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ARCHITECTURE AS THE STRUCTURING OF MOVEMENT THROUGH SPACE

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ARCHITECTURE AS THE STRUCTURING OF MOVEMENT THROUGH SPACE

by

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A thesis submitted in partial fulfillment of
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of

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This book is dedicated to those who question why.

PREFACE

I think that the most important element of architecture is the idea, the concept. Without such a formulative basis how can one evaluate progress toward a goal? What basis do you have for your decisions?

True, a building should function; it should function well. But, there are a multitude of ways in which a building may be designed, all of which function equally well overall.

True, also, economics are important, but once again this does not establish an all encompassing goal.

A building should be structurally sound. It shelters human activity, and therefore it should provide a structurally stable, well lit, temperate environment for man.

Vitruvius described the elements of architecture as firmness, commodity, and delight. If a building is to be architecture it must have all of these qualities. Firmness deals with structural stability. Commodity deals with the functions

that the building houses. And delight deals with the aesthetics of the building.

But not aesthetics in terms of visual beauty, for as Hume said:

> "Beauty is no quality in things themselves: It exists merely in the mind which contemplates them; and each mind perceives a different beauty." [1]

Instead, I think, Vitruvius meant aesthetics in the sense of the Greek word Aesthetickos which means "of sense perception". This then qualifies the sensory qualities of building as an important element of design. To this issue, I wish to address my thesis.

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THESIS STATEMENT

Architecture is the structuring of spacial relations to evoke in the participator an accumulative perception which leads to the conception of a unified experience.

introduction

One of the prime purposes of architecture is to heighten the drama of living. Life is a continuous flow of experience. Each moment in time is preceded by a previous experience and becomes the departure point for the experience to come. If we acknowledge that an objective of life is the achievement of a continuous flow of harmonious experiences, then the structuring of spacial relations as experienced by the participator over time and through movement should be a major concern of designers.

The purpose of design is to affect the people who use it. In architecture, this effect is on the continuous flow of perceptual impressions which assault the senses of the people who move through it. Architecture does not fully present itself to us from one stationary view point. As we move through it our perceptions change. The changing visual impressions are only part of the sensory experience; the changes from hot to cold, from rough to smooth, from light to dark, from quiet to noise, and even the change in smells are all part of the possible perceptual qualities which are important to the cumulative effect on the

participator.

Also adding to the effect is the actual muscular effort of movement through space by the individual, the kinesthetic experience of ascending or decending.

A complex work of architecture can only be experienced adequately through a succession of perceptions which become organized mentally into a total experience. Therefore, the quality of the experience is dependent upon the perceived relation of the parts. People vary in their sensitivity to the environment. The designer must realize this and project himself into the mind and feelings of the participator so as to conceive in his design the effect it might have on those for whom it was intended.

Raskin describes cities as

> "... the interweaving of human patterns. They are full of people doing different things, with different reasons, and different ends in view, and the architecture reflects and expresses this diversity - which is one of content rather than form alone." [2]

It is not that the building itself should constitute the perception. The building, the setting we provide, should enhance the experience of the particular peoples' activity. The possible experiences that the building provides is perceived in relation to the activities. We draw our analysis of what might be appropriate for this particular building from the activity itself and the people who will be involved. The success of the design is dependent upon the designer's ability to empathize with the feelings and attitudes of the participator and so perceive his design as it might be experienced by those for whom it was intended.

Since people vary in their attitudes and capacities to respond to design stimuli the designer must structure the spacial relations to allow for the variations in possible perceptions which will occur and yet lead to the conception of a whole, or unified experience. The designer can do this through the form of his structuring. He can direct the movement of people through purposeful paths,

punctuating this movement, and therefore influencing the nature of the participator's response.

perception

The first step in developing a method of structuring experiences is defining a theory of perception. I have chosen an information based theory. According to this theory, perception is defined as the process of obtaining or receiving information from the environment.

If all information comes to us through our senses, then our immediate awareness of the world is given through sensations, but we do not comprehend the world simply by receiving sense data. We must classify this information and analyze it in terms of general notions or rules in order to give it objective meaning.

Arther Koestler describes this classification process when he writes:

> "The sensory input is screened, dismantled, reassembled, analysed, and interpreted and stored along a variety of channels belonging to different hierarchies with different criteria of relevance. A tune may be stored stripped of timbre and vice versa. The departicularization of experience in the processof memory formation is compensated to some extent by the multiplicity of abstractive hierarchies which participate in the process and by the retention of 'picture-strips' - vivid fragments of emotive or symbolic significance."

Generally though, we act on the basis of spontaneous impressions without consciously analyzing and catagorizing our experiences. Perhaps part of the reason why we manage on such superficial information is because the phenomena are perceived as aspects of form rather than isolated sensations. Since the mind attempts to objectify phenomenon, perception is symbolic.

The environment is not simply a collection of accidental phenomena. We know from daily life that the phenomena are related in some way. From the perceived relationship in phenomena we form concepts of cause and effect, meaning and order. The perception of objects involves other sources of information beyond those of immediate sensory stimuli. It involves knowledge of the object derived from previous experiences.

> "The incoming stimuli are not evaluated solely according to their quantitative characteristics - strength, duration, information content, etc. The MEANING which they are given, the importance which is attached to them during the actual process of perception formation, is conditioned almost exclusively by prior experience with other, similar or related stimuli. The interpretive mechan-

> ism of the mind's eye operates according to the basic principle that similar causes will produce similar effects; we can survive and function only because the world usually behaves and appears as we expect it to."[4]

Any action would be impossible if we did not believe that things are relatively permanent and that we may expect certain behavior from them. In daily life we base our actions upon conscious or subconscious hypotheses about what will happen if we behave in a particular way. These hypotheses are based on our past experiences and our perceptions of our present situation.

The perceived environment is contextural. It includes not only visual stimuli, but sounds, tastes, smells and kenisthetic sensations also. The richness of environmental experience is due to this variety. Much of the information we receive is redundant in that we may perceive that something is on fire by seeing it, by feeling its heat, by smelling it, and by hearing it burn. This redundancy of sensory information heightens our experience of the phenomenon but as part of a larger context. The context of a perceptual situation includes

not only the physical surroundings but the physical, mental and emotional factors of the individual.

It seems paradoxical that different persons at the same time have similar and different experiences of the same environment. This implies that we have different attitudes toward the "same" thing. We have all experienced how the same thing may "change" according to our attitude. When we are in a state of depression even near and dear things may seem repulsive. Attitude is not merely a more or less friendly outlook but it directly determines the phenomenon.[5] Any individual attends to certain elements of the environment and not to others. This implies that we do not always 'see' all that is presented to us. We filter out sense data according to our particular needs or interests. William James refers to this selective process:

> "Millions of items of the outward order are present to my senses which never properly enter my experience. Why? Because they are of no interest to me. My experience is what I agree to attend to."[6]

This means that we direct our voluntary attention to elements in the visual world which provides information we need to perform our conscious activities.

> "our voluntary attention is always derived; we never make an effort to attend to an object except for the sake of some interest for which the effort will serve... Interest alone gives accent and emphasis, light and shade, background and foreground - 'intelligible perspective' in a word." [7]

An this perspective varies with every creature. What one attends to in the environment depends on one's personality, [8] one's membership in a social group, one's culture, [9] and the environment in which one usually operates. [10] Our previous experiences shape what we attend to. Through his work, Jean Piaget, the child psychologist, suggests that the ability to select, abstract, and organize information grows as a child matures. [11] It is through experience that we learn to identify the variables which provide more and more information about the environment. Commonality in language and the socializing process between individuals brings similarities to the process of perception. [12]

Egon Brunswick and Adelbert Ames, respectively, point out two major factors influencing our perceptual attitude. First, that action plays a major role in obtaining information from the environment, and second that we seek information for some purpose.[13] Therefore, our perceptual attitude is dictated to some extent by the situation. When reading, for example, we direct our attention to the forms and not necessarily to the color or size of the letters. These other aspects may be distracting or disturbing if not omitted.[14]

We direct our voluntary attention to aspects or elements of the environment which provide information we need to perform our activities. In architecture we can assume that those activities are in relation to the functions of the building.

Voluntary attention may be derived by aspects or elements of the situation which draw our attention to them. William James offers some possibilities of these.

