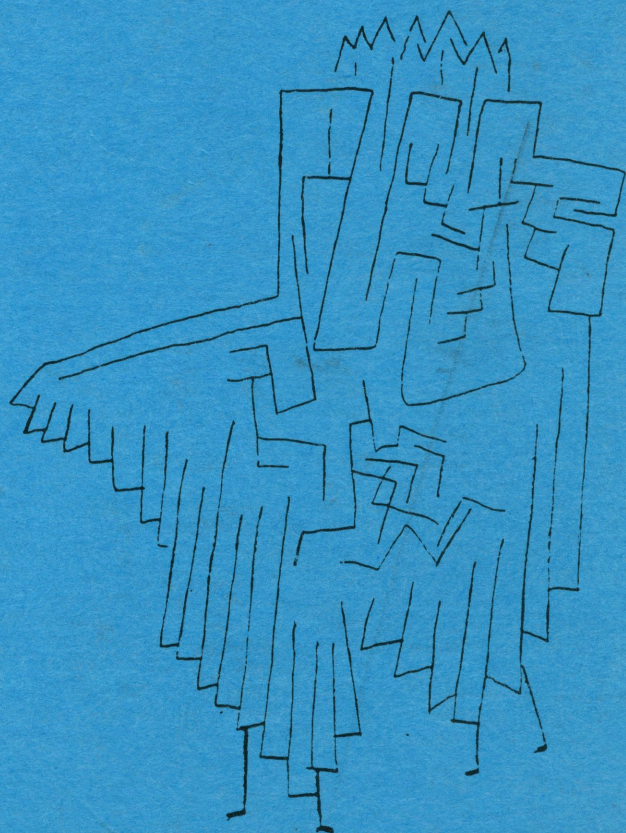


THE
BARREN ISLAND SCHOOL of ART

K. Lee



1934 MAY

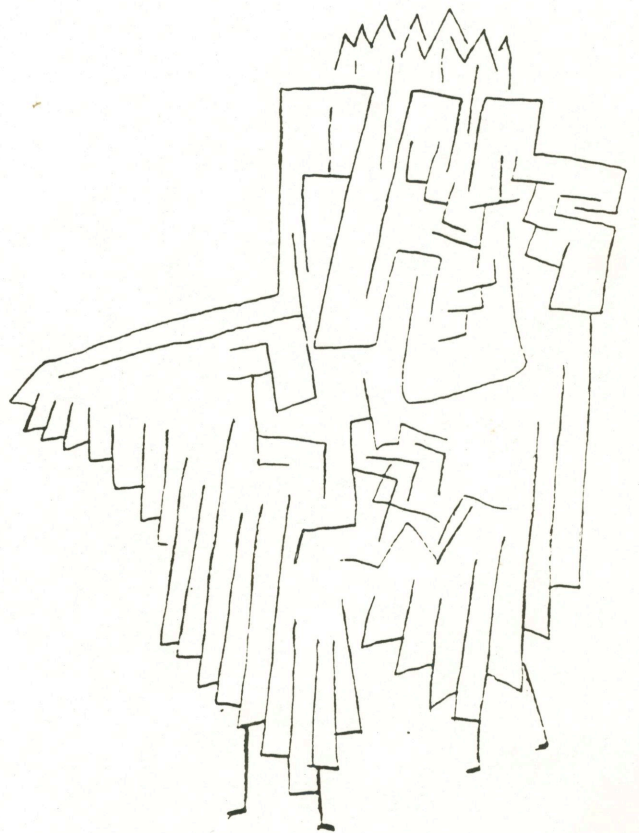
WATER AND GUM ARABIC

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Lein Shatt

1987

Barren Island School of Art

Coeymans, New York

by

Kevin Lippitt

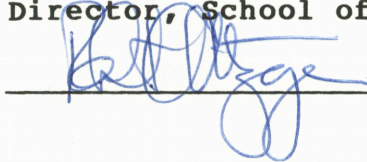
A professional paper submitted in partial fulfillment of the
requirement for the Degree of Bachelor of Architecture.

Approved:

Advisor:

Chairman, Thesis Committee:

Director, School of Architecture:



Montana State University

Bozeman, Montana

June 8, 1987

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"Nature has made creatures only; Art has made men."

-Frank Lloyd Wright
May 1914

"It is the duty of the artist of today to penetrate the still unrecognized defects of our biological functioning, to investigate the new fields of the industrial society and to translate the new discoveries into the stream of our emotions."

-Laszlo Maholy-Nagy

"Everyone of us reads the same poem, and yet each one makes his own poem. This is the nature of the imagination: that everyone has to reimagine for himself."

-J. Bronkowski

The Visionary Eye 1978

Forward

Architecture consists largely of human perceptions. Although architecture is buildings it is also the lives that go on within the buildings; though it is distant vistas it is also intimate contact. It is hard and solid, yet it represents dreams and fantasies. It exists today, yet it reminds us of yesterday and makes us think of designing our tomorrows. Architecture is very public, as it is built and experienced by many individuals, but it is also private in the sense that responses to architectural environments are very personal.

Each individual has their own perceptions of architecture and architectural form. The mind of each person perceive and respond to these perceptions differently. It is because of these perceptions and emotions that give feeling to a space while creating it a sense of place.

It is important to understand how we perceive our environments and how we respond to these perceptions. This is the basis of a humanistic architecture.

INTRODUCTION

It is the intent of this thesis to develop an Art school/community near the town of Coeymans, New York in the hopes of creating an environment renewed in interests in the arts.

The Barren Island Art School will be an exploration into the interaction of architectural form and natural site characteristics in hopes of creating a stimulating emotional setting, while creating a community atmosphere that will enrich the artists artistic endeavors.

The architectural solution will derive from:

- Space-people interaction
- Differentiation of interaction and emotional levels
- Integration of nature and architecture to influence emotional levels.

It is hoped that this created environment will become a nurturing ground for the advancement of the arts.

The Hudson River Valley

The Hudson River valley is a region richly endowed with great natural beauty. Its landscape has inspired man throughout history to express himself artistically. Whether it be spoken, as with the indian folklore and myths, printed or painted, countless individual works can be attributed to its beauty and majesty. Its banks "...were so pleasant with grasses and flowers- and goodly trees as ever were seen." was logged by the Elizabethan explorer Henry Hudson in 1609 upon discovering this magnificent waterway.

So compelling was this river valleys beauty that it was regarded with awe by many artists. They beheld "...divine architecture in the mountains, hollows and waters of its valley." They "...paid tribute to the blue stream and its bluer mountains with a conscientious and disciplined artistry which resulted in skills never before obtained by American artists." It was these artist by the mid-nineteenth century were to be designated the "Hudson River School".

The Hudson River School

The Hudson River School was Americas first coherent and sizable group of landscape artists. Begun about 1825 it grew rapidly, developing its own theories, breaking from the tradition of the Paris Barbizon School. It was the center of the national art stage until the late 1870's when it was thrust aside for the new art of realism and impressionism.

Landscape painting played a relatively minor role in the art field during the 1700's and America had few landscape painters before this artistic movement. The landscape of the Hudson River Valley was too beautiful to ignore. It was this beauty that the painters of the Hudson River School wanted to portray to the rest of what was America then and to the world.

The Hudson River School produced many fine artists, such as the likes of Thomas Cole, Washington Allston, Samuel F.B. Morse, Asher B. Durand and Frederick Church, whose Byzantine castle still overlooks the valley that he loved and painted.

The Hudson River School was Americas first and foremost art school and their vision fortunately will not pass away.

THE SITE

The site that was chosen for this project is located on the southern most border of the town of Coeymans in the County of Albany New York.

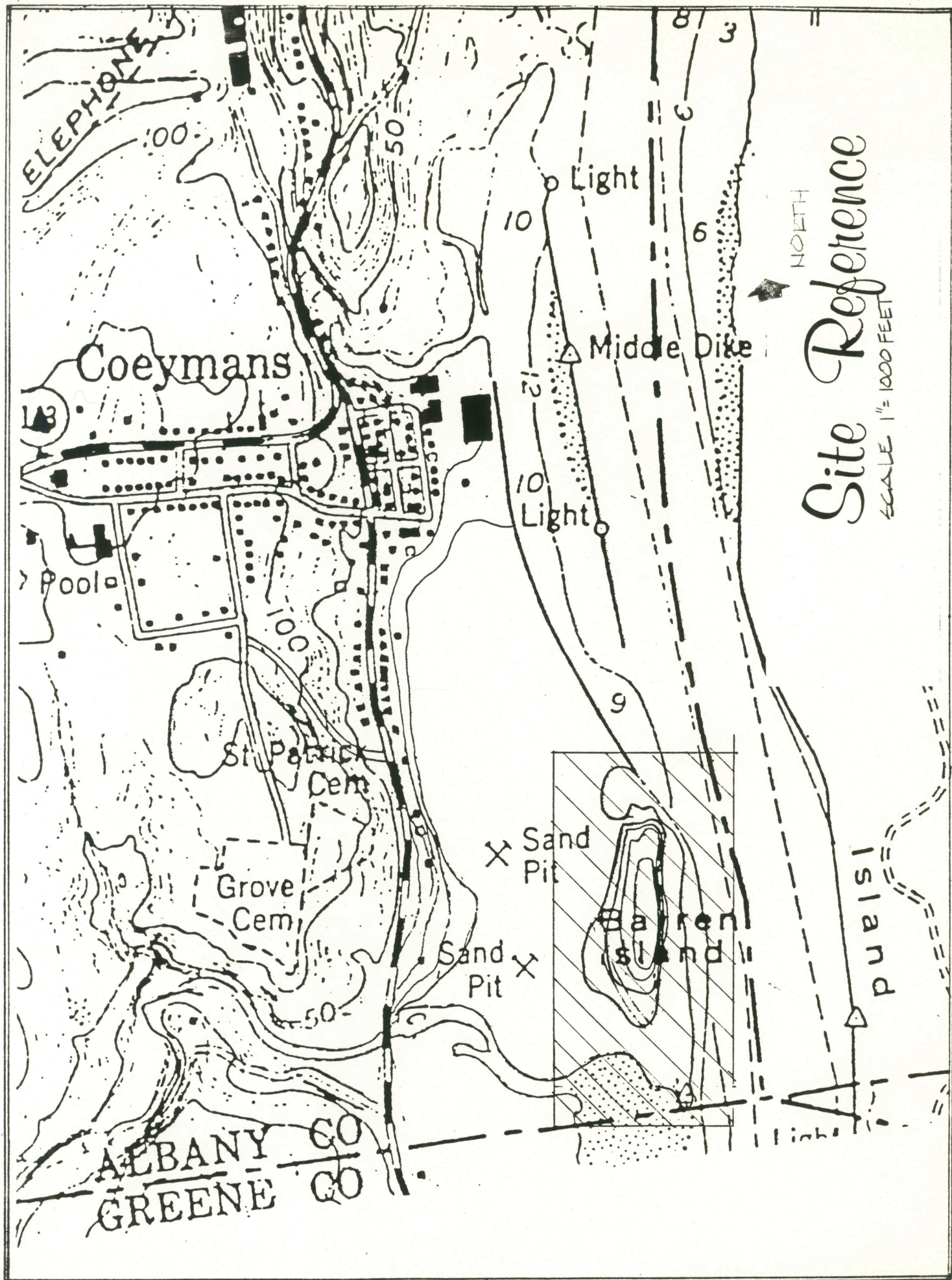
Once an island used for recreation and relaxation for the residents of the town of Coeymans and the surrounding areas in the 1800's to early 1900's it now stands as a section of land joined to the main river bank by a large "sand pit" which was placed there in the 1940's when the Hudson River was dredged to make way for larger, deeper ships to navigate its waters to the Port of Albany, the main distribution point on the Eastern side of Upstate New York.

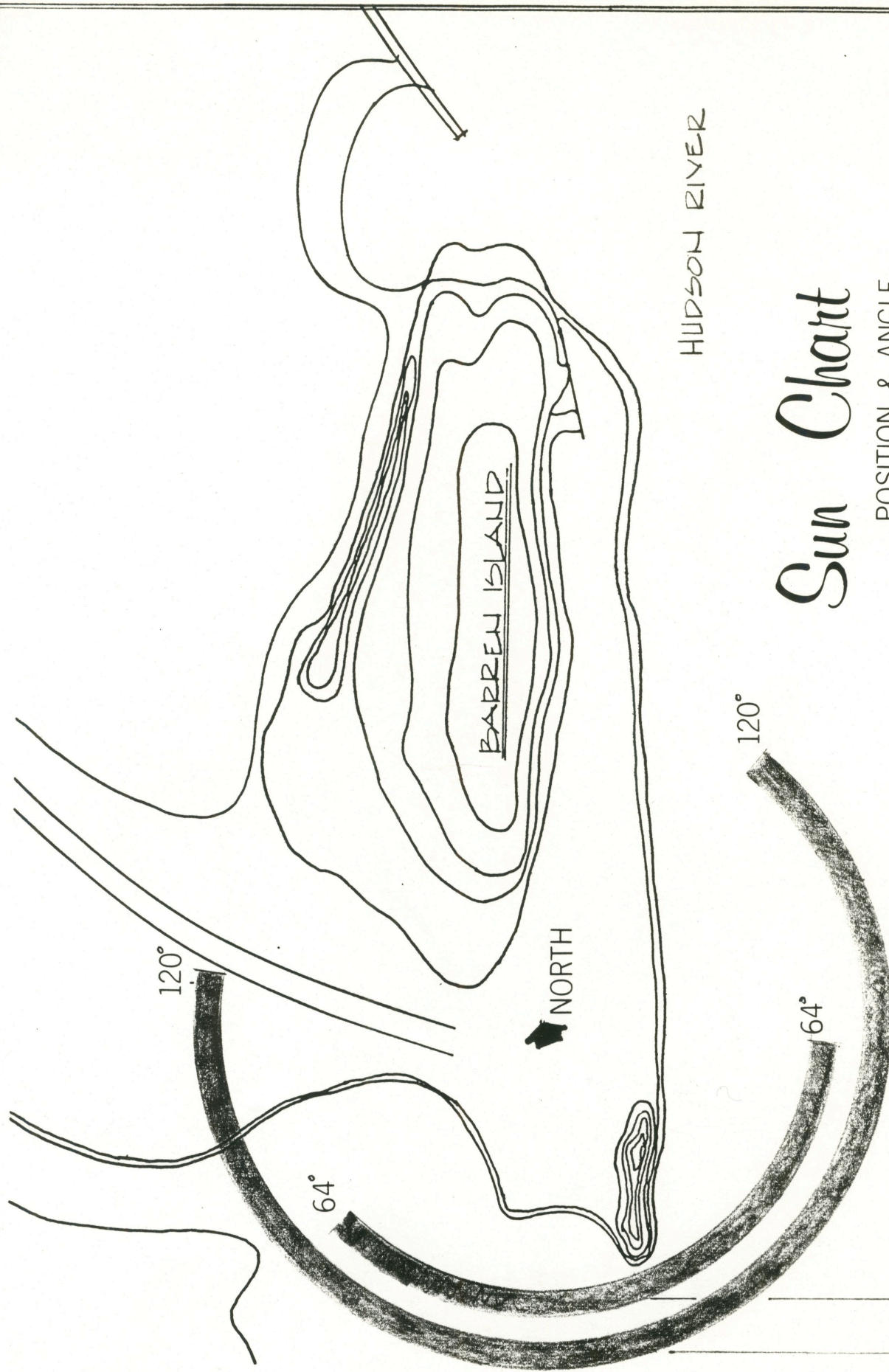
The "sand pit" is now overgrown with a vast amount of trees and shrubs which has become a substantial forest. A thick canopy overhead makes this a serene and peaceful place for hiking and communicating with a friend and nature.

The main island area of the site, the original Barren Island, is made up[of a level area on the south and east sides backed by a rising hill that slopes peacefully on the west but rises dramatically on the east and north sides of the site. This dynamic range in the site topography gives a natural feeling of variety.

The site is bordered on three sides by water. The Hudson River to the east, the mouth of the Hannacrois Creek to the south and a small, calm man-made bay on the north side of the site. These water areas are inviting for rest (north bay) and recreation (south bay), so water activities are a possibility for recreation and inspiration.

Overall the combination of forest and flatland along with the water element makes this a most enjoyable site for an artist community. The site can be an inspiration to all that travel here.





HUDSON RIVER

BARREN ISLAND

NORTH
▲

Sun Chart

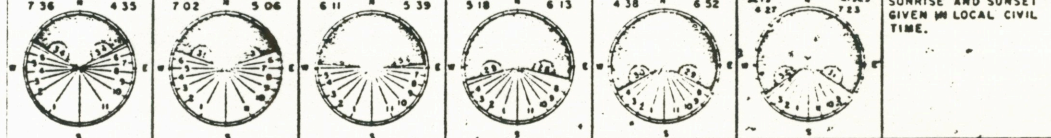
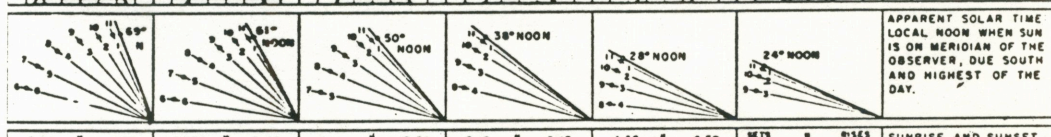
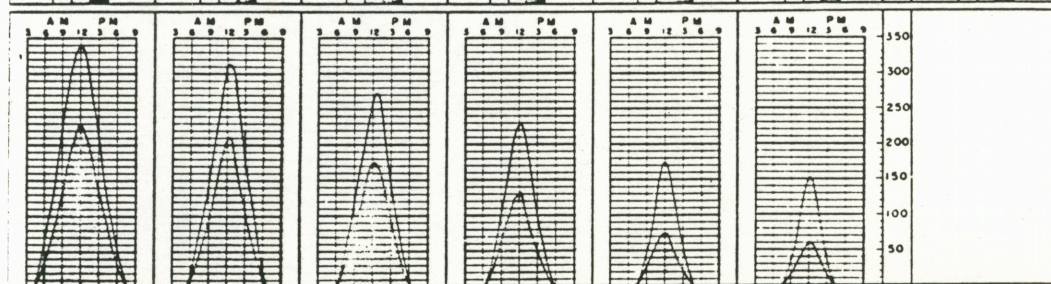
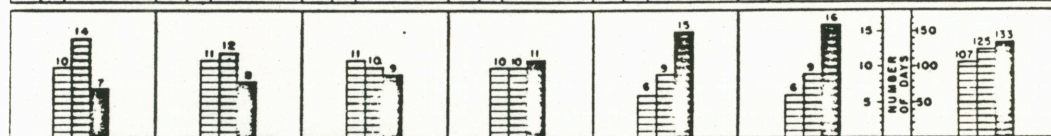
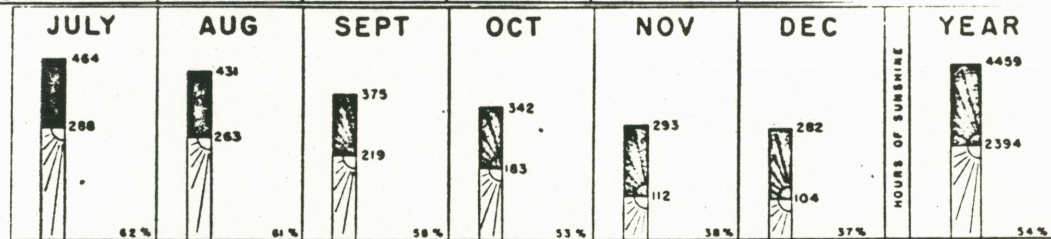
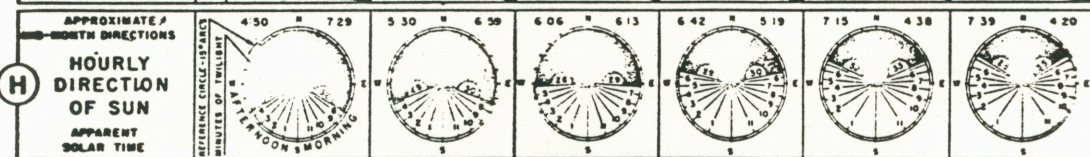
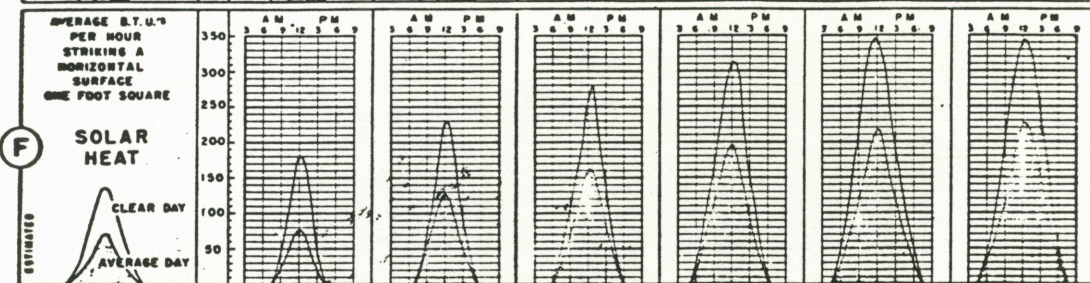
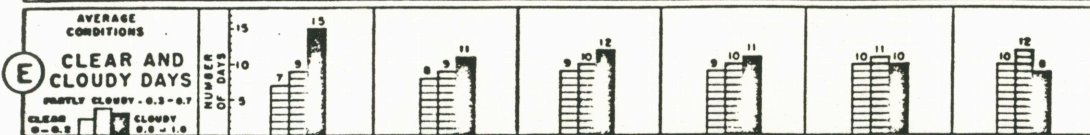
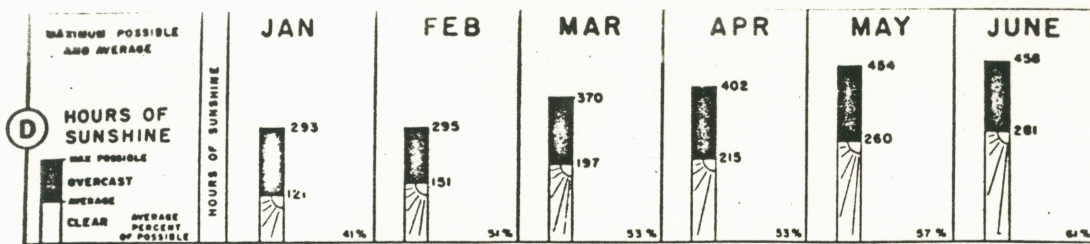
POSITION & ANGLE

