

GROWTH PLAN FOR THE MEETING SCHOOL, RINDGE, NEW HAMPSHIRE

by

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Submitted in Partial Fulfillment of the Requirement for  
the Degree of Bachelor of Architecture  
at the  
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Dear Professor Lyndon:

I submit this thesis as required for the  
Degree of Bachelor of Architecture to  
Massachusetts Institute of Technology,  
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Jane Griswold Patterson

13 Winthrop Street  
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June 22, 1970

ABSTRACT

The Meeting School, in Rindge, New Hampshire, is a Quaker coeducational boarding school for forty students, ageing 15 to 18. It has eight faculty families.

It needs more breathing space, at least a library, gathering room, and a new faculty-student house -- all places to allow space for the projects and living styles of the faculty and students to unfold, as much by the freeing of existing space as by the design of these new buildings.

The secondary community at Bartlett Hill, a quarter-mile away, is a possible solution to the need to find a way for people who do not become teachers at the school to live within its community.

ACKNOWLEDGMENT

Many people gave my thesis good criticisms. However, those chiefly responsible for its direction were Edward Allen, Donlyn Lyndon, Herman Hertsburger, Jerry Soltan, and Colin St. John Wilson. The Meeting School helped and loved me, as did all my friends and relations. Thank you.



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## INTRODUCTION

The Meeting School is a coeducational boarding school for forty students in Rindge, New Hampshire, teaching the last three years of high school. It has eight faculty families, six of whom board students. Students and houseparents share dining, living, and kitchen areas, and bathrooms. While each faculty wife has charge of her own house, students cook, serve meals, and wash dishes, and clean house.

The governing of the school is by consensus, the faculty and students sitting together at least once a week to decide all policy, rules and regulations by agreement of all. The communal living program helps students to understand how to make wise decisions.

Courses, while mostly traditional, are held in the living rooms of the houses. Counselling is regular. Teachers run their classes as they see fit. For team sports, such as soccer, the school is divided into four roughly equal teams which include also interested faculty and children.

A farm, run by a faculty farmer and interested students, provides milk, meat, eggs, fruit and vegetables, though not enough to make the school self-sufficient.

The Meeting School is avowedly Quaker. Faith is what the faculty feels keeps the school functioning. Meditations in silence are common occurrences.

As the school continues, it will grow -- not in number of students, but to include people not necessarily teachers and to provide students and faculty with more privacy. My planning for the next ten years has explored possible solutions to both possibilities.

When the school was founded, it was hoped that parents with children to be educated would come to live there. This did not happen. Now, however, families are interested -- not just in the education of their children, but in an alternate living style. At the same time tuition has reached a price where such education is not available to many. A possible solution would be an industry at which the students could work, to be run by adults who would live in the community. An appropriate industry would be a more vigorous farm program accompanied by a health food depot. The housing needed by these families should not be located at the school. With more than the present sixty members, the school business meeting would probably become unwieldy. Secondly, the families involved with the health food plant would have their separate concerns not related to the running of academic programs and would probably need a business meeting of their own.

The secondary community on Bartlett Hill has common space for the group in its center, and private space off the back for each family. Each house has a screened porch looking on to the common and into each other's porch. Each house has a private terrace on the other side. Each is designed to be able

to be used in many ways: for one family or two, or to include students from the school, or to allow a member of the family to have an office in the house. Each has a storage space which could be a shop, a darkroom, a nursery school, depending on the individual and group needs.

The need for privacy for both faculty and students suggested the construction of a Gathering Room to be used for Quaker Meetings, morning meditation and assembly, silent prayer throughout the day. The existing room in the basement of a faculty house, doubling for class space, cannot meet these needs. The faculty and student family does not have the privacy it needs.

A Library with space to study away from a roommate or to hold a class when a child is sick, as well as to allow for the addition of books, would help as would a guest space for those who would like to stay a few weeks as a retreat from the intensity of the school.

These ideas are developed more thoroughly in the following criteria for design. The criteria were written when the structural system being considered for use was thick-shelled concrete. Its properties made easy expansion and thorough acoustic privacy possible. Although the main material used for final design was wood, the considerations help illustrate the architectural need of the school.

THE MEETING SCHOOL: CRITERIA FOR DESIGN

I. Gathering Space

Library: gathering should happen outside

Gathering Room: 75 people comfortably, 100 tightly

Houses:

teaching: 15-20 maximum

living: large enough for 15, or the whole school upon occasion (using Dining too); crowding expected; generally groupings of 3-4

dining: 13-14 people around the table

kitchen: 4 cooking, 2-4 matching

family space for faculty: possibly the whole house on occasion, but usually not more than 8

bedrooms: 3-4 together

faculty studies: essentially private, up to 3 people

II. Outside-Use Space

All space could use outside spaces auxillarily; in any case they should be warm in spring and fall, above wet and flooding ground, and informal to encourage gatherings.

III. Light Quality

Direct sun-light helps keep New Hampshire winters bearable. But light should be controlled so it does not interrupt teaching or talking.

IV. Privacy

A. Circulation

Library: major winter circulation should be inside, otherwise along an edge (for knowledge of the place, but keeping it quiet)

(Privacy: Circulation)

Gathering room: a node

Houses:

teaching: major circulation outside; could be a node on end of path

living: dead-end to major circulation, or on edge

dining: main circulation path should not go through; minor okay

kitchen: path through fine, but work space separate

family space for faculty: at the end of circulation, separate

bedrooms: minor circulation fine, path from bath-to-bedroom direct

faculty studies: easy access from major circulation, but local activity should not bother it by going past (see Acoustics)

B. Acoustics

subnormal: others are aware of conversation
normal: conversation does not penetrate in or out
supernormal: laughter, radios, record players do not penetrate in or out

	<u>Degree of Privacy</u>	<u>Qualifications</u>	<u>Reverberance</u>
Library	supernormal		absorbitive
Gathering Room	need not be protective		can echo
Houses:			
teaching	supernormal	could be opened up to include living	I don't know
living	normal or subnormal	conversation corners though	I don't know
dining	noise peripherally supernormal	activities elsewhere can be noticeable	good for conversation
kitchen	subnormal		absorbitive

(Privacy: Acoustics)

	<u>Degree of Privacy</u>	<u>Qualifications</u>	<u>Reverberance</u>
family space for faculty	supernormal	children's noise?	let faculty determine
bedrooms	normal	should record players, guitars be heard?	quiet, absorbing
faculty	supernormal		restful, quiet

C. Visual

	<u>View In</u>	<u>Qualifications</u>	<u>View Out</u>
Library	activity within noticable, but not to be stared at		something nice to see: a view
Gathering Room	little view from outsiders	welcome to the building to be by other means	a view, not other people
Houses:			
teaching	(see Library)	one should not be able to stare at the activity inside -- or does it matter?	not important; possibly nice to have a view
living	fine	some living space should be observable and some not	sense of the school and land
dining	(see Teaching)	inner directed -- other things more important	nice
kitchen	fine	one should be able to see easily what is happening	nice
family space for faculty	little	(see Teaching)	something nice to see

(Privacy: Visual)

	<u>View In</u>	<u>Qualifica-</u> <u>tions</u>	<u>View Out</u>
faculty studies	little	(see Teaching)	something nice to see
bedrooms	little	(see Teaching)	again, the things it is nice to watch all year

V. Expansion

Library: needed for new materials and uses

Gathering Room: build a new place instead

Houses:

teaching and living: auxillary space might be wanted -  
greenhouse, darkroom, gallery

dining: should not be necessary

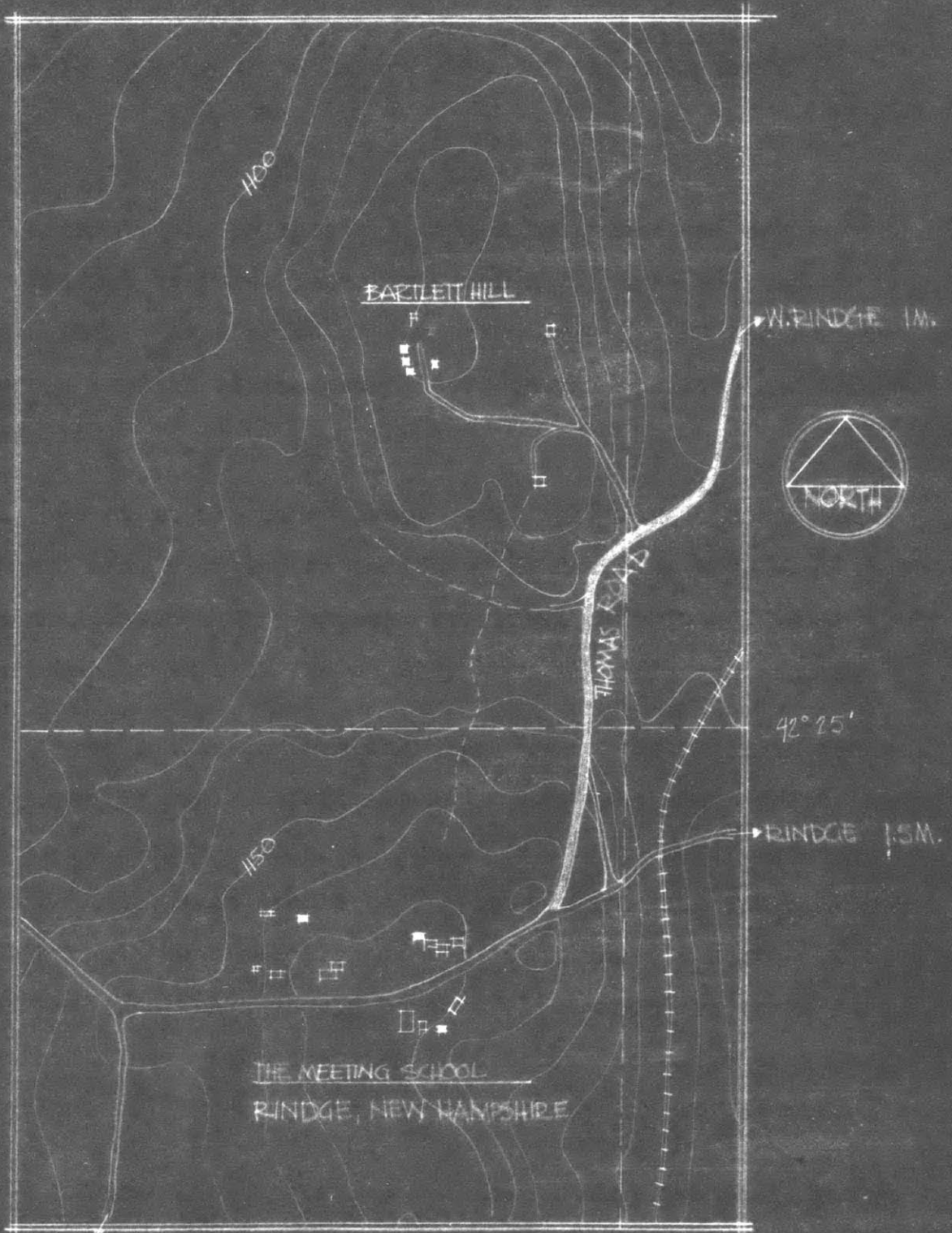
kitchen: should not be needed

family space for faculty: might need new bedrooms

bedrooms: possibly 4x8 expansion for student projects


faculty studies: might grow for special projects





WINCHENDON 4 M.

72° 07' 42"

NEW CONSTRUCTION 

EXISTING BUILDINGS 

DIRT ROAD 

SURFACED ROAD 

PATH OR CUT 

1" = 800'

THESIS RESEARCH: INTERFACE - SCHOOL AND OPEN SPACE

I attempted in my thesis research to understand how to put buildings in rural landscapes, or how not to destroy what was there while allowing for urban growth, and how to make urban land in cities useful to both universities and townspeople.

I thought in planning terms: what will make a place work? I explored existing situations. My examples were mostly not highly defined city spaces, but rural interfaces, which spoke of what to do with the country when the city gets there.

My first conclusion was that land cannot be built on and remain as it was. Unfortunately! Then what kind of site and plan will enhance a given space? An urban environment is being made; what should be its intensity? How can the scale be human? What details are for human use? A beginning answer is that the space should be controlled where it is in relation to buildings, but otherwise left free. The edge of domestication, or differing degrees of control, should be clear.

The reasons for natural spaces are simple: to feel, watch, smell, hear and work with the land and its inhabitants, to take stock of the larger world and man's place in it. Therefore, natural places should provide this chance for reflection and involvement: (a) if sat in, what is there should be easy to see, feel, smell, touch; (b) if walked through, the space

should be long enough to make an impression (How long is that?); (c) but even a flower box is better than nothing!

Some specific determining elements:

1. Form: Should be personal. If it does not encourage and allow human use, it should be changed. This includes the land, the barriers, boundaries and definitions, and the equipment.

2. Scale: Should be personal, related to man's size. The Modulor of LeCorbusier is relevant here: providing a sense of one thing growing from another, suggesting dimensions appropriate to human use.

3. Materials: Should be appropriate to the site: wooden road edges, or rocks and wood and stone fences; concrete, brick, and metal work well for cities.

4. Orientation: Orientation of a small space to the sun can be very important, especially in this climate. For example, if Commonwealth Avenue ran north and south, it would have shade much of the day, especially in the winter months, lessening the annual period of use. Likewise, a small garden, bound by a tall building on the south would be refreshingly cool on an August day, but not inviting in April or November.

If a place is too small for people to use to get away from each other, then it should be geared so that people can easily watch one another. Places in-between should try to do both.

A linear path need not be very wide if it changes along its route, sometimes wide, with places to stop. It should have

distance, to be an experience to walk along.

Spaces for being in, not walking through, need to have places where observers are out of the way, designed to watch and be watched. This can be done by concave shape of land, by sitting places on the sides, by focal points where people can gather. Small good spaces look onto others, or have space for group action. Large good spaces have natural circulation through them.

I. EXETER

A. Playing fields and Gilman Park: A park of the town set beside the playing fields of the school creates a large open expanse of land in the center of town. The school gate which blocks cars and the foot-bridge across the river separating the two places, keeps the area pedestrian. The road along the river bank indicates the end of the playing fields, and the space between the road and river can thereby be used by anyone without interfering with the school activities.

The character of the park is of pines and shade, with an ancient cannon defending the river from the British, making a place to go. The fields have grass and long open space, edged by pine and hardwood, blocking the houses on the other side. The river extends along the final edge with the woods of the school bordering it, extending the space indefinitely. The river is used for canoeing, swimming, and skating.

B. Yard before the main Academy Building: A setting for the building, but too formal to be used by people. Across the street near the dormitories people play ball in the visual continuation of the yard, but the main space is too austere. Why? The yard provides no edge to occupy, the fence which is an edge cannot be sat upon, normal pedestrian travel does not go across the space, but around. It is simply a setting for the main building. The town looks at the place from the road which runs through the space, but is blocked from it by the 3'6" fence and the box hedge. Walking along the road one feels on display.

The yard by the dormitories is not a frame for any building, nor is it so well-manicured.

C. Wentworth, Cilley and Amen Court: A formal, rectangular court between three dormitories, defined by hedges, pretty but unusable, sunken so that users cannot see passers-by, a principle entertainment; with sloped sides potentially useful, lined with unapproachable hedges.

The space is not large enough to play frisbee or ball, and provides no space for sitting and sunning. The center fountain can only be looked at, not sat around or beside. The outside edges between the surrounding road and the buildings have more hedges. People do use the space -- but in spite of it.

## II. OBERLIN

A. Tappan Square: In the center of town, a large, mostly flat, open space with many trees, criss-crossed by brick and sandstone (which takes the impression of leaves lying on it in the rain) paths. The college public facilities (museum, auditorium, chapel, and library) and the town (shopping, library, churches) surround the green. Thus it is crossed by townspeople, students, faculty, children. They own it: they ride bikes around and through it, they stop to talk and sit and play.

The edges of the square are visible from inside, but this is deceptive. The land is flat, the space between one and the street can be considerable. On good days 200 or more

students can occupy tree trunks and patches of grass in the square and still leave most of the space empty. Graduation ceremonies held for 500 students leave one-half the square empty for casual wanderings by others.

B. Plum Creek: The creek starts at the Arboretum, which is connected to the golf course, the grave yard, and then to the countryside. In the Arboretum is the Reservoir, a public place for skating in the winter and enjoying the water and trees in the summer. The creek borders the Arboretum and then runs through the town, with a foot path on one side with at least 10' of public land. A college dormitory borders on it, its open space including a statue; a town playing field opens off it, and on the other end of town there is another park -- a meadow, as opposed to the hilly, wooded arboretum. In between a barber shop, public housing for the elderly; many backyards border on the creek, the main street of town crosses it. The path is a quiet place to walk or ride a bike -- for students or townspeople, because some of it is school land and some is owned by the town. It is for both. People who are there smile and appreciate each other because they can only be there to enjoy the water and the greenery, too. The time to walk from one end to the other is about two hours.

### III. NORTHFIELD SCHOOL

General setting is rural, each building is set by itself on the land with a buffer of bushes planted at its base and trees near-by to grace the structure. Because of the hilly site each building has its own view and is separated from the others. Land is not to be conserved but used; siting is thoughtful but with the sense that land stretches on forever. Its success is due to the large amount of farm land around it. Like the French and German palaces, it is an anachronism -- but a nice one.

### IV. AMHERST

A. The Town Green: Acts to separate and bring together the town and college. Each has its own side of the green, but the space is concave, allowing one to see the other side. The college buildings are not those where outsiders are likely to come, but the town offices, city hall and police, are on the green, along with the Inn, churches, banks and shops. The main roads meet at the Green.

(The character of such greens is simple: grass, large trees, paths, maybe a war memorial or a band stand, laid out in a loose pattern, conveying the sense that there is lots of land and little need to be intense. It is a very American attitude: unending land, neither edged nor defined, left to its own growth. Japanese gardens or the parks of Paris are much more controlled.)

B. The courts of Amherst College: The main green of Amherst extends up to the oldest buildings of the school. The view



is magnificent. Behind the buildings is a smaller green, surrounded by more classrooms and dormitories. Such greens are repeated throughout the college, not quite formal enough to be settings for the buildings, yet not designed to be used easily: either too small with no detail for people to relate to or no direction inward or outward -- no focus -- or with indirect access to the surrounding buildings. They are awkward places.

## V. MASSACHUSETTS INSTITUTE OF TECHNOLOGY

A. The Great Court: A space with a sunken center, with paths through it used regularly by the inhabitants. It orients to the river and thus Boston, giving more to watch than just internal happenings, but the space itself is large enough to play football. Its orientation south makes the court warm in spring and fall and shaded in the summer.

The court is larger than the buildings around it, so one is not overwhelmed by the buildings and does not feel people inside are watching. At the building edge is a path making a tunnel between 6'-high bushes which bloom at graduation. Then there are rows of trees before the drop of 4' to 5' into the central bowl.

B. The Court between Buildings 3, 10, and 26: Pretty, with wood benches, flowers, paving stones, and bushes -- but uncomfortable to use because the benches are placed so that one cannot easily look at the flowers and trees, and feels on

display to the surrounding buildings, There is no protection. If the space were larger, or if the benches were oriented towards the next opening, but instead one feels observed rather than the observer.

C. Banks of the River Charles: A long edge to walk along, with things to watch: people, cars, sailboats, rowboats, motor-boats, and the water -- its light, shadow, reflection pattern: the essence of life, even when polluted; places wide enough to stop and sit, sun, picnic, watch, talk; a variety of places: some enclosed, as at the Boston University bridge, some active, such as the sailing pavillions and the swimming pool, some very urban, like the railing in front of M.I.T. with paved path and stone embankment, some just open space. Borders across are seen, but the end is not, so the walk opens up new things within a known context: one won't get lost. The slope of the bank makes things visible.

## VI. BOSTON

A. The Common: Does not have borders which are visible, but it has anchors along its paths: the bandstand, the graveyard, the statues and the pond, the subway, the Commons garage with its huge flat space. Being hilly, almost any place on it can be a place to sit and watch others, and due to its placement in the city between the shopping areas, and near public transportation, government offices, and neighborhoods, people use it constantly. Its joy is partly its change from the

built-up city where land-form and trees are hard to find, and partly because it is owned by all the different kinds of people who live on its edges.

B. Louisburg Square: A surprise stuck among a densely built area: green with good details: the statue, the fence, the cobblestones, the trees, the houses surrounding. But it cannot be used by those who do not live there, and is mainly for looking at, out windows; little children do not seem to play there, nor do its people have picnics there nor read there on a sunny afternoon. In formal use seems awkward. A wedding reception would be appropriate to its formality.