> "In voluntary attention of the immediate sensorial sort the stimulus is either a sense impression, very intense or voluminous or sudden, or else it is an instinctive stimulus, a per-

> ception by reason of its nature rather than mere force it appeals to some one of our normal congenital impulses and has a directly exciting quality... such as strange things, moving things, wild animals, bright things, pretty things, metalic things, words, blows, blood, etc., etc., etc." [15]

As all our activities occur in space and time so must we not only consider the spacial aspects of our experiences but the temporal aspects as well. Man is not static; he moves and his movements may have a directly exciting quality. When an observer moves, the entire environment goes through a perspective transformation. Gordon Cullen, in his book Townscape, points out that much of the interest in the environment stems from the way these transformations take place.[16]

Change occurs in our perception as we move through space. These changes form patterns which, once perceived, create anticipatory expectations for further experiences. By this concept of patterning, man prepares himself for the changing situation. We depend upon perceiving differences to formalize concepts of relationships. It is, then, the sequence of events and their perceptual

relationships which form the conception of the total experience.

A complex work of architecture can only be experienced adequately through a succession of perceptions which become organized mentally into a total experience. Some architectural structures require particular viewpoints to become intelligible. A symmetrically organized succession of spaces is only perceived adequately if we move along its axis, while a centralized space is perceived best if we are located at its center. Deviations from these perspectives may cause improper perceptions.

Since we are primarily interested in patterning some aspect of the observer's experience, it follows that consideration of the nature of his movement is necessary to achieving our goals. Man, as has been pointed out, is motivational, his movements are directed towards his purpose and his interests. In terms of architecture we may infer that his purpose is in relation to the function or activities of the building. If we can understand his needs in relation to his activities, we can formulate concepts as to his necessary perceptual information and

we can then implement this to structure to a certain extent the possible movements of the participator. Through the form of the structuring we can direct movement through purposeful paths, punctuating aspects of this movement through elements of interest and change and therefore controlling, to some degree, the sequencing and grouping of perceptions into an experiential unity.

structure

From this theory of perception one finds that all do not necessarily perceive the building as we intended. The individual "colors" the situation according to his own goals, motives and past experiences. Through manipulation of architectural elements in relation to the possible goals of the participator we can lend structure to the person's experiences. These elements of structure I have named as paths, places, and boundaries.

paths

Paths are architectural means by which we consciously or subconsciously direct peoples' movement. They may connect two separate points or they may return to the point of starting. They may be horizontal or change in elevation such as an elevator or ramp. Paths may also vary in the degree of control over peoples' movements. They may slow down movement by their difficulty in traversing, such as a steep path or difficult stairway. They may have boundaries which delimit movements such as narrow corridors or they may be defined

simply by a difference in surface characteristics. Paths do not have to be a horizontal surface on which people move. It may be anything which may be perceived as directing or delimiting movement. Paths may be spaces or planes or lines. Paths, though must be of a directional or linear quality.

We also must realize that elements occur along paths which affect our perceptions. Finally, movement is composed of quantities of people or objects moving and their various speeds, all of which affect perception.

places

Places are points of orientation, arrival, rest or activity. They punctuate movement by breaking it, slowing it down or speeding it up. A steep path that suddenly widens out and levels off may be perceived as a place and we may be invited to slow down or stop and rest. Or imagine a person moving along a sidewalk in a dense, slow moving crowd and then coming upon an opening such as a park or plaza. He may speed up his movement as he frees himself from the crowd.

The effects of places on movement varies with the situation and participator. The important thing is that they are differentiated from paths by elements of change. This may be done by differing the directional qualities of form, changes in surface qualities, or variation in elements of the situation.

boundaries

The final element of structuring is boundaries. Boundaries define both places and paths. They may be physical or conceptual. A single vertical element such as a flag pole may conceptually define a place and a row of trees may define a conceptual path. Boundaries may be a physical barrier such as a solid wall or they may be physically or mentally penetratable. Boundaries may be surfaces, and surfaces carry meaning and delimit activity. Surfaces have contours, textures, edges, and are recognized as enclosing other spaces.

Texture is among the primary vehicles by which we understand the diversity of substances and materials of our environment. If something has texture, then

it has a greater chance of being perceived as an object. An object is perceived as hard or soft, solid or liquid, rough or smooth with a high degree of accuracy. These qualities have utility and meaning to the observer. Contours and textures provide information about distances and angles of objects.

Our movements are also affected by the textural qualities of boundaries. Smooth surfaces can invite close contact while rough surfaces can generate movement in a wide radii or more careful movement. Changes in texture can signify special events, and can slow down or speed up movement. Choreographing movement through changes in textural clues has been explored in recent architecture for the blind.[17]

project

The particular function I wish to deal with is the theater function. I wish to concentrate on structuring the spacial relations of the theater goer. In this way the theater experience has a tangible, sequential structure and is experienced over a relatively short period of time. First we must identify the possible goal-related activities which occur and their relation to the whole.

The chart (figure 1) identifies the possible activities which might occur during an evening of theater. I have divided them into a series of successive phases. We find that the theater experience consists not merely of the play itself but the arrival, intermission, and departure also. Therefore, if we are concerned with enhancing one's experience of the play, we cannot justify our efforts simply in the auditorium but must concern ourselves with the experiences from the beginning to completion, from the time the theater goer first sets eyes on the theater to the time that he finally leaves. Now we must determine the nature of the parts to determine the structure of the whole.

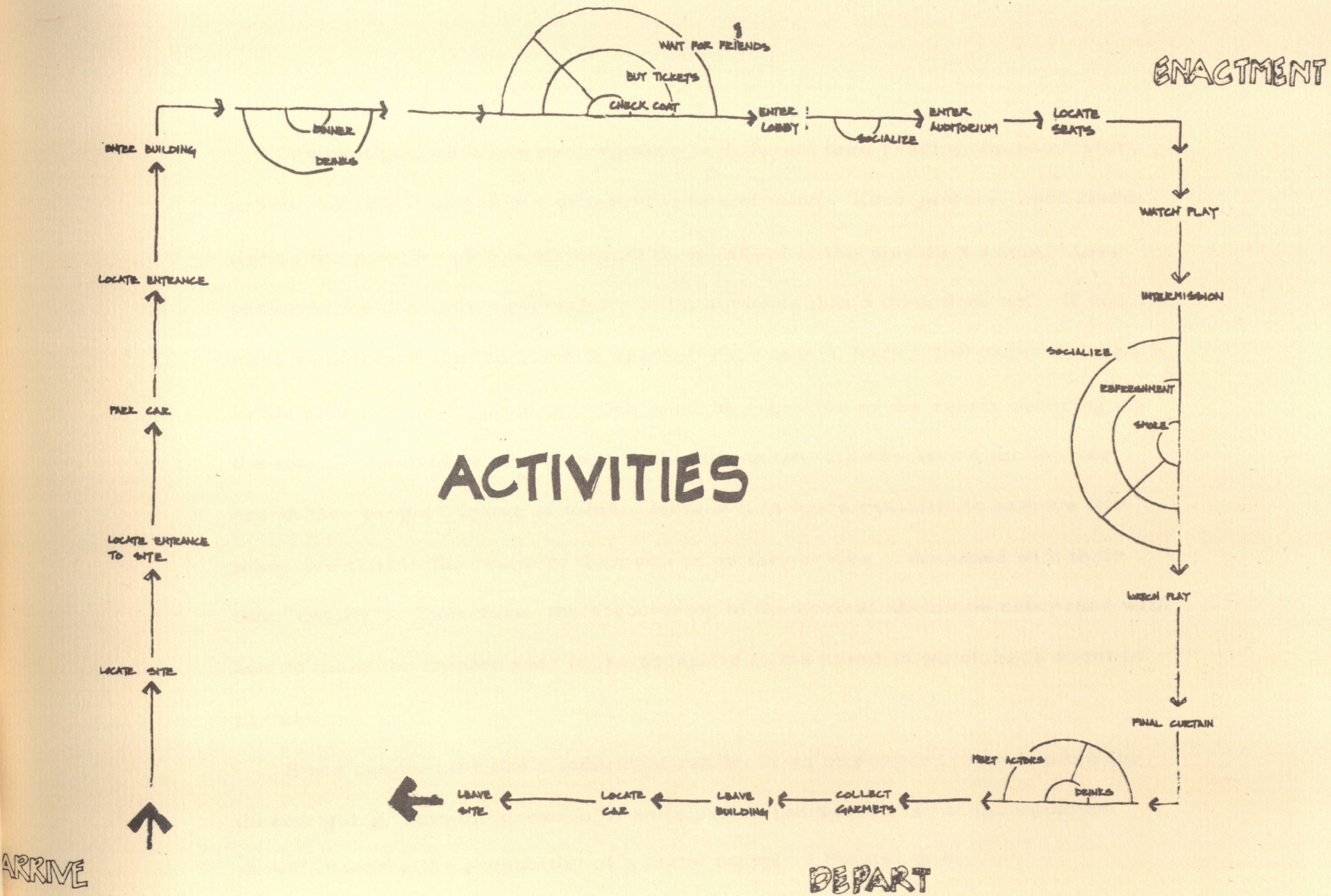
ENACTMENT
WAIT FOR FRIENDS
BUY TICKETS
CHECK COAT
ENTER LOBBY
SOCIALIZE
ENTER AUDITORIUM
LOCATE SEATS
WATCH PLAY
INTERMISSION
SOCIALIZE
ENTERTAINMENT
SNORE
WATCH PLAY
FINAL CURTAIN
MEET ACTORS
DRINKS
COLLECT GARMENTS
LEAVE BUILDING
LOCATE CAR
LEAVE SITE
DEPART
ACTIVITIES
ARRIVE
LOCATE SITE
LOCATE ENTRANCE TO SITE
PARK CAR
LOCATE ENTRANCE
ENTER BUILDING
DINNER
DRINKS

