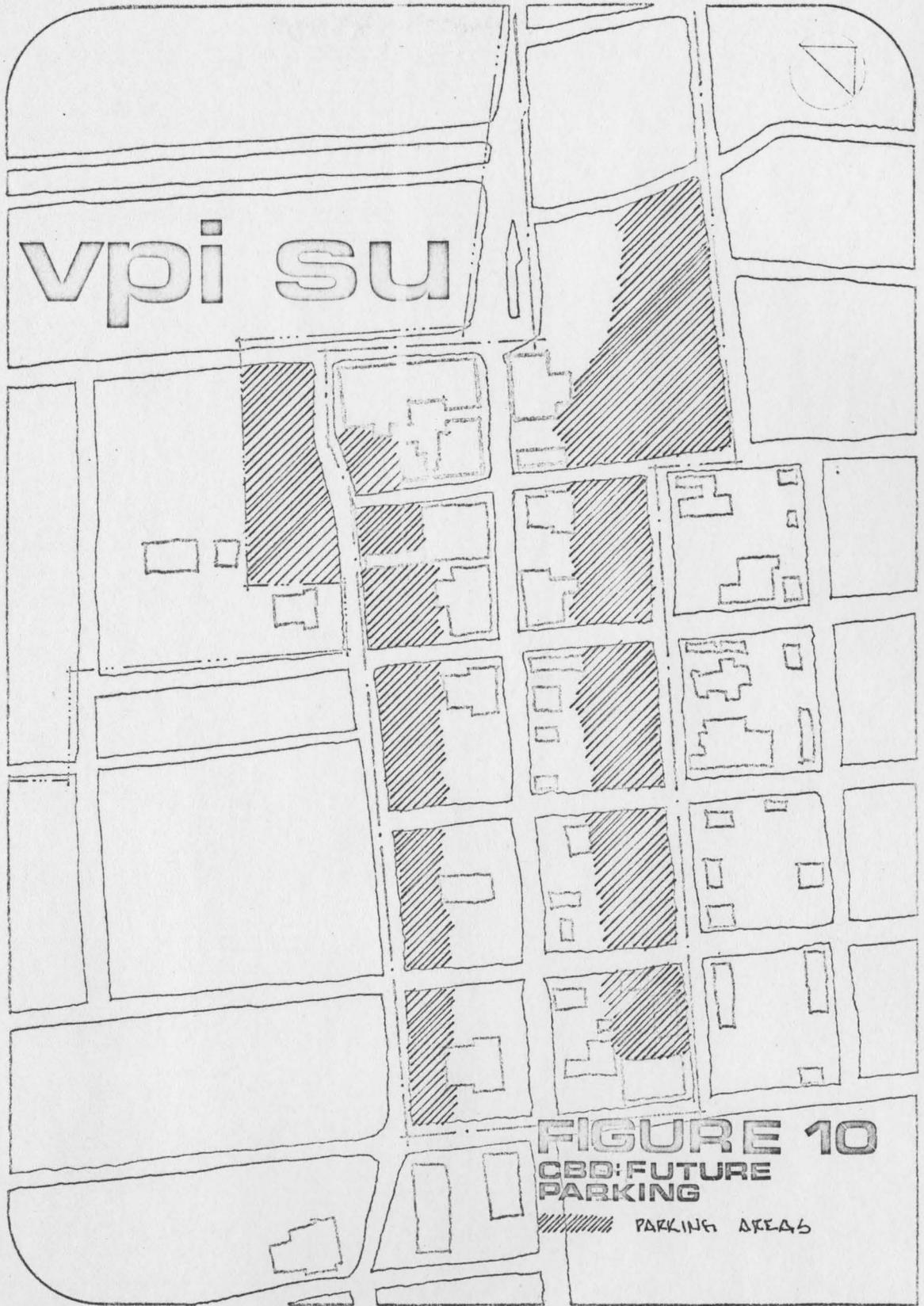


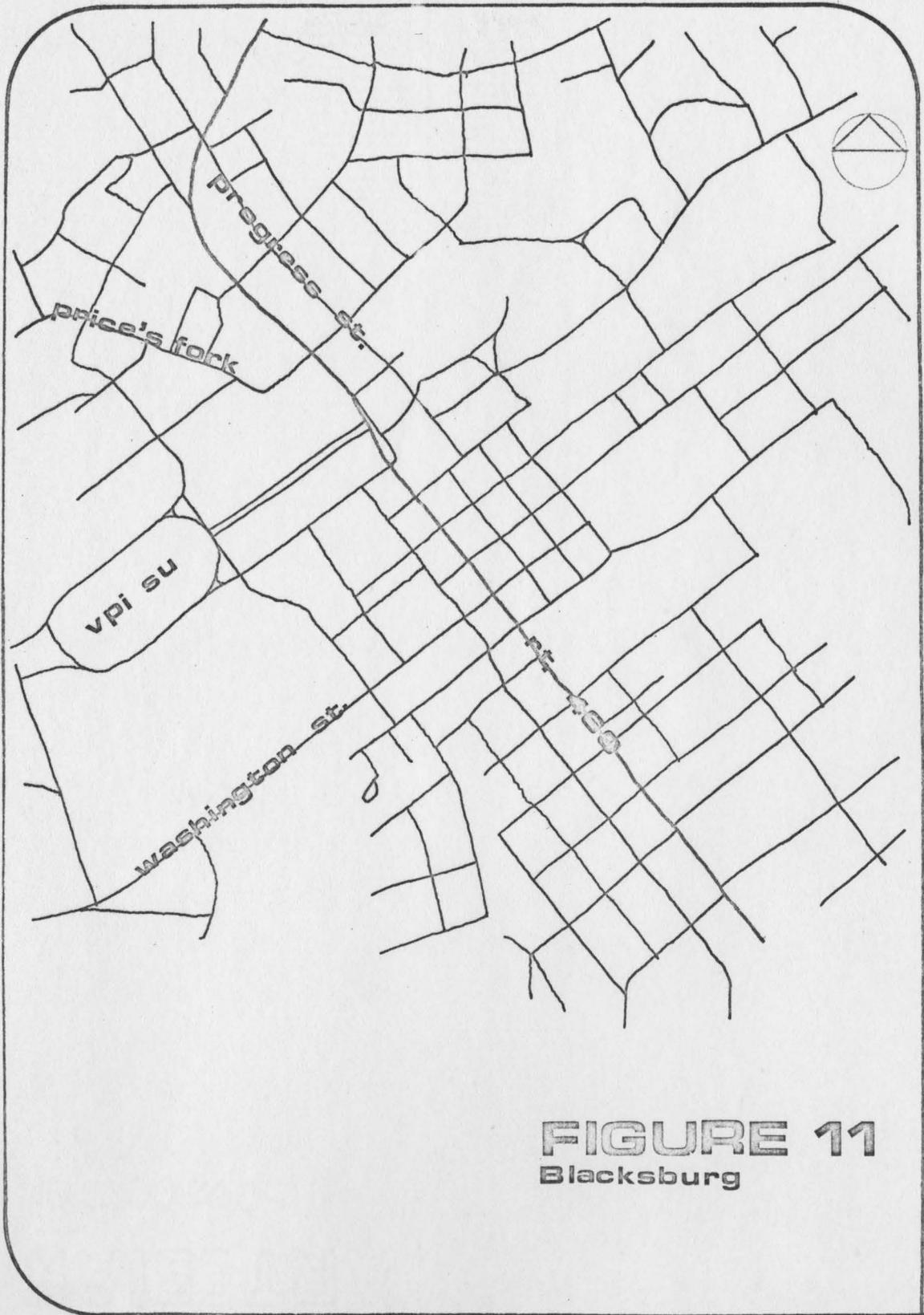


The location of the university in the town closes the west to future growth. The east side is limited by the residential area. However, because of the added tax base in a double level pedestrian mall, it is felt that much physical growth of the CBD would not be needed. Tearing down many of the smaller single structures and providing parking would be a great improvement. The key problem of the present Blacksburg CBD is the lack of parking.

Feasibility of re-routing traffic could come about very easily, even before the BCA or mall is constructed. Road signs and lights can be so directed to handle the overflow of town traffic. With its recent improvements, Draper Road would remain in relative good condition for years to come. The Jackson Street section should be widened, and Progress Street in general needs to be widened until it meets Main Street at the north end of town. If one-way streets are imposed on Progress Street (north) and Main Street (south), a traffic loop is created around the CBD. In some respects this might be a constructive aid for Blacksburg by creating two main arteries from the north end of town almost all of the way south to Gables Shopping Center. This would make for a smoother flow of traffic with minimum cost to the town, since a major part of the construction has already been accomplished. (Figure 9)

Further considerations need to be studied to see the potential for the enlargement of Price's Fork Road and Tom's Creek Road, since at present both are used as major town arteries. (Figure 11) Considering feasibility studies, it is seen that major growth patterns for Blacksburg can be changed and corrected for the achievement of





**FIGURE 11**  
Blacksburg

a strong CBD.

#### EXISTING FUNCTIONS

Blacksburg, unlike many other small towns, does have a vast wealth of cultural and recreational functions. However, the major reason for this development is the presence of VPI&SU. If the university were not an active part of the daily life and economy of Blacksburg, the town would probably be deprived of these cultural and recreational functions.

The major area that Blacksburg has developed has been in athletics. While it is important to develop the body to its fullest, it is of equal importance to develop the mind and allow for an enlarging of the cultural and artistic aspects of life. This is not to say that recreation should not be included in a new town center, but that all areas of development for body--mental, physical, and social--need to be developed. The existing functions can be found in publications provided by the Blacksburg Planning Department.<sup>3</sup>

#### USER IDENTIFICATION

It is important to know who will be using the proposed Blacksburg Centre for the Arts. To understand this, a brief breakdown of population will be cited.

The user identification can be divided into two basic groups: Blacksburg residents and VPI&SU residents.

- (1) Blacksburg residents
  - A. Town residents - Merchants
  - B. Town residents - VPI&SU employees

- C. Suburb residents
- D. Remaining citizens

(2) VPI&SU residents

- A. Full-time students - Dormitory residents
- B. Full-time students - Town residents
- C. Part-time students - Town residents

In order to include all users, a third group needs to be identified also. The name given to this last group would be transients and would include both VPI&SU and Blacksburg residents.

#### RECOMMENDATIONS

At present, Blacksburg looks to the university to provide those functions it cannot provide. At this point the town's philosophy goes astray. Blacksburg is an urban center and needs to take on an urban atmosphere. Blacksburg is growing and needs to face the responsibility of serving itself, its components, and its surroundings.

In less than a decade, Blacksburg's population should nearly double. Presently overburdened public facilities will have to be rapidly expanded to meet the increased demand that such a population growth will exert. (Figure 3) Because of a unique physical and educational situation, public and private services will have to be provided to meet the demands of this large group of citizens. Not everyone's needs will be the same. An individual's need for services will vary according to a variety of factors, including age, income, and marital status.

The functions, activities, and services that Blacksburg should provide may be duplicates of present functions provided by the

university. However, this duplication is well justified by the previous statement concerning future growth. In order for Blacksburg to take its proper role in the urban environment, a more central location of functions will have to be achieved. (Justification for the site selected) A combination of functions to serve more people, both town and university, will have to develop. (Justification for a multi-service area) To achieve a feeling of identification, esteem, and place in society, a definable set of functions will have to be established. (Justification for the limited functions and choice of functions)

Because of the nature of the center, its relation to the town and university, and its purpose, goals, and intent, the following functions were selected for analysis:

- (1) Crafts
- (2) Shops
- (3) Entertainment
- (4) Historic
- (5) Athletic

The choice of functions or services may seem random, but a closer look at these functions will reveal an underlying goal and purpose to the new Blacksburg center. First, the CBD is dying. Secondly, open activities, where people can get involved, draws people to an area. In order to get the public there, you need a strong motivating force. Thirdly, once people have gathered together, they need activities to keep them busy and keep their interest. It is of the utmost importance for Blacksburg to keep its CBD alive and allow for people to respond to their environment. It is felt that the proper selection and combination of crafts; shops; entertainment;

a place to expend energy; and a museum will bring back to life the CBD. The town of Blacksburg needs to act now--not tomorrow--in order to save a potentially progressive urban center.

After further study of the selected functions, three major divisions actually develop. These new groups are formed:

- (1) Crafts: to include crafts native to southwest region of Virginia; i.e., pottery, weaving, leather work, quilting, etc.
- (2) Active Activities: to include outdoor sports; group, individual, or passive activities if desired; group functions, etc.
- (3) Cultural: true sense of the word--museum or display of historical artifacts of the area.

It is felt that these three areas simplify the task in the area of functions and allow for more free generation of design ideas. From these major divisions, the sub-divisions can be formed, as, for example: related shops, theaters, and restaurants that need to accompany this facility. With these added recommendations and the first cited functions, a truly worthwhile and enjoyable place can be born.

#### INTERACTION OF COMMUNITY AND FACILITY

The true interaction of the community and the resulting facility can never be visualized completely. However, a proposed ideal interaction can be stated at this point. It is important to take a mental trip through the BCA and record your reactions to what is intended. As a follow-up to this, similar work can be imagined after the final design is completed.

At all times the center should remain quiet, but always stir the users on for what they have come. The mere form should encourage the people of Blacksburg to interact. This interaction justifies the center as a focal point and anchor for future town redevelopment. (Figure 19) The people of Blacksburg need a more positive tie to the university life and its functions. Because of the proposed center's location, each side is allowed to meet on common ground.

#### PHILOSOPHY

Much information has been already stated about the need for a center place for Blacksburg. Surveys have and still are conducted to show the need and importance of a center like the BCA with its resulting impact. At present, the discussion of the essence of a center needs to be stated and the following questions answered: What is the center and how can it be made?

"Two striking facts have emerged. The first is the acute shortage ... of suitable premises where people can come together to carry on social, educational, and recreative activities.... The second fact is the difficulty experienced in making the centers self-supporting.... Such centers do little towards solving the fundamental problem which, as we see it, is to provide for the needs of those who find themselves with spare time but without training in its use ... in our opinion the function of the community center is to make provision for both needs.... We think it unlikely that the scope of the center as an arm can be extended as to embrace the whole of the community.... It should also be possible for people with no special interest to come freely to concerts, dances, and other social gatherings, and for a small payment to use the ... accommodations."<sup>4</sup>

Even though this statement was made in 1945, the essential goals, purpose, and philosophy of a center are stated. The fact that centers

of this type do lack funds and generally cost a community in the long run is justification for a multi-purpose center. In order to survive or break even, the Blacksburg Centre for the Arts will have an economic base that will be built in. This will be in the form of public shops and community theaters.

The Blacksburg Centre for the Arts will try to become a workable, active, functioning part of the CBD. As a prototype itself, the ideas of the BCA are not new. It is important to know and understand a town before a decision for a community center is made. The underlying goal, or philosophy, of the BCA is to bring to Blacksburg the needed cultural, educational, and recreational activities, plus a new self-supportive economic base system. If a facility of the BCA's nature is completed, those needs can be satisfied.

Blacksburg needs to extend its role, increase its scope in the community, and take its proper place as co-host to the cultural, educational, and recreational activities of Montgomery County. The intention of the BCA is to provide for cultural and recreational aids of "all" kinds, flexibility of space use, and an environment that will promote individual growth and human relations. After further examination of the spatial program of needs, the general sub-division of spaces is for the most part in keeping with the objectives described.

The object in planning the center should be to get the optimum use out of every space, not only during the regular working day, but in the after working hours, on weekends, and all-year round. With the inflated cost of building, anything less would seem extravagant.

A center of this type should have as much as possible of the facility open--if not open 24 hours a day, then at least open 16 hours for seven days a week. The center is not intended to serve as a substitute for home, church, or other traditional rally-points of social life. The BCA is intended to supplement the facilities already available. Even though there are existing cultural and recreational facilities, there is a need to provide a neutral meeting place in which people from all backgrounds can come together for social and cultural purposes. People should meet as individuals in the BCA, not as members of a particular group. Then, the Blacksburg Centre for the Arts is without restrictions and freely open to all who desire to use it.

# SCHEDULE OF FUNCTIONS

DESIGN CRITERIA  
SPECIAL REQUIREMENTS

3

## DESIGN CRITERIA

Design criteria are the basis for decisions made about function, activity, form, and any other areas concerning resulting architecture. To have a common base of understanding, it is helpful to have the same starting point. For purposes of this thesis, design criteria shall be defined, quoting Webster's Third New International Dictionary: "a standard on which a decision or judgement may be based; a basis for discrimination."<sup>5</sup>

Thus far in the development of the program, goal statement, purpose, and design process, many of the decisions concerning form and method of development have been mentioned. As with any architectural project, all site design criteria need to be studied and considered. One important difference between architecture and other fields or professions is the means of trade-offs employed to reach the design criteria stage. Site criteria have to be weighed and include: wind, sun, water shed, ground texture, foilage, relation to other sites and structures, rock formations, soil solubility, flooding, traffic patterns, and pedestrian patterns. For the Blacksburg Centre for the Arts several design criteria were held more important than others. The following were given top consideration:

- (1) Relation to VPI&SU and town
- (2) Orientation of functions to sun.
- (3) Orientation of functions to wind.
- (4) Influence of site in relation to business district redevelopment.
- (5) Traffic circulation, both automobile and pedestrian.
- (6) Impact of resulting structure on the surrounding area, structures, foilage, environment, etc.

\*Environmental impact study similarity

The mentioned design criteria deal mostly with physical considerations. However, there are many other areas of equal importance that need consideration. One such area involves the material for construction of the facility. The following materials were given top priority:

- (1) Natural stone in limited quantity--link between the university and the area.
- (2) Due to future expansion, precast construction was considered the best.

Other areas of design consideration were:

- (1) Open spaces around and within the site and facility - court concept.
- (2) Use of the facility by the public - a group or groups.
- (3) Total character of the center.
- (4) Replacement and generator of the shopping district for Blacksburg.

These are the basic criteria for decisions made on designing the Blacksburg Centre for the Arts. It is most important to keep in mind that not all criteria are verbal or visual ones. To create usable, workable, aesthetically-pleasing architecture, many more design criteria than listed were considered.

#### SPECIAL REQUIREMENTS

Requirements that apply to the Blacksburg Centre for the Arts specifically are listed below. In order to consider this still a prototypical design, all requirements can be thought of as general to centers with the same goal statement, purpose, and objectives.

The special requirements are:

- (1) The center, while geared to the 18-40 age group, should provide for and at least be able to

- accommodate the aged and very young.
- (2) The center should not hinder anyone's active participation.
  - (3) Functions offered at this center may be duplicating those of VPI&SU or local schools, but this is done in light of redeveloping the CBD.
  - (4) The natural slope of the site is to be used to the advantage of the center, without hindering future growth.
  - (5) Size of the center is to be figured by the formula: 2 square feet per person. (Based on population of 45,000 - 1986)
  - (6) Outdoor activities (sports) are to be given major consideration but not guide the development of the resulting form.
  - (7) Functions to be offered are to be specific and limited to some degree. (Based on added functions of the town)
  - (8) Future growth is to be in related areas (neighboring sites) to ensure the proper cultural, social, and recreational balance of the town.
  - (9) Full consideration to sun, wind, and physical conditions are to be maintained.
  - (10) A balance between town and the university is to be kept and reflected in the center.
  - (11) The center should not be geared to handling the needs of Blacksburg only. It is possible that the county and neighboring cities and towns will use the center.
  - (12) As much natural light as possible in all areas of the center.
  - (13) Use of the center on a 24-hour basis for parts should be considered with adequate artificial light to reflect daylight.
  - (14) Special consideration is to be given to movement and circulation through the center and site.

PROBLEM  
SYNTHESIS:  
SCHEMATIC DESIGN

SITE ANALYSIS, CODES AND  
ZONING  
DESIGN SOLUTION  
PRESENTATION

4

## SITE ANALYSIS, CODES AND ZONING

Two surveys were conducted in Blacksburg. The same base group was used each time because a random, cross-section of people was desired. The total number of persons surveyed was "100" each time. The base group was composed of employees of local merchants and local government agencies. This author felt they reflected the town's attitude as a whole.

Conclusions from the first survey state that 45% of the control group show an interest in having a facility or facilities for civic or cultural use in Blacksburg.<sup>6</sup>

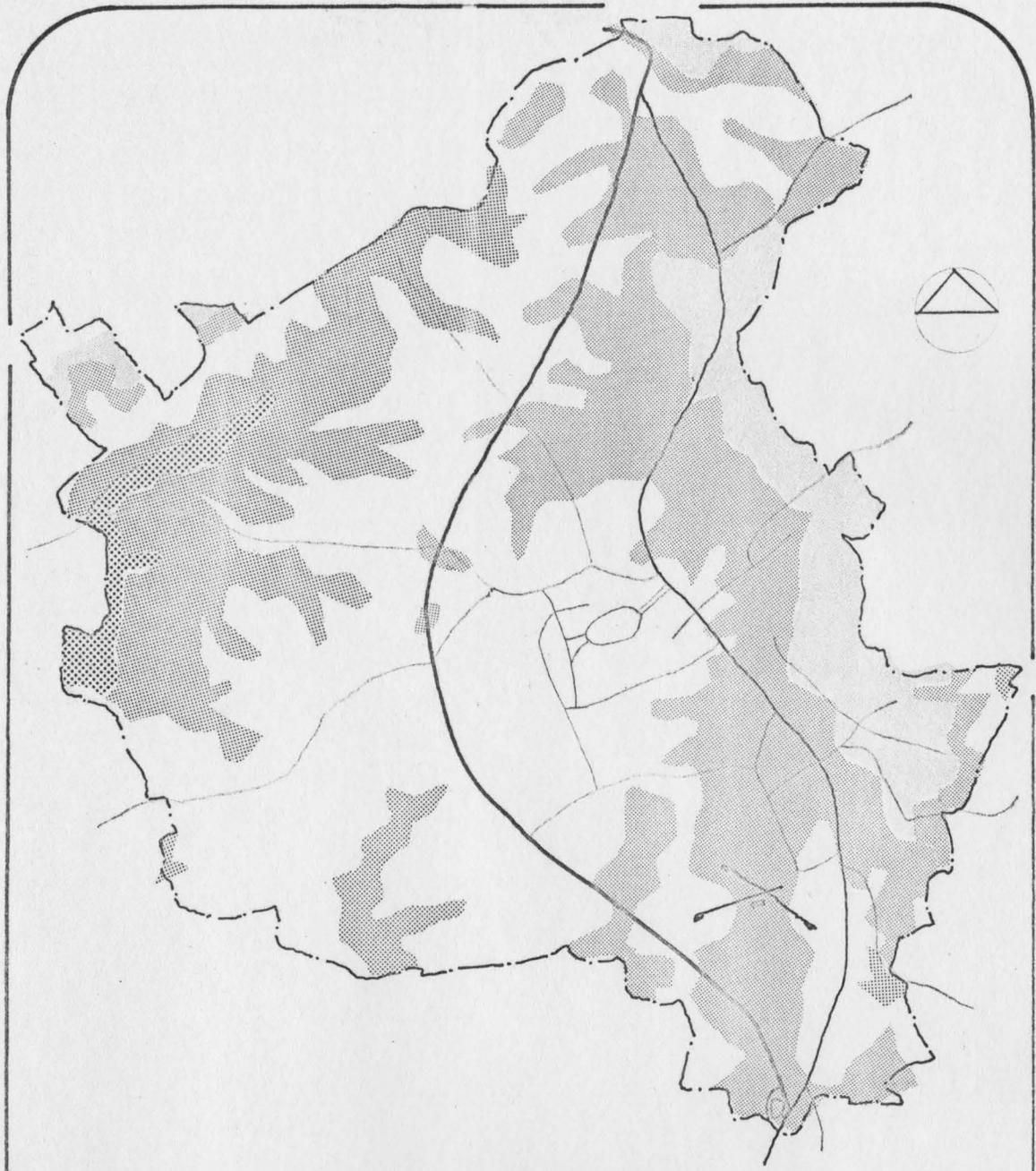
Conclusions of the second survey state that 33% of the control group suggested the central business district of Blacksburg for the location of the BCA. The next closest group chose Gables Shopping Center as the possible location with 26%.<sup>7</sup>

Sixty-five per cent of those surveyed felt that the intersection of Main Street and College Avenue was the physical center of town. Thus the author justified the location for the BCA. The diagrams used in physical site comparisons are included. (Diagrams 1, 2, 3 & 4) They are:

- (1) Topographic relief
- (2) Formations
- (3) Streams/flooding
- (4) Soil solubility

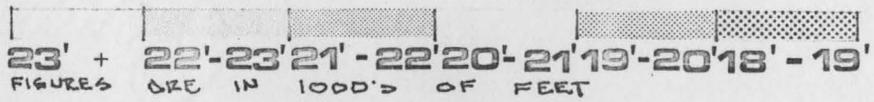
Then, the overall purpose for the selection of the site is to generate a better CBD and a stronger link between Blacksburg and the university. It is intended that this center will be the germination of a better environment for all.