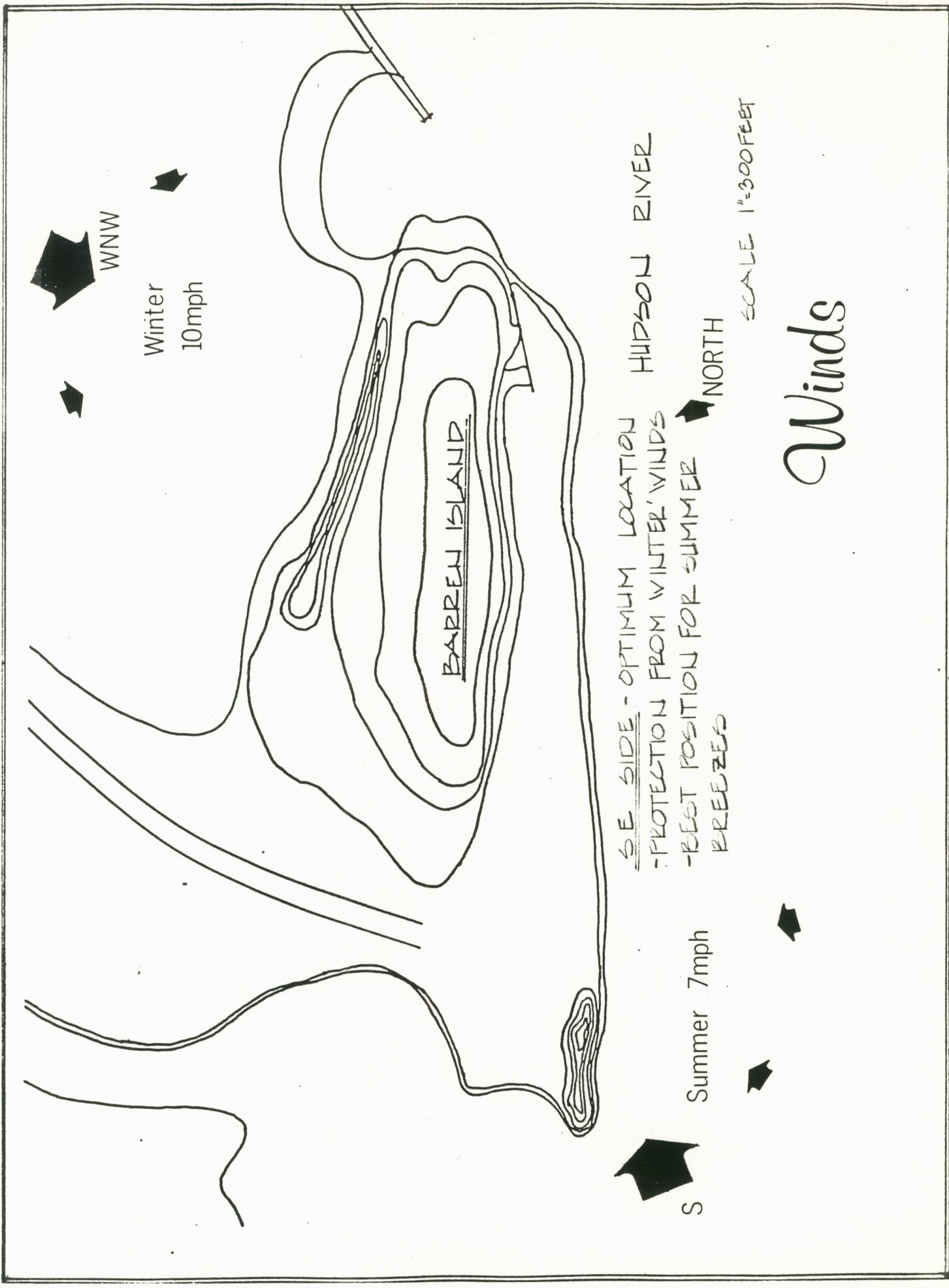
SCALE 1" = 300 FEET

— 26° off Horizontal noon Dec 21

— 74° off Horizontal noon June 21

SOLAR ANALYSIS





WNW

Winter
10mph

BARREN ISLAND

SEE SIDE - OPTIMUM LOCATION
- PROTECTION FROM WINTER WINDS
- BEST POSITION FOR SUMMER
BREEZES

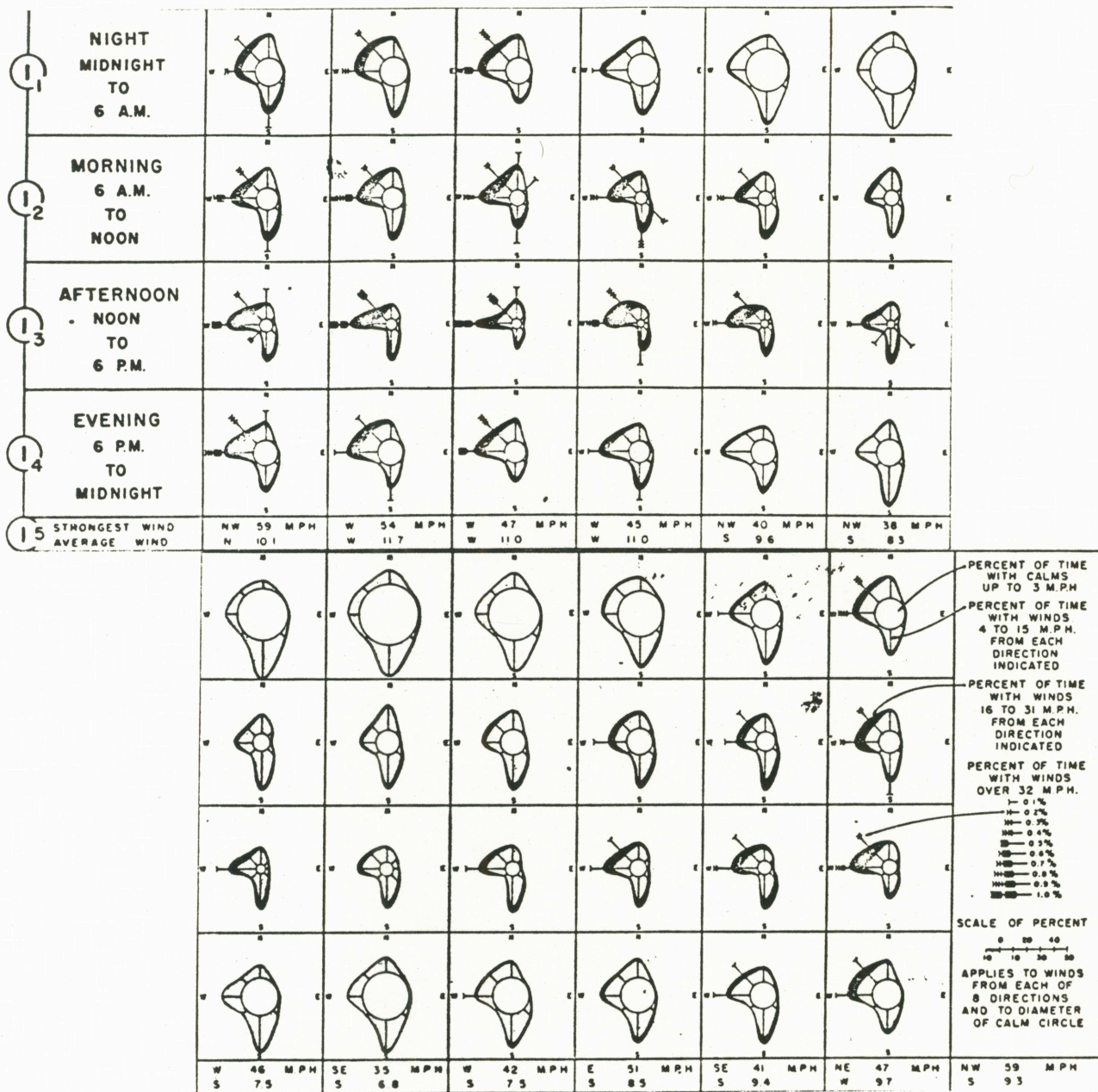
Summer 7mph

NORTH

SCALE 1"=300 FEET

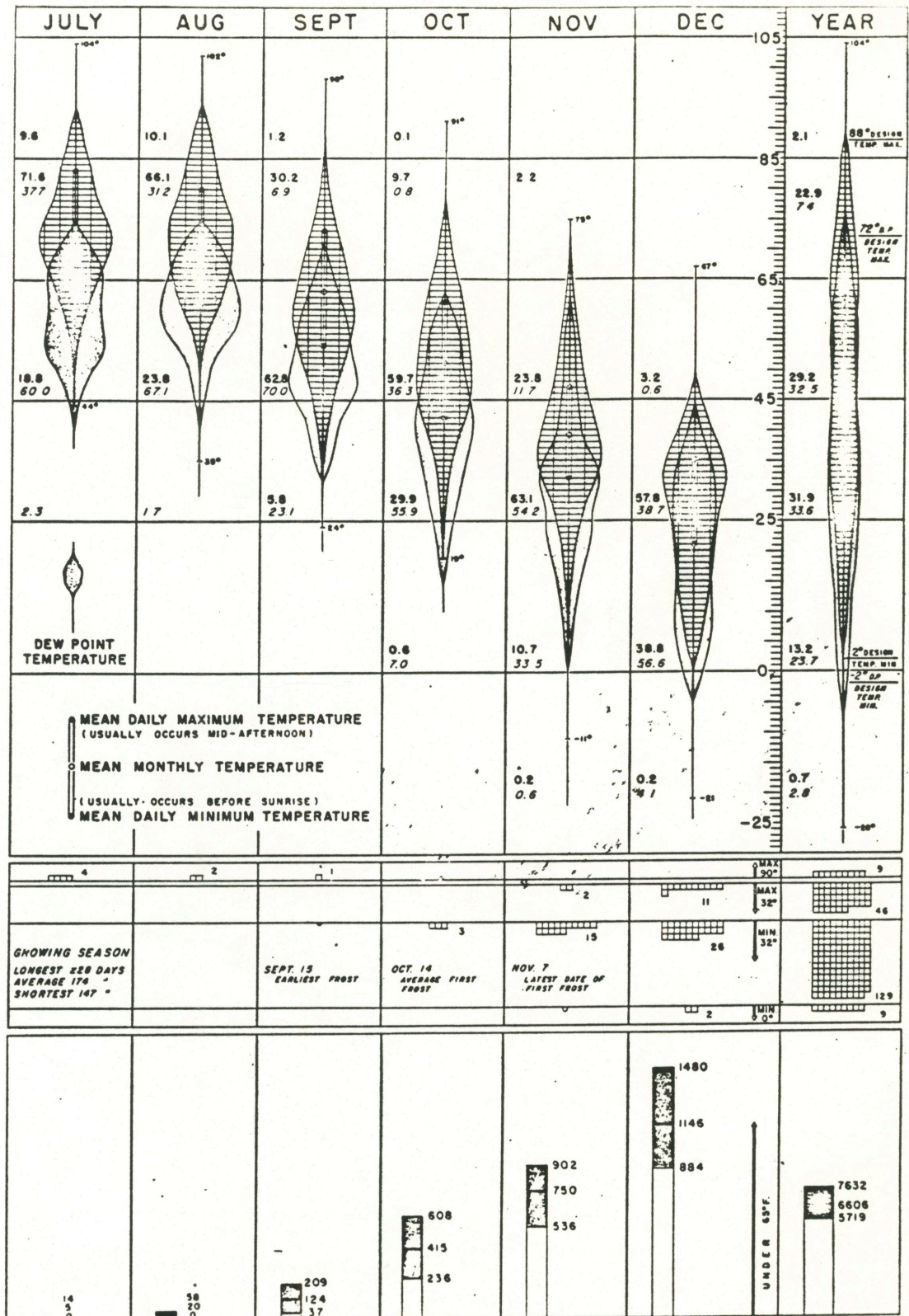
Winds

WIND ANALYSIS

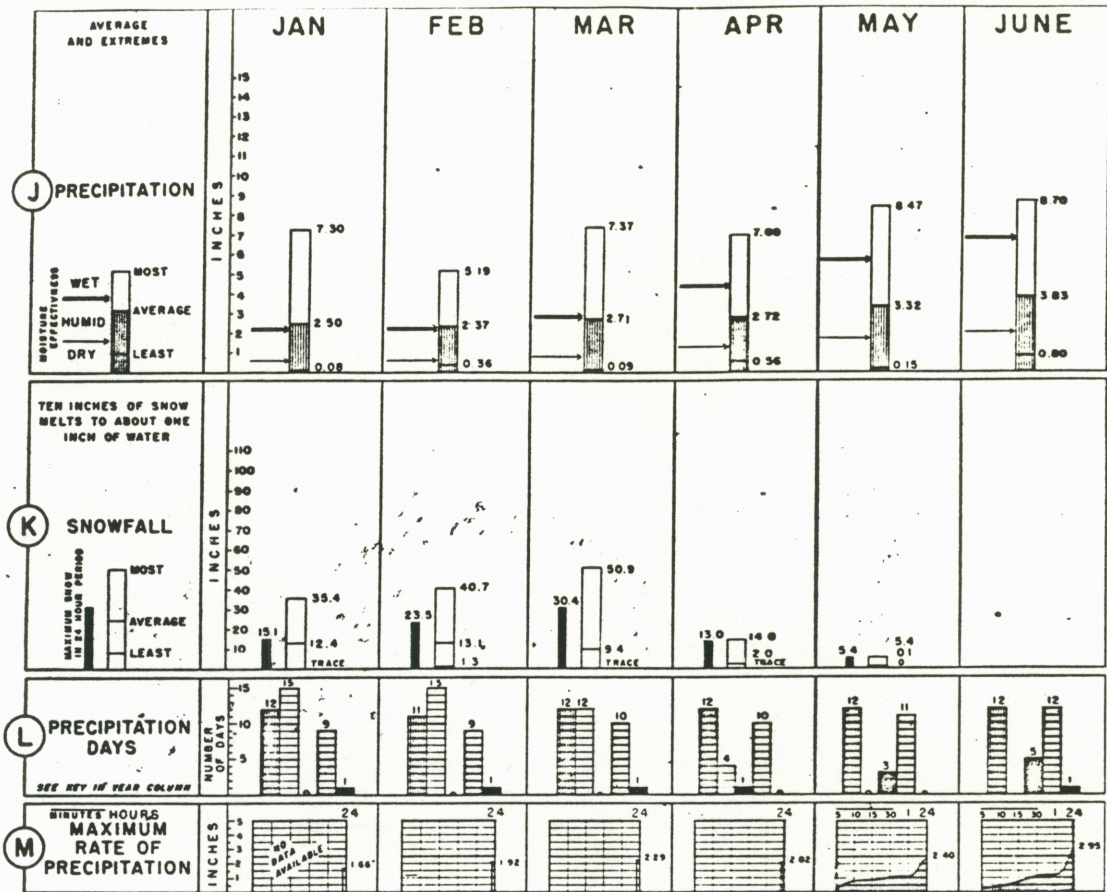


	JAN	FEB	MAR	APR	MAY	JUNE
A1 VERY HOT						
A2 HOT				0.2	0.9	3.1
A3 WARM			1.1	5.9	28.1 14	57.3 94
A4 COOL	3.3 1.5	2.3 0.4	14.9 5.1	36.9 12.1	59.5 42.2	39.3 81.6
A5 CHILLY	45.2 27.9	52.3 27.0	64.1 43.6	54.5 65.8	11.5 54.5	0.3 9.0
A6 COLD	46.9 57.1	43.0 59.4	19.4 48.9	0.5 22.1	1.9	
A7 VERY COLD	4.8 13.5	2.4 13.2	0.5 2.4			
RANGE AND DISTRIBUTION OF TEMPERATURES PROPORTION OF TOTAL AREA IN EACH ZONE INDICATES PERCENT OF TIME TEMPERATURES ARE IN THAT ZONE						
0.5 = TOTAL PERCENT OF DRY AIR TEMPERATURES FOR GIVEN ZONE 22.1 = TOTAL PERCENT OF DEW POINT TEMPERATURES FOR GIVEN ZONE						
B HOT AND COLD DAYS ONE DAY MAX. 50° OR ABOVE MAX. 32° OR BELOW MIN. 32° OR BELOW MIN. 0° OR BELOW MARCH 24 EARLIEST DATE OF LAST FROST APRIL 23 AVERAGE LAST FROST MAY 12 LATEST FROST						
C DEGREE DAYS MONTHLY TOTALS OF AVERAGES AND EXTREMES TOTAL NUMBER OF DEGREES THE DAILY MEAN FALLS BELOW 65° F MOST AVERAGE LEAST UNDER 65° F						