Figure 1

Seeing a play as a live performance is different than reading the same story in your home. It demands a different frame of mind. Each gesture, each flucuation in the actor's voice is important to the effect of the play as a whole. Live performance demands a receptivity of its audience that a book does not. If you miss some particular point while reading you can turn back a few pages and find it. In the play you cannot go back. One must be receptive to the events occuring on the stage. It would be presumptious to assume that all who attend the theater are in the "proper" frame of mind. Instead it is more realistic to assume that many are still in the realm of themselves as they arrive, concerned with their own "reality". Therefore, the structuring of the arrival should be concerned with how to make the theater goer more receptive to the event in which he is about to partake.

Since concern for one's individual reality is an improper frame of mind for theater going, then the creation of anticipation and awareness of the situation should increase the probability of a more receptive theater goer.

The theater experience is preplanned. People who attend the theater have a common goal: to see the play. Experiences which occur prior to that goal are effective in determining the anticipation and satisfaction of that goal. The arrival deals with the idea of going to a "place". The process of arriving sets the stage, that is, forms expectations of what is to come. Expectations create anticipation. To resolve that anticipation, there must be a place of culmination, a place that one has arrived at. This place must be distinguished from the path of arrival so that it is perceived as a place of termination yet must bear some similarities to the previous parts so that it is perceived as relating to the whole.

As the figure indicates, there are a series of minor goals such as finding a place to park and locating the entrance, which occurs prior to the achievement of the major goal. These also may be structured as a series of arriving, arrivals at a place, pauses and movements to yet another point of arrival within the structure of the whole. The relationships of the achievement of these minor goals are effective to the anticipation and satisfaction of the major goal.

Another means of increasing the receptivity of the theater goer is by creating interest or awareness. These elements draw one's attention away from one's self and into the present situation. Both interest and awareness have been described as being caused by change. Awareness may also be potentially heightened by reorientation or change in direction. If the direction of movement is not easily perceived, then one must attend more to the situation, thus increasing awareness.

Another element of the structuring is that of focus. During the duration of the evening there are two specific points of focus: that of the play and that of the intermission. The spaces in which these occur should remain simple to allow emphasis on the play in one part and the people in the other. Since the two are related in time sequence, an element of transition should occur between the two.

Finally, the theater is a world of "illusion". It is a special event, different than everyday life. We know that the actors on the stage are not who they portray

themselves to be but for the duration of the play we must let this "illusion" become temporary "reality". Therefore the structuring should allow for the transition between our everyday reality to the world of illusion and back to the everyday reality again.

From this study we therefore find that the structuring of relations should create anticipation and awareness, have elements of focus, and should provide a sense of transitions which perceptually separate the individual and rejoin him to his everyday life. The next step is to take the goal orientated activities and structure the spacial relations to achieve the desired effect. This can be done in a variety of ways, and it is here that the restrictions of economics, structure, site, function and codes come into play. I have graphed (figures 3 and 4) a possible means to the solution and now the final step is to give it physical form.

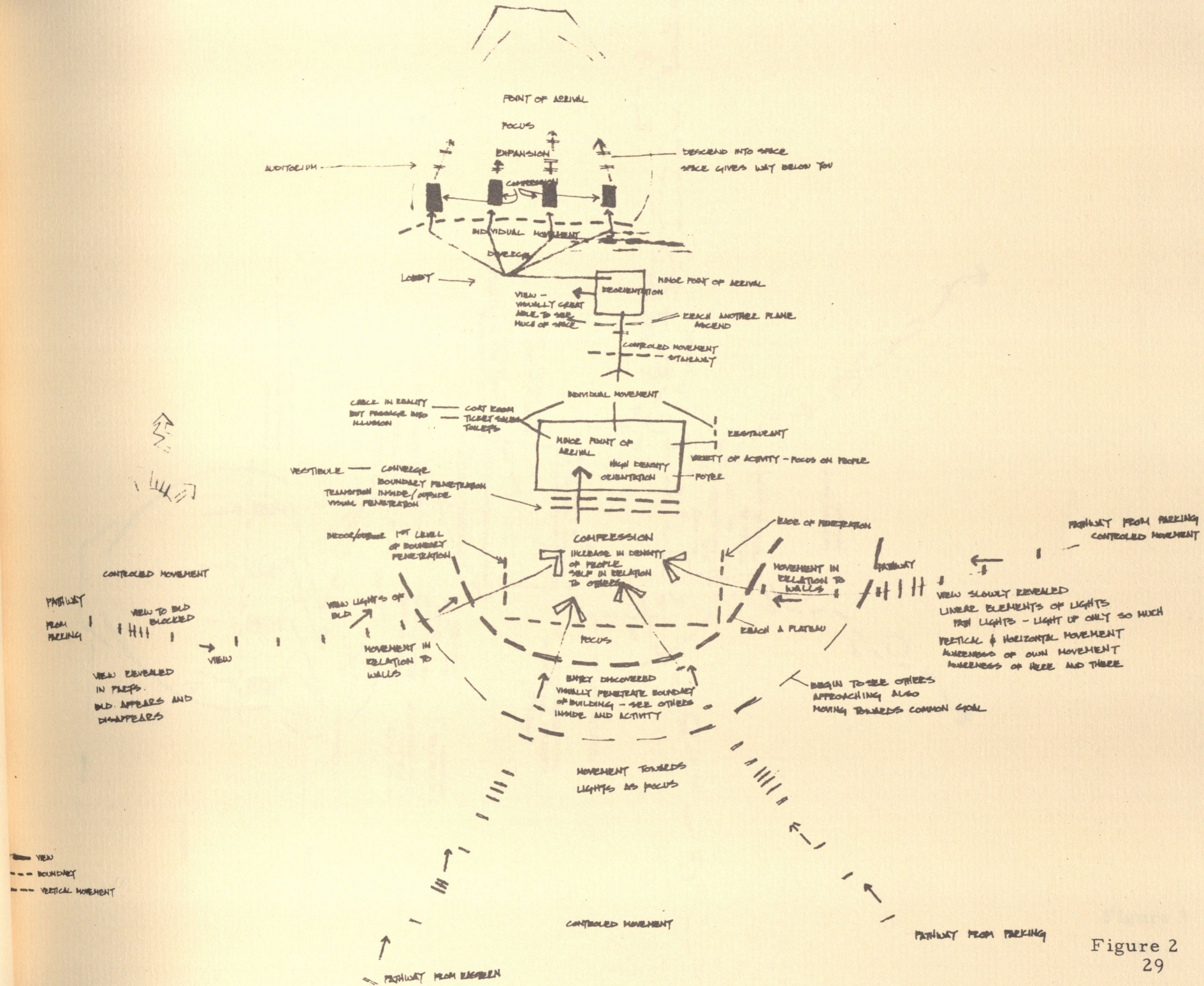
POINT OF ARRIVAL
FOCUS
EXPANSION
AUDITORIUM
DESCEND INTO SPACE
SPACE GIVES WAY BELOW YOU
COMPRESSION
INDIVIDUAL MOVEMENT
LOBBY
MINOR POINT OF ARRIVAL
DISORIENTATION
VIEW - VISUALLY GREAT ABLE TO SEE MUCH OF SPACE
REACH ANOTHER PLANE ASCEND
CONTROLED MOVEMENT
GUIDANCE
INDIVIDUAL MOVEMENT
CHECK IN REALITY
BUT PASSAGE INTO ILLUSION
COAT ROOM
TICKET SALES
TOILETS
RESTAURANT
MINOR POINT OF ARRIVAL
HIGH DENSITY ORIENTATION
VARIETY OF ACTIVITY - FOCUS ON PEOPLE
FOYER
VESTIBULE
CONVERGE
BOUNDARY PENETRATION
TRANSITION INSIDE/OUTSIDE
VISUAL PENETRATION
INDOOR/OUTDOOR
HOT LEVEL OF BOUNDARY PENETRATION
COMPRESSION
INCREASE IN DENSITY OF PEOPLE
SELF IN RELATION TO OTHERS
EDGE OF PENETRATION
PATHWAY FROM PARKING
CONTROLED MOVEMENT
MOVEMENT IN RELATION TO WALLS
PATHWAY
VIEW SLOWLY REVEALED
LINEAR ELEMENTS OF LIGHTS
FROM LIGHTS - LIGHT UP ONLY SO MUCH
VERTICAL & HORIZONTAL MOVEMENT
AWARENESS OF OWN MOVEMENT
AWARENESS OF HERE AND THERE
CONTROLED MOVEMENT
PATHWAY FROM PARKING
VIEW TO BLD BLOCKED
VIEW
VIEW REVEALED IN PIECES
BLD. APPEARS AND DISAPPEARS
VIEW LIGHTS OF BLD
MOVEMENT IN RELATION TO WALLS
FOCUS
REACH A PLATEAU
ENTRY DISCOVERED
VISUALLY PENETRATE BOUNDARY OF BUILDING - SEE OTHERS INSIDE AND ACTIVITY
BEGIN TO SEE OTHERS APPROACHING ALSO MOVING TOWARDS COMMON GOAL
MOVEMENT TOWARDS LIGHTS AS FOCUS
CONTROLED MOVEMENT
PATHWAY FROM PARKING
PATHWAY FROM EASTERN
VIEW
BOUNDARY
VERTICAL MOVEMENT