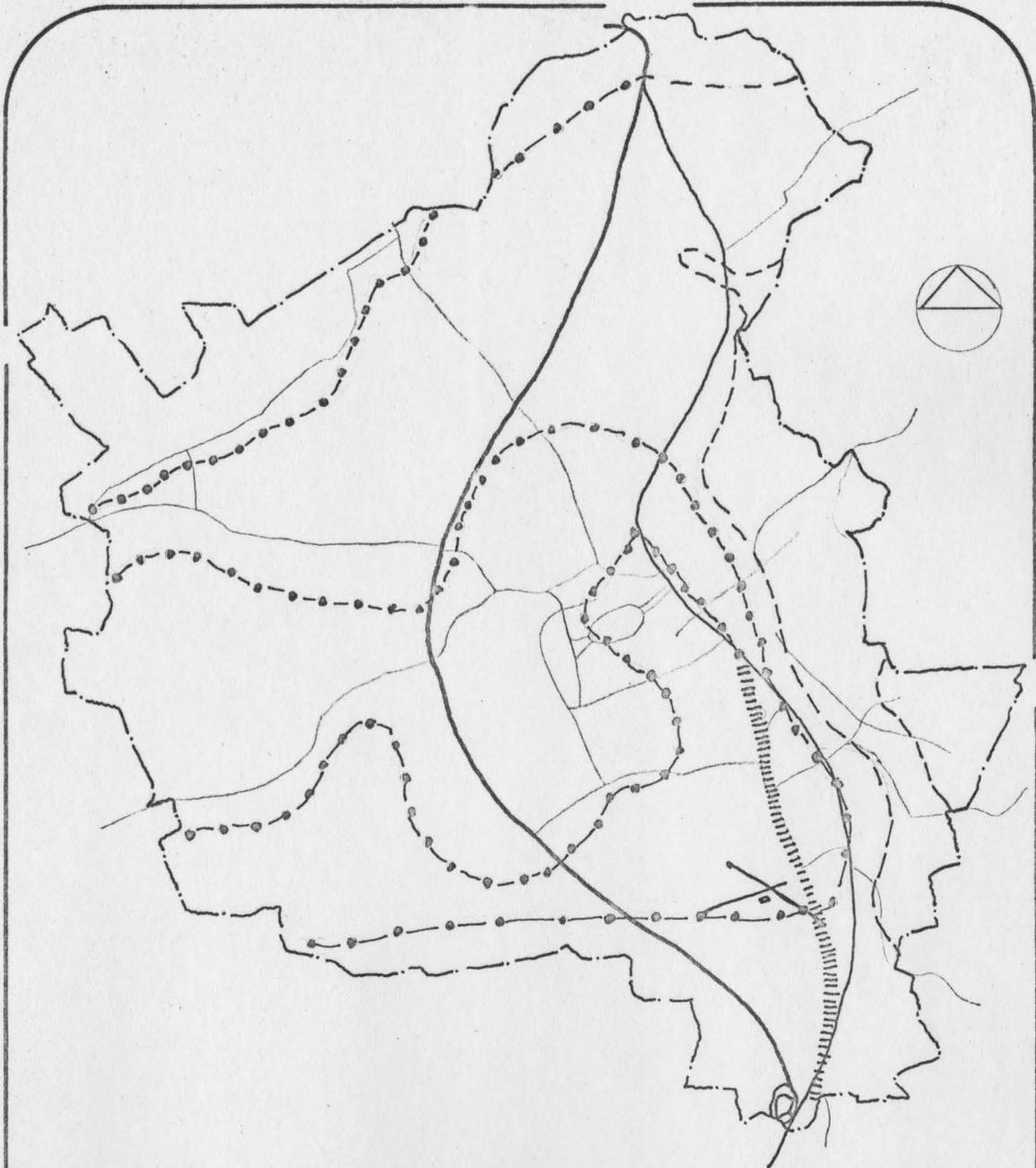
Information concerning code and zoning analysis was taken from the National Building Code and Zoning Ordinance, Blacksburg, Va.<sup>8</sup>



**DIA. 1**

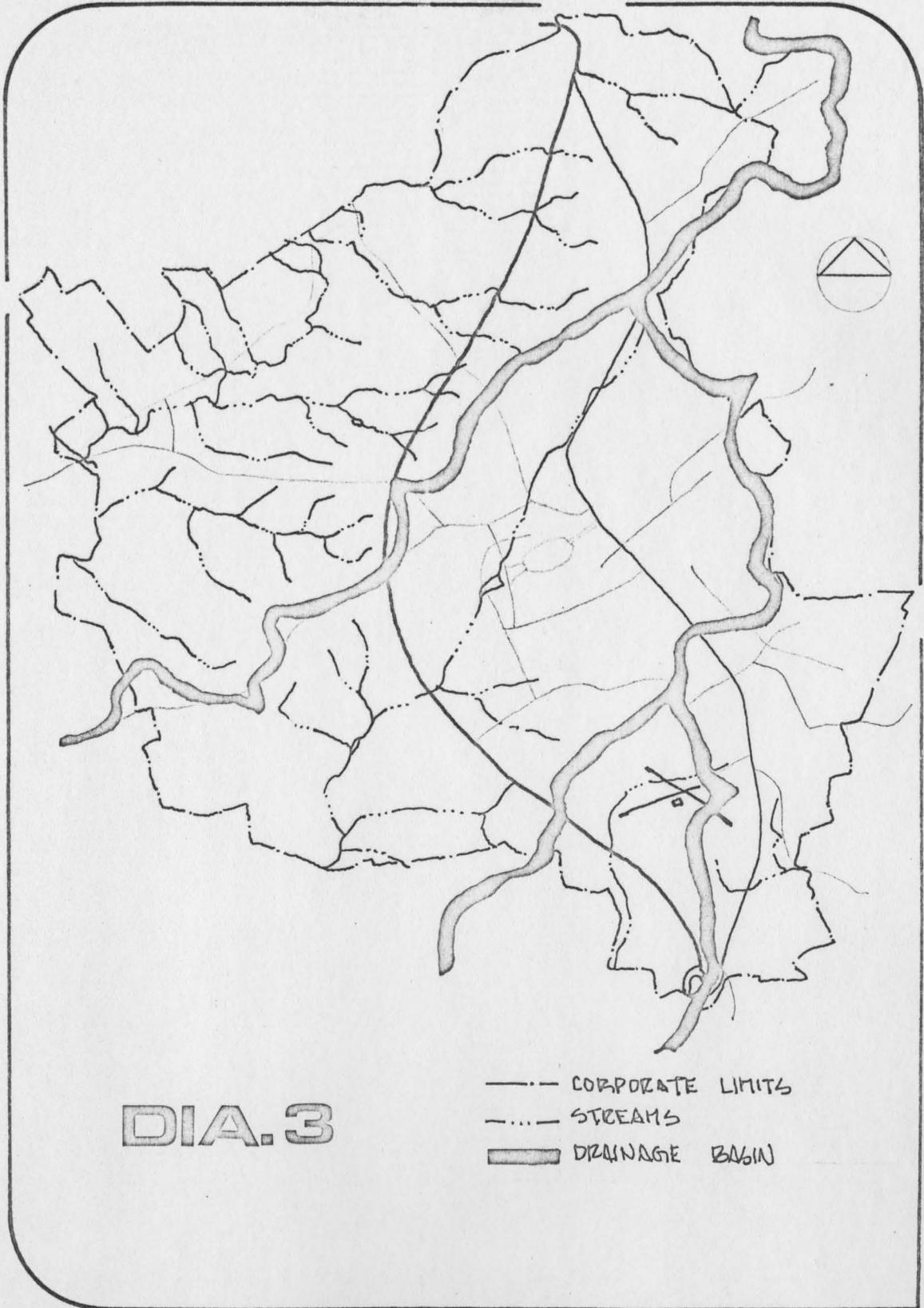
**TOPOGRAPHIC  
RELIEF**

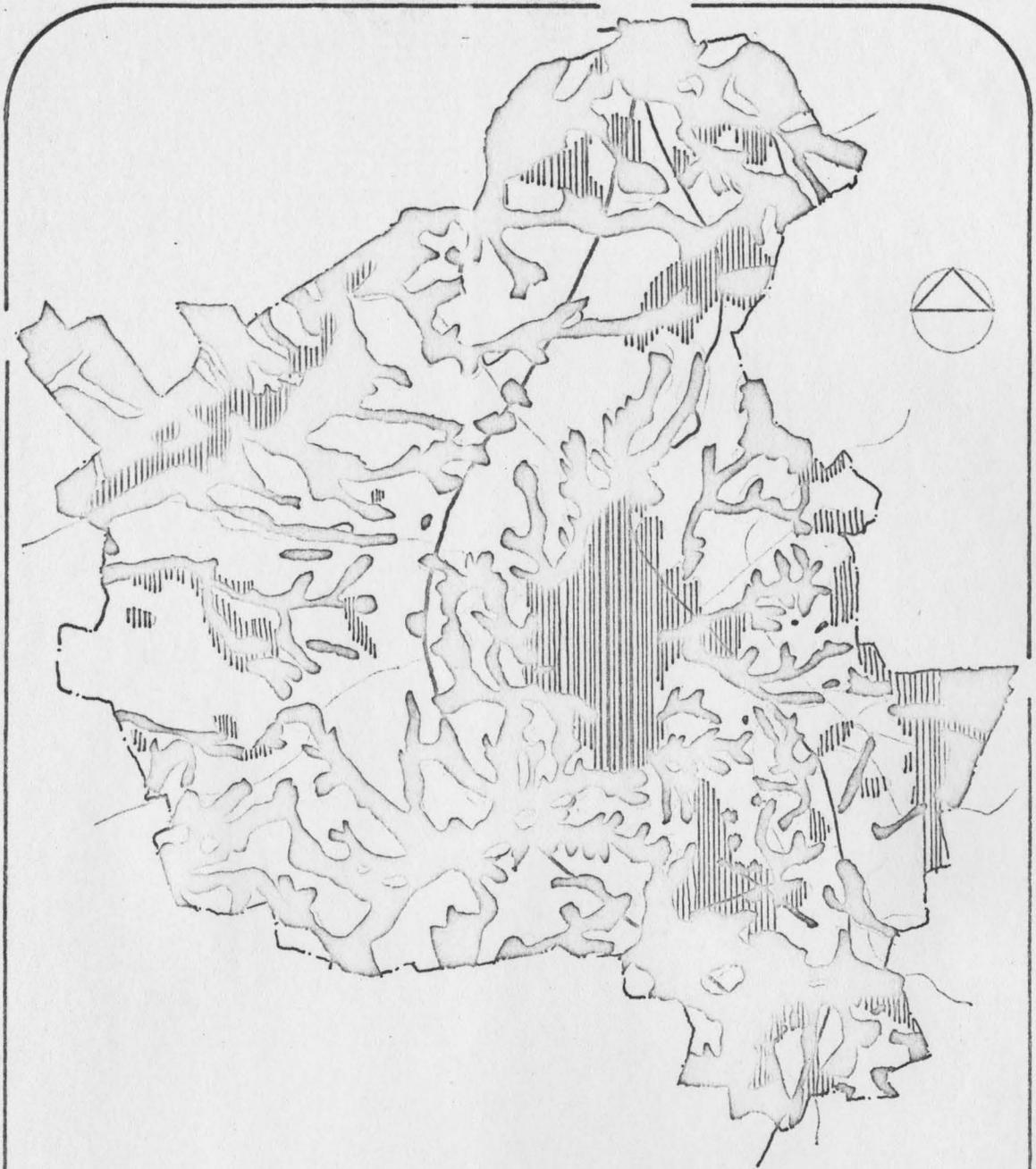




**DIA. 2**

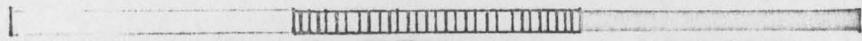
- COPPER RIDGE
- · - · - THRUSTS OF PULASKI
- · · · · MISSISSIPPI FORMATION
- ||||| YELLOW SULFUR REVERSE FAULT





DIA. 4

SOIL  
SOLUBILITY

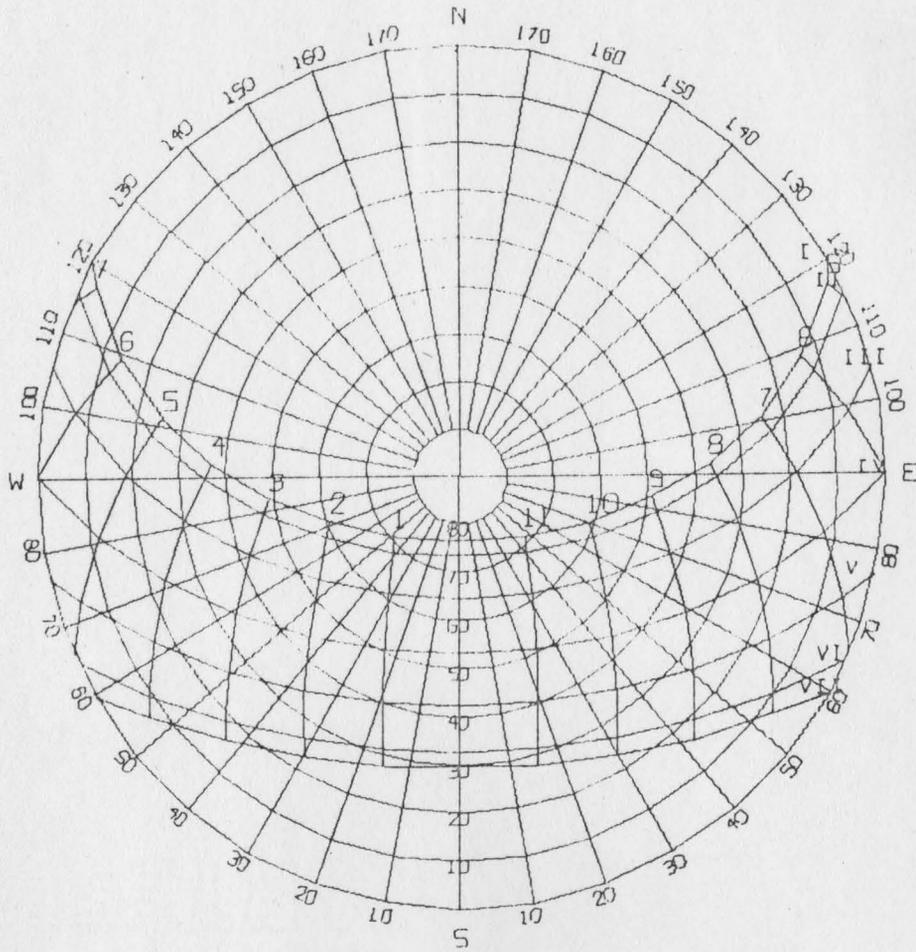


FAVORABLE QUESTION UNFAVOR.

The following list of site data was considered by this author but not included in this thesis:

- (1) Wind directions - prevailing breezes
- (2) Location of water mains, sewer, gas and electric hookup.
- (3) Site studies - micro-macro relationships
- (4) Town to county location

Site data that is included in this thesis follows. (Figures 12, 13 & 14)

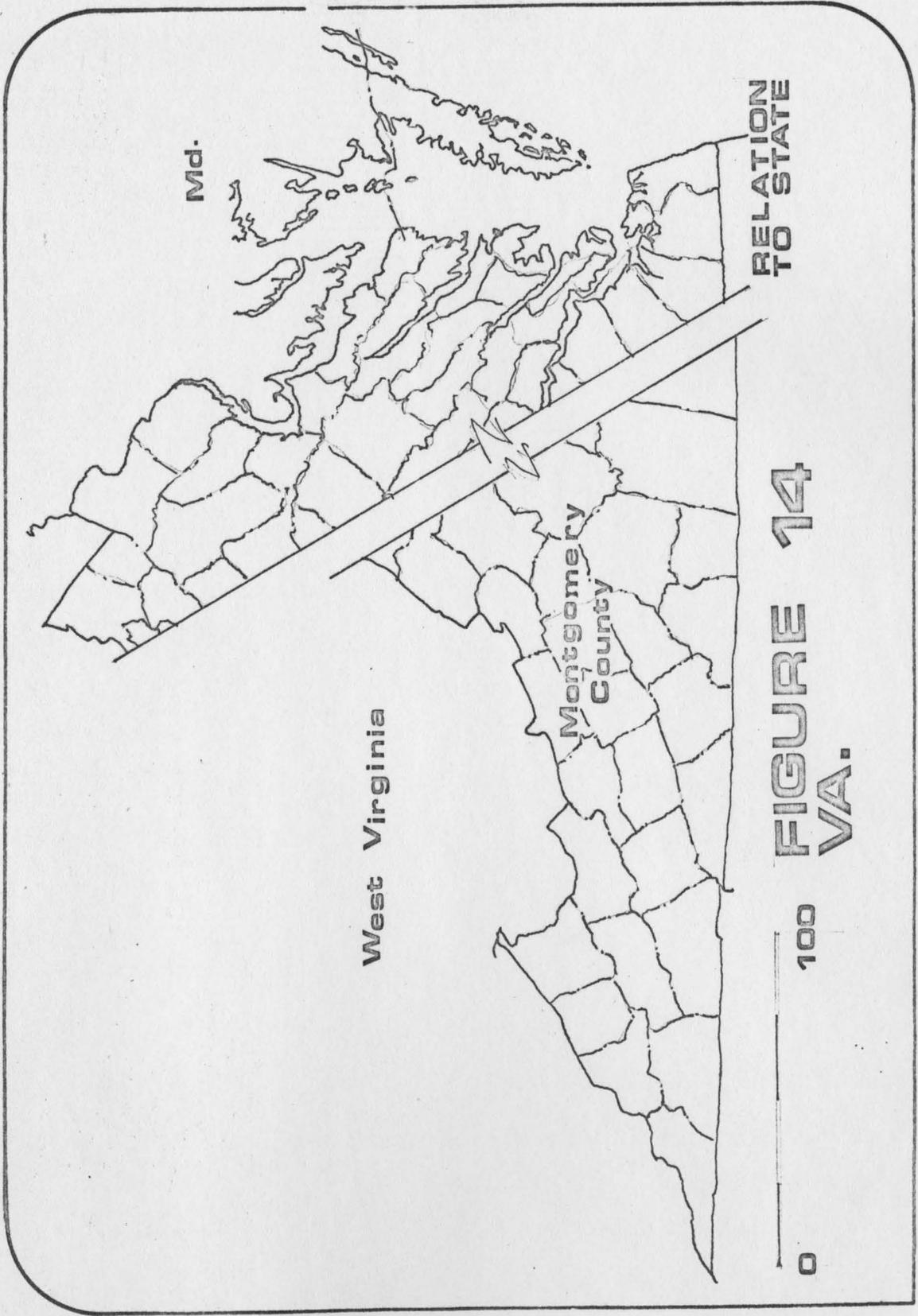


SUN ANGLE CHART  
LATITUDE 37.17

**FIGURE 12**



**FIGURE 13**  
**FOLIAGE**  
**EXISTING TREES**



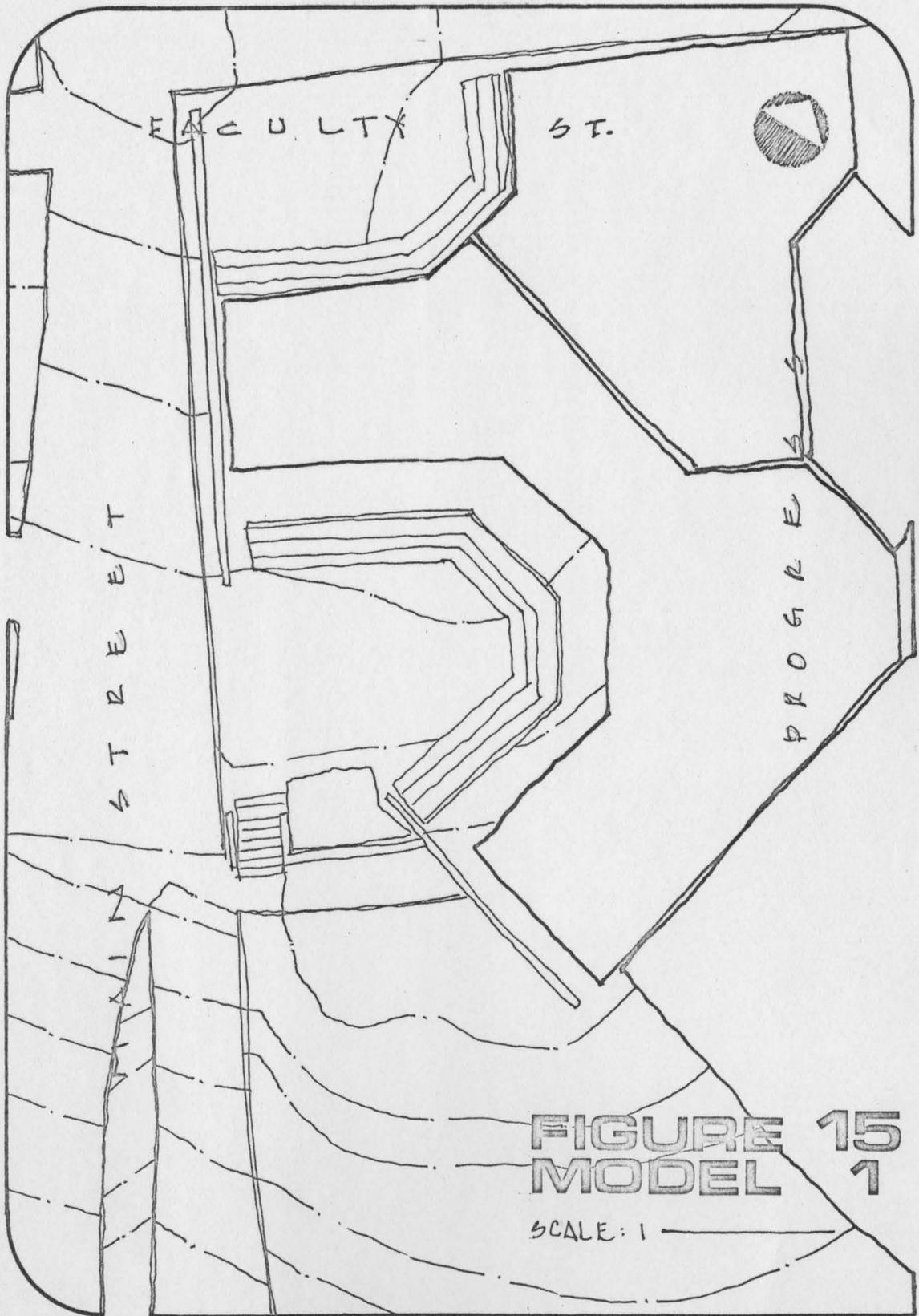
**FIGURE 14**  
**VA.**

## DESIGN SOLUTION

The preliminary model stages of development are depicted in the following three illustrations. (Figures 15, 16 & 17)

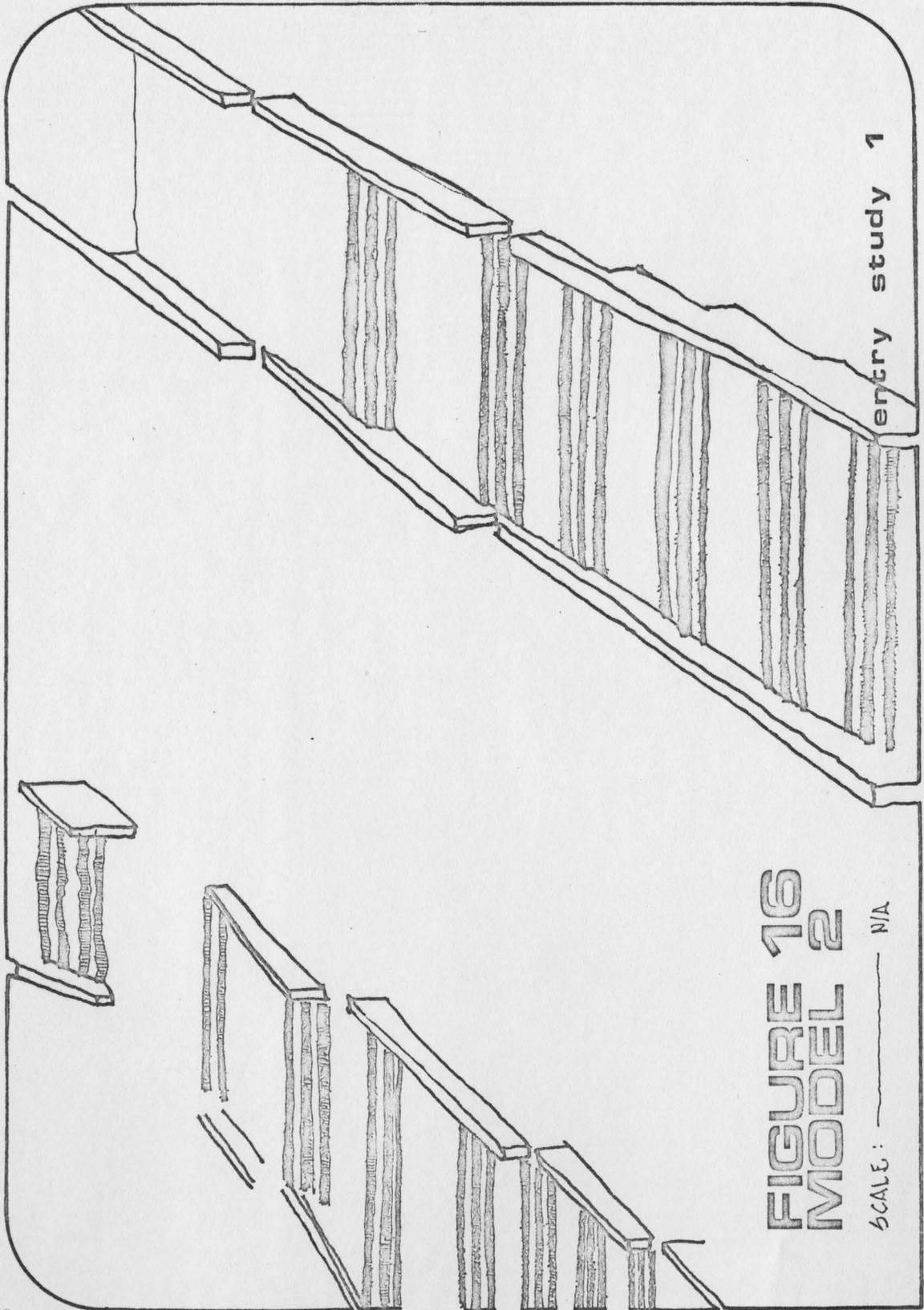
## PRESENTATION

The presentation drawings are included as documentation of the final solution. (Diagrams 18-29)