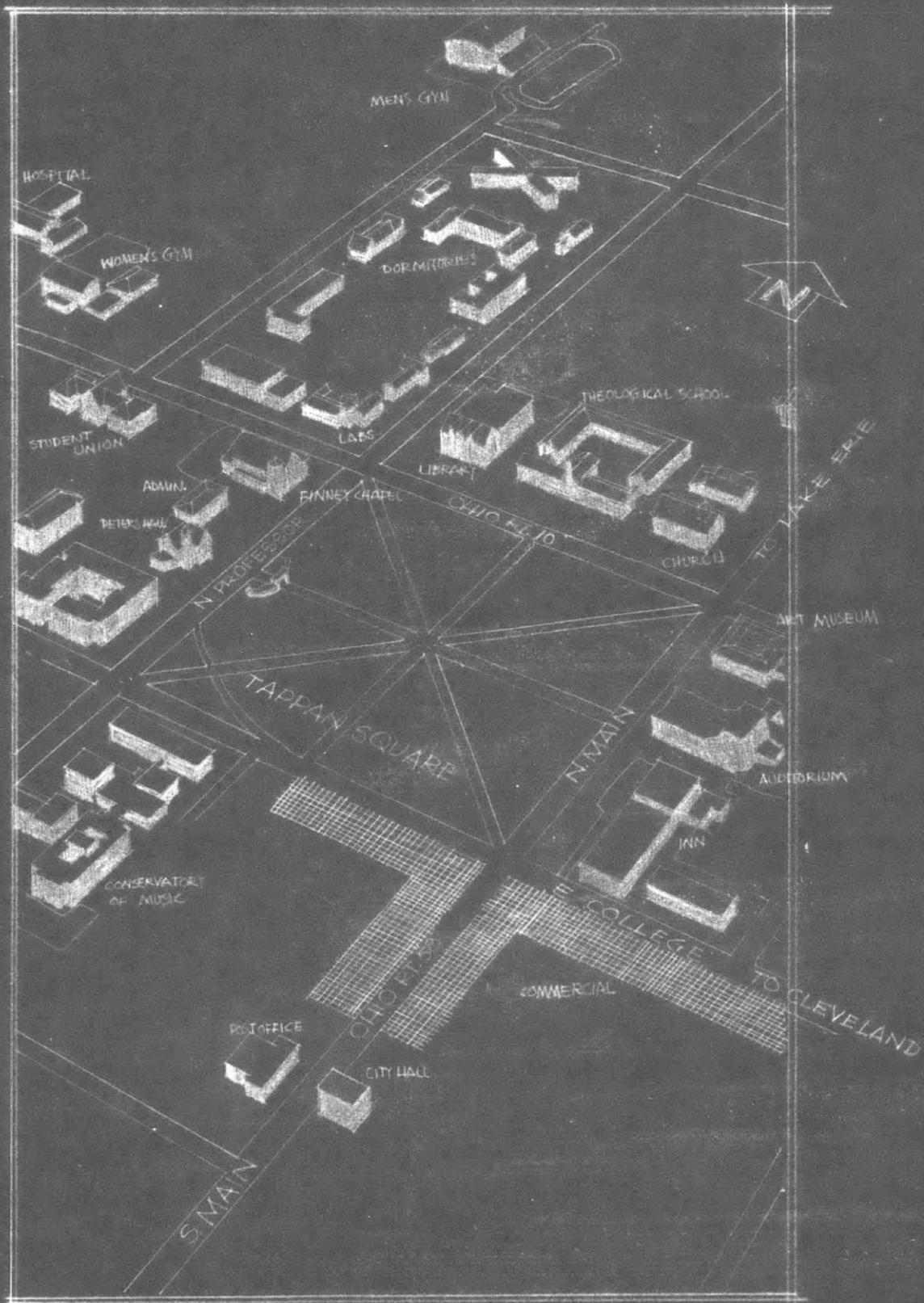
C. The Public Gardens: Formal, contained by visible fences and hedges, with places to walk to: the statues, the swan boats, the bridge, the pond, but also, with its Victorian exuberance, lots of places to stop within its form: corners edges, the bridge to lean upon and the pond to walk beside. The formal garden plots are quaint surrounded by so much land to be used easily.

D. Commonwealth Avenue: A mall with rhythm and scale, an aesthetic experience. The place is important, as against the Common with its trees and hills, or the Charles River with water, both natural phenomena. The Avenue has bow fronts, roof-lines, brick detailing, man-made variety and unity. Its cross-streets give rhythm to the walking. Bordered by houses and roads and trees, it is wide enough to walk down the

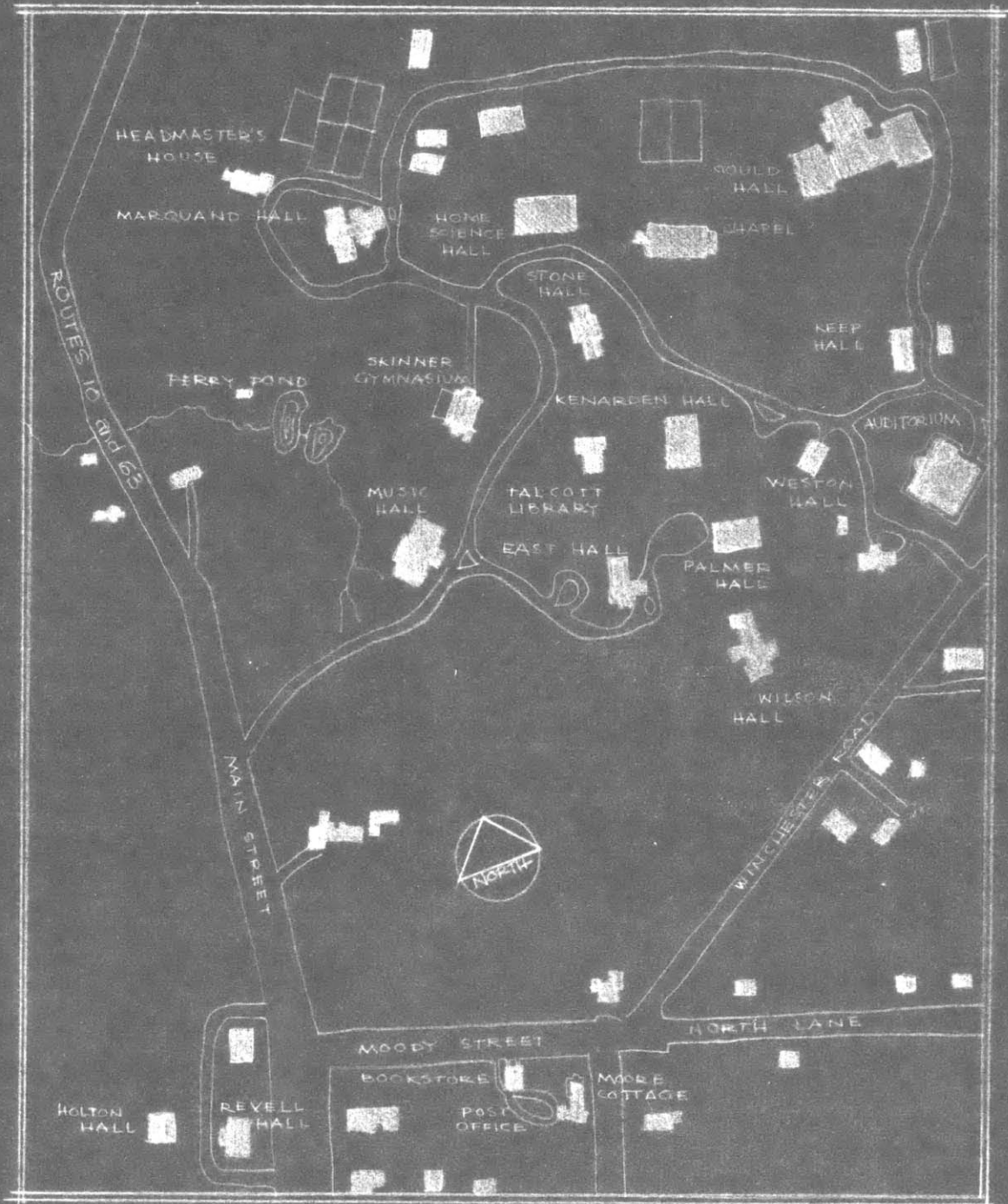
middle and still play ball on both sides, yet narrow enough to pick out details on the houses across the way. Its end is obscured by trees. Running east-west, it is warmed by the sun all day in spring and fall, sheltered by leaves in the summer.

The Commonwealth Avenue mall leads into the Fenway which leads into Franklin Park, the Storrow Drive embankment, and the Jamaica Way.

E. The Fenway: The Fenway has a stream going through it, bridges over it, large trees and flowering bushes and apartments alongside it, roads bounding it and opening to college lawns. The grass is cut, but not manicured as is The Public Garden. It is concave, thus visible; it winds, so its end is not visible.

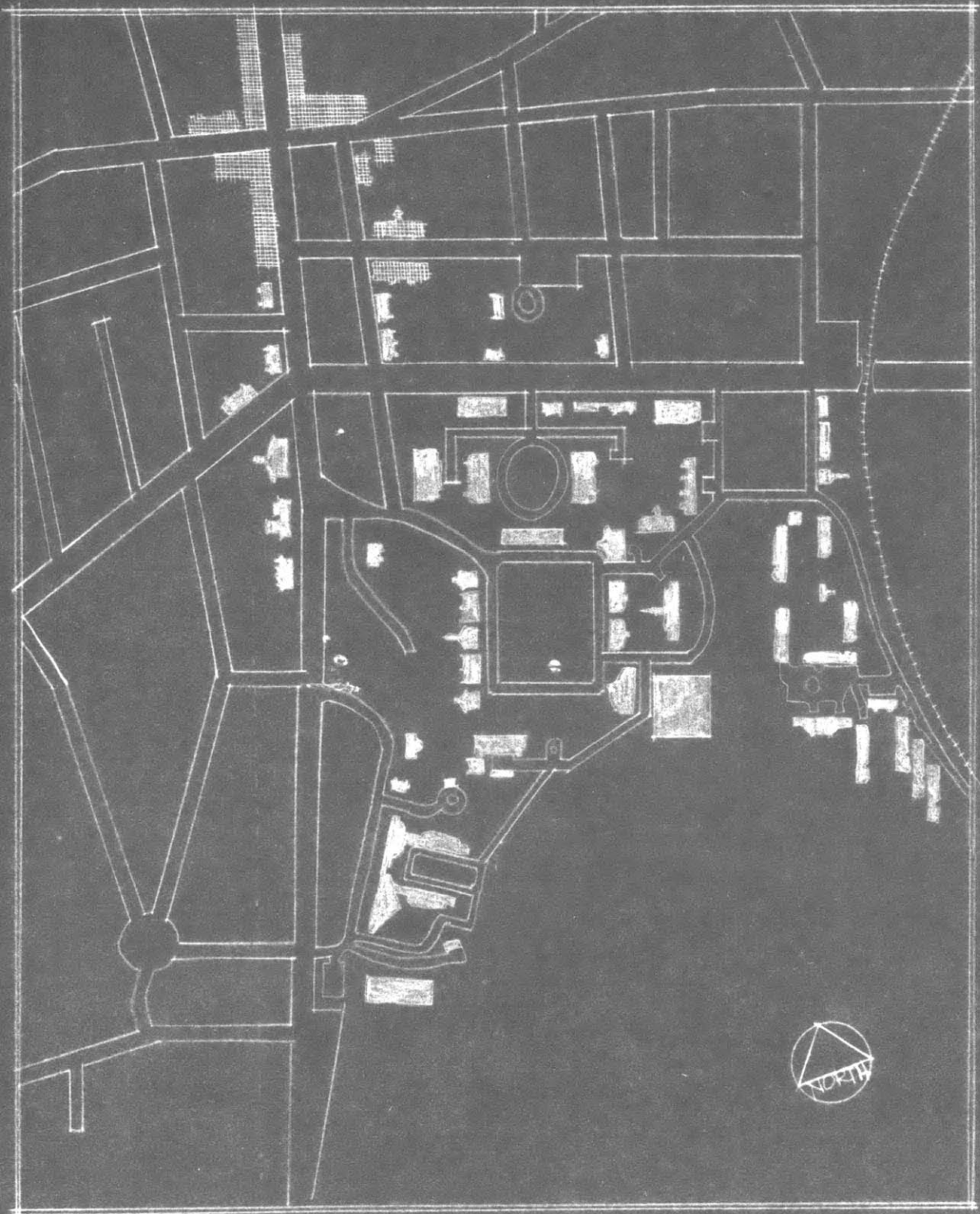


OBERLIN COLLEGE, OBERLIN, OHIO



NORTHFIELD SCHOOL  
EAST NORTHFIELD, MASSACHUSETTS





PUBLIC TOWN BUILDINGS

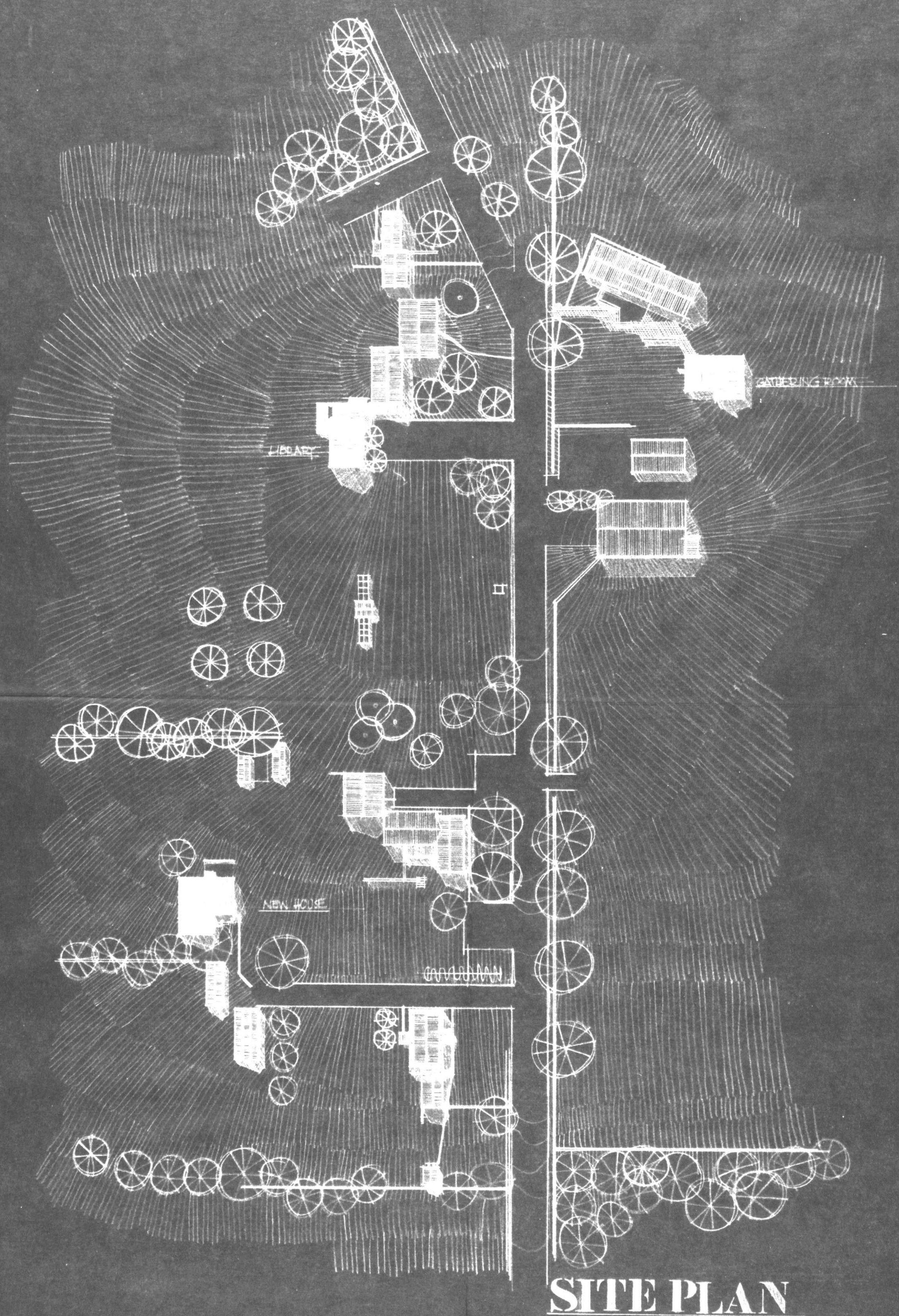


AMHERST COLLEGE BUILDINGS



AMHERST, MASSACHUSETTS





**SITE PLAN**

**THE MEETING SCHOOL**

**TMS**

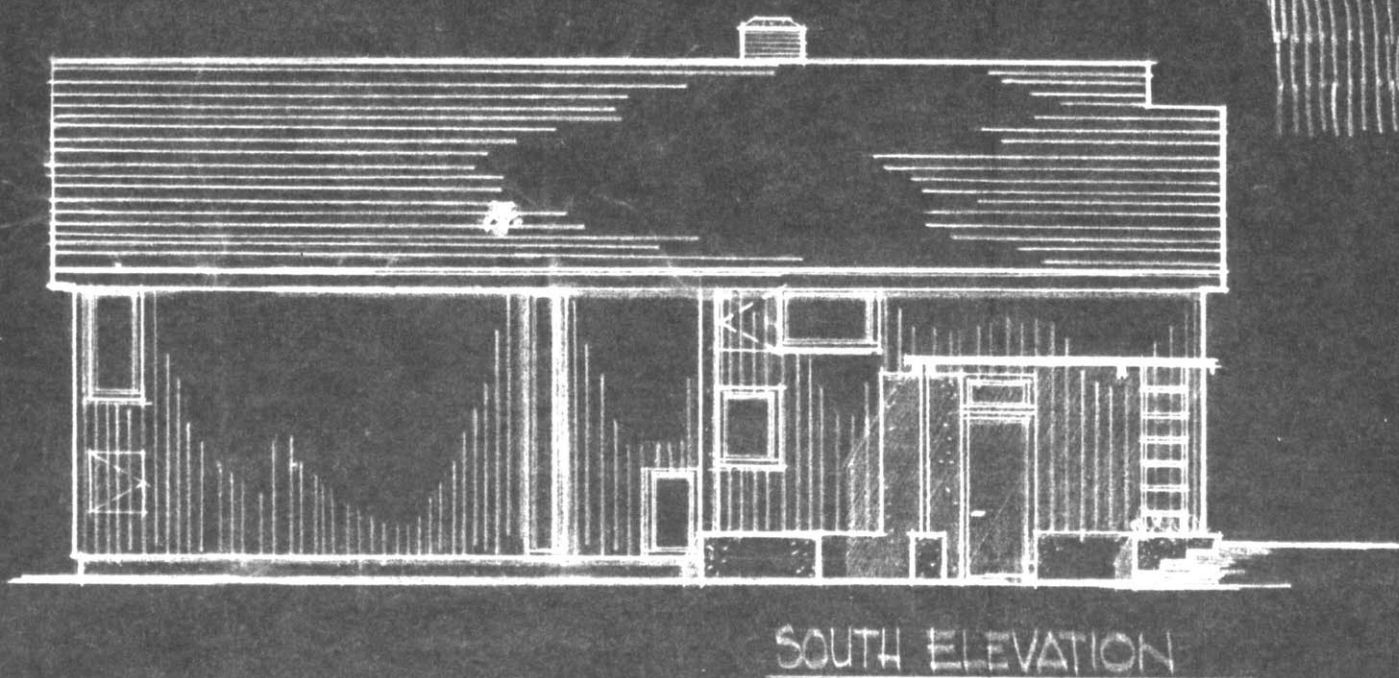
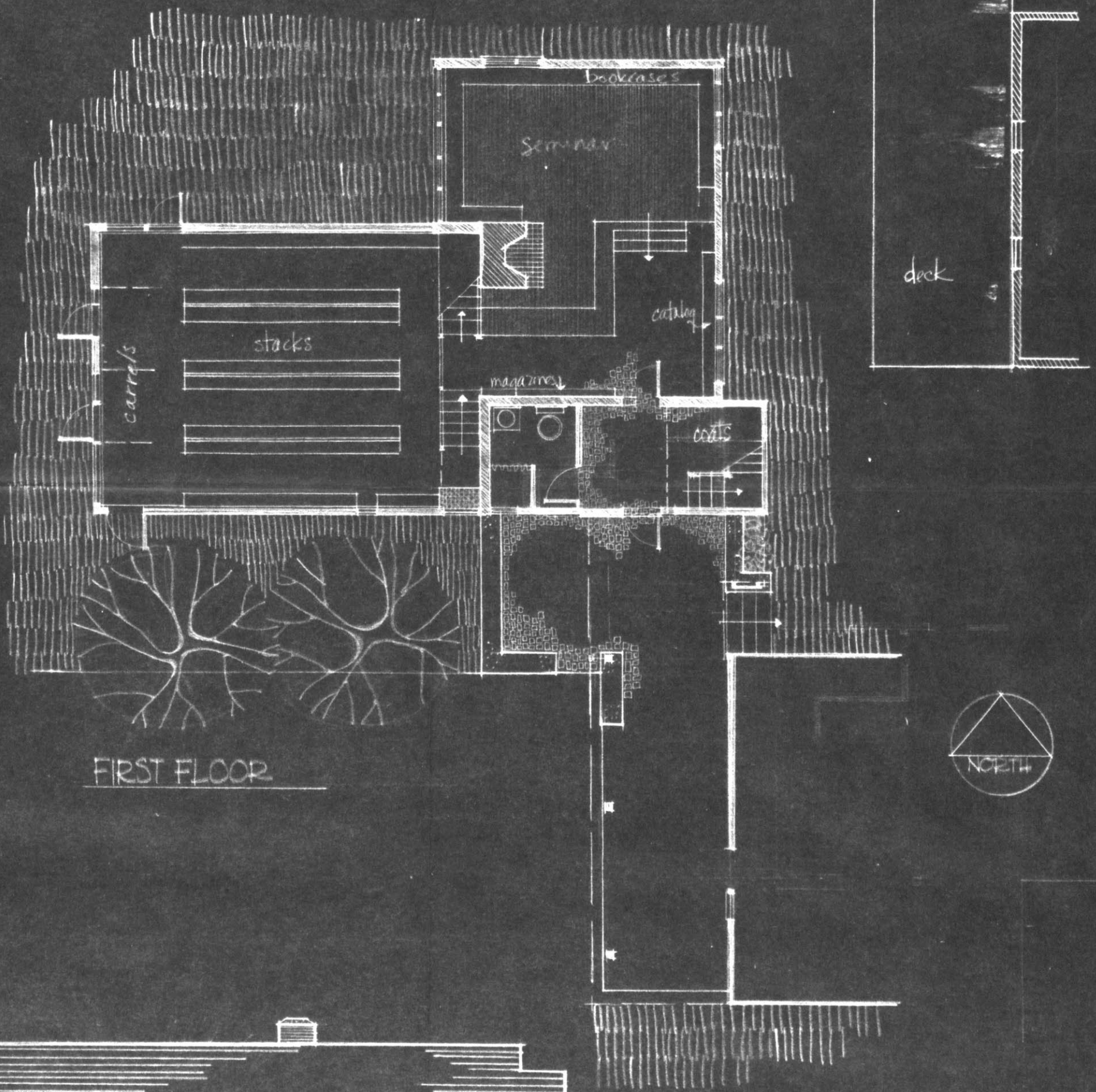
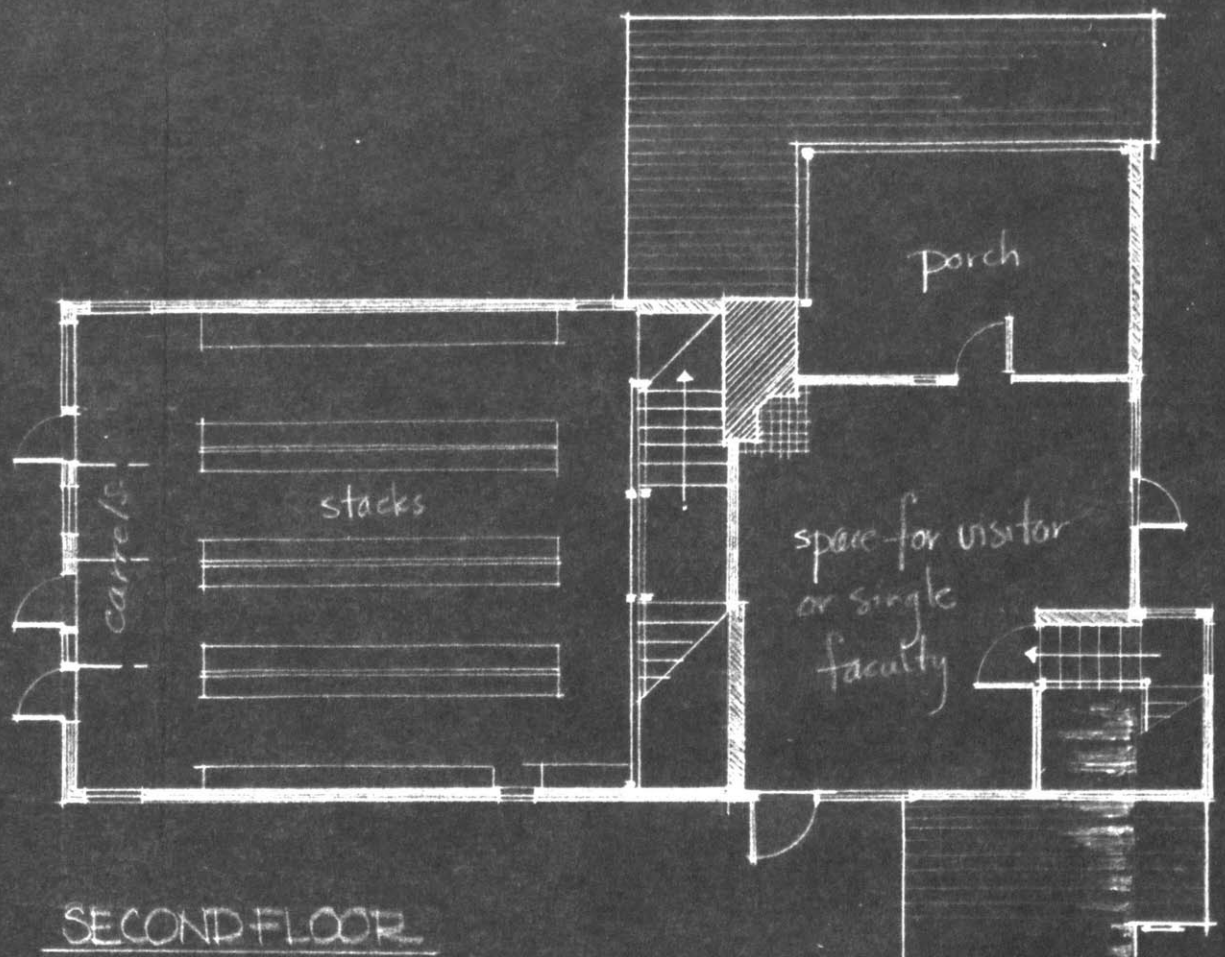
1" = 60'