Figure 2

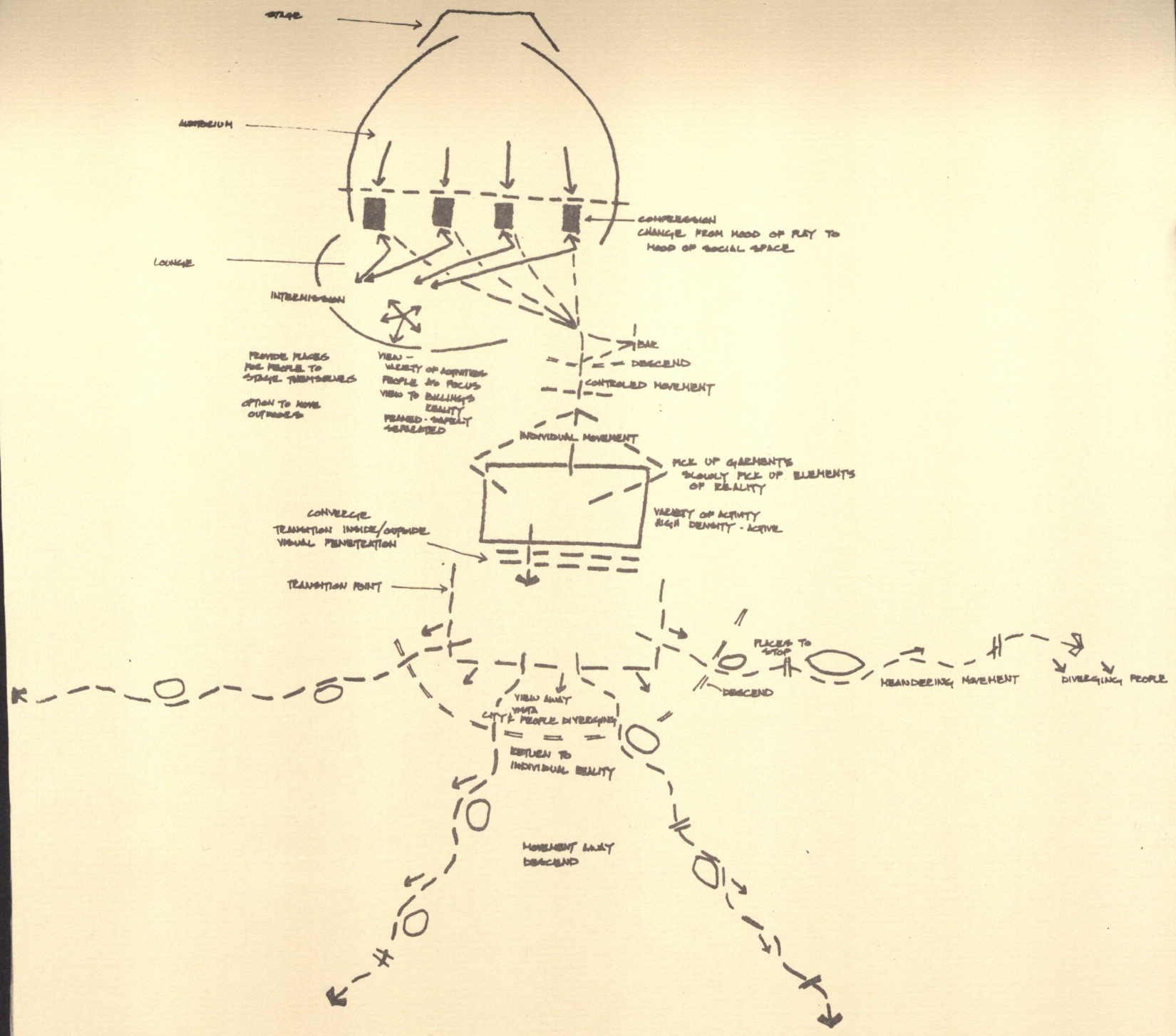
STAGE
AUDITORIUM
COMPRESSION
CHANGE FROM MOOD OF PLAY TO MOOD OF SOCIAL SPACE
LOUNGE
INTERMISSION
PROVIDE PLACES FOR PEOPLE TO STAGE THEMSELVES
OPTION TO MOVE OUTWARDS
VIEW - VARIETY OF ACTIVITIES PEOPLE NO FOCUS VIEW TO BUILDING'S REALITY FRAMED - SAFELY SEPERATED
BAR
DESCEND
CONTROLLED MOVEMENT
INDIVIDUAL MOVEMENT
PICK UP GARMENTS SLOWLY PICK UP ELEMENTS OF REALITY
VARIETY OF ACTIVITY HIGH DENSITY - ACTIVE
CONVERGE
TRANSITION INSIDE/OUTSIDE VISUAL PENETRATION
TRANSITION POINT
PLACES TO STOP
DESCEND
MEANDERING MOVEMENT
DIVERGING PEOPLE
VIEW AWAY INTO CITY & PEOPLE DIVERGING
RETURN TO INDIVIDUAL REALITY
MOVEMENT MAY DESCEND

Figure 3

program

200 Sq. Ft. Vestibule - Main entrance to building.

750 Sq. Ft. Foyer - Contains ticket sales and coat check room. Should be accessible to toilets, lobby, and administration.

350 Sq. Ft. Administration - Contains office space for house manager and secretary. Should be accessible to ticket sales and director spaces.

1000 Sq. Ft. Lobby - Major circulation space between entrance and auditorium. Also the primary space used during intermission. Should be accessible to toilets, lounge space, refreshments and outdoors.

650 Sq. Ft. Lounge - Smaller space off lobby and related to auditorium. At times food and drinks will be served. Opening night activities to occur in this space so it should be accessible to actors' spaces.

2000 Sq. Ft. Restaurant - Owned and operated by individual not by the theater company. It will operate continuously whether a play is being presented or not. The menu may run specials which deal with the particular play. Access is needed from outside. The restaurant will also service opening night occasions and special events. A means of access to bar, toilets, and coat room is also desirable.

1200 Sq. Ft. Bar - The bar will also be owned and operated by individuals outside of the theater company but will serve people attending the plays.

5600 8000 Sq. Ft. Auditorium - Auditorium will vary in seating capacity from 500 seats for serious drama to 750 seats for musicals and comedies. Both auditoriums will not be used simultaneously.

250 - 650 Sq. Ft. Stage - Stage will have three options in size as procenium stages with optional thrust or orchestra pit, therefore an option of six stages. Stage will have fly loft and side stage space.

100 - 400 Sq. Ft. Orchestra Pit - To contain between twelve and twenty-five musicians. Should have direct access to back stage and equipment storage space.

200 Sq. Ft. Janitor - To serve primarily auditorium, lobby, lounge and foyer.

50, 50 & 100 Sq. Ft. Light Booths - Due to the flexibility in auditorium spaces, three light booths are required. Visibility of stage is mandatory. Also a cat walk system that unites all three and also serves the lighting grids is desirable.