**FIGURE 15**  
**MODEL 1**

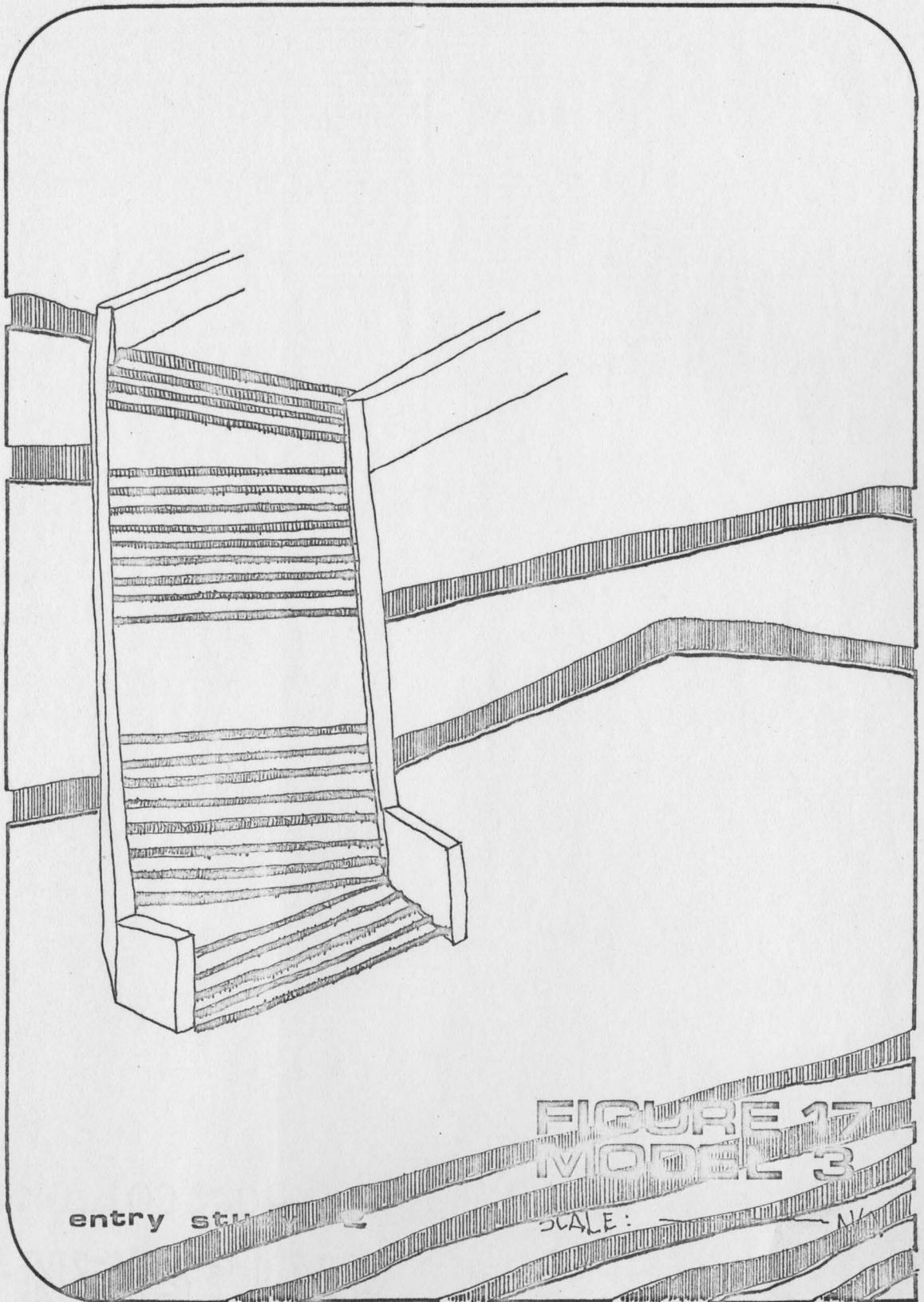
SCALE: 1



entry study 1

FIGURE 16  
MODEL 2

SCALE: \_\_\_\_\_ N/A



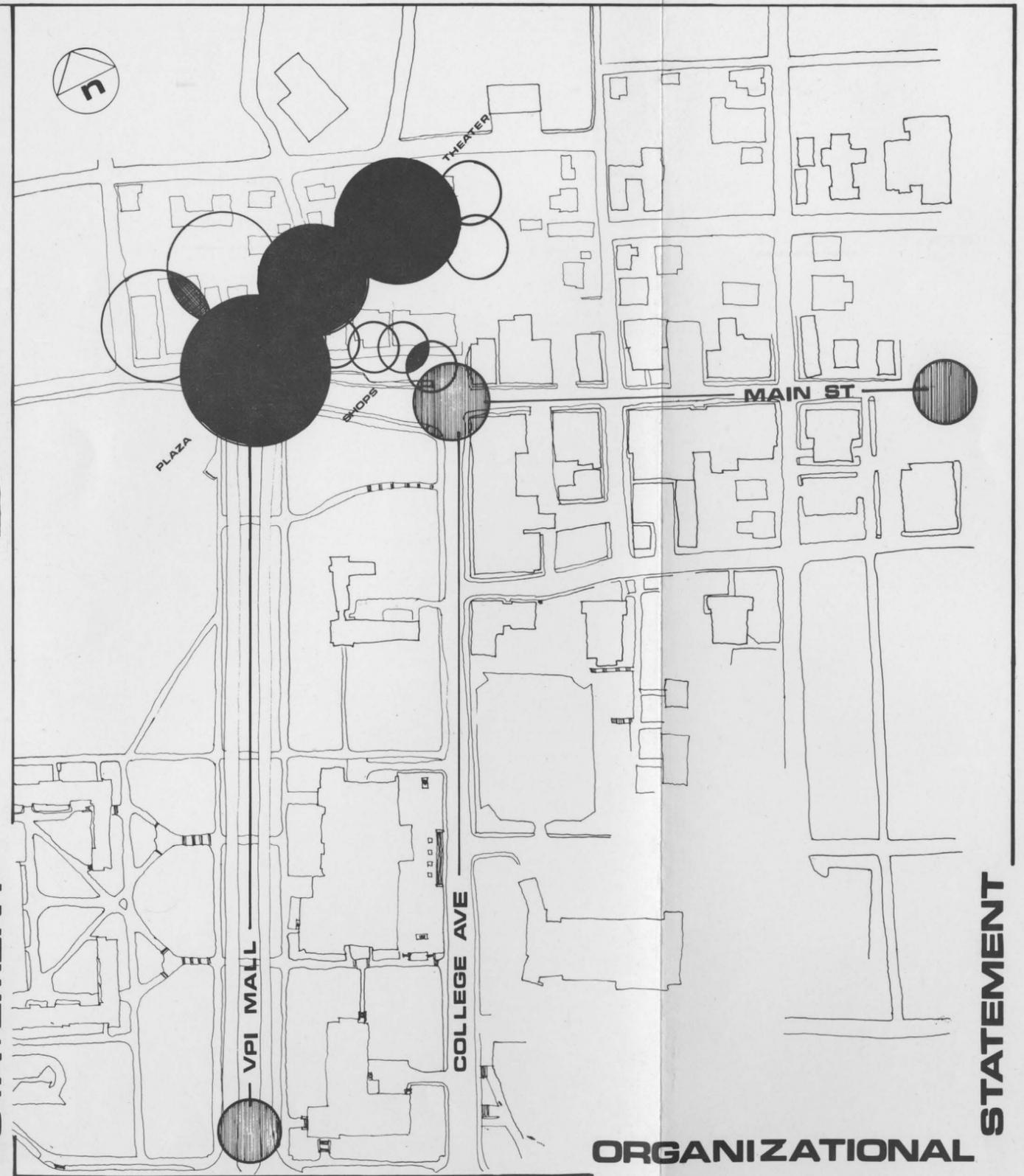
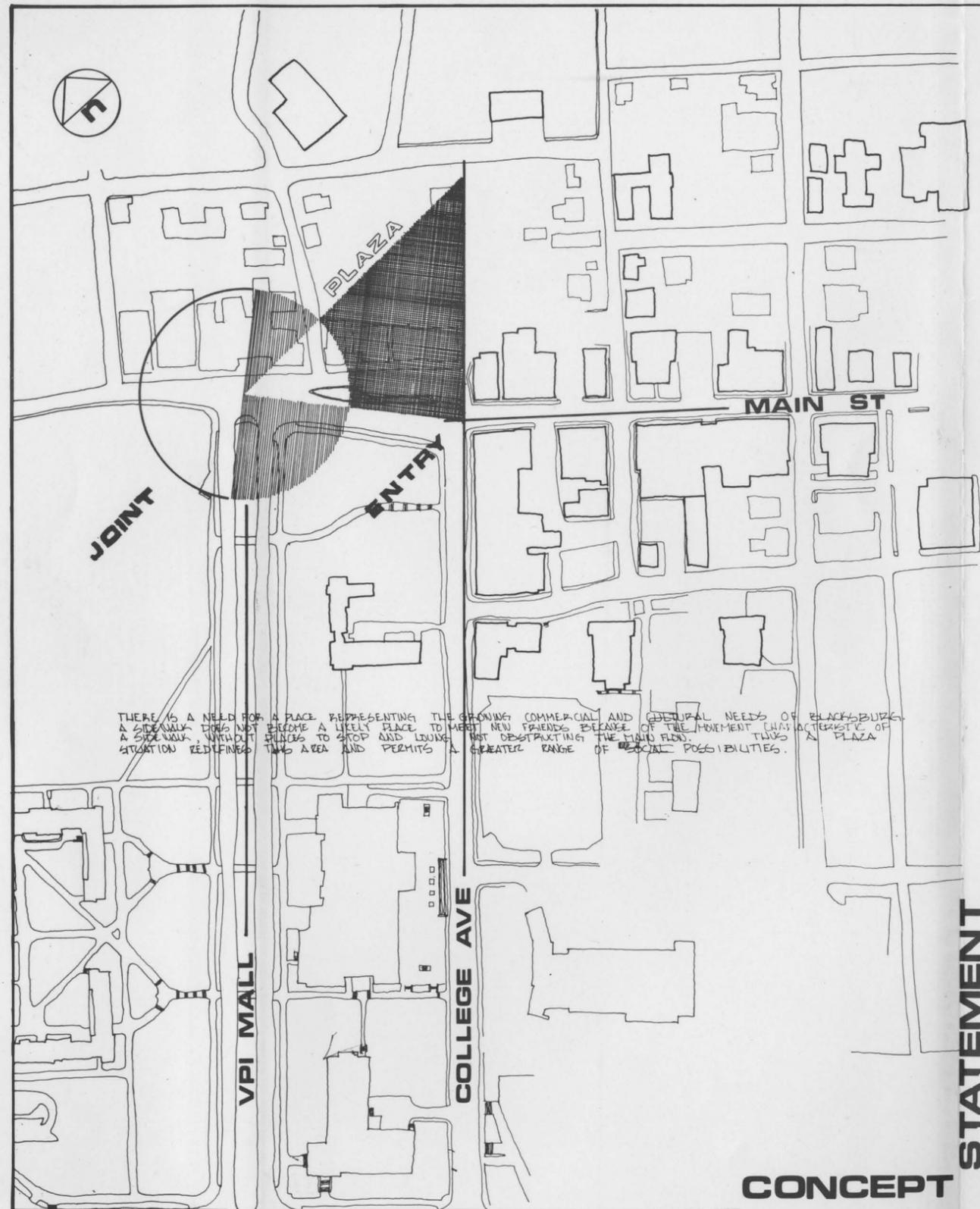


FIGURE 18

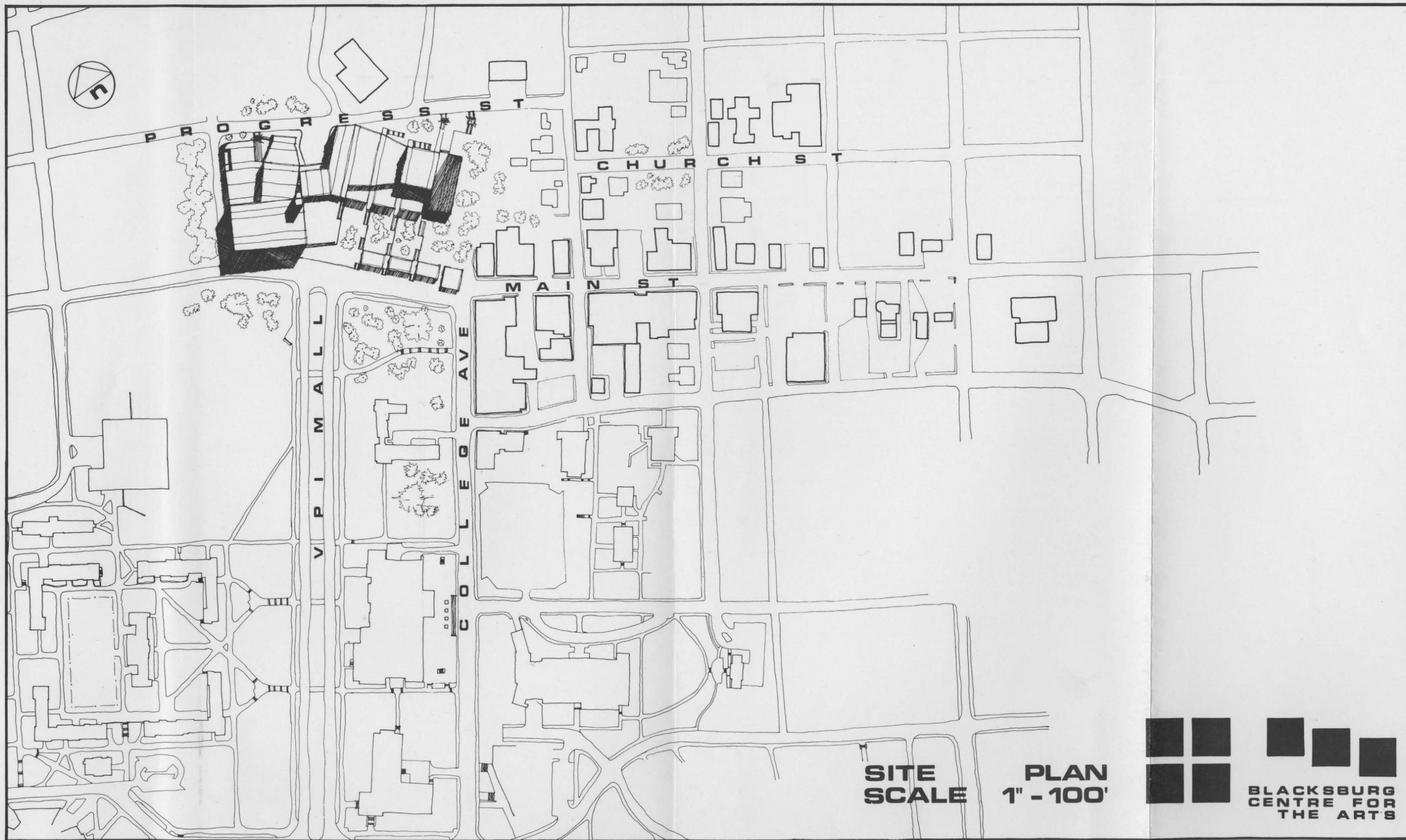


FIGURE 19

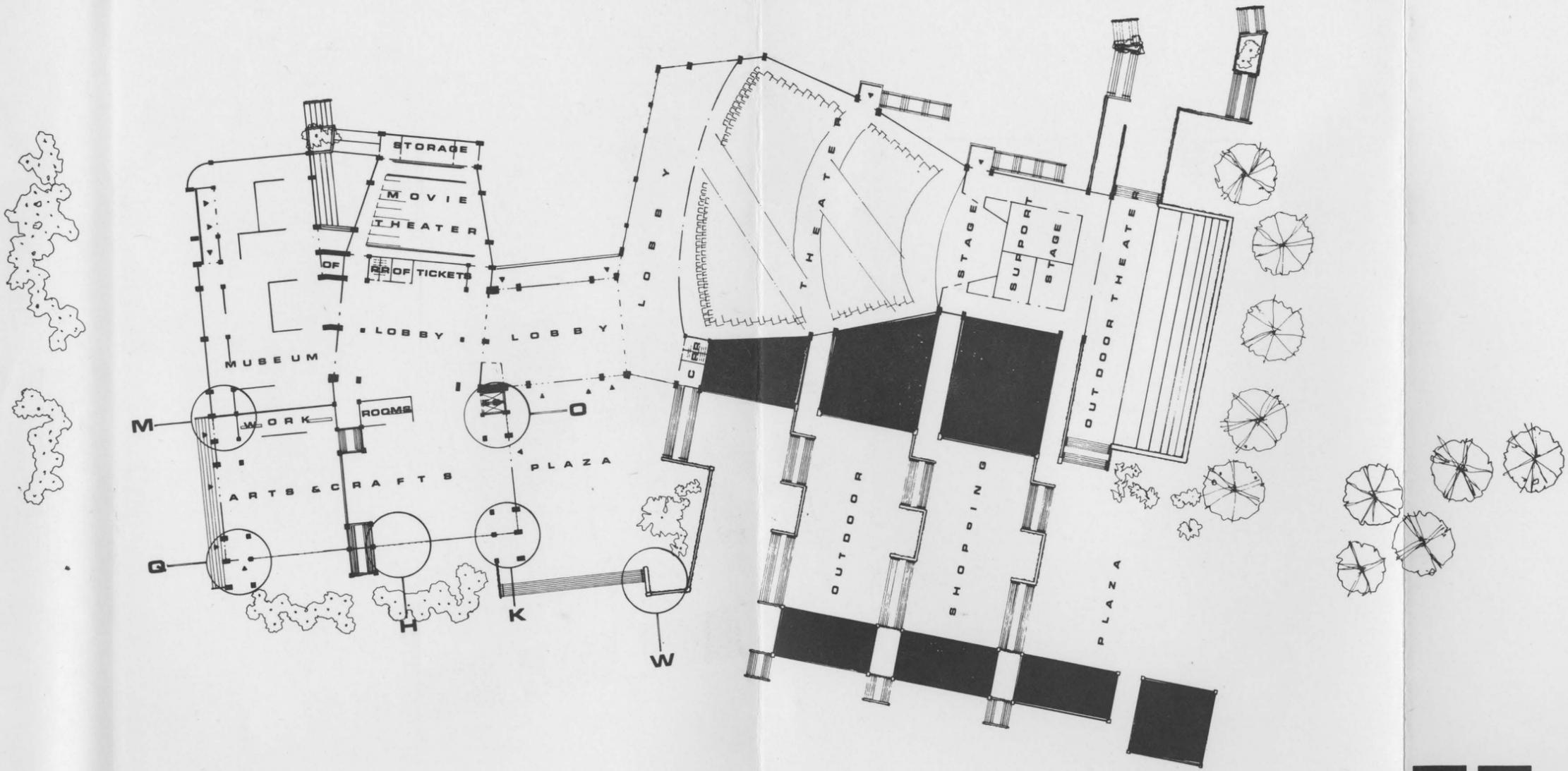
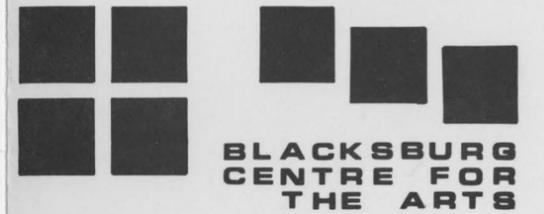


FIGURE 20

**MAIN ST FLOOR PLAN**  
**SCALE 1"-32'**



**BLACKSBURG  
CENTRE FOR  
THE ARTS**

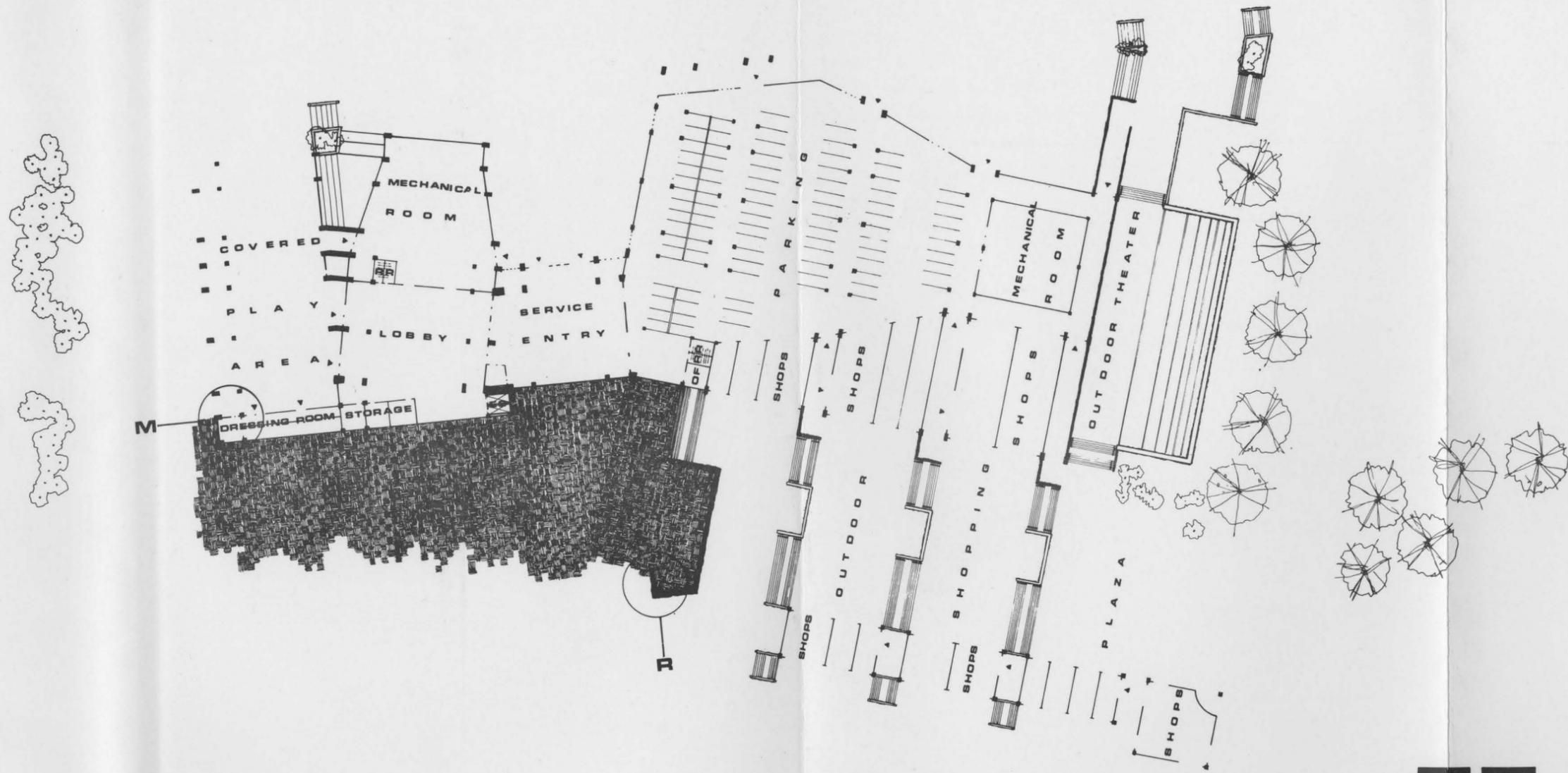


FIGURE 21

**PROGRESS ST FLOOR PLAN**  
**SCALE 1"-32'**

**BLACKSBURG  
CENTRE FOR  
THE ARTS**

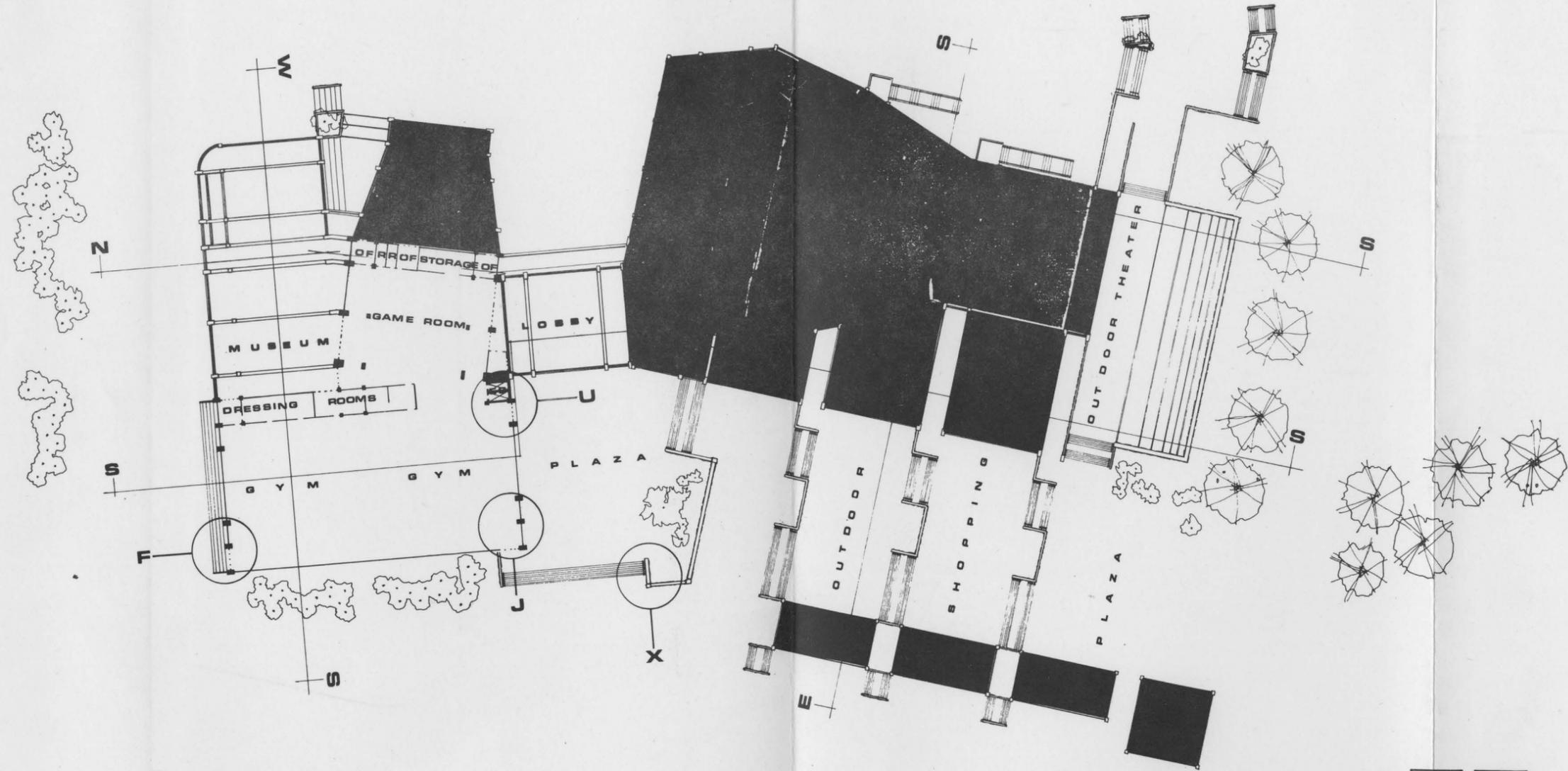
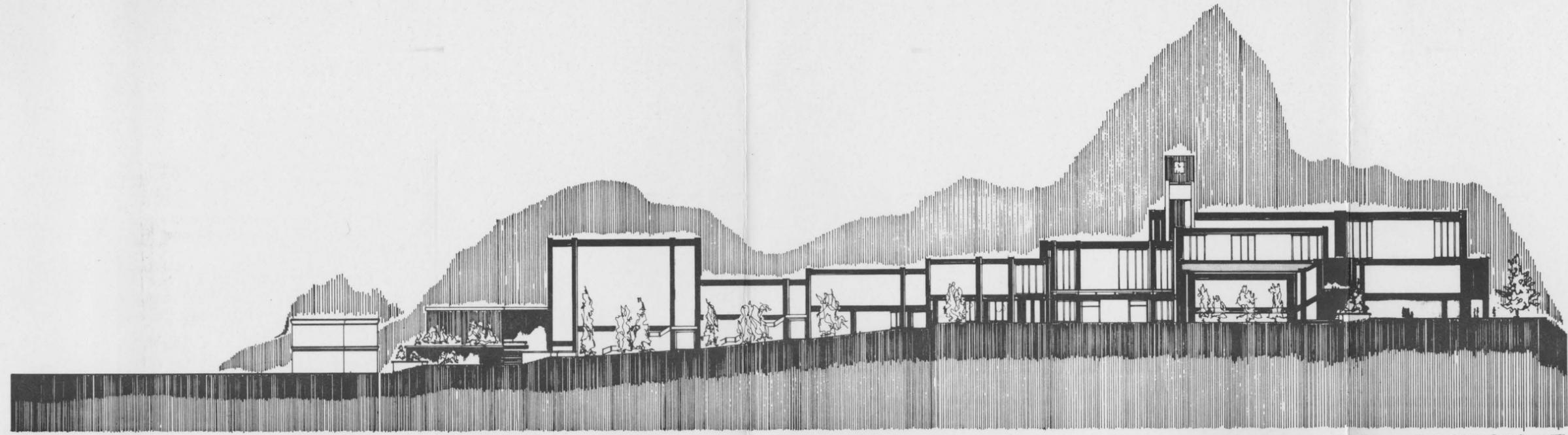


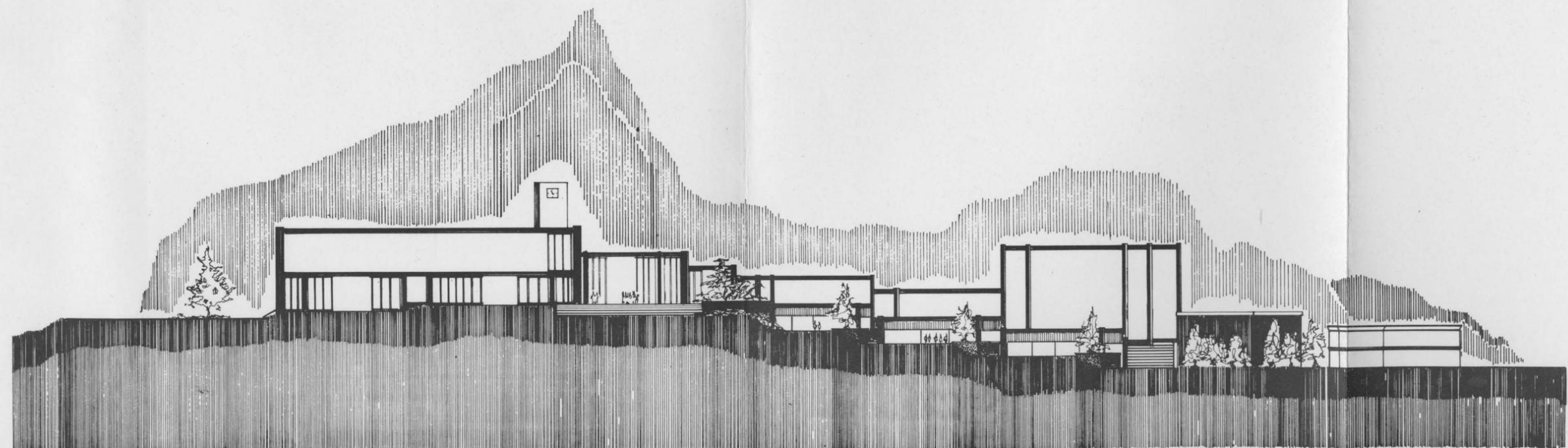
FIGURE 22

**SECOND FLOOR PLAN  
SCALE 1"-32'**

**BLACKSBURG  
CENTRE FOR  
THE ARTS**



MAIN ST      ARGABRITE'S      THEATER      PARKING      LOBBY      MOVIES      GYM      FACULTY ST  
**NORTH ELEVATION**      **SCALE 1"-32'**