4 JUNE 1970

JANE GRISWOLD PATTERSON

1





**LIBRARY**

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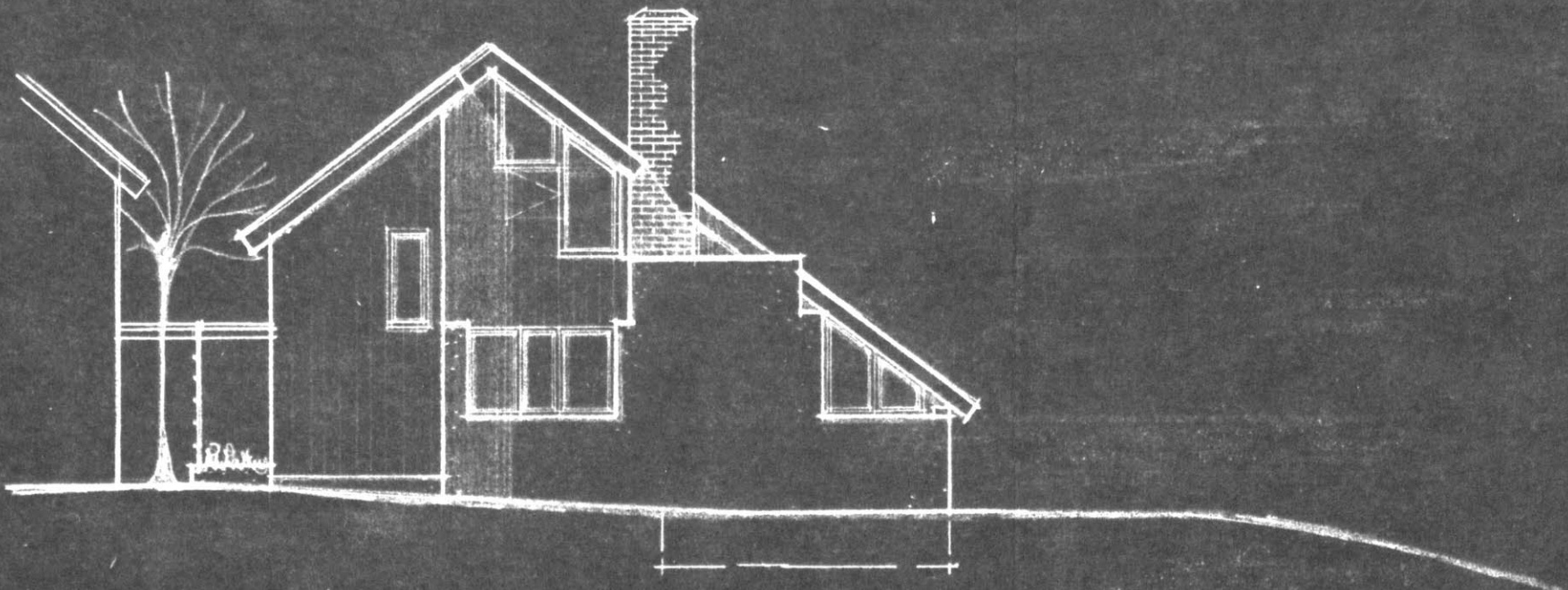
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JANE GRISWOLD PATTERSON

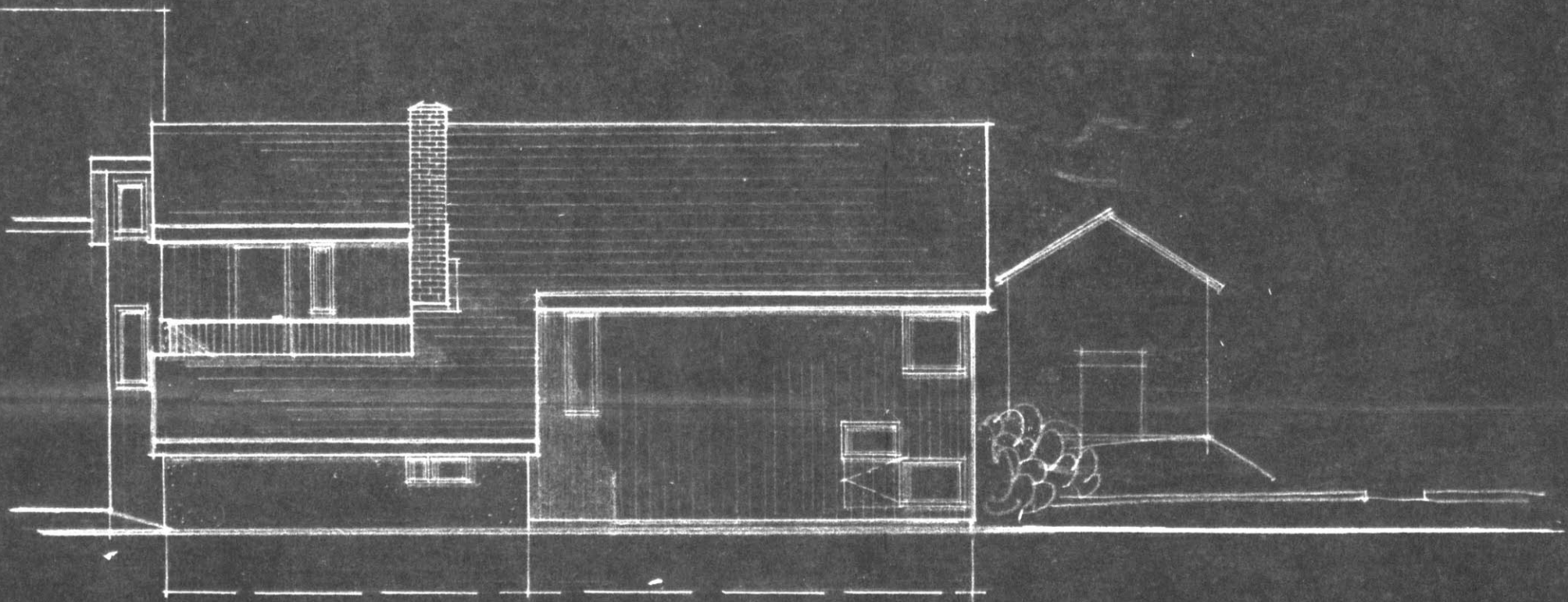
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EAST



NORTH



WEST

ELEVATIONS

LIBRARY 2

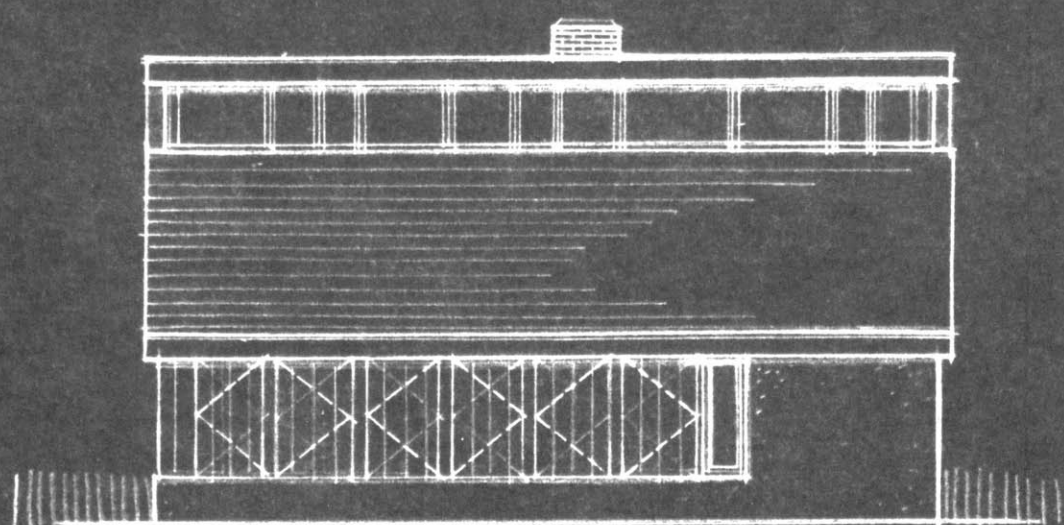
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JANE GRISWOLD PATTERSON

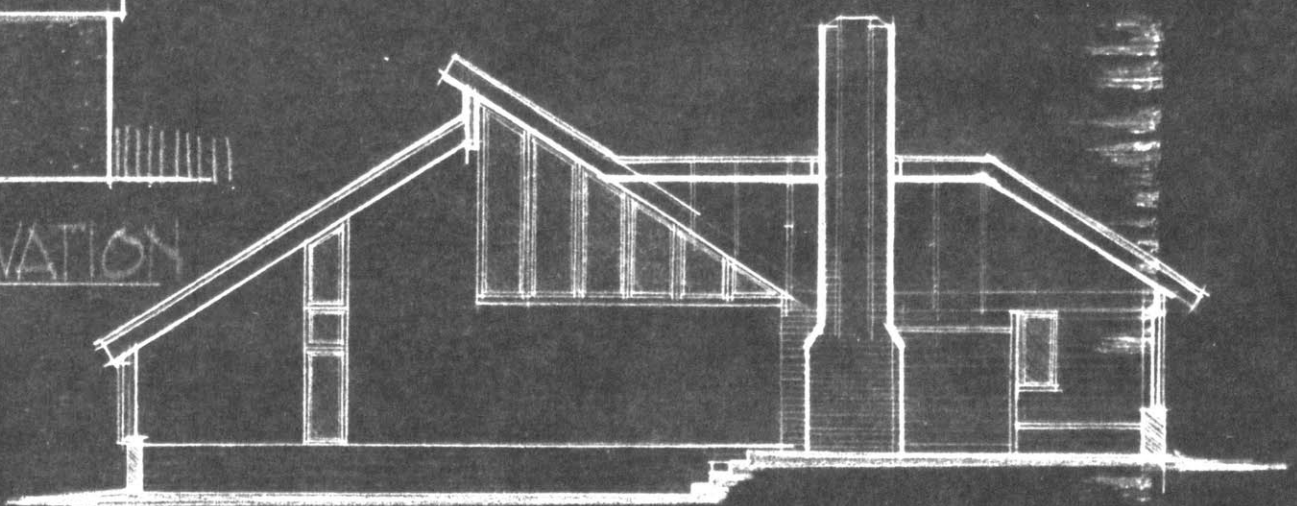
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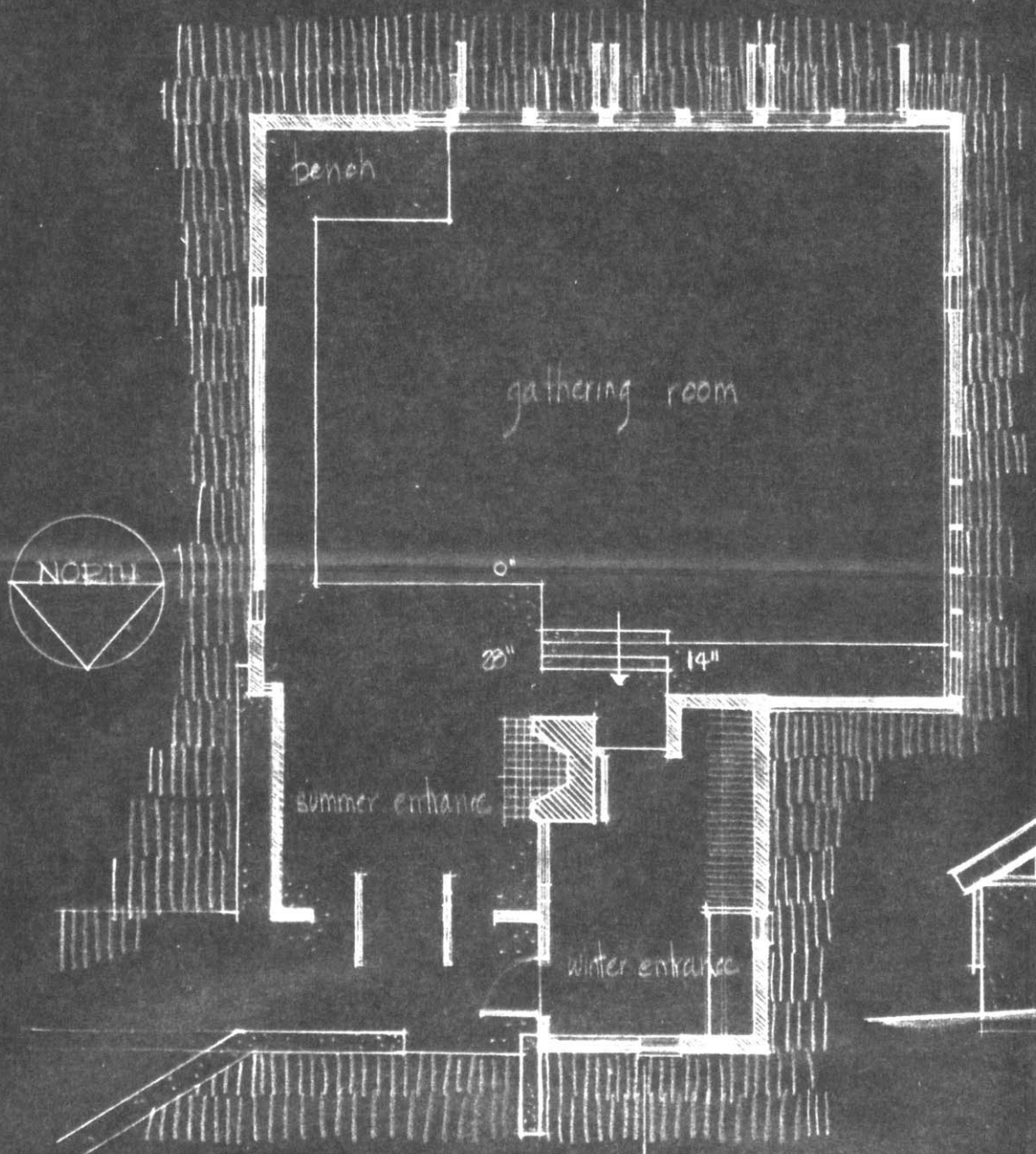