Back Stage Area

750 Sq. Ft. Temporary Storage - Directly accessible to stage and workshop.

150 Sq. Ft. Stage Toilets - Accessible from stage.

300 Sq. Ft. Green Room - Space for actors to wait before going on stage and to meet with people after performances. Desirable access to both stage and public spaces.

200 Sq. Ft. Stage Crew Room - Accessible to stage.

400 Sq. Ft. Directors' Offices - The theater company has one full time director with possibly two assistant directors. Assistant directors are generally temporary. Directors offices should be accessible to stage, rehearsal spaces and administration.

600 - 750 Sq. Ft. Rehearsal Spaces - Two rehearsal spaces. Used for try outs and practice when more than one production is being worked on. Should have access to prop storage, dressing and costumes, and outdoor access.

4 @ 80 Sq. Ft. Stage Dressing Rooms - For between scene changes and also to serve ampitheater.

Ampitheater - For summer performances, either plays or musical recitals. Access to dressing rooms and scenery.

Work Spaces

1500 Sq. Ft. Workshop - For scenery construction. Contains wood working tools, a paint room, delivery access and storage. Should be accessible to other storage areas and stage.

300 Sq. Ft. Prop Storage - Should be accessible to workshop and rehearsal space.

1000 Sq. Ft. Set Storage - Should be accessible to workshop and temporary storage.

300 Sq. Ft. Musical Equipment Storage - Accessible to orchestra pit.

870 Sq. Ft. Costume Work Space - Will contain a laundry room, with three washers and three dryers, a dyeing room with two sinks, a sewing room with four machines, dressing space and storage space. Should be accessible to rehearsal space. Actors will have costumes in dressing rooms during times of production.

Actors Space

4 @ 100 Sq. Ft.
4 @ 300 Sq. Ft. Dressing Rooms - Dressing to be accessible to stage, toilets and showers and actors lounge.

150 Sq. Ft. Make-Up - Mass make-up area containing mirrors, lighting and benches.

560 Sq. Ft. Toilets and Showers - To serve actors before and after performances.

450 Sq. Ft. Actors Lounge - To be accessible to public, and contain a small kitchen. Generally used during practices.

800 Sq. Ft. Mechanical Room - Desirable that it be as quiet as possible.

FOOTNOTES

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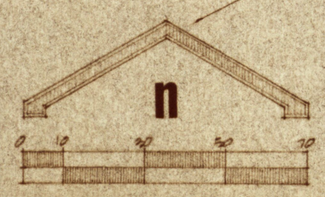
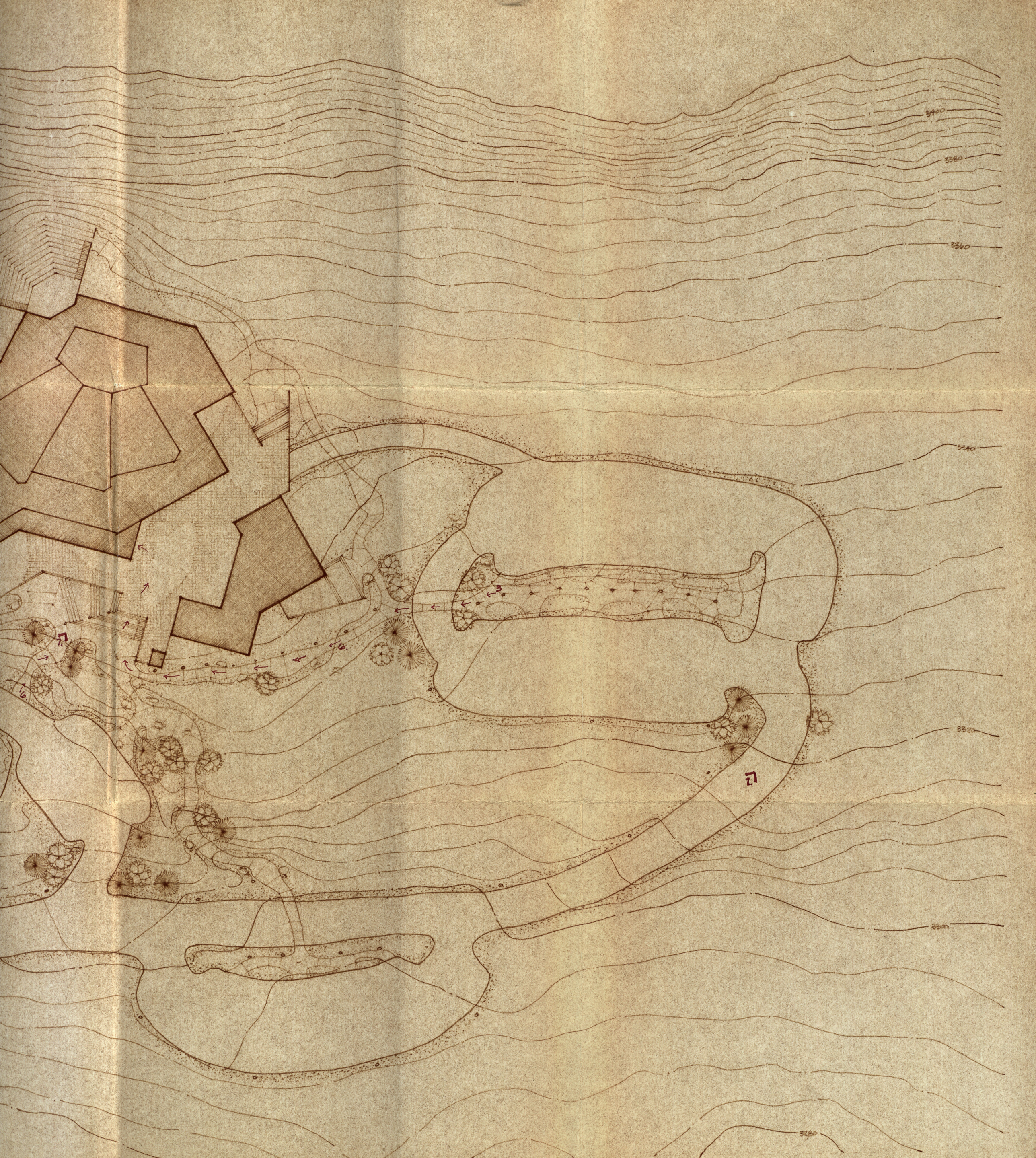
site plan

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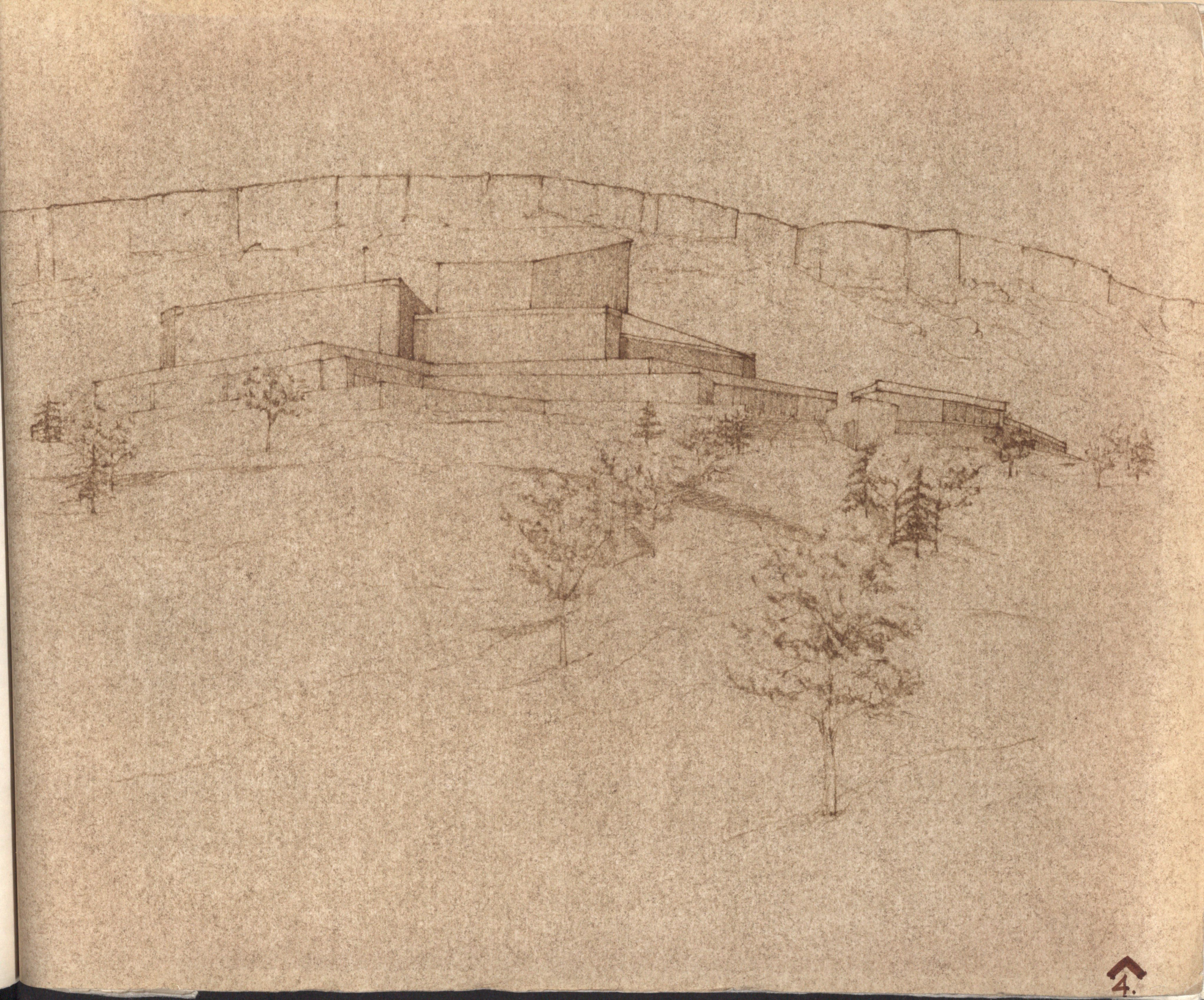
Plan A 3.