FACULTY ST      ARTS-CRAFTS      GYM      LOBBY      THEATER      SHOPS      STAGE      THEATER      ARGABRITE'S      MAIN ST  
**SOUTH ELEVATION**      **SCALE 1"-32'**

FIGURE 23

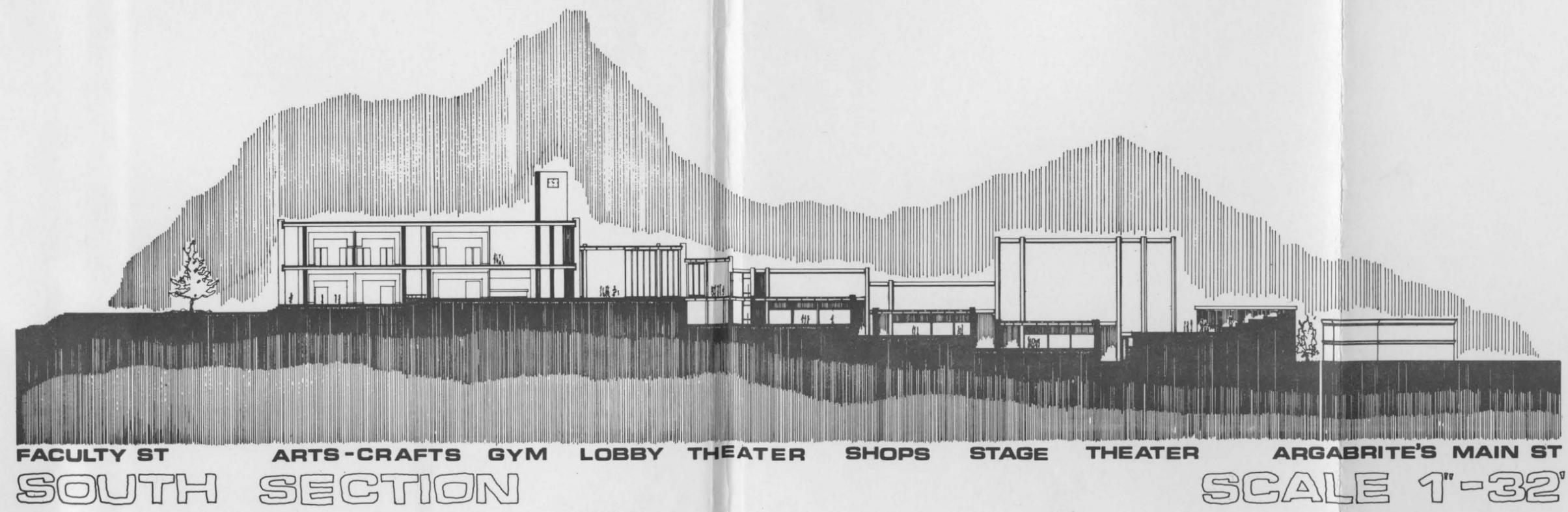
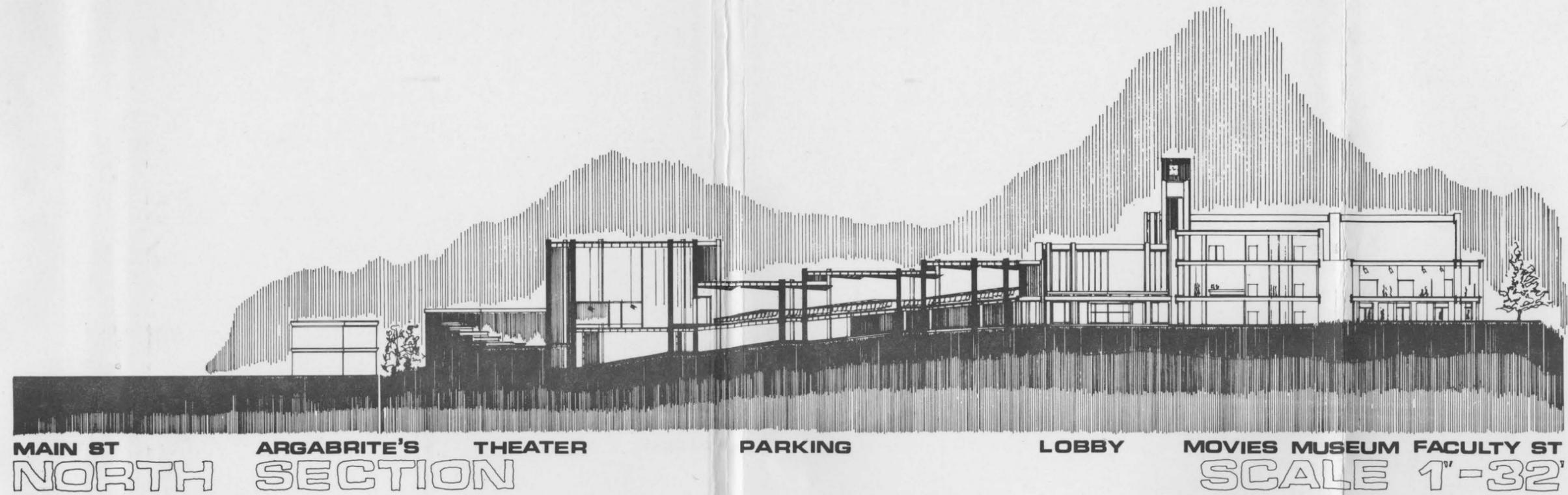


FIGURE 24

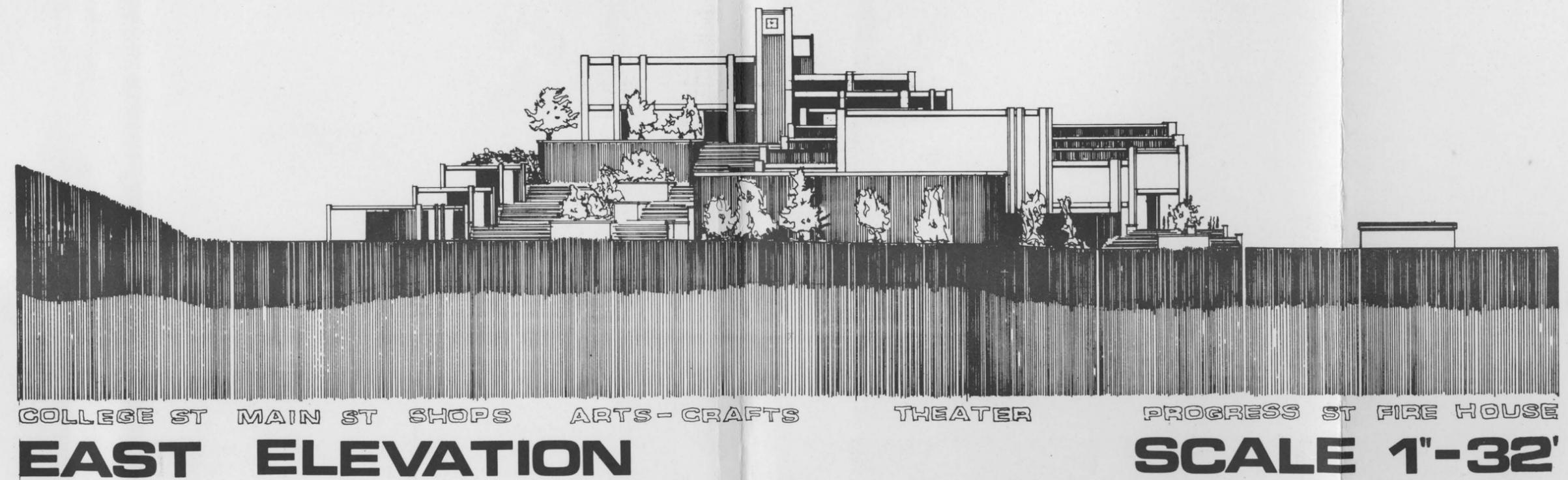
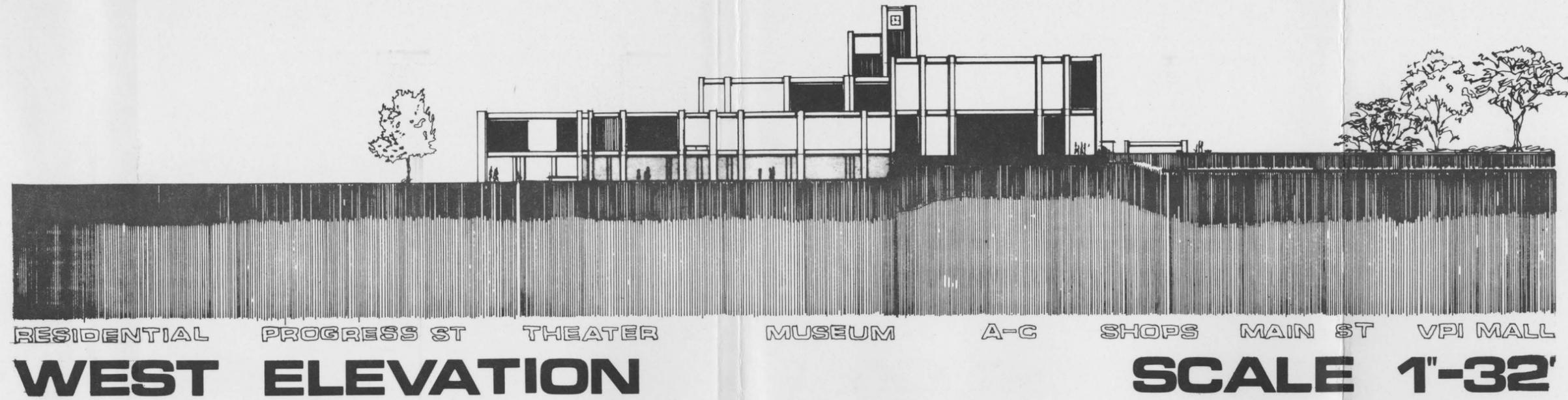
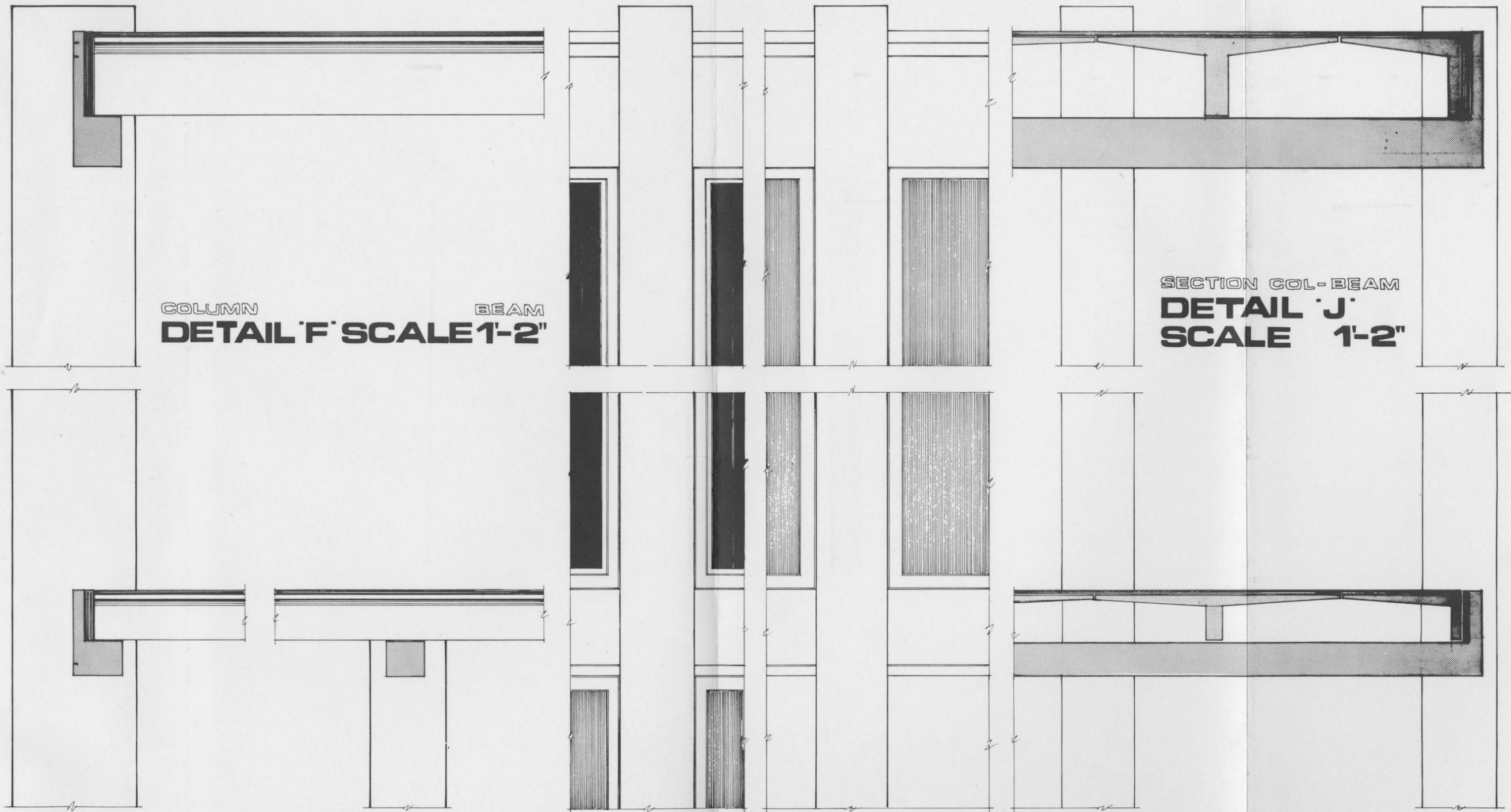


FIGURE 25





COLUMN  
**DETAIL 'F'** SCALE 1'-2"  
 BEAM

SECTION COL-BEAM  
**DETAIL 'J'**  
 SCALE 1'-2"

COLUMN  
**DETAIL 'G'**

TEE BEAM

DEEP BEAM  
**SCALE 1'-2"**

WINDOW PANEL

**DETAIL 'H'** SCALE 1'-2"

WALL PANEL

SECTION  
**DETAIL 'K'**

COLUMN-BEAM  
**1'-2"**

FIGURE 27



SECTION

FOUNDATION

WINDOW PANEL PLAN ELEVATION

COLUMN-BEAM

PLAN

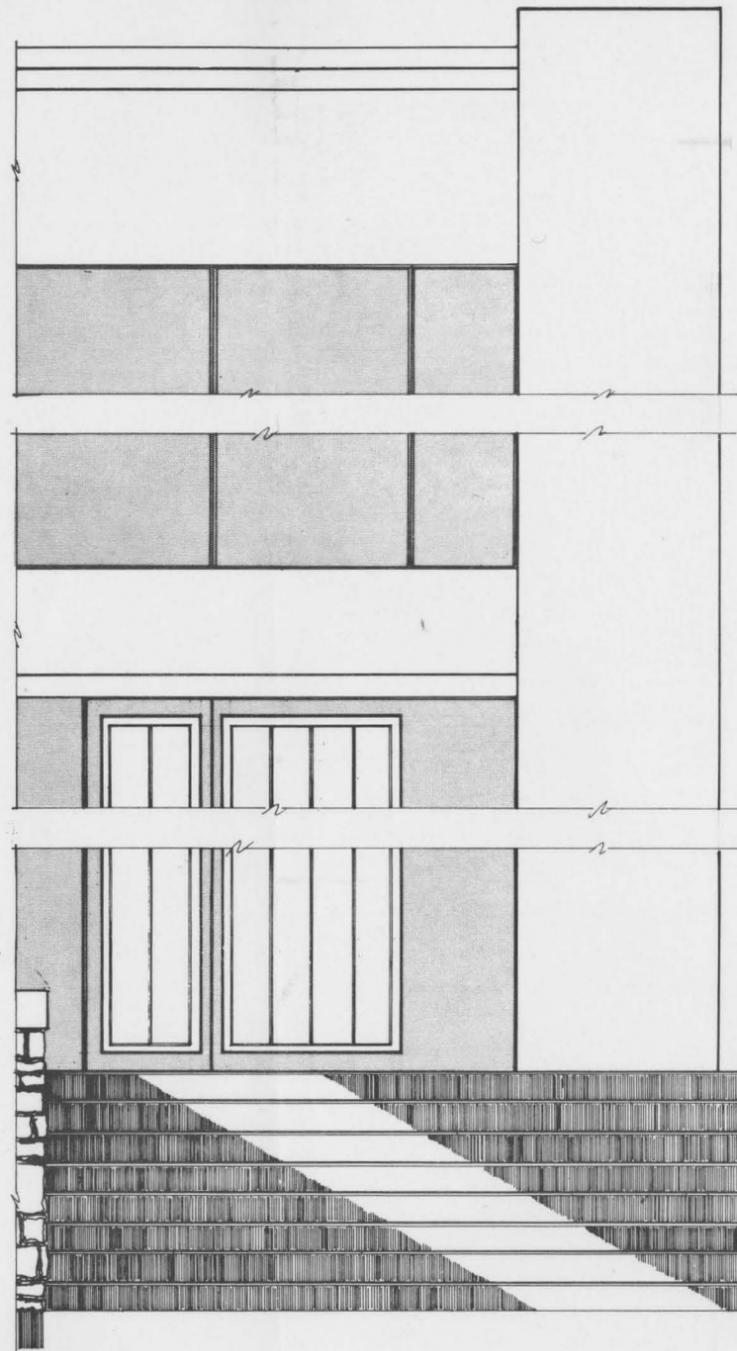
ELEVATION

**DETAIL M SCALE 1'-2'**

**DETAIL O SCALE 1'-2'**

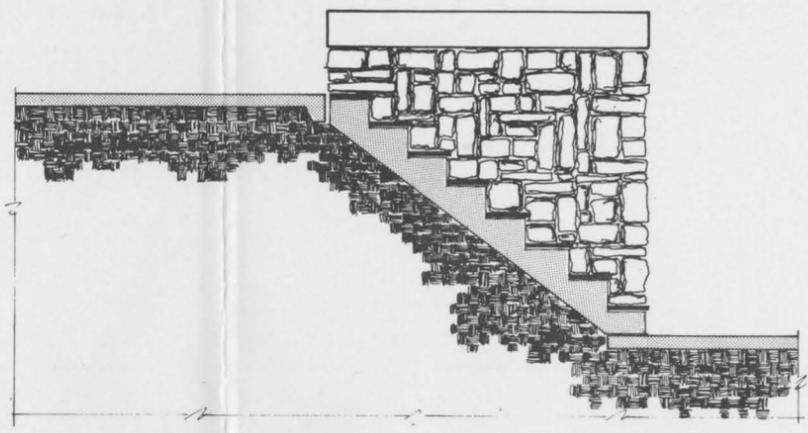
**DETAIL Q SCALE 1'-2'**

FIGURE 27a



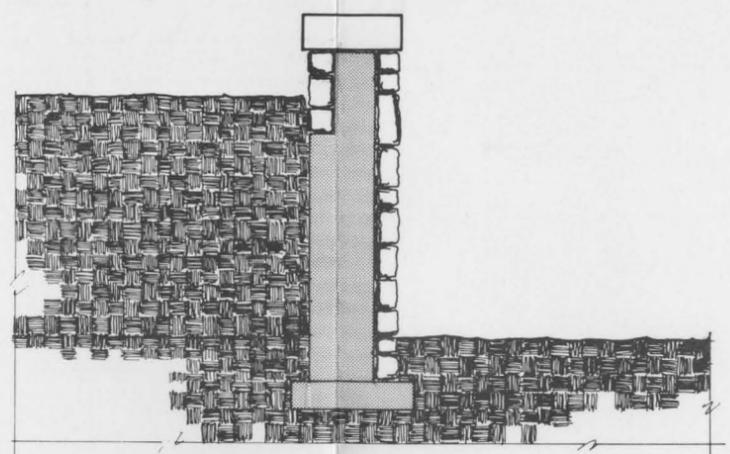
COLUMN BEAM  
**DETAIL 'R'**

WINDOW WALL PANELS



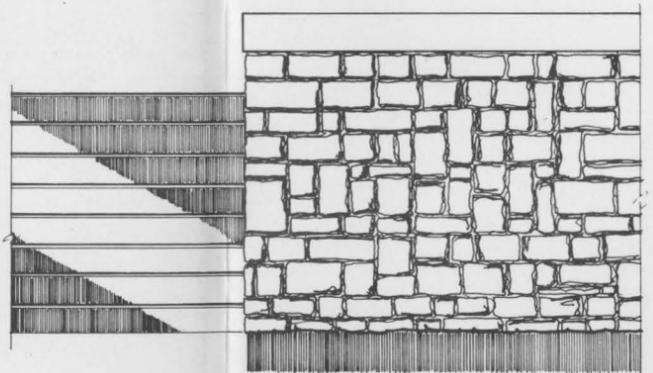
SECTION  
**DETAIL 'W'**  
SCALE 1"-2'

STEPS

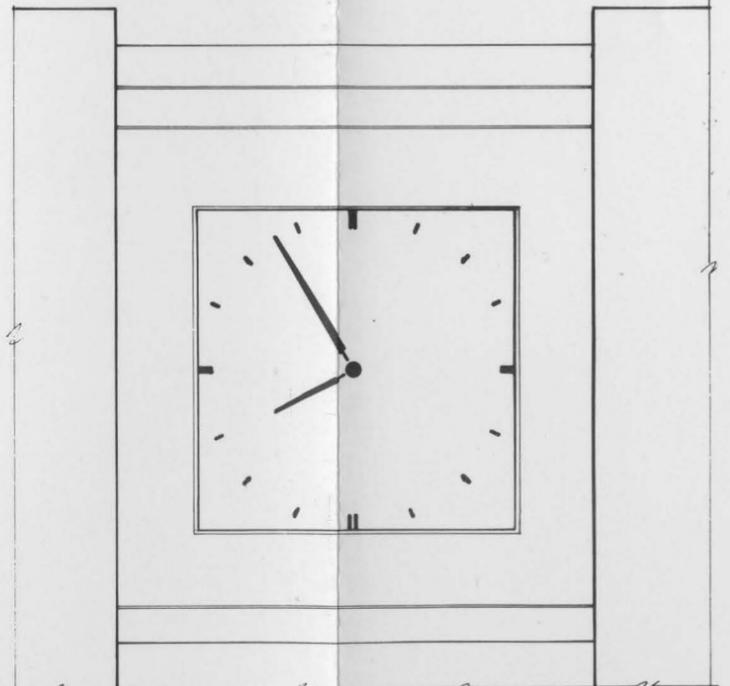


SECTION  
**DETAIL 'X'**  
SCALE 1"-2'

RETAINING WALL

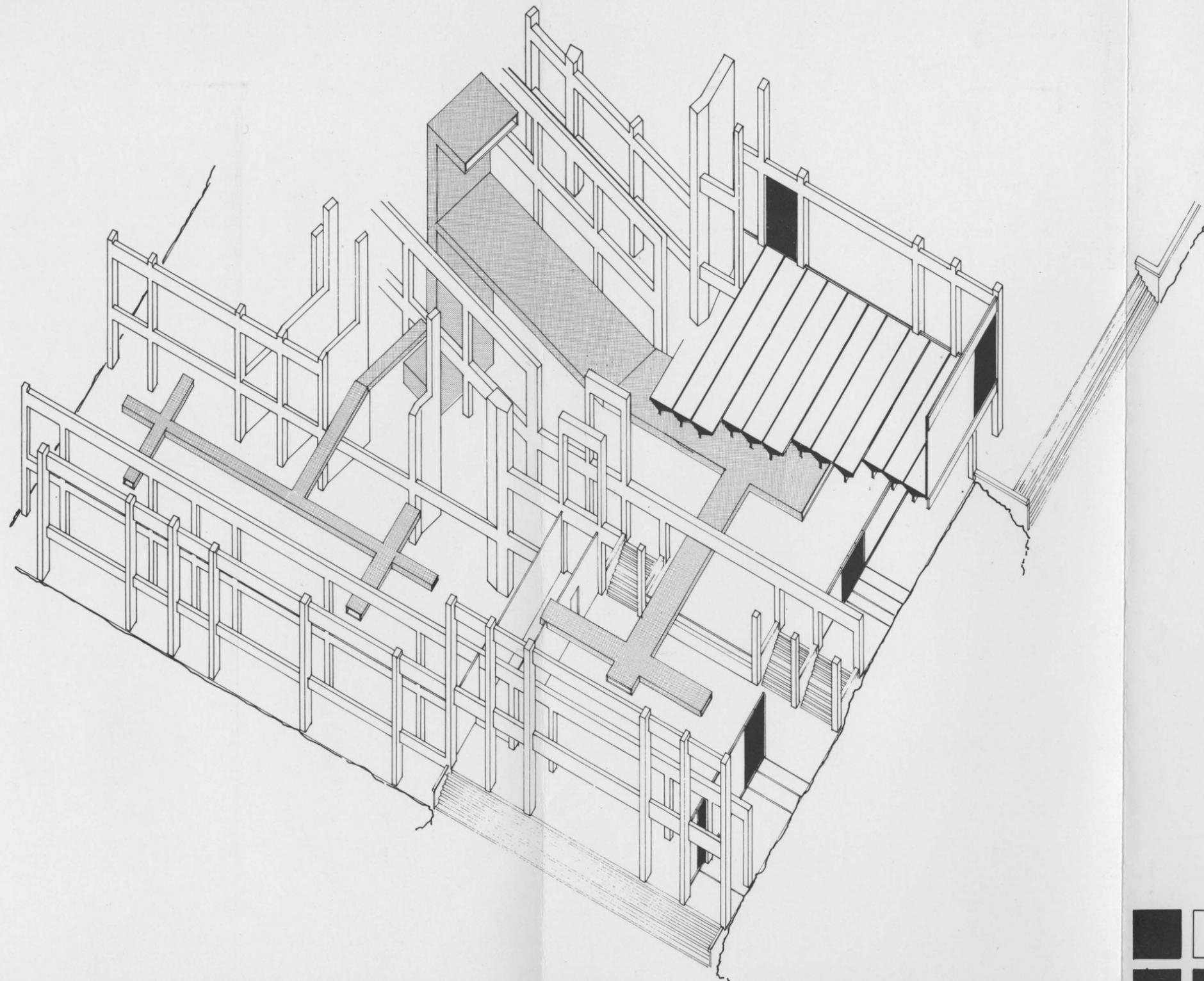


STEPS ELEVATION  
**SCALE 1"-2'**



TOWER ELEVATION  
**DETAIL 'U'**  
SCALE 1"-2'

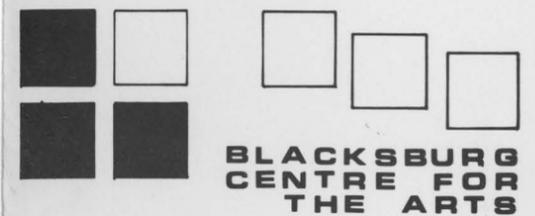
FIGURE 28



**AXONOMETRIC VIEW**

**SCALE 1" - 16'**

FIGURE 29



**BLACKSBURG  
CENTRE FOR  
THE ARTS**

PROBLEM  
SYNTHESIS:  
COMPUTER LOG

ACTIVITY DATA  
INTERACTION MATRIX  
OPTIMUM MATRIX

## ACTIVITY DATA

During the problem synthesis stage of the design process, it is of the utmost importance to keep an open mind in order to achieve the optimum design possible. Because of the nature of this thesis--design oriented with supportive research data--it was felt that an additional check was needed in order to bring together the design as well as justify the final results. The computer was used as the necessary check for design justification.