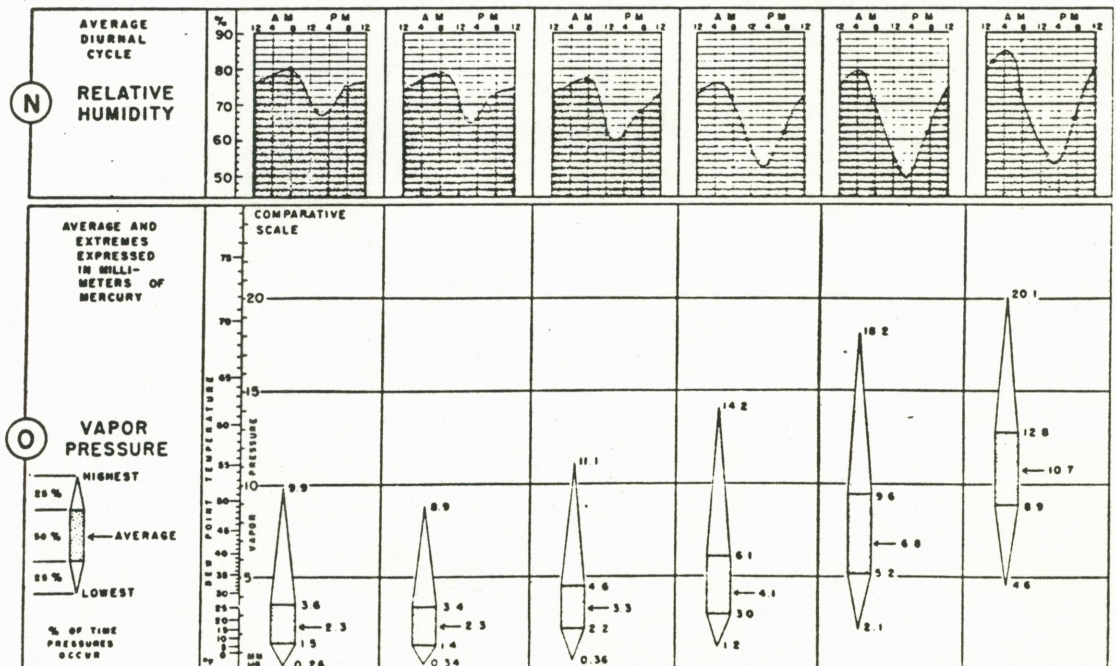
THERMAL ANALYSIS



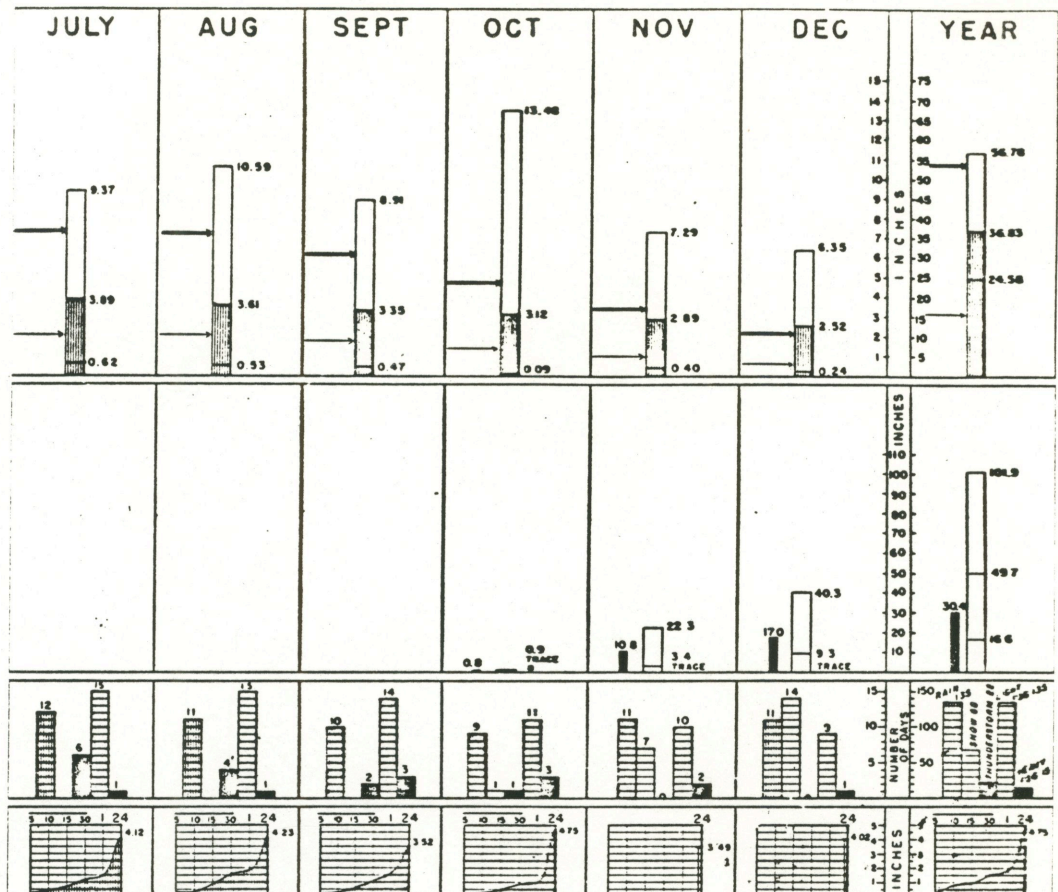
PRECIPITATION ANALYSIS



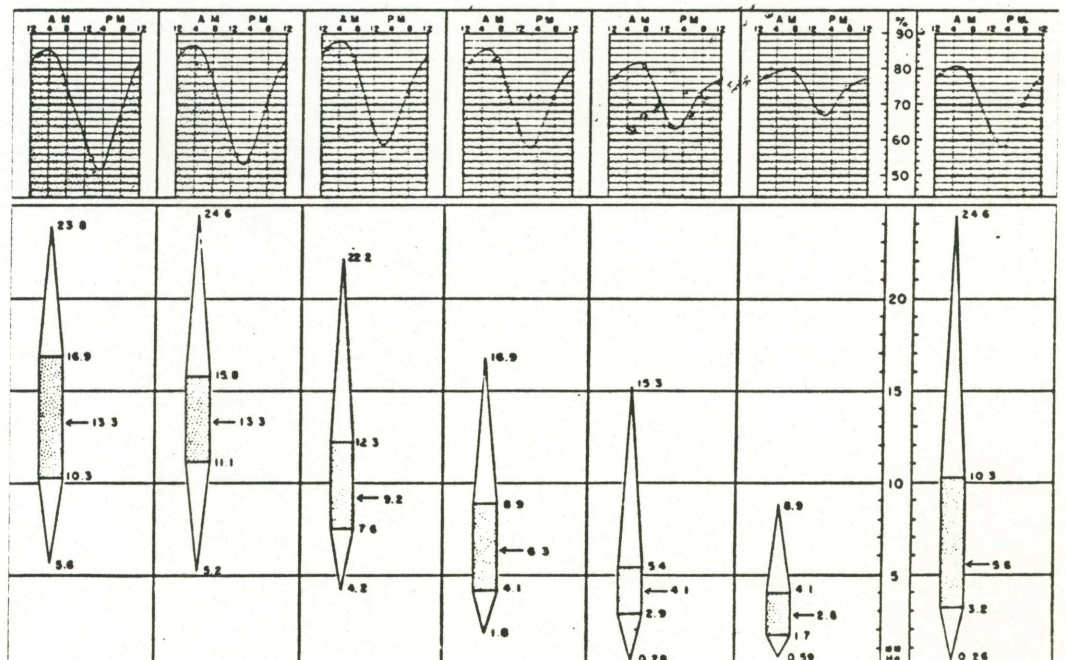
HUMIDITY



PRECIPITATION ANALYSIS

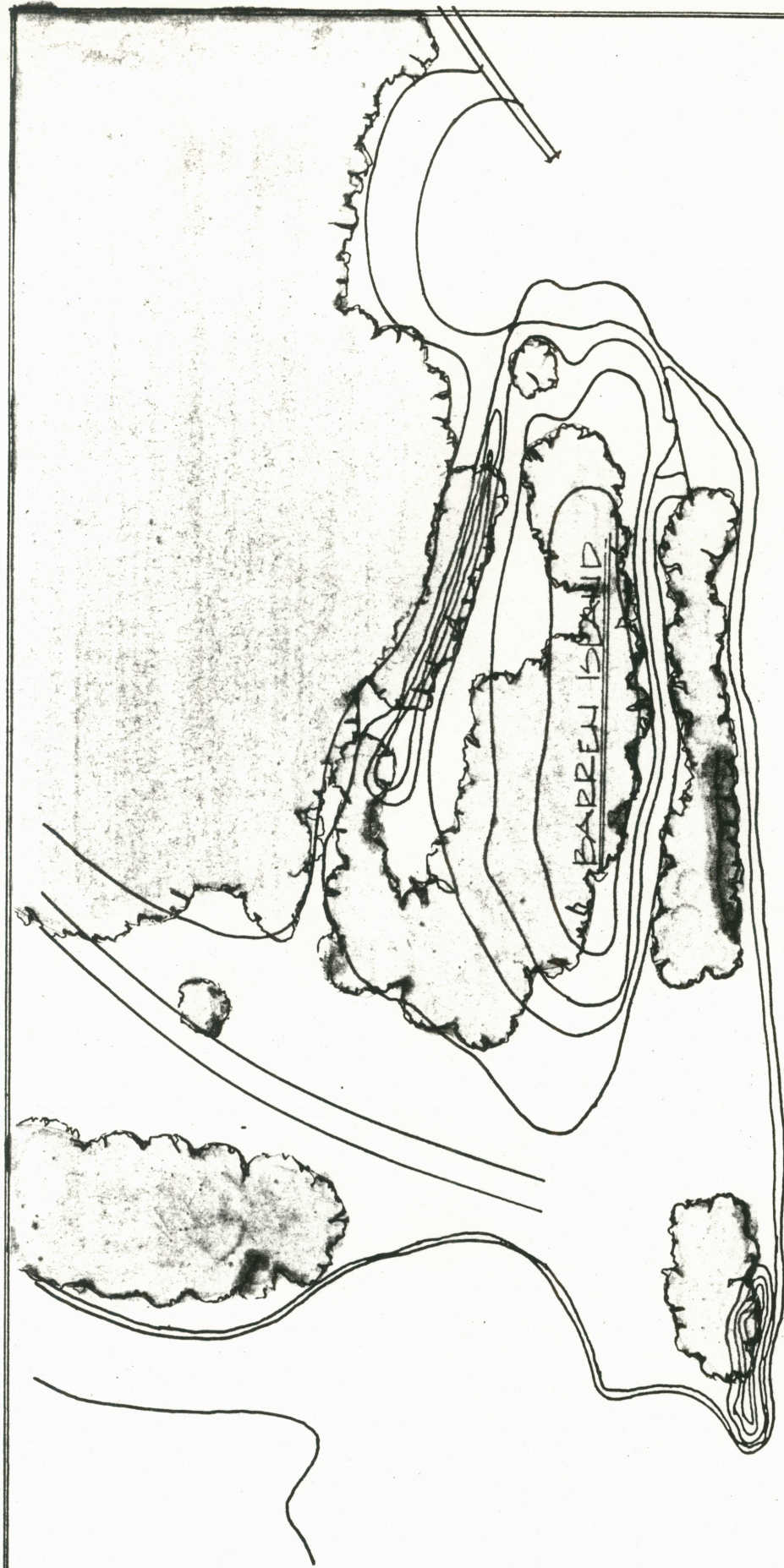


ANALYSIS



CLIMATOLOGY

WINTER MEAN TEMPERATURE	27.6 DEGREES
LOWEST TEMPERATURE	-28 DEGRESS
SUMMER MEAN TEMPERATURE	69.7 DEGREES
HIGHEST TEMPERATURE	104 DEGREES
ANNUAL RELATIVE HUMIDITY	70.8%
ANNUAL PRECIPITATION	33.4 IN.
MAXIMUM PRECIPITATION	9.0 IN.
ANNUAL SNOWFALL	57.5 IN.
ANNUAL NUMBER OF CLEAR DAYS	72
ANNUAL NUMBER OF CLOUDY DAYS	184
ANNUAL PERCENTAGE OF POSSIBLE SUNSHINE	53.0%
WINTER WINDS PREVAILING DIRECTION	WNW
WINTER WINDS MEAN SPEED	9.53 MPH
SUMMER WINDS PREVAILING DIRECTION	S
SUMMER WINDS MEAN SPEED	7.40 MPH
ELEVATION	275 FEET



DECIDUOUS

OAK
ASPEN
ELM
LOCUST
MAPLE

CONIFEROUS

HEMLOCK FIR
WHITE PINE
RED CEDAR

Ground Cover

SCALE 1" = 300 FEET

NORTH
SCALE 1"=300 FEET

FOREST

BARREN ISLAND

OPTIMUM VIEWS

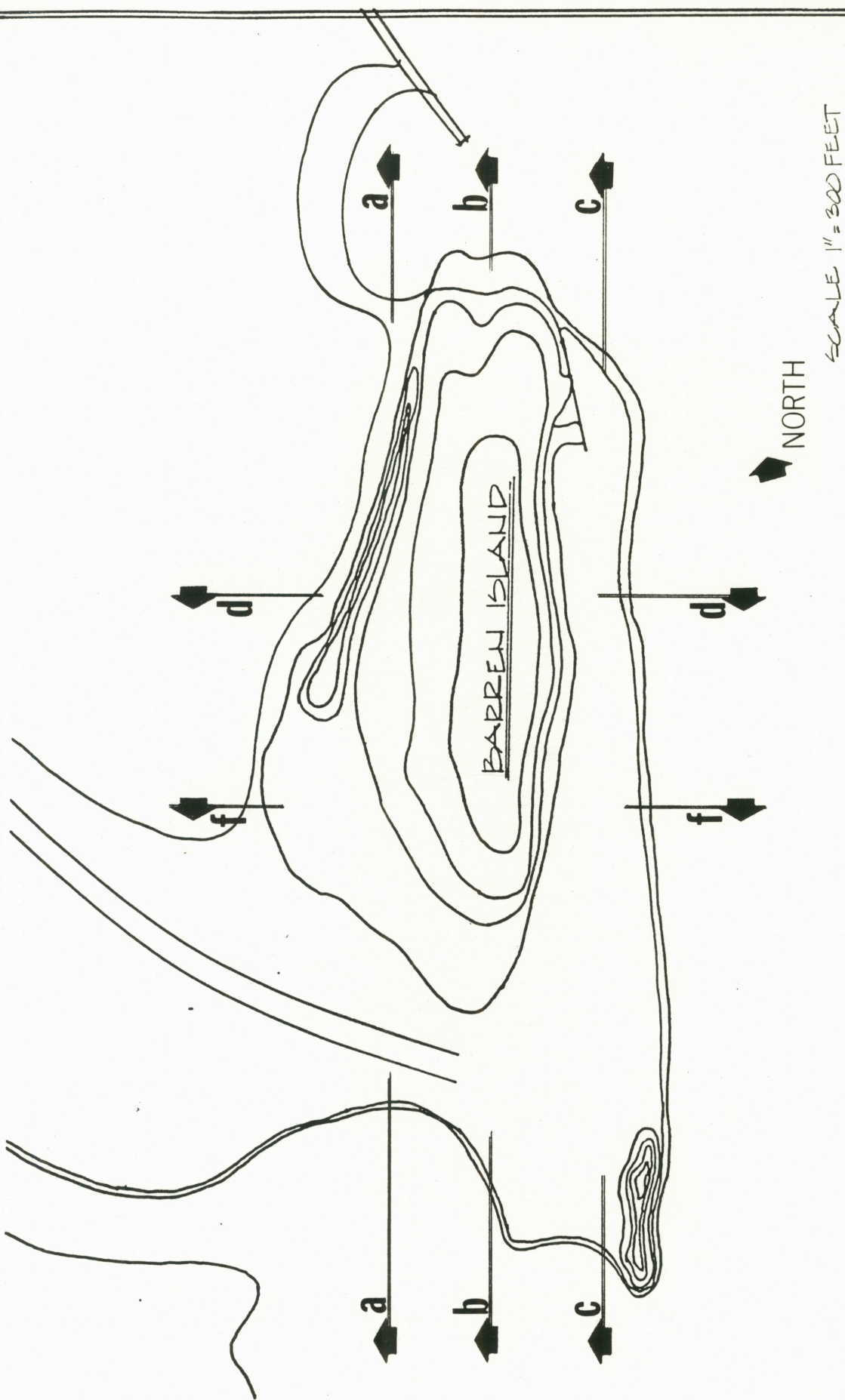
TOP OF SITE - VIEW ALBANY
BRIDGE / BERKSHIRE RANGE TO
NORTH / CATSKILL RANGE TO
SOUTH