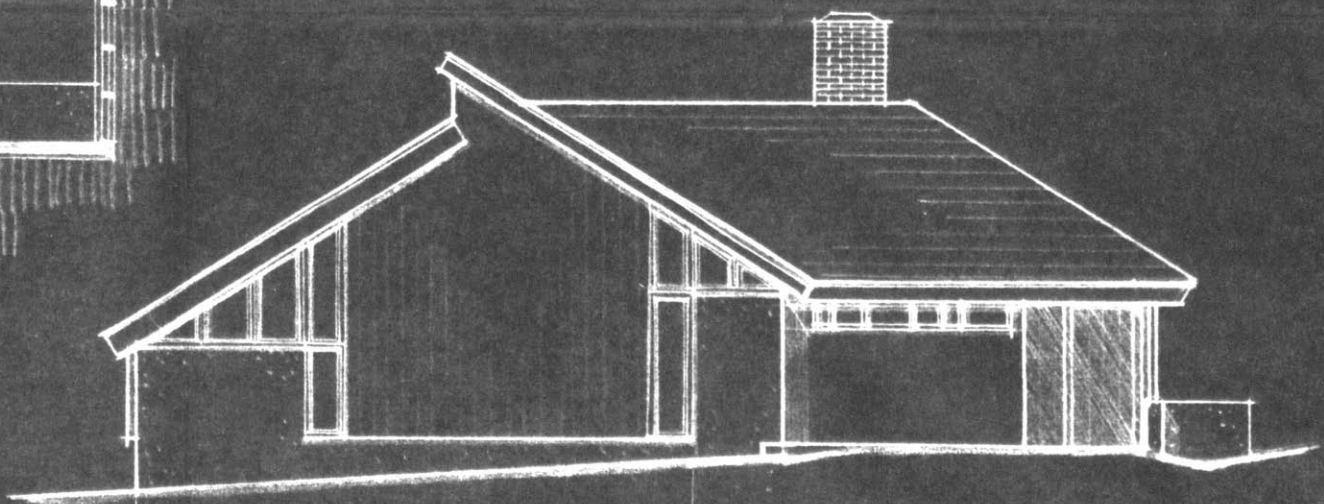
SOUTH ELEVATION



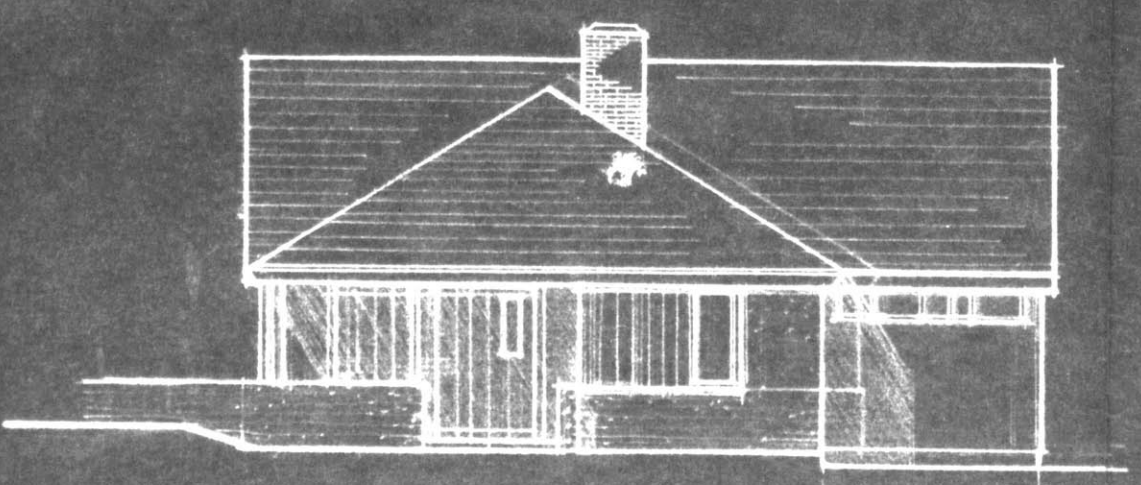
SECTION A-A



PLAN



EAST ELEVATION



NORTH ELEVATION

# GATHERING ROOM

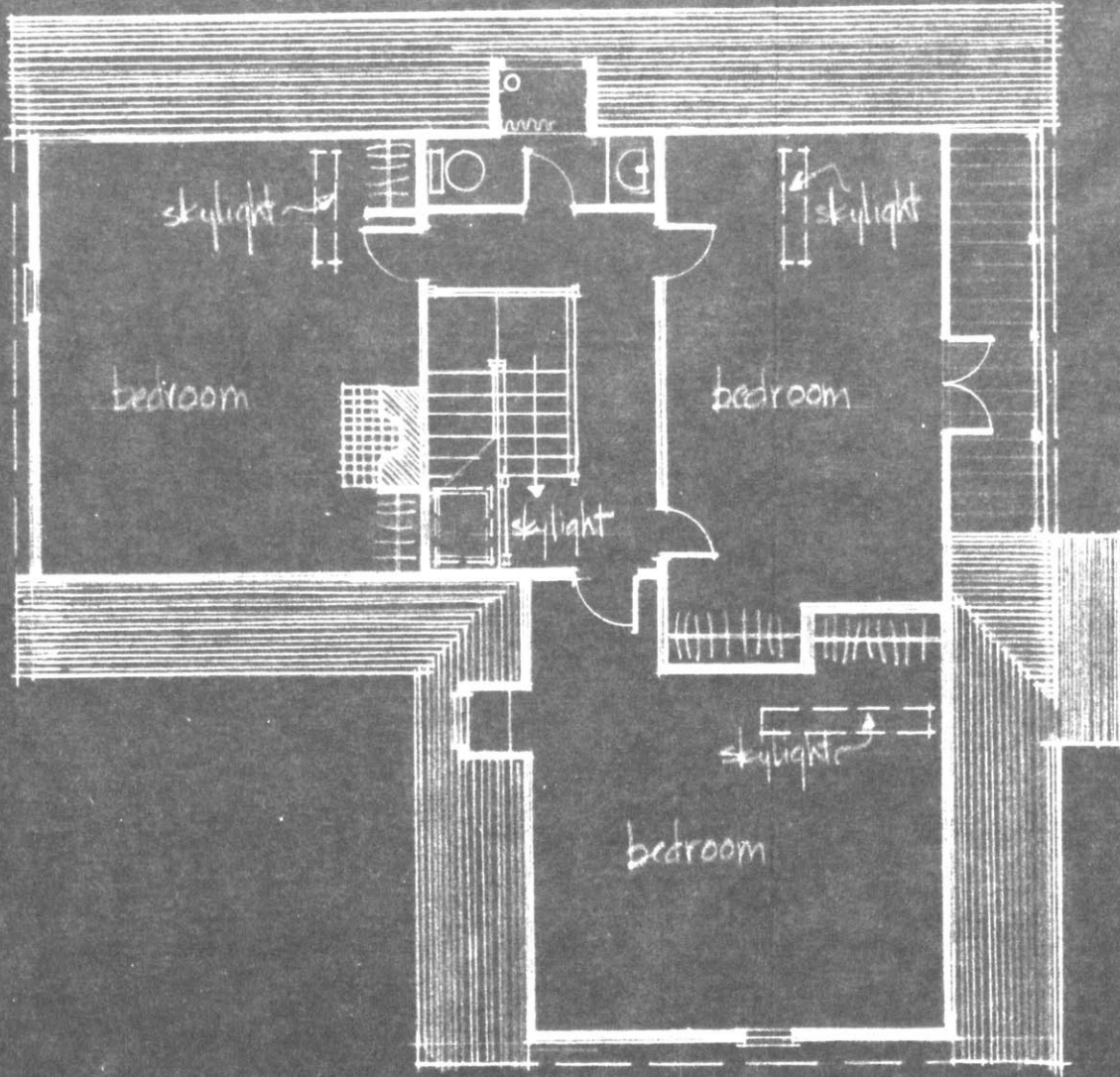
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JANE GRISWOLD PATTERSON

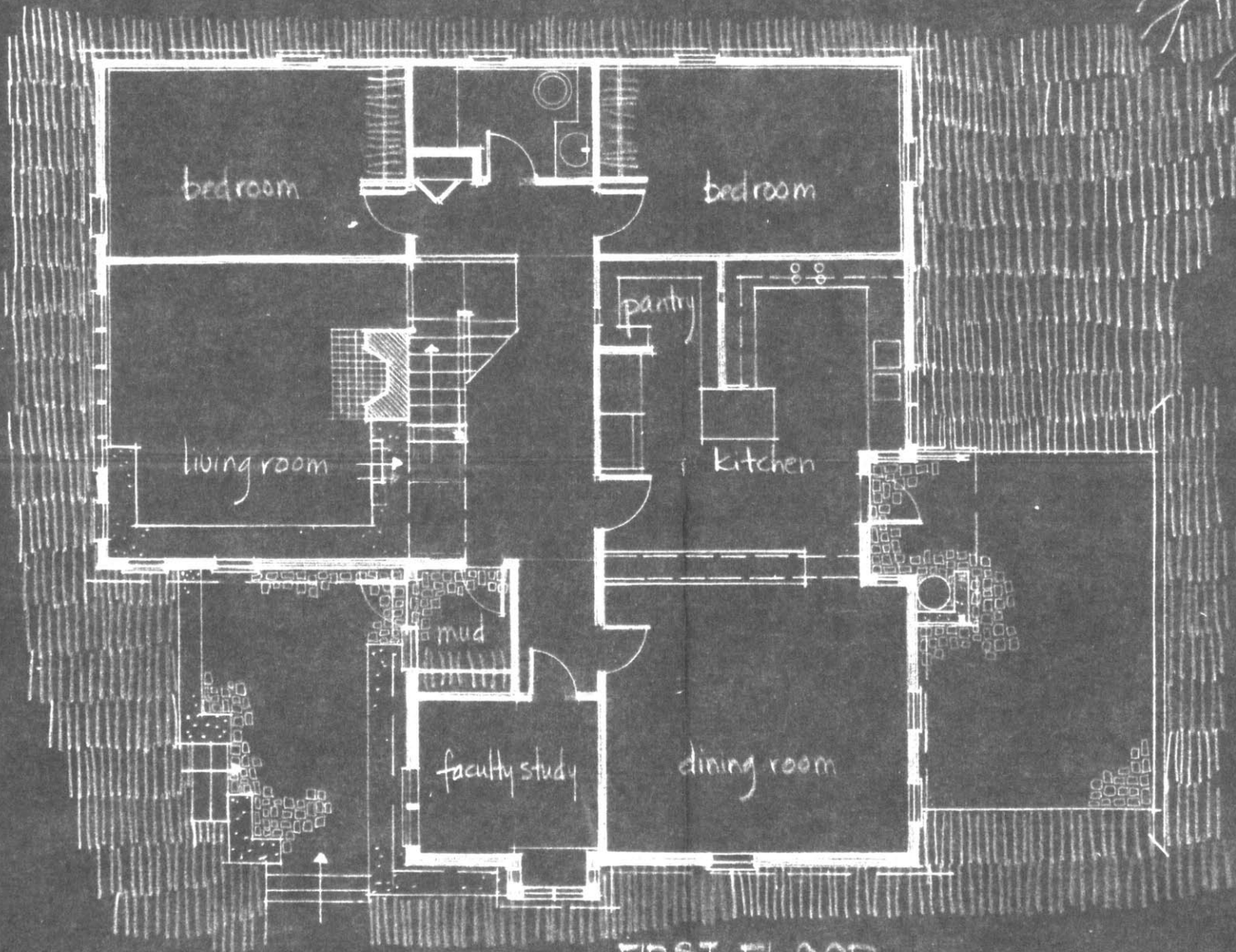
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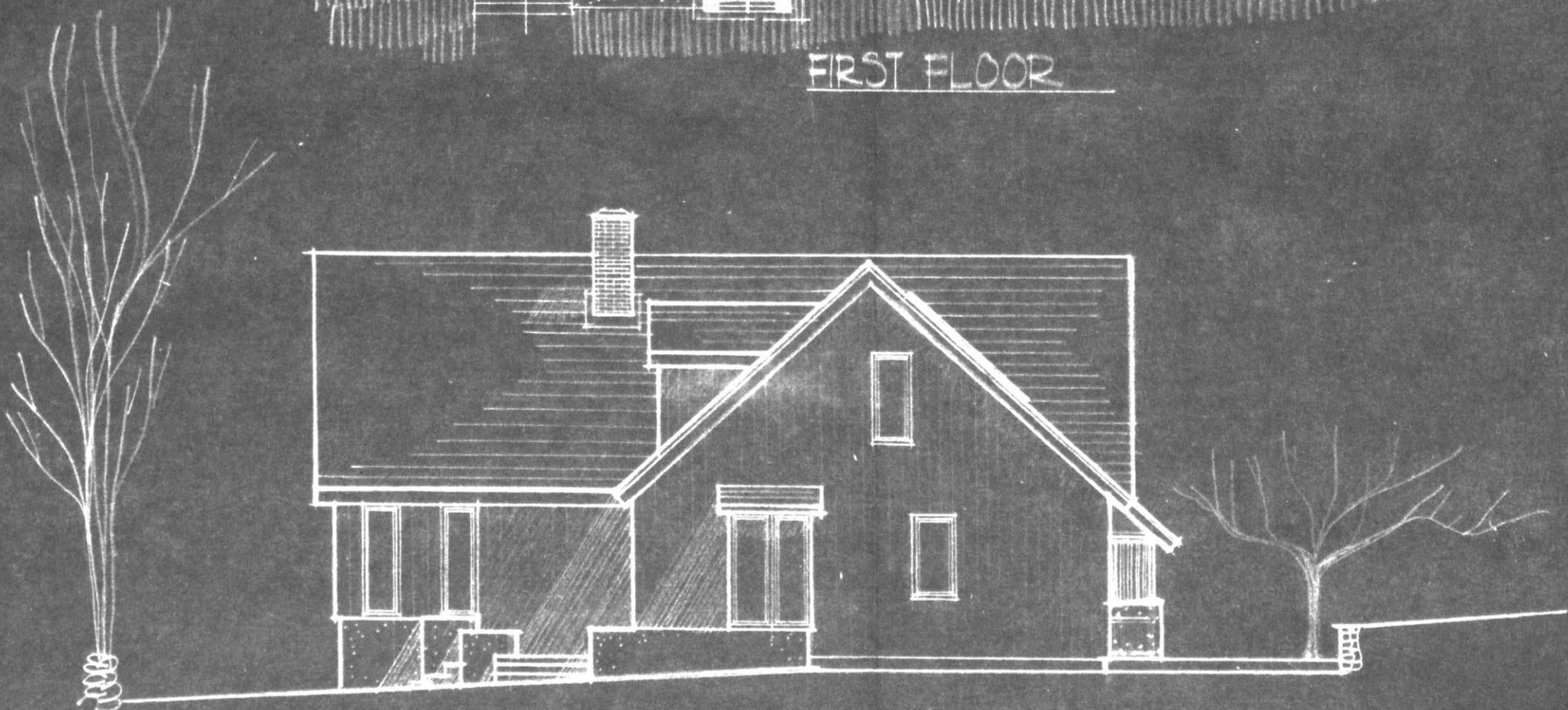




SECOND FLOOR



FIRST FLOOR



SOUTH ELEVATION

HOUSE

1/8" = 1'-0" 4 JUNE 1970

JANE GRISWOLD PATTERSON

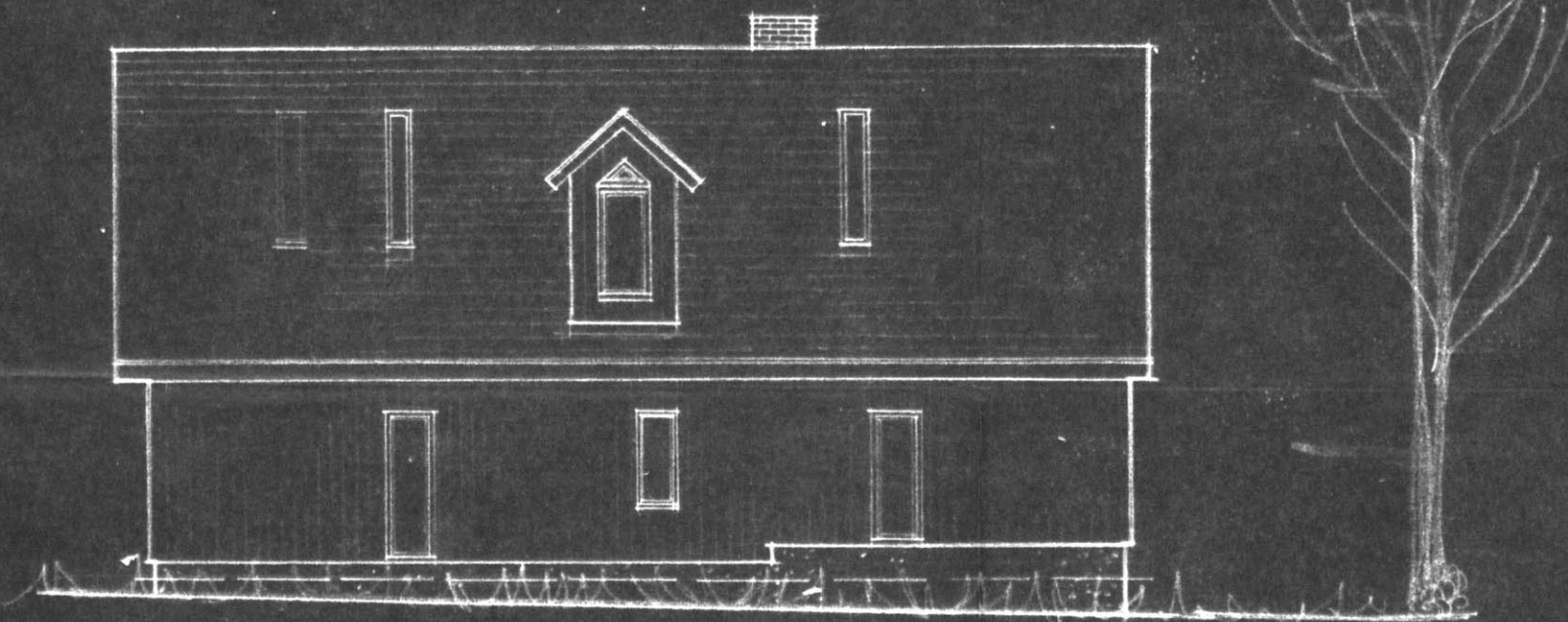
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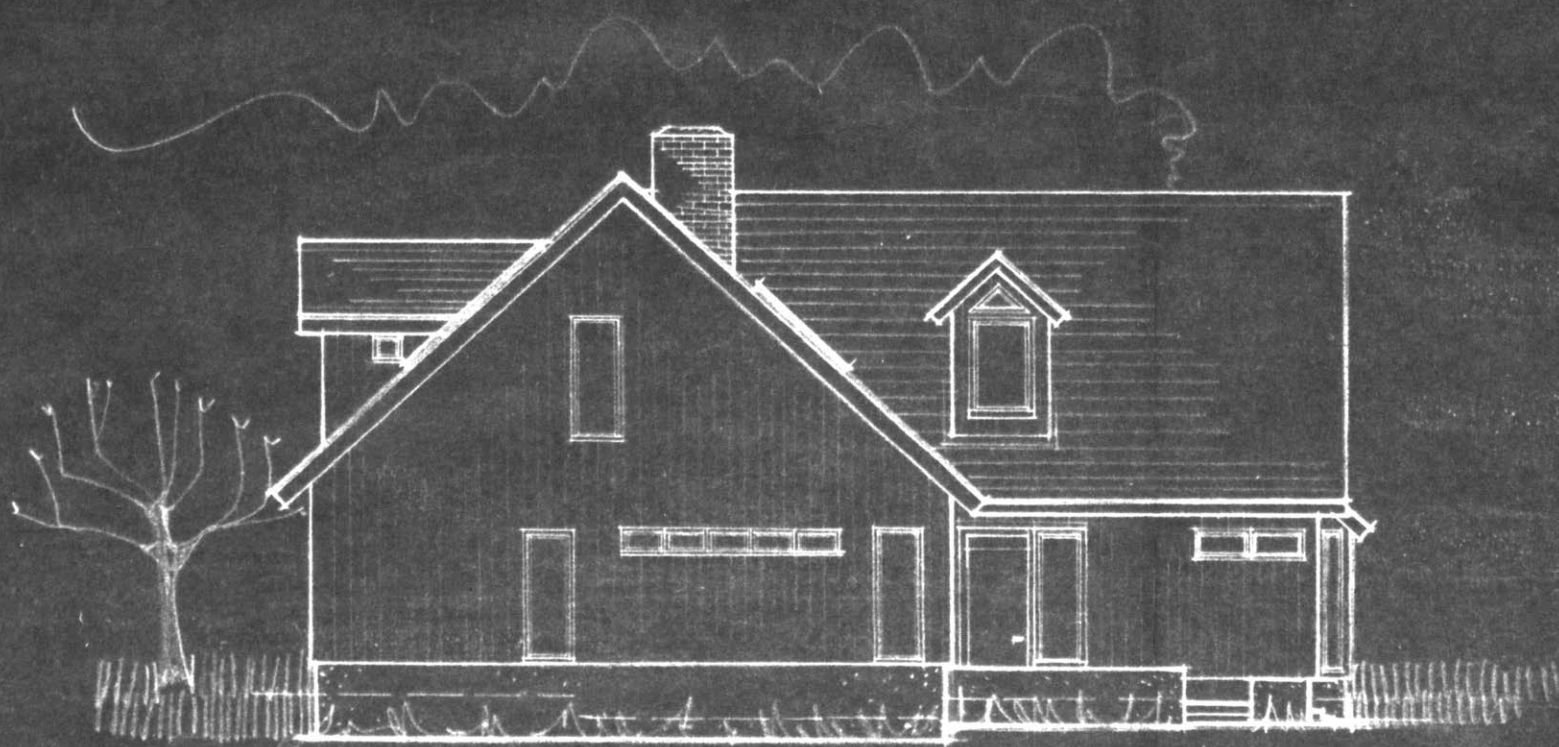




EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

**HOUSE 2**

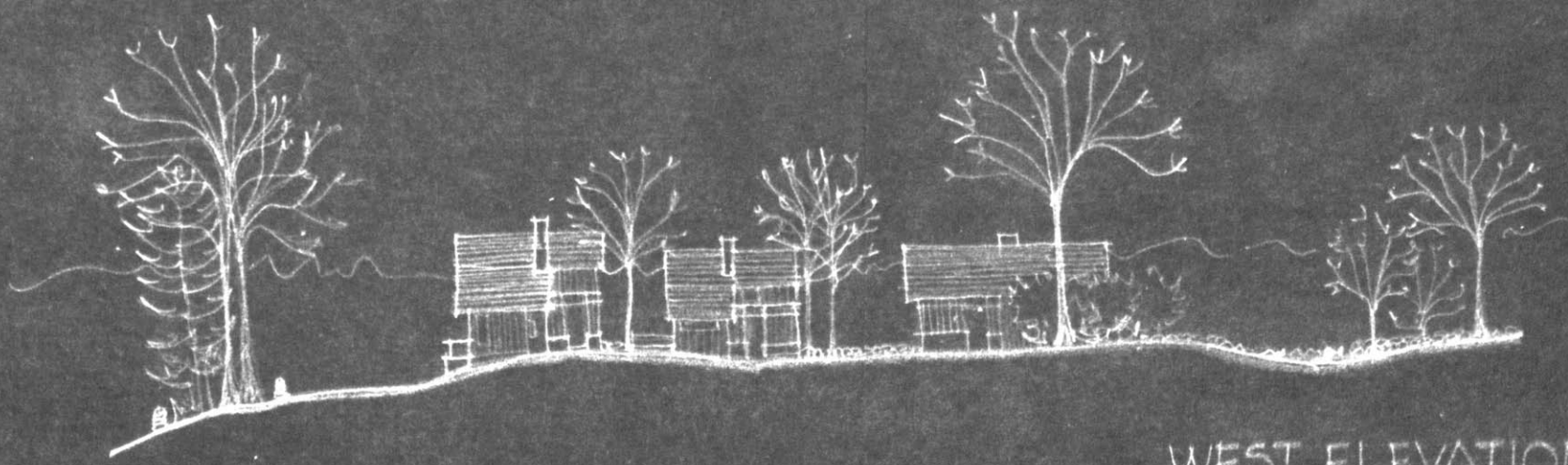
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JANE GRISWOLD PATTERSON