The first major step in use of the computer is the establishment of a data set. The following were the steps used:

```
'C'    VM/370 on line
'D'    Dial TSO
'C'    Dailed to TSO
'D'    Logon Hogan/BOB
'C'    Hogan Logon in progress, date, time. No
        broadcast messages. Ready.
'D'    Edit GTBSD DATA DATA
'C'    Enter new or old
'D'    New
'C'    Input
```

From here the list of information above was given the computer to store and bring to recall at a later date.

## INTERACTION MATRIX

The next step in use of the computer was to recall the "data set," select the proper spaces and activities to interact, and have the computer formulate the optimum organizational arrangement. For the Blacksburg Centre for the Arts, four such matrices were formulated. Each matrix used the following attributes and description ratings to formulate an optimum matrix.

The attributes are:

- (1) Orientation, denoted by N (north); S (south); E (east); and W (west)
- (2) Open/closed - referring to spaces, denoted by O (open) and a blank (closed)
- (3) Quiet zone - noisy zone, denoted by Q (quiet) and N (noisy)
- (4) Restricted, denoted by R (restricted) and a blank (non-restricted)

The description ratings are:

- (1) Denotes an undesirable space or function
- (2) Denotes an unimportant space or function
- (3) Denotes an ordinary closeness of spaces or functions
- (4) Denotes an important space or function
- (5) Denotes an especially important space or function
- (6) Denotes an absolutely important space or function

For purpose of illustration, one computer matrix will be shown as an example of the first product of the spatial interaction matrix.

(Table 1)

#### OPTIMUM MATRIX

After completion of the interaction matrix analysis program, the computer analyzed the data and gave the author a hard copy of the allocation diagram (optimum matrix). For the four matrices run, three readable results were given for each. The first figure lists the space designations with their computer coded number reference and abbreviations, plus gives spatial attributes proper representation. The second figure gives the spatial allocation in the form of a bubble diagram. The third and final figure is a pictorial layout in "corelap matrix" notation. The last figure is the first readable floor plan that can be understood by most persons. It is not to be confused, however, with the final form that resulted from



an active and worthwhile design process.

The fourth and final matrix was an attempt by the author to see how well the project will integrate into the whole Blacksburg community. The diagrams are the same representation as before with one major difference--the addition of all the major functions and spaces plus a relationship to the town. (Figure 30) A quick comparison can thus be made and conclusions drawn. It is seen that some modification of the allocations given needed to be made. Resulting from this matrix and allocation diagram, it is seen that Blacksburg needs a master plan. (Figure 31) The town has many problems, but two major ones stand out.

The first problem is a growth situation. Since VPI&SU borders the CBD of Blacksburg on two sides, it is limited to growth in that direction. The central business district is also limited in growth patterns by the residential district that borders it on the other side. The only results or outcome of this is a linear growth pattern spread out over many blocks or a move to the shopping centers. The latter seems to be a temporary solution at best. The second problem lies in the amount of parking available and the amount of parking to become available. It is seen that some CBD parking can become easily available, but much more needs to be put in use. (Figure 10)

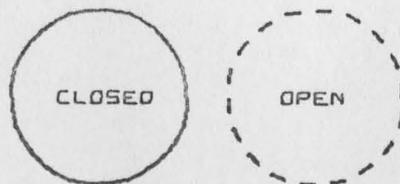
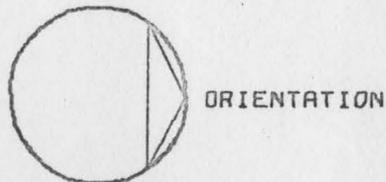
These two major problems add additional design restraints to the total project, thus changing the overall matrix allocation diagram somewhat. (Figure 31) The most apparent changes in the

SPATIAL ALLOCATION DIAGRAM  
ORIGINAL  
BEHAVIORAL ENVIRON. STUDY

## SPACE DESIGNATION

11	PLAZA	( PLA )
12	LOBBY	( LOB )
13	MALL WALK	( MAL )
14	MALL WALK 1	( MAL1 )
15	MALL WALK 2	( MAL2 )
16	MALL WALK 3	( MAL3 )
17	TERRACES	( TER )
18	OUTDOORPLAY AREA	( PLAY )
19	AMPHITHEATER	( AMT )
20	COMMERCIAL	( COM )
21	MUSEUM	( MUS )
22	ARTS CRAFTS	( ART )
23	THEATER 1	( THE1 )
24	THEATER 2	( THE )
25	PHYSICAL RECREATION	( PYR )
26	PARKING	( PARK )
27	SERVICE AREAS	( SER )
28	MAIN AND COLLEGE	( MAI )

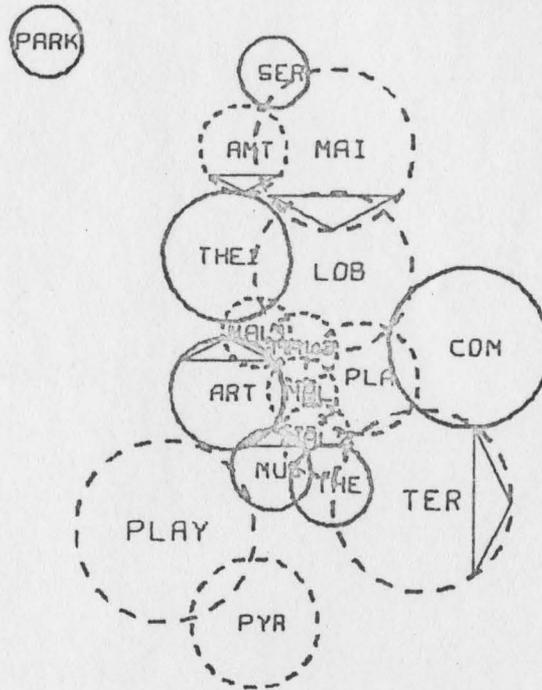
## SPATIAL ATTRIBUTES



**FIGURE 30**

BLACKSBURG CENTER FOR THE ARTS  
CIVIC CULTURAL CENTER  
PRELIMINARY ANALYSIS

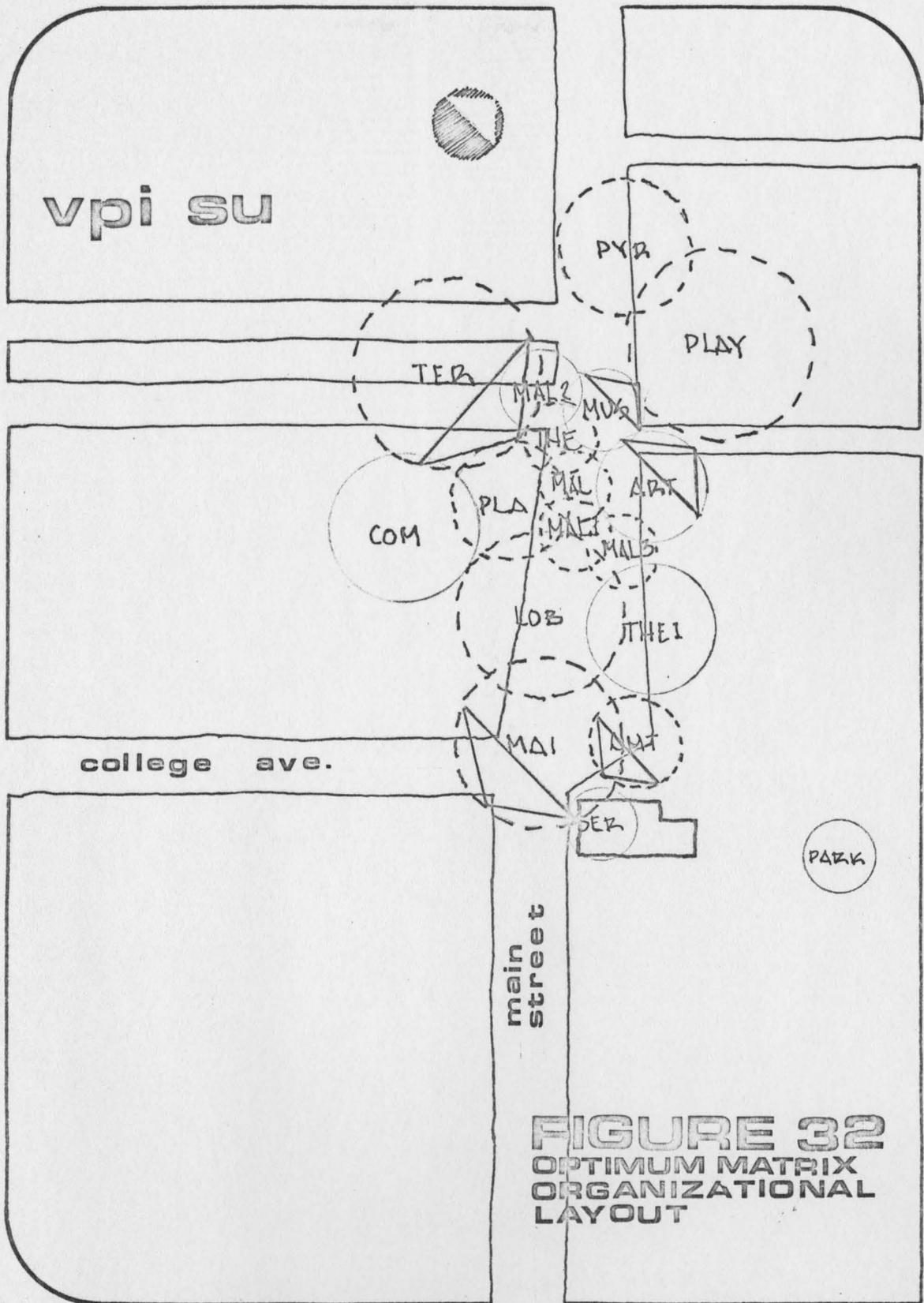
NORTH



**FIGURE 31**

LAYOUT SCORE - 3657

allocation diagram are the shifts to the right to remove activities and functions from the VPI&SU campus, causing a more dense configuration of the BCA but adding aesthetic value. (Figure 32) These shifts also cause some activities and functions to be stacked, one on top of the other. Other changes that lead to a major design consideration are the movements and stacking of parking on the site with a possible proposal of where additional parking can be placed in Blacksburg. (Figure 32)



**FIGURE 32**  
**OPTIMUM MATRIX**  
**ORGANIZATIONAL**  
**LAYOUT**

THESIS  
EVALUATION:  
BLACKSBURG CENTRE  
FOR THE ARTS

THESIS OBJECTIVES  
CONCLUSIONS



## THESIS OBJECTIVES

The following list is a set of specific objectives for this thesis. The author feels that after careful consideration, the development of these objectives coincides strongly with the specific goals of the Blacksburg Centre for the Arts.

The thesis objectives are:

- (1) To collect data, transform this data into information, and apply it to a given design situation.
- (2) To determine specific core needs.
- (3) To establish the given functions and distributions of activities that will compose the BCA.
- (4) To establish location and physical criteria.
- (5) To develop a set of planning principles and programming requirements.
- (6) To integrate these functions and activities into a workable multi-purpose center that will generate its form and purpose.
- (7) To present a completed detailed study, for example design of the Blacksburg Media Center.<sup>9</sup>
- (8) To test these objectives, principles, and requirements generated by designing a conceptual model.
- (9) To evaluate the architectural results through feedback from faculty and individuals involved in planning and design of similar facilities.

## CONCLUSIONS

A need for a cultural center is established. After careful consideration of that need, a program is constructed that allows for great flexibility. Several sets of goals and objectives are outlined which give specific guidelines as to how the resulting center should develop. To change the resulting center would mean a change in the design process and mean starting over. After many initial attempts at a form statement, the decision for the final center for Blacksburg is made.

Meeting all the specific goals and objectives stated at the onset of this thesis is the ideal solution. Satisfying more than half of these is a more realistic follow-up to the center's completion. The author feels that in the area of process documentation and development, the BCA has been 100% successful. The preliminary research and actual thesis paper, plus the oral examination consisting of thirteen presentation panels (Figures 18-29) illustrate the extensive documentation accomplished by this author.

In the area of design, the author feels less confident because design is always an open-ended problem. The author chose to finalize the design process in the form of this thesis. The proposed BCA and town redevelopment is an improvement over existing conditions and is a better statement than former proposals. However, the author realizes that many improvements could still be made in his design.

In the area of structural design, the author feels that the BCA also could use improvement. This results from a lack of confidence in structural design by the author, but is an area that can be overcome by practice in the real world. This has been the author's only project that has been studied to the depth and perception that is stated in this thesis. Possibly at a later date with a clear mind and renewed abilities, this author could revise his design and make the necessary improvements.

LITERATURE  
CITED:

FOOTNOTES

## FOOTNOTES

1. Blacksburg Planning Department, "Blacksburg Open Space: 1974 to 1985," Blacksburg, Va., 1974. (Mimeographed.)
2. George T. Butler, "Blacksburg New Community," Research report, Blacksburg, Va., 1974.

(The following question and corresponding answers are taken from the first survey asked of Blacksburg residents:

"Which facility would you most like to see built in Blacksburg?"

- 18% - Blacksburg Media Center, including: housing, museum, movie theaters, outdoor theater, library, indoor mall, outdoor mall, park.
- 22% - Blacksburg Community Center, including: housing, old folks home, shops, plaza/beer garden, day care center, offices.
- 8% - Blacksburg Museum Center, including: museum, public/private art school, shops, outdoor park, theaters, child's art school.
- 45% - all of these.
- 7% - other.)

3. Blacksburg Planning Department, "Downtown Blacksburg," Blacksburg, Va., 1974. (Mimeographed.)
- Blacksburg Planning Department, "Blacksburg," Blacksburg, Va., 1974. (Mimeographed.)
- Blacksburg Planning Department, "Blacksburg Open Space: 1974 to 1985," Blacksburg, Va., 1974. (Mimeographed.)
4. Great Britain Ministry of Education, Community Centers (London: His Majesty's Stationery Office, 1945), p. 34.
5. Webster's Third New International Dictionary (Springfield, Mass.: Merriam, 1961), p. 538.
6. George T. Butler, "Blacksburg New Community," Research report, Blacksburg, Va., 1974.
7. Ibid.
8. Blacksburg Planning Department, "Zoning Ordinances 1974, Blacksburg, Virginia," Blacksburg, Va., 1974. (Mimeographed.)
9. George T. Butler, "Blacksburg Media Center: Proposal and Town Redevelopment," Blacksburg, Va., 1974. (Typewritten.)

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**APPENDIX:1**  
**STRUCTURAL AND**  
**MECHANICAL CALCULATION**

STRUCTURAL CALCULATIONS  
MECHANICAL CALCULATIONS

# STRUCTURAL CALCULATIONS

BCA  
SPAN DEPTH CALCULATIONS  
BCA  
PRELIMINARY STRUCTURAL  
CALCULATIONS

**TABLE 2****BCA  
SPAN DEPTH CAL.**

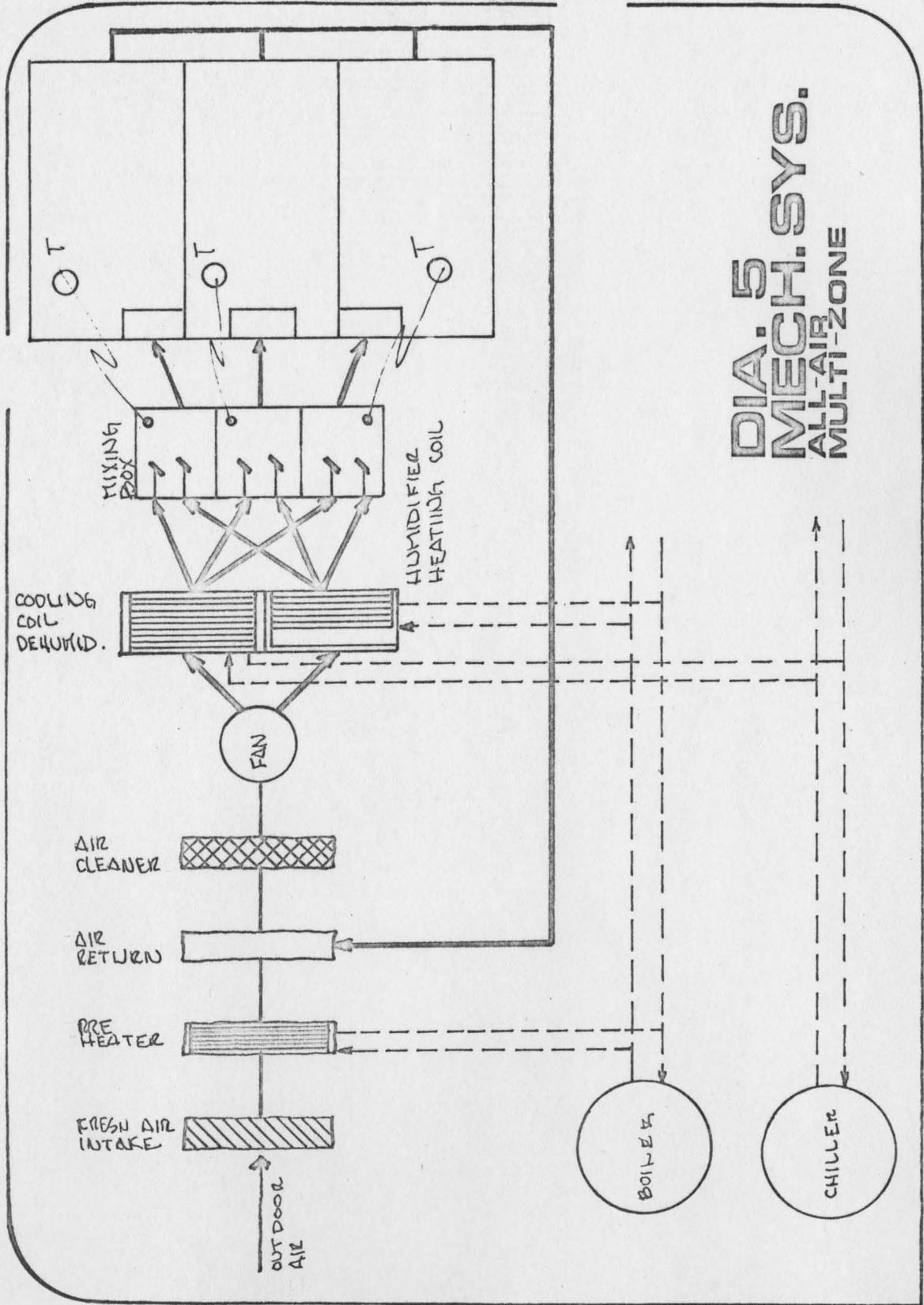
<b>TYPE</b>	<b>SPAN</b>	<b>RATIO</b>	<b>DEPTH</b>
SPACE FRAME	60 FT.	14/20	3/5 FT.
DOUBLE TEE	60 FT.	24/32	2/2½ FT.
SINGLE TEE	150 FT.	24/30	6/5 FT.

NOTE: RUN 1 - Means of determining structural system

<b>TABLE 3</b>		<b>BCA PREL. STRUCT. CAL.</b>	
<b>TYPICAL COLUMN</b>	<b>GYM/ARTS-CRAFTS</b>		
<b>INTERIOR COL.</b>	<b>AREA</b>	1.1 x 25 x 180 = 4950 sq. ft.	
COL. AXIAL LOAD, Pu	75 + 115 = .190 x 4950 = 950 KSF		
TOTAL (3 floors)	2850K	USE 3000K	
<b>ASSUMED</b>	f'c 5KSI	% Ag 4%	LINE 3.5
<b>AREA:</b> Ag	1000 sq. in.		
	<b>MIN. COLUMN</b>		
	32" x 32"		

# MECHANICAL CALCULATIONS

MECHANICAL SYSTEMS  
SELECTION  
BCA  
OCCUPANCY & EGRESS  
BCA  
TOTAL BUILDING EFF.  
BCA  
ELEVATOR SIZING  
BCA  
COLD WATER SUPPLY  
BCA  
HOT WATER SUPPLY  
BCA  
ACOUSTICAL CALCULATIONS  
BCA  
MIN. PLUMBING FIXTURES





**TABLE 5****BCA  
TOTAL BUILDING EFF.**

<b>ROOM</b>	<b>ASSIGNABLE INCOME</b>	<b>NON-IN.</b>	<b>NON-AS</b>	<b>NOTES</b>
MAIN FLOOR	41,750	10,325	28,000	
BASEMENT FLOOR	39,037	11,462	31,837	
SECOND FLOOR		24,300	2,475	
<b>SUB-TOT.</b>	80,787	46,087	62,312	
	126,874			
<b>TOTALS</b>				189,187
<b>GEN. EFF.</b>	126,874/ 189,187=			67 %
<b>REN. EFF.</b>	80,787/ 189,187=			43 %

NOTE: Numbers given in Square Feet.

**TABLE 6****BCA  
ELEVATOR SIZING**

<b># OF FLOORS</b>	3		<b>TOT.</b>
<b>FLOOR HEIGHT</b>	12 FT.		36 FT.
<b>FLOOR AREA</b>			183,820
<b>POPULATION CRIT.</b>	150		1,225
5-MIN. CAPACITY, $P_c$	$1,225 \times .1 = 123$		
CAR CAPACITY CAR SPEED	4,000 300		
AVG. ROUND TRIP, $T_r$	121 SECONDS		
COMPUTED # OF ROUND TRIPS	$300/121 = 2.5$		
PASSENGER CAPACITY, $P_m$	$2.5 \times 27 = 67$		
MIN. # OF CARS, $N$	$123/67 = 2$ CARS		
INTERVAL TIME, $T$	$121/2 = 60$ SEC.	RANGE 30-60 SEC.	
		CHECKS	

<b>TABLE 7</b>		<b>BCA</b>		<b>COLD WATER SUPPLY</b>	
<b>INSTITUTIONAL BASE</b>	<b>G<sub>D</sub></b> 100 FT	<b>R<sub>H</sub></b> 10 %	<b>R<sub>M</sub></b> 20 %		
BUILDING OCCUPANTS, Ps	183,820/ 150= 1000 persons				
DAILY COLD WATER CONSUMP., Gtc	1,000 x 100= 100,000 GAL.				
HOURLY RATE, Ghc	.15 x 100,000= 15,000 GAL.				
COLD WATER STORAGE, Gc	.50 x 15,000= 7,500 GAL.				
TOTAL WATER, 10% ADDITION	9,900 x .10= 11,000 GAL.				
Approximate cold water storage tank size: Gh 2,400 GAL. Gc 7,500 GAL. 10% ADDITION FOR SAFETY					
TANK VOLUME, Vt	11,000 x .1337= 1,500 CU. FT.				
SPACE LIMITATION, SIZE	$8D^2 = 1,500$		D= 14 FEET		
CYLINDRICAL H= 10 FEET	$10 = 1,500 / .7854 \times D^2$				
Ht= 11½ FEET	D= 14 FEET				
WATER WEIGHT, Ww	62.5 x 1,500= 93,750 POUNDS				

**TABLE 8****BCA  
HOT WATER SUPPLY**

INSTITUTIONAL BASE			$G_D$	$R_H$	$R_M$
$V_T$ 15,000	$G_C$ 11,000	$W_W$ 93,750	100 FEET	10 %	20 %
TOTAL DAILY HOT WATER, Gth			$.10 \times 100,000 = 10,000$ GAL.		
MAX. HOURLY DEMAND, Ghm			$.20 \times 10,000 = 2,000$ GAL.		
AVG. HOURLY DEMAND, Ghha			$.0417 \times 10,000 = 417$ GAL.		
STORAGE CAPACITY, Gh			$1.6 \times (2000 - 417) = 2,400$ GAL.		
WATER HEATER, EDR			$5.6 \times 417 = 2,255$		
AVG. WATER TEMP.			$140^{\circ}$ F		

Note: Used for domestic hot water calculations.

**TABLE 9****BCA  
ACOUSTICAL CAL.****REVERB. TIME: 1.8 SEC.****AREA** 23,975 SQ. FEET**F<sub>w</sub>** 150 FEET**R<sub>w</sub>** 120 FEET**S<sub>w</sub>** 150 FEET**S<sub>w</sub>** 150 FEET**H<sub>z</sub>**: 500 cycles**C** 23,975 SQ. FT.**F** 23,975 SQ. FT.**HEIGHT** 20 FEET

ITM	DESCRIP.	A	TOTAL	C <sub>a</sub>	a	NO.
Fw	OPEN AREA		3,000 SQ.FT.	.3	900	
Rw	FRABIC		2,400 SQ.FT.	.55	1320	
Sw			3,000 SQ.FT.	.55	1700	
Sw			3,000 SQ.FT.	.55	1700	
C	ACOUSTIC PLATES		23,975	.06	1538	
F	CARPET		23,975	.14	1196	
	SEATS 1,000 @6 SQ.FT.		6,000	.80	4800	
					479,500	
<b>VOL</b>	23,975 x 20=				13,384	<b>TOT</b>
<b>TIME</b>	.05 x 479,500/	13,384			1.75	CHECK

**TABLE 10****BCA  
MIN. PLUMBING FIXT.**

<b>BCA</b>	<b>WC</b>	<b>URINAL</b>	<b>LAVA.</b>	<b>DF</b>	<b>SHOW.</b>
150 PER. DAILY AVG.	34	26	24	29	60

The following list of mechanical calculations were figured by this author but not included in this thesis:

- (1) Piping - Sizing - Up Feed System
- (2) Vapor Barrier
- (3) Air Duct Sizing
- (4) Lighting

# APPENDIX 2: PROGRAM

ACTIVITIES AND SPACE  
REQUIREMENTS

## ACTIVITIES AND SPACE REQUIREMENTS

## I. Multi-purpose theater - rough total: 13,580 sq.ft.

open-thrust/proscenium stage; music possible 40 x 20 = 800  
 3,500 sq.ft. combined  
 seating area: 5,600 sq.ft.  
 musical pit: 200 sq.ft. - 10 sq.ft. per person  
 wings (props)  
 dressing rooms (men-women): 680 sq.ft.  
 green room: 300 sq.ft.  
 costume/scene shop  
 storage, loading, receiving docks -  $\frac{1}{2}$  total: 2,000 sq.ft.  
 lobby/lounge  
 box office: 50 sq.ft.  
 rest rooms: 1,000 sq.ft.  
 related - management offices: 150 sq.ft.  
 music practice rooms: 500 sq.ft.  
 music storage: 100 sq.ft.  
 rehearsal rooms: 500 sq.ft.  
 mechanical  
 lights  
 wash rooms with shower facility  
 seating: 6 sq.ft. per person  
 number of persons - 500: 3,000 sq.ft.