VIEW
FROM LOWER
NORTH POINT -
RIVER VALLEY /
ALBANY BRIDGE -
LIGHTS ARE VERY
PLEASANT @ NIGHT

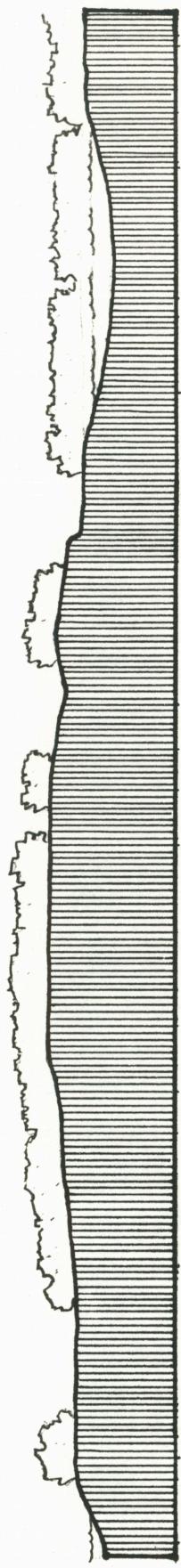
VIEW FROM LOVE
LOWER SOUTH
POINT - RIVER
VALLEY / HOUGHTALING
ISLAND

Views

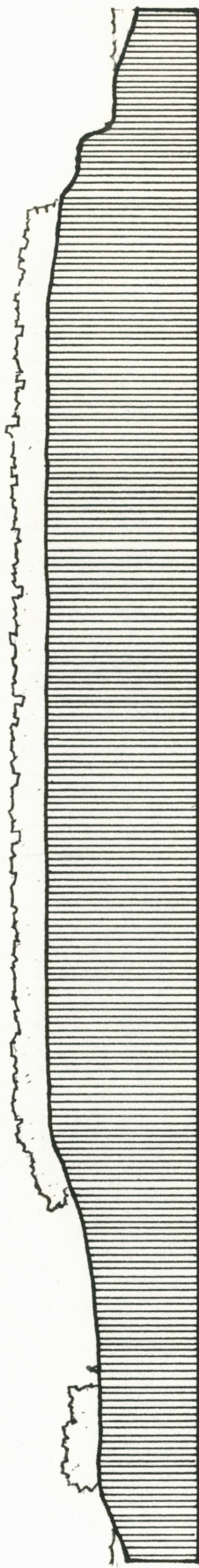
Sections



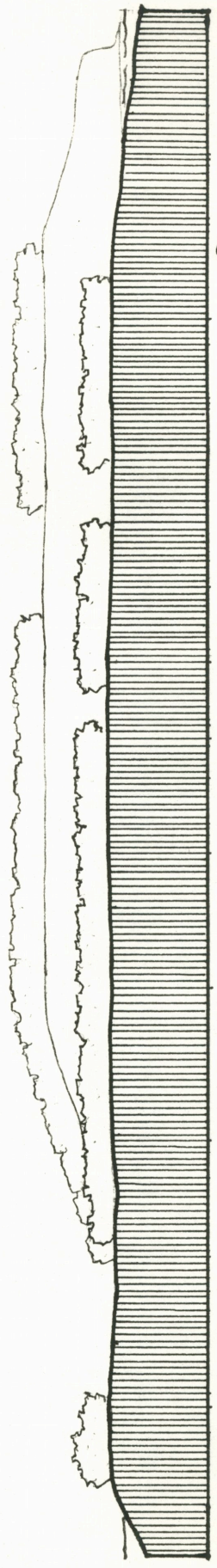
0 100
scale in feet



a-a



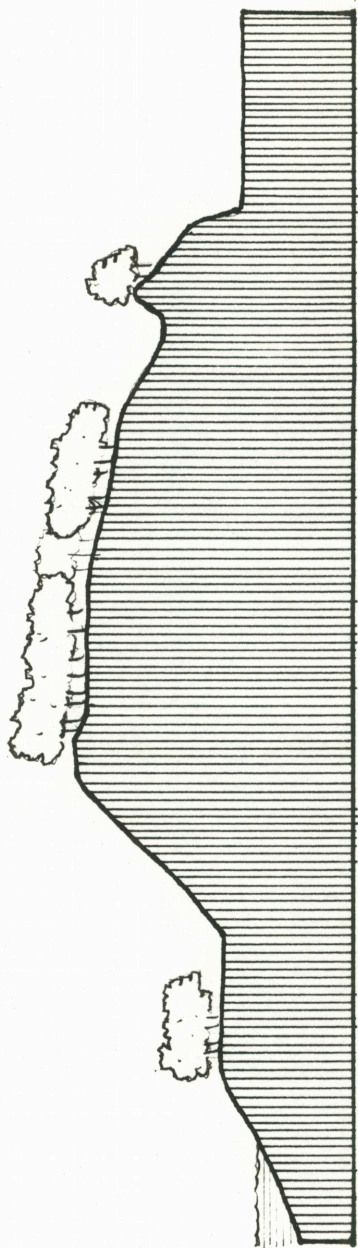
b-b



c-c

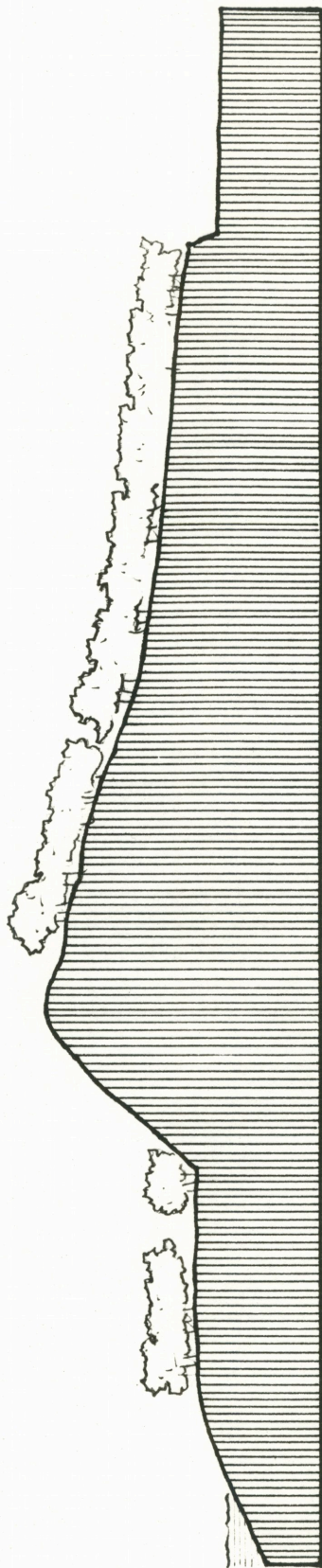
Sections

Profiles



d-d

0 60
scale in feet

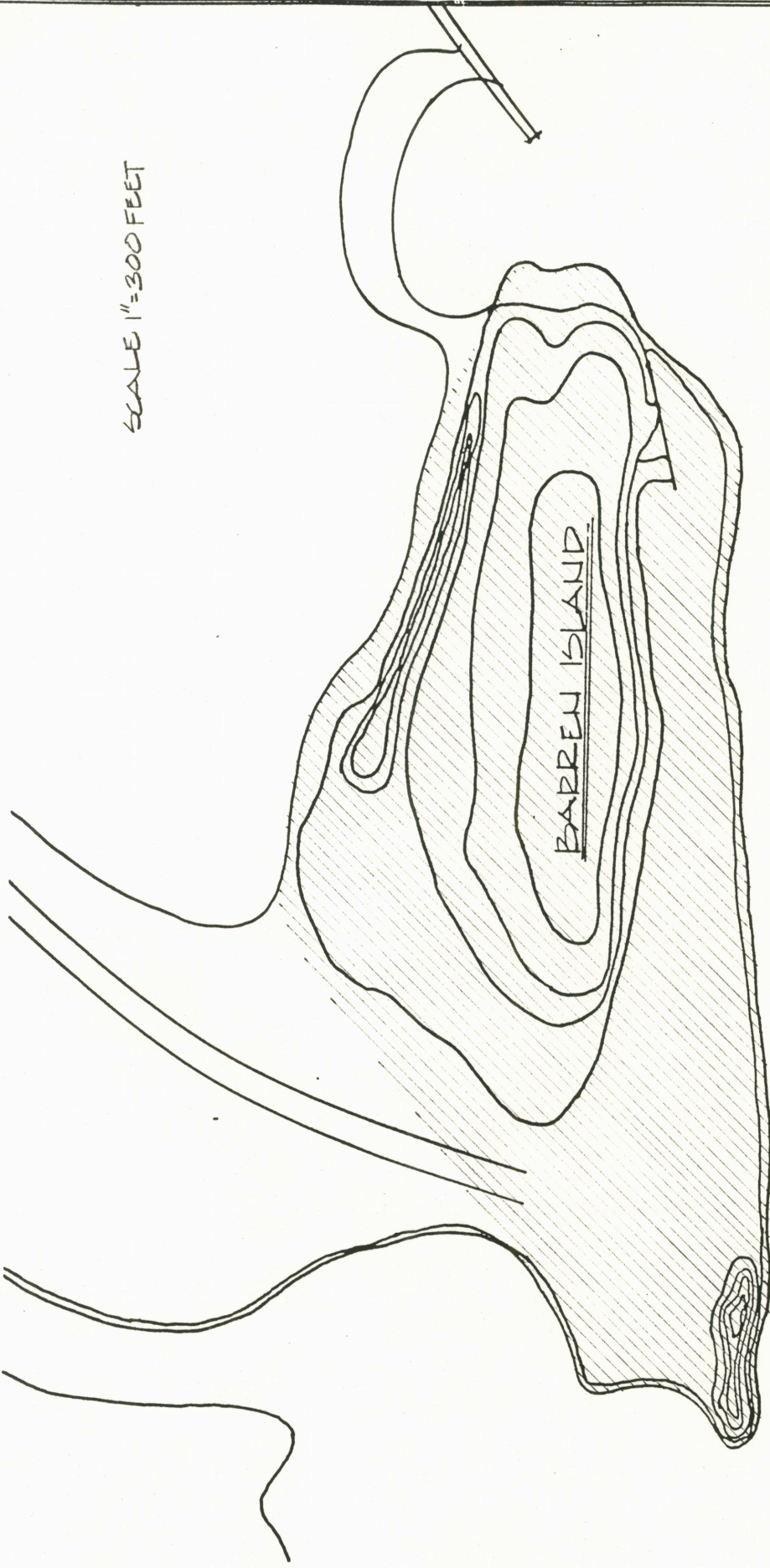


b-b

Soils

- - Ue - UDIPSAMMENTS - PREDGE MATERIALS
- ▨ - NRC - NASSAU SERIES

SCALE 1"=300 FEET



SOIL ANALYSIS-Ur-UDIPSAMENTS

Sand Pit or Dredge Area

-This area to the northwest, west and southwest section of the site has been filled with dredge materials from the Hudson River in the mid to late 1940's by the Army Corps of Engineers.

The material found here is classified as Ur-Udipsaments, Dredged. This unit consists of very deep, nearly level to rolling areas of moderately well drained to somewhat excessively drained sand or sand and gravel soils. It consists of soil material that has been pumped from the Hudson River bottom. The soil material is made up of sandstone, siltstone, shale and graywacke similar to that in the Tioga, Colonie and Riverhead soils.

The surface is brown loamy sand and sand which may contain up to 35% gravel. Reaction levels range from acid to slightly acid. The layers below the surface consist of brownish yellow and dark brown loamy sand, sand or fine sand containing up to 35% gravel. Bedrock in this area is 6-12 feet below the surface soil and consists of resistant graywacke, sandstone and Coeymans limestone.

This area is highly variable in composition, therefore soil properties such as permeability, available water capacity and soil reaction vary from area to area.

SOIL ANALYSIS Nrc-NASSAU

-Barren Island Proper

-This area is the island before the dredging of the Hudson River in the 1940's.

This rolling soil is shallow and somewhat excessively drained. It is on bedrock controlled ridges and hills. Nassau soils make up about 70% and rock outcrops 5-10% of this area.

Typically, this soil has a surface layer of dark-grayish brown, very channery silt loam, 8 inches thick. The subsoil is yellowish brown, very channery silt loam, 8 inches thick. The underlying bedrock at 16 inches is dark gray shale.

The rooting depth of this soil is restricted due to the closeness of the bedrock to the surface. Permeability is moderate and available water capacity is very low.

This soil is not suitable to cultivation because of rock outcrops, complex slopes, the severe erosion and droughtiness during the summer. Establishing a permanent sod crop on this soil is a good management practice. Common trees found in this area are Sugar Maple, Eastern White Pine, Northern Red Oak, and Locust.

The main limitation of this soil for buildings with basements is depth to bedrock. Because the bedrock is dominantly shale, excavation for foundations is possible; but additional soil material will be needed for landscaping.

Source _____, U.S. Dept. of Agriculture Soil Conservation Service (Albany County District, Albany, N.Y. 1965)

Arnow, Theo. , The Ground Water Resources of Albany County New York (Dept. of Conservation/U.S. Geological Survey Albany N.Y. 1949)

BEDROCK GEOLOGY

Barren Island Proper and Sand Pit Dredge Area

-In these areas the subsurface geological makeup is that of resistant graywacke, siltstone, shale and Coeymans limestone. Unless these bedrock materials are highly fractured they tend to have good bearing strength.

-Coeymans Limestone-

A massive bluish-gray, coarse grained limestone which carries occasional shale partings and thin lenses of chert. It weathers to a characteristic light-gray color and is in large part composed of shell fragments. Because of its massive character, extreme hardness and characteristic vertical jointing, the Coeymans limestone is one of the major cliff producing formations of the Helderberg Range.

-Graywacke-

A conglomerate rock consisting of rounded pebbles and sand firmly united. This rock has a very high load bearing capacity so is suitable for foundations. It is an excellent stone for landscaping in walkways, walls and exterior house walls.

-Sandstone-

A sedimentary rock formed of grains of quartz cemented together by lime and silica. It has high load bearing capacities and provide suitable foundation platforms. Resistant sandstone is an important source of building stone.

-Siltstone-

Stone consisting of hardened silt; a sedimentary material of fine mineral particles found at the bottom of bodies of water. This material has a low bearing capacity and should be used as landscaping infill.

-Shale-

Rock consisting of clay-like materials that split into layers easily. Foundations typically used on this bedrock material are footings and occasional rafts. Piers are common in transferring loads to the bedrock. This is not a suitable building material.

Source: Arnow, Theodore The Ground Water Resources of Albany County, New York (Dept. of Conservation/U.S. Geological Survey Albany, New York 1949)

Way, Douglas

Terrain Analysis
The Harvard Press

Dowden, Hutchinson & Ross, Inc. Penn. 1973

Table 6.6. Sedimentary rocks: Limestone
Humid

Topography

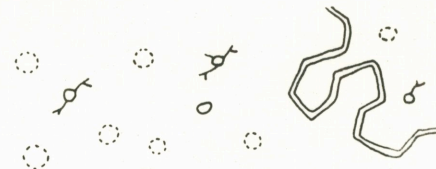
Karst



Chemical weathering dissolves the rock along jointing and bedding planes, thus developing a collapsing surface of sinkholes and depressions known as "karst topography." The ground surface is undulating and forms indistinct transitional boundaries with other, associated sedimentary rocks. Sinkholes are rounded in flat-laying beds, elongated in tilted beds.

Drainage

Internal



The solution cavities within the rock and the high permeability of the residual soil cause humid limestone regions to be drained internally, leaving little water to be collected in a surface water system. Major streams follow angular alignments of old jointing patterns. Typical sinkholes average 10 to 40 feet in depth and 50 to 500 feet in width.

Tone

Mottled

The general tone in limestone regions is a mottled gray. Sinkholes containing ponded water have darker tones and regular outlines.

Vegetation and land use

Cultivated

Limestone regions in humid climates are cultivated and cleared of forest growth. Small woodlots may be associated with farmsteads. Field patterns are irregular, being controlled by the sinkholes and depressions of the karst topography. Highways are generally curvilinear and attempt to avoid crossing sinks.

Gullies

White gullies

Few are present, but short, white-fringed gullies occur around sinkholes. If present, they reflect a cohesive soil with a sag-and-swale section.

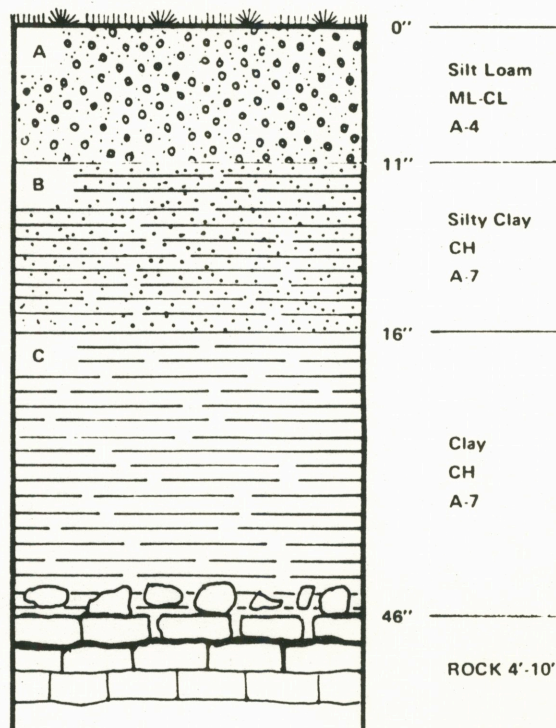


Figure 6.30. A typical limestone residual soil profile as found in a humid climate.

Table 6.2. Sedimentary rocks: Sandstone (humid)

Humid

Topography

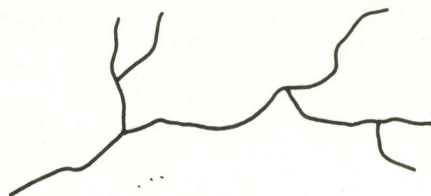
Massive, steep slopes



Sandstones tend to be relatively resistant to weathering because of the strength of their cementing agents. Therefore, in humid climates they produce a massive, bold topography with steep sideslopes. The residual soils tend to be very shallow along the ridgelines but thicker at lower elevations, owing to the accumulation of colluvium. Since sandstone is usually the most resistant sedimentary rock in humid climates, it tends to occur as an overlying cap rock. Where sandstones encounter other sedimentary rocks, there is generally a sharp boundary.

Drainage

Dendritic: Coarse



In humid climates the drainage pattern for sandstones is generally dendritic although, depending on the influence of the jointing pattern, it may also be somewhat angular or even rectangular. The drainage system texture is usually coarse but may also be medium, with minor tributaries joining the next higher stream order at right angles.

Tone

Light

The photographic tones are light because both the landform and the residual soils are well drained. Banding indicates bedding planes of other sedimentary deposits.

Vegetation and land use

Forested

Sandstone regions in humid climates do not develop residual soils of sufficient depth or nutrient value for intensive agricultural use. Because of the rugged topography and soil conditions, the land is covered with forests with little ground cover. The forest cover, if undisturbed, tends to be uniform, reflecting the uniformity of composition of the residual soils. Major changes in vegetative associations are found along hillsides, where there are different climatic conditions and orientation. Since major valleys in such regions have deeper soils and greater available moisture, they may be in agricultural use. Settlement patterns and circulation systems tend to follow the major valley

Gullies

Few, V-shaped

Few gullies are observed because of the porosity of the soil and rock, which decreases runoff. Any gullies present are V-shaped.

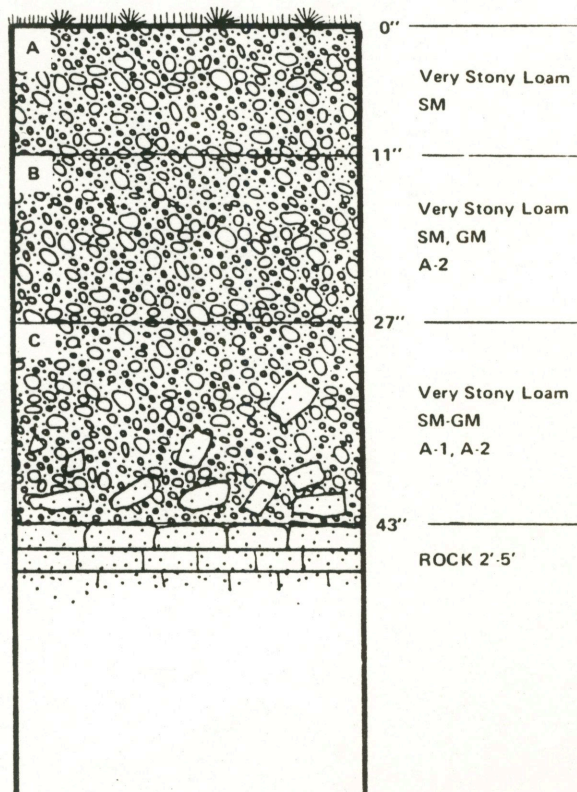
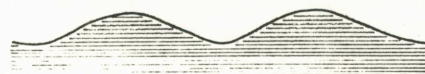


Figure 6.11. A typical soil profile developed from sandstone materials in a humid climate.

Table 6.4. Sedimentary rocks: Shale (humid
Humid

Topography

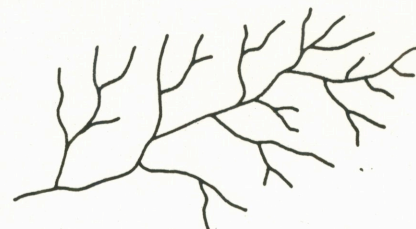
Soft Hills



A smooth, sag-and-swale topography occurs, appearing as soft hills and mounds. Sharp breaks in slopes are neither common nor stable. The attitude of the bedding layers does not affect the appearance of the topography, and it is difficult to observe bedding planes, because of the deep soil profiles found in this climatic zone.

Drainage

Dendritic: Medium to fine



The soft materials exert no control over the drainage system, allowing a medium to fine dendritic pattern to develop freely. No angularity is found, and tributaries enter streams of the next order at acute angles.

Tone

Mottled, dull

The fine cohesive materials comprising the residual soils show as dull gray tones with some mottling. The mottling is caused by slight differences in moisture and organic content.

Vegetation and land use

Cultivated

Humid climate shale regions are either intensely cultivated or heavily forested, depending upon the slopes and the depth of the residual soil cover. In cultivated areas the steeper sideslopes tend to be left in forest cover, thus emphasizing the dendritic pattern. Field patterns are generally square or rectangular, becoming irregular only if drainage courses are intersected. Highways are usually in gridded form unless major drainage systems are encountered, when they become curvilinear.

Gullies

Sag and swale

Gentle sag-and-swale type gullies are common, reflecting the cohesive nature of the residual soils.

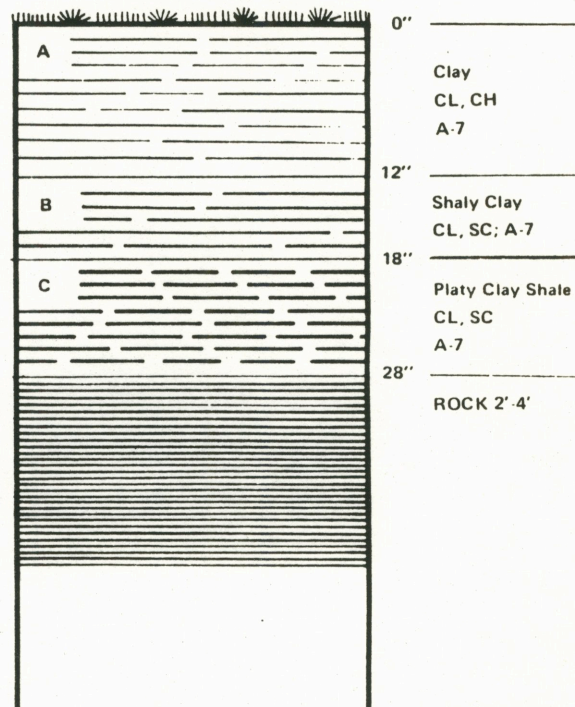
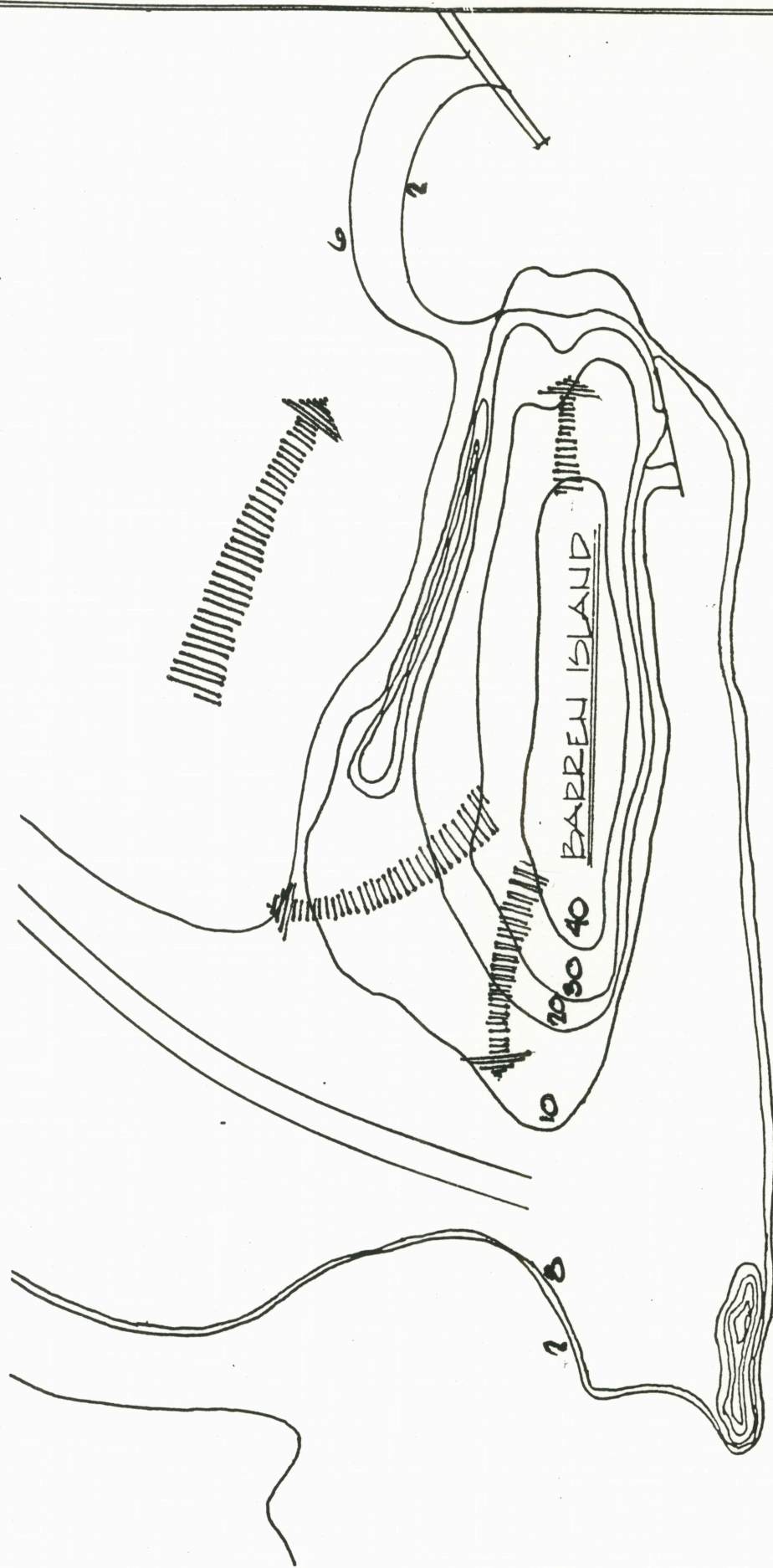


Figure 6.17. A typical residual soil profile of clay shale formed in a semiarid climate.