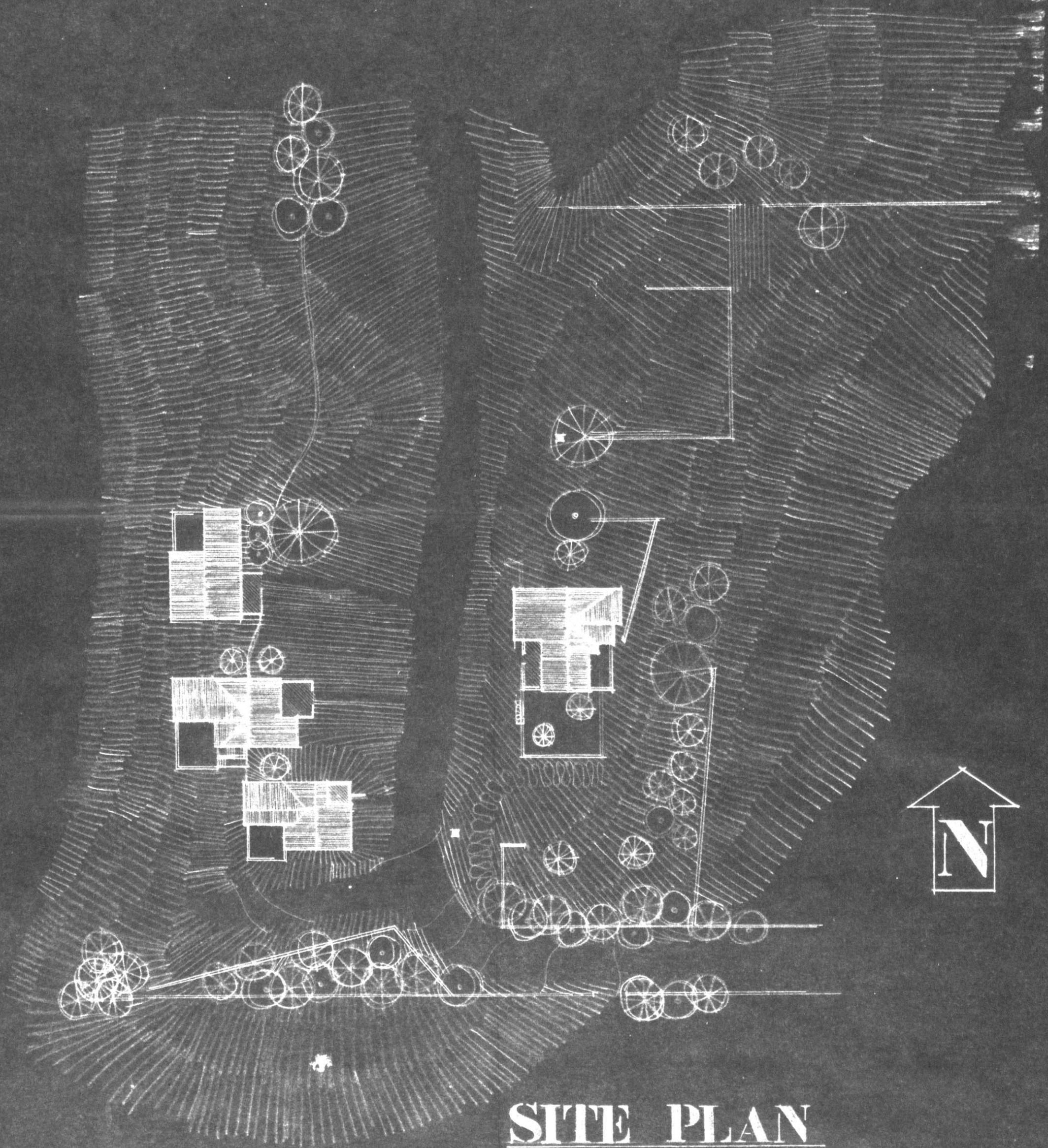
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**6**