## II. Amphitheater - rough total: 6,000 sq.ft.

stage  
 back stage  
 dressing rooms  
 costume shop  
 scene shop  
 offices - administration  
 lighting  
 sound  
 seating area

III. Movie theater - mini variety - 500 persons - rough total:  
6,025 sq.ft.

screen  
 projection room: 150 sq.ft.  
 seating - 2,200  
 storage -  $\frac{1}{3}$ : 1,000 sq.ft.  
 lobby/lounge -  $\frac{1}{3} \times \frac{1}{2}$ : 1,500 sq.ft.  
 refreshments  
 rest rooms: 1,000 sq.ft.  
 ticket office: 150 sq.ft.  
 related - administrative offices: 225 sq.ft.

mechanical room  
 emergency exit

IV. Physical recreation facilities - rough total: 13,700 sq.ft.

indoor/outdoor  
 gymnasium/basketball court/volley ball court, etc.: 8,000 sq.ft.  
 gym storage: 450 sq.ft.  
 dressing rooms - men and women: 1,800 sq.ft.  
 shower areas - men and women: 900 sq.ft.  
 weight room: 3,600 sq.ft.  
 green room/s  
 storage  
 tennis courts: 1,000 sq.ft.  
 lobby/lounge  
 rest rooms: 1,000 sq.ft.  
 administrative offices - 3 for a city-wide basis: 625 sq.ft.  
 related - mechanical

V. Arts area - rough total: 17,500 sq.ft.

lobby/lounge  
 administrative offices - 3, city related; director; manager:  
 625 sq.ft.  
 laboratory setting  
 painting: 900 sq.ft.  
 pottery: 900 sq.ft.  
 leather work: 900 sq.ft.  
 print making: 900 sq.ft.  
 weaving: 900 sq.ft.  
 photography: 900 sq.ft.  
 storage (all) - minimum % = 15% added: 900 sq.ft.  
 rest rooms: 1,000 sq.ft.  
 loading/receiving dock - 1/3 total: 2,000 sq.ft.  
 gallery area/display purpose  
 storage  
 office, administrative - 2 (large): 600 sq.ft.  
 rest rooms: 1,000 sq.ft.  
 gardens - sculpture  
 loading/receiving docks - 1/3 total  
 secured storage  
 exhibition rooms - 10  
 size 15 x 30: 450 sq.ft.

VI. Museum type facilities

exhibition rooms: 4,500 sq.ft.  
 entrance  
 storage: 1,500 sq.ft.  
 offices  
 rest rooms

## VII. Commercial - Entertainment - rough total: 20,500 sq.ft.

10 cluster/group shops; replacement of one's downtown:  
     barber, shoe repair; connect with leather  
     5 service-type  
     5 goods  
 local restaurant/club  
 Greek's Basement retained  
 storage - individual  
 shipping - receiving/delivering docks  
 mall/walking: 2,000 sq.ft.  
 rest rooms: 1,000 sq.ft.  
 offices; public type - 10: 2,100 sq.ft.  
 related: parking  
         mechanical  
         maintenance  
 office range: 4 small 10 x 15 = 150  
               4 medium 15 x 15 = 225  
               2 large 20 x 15 = 300  
               Total: 675 sq.ft.  
 shops: Group B - barber: 900 sq.ft.  
               shoe repair: 900 sq.ft.  
               hobby center/crafts: 1,800 sq.ft.  
               bakery: 900 sq.ft.  
               home furnishing center: 1,800 sq.ft.  
     Group A - plant center: 900 sq.ft.  
               men's clothing: 900 sq.ft.  
               women's clothing: 900 sq.ft.  
               imports store: 1,800 sq.ft.  
               gift center: 900 sq.ft.  
 restaurant - Greek's basement  
 dinner club - geared to the middle to upper income range:  
     3,700 sq.ft.  
 sizes - small shops: 15 x 60 = 900 sq.ft.  
           large shops: 30 x 60 = 1,800 sq.ft.  
 kitchen area - 1/3 - 1/2 dining area  
 service center: 18 sq.ft.  
 allow 18 sq.ft. per person  
 25 four person tables: 1,800 sq.ft.  
 storage - 1/2 dining area

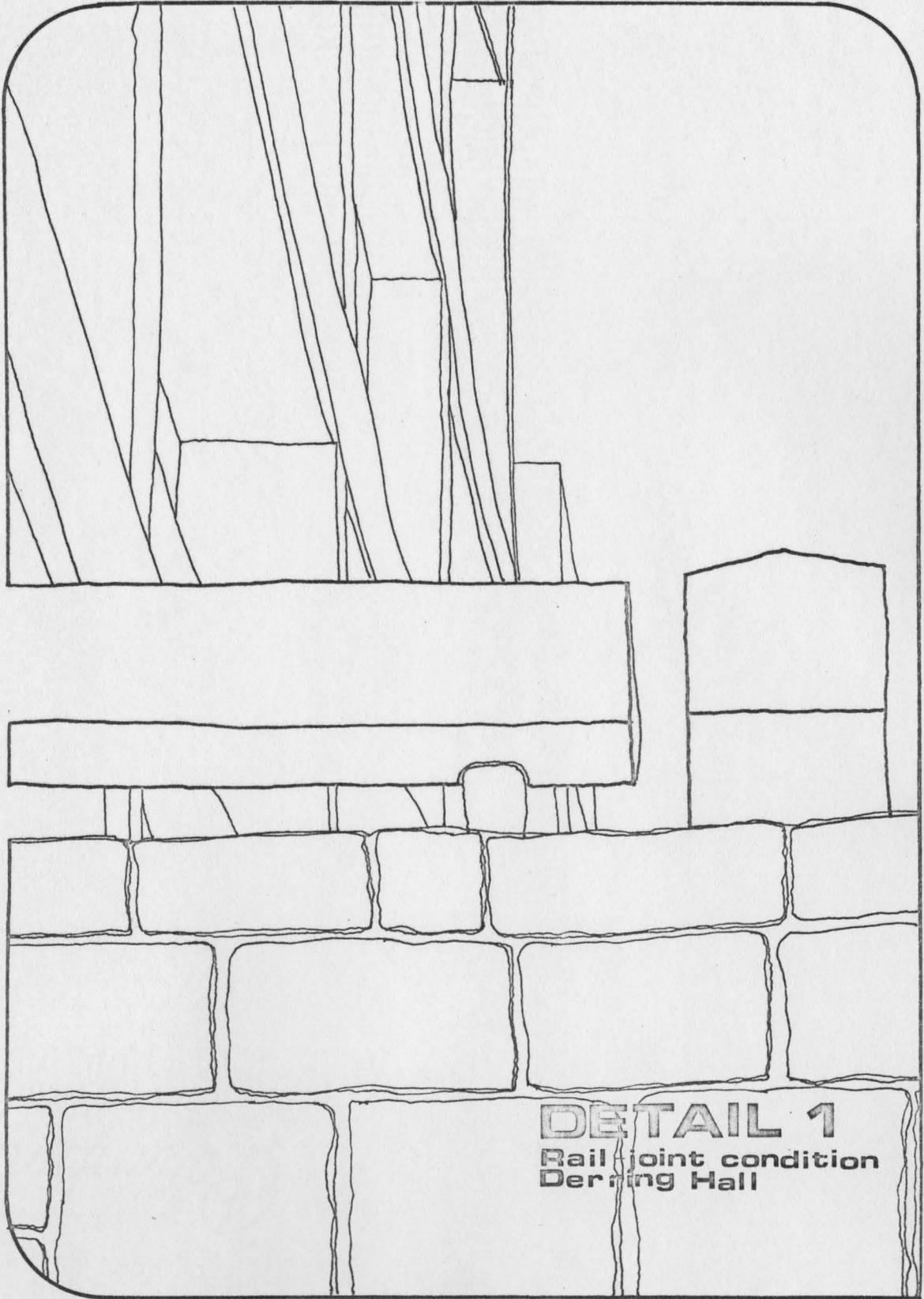
# APPENDIX: 3

## PROCESS

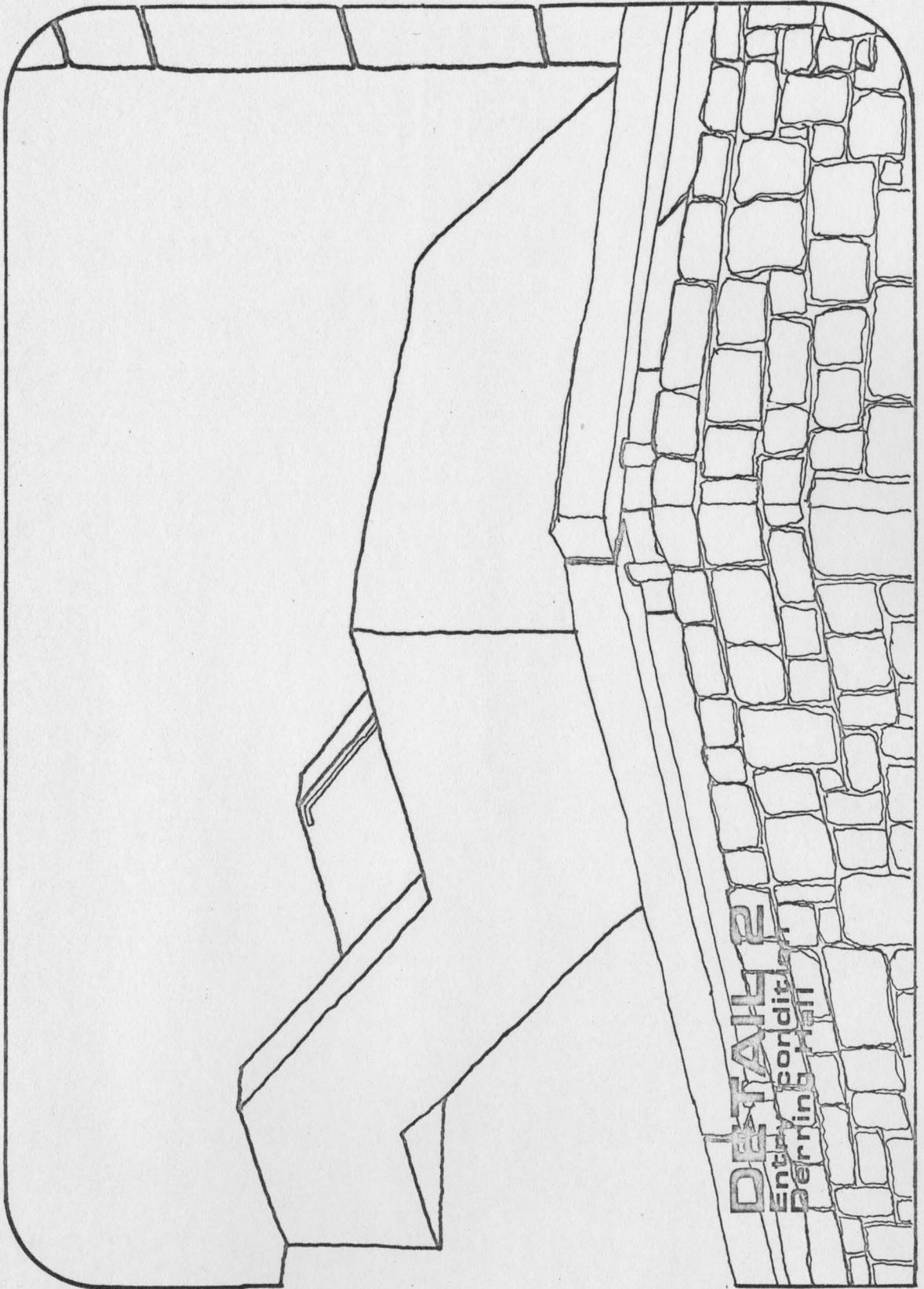
DETAIL STUDIES  
EXAMPLES: CULTURAL CENTRE  
STUDIED  
PROCESS DEVELOPMENT

# DETAIL STUDIES

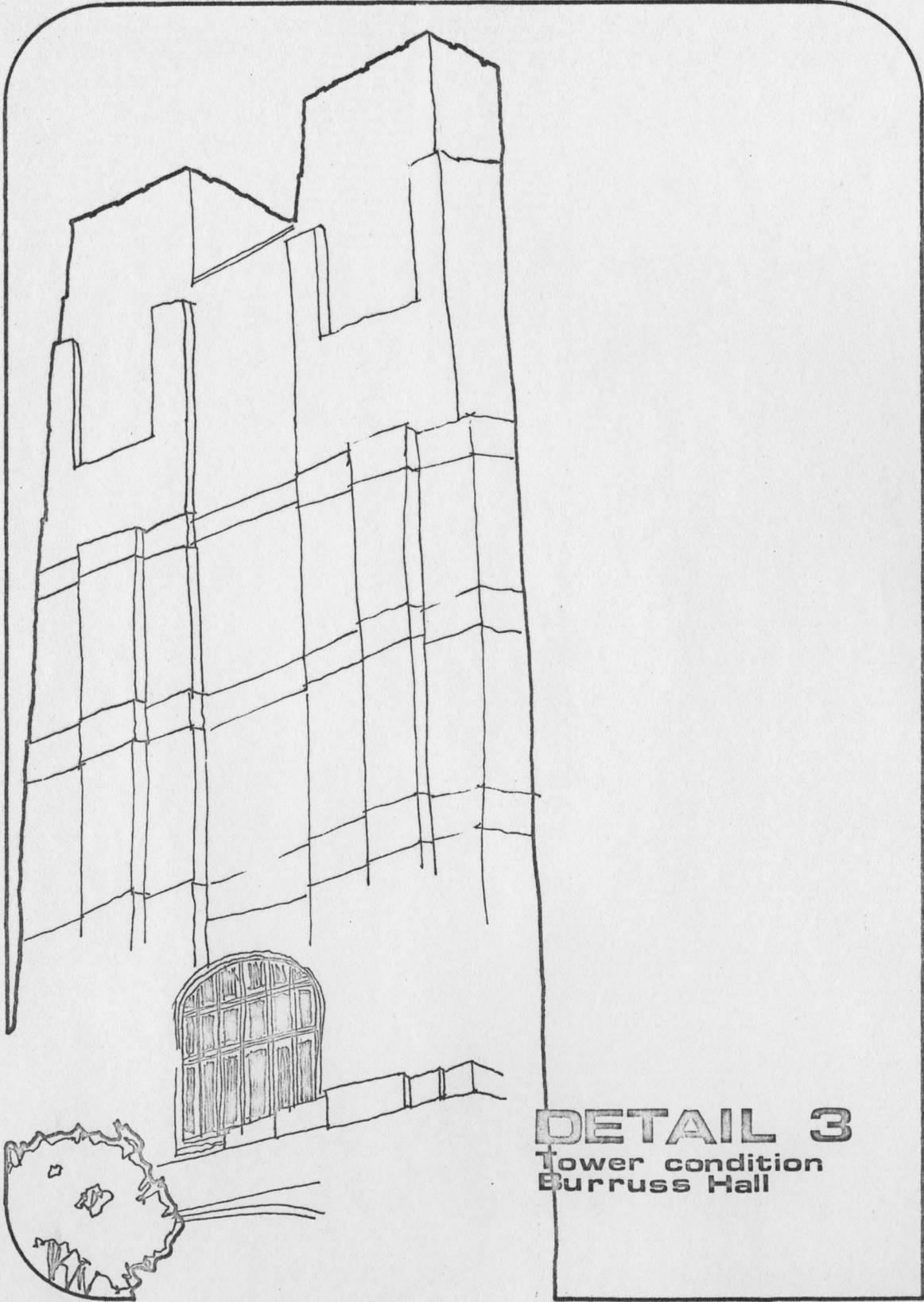
RAIL-JOINT CONDITION  
DERRING HALL  
ENTRY CONDITION  
DERRING HALL  
TOWER CONDITION  
BURRUSS HALL  
SYMBOLL CONDITION  
WAR MEMORIAL



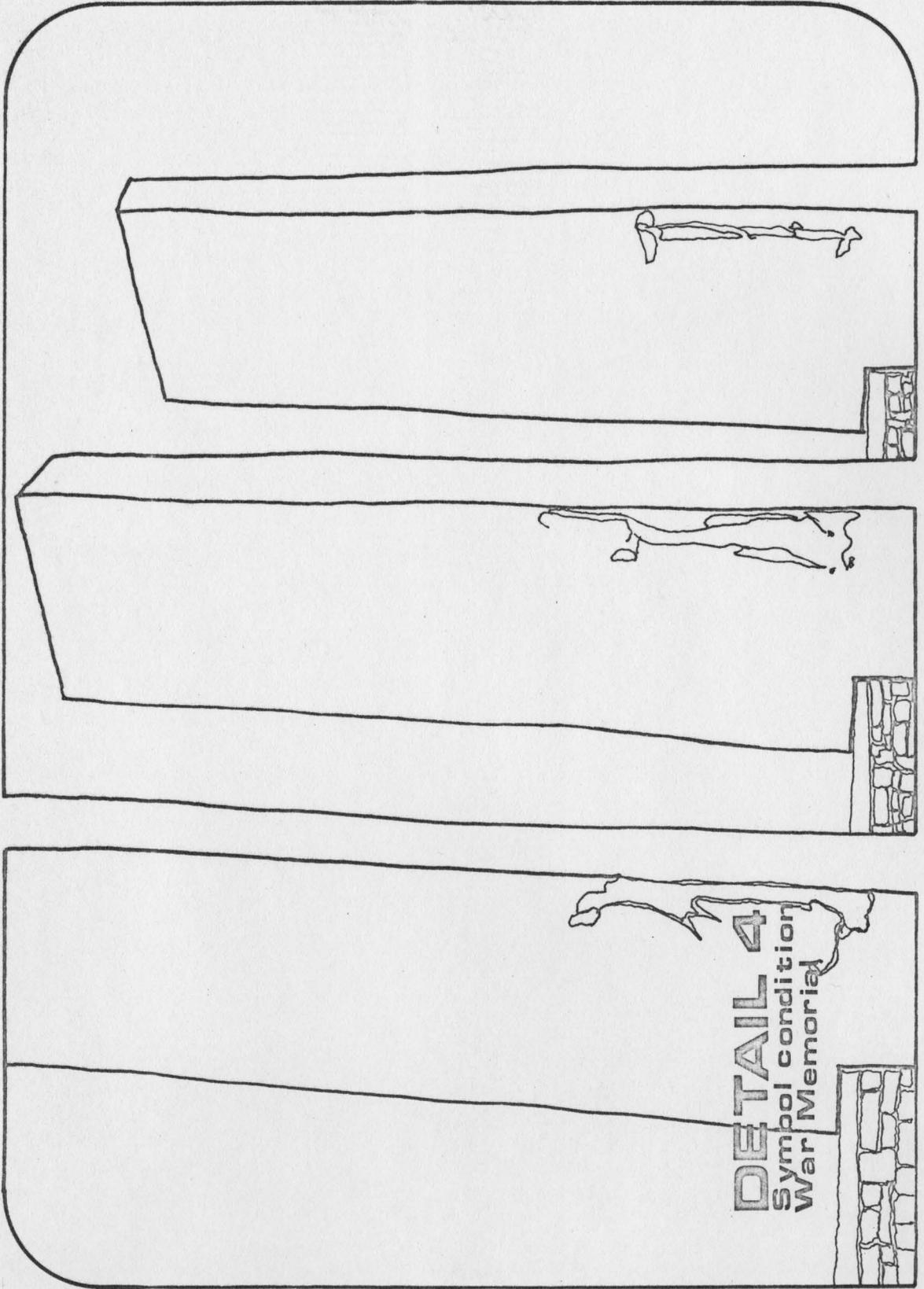
**DETAIL 1**  
**Rail joint condition**  
**Derring Hall**



DETAIL  
Entry Corridor,  
Perrin Hall



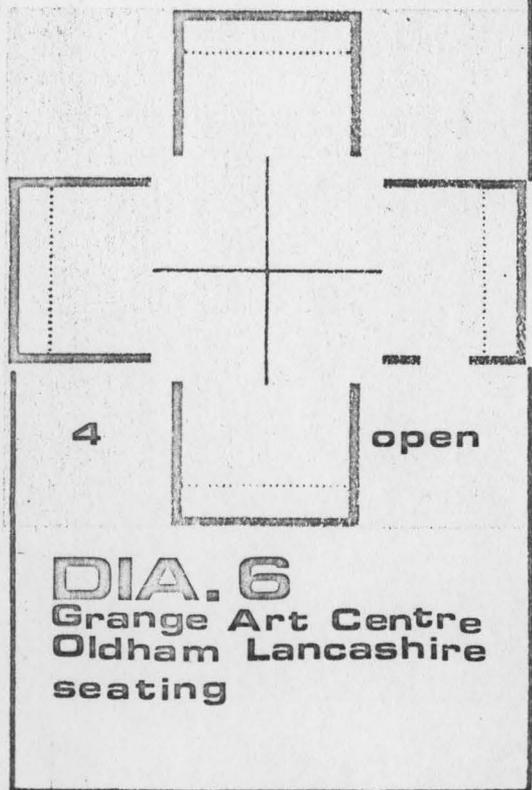
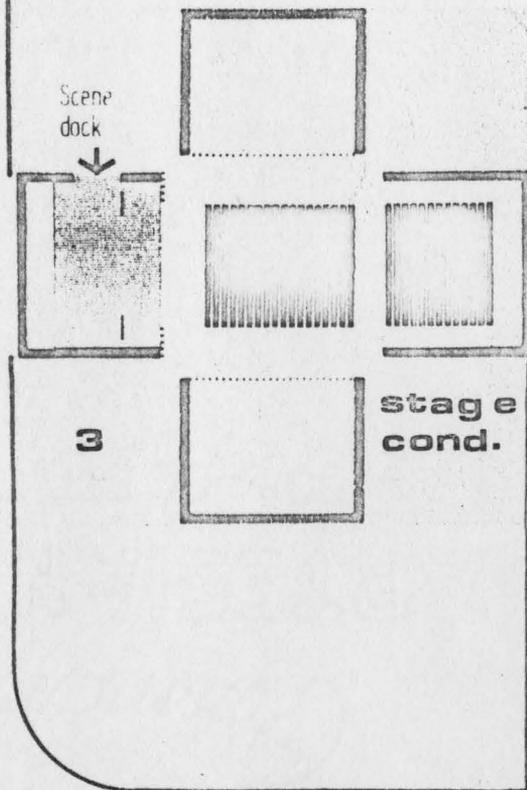
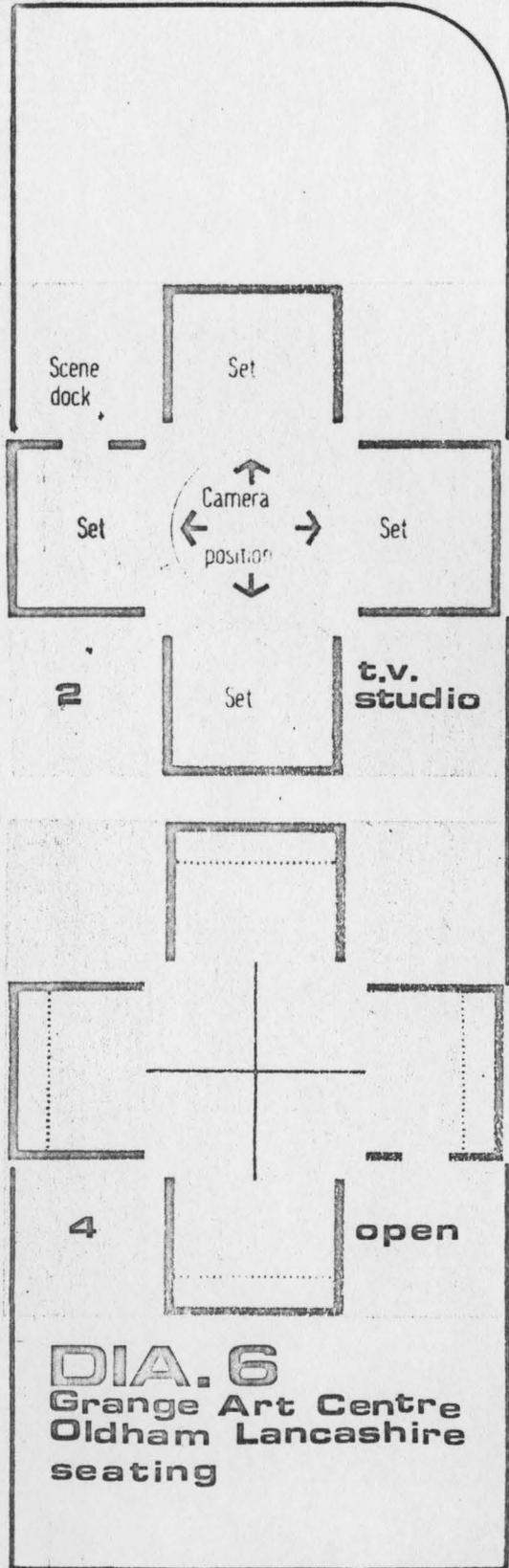
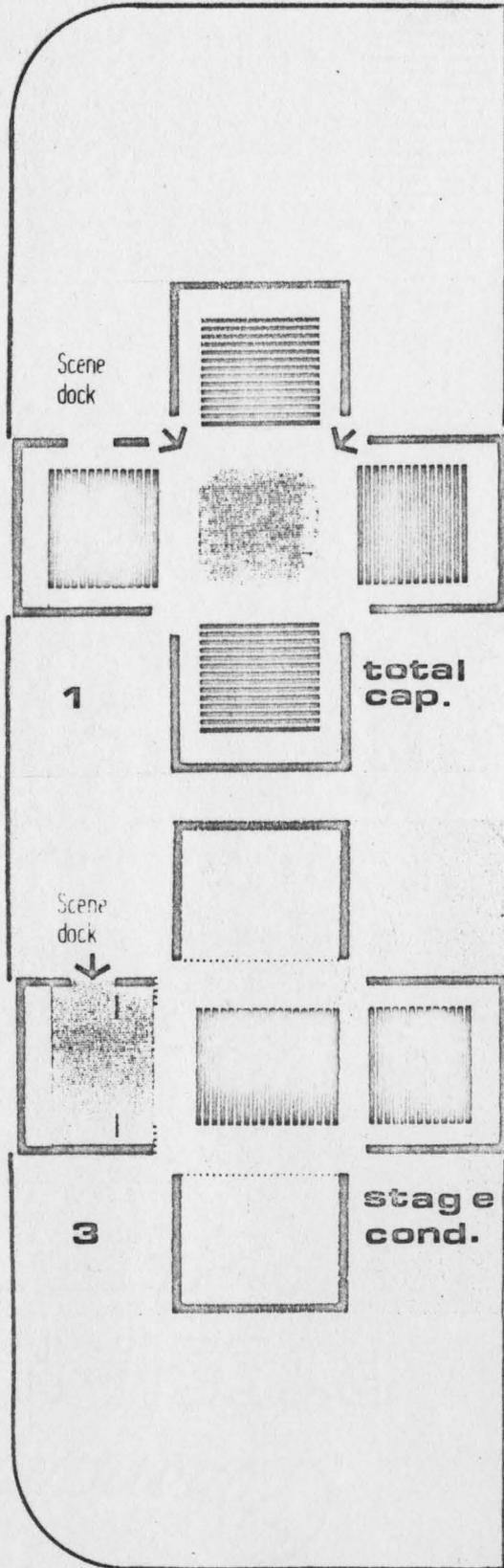
**DETAIL 3**  
Tower condition  
Burruss Hall