Drainage



NORTH

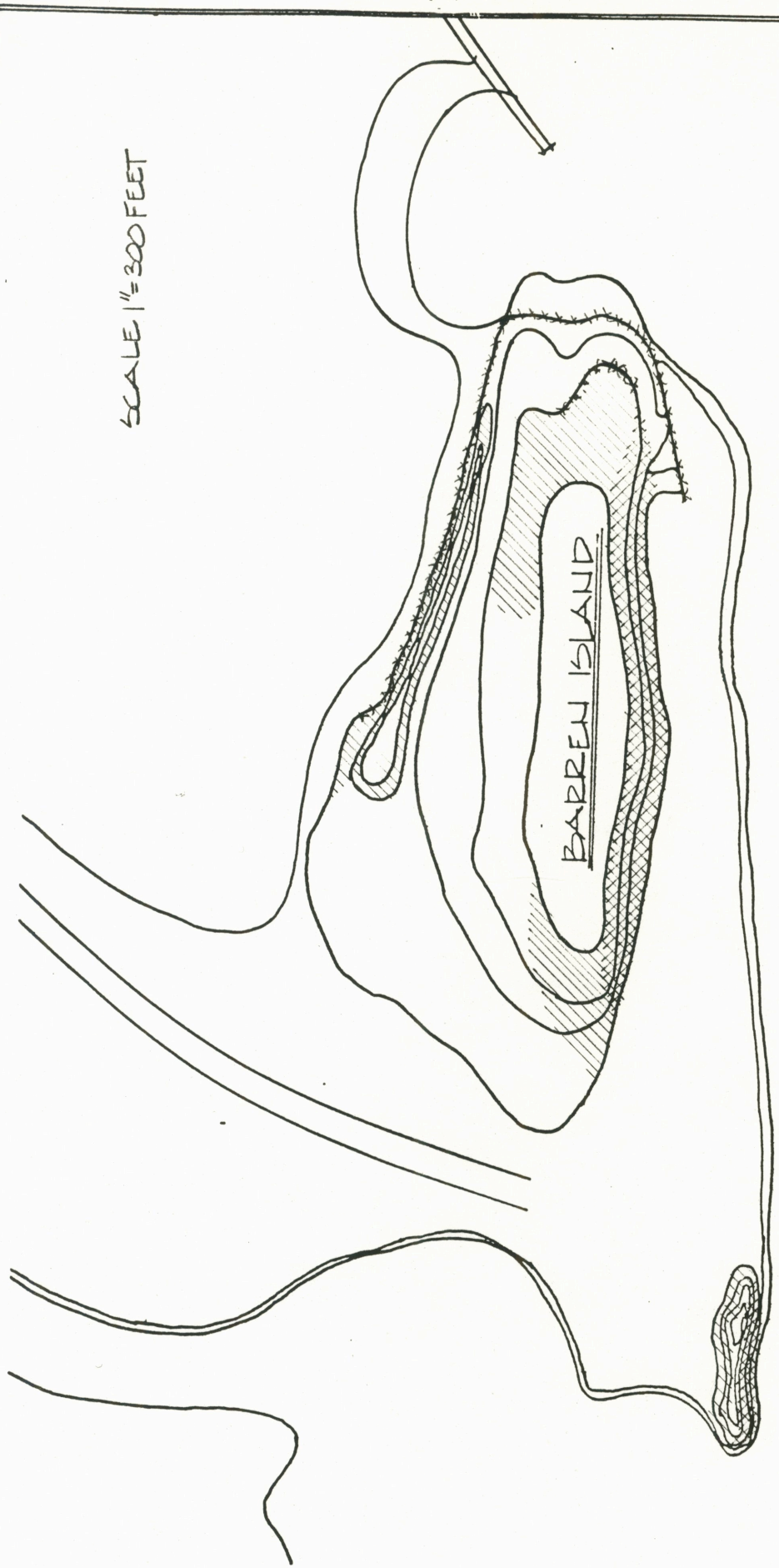
CONTOUR INTERVAL 10 FEET



DRAINAGE COURSE & DIRECTION

SCALE 1"=300 FEET

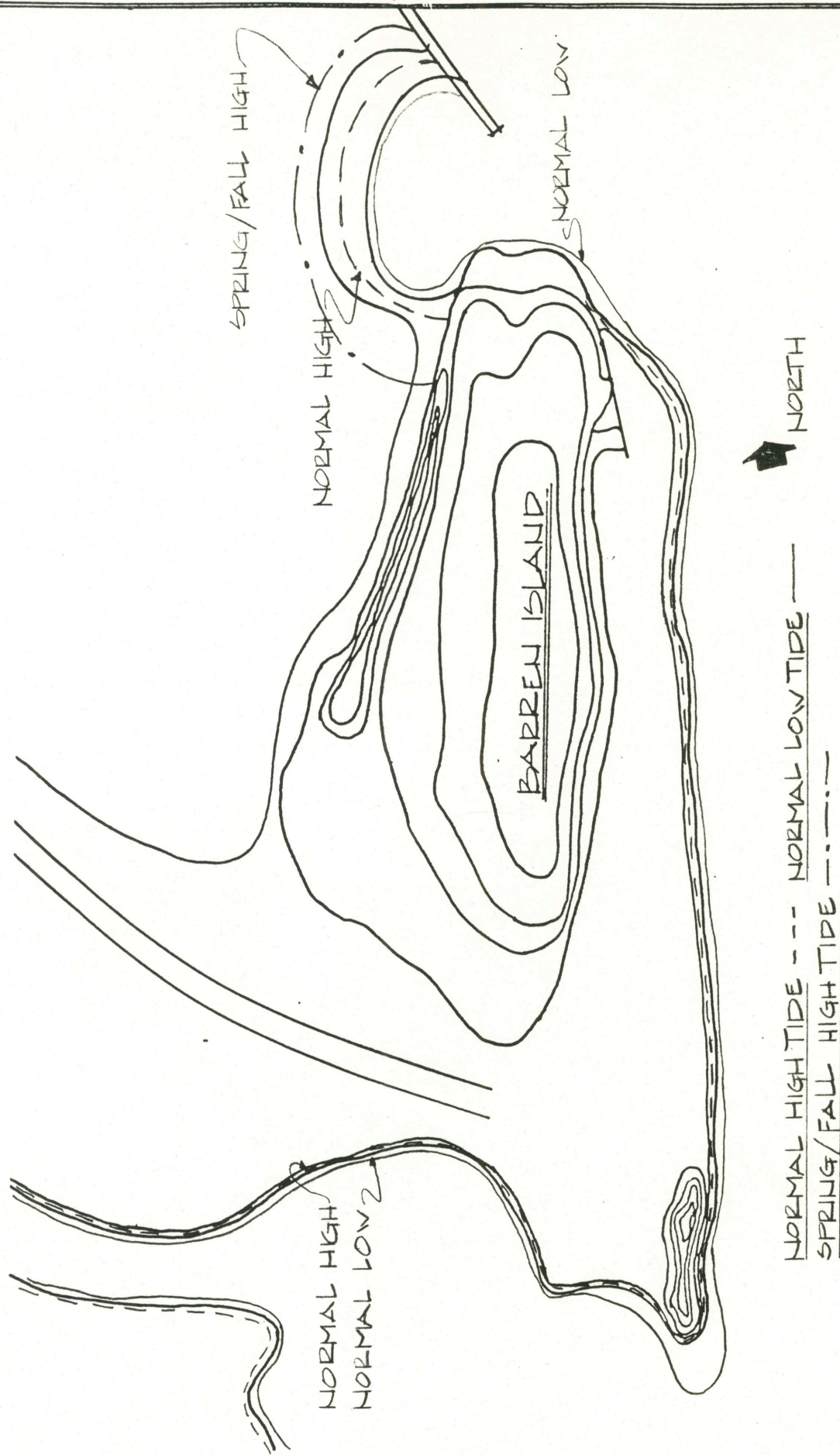
SCALE 1"=300 FEET



- 0-5% SLOPE
- ▨ 5-15% SLOPE
- ▩ 15% & OVER SLOPE
- xxx- APPROXIMATE 90° ESCARPMENT

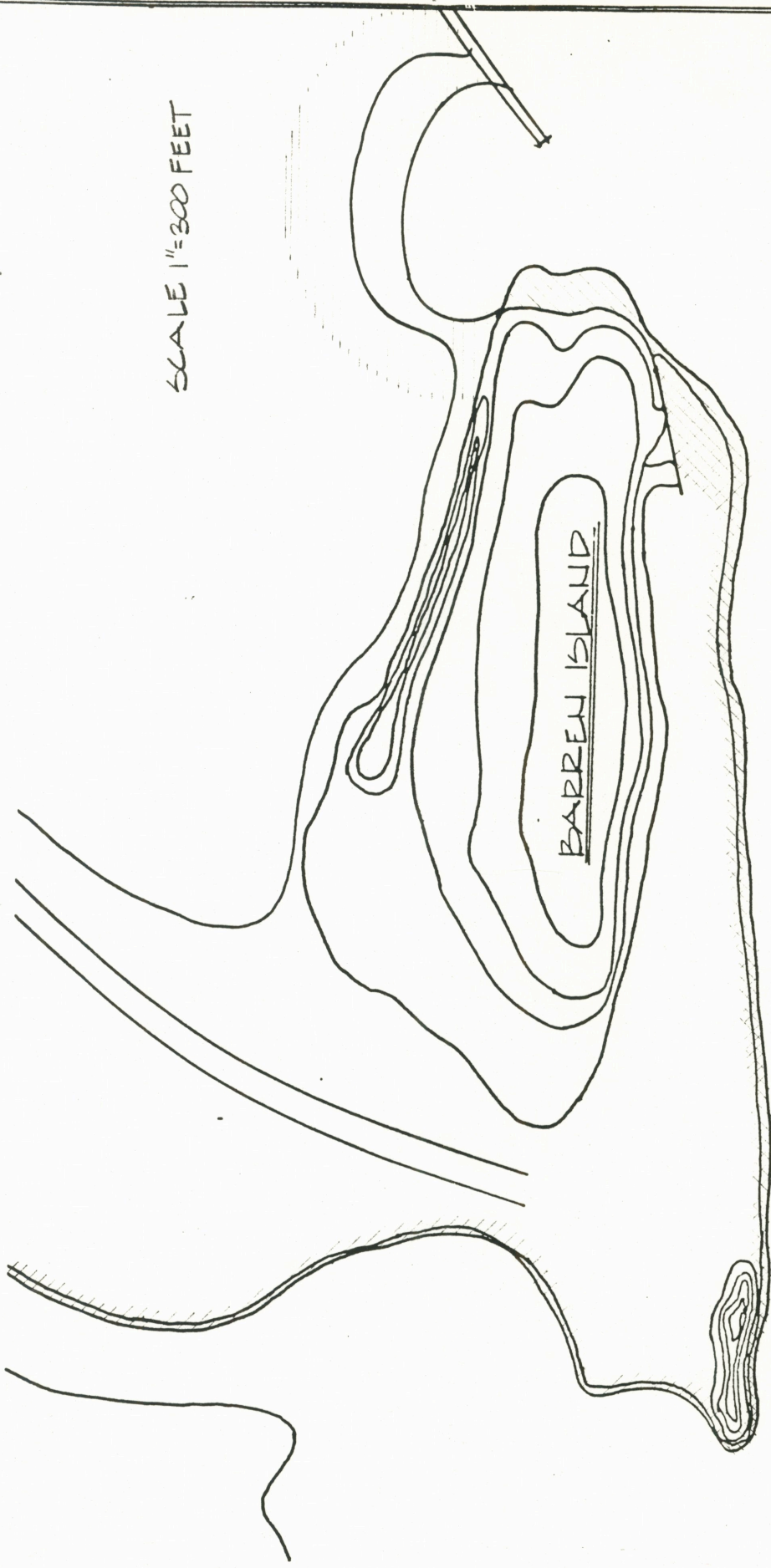
Tides

SCALE 1"=300 FEET



THE APPROXIMATE NORMAL RANGE OF THE TIDES FOR THIS AREA ARE 4.0 TO 4.3 FEET, SEASONAL FLUCTUATIONS DO OCCUR RESULTING IN EXTREME STAGES OF THE HUDSON RIVER ESTUARY.

SCALE 1"=300 FEET



- ▨ - MODERATE SLOPE - SAND to FINE STONE
- ▩ - MODERATE to STEEP SLOPE - SMALL STONE to LARGE ROCK
- ▧ - GENTLE SLOPE - FINE SAND to SMALL STONE

Beach Quality

BEACH QUALITY

-South Bay- with a moderate slope and good edge conditions this beach area is very good for active recreation uses. This large protected bay with excellent southern exposure is at the mouth of the Hannacrios Creek and is a good location for small pleasure craft use, swimming and fishing.

-East Shore- though this area has a moderate slope it is extremely rocky at its southern end. As you progress north along this shoreline the large rocks taper off to small stones. Though this area has the best views of the lower part of the site only passive recreation such as sitting and walking are suitable for this area.

-North Bay- The north bay has a very gentle, sandy slope and is an enclosed bay with very little water disturbance. Recreation opportunities range from passive to active, from contemplation to water sports. The only limitation to this area is that the water is roughly deep enough for small boats only such as small outboards, skiffs and rowboats. This area is the best for beach type recreation.

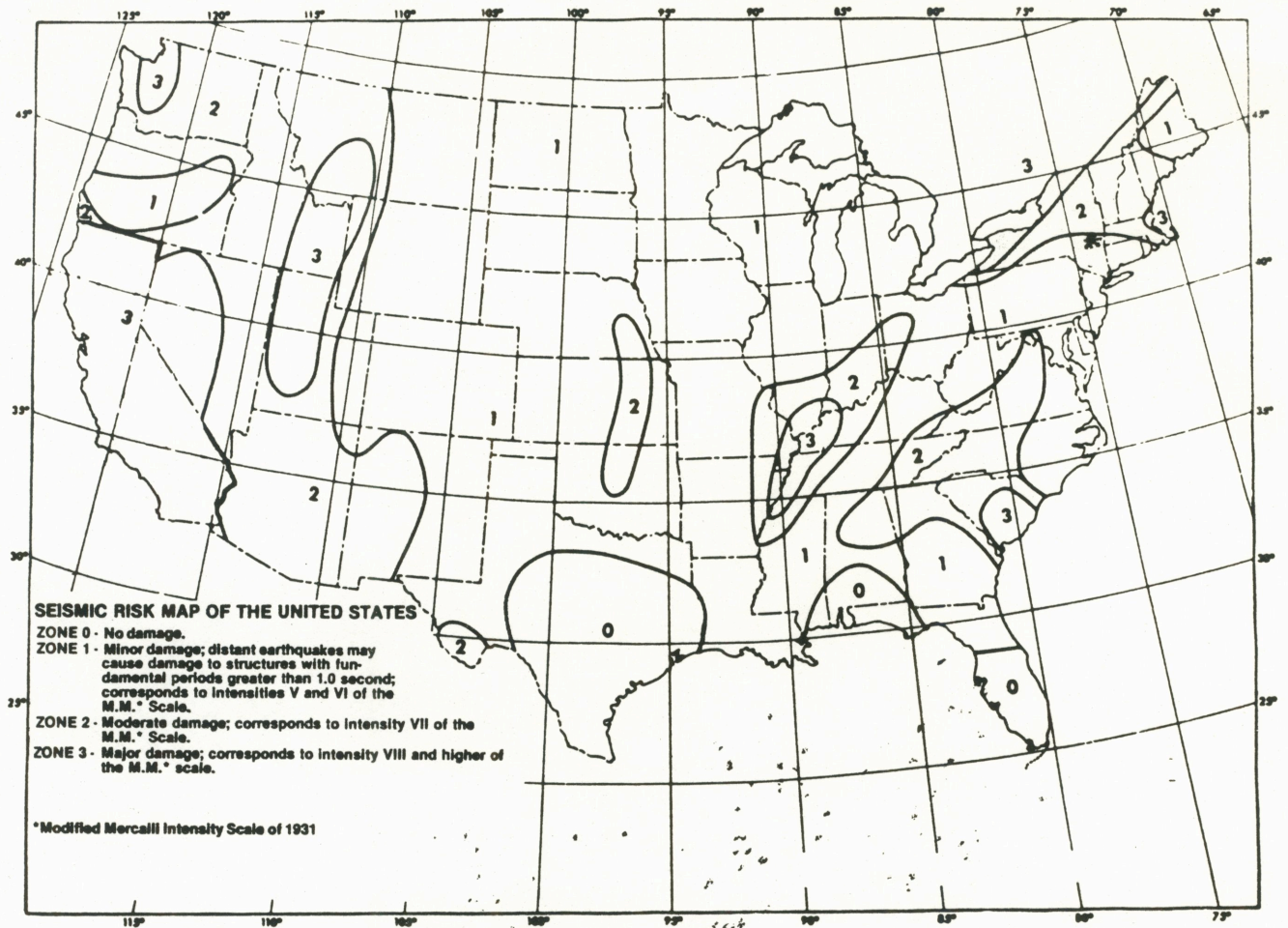


Figure 2.14 Seismic risk map of the contiguous United States.

SPATIAL REQUIREMENTS

SOCIAL CENTER

ZONE A

AREA	NET AREA
Lobby/Interior Court	1400 sq. ft.
Bathrooms	400 sq.ft.
Auditorium	2500 sq. ft.
Exhibition Area (Temporary)	3000 sq. ft.
Exhibition Area (Permanent)	2000 sq. ft.
Exhibition Prep Room	750 sq. ft.
Workshop	750 sq. ft.
Exhibition Storage	750 sq. ft.
Exhibition Shipping/Receiving	1500 sq. ft.
Registration/Cataloge Room	250 sq. ft.
Registrar's Office	150 sq. ft.
Security	350 sq. ft.
Secretary/Waiting	300 sq. ft.
Directors Office	300 sq. ft.
Administrative Assistant	250 sq. ft.
Accountant	250 sq. ft.
Curator	200 sq. ft.
Conference Room	600 sq. ft.
Record Storage	200 sq. ft.
Kitchen Manager	150 sq. ft.
Staff Lockers/Toilets	250 sq. ft.
Kitchen	750 sq. ft.
Dining Hall	1500 sq. ft.
Kitchen Storage	300 sq. ft.
Formal Lounge	1000 sq. ft.
Janitorial	
Subtotal Square Footage	19850 sq. ft.
Mecahnical/Circulation 15%	2980 sq. ft.
Total Square Footage	22830 sq. ft.

SPATIAL REQUIREMENTS

STUDIOS

ZONE B

AREA	NET AREA
Ceramics	2025 sq. ft.
Artist Office 2 @ 150 sq. ft.	300 sq. ft.
Damp Room	100 sq. ft.
Kiln Room	500 sq. ft.
Printmaking - Intaglio	1570 sq. ft.
Artist's Office	150 sq. ft.
Acid Room	65 sq. ft.
Printmaking - Seriography	1750 sq. ft.
Artist's Office	150 sq. ft.
Printmaking - Lithography	1450 sq. ft.
Artist's Office	150 sq. ft.
Sculpture	2140 sq. ft.
Artist's Office 2 @ 150	300 sq. ft. _
Painting/Drawing	1700 sq. ft.
Artist's Office 2@150	300 sq. ft. -
Metalsmithing	1750 sq. ft.
Artist's Office 2@150	300 sq. ft.
Bathrooms w/ Lockers	600 sq. ft.
Seminar Room 2@300	600 sq. ft.
Lounge	1000 sq. ft.
Private Studios 10 @ 100	1000 sq. ft.
Art Shop	
Shipping/Receiving	1000 sq. ft.
Storage	350 sq. ft.
Managers Office	150 sq. ft.
Display/Sales	2500 sq. ft.
Subtotal Square Footage	21900 sq. ft.
Mechanical/Circulation 15%	3285 sq. ft.
Total Square Footage	25185 sq. ft.

SPATIAL REQUIREMENTS

LIBRARY

ZONE B

<u>AREA</u>	<u>NET AREA</u>
Open Stacks	3000 sq. ft.
Librarians Office	200 sq. ft.
Librarians Workroom	250 sq. ft.
Library Reproduction Room	150 sq. ft.
Slide Room - 60,000 slides	350 sq. ft.
Rare Book Room	1500 sq. ft.
Open Reading	300 sq. ft.
Private Carrels 10 @ 60	600 sq. ft.
Lounge	500 sq. ft.
Subtotal Square Footage	6850 sq. ft.
Mecahnical/Circulation 15%	1027 sq. ft.
Total Square Footage	7877 sq. ft.

RESIDENCE

ZONE C

<u>AREA</u>	<u>NET AREA</u>
ARTIST RESIDENCE	
Single 3 @ 500	1500 sq. ft.
Married no children 4 @ 625	2500 sq. ft.
Married w/ children 3 @ 600	1800 sq. ft.

STUDENTS

Studio 60 @ 450	27000 sq. ft.
Married no children 20 @ 500	10000 sq. ft.
Married w/ children 20 @ 600	12000 sq. ft.

RECREATION BUILDING

SPACE/PROGRAMMING ANALYSIS KEY

PRIVACY

SOLITUDE-an individual is separated from the group and freed from the observation of other persons. He/she may be subject to jarring physical stimuli, such as noise, odors and vibrations. Their peace of mind may continued to be disturbed by physical sensations of heat, cold, itching and pain. Solitude is the most complete state of visual privacy that individuals can achieve.

INTIMACY-the individual is acting as part of a small unit and is allowed to exercise corporate seclusion so that it may achieve a close, relaxed and frank relationship between two or more individuals. Without intimacy, a basic need of human contact would not be met.

ANONYMINITY-an individual is in public places or performing public acts but still seeks and finds freedom from identification and surveillance; He is among people and knows he is being observed. In this state the individual is able to merge into the situational landscape. Knowledge or fear that one is under observation in public places destroys the sense of relaxation and freedom that people seek in open and public spaces.