WEST ELEVATION



SITE PLAN

BARTLETT HILL

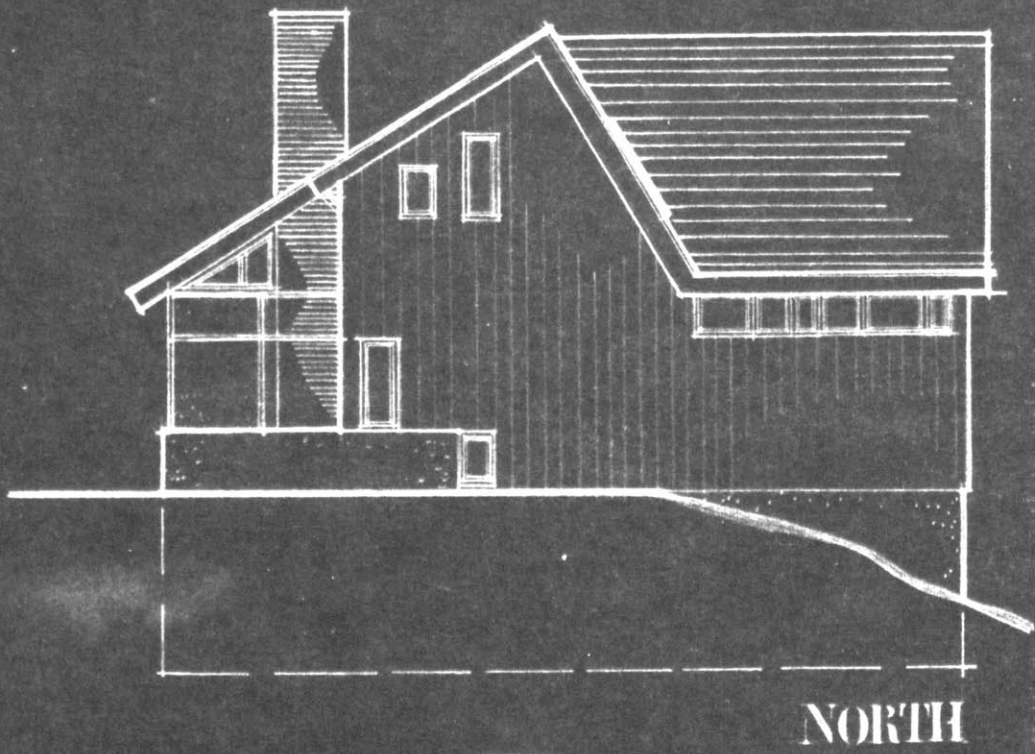
1" = 30'-0" 4 JUNE 1970

JANE GRISWOLD PATTERSON

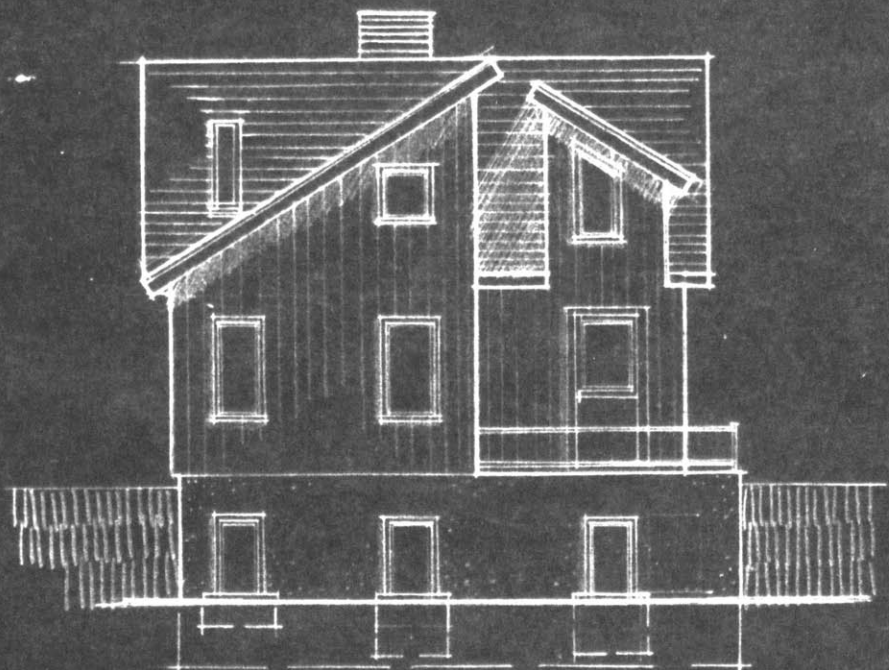
TMS



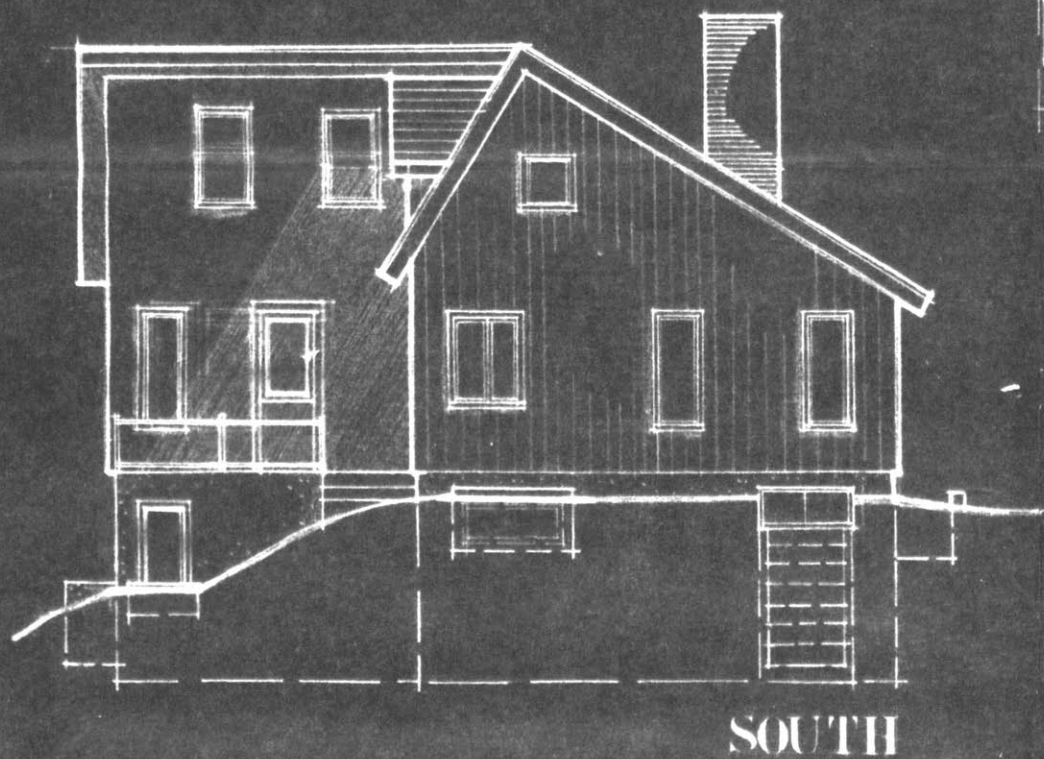




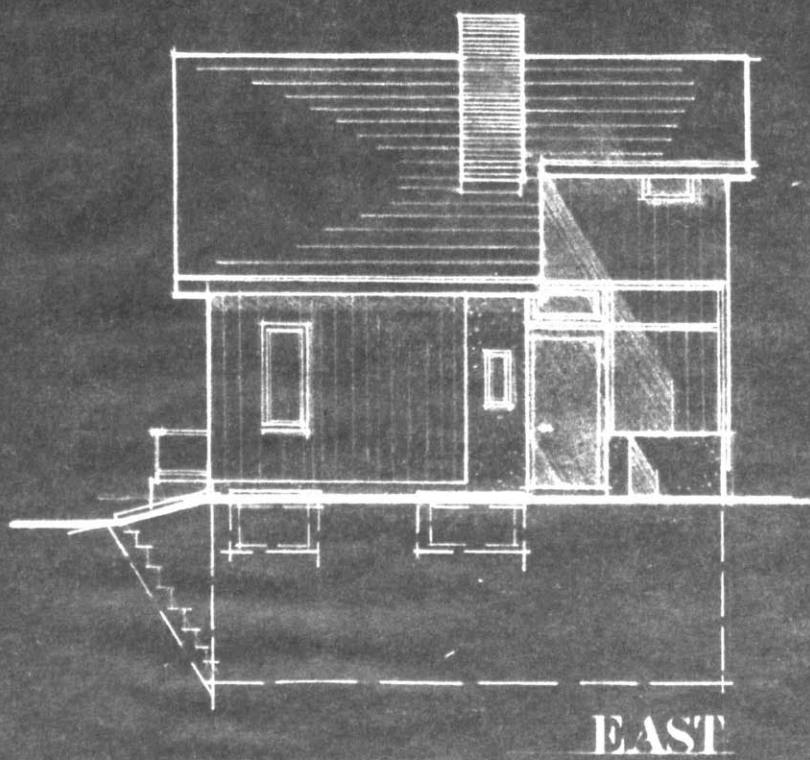
NORTH



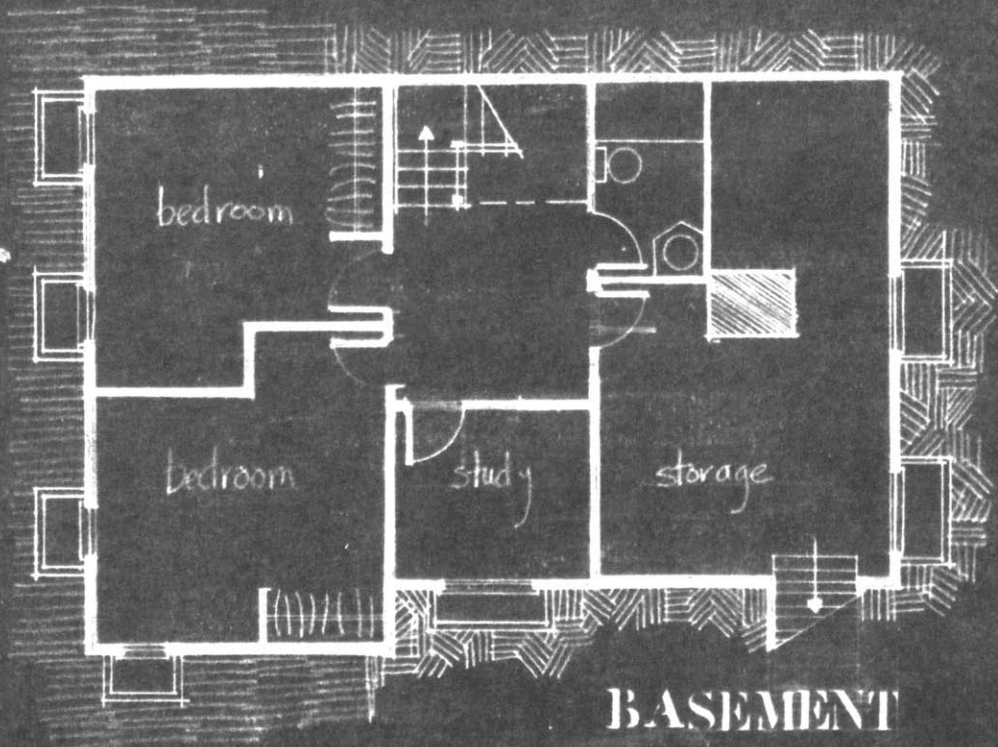
WEST



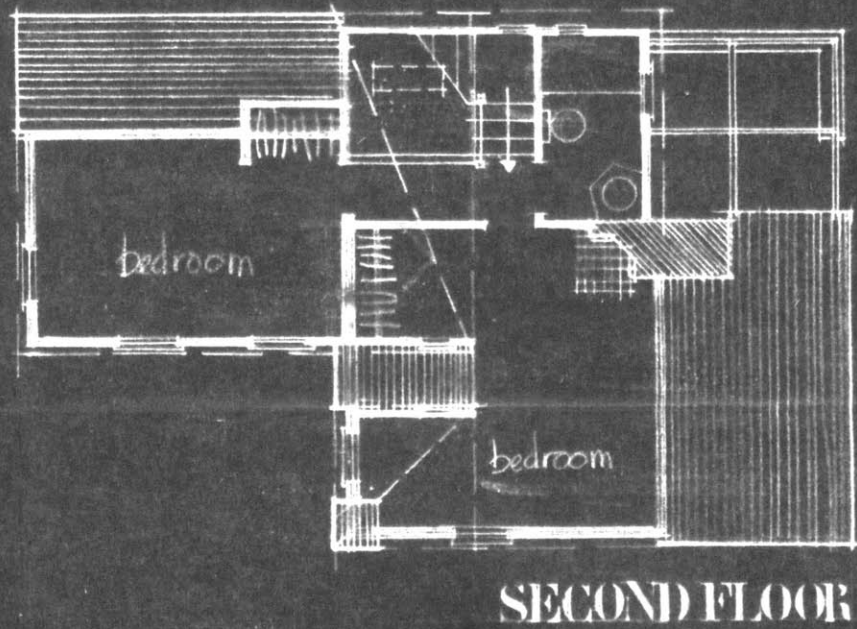
SOUTH



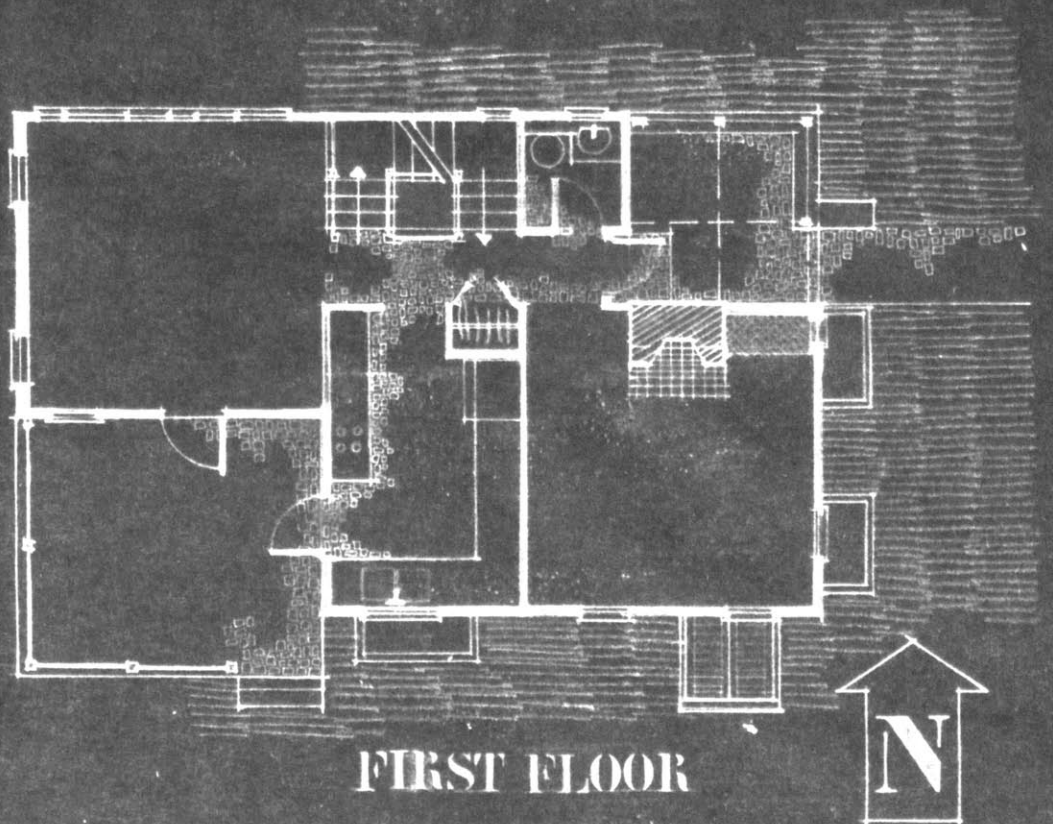
EAST



BASEMENT



SECOND FLOOR



FIRST FLOOR

# FIRST HOUSE

BARTLETT HILL

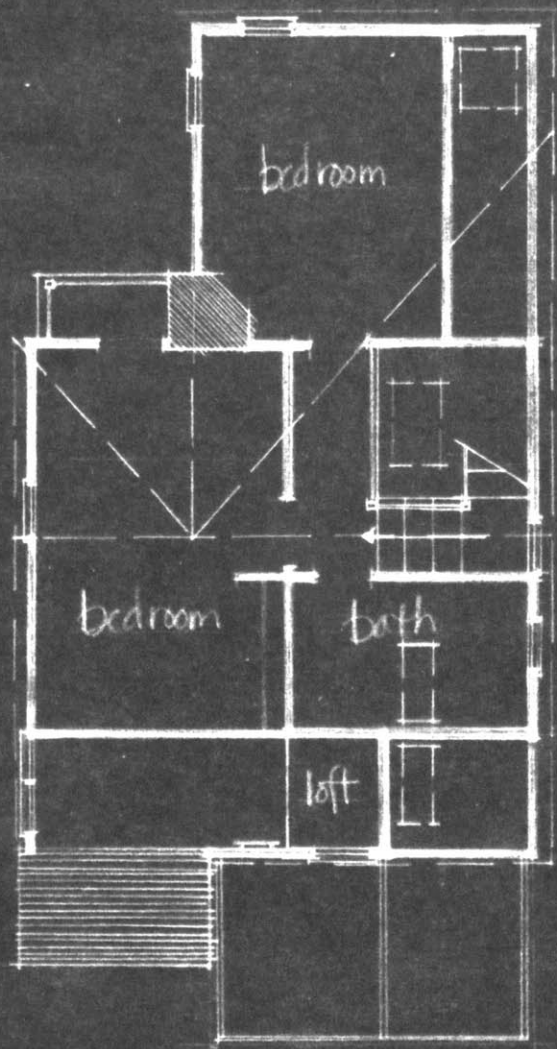
1/8" = 1'-0" 4 JUNE 1970

JANE GRISWOLD PATTERSON

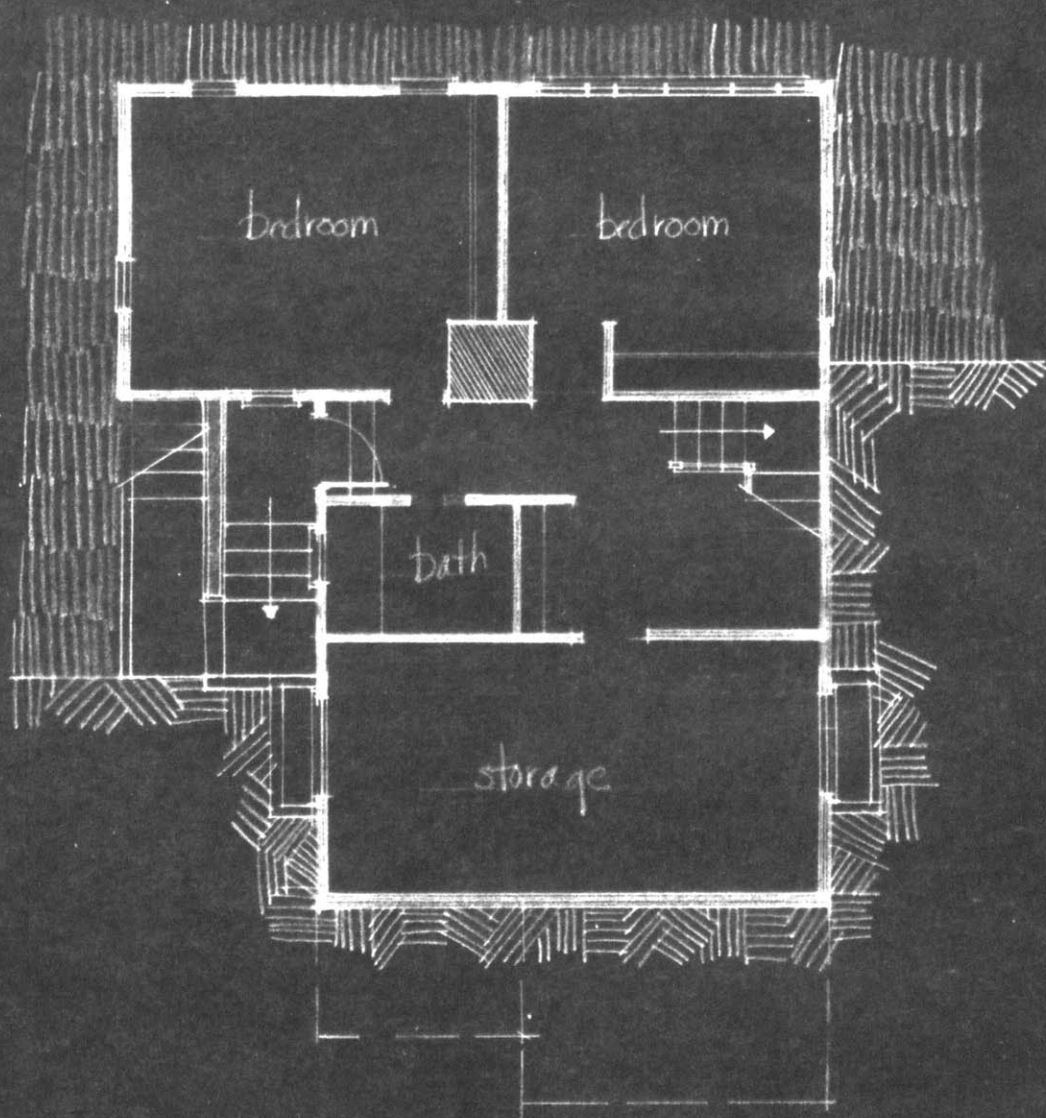
# TMS

# 8

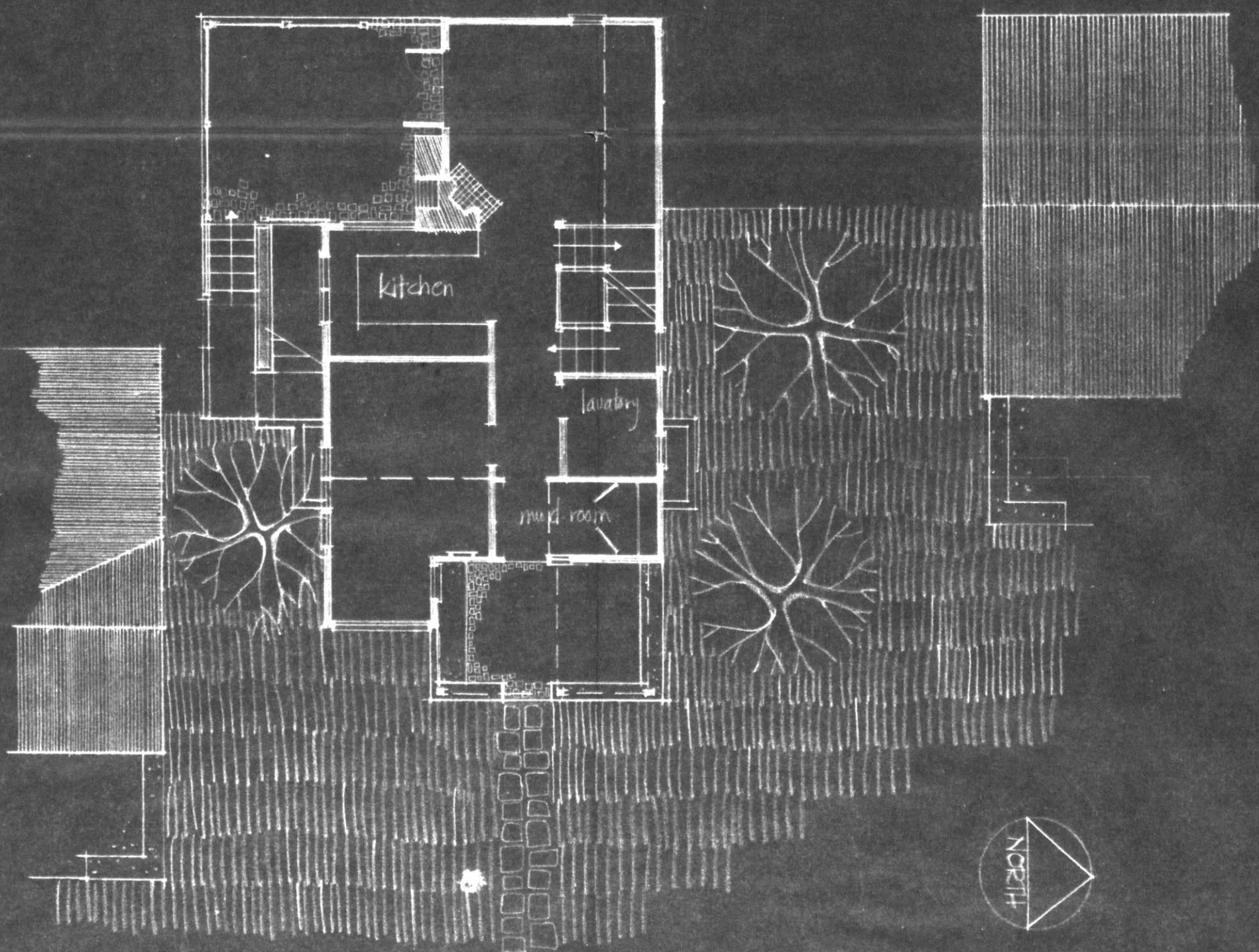




SECOND FLOOR



BASEMENT



FIRST FLOOR

**SECOND HOUSE**

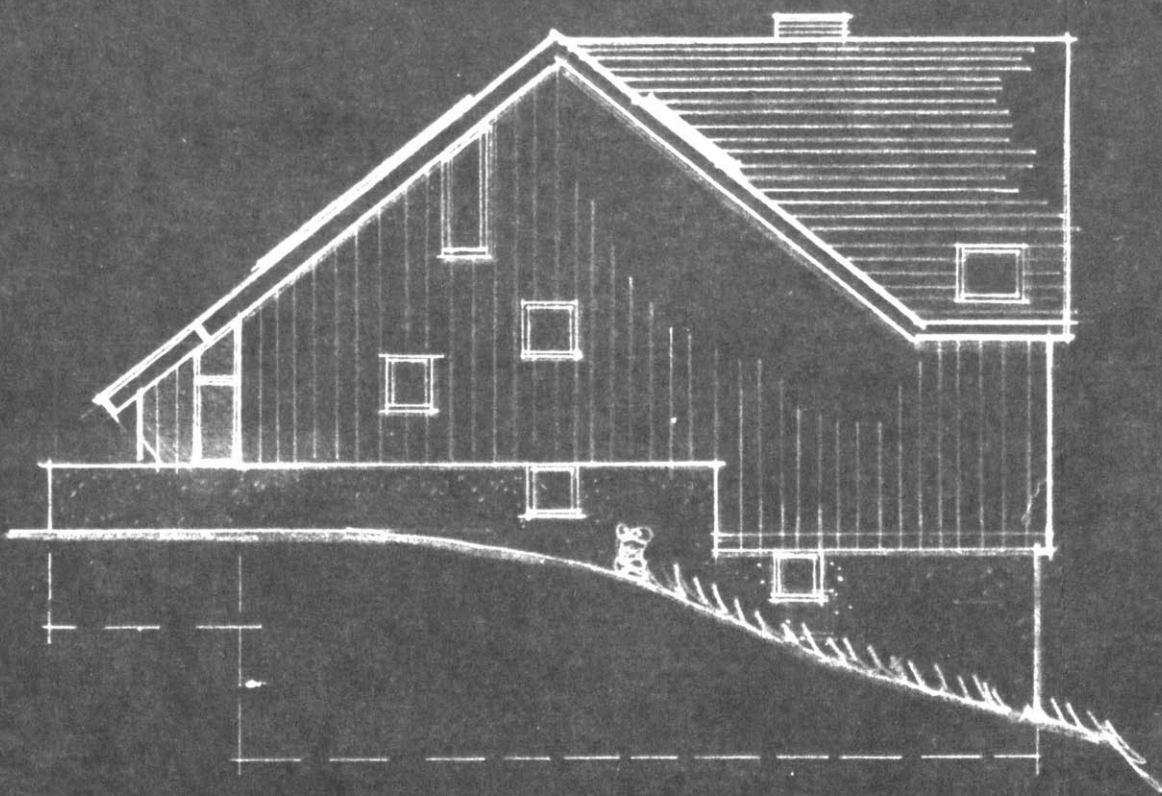
BARTLETT HILL

**TMS**

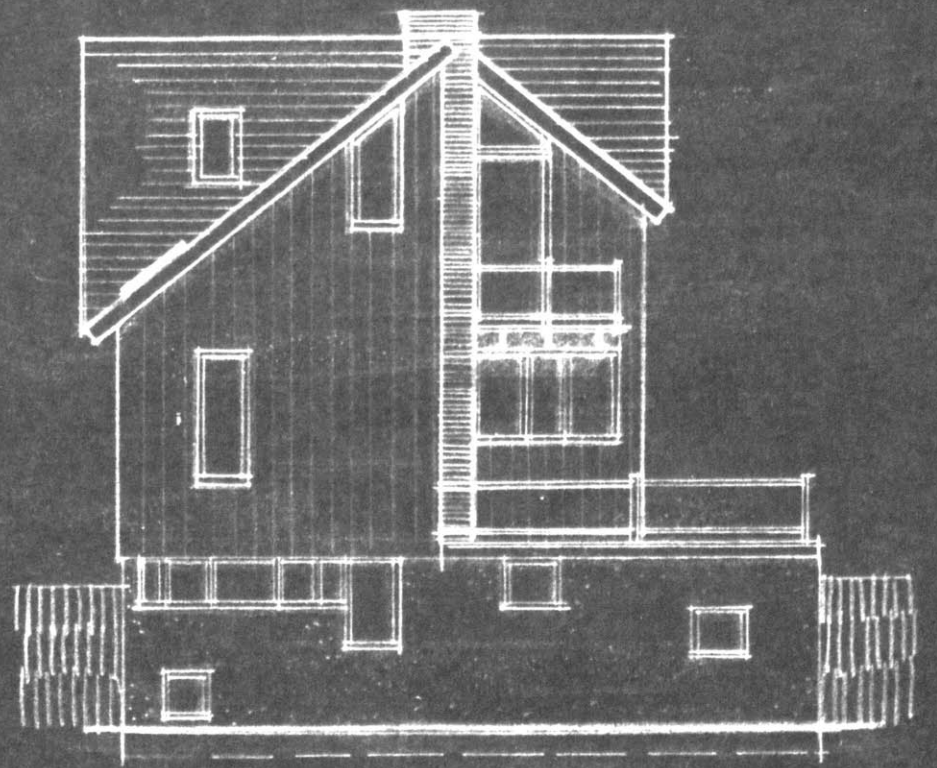
1/8" = 1'-0" 4 JUNE 1970

JANE GRISWOLD PATTERSON

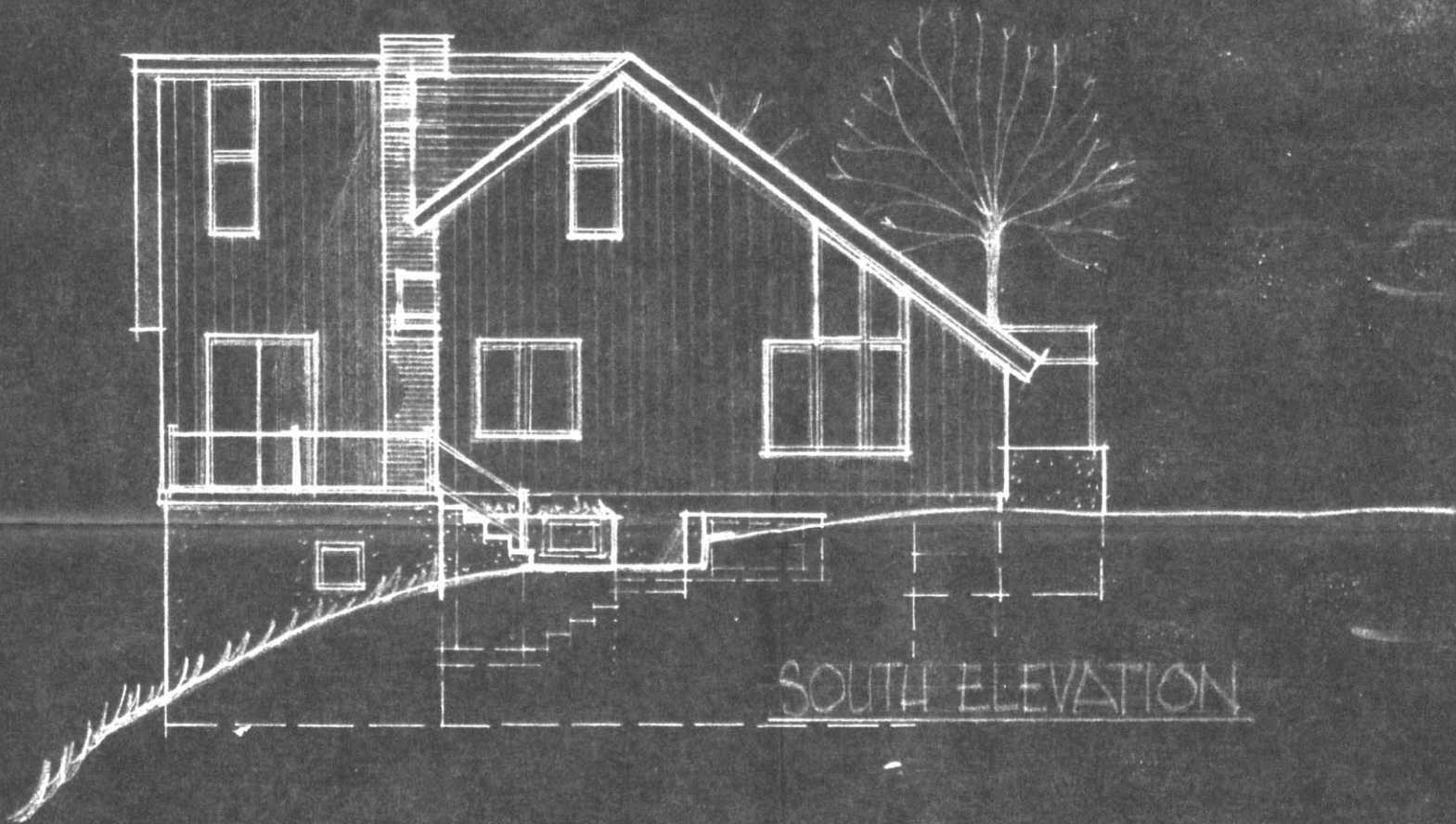




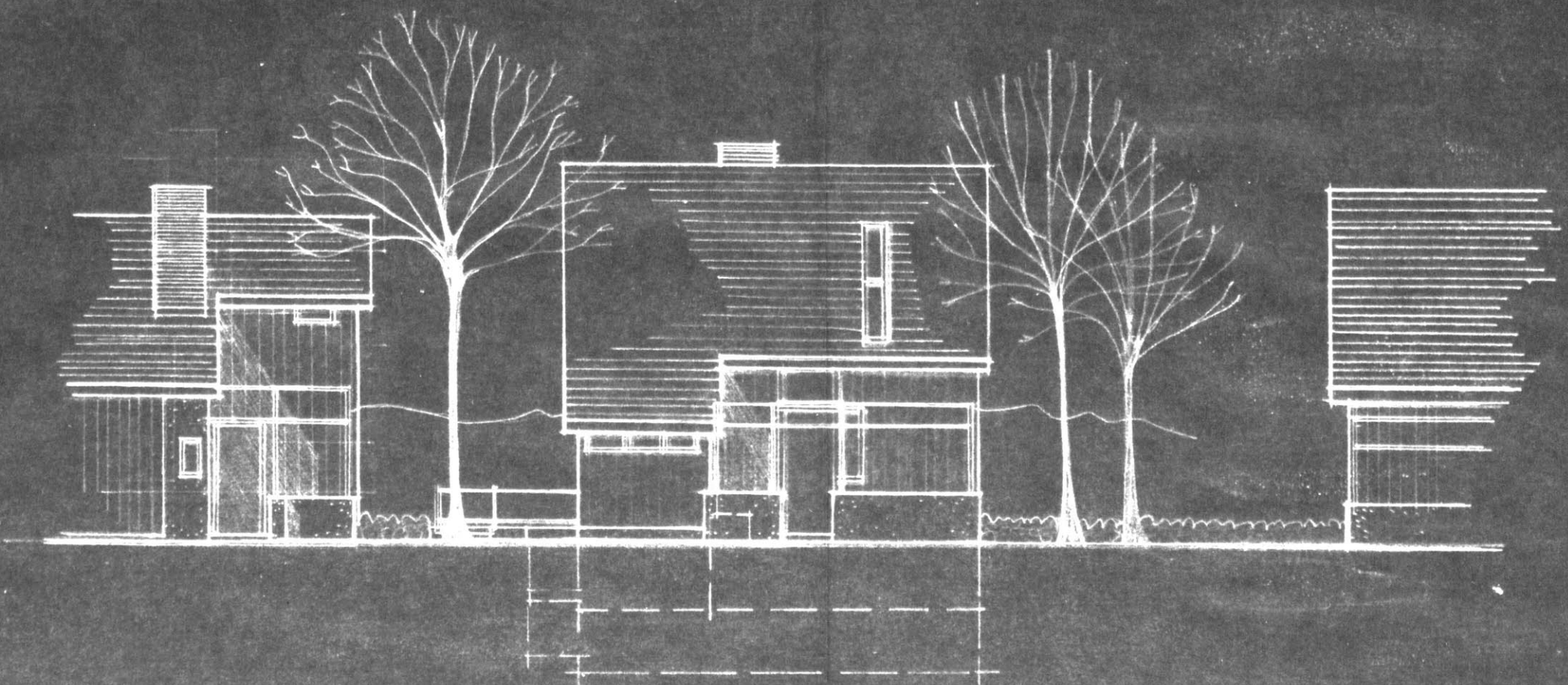
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