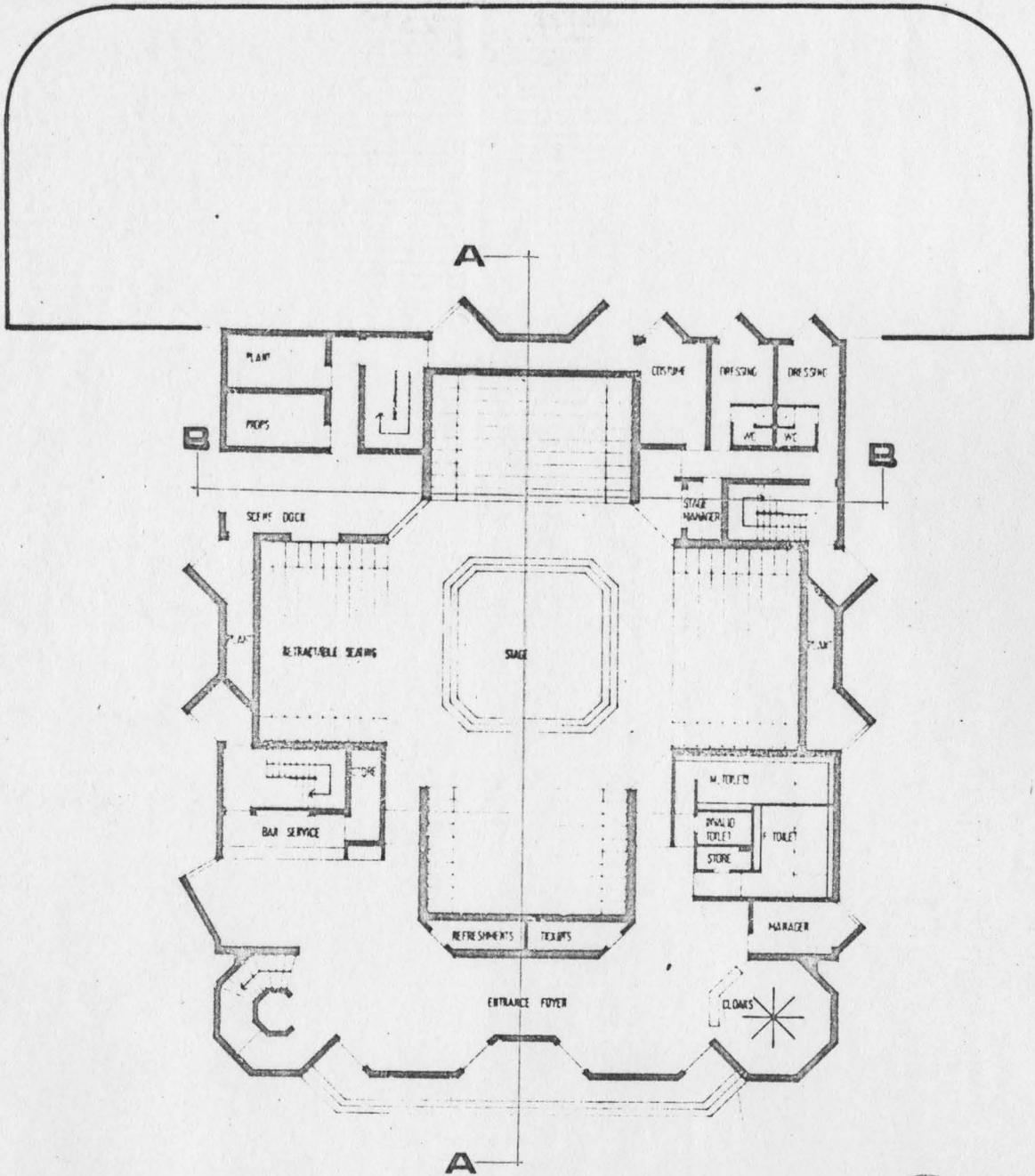
**DETAIL 4**  
Symbol condition  
War Memorial

**EXAMPLES:  
CULTURAL CENTRES  
STUDIED**

GRANGE ART CENTRE  
OLDHAM LANCASHIRE  
ST. LAWRENCE CENTRE FOR  
THE ARTS & TOWN HALL  
TORONTO, ONTARIO



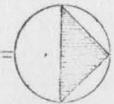
**DIA. 6**  
 Grange Art Centre  
 Oldham Lancashire  
 seating

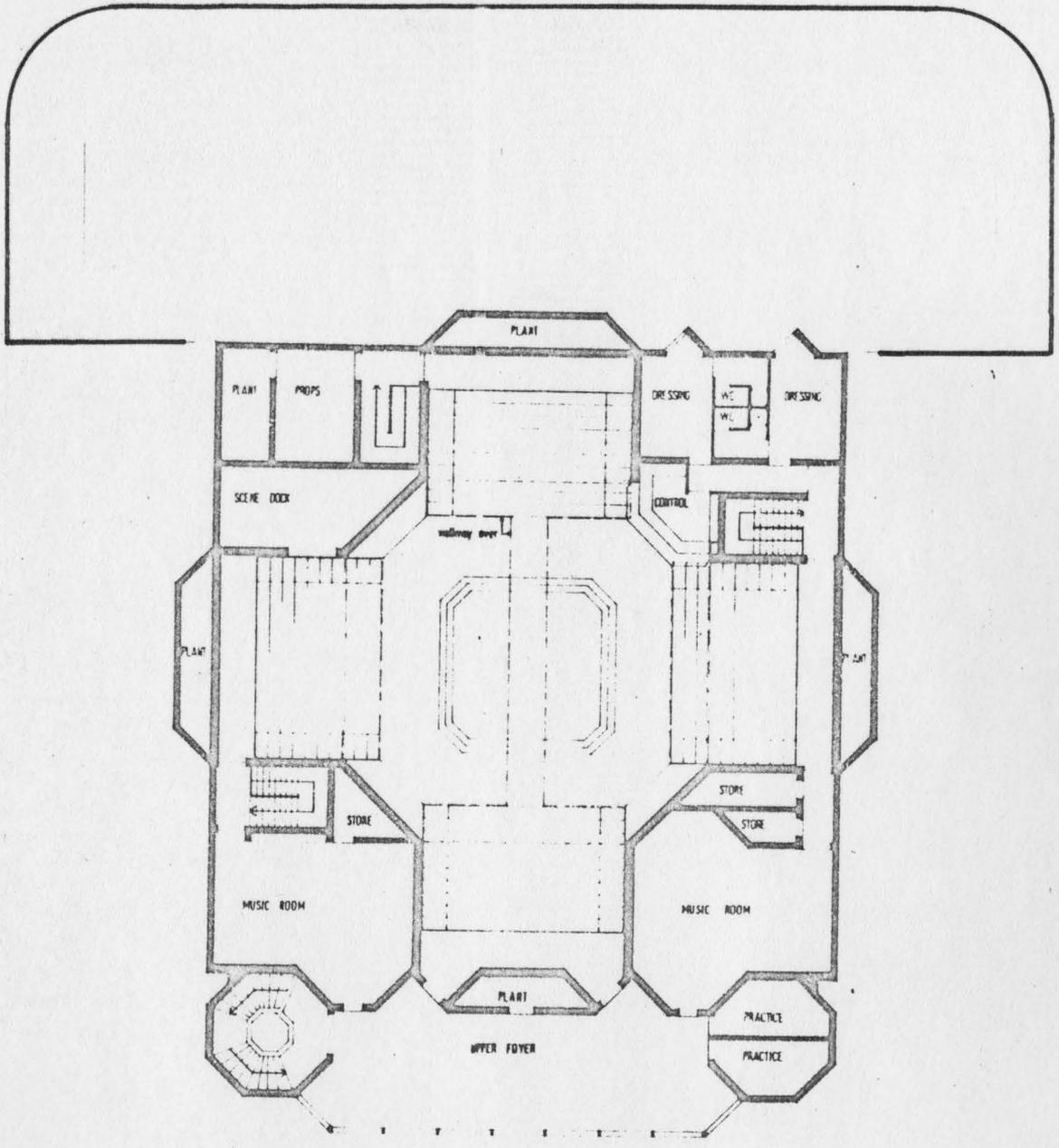


GROUND FLOOR PLAN

**DIA. 7**

**grange art centre  
oldham lancashire  
main floor**

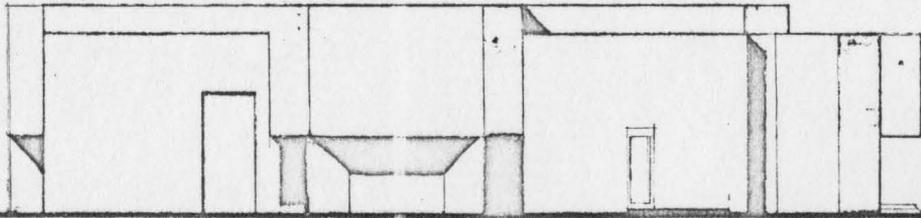




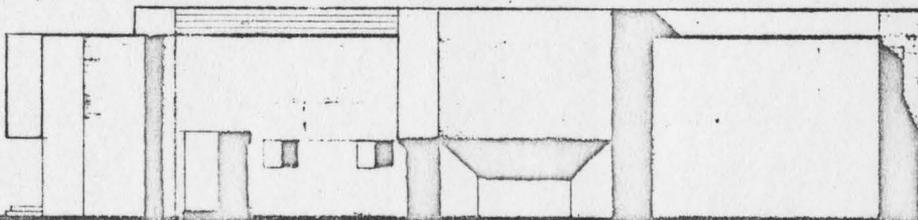
UPPER FLOOR PLAN

**DIA. 8**  
grange art centre  
oldham lancashire  
second floor

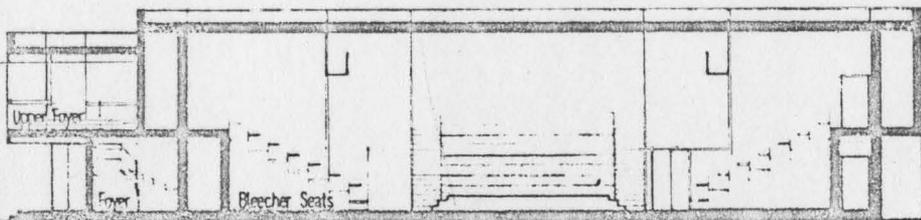




SOUTH ELEVATION

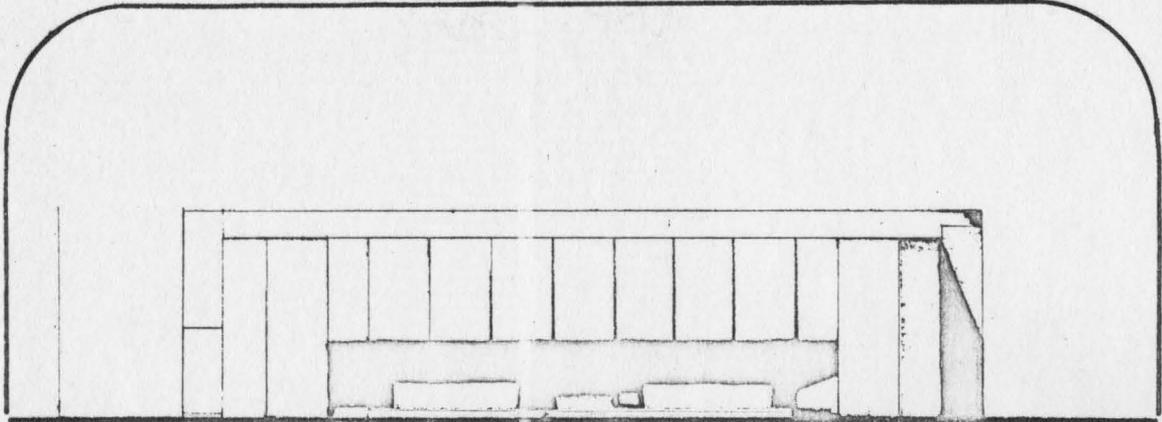


NORTH ELEVATION

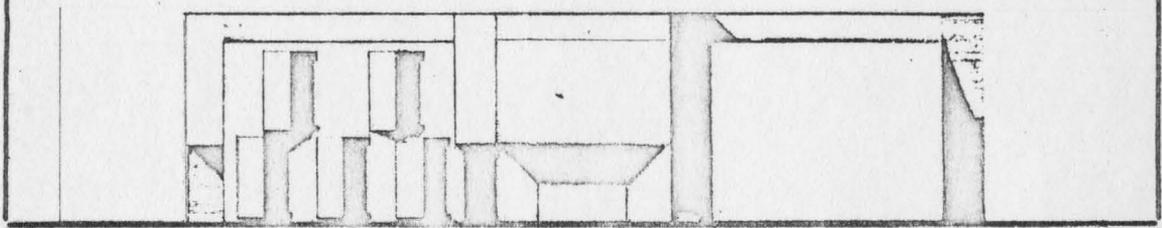


SECTION AA

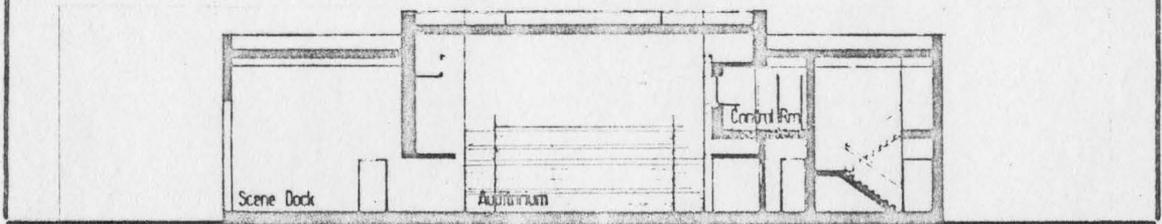
**DIA. 9**  
g.a.c.  
oldham lancashire



EAST ELEVATION

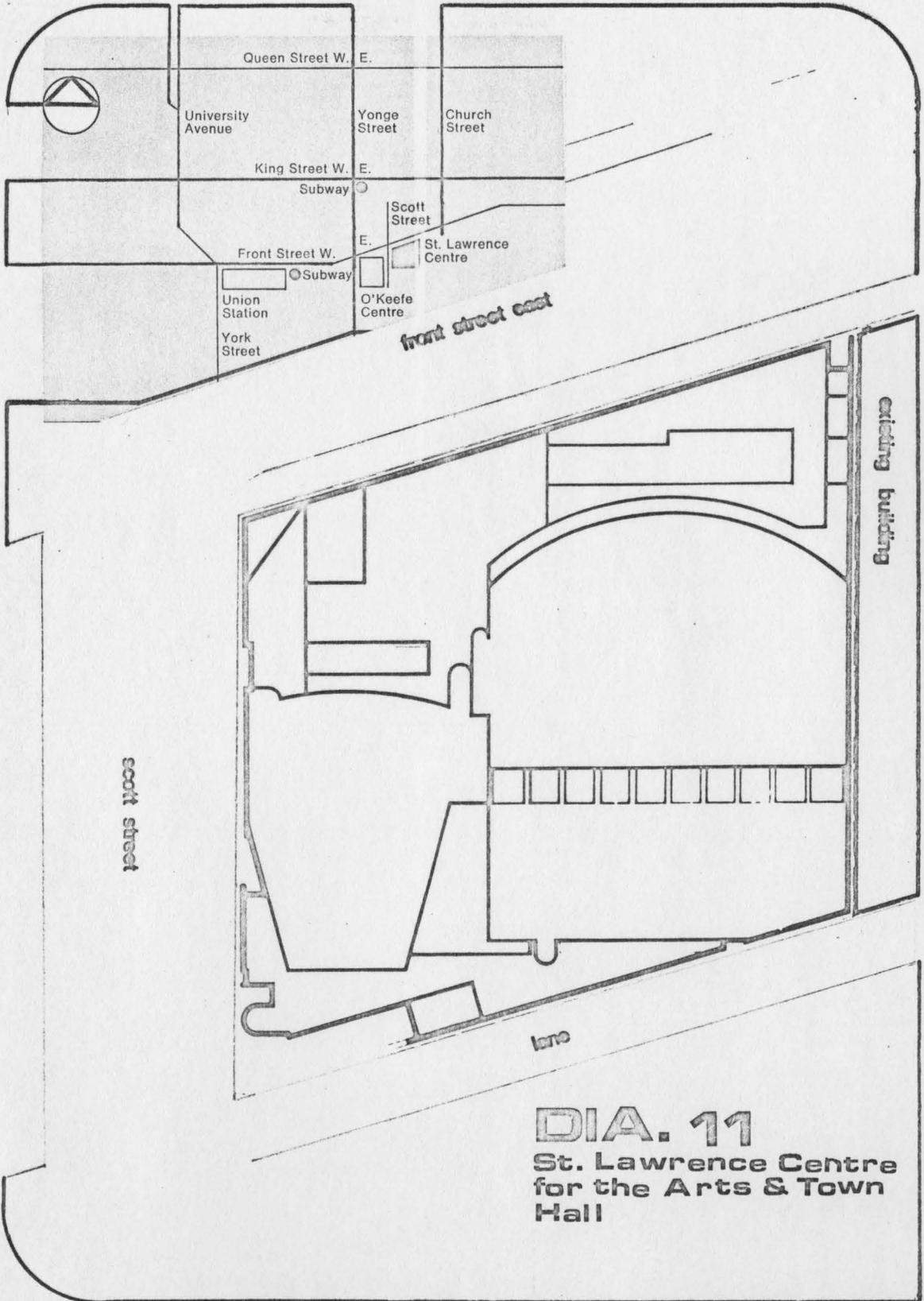


WEST ELEVATION

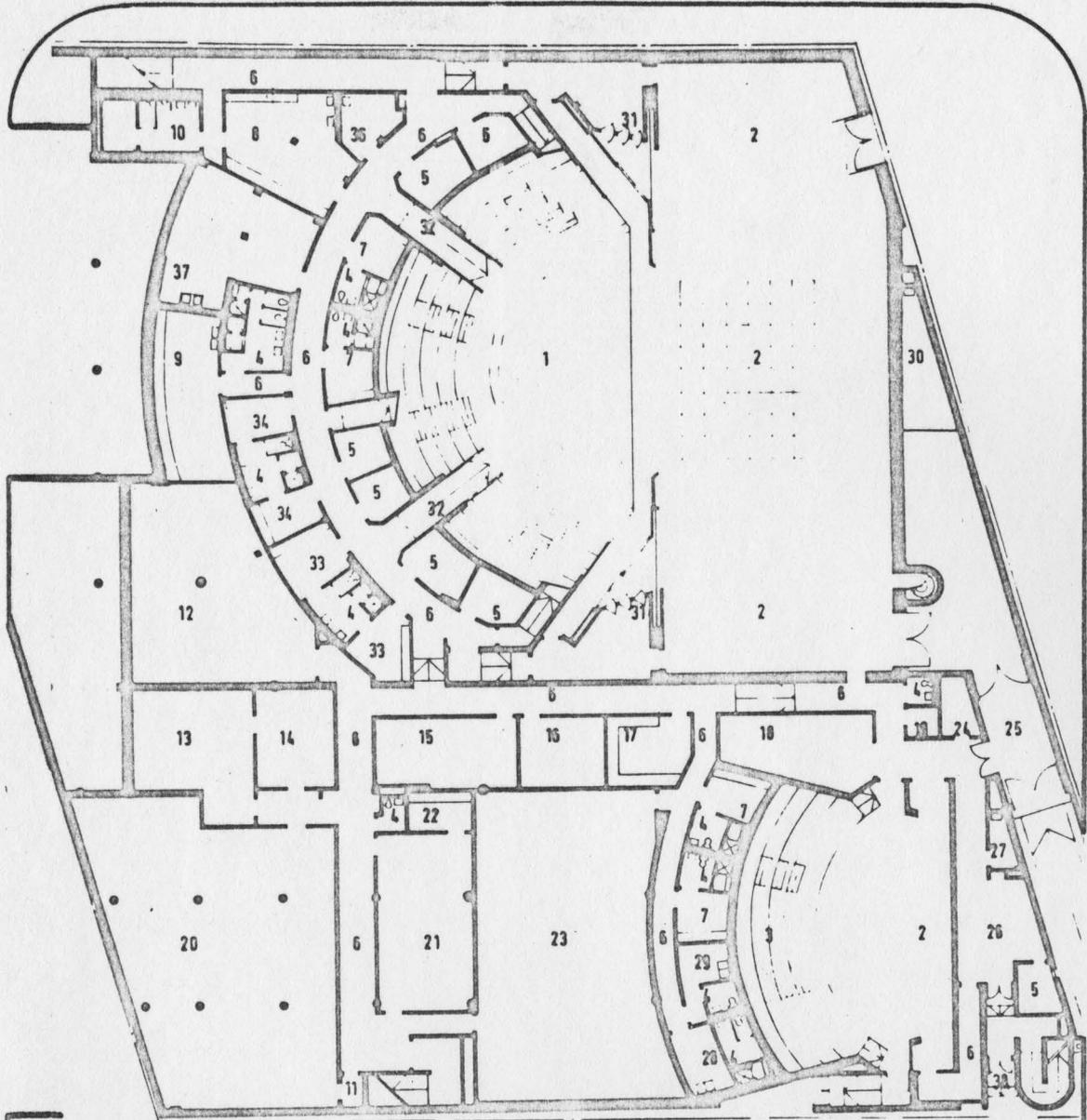


SECTION BB

**DIA. 10**  
g.a.c.  
oldham lancashire



**DIA. 11**  
**St. Lawrence Centre**  
**for the Arts & Town**  
**Hall**

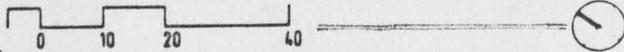


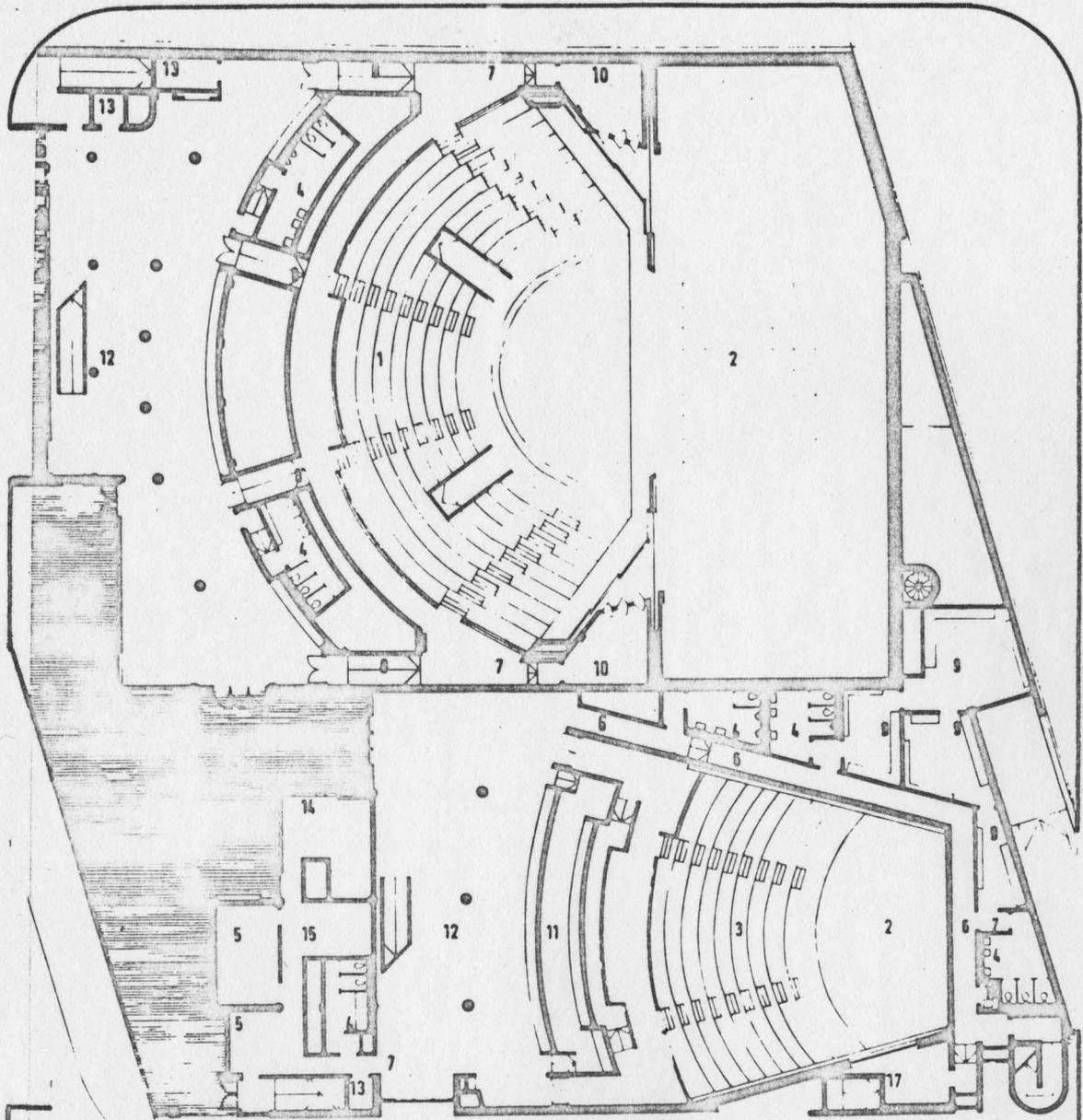
- |                       |                               |                         |
|-----------------------|-------------------------------|-------------------------|
| 1 THEATRE             | 13 ELECTRICAL ROOM            | 24 STAGE MANAGER        |
| 2 STAGE               | 14 DINNER CONTROL             | 25 RECEIVING DOCK       |
| 3 TOWN HALL           | 15 STORAGE AND BELL TELEPHONE | 26 WAITING ROOM         |
| 4 WASHROOM            | 16 ELECTRICAL STORAGE         | 27 JANITOR STORAGE      |
| 5 OFFICE              | 17 PROPERTY STORAGE           | 28 STAGE HANDS          |
| 6 CORRIDOR            | 18 TOWN HALL STORAGE          | 29 USHERS               |
| 7 SOLOIST             | 19 QUICK CHANGE               | 30 WORK SHOP            |
| 8 MENS DRESSING       | 20 MECHANICAL ROOM            | 31 WINGS                |
| 9 WOMENS DRESSING     | 21 GREEN ROOM                 | 32 VOMITORY             |
| 10 SHOWER ROOM        | 22 KITCHEN                    | 33 TRIPLE DRESSING      |
| 11 VESTIBULE          | 23 REHEARSAL STAGE            | 34 DOUBLE DRESSING      |
| 12 MUSICIANS PRACTICE |                               | 35 FIRST AID            |
|                       |                               | 36 LAUNDRY AND COSTUMES |
|                       |                               | 37 STAGE DOOR           |

**DIA. 12**  
s.l.c.

toronto ontario

**GROUND FLOOR PLAN**



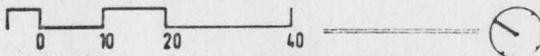


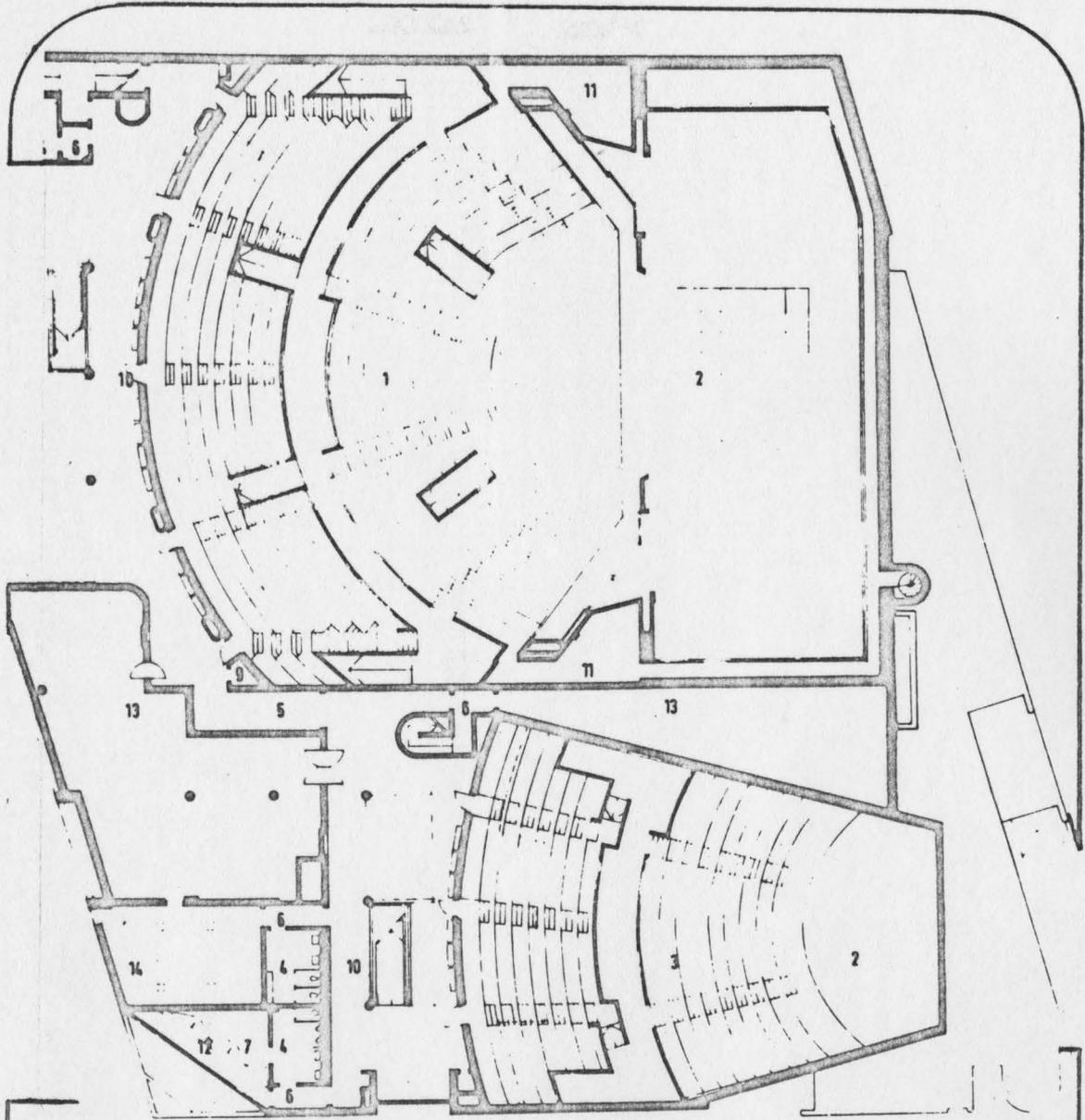
- |             |                   |
|-------------|-------------------|
| 1 THEATRE   | 10 WING           |
| 2 STAGE     | 11 COAT ROOM      |
| 3 TOWN HALL | 12 LOBBY          |
| 4 WASHROOM  | 13 STORAGE        |
| 5 OFFICE    | 14 BOX OFFICE     |
| 6 CORRIDOR  | 15 GENERAL OFFICE |
| 7 VESTIBULE | 16 JANITOR        |
| 8 VESTIBULE | 17 ACTORS GALLERY |
| 9 LOCKERS   | 18 FOYER          |
|             | 19 KITCHEN        |