RESERVE-the individuals need to limit communication about himself is protected by the willing discretion of those surrounding him. This is a creation of a psychological barrier against unwanted intrusions; the relation that creates a mental distance to protect the personality.

SOURCE:PASTALAN, LEON Study in Privacy 1967
 cited in paper Privacy as an Expression of
Human Territoriality Leon A. Pastalan
pg. 325-24
cited in Humanscape: Environments for
People Kaplan and Kaplan U. of Michigan
Duxbury Press Mass. 1978

TABLE 1 Privacy states and definitional properties of territoriality

<i>Privacy</i>	<i>Territoriality</i>			
	<i>Behavior Form</i>	<i>Situational Context</i>	<i>Antecedent Factors</i>	<i>Organismic Factors</i>
<i>Solitude</i>	Physical withdrawal from view from primary and secondary associates as well as the public; verbal reports; full range of occupancy and defense responses	Environmental props to control informational flow, location; single person	Pressures of multiple role playing, role incompatibility; interpersonal incompatibility; defeat	Reli● from visual observation; self-evaluation; to unmask and be oneself; to perform bodily functions
<i>Intimacy</i>	Physical seclusion from secondary associates and public; anticipatory preventive responses; full range of occupancy and defense responses	Environmental props to control informational flow location; small group	Role relations and interpersonal compatibility or incompatibility	Need for close, relaxed, frank relationships; egalitarian; sharing of confidences
<i>Anonymity</i>	Psychological and physical blending with the public; defense through self-markers and verbal reports	Informational flow is controlled through merging into the situational landscape; use of open space, mass numbers of people and objects	Role responsibilities demanding full adherence to expected behavior; anonymous relations	Need to escape personal identification and responsibility of full rules of behavior and role; anonymous sharing of confidences
<i>Reserve</i>	Psychological barrier against unwanted intrusion; defense through self-markers and verbal reports	Control of informational flow through self-restraint and willing discretion of associates	Reciprocal reserve and indifference; mental distance to protect the personality	Need to limit communication about the self

Space Program Analysis Key

ACOUSTICS

<u>Acoustical Character</u>	<u>Sound Pressure</u>	<u>Activity</u>
Faint	20-40dB	Private office Quiet conversation
Moderate	40-60dB	Ave. conversation Quiet radio
Loud	60-80dB	Noisy office Quiet typewriter
Very loud	80-100dB	Loud street noise Shop machinery

Source: Doelle, Leslie L., Environmental Acoustics
McGraw-Hill Book Co.
New York pg. 16

Illumination

ILLUMINATION TYPE

D.L.	Daylighting
G.L.	General Lighting
T.L.	Task Lighting
D.L.1	Display Light

Many buildings prove unsuitable in the psychological needs of the user. In response to this the buildings on this site will be designed in a "physical framework flexible enough to permit the user to express his aesthetic preferences" (Greene) and enter into the act of creating his/her environment. By allowing the user to shape their own domain they create an identity for themselves within a larger shared territory. "In the action of changing and creating an environment the individual confers meaning on the environment" (Pawley).

GALLERY/ ADMINISTRATIVE CENTER

This building will contain a gallery for traveling art shows. The gallery should be flexible and capable of accommodating large paintings and other works of art as well as exhibits of smaller items. Concern should be given to future, experimental directions in art so the gallery can serve as a creative facility rather than an impediment to innovation. A smaller gallery will also be provided for the permanent collection of the school.

Zone

A. - SOCIAL CENTER - EXHIBIT

Area

LOBBY

Function

MAIN PUBLIC ACCESS: ORIENTATION
ASSEMBLY

Privacy

INTIMATE to ANONYMINITY

Interaction

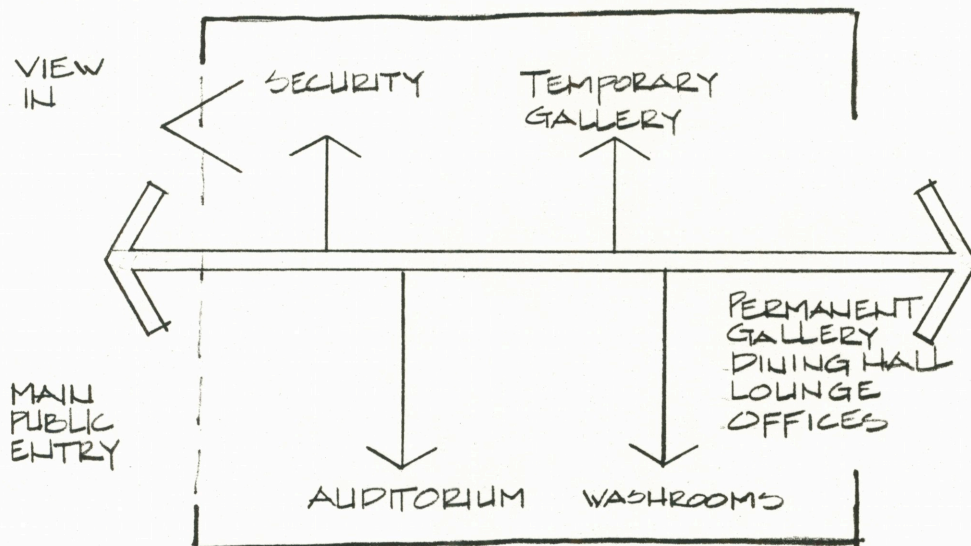
PUBLIC

Acoustics

MODERATE

Illumination

N.L. / G.L.



Required Area 600 1/2

Ceiling Height 10'0"

Zone

A- SOCIAL CENTER - EXHIBIT

Area

BATHROOMS (2)

Function

Privacy

SOLITUDE

Interaction

PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L.

Required Area 600 sq ft

Ceiling Height 8'6"

Zone

A- SOCIAL CENTER - EXHIBIT

Area

AUDITORIUM

Function

FORMAL STUDENT REVIEW

LECTURES & PERFORMANCES - VISITING ARTISTS

FILM VIEWING

Privacy

INTIMATE TO RESERVE

Interaction

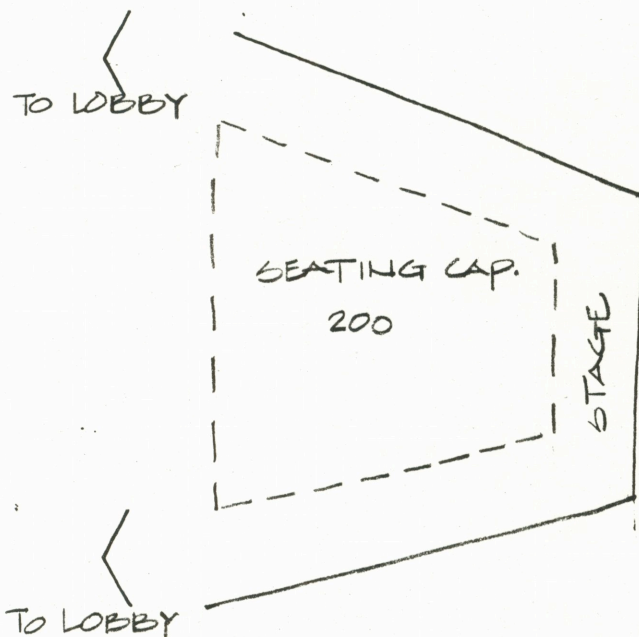
PUBLIC

Acoustics

MODERATE

Illumination

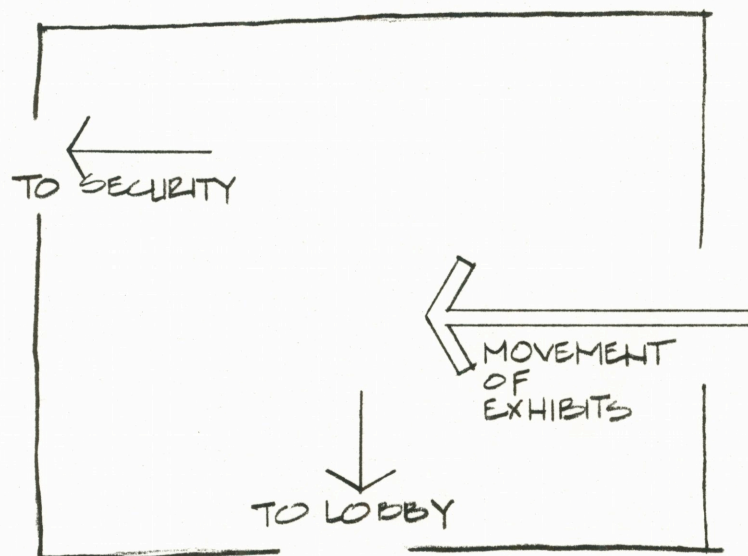
G.L. / T.H.L.



Required Area 2500 #

Ceiling Height to 40'0"

Zone	A. - SOCIAL CENTER - EXHIBIT
Area	EXHIBITION AREA - TEMPORARY
Function	TRAVELING ART SHOWS - LARGE & SMALL STUDENT / PROFESSOR SHOWS
Privacy	SOLITUDE to RESERVE
Interaction	PUBLIC
Acoustics	FAINT
Illumination	N.L. / T.L.



Required Area 3000 $\pm$

Ceiling Height 8'-6" - 12'-0"

Zone

A- SOCIAL CENTER - EXHIBIT

Area

EXHIBITION SPACE - PERMANENT

Function

BARREN ISLAND PRIVATE COLLECTION

Privacy

SOLITUDE to RESERVE

Interaction

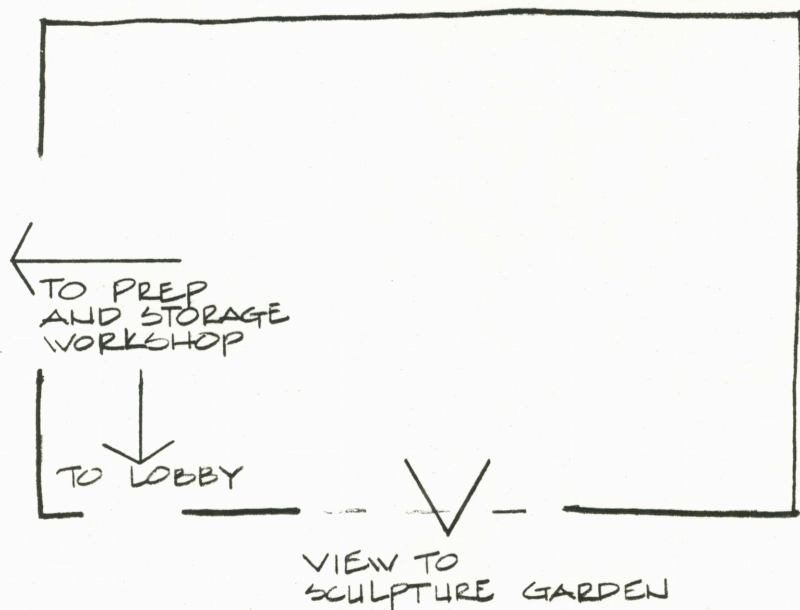
PUBLIC

Acoustics

FAINT

Illumination

N.L./T.L.



Required Area 2000 $\pm$

Ceiling Height 8'-6" - 12'-0"

Zone

A- SOCIAL CENTER - EXHIBIT

Area

PREP ROOM

Function

ASSEMBLY & DISASSEMBLY OF
TEMPORARY OR VISITING EXHIBITS
ASSEMBLY TOOL STORAGE

Privacy

SOLITUDE to INTIMATE

Interaction

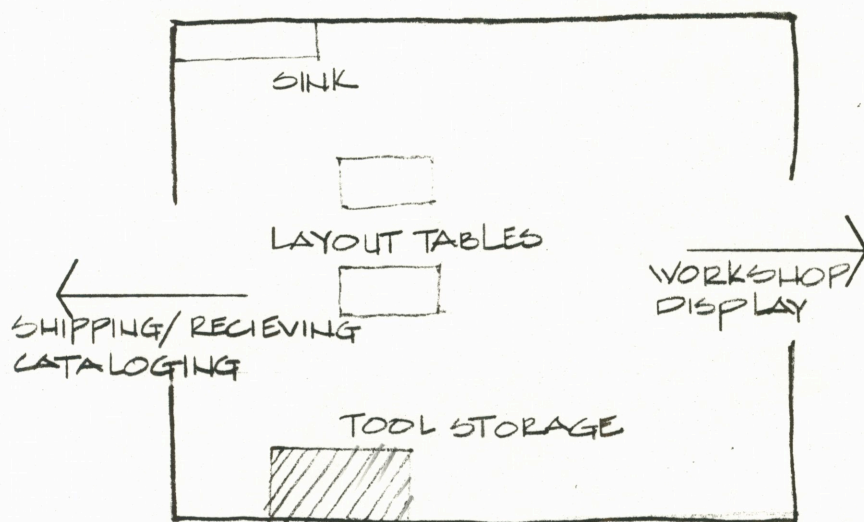
PRIVATE - EMPLOYEES

Acoustics

MODERATE to LOUD

Illumination

G.L. / T.L.



Required Area 750 $\square$

Ceiling Height 12'-0"

Zone

A- SOCIAL CENTER - EXHIBIT

Area

WORKSHOP

Function

CLEANING & UPKEEP OF ARTIFACTS
PREPARATION OF EXHIBIT DISPLAYS

Privacy

SOLITUDE to INTIMATE

Interaction

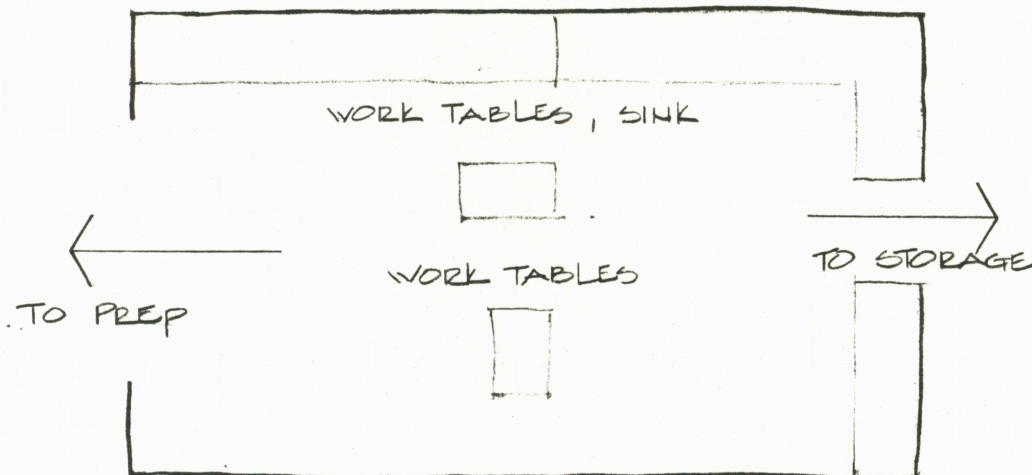
PRIVATE - EMPLOYEES

Acoustics

MODERATE to VERY LOUD

Illumination

G.L. / T.L.



Required Area

750 sq ft

Ceiling Height

12'-0"

Zone

A- SOCIAL CENTER - EXHIBIT

Area

EXHIBIT STORAGE

Function

STORAGE OF SHIPPING CRATES & SUPPLIES

Privacy

SOLITUDE

Interaction

PRIVATE - EMPLOYEES

Acoustics

FAINT

Illumination

G.L.

Required Area 750 $\square$

Ceiling Height 12'-0"

Zone

A - SOCIAL CENTER - EXHIBIT

Area

SHIPPING & RECEIVING

Function

RECEIVING & SHIPPING OF DISPLAYS

RECEIVING SHOP SUPPLIES

UNLOADING & REPACKING OF EXHIBITS

Privacy

INTIMATE

Interaction

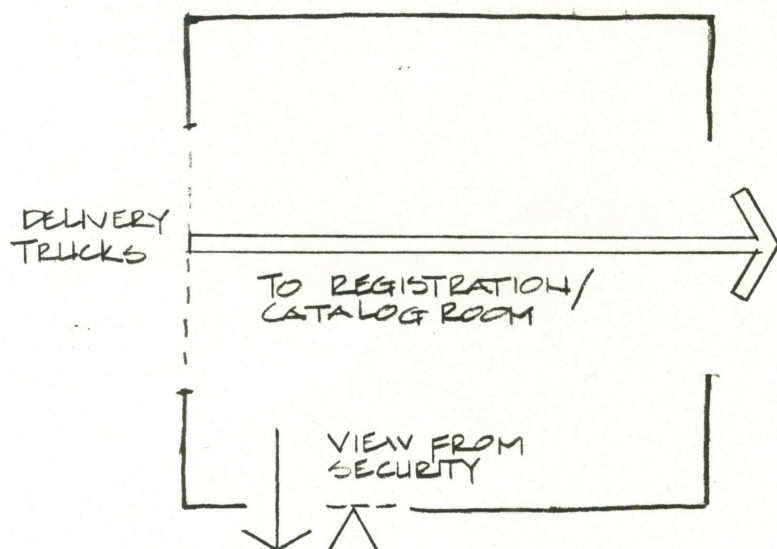
PRIVATE - EMPLOYEES

Acoustics

MODERATE to LOUD

Illumination

G.L.



Required Area 1500 #

Ceiling Height 10'-0" - 12'-0"

Zone

A. - SOCIAL CENTER - EXHIBIT

Area

EXHIBITS REGISTRATION/CATALOG ROOM

Function

DOCUMENTATION OF ARTIFACTS
ELECTRONIC DATA CATALOGING

Privacy

SOLITUDE to INTIMATE

Interaction

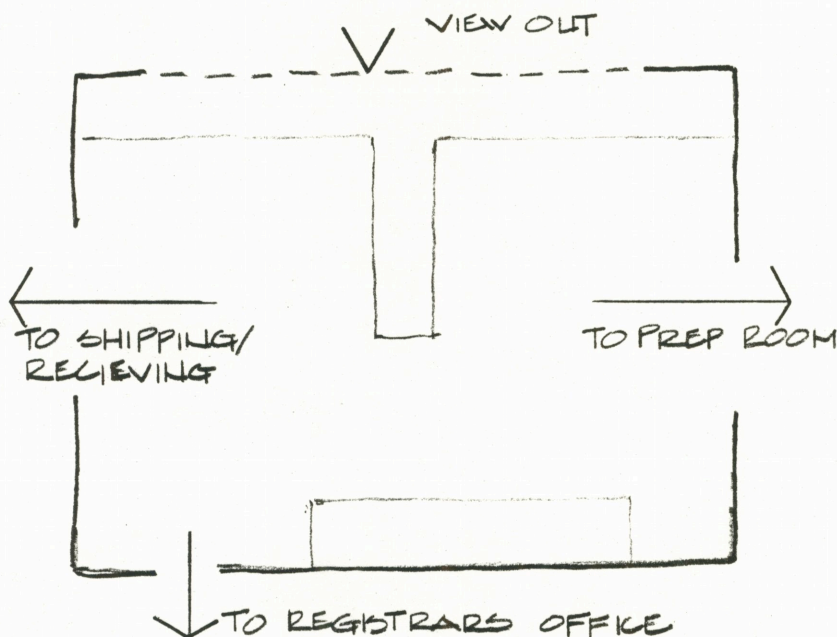
PRIVATE

Acoustics

MODERATE

Illumination

N.L./G.L./T.L.



Required Area 250 #

Ceiling Height 8'-6" - 9'-0"

Zone

A. - SOCIAL CENTER - EXHIBIT

Area

EXHIBITS REGISTRATION/CATALOG ROOM

Function

DOCUMENTATION OF ARTIFACTS
ELECTRONIC DATA CATALOGING

Privacy

SOLITUDE to INTIMATE

Interaction

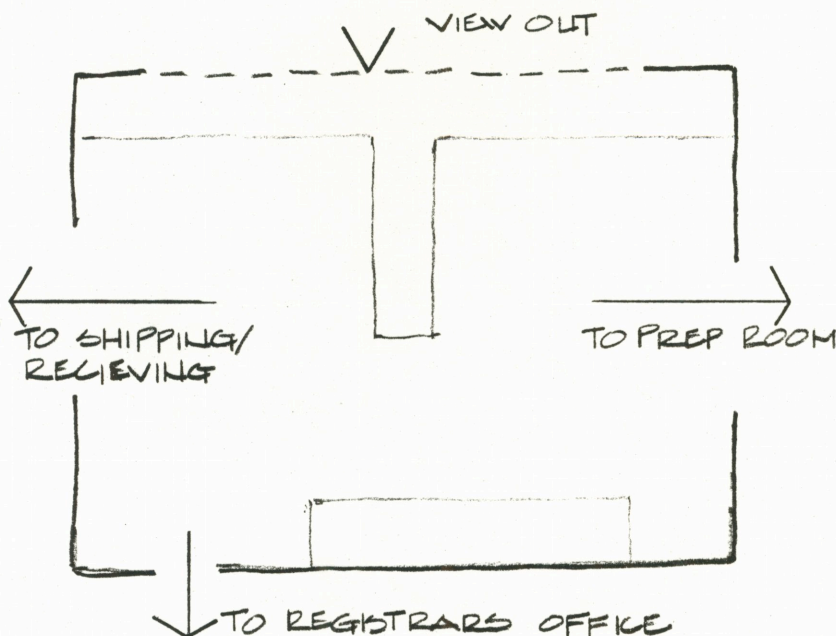
PRIVATE

Acoustics

MODERATE

Illumination

N.L./G.L./T.L.



Required Area 250 #

Ceiling Height 8'-6" - 9'-0"

Zone

A - SOCIAL CENTER - EXHIBIT

Area

REGISTRARS OFFICE

Function

ADMINISTRATIVE OFFICE

Privacy

SOLITUDE & INTIMATE

Interaction

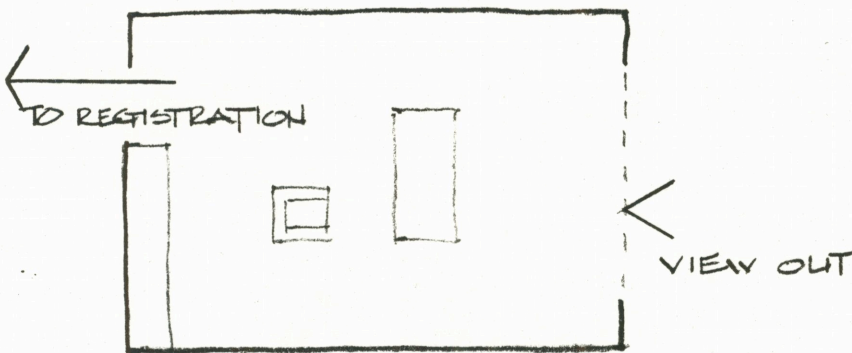
PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.



Required Area 150 sq ft

Ceiling Height 8'6" - 9'0"

Zone

A - SOCIAL CENTER - EXHIBIT

Area

SECURITY OFFICE

Function

CONTROL OF RECEIVING DOCK
SURVEILLANCE OF EXHIBITS

Privacy

INTIMATE

Interaction

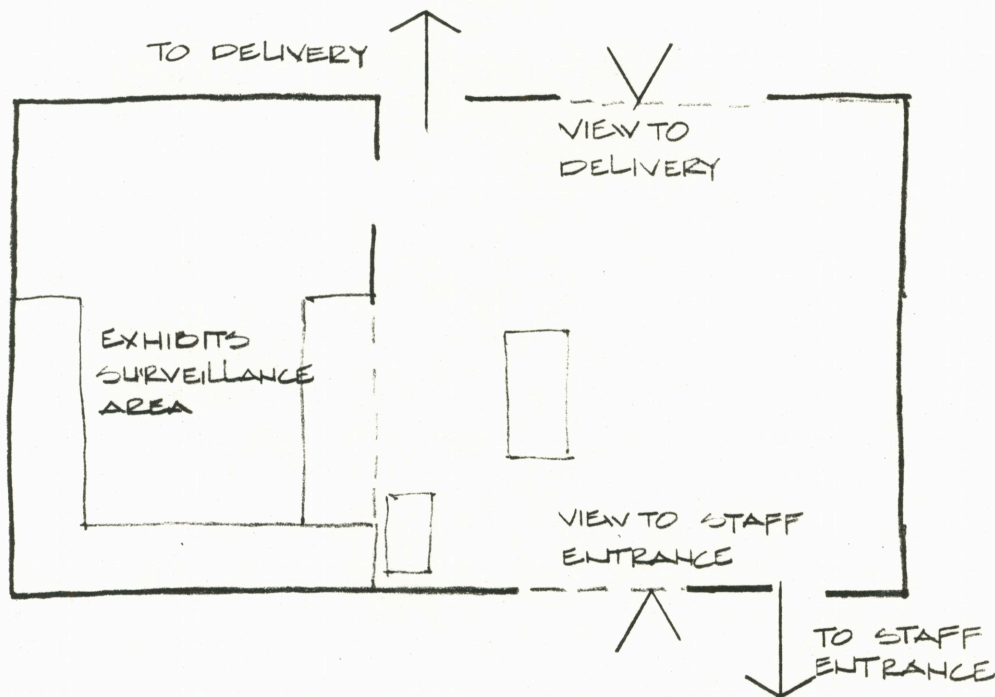
PRIVATE

Acoustics

LOUD

Illumination

N.L. / G.L. / T.L.



Required Area 350 $\square$

Ceiling Height 8'-6" - 9'-0"

Zone

A₁ - SOCIAL CENTER - OFFICE AREA

Area

DIRECTORS OFFICE

Function

ADMINISTRATIVE OFFICE

Privacy

SOLITUDE to INTIMATE

Interaction

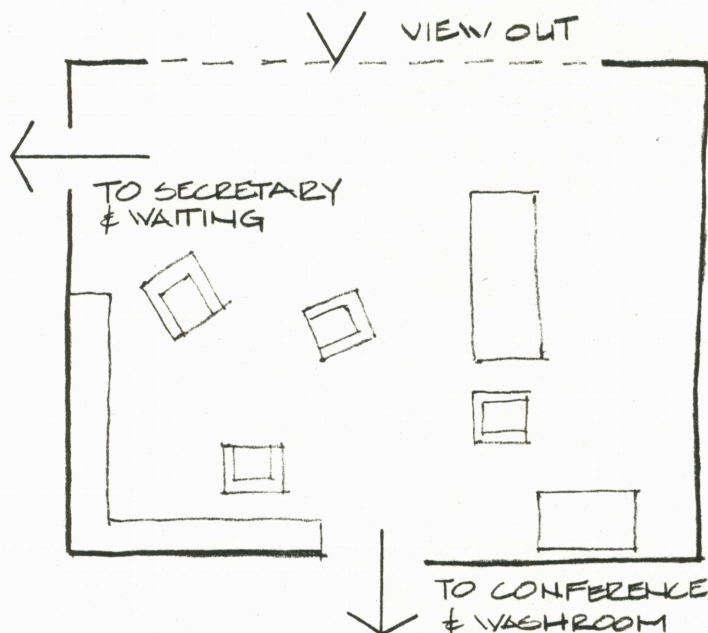
PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.



Required Area 300 sq ft

Ceiling Height 8'-6" 9'-0"

Zone

A₁ - SOCIAL CENTER - OFFICE AREA

Area

SECRETARY (2) / WAITING

Function

CLERICAL - RECEPTION OFFICE

Privacy

INTIMATE

Interaction

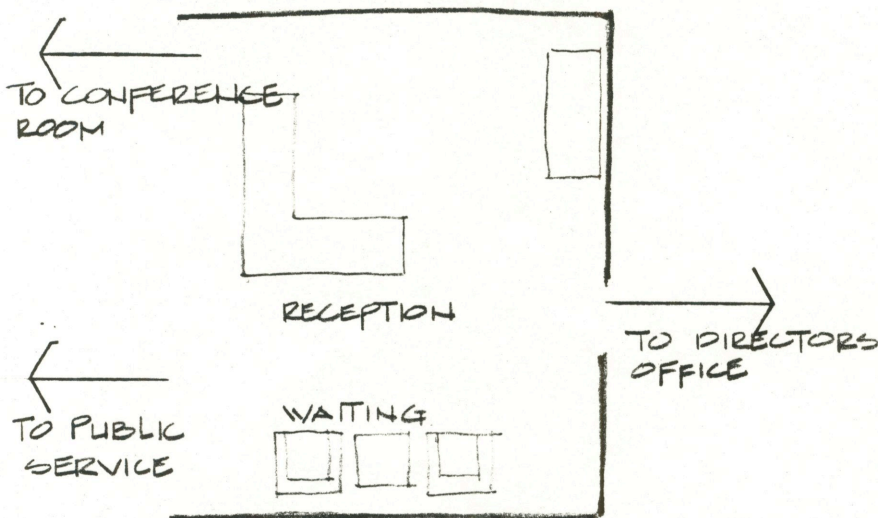
SEMI-PRIVATE

Acoustics

MODERATE

Illumination

N.L. / G.L. / T.L.



Required Area 300 sq ft

Ceiling Height 8'-6" - 9'-0"

Zone

A₁ - SOCIAL CENTER - OFFICE AREA

Area

ADMINISTRATORS ASSISTANTS OFFICE

Function

ADMINISTRATIVE OFFICE

Privacy

SOLITUDE to INTIMATE

Interaction

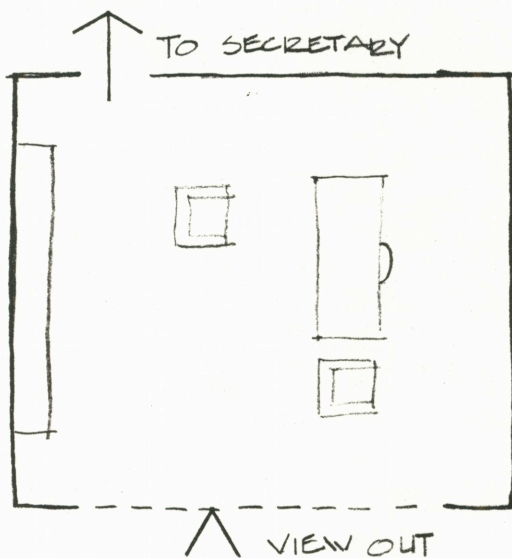
PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.



Required Area 250 ±

Ceiling Height 8'-6" - 9'-0"

Zone

A₁ - SOCIAL CENTER - OFFICE AREA

Area

ACCOUNTANT / BOOKKEEPER

Function

ADMINISTRATIVE OFFICE

Privacy

SOLITUDE to INTIMATE

Interaction

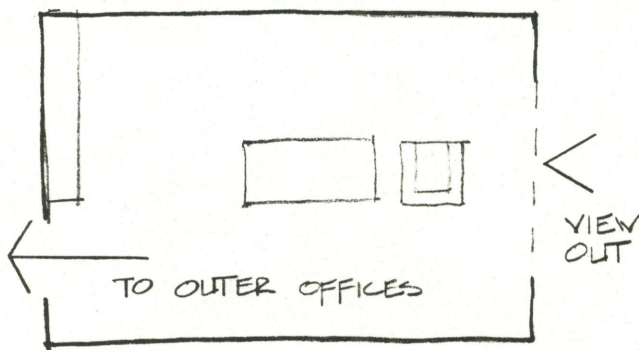
PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.



Required Area 250 #

Ceiling Height 8'6" - 9'0"

Zone

A, SOCIAL CENTER-OFFICE AREA

Area

CURATORS OFFICE

Function

ADMINISTRATIVE OFFICE

Privacy

SOLITUDE to INTIMATE

Interaction

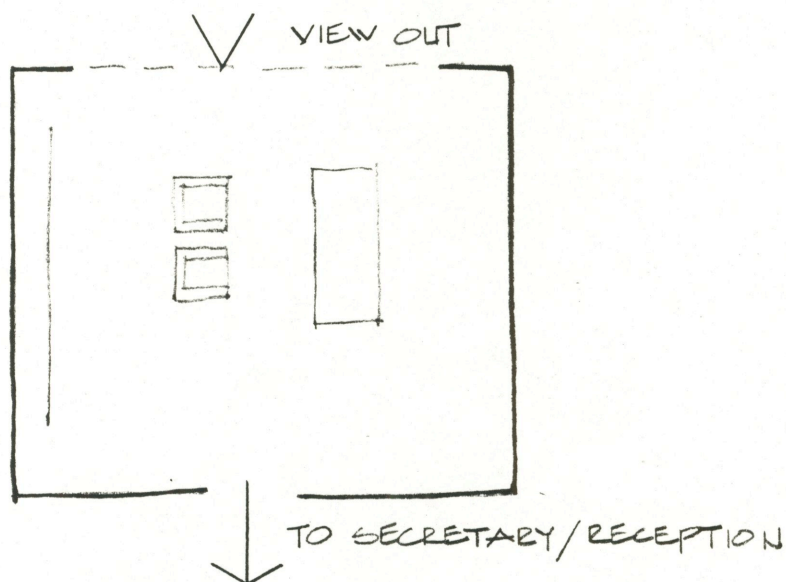
PRIVATE

Acoustics

FAINT

Illumination

N.L./G.L./T.L.



Required Area 200 $\pm$

Ceiling Height 8'-6" - 9'-0"

Zone

A₁ - SOCIAL CENTER - OFFICE AREA

Area

CONFERENCE ROOM

Function

ADMINISTRATIVE MEETINGS

CAPACITY - 20 PERSONS

Privacy

INTIMATE

Interaction

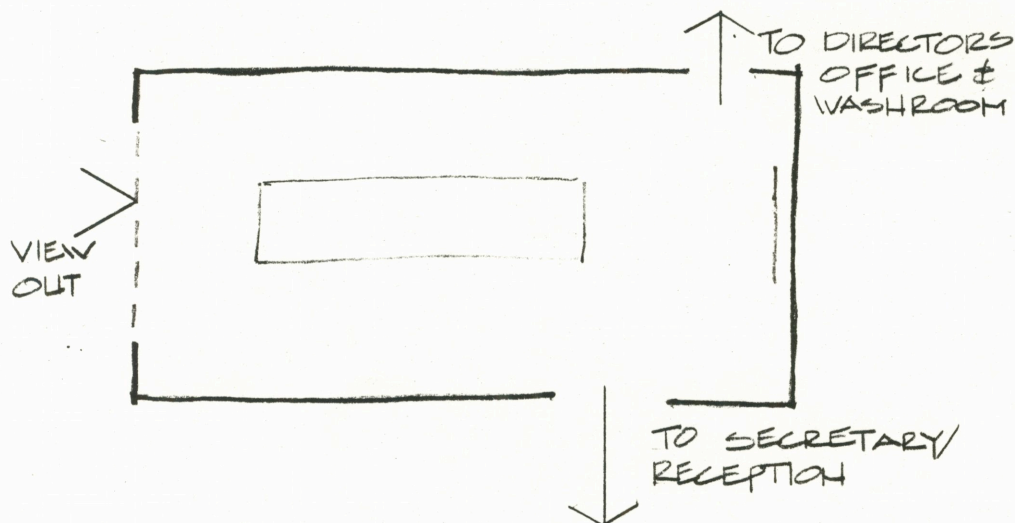
PRIVATE

Acoustics

FAINT to MODERATE

Illumination

N.L. / G.L.



Required Area 700 ±

Ceiling Height 8'-6" - 9'-0"

Zone

A₁ - SOCIAL CENTER - OFFICE AREA

Area

RECORD STORAGE

Function

STORAGE OF RECORDS, FORMS, PRIVATE
DOCUMENTS
OFFICE SUPPLIES

Privacy

—

Interaction

PRIVATE

Acoustics

FAINT

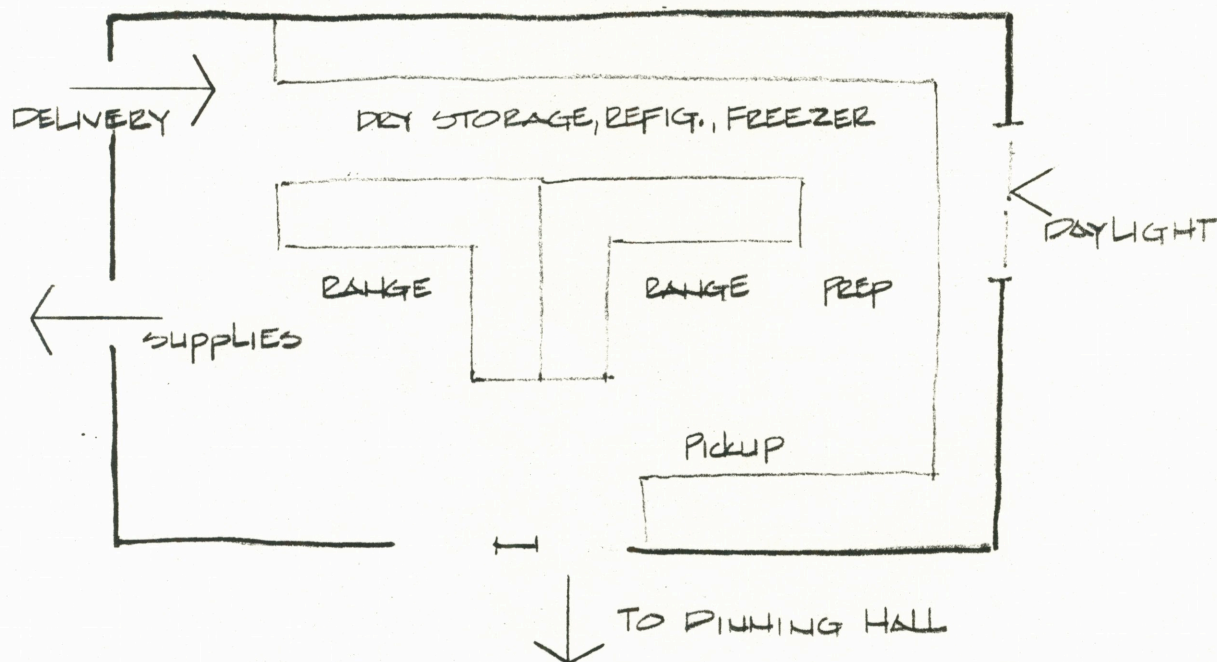
Illumination

G.L.

Required Area 200 ±

Ceiling Height 8'-6" - 9'-0"

Zone	A ₂ - SOCIAL CENTER - SUPPORT
Area	KITCHEN
Function	PREPARATION OF FOOD FOR FORMAL & INFORMAL BUFFET SERVICE
Privacy	INTIMATE
Interaction	PRIVATE - EMPLOYEES
Acoustics	MODERATE to LOUD
Illumination	N.L. / G.L.



Required Area 750 #	Ceiling Height 8'-6"-9'-0"
----------------------------	-----------------------------------

Zone

A₂ - SOCIAL CENTER - SUPPORT

Area

KITCHEN MANAGERS OFFICE

Function

ADMINISTRATIVE OFFICE

Privacy

SOLITUDE to INTIMATE

Interaction

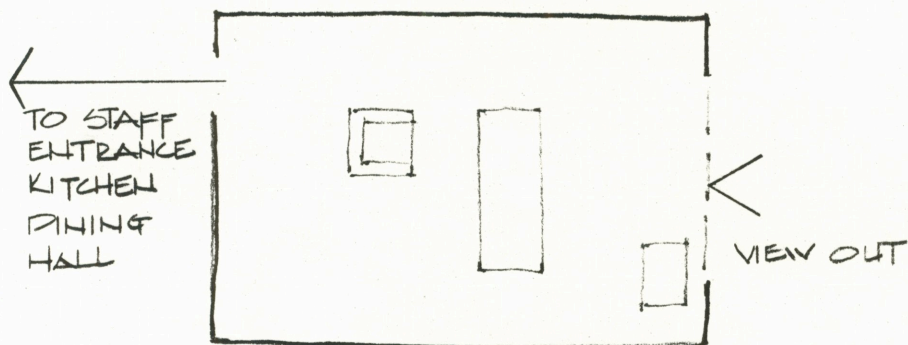
PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.



Required Area 150 sq ft

Ceiling Height 8'6" - 9'0"

Zone

A₂-SOCIAL CENTER-SUPPORT

Area

KITCHEN STAFF LOCKERS & TOILETS

Function

STORAGE OF PERSONAL BELONGINGS
OF STAFF

Privacy

INTIMATE

Interaction

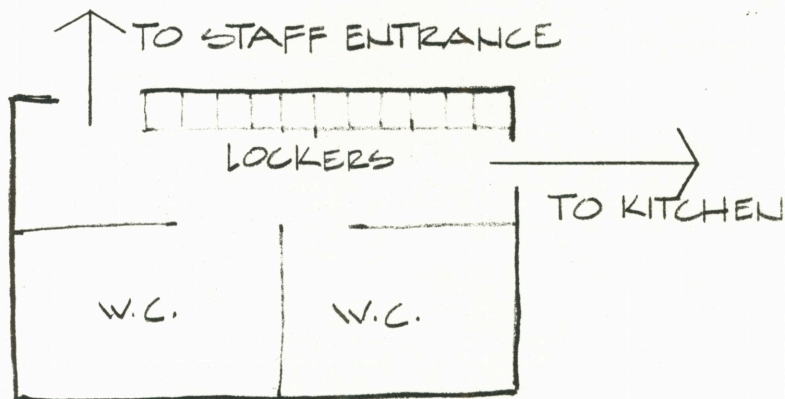
SEMI-PRIVATE

Acoustics

MODERATE

Illumination

G.L.