**SECOND HOUSE 2**

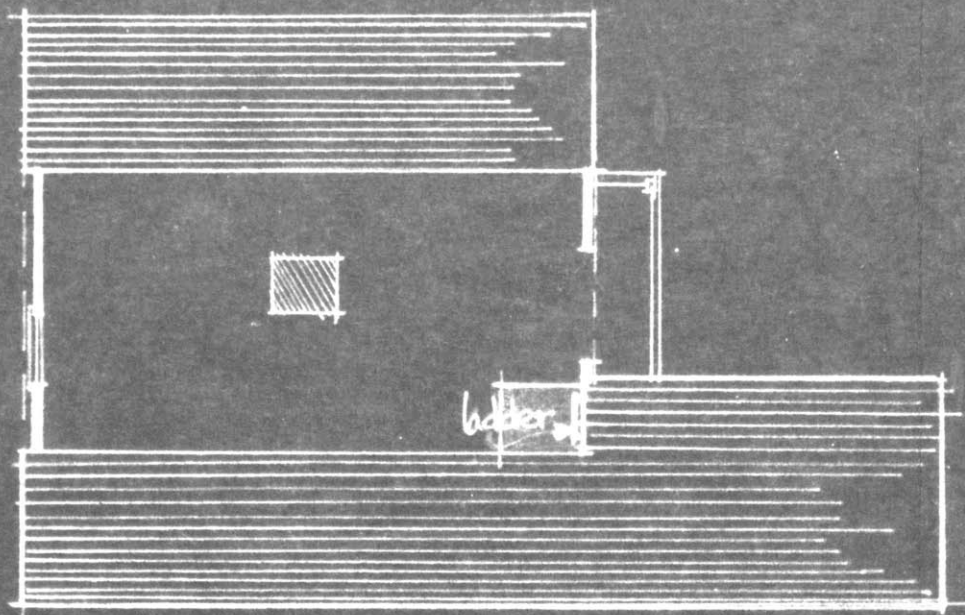
$\frac{1}{8}'' = 1'-0''$  4 JUNE 1970

JANE GRISWOLD PATTERSON

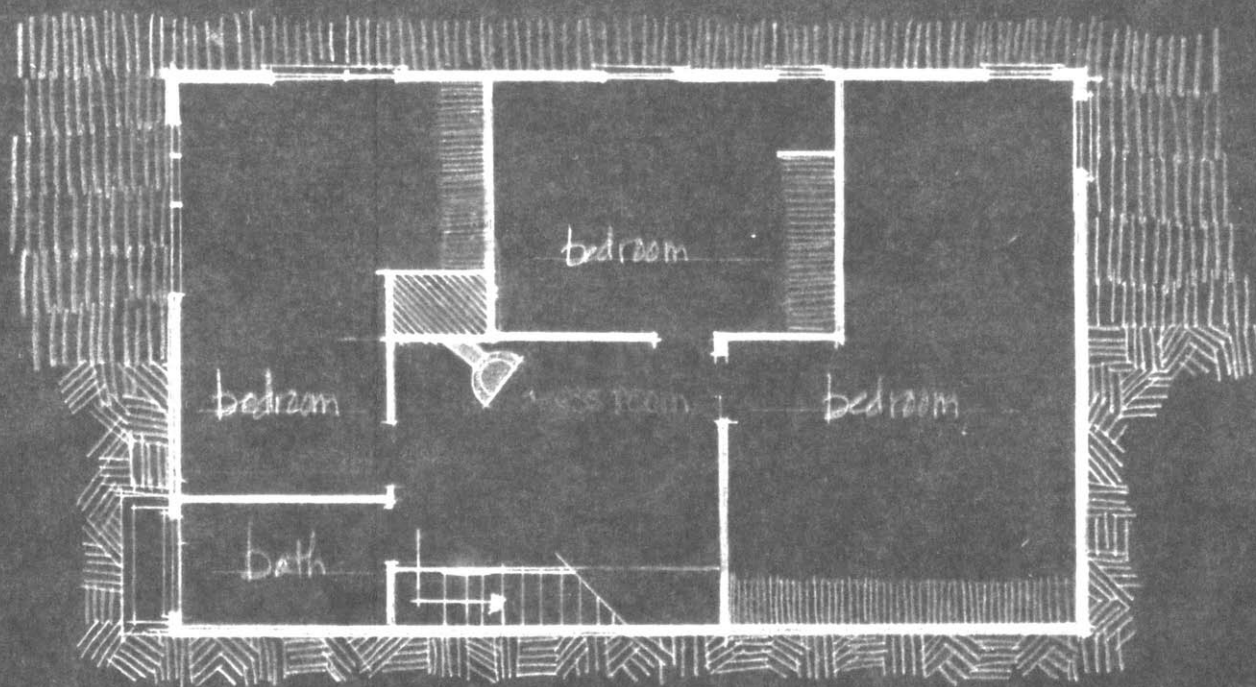
**TMS**

**10**

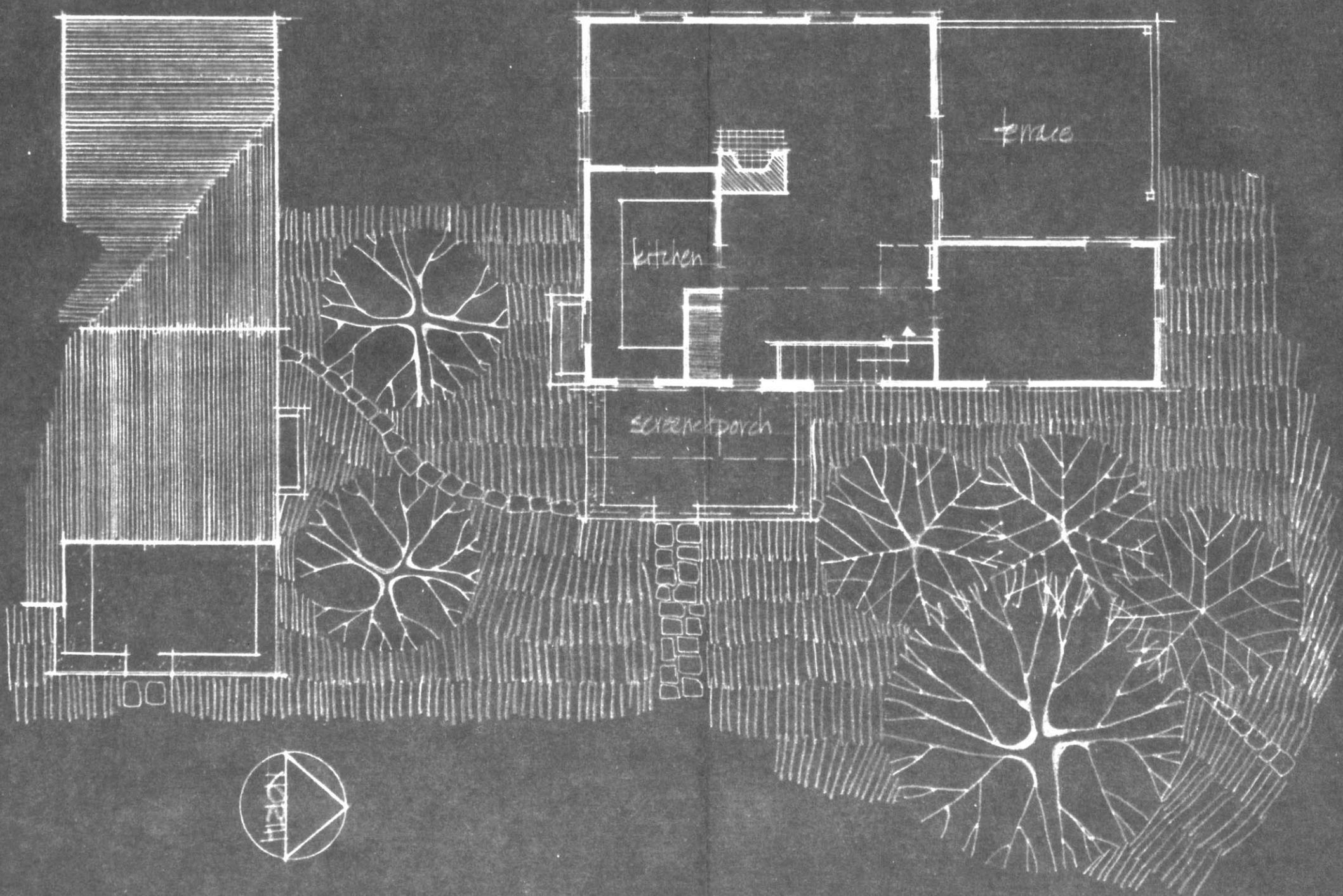




ATTIC



BASEMENT



**THIRD HOUSE**

BARTLETT HILL

$\frac{1}{8}'' = 1'-0''$

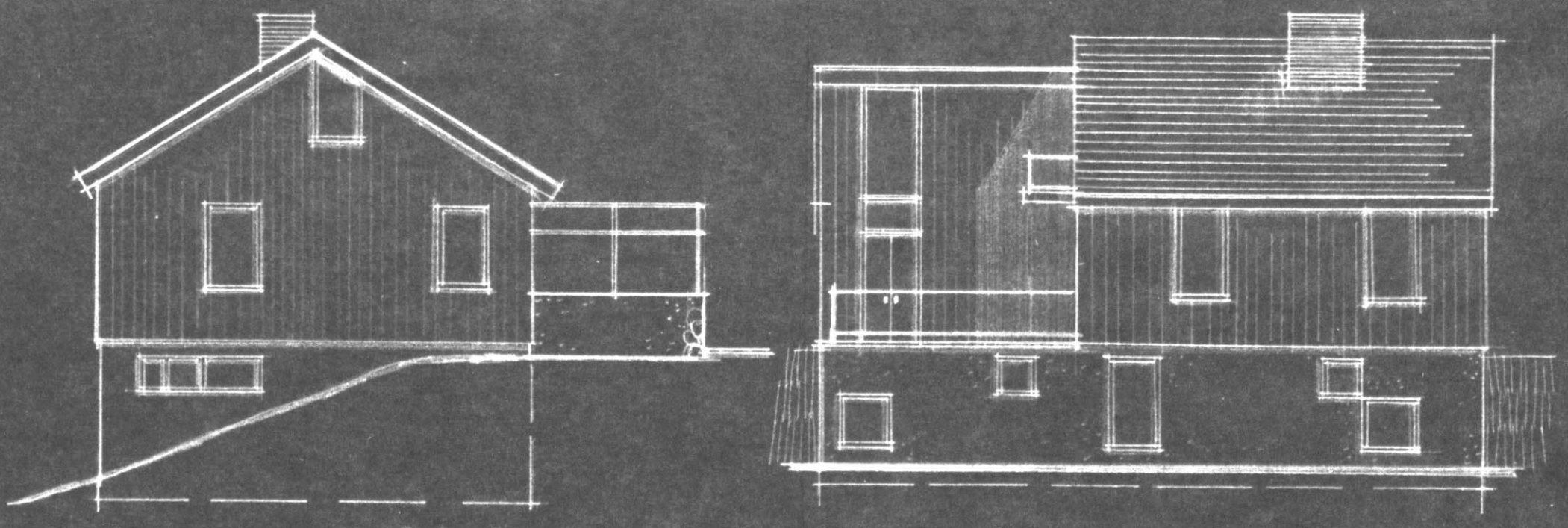
4 JUNE 1970

JANE GRISWOLD PATTERSON

**TMS**

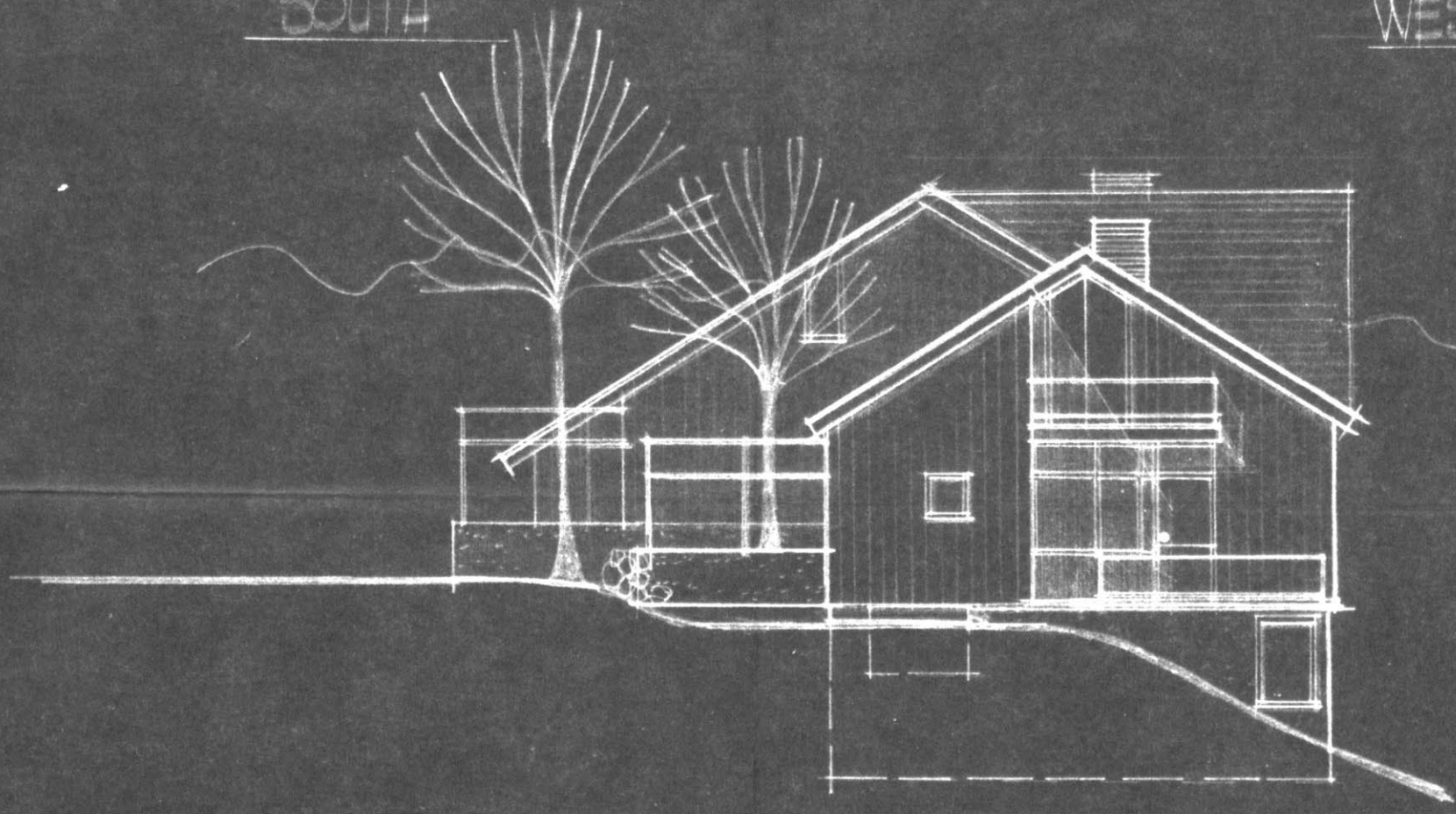
**11**



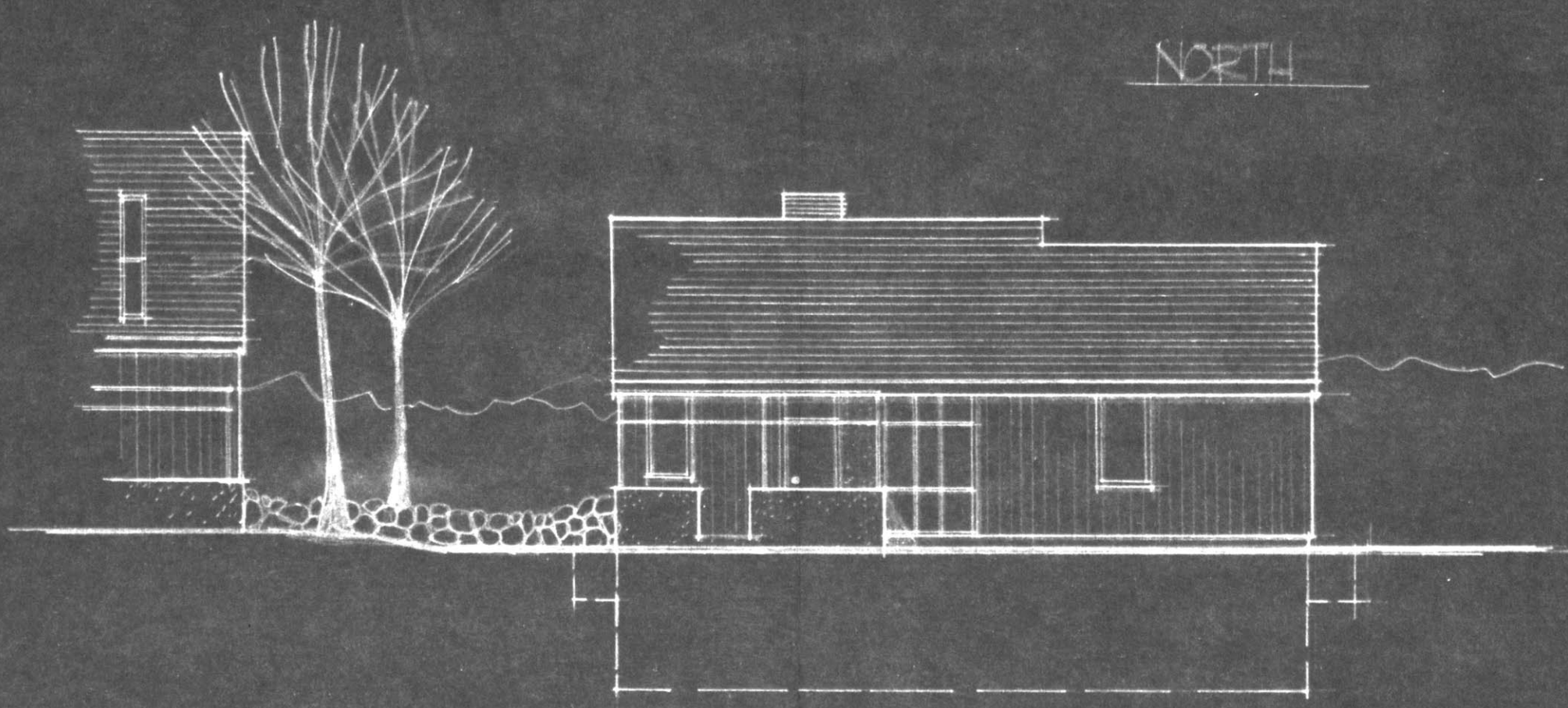


SOUTH

WEST



NORTH



EAST

ELEVATIONS

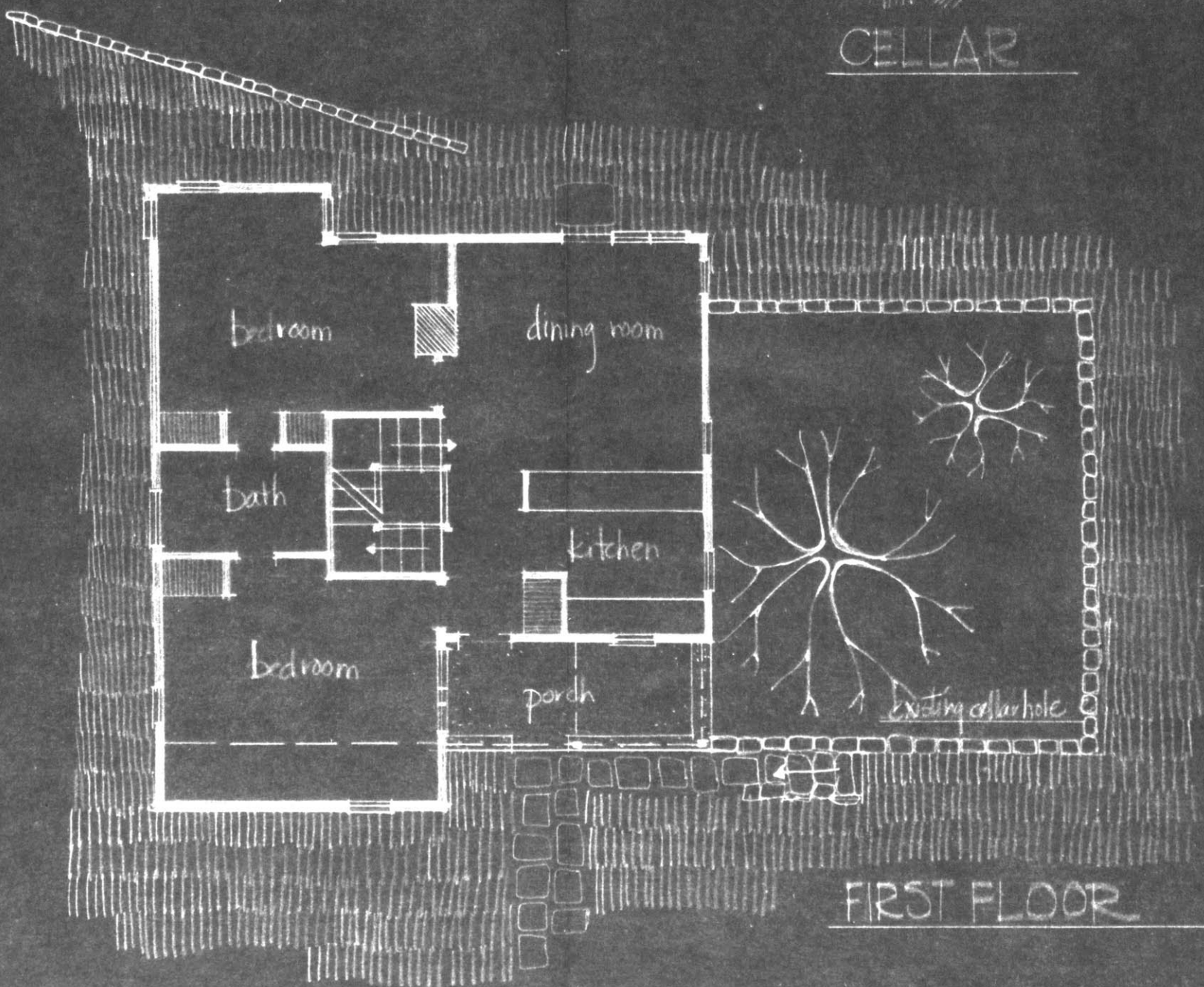