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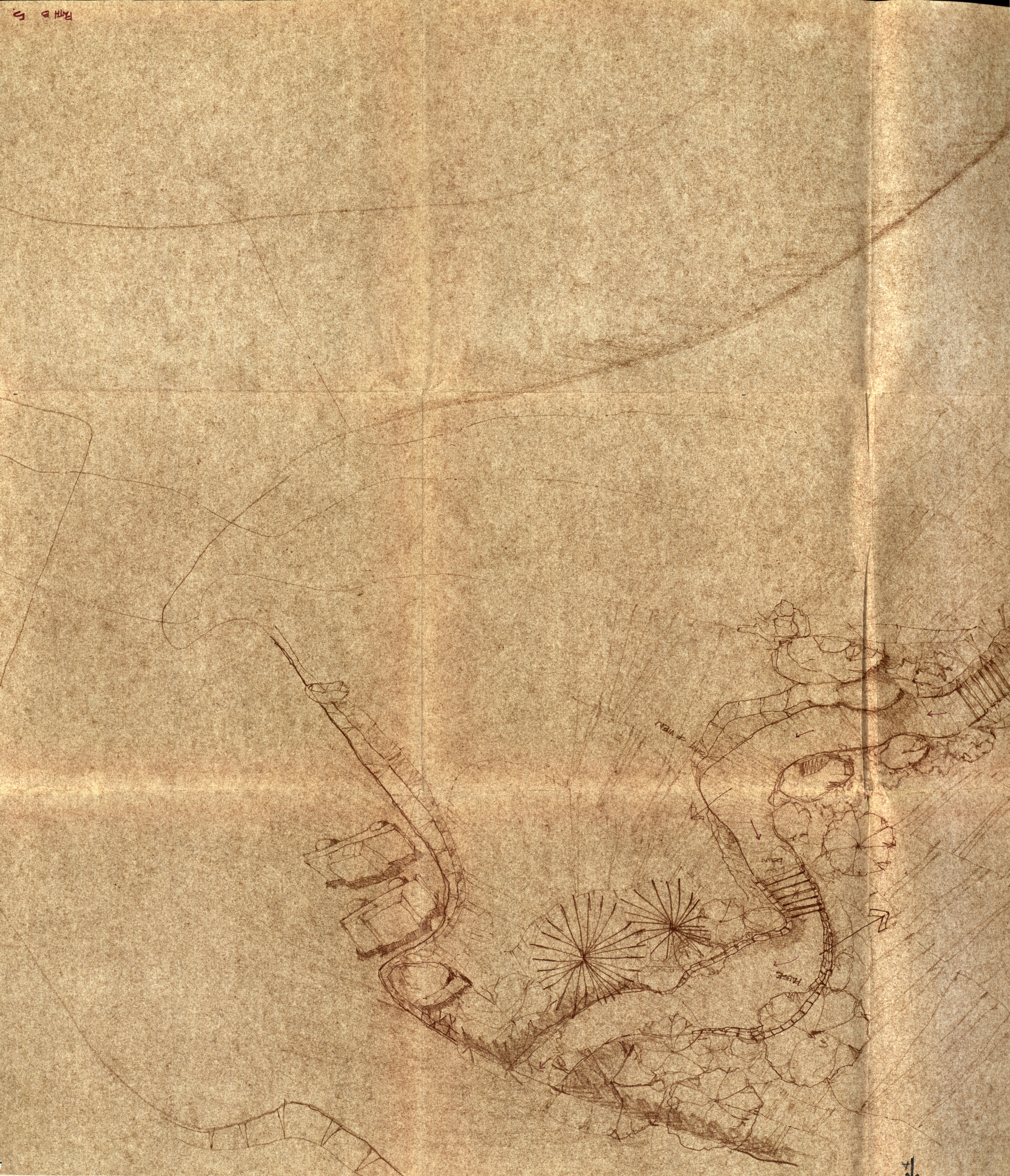


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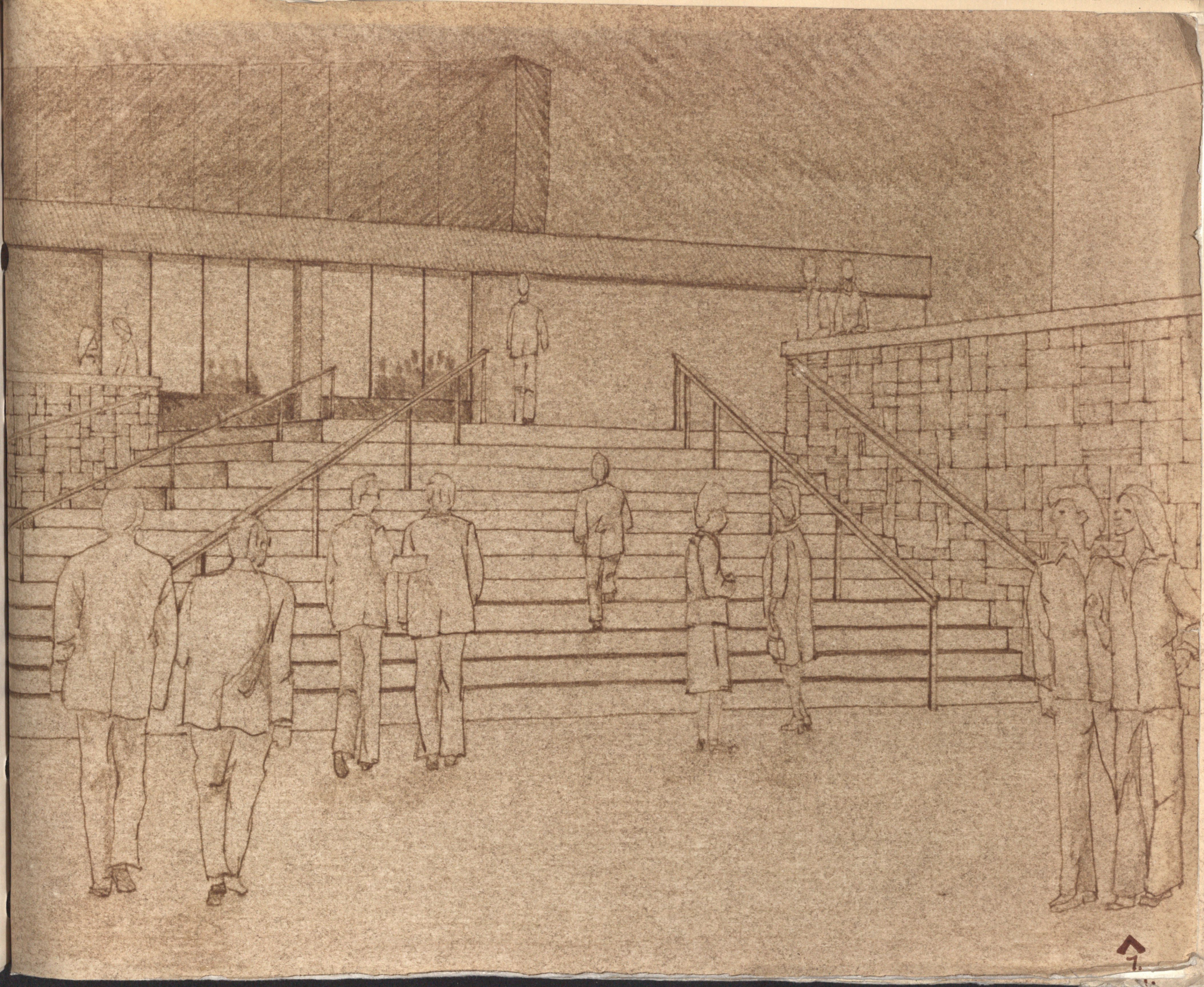
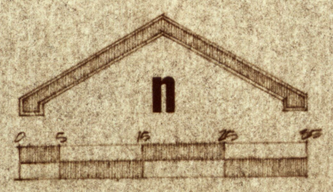