Required Area 150 ±

Ceiling Height 8'-6"-9'-0"

Zone

A₂ - SOCIAL CENTER - SUPPORT

Area

DINING HALL

Function

BUFFET STYLE SERVICE

CAPACITY - 100 PERSONS FORMAL

- 150 PERSONS INFORMAL

Privacy

INTIMATE to RESERVE

Interaction

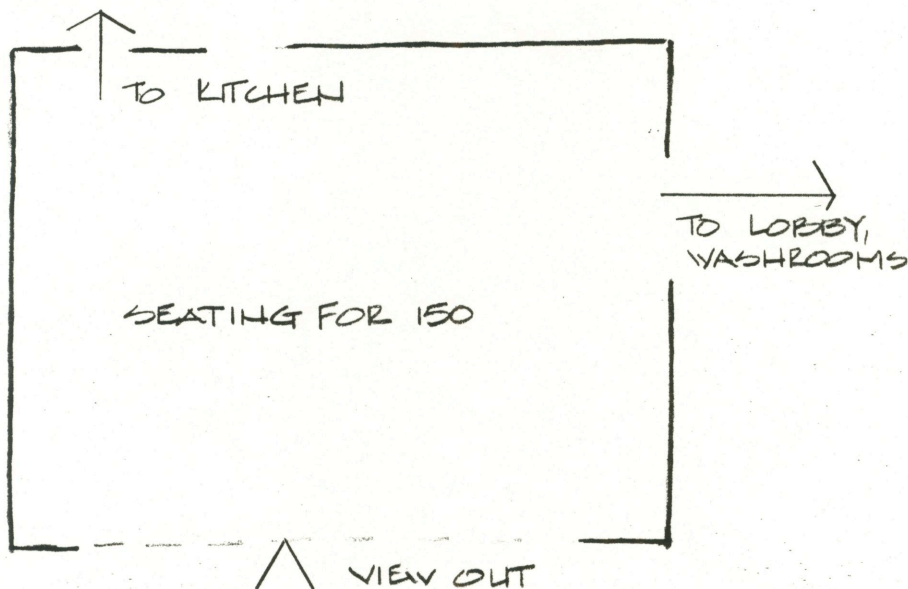
PUBLIC

Acoustics

MODERATE

Illumination

N.L. / G.L.



Required Area 1500 $\square$

Ceiling Height 10'-0"

Zone

A₂ - SOCIAL CENTER - SUPPORT

Area

FORMAL LOUNGE

Function

PRIVATE RECEPTION/DINNERS

Privacy

INTIMATE

Interaction

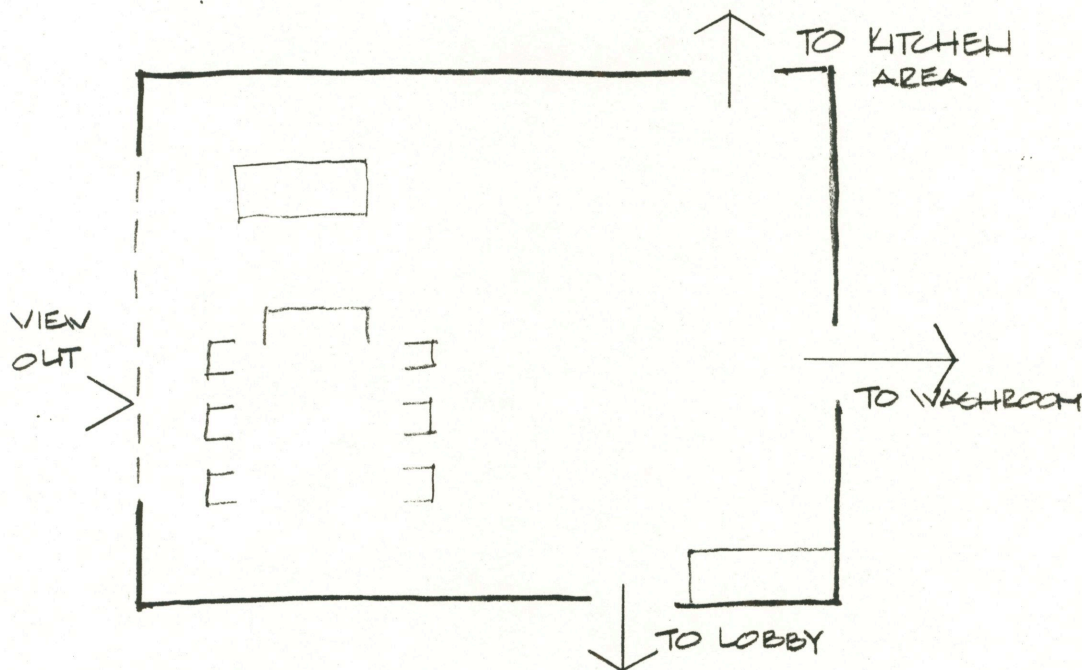
PRIVATE

Acoustics

MODERATE

Illumination

N.L./ G.L.



Required Area 1000 ±

Ceiling Height 10'0"

Zone

A2. SOCIAL CENTER - SUPPORT

Area

JANITORIAL ROOM

Function

STORAGE OF CLEANING EQUIPMENT &
MATERIALS

Privacy

SOLITUDE

Interaction

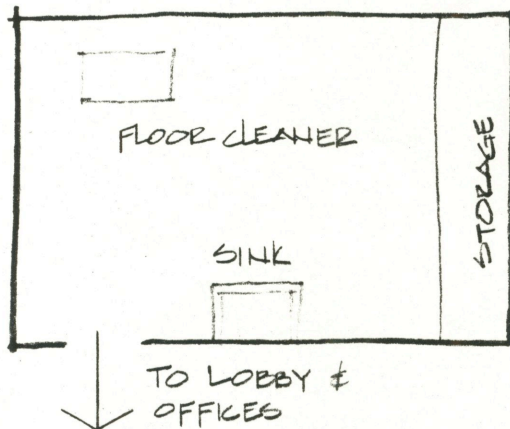
PRIVATE

Acoustics

MODERATE

Illumination

G.L.



Required Area 150 $\pm$

Ceiling Height 8'-6" - 9'-0"

ART STUDIOS

The studios will ostensibly be the most active part of this complex in the sense of creative stimulation. This can be obtained by the use of a multiplicity of perceptual levels. This involves struggles and hesitations for the observer making perceptions more vivid.

Zone B - -STUDIO AREA

Area CERAMICS

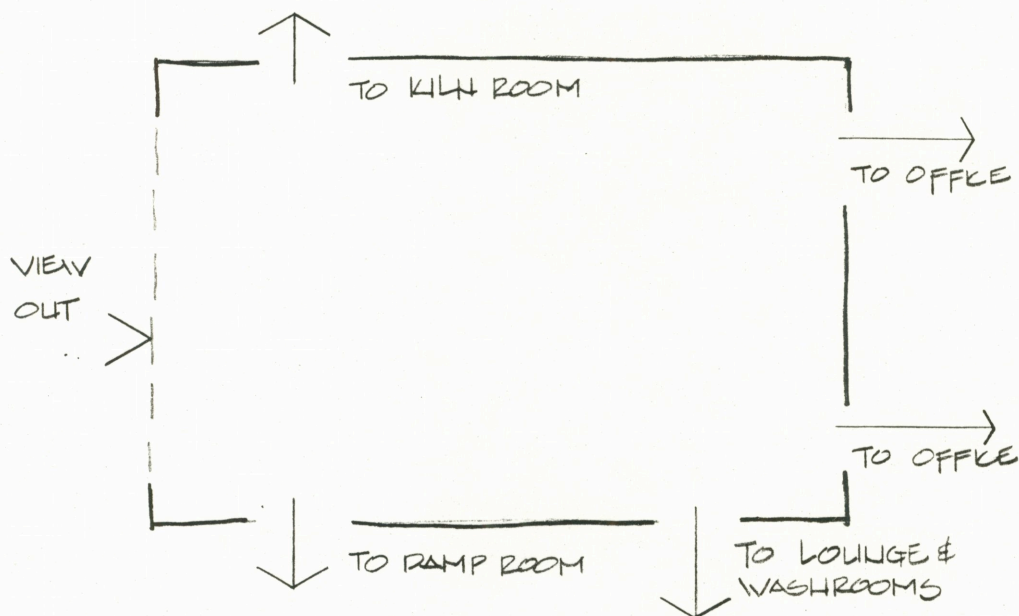
Function CREATING POTTERY & CLAY SCULPTURES
STONEWARE, TERRAZO, PORCELAIN

Privacy INTIMATE to RESERVE

Interaction SEMI-PRIVATE

Acoustics MODERATE

Illumination N.L. / G.L. / T.L.



Required Area 2025 $\pm$

Ceiling Height 10'-0" - 12'-0"

Zone

B - STUDIO AREA

Area

CERAMICS - ARTIST(S) OFFICE (?)

Function

Privacy

SOLITUDE to INTIMATE

Interaction

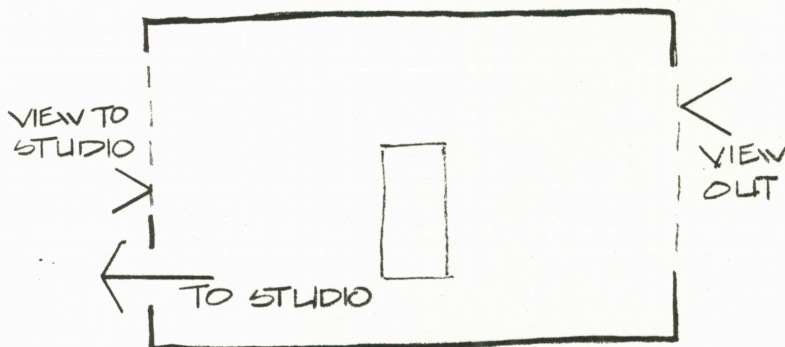
PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.



Required Area 150 #

Ceiling Height 8'-6" - 9'-0"

Zone

B- STUDIO AREA

Area

CERAMICS - DAMP ROOM

Function

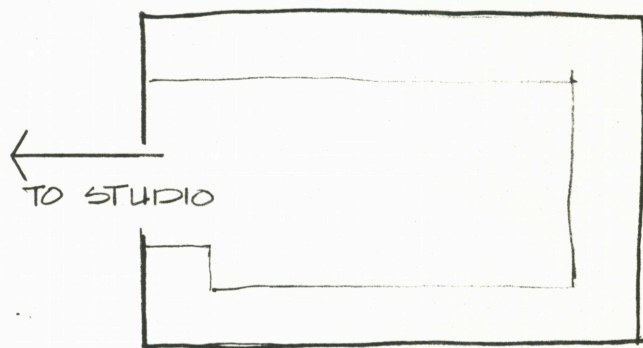
Privacy

Interaction

Acoustics

Illumination

G.L.



Required Area

100 sq

Ceiling Height

10'-0"

Zone

B- STUDIO AREA

Area

CERAMICS - KILN ROOM

Function

FIRING OF ALL CLAY, STONEWARE,
TERRACOTTA & PORCELAIN

Privacy

—

Interaction

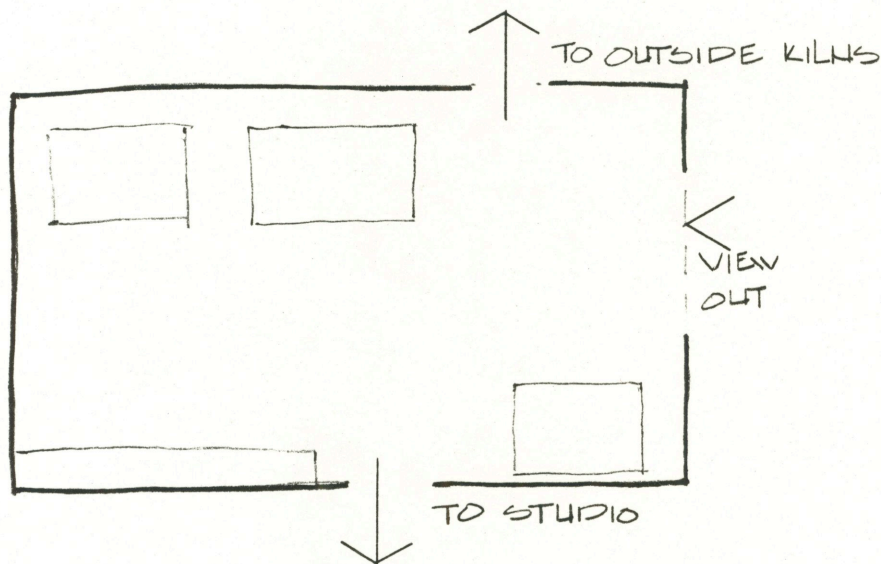
—

Acoustics

MODERATE

Illumination

N.L. / G.L.



Required Area 500 sq ft

Ceiling Height 10'0"

Zone

B- STUDIO AREA

Area

PRINTMAKING-INTAGLIO-

Function

Privacy

INTIMATE to RESERVE

Interaction

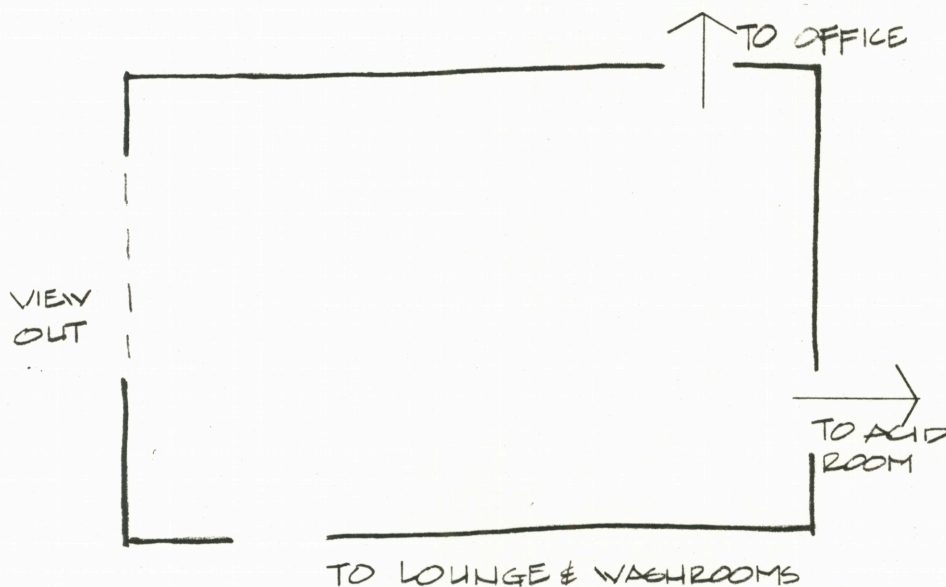
SEMI-PRIVATE

Acoustics

MODERATE

Illumination

N.L./G.L./T.L.



Required Area 1570 #

Ceiling Height 10'-0" - 12'-0"

Zone

B. - STUDIO AREA

Area

PRINTMAKING - ARTIST OFFICE

Function

Privacy

SOLITUDE to INTIMATE

Interaction

PRIVATE

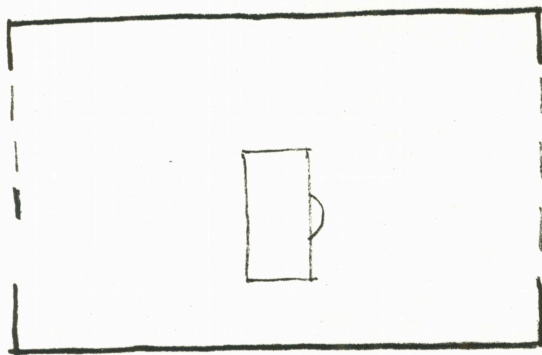
Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.

SEE CERAMICS



Required Area 100#

Ceiling Height 8'6" - 9'0"

Zone

B- STUDIO AREA

Area

PRINTMAKING-INTAGLIO-ACID ROOM

Function

ETCHING OF PLATES

ACID STORAGE

Privacy

INTIMATE to ANONYMINITY

Interaction

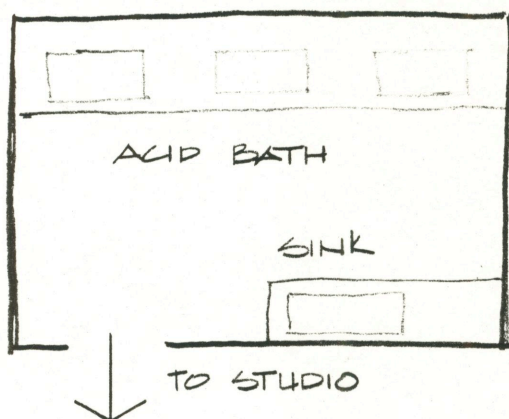
SEMI-PRIVATE

Acoustics

FAINT to MODERATE

Illumination

G.L./T.L.



Required Area 65 #

Ceiling Height 8'-6"-9'-0"

Zone

B - STUDIO AREA

Area

PRINTMAKING - SERIOGRAPHY

Function

Privacy

INTIMATE to RESERVE

Interaction

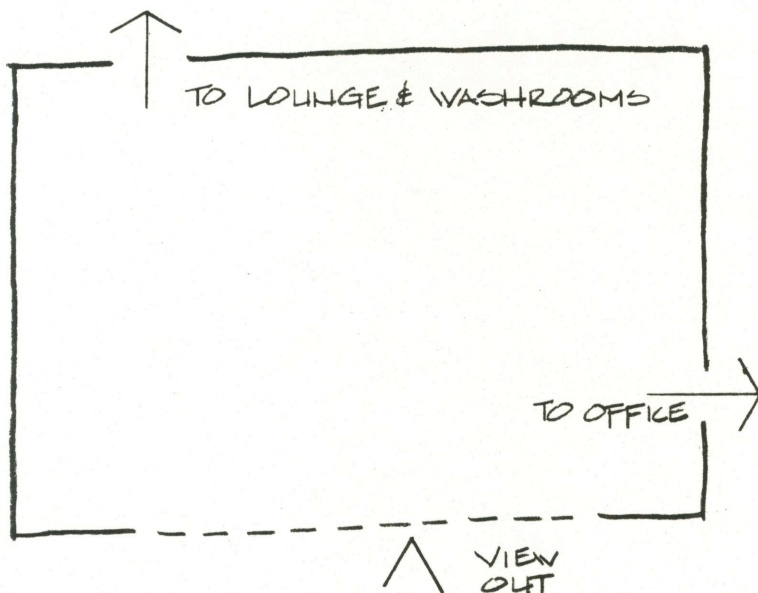
SEMI-PRIVATE

Acoustics

MODERATE

Illumination

N.L. / G.L. / T.L.



Required Area

1745 sq

Ceiling Height

10'-0"

Zone

B - STUDIO AREA

Area

PRINTMAKING - ARTIST OFFICE

Function

Privacy

SOLITUDE to INTIMATE

Interaction

PRIVATE

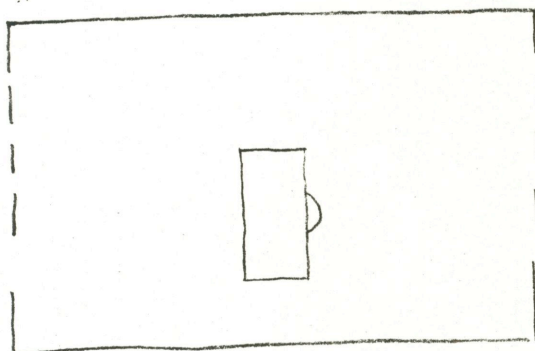
Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.

SEE CERAMICS



Required Area

150 sq ft

Ceiling Height

8'-6" - 9'-0"

Zone

B - STUDIO AREA

Area

PRINTMAKING - LITHOGRAPHY

Function

Privacy

SEMI-PRIVATE

Interaction

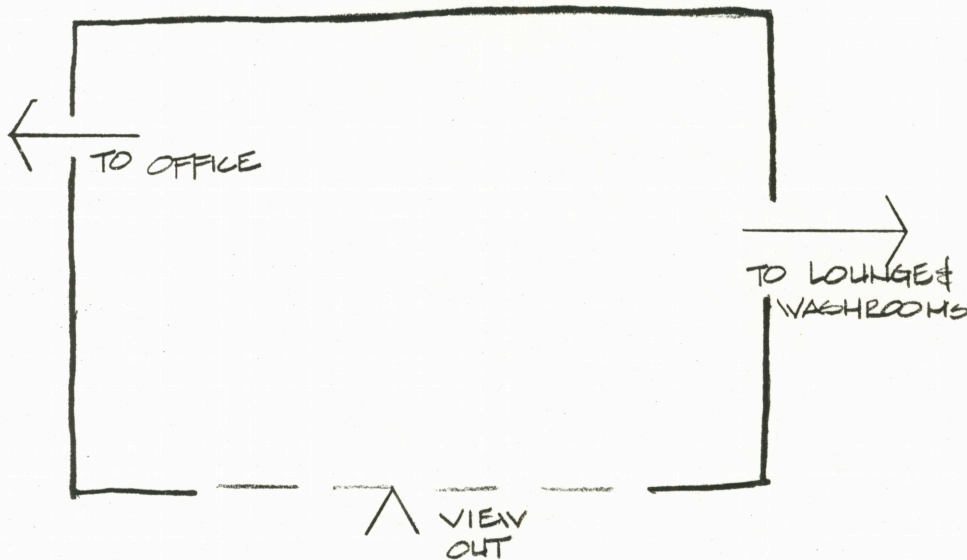
PRIVATE

Acoustics

FAINT

Illumination

N.L./G.L./T.L.



Required Area

1455

Ceiling Height

10'-0"

Zone

B-STUDIO AREA

Area

PRINTMAKING-ARTIST OFFICE

Function

Privacy

SOLITUDE to INTIMATE

Interaction

PRIVATE

Acoustics

FAINT

Illumination

N.L./G.L./T.L.

SEE CERAMICS

Required Area 150 #

Ceiling Height 8'-6"-9'-0"

Zone

B- STUDIO AREA

Area

SCULPTURE

Function

Privacy

INTIMATE to RESERVE

Interaction