**DIA. 13**  
S.I.C.

toronto ontario

FIRST FLOOR PLAN

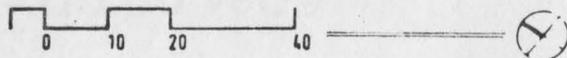




- |             |                    |
|-------------|--------------------|
| 1 THEATRE   | 8 JANITOR          |
| 2 STAGE     | 9 EXIT             |
| 3 TOWN HALL | 10 LOUNGE          |
| 4 WASHROOM  | 11 LIGHTING ROOM   |
| 5 CORRIDOR  | 12 DISPLAY         |
| 6 VESTIBULE | 13 MECHANICAL ROOM |
| 7 STORAGE   | 14 COOLING TOWER   |

**DIA. 14**  
s.l.c.

**SECOND FLOOR PLAN**

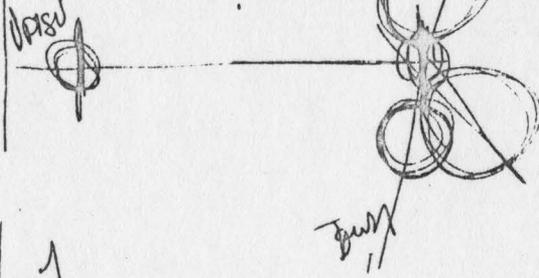


**toronto ontario**

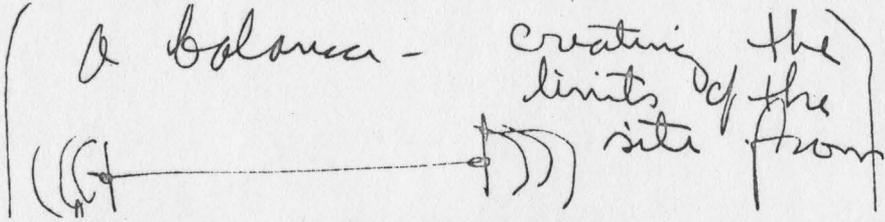
# PROCESSES DEVELOPMENT

CITED EXAMPLES FROM  
DESIGN DIARY  
ZONE MOVIE THEATER 1  
ZONE MOVIE THEATER 2

reading to UPI 50 can give <sup>arm of the town</sup> <sup>convinced</sup>  
 and recreational better they meet  
 in a common ground the theater  
 Drama & theater -



1 form generators - series of  
 courts - on all sides. How

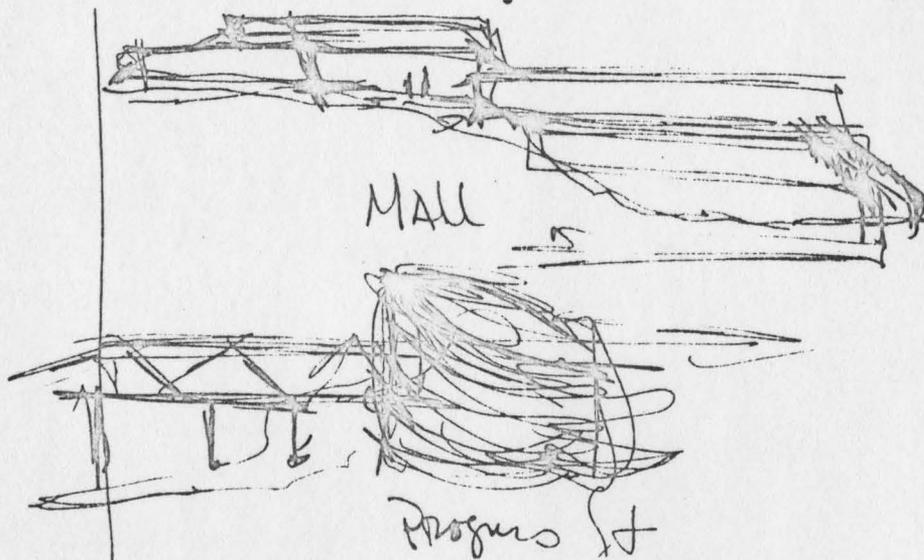


a place a court  
 today it was born - 1/10/75  
 Plaza.

Massive bowl to be created  
 to form well for amphitheater  
 Sun orientation, wind.

⇒ of key requirements, style and scale, proportional to town? URSU  
 Next Step - Consider Sy. Areas for the functions -

Tunnels - for people, cars - letting the public react interest with fee where yet not being taken in they want to be in it the they can so in - cost even



Great walls - small entrances to the centre - movement through it,

The levels - consider the level -  
 where the slope changes - how to  
 find the site. which way to  
 go and what do you see?

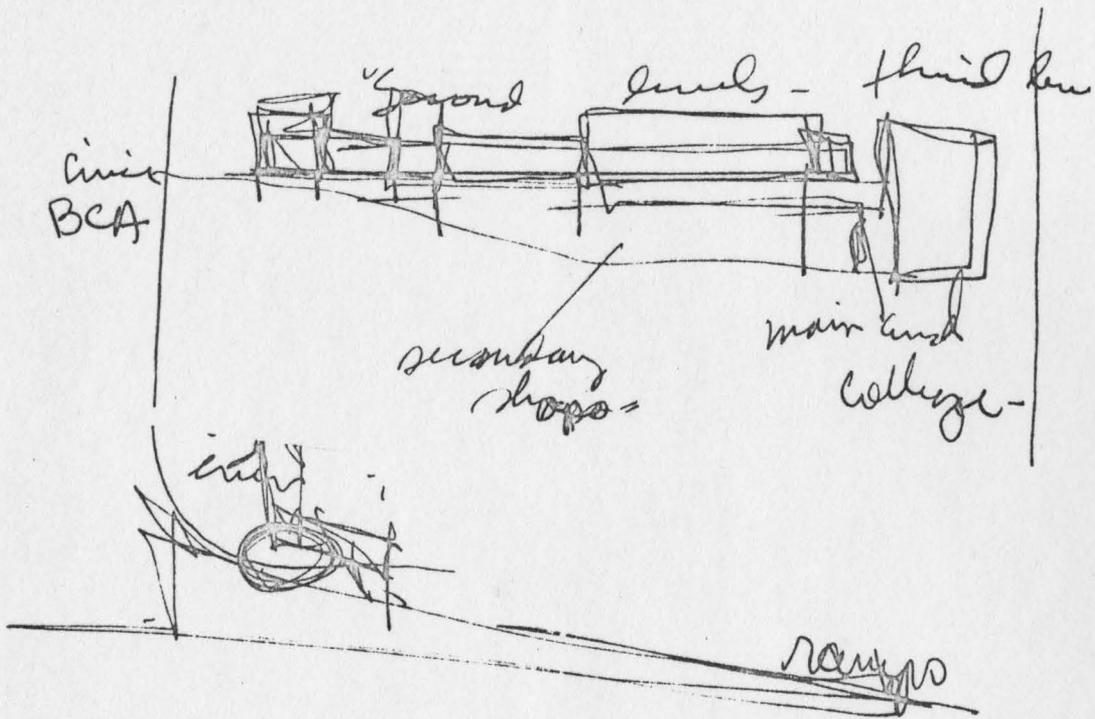
Amphitheater: Great wall - floor  
 of all of the site to a cupped out  
 of hands - a cradle of town and  
 college. <sup>open</sup> an outdoor  
 area - to let people enjoy life.

Reporting of elements.  
 major court



a system

Organization: ? simple, yet complex  
 slow very slow - finding -

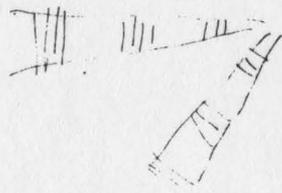


Major Shift in plaza, cont -  
the shape of the plaza meets

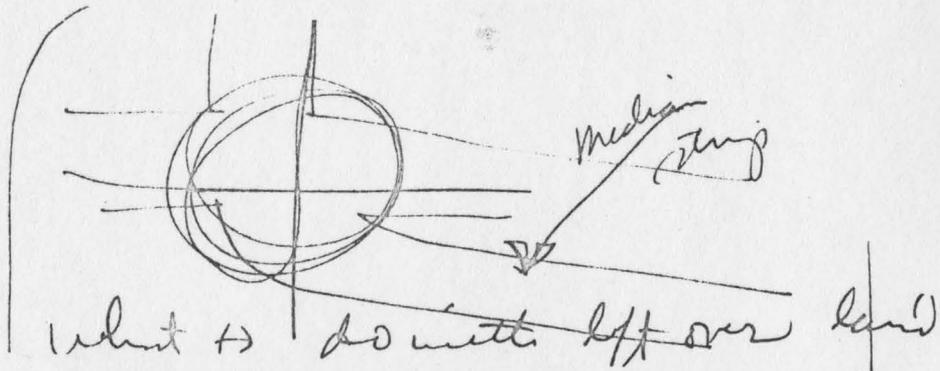


A repeating element: entries, many

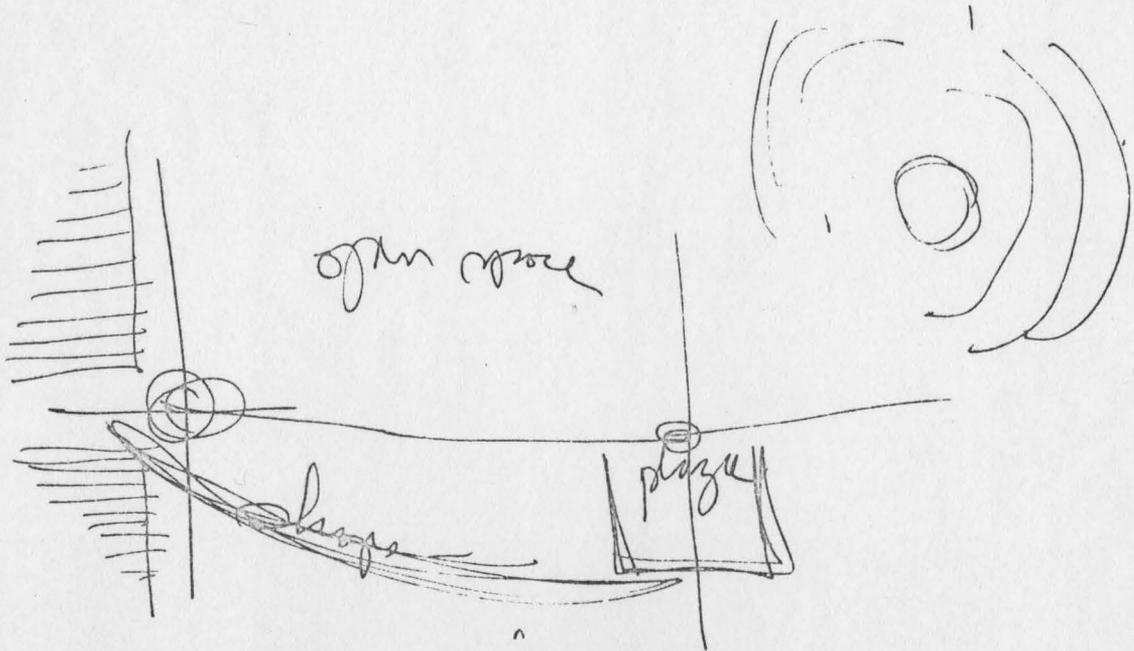
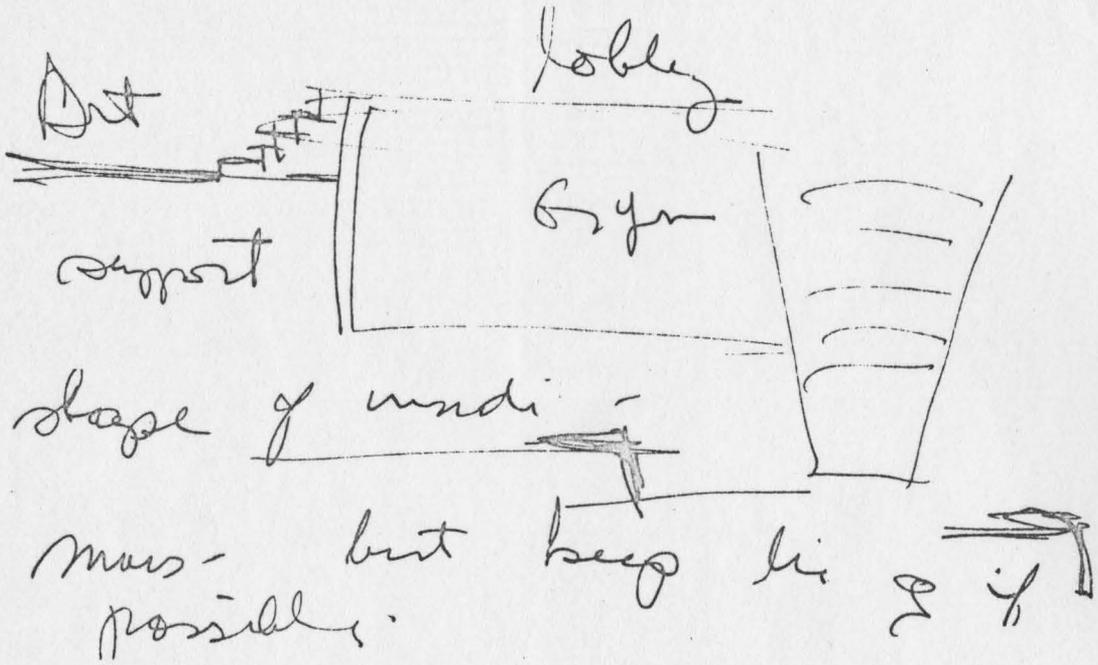
Thinking from one point to another  
 as experience walking - what do  
 you see? how can it be made?

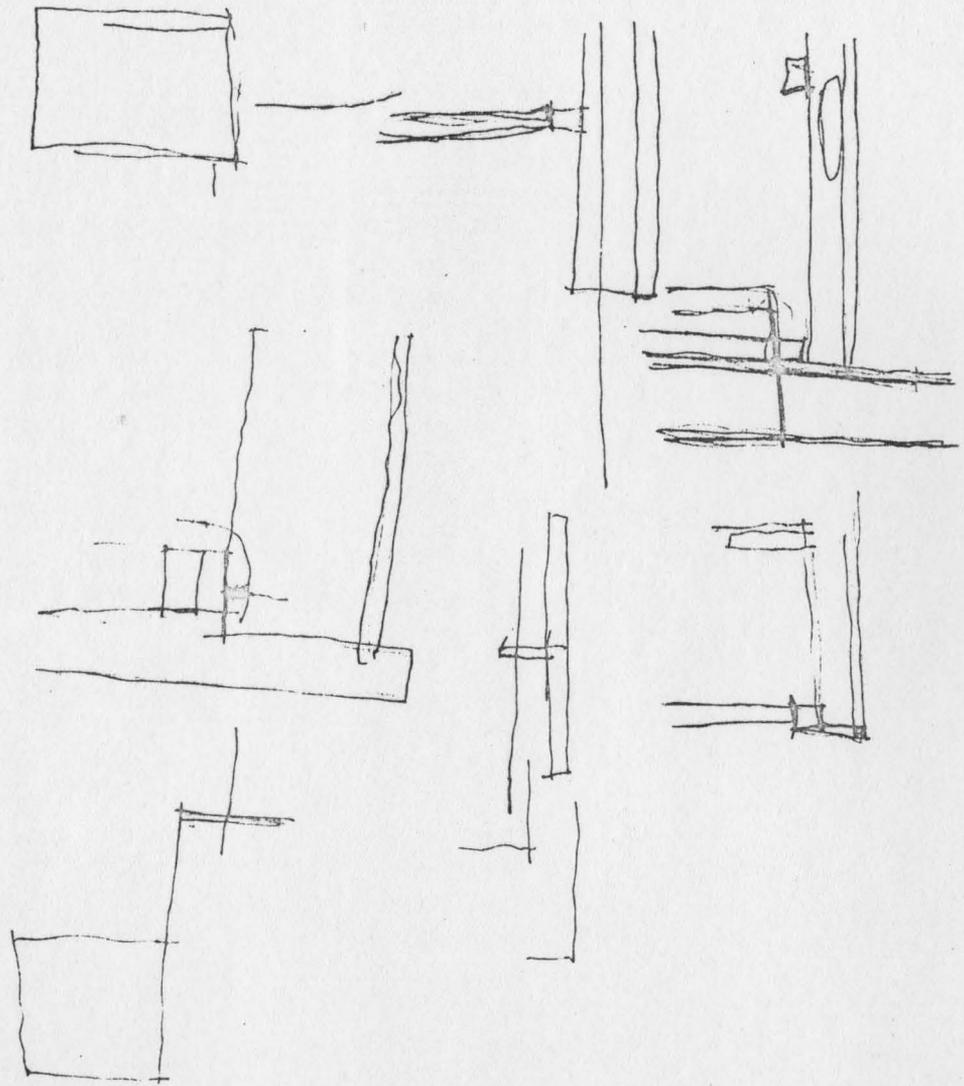


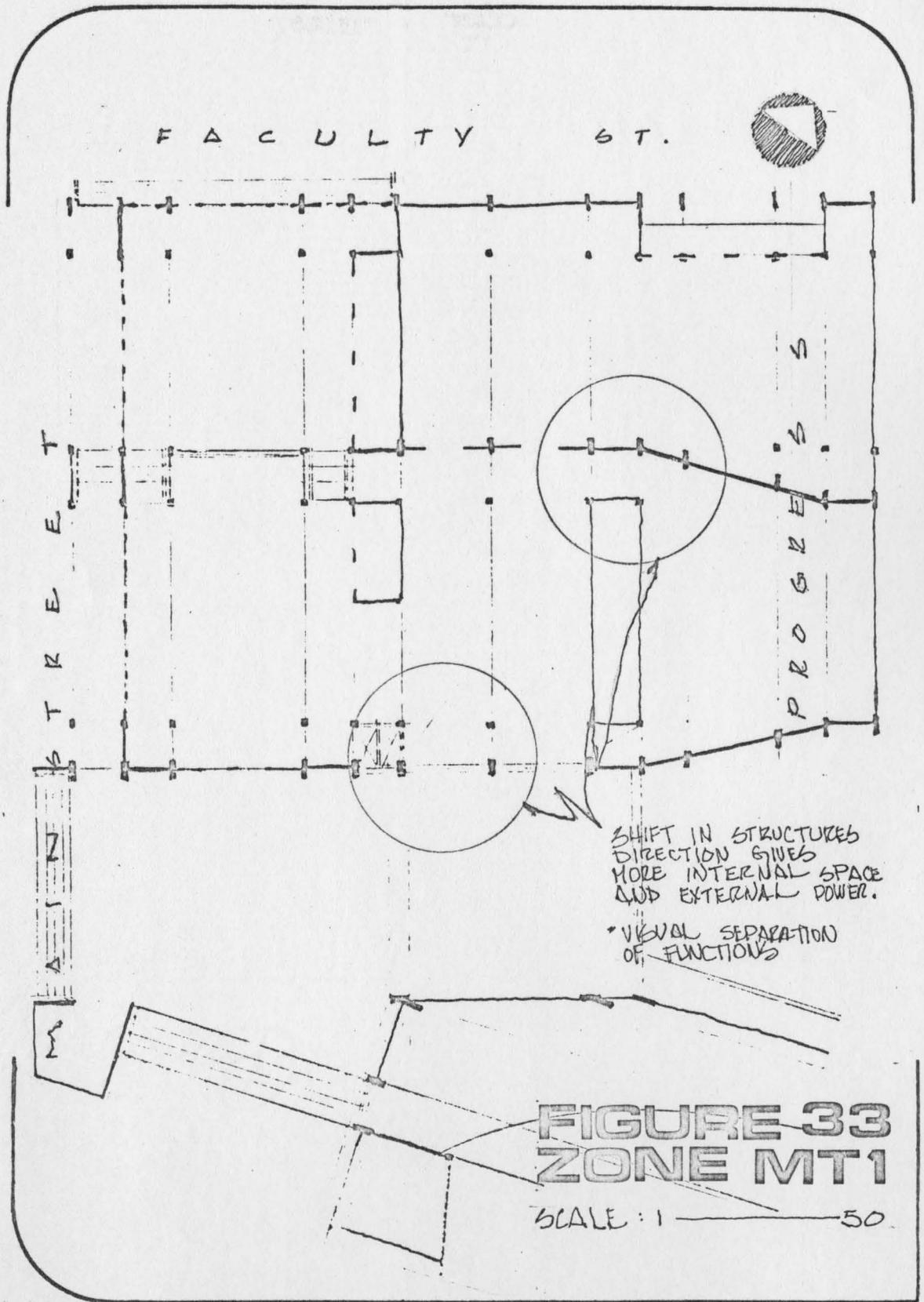
let elements create the  
 space -

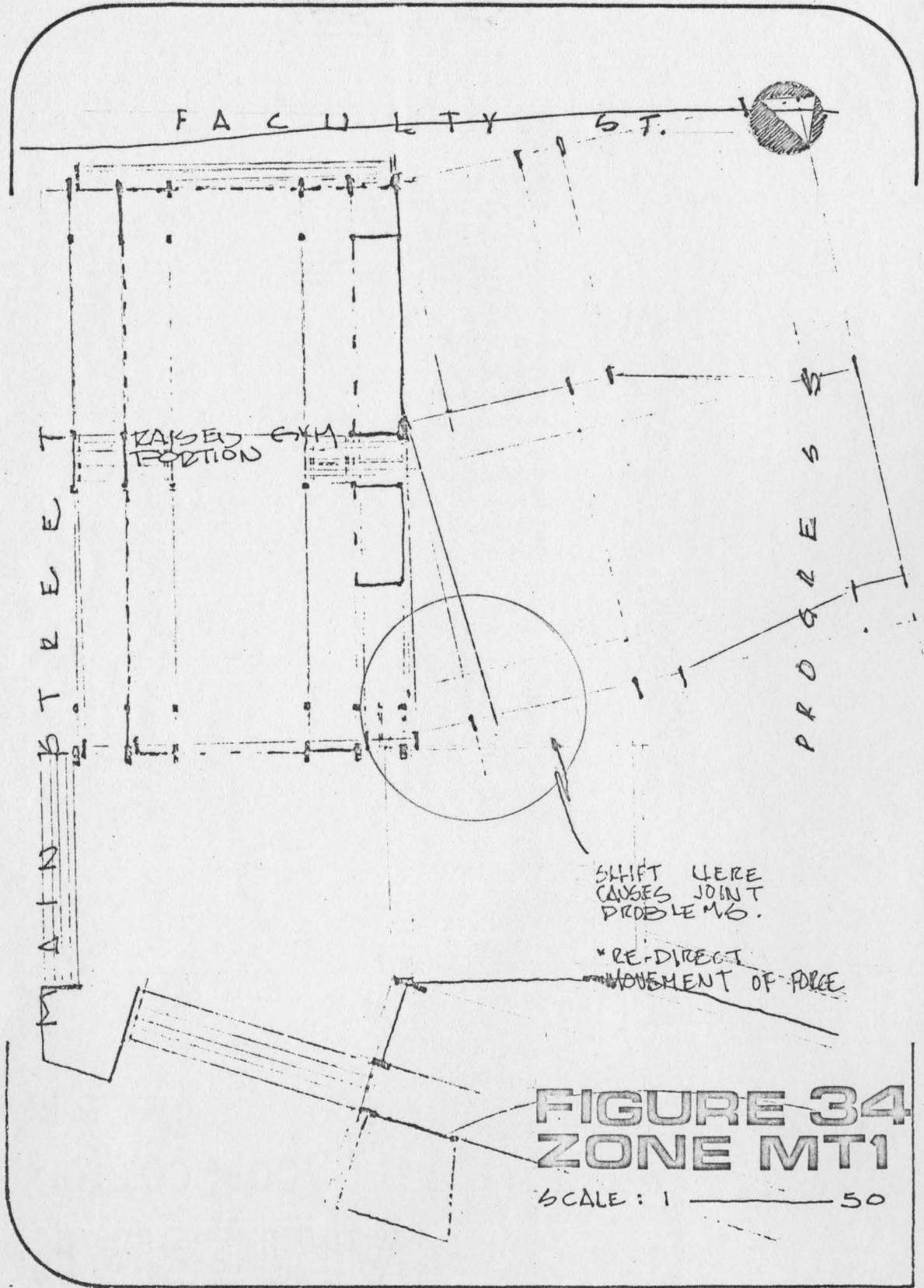


consider the  
 town center  
 action area









**FIGURE 34**  
**ZONE MT1**

SCALE: 1 ——— 50

**VITA:  
GEORGE T. BUTLER, III**

**The vita has been removed from  
the scanned document**

**ABSTRACT:**  
**BLACKSBURG CENTRE**  
**FOR THE ARTS:**  
**A PROPOSED CULTURAL CENTRE AND TOWN**  
**REDEVELOPMENT**

**G T**  
**BUTLER**

BLACKSBURG CENTRE FOR THE ARTS:

A PROPOSED CULTURAL CENTER AND

TOWN REDEVELOPMENT

by

George T. Butler, III

(ABSTRACT)

This thesis involves the development of a methodology for generating a new environment for towns, using Blacksburg as an example of towns and a cultural center as the vehicle of generation. A need for a cultural center is established, and activities are programmed to fit that need. The idea is to create a center that will generate a new surrounding micro-environment that, once initiated, changes the status of that town--Blacksburg--to an urban center.

The focus of this thesis will be to initiate a conceptual framework of what an urban cultural center should be and how to integrate that framework into an urban fabric to cause new growth; and to propose a cultural center in downtown Blacksburg as an actual implementation of that framework. The key problem is to bring together the two existing communities, university and town, in a satisfying and cohesive fashion.