a- vestibule
b- coats
c- manager
d- secretary / tickets
e- lobby
f- lounge
g- toilets
h- janitor

i- discussion rooms
j- director
k- dressing / practice rooms
l- fly loft
m- auditorium
n- bar
o- elevator

main floor plan



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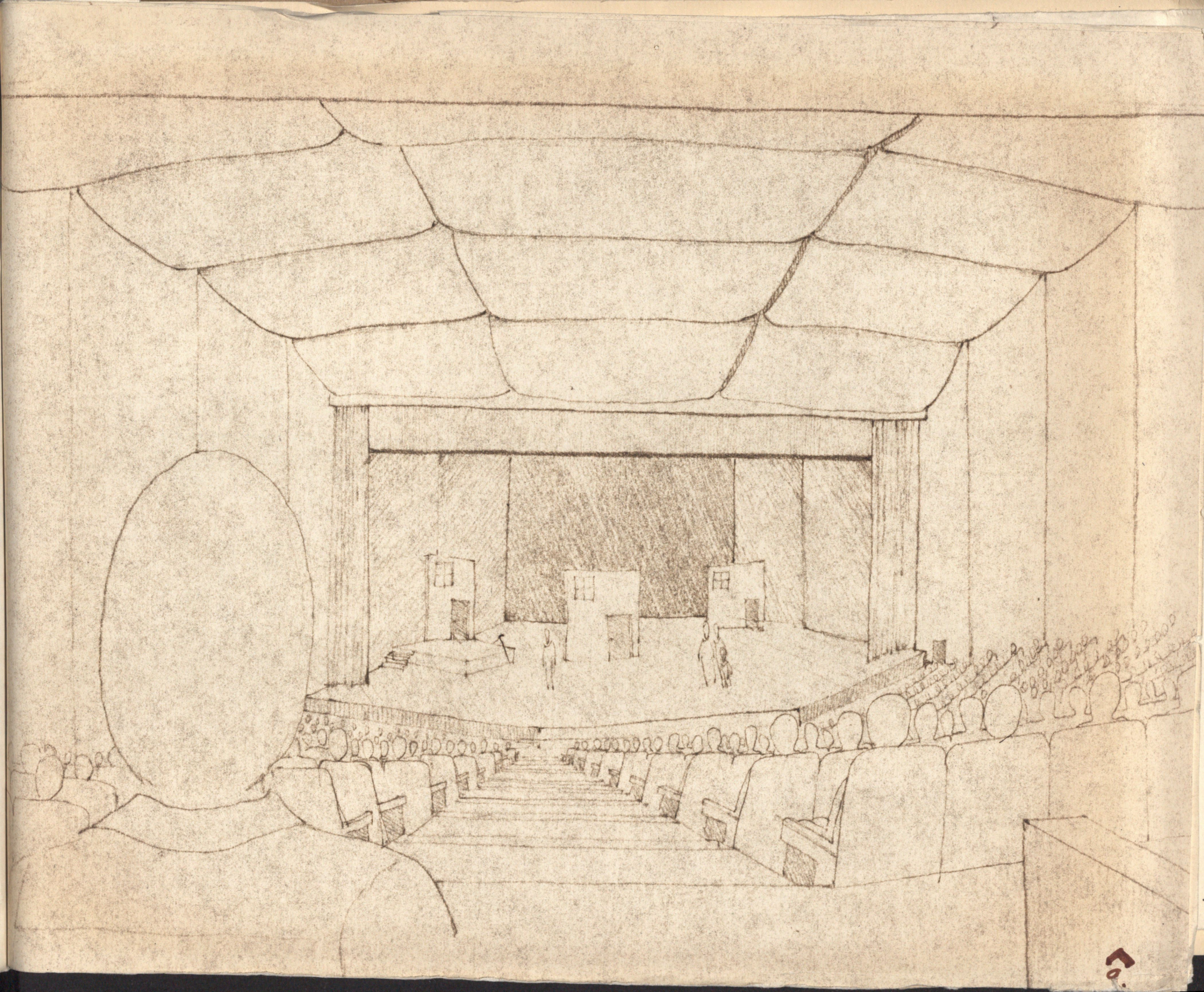
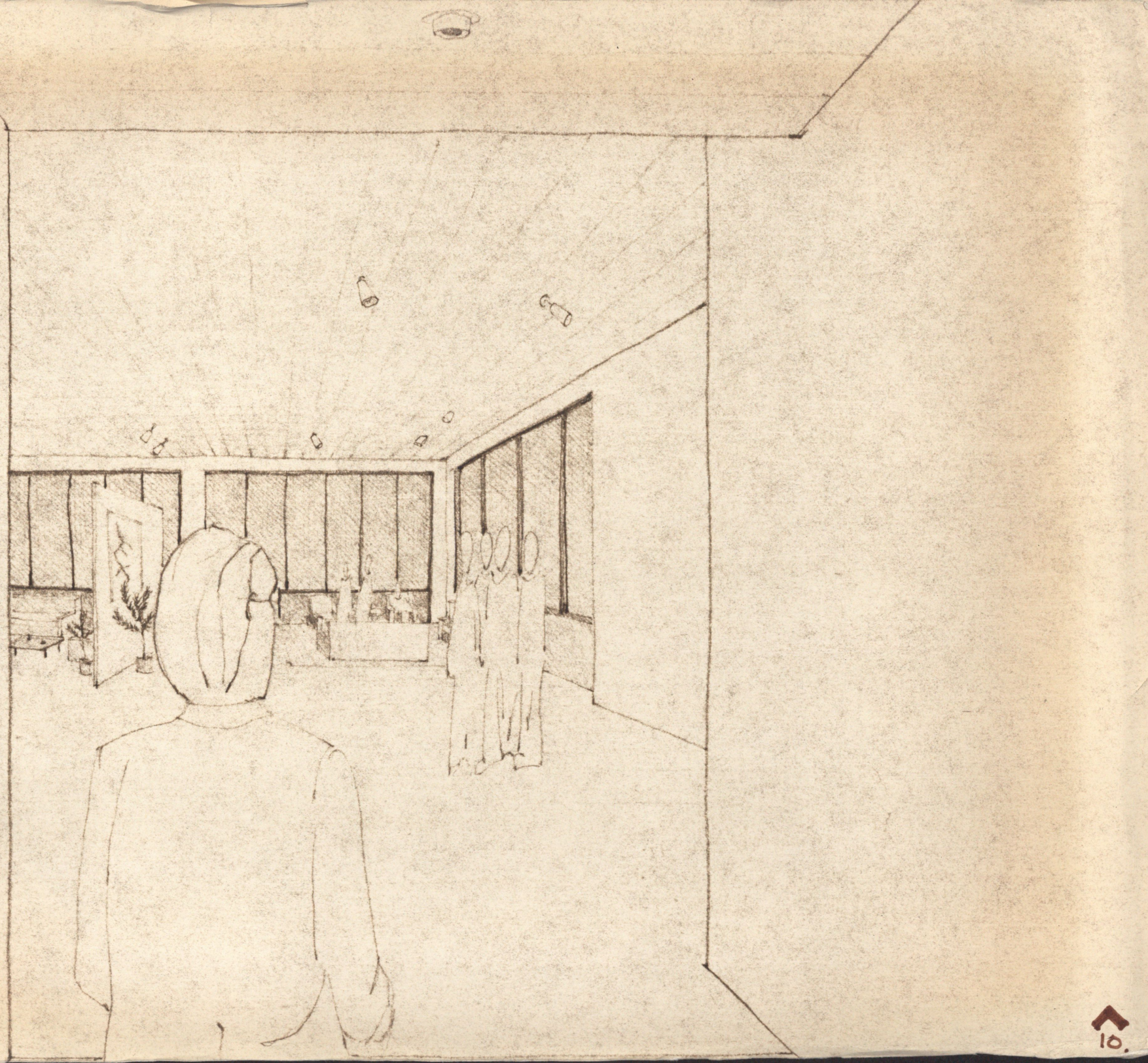
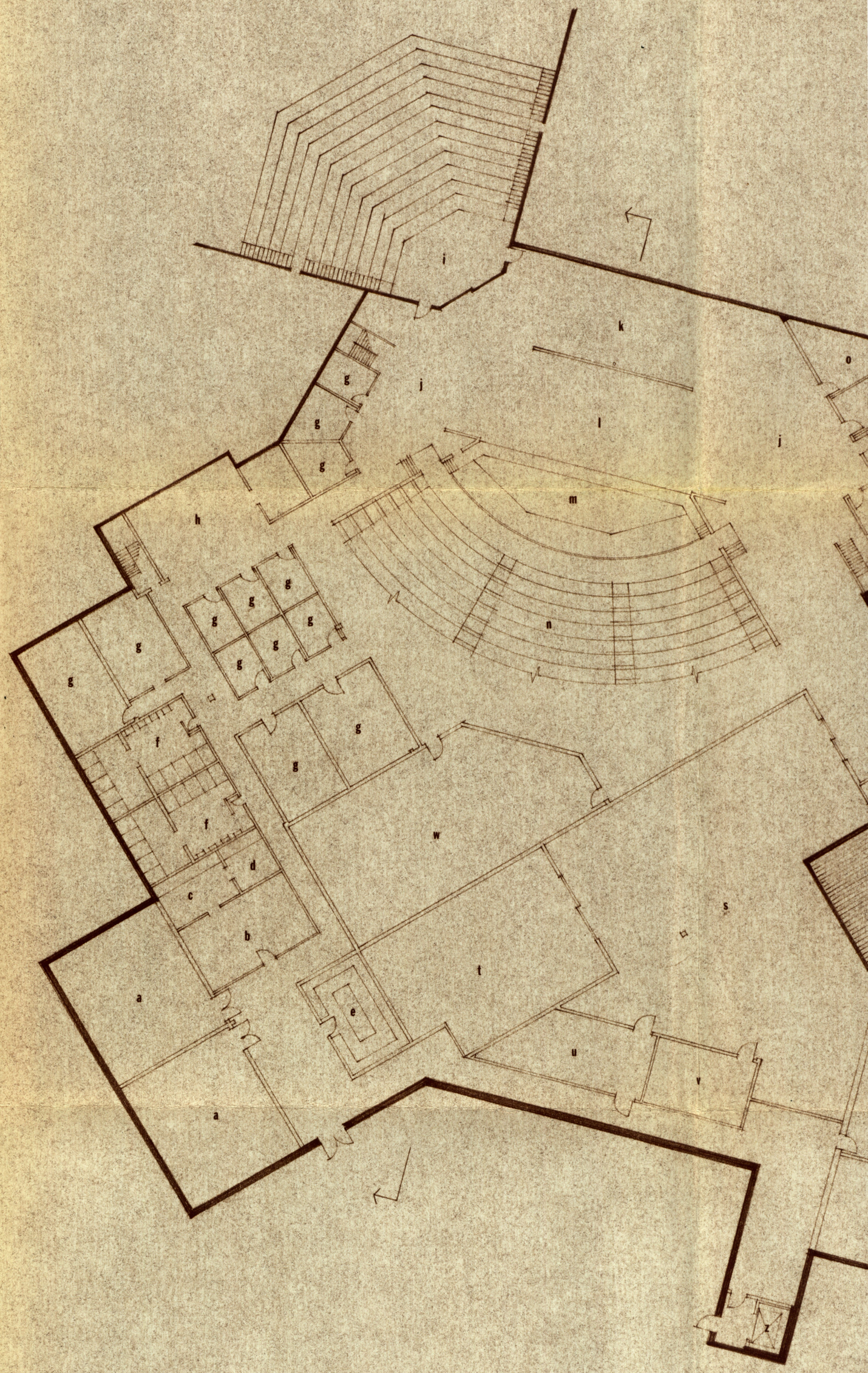
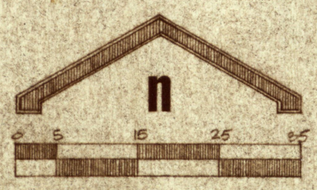






a- rehearsal room
b- costume sewing
c- laundry
d- costume dyeing
e- costume storage
f- toilets/showers
g- dressing rooms
h- make up
i- ampitheater
j- temporary storage
k- back stage
l- stage
m- orchestra pit
n- auditorium
o- stage crew room
p- stage toilets
q- green room
r- delivery
s- work shop
t- set storage
u- prop storage
v- paint room
w- mechanical
x- restaurant
y- kitchen
z- elevator

lower floor plan

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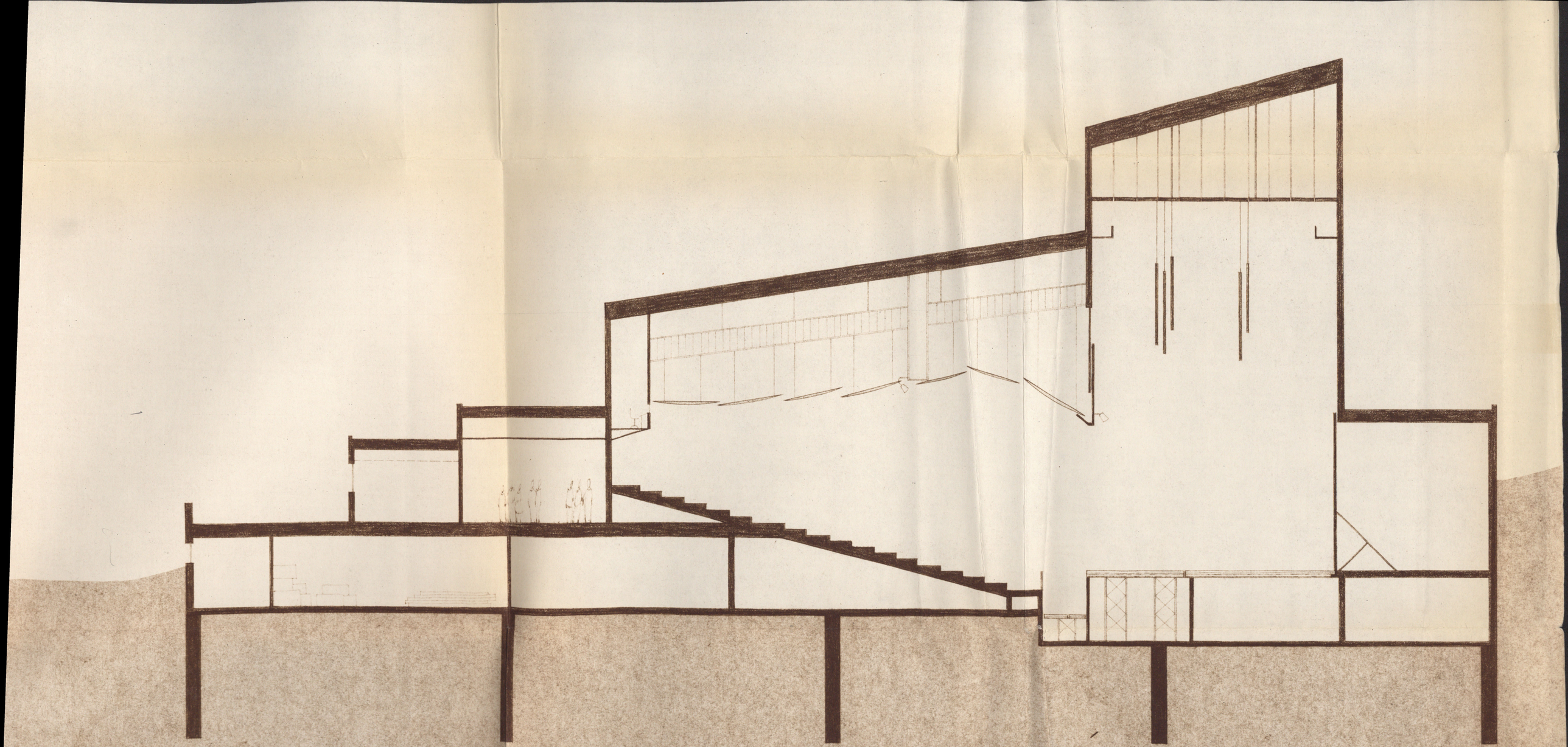

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