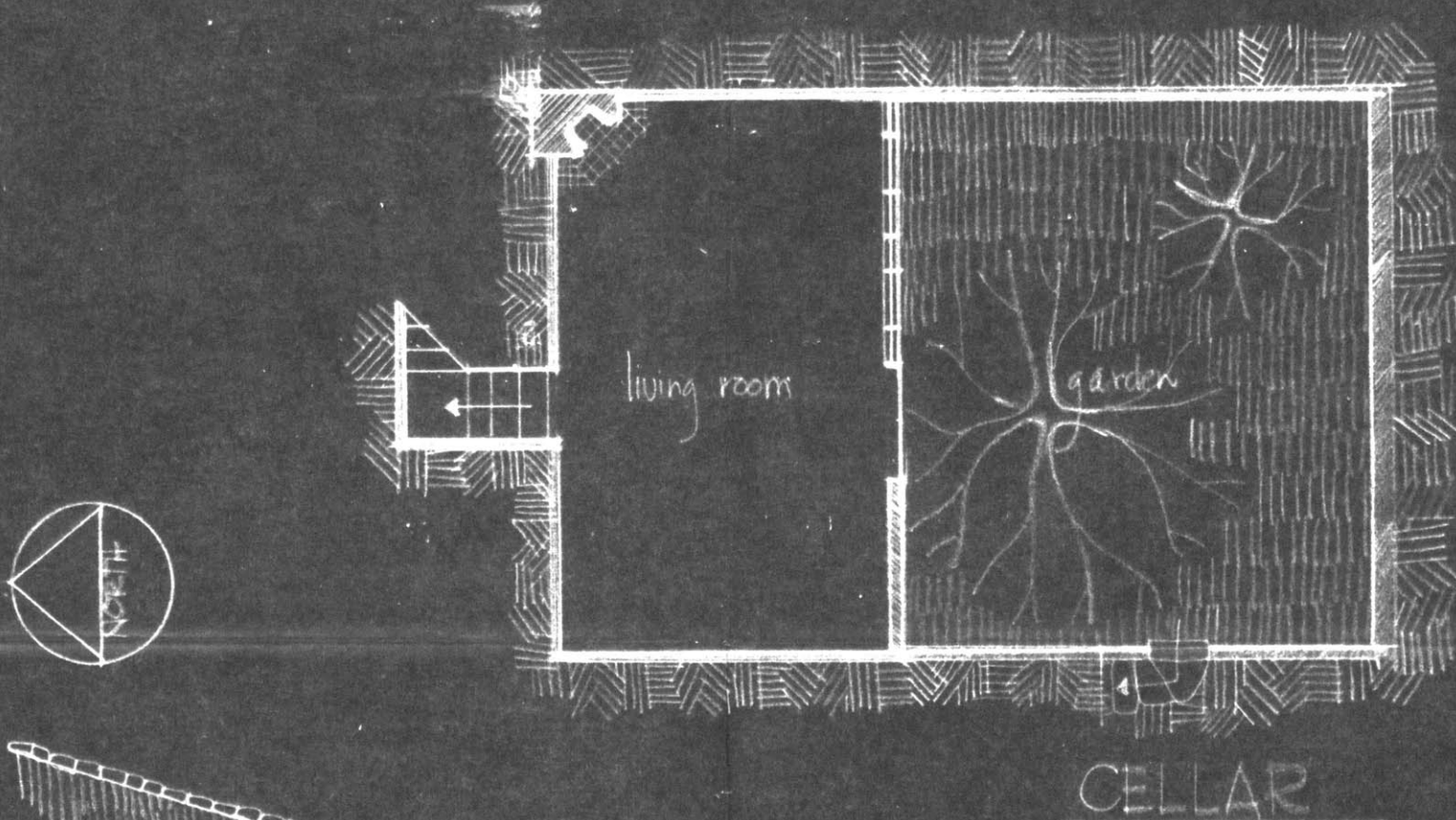
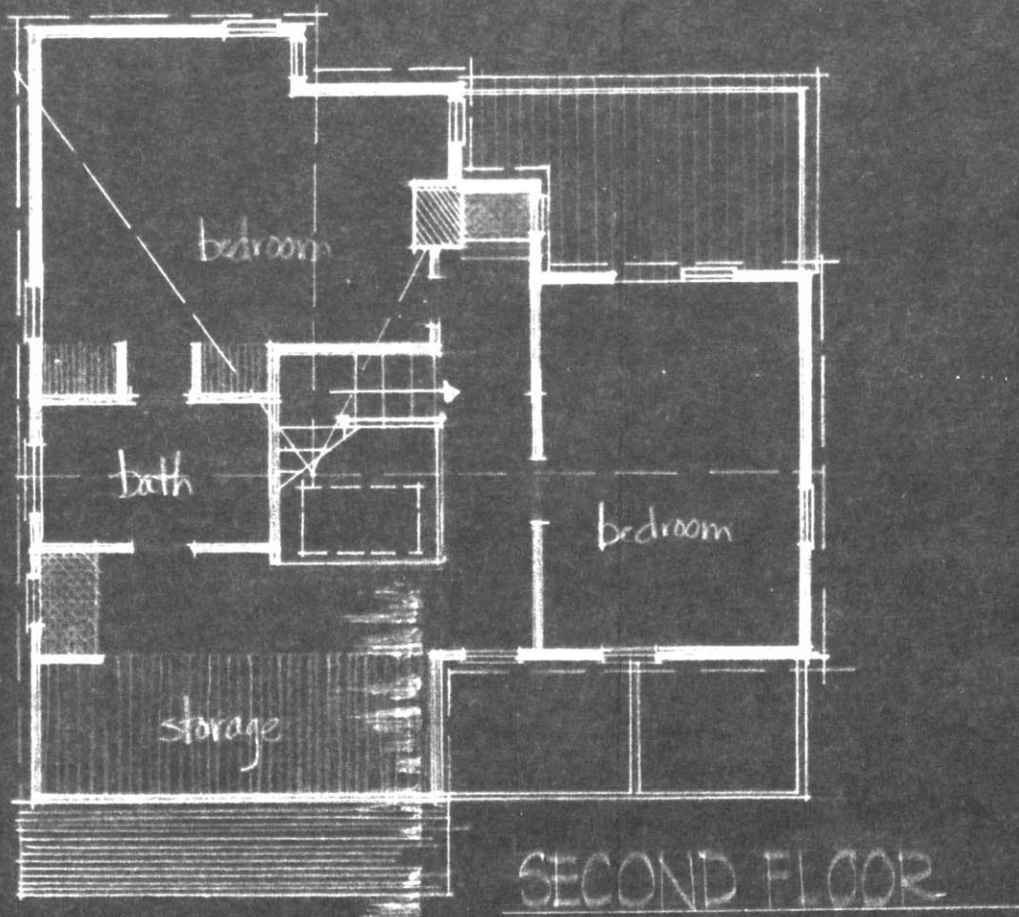
# THIRD HOUSE 2

$\frac{1}{8}'' = 1'-0''$  4 JUNE 1970

JANE GRISWOLD PATTERSON /

# TMS 19





**CELLAR HOUSE**

BARTLETT HILL

**TMS**

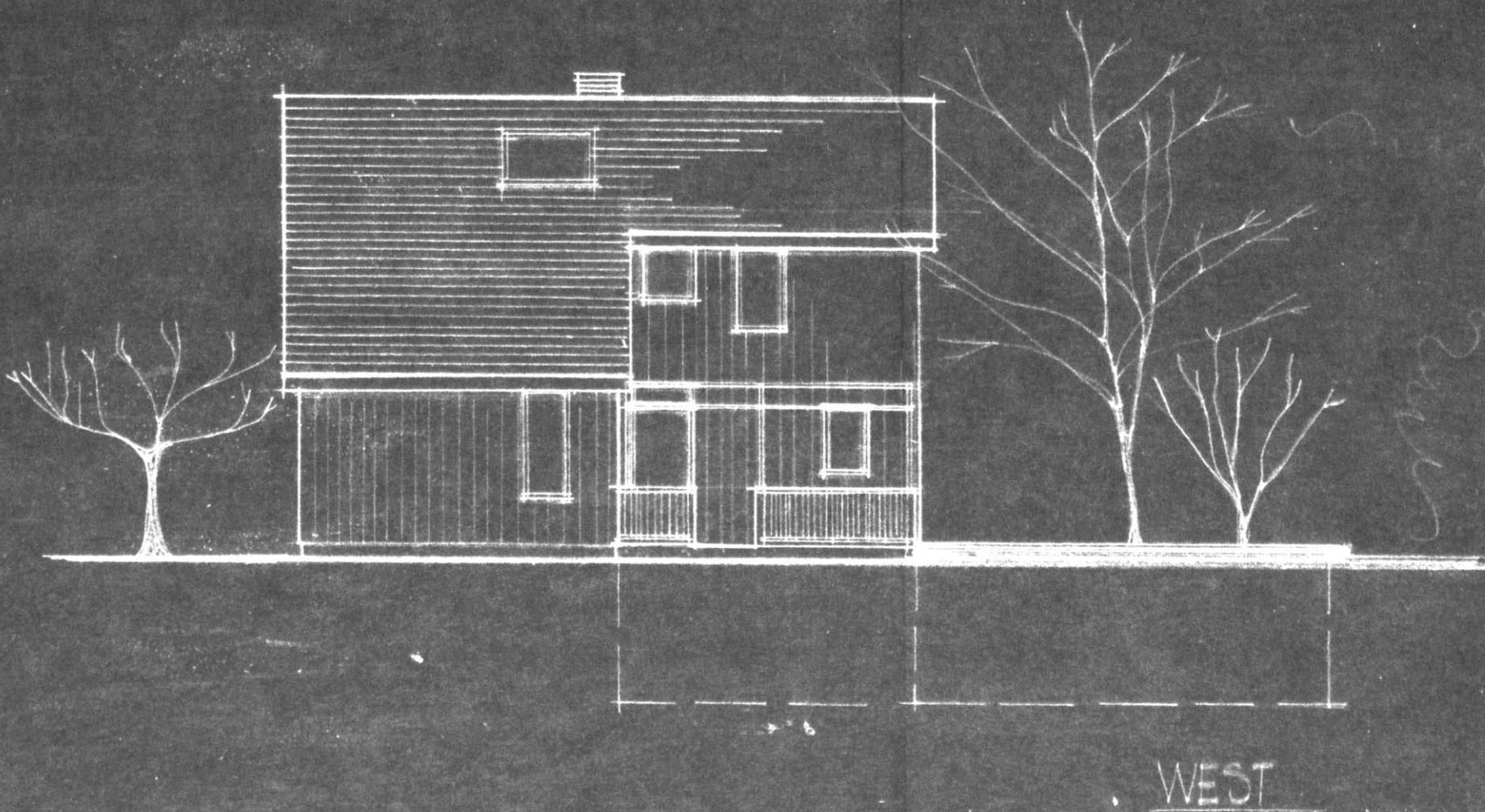
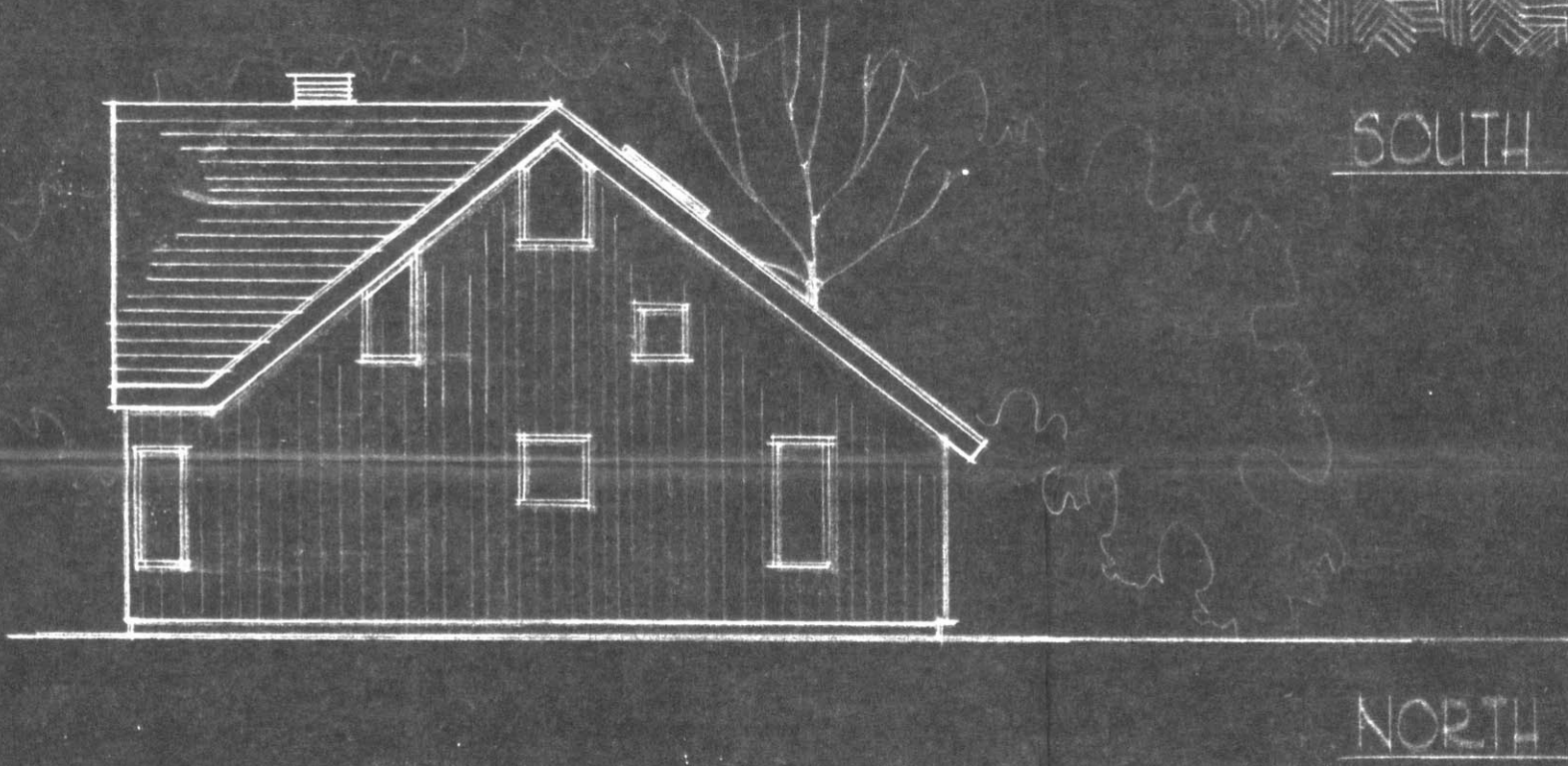
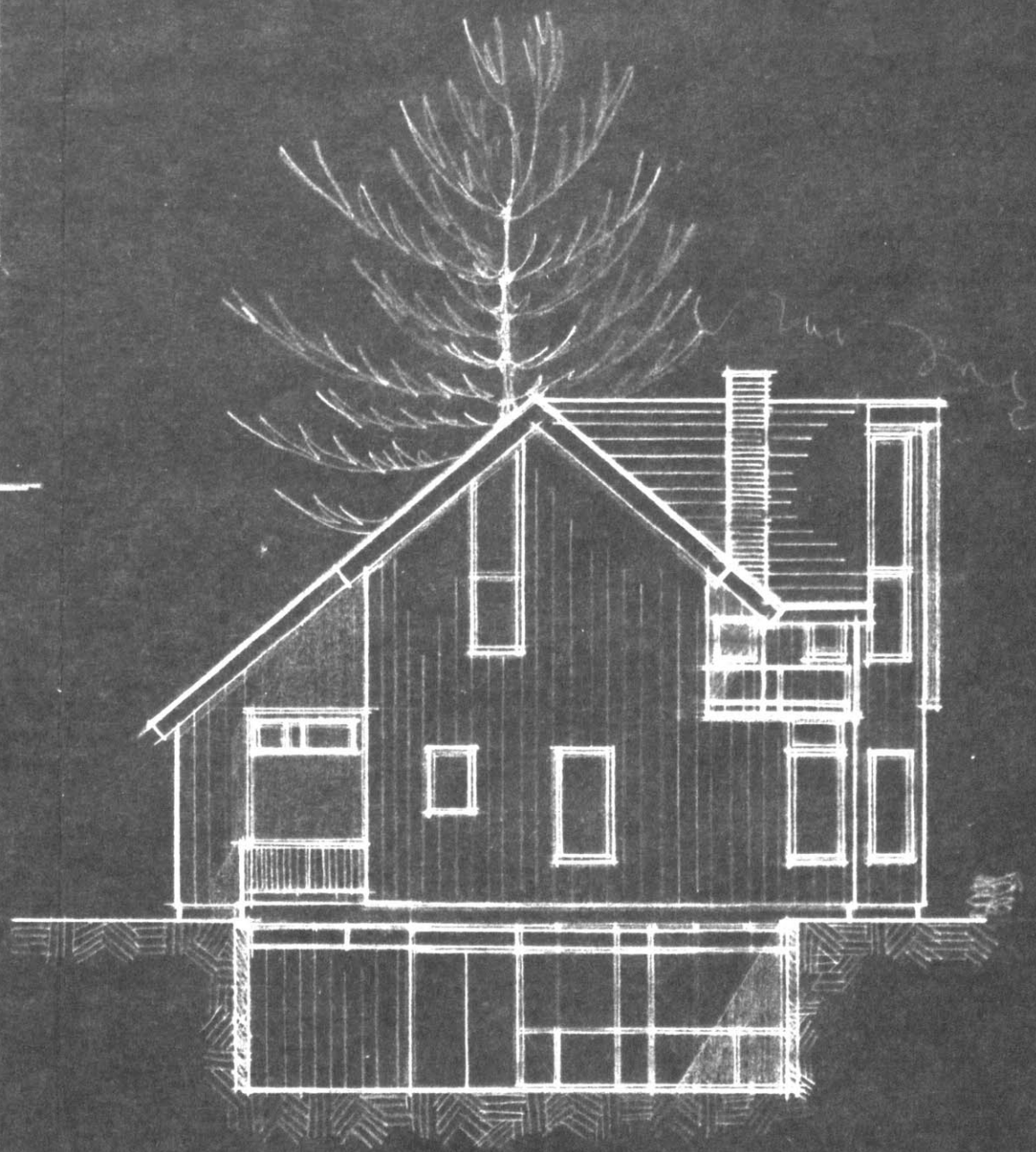
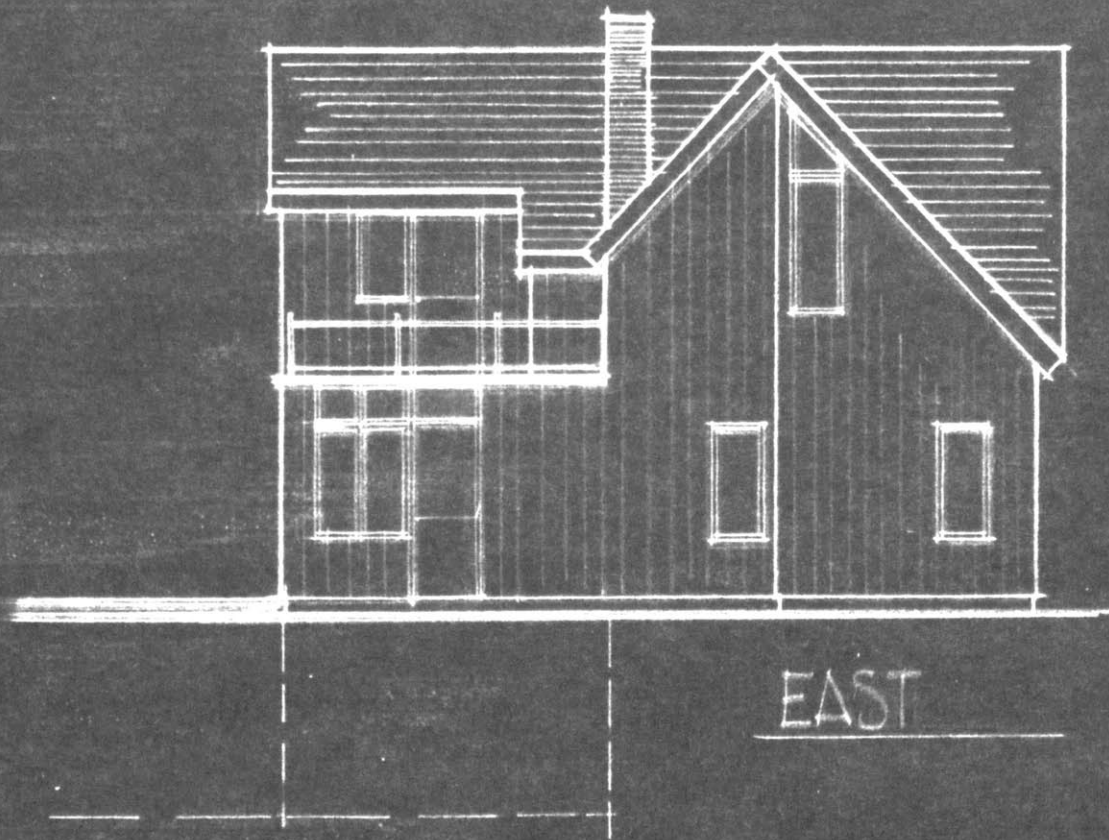
$\frac{1}{8}'' = 1'-0''$

4 JUNE 1970

JANE GRISWOLD PATTERSON

**13**





**CELLAR HOUSE 2**

$\frac{1}{8}'' = 1'-0''$  4 JUNE 1970

JANE GRISWOLD PATTERSON

**TMS**

**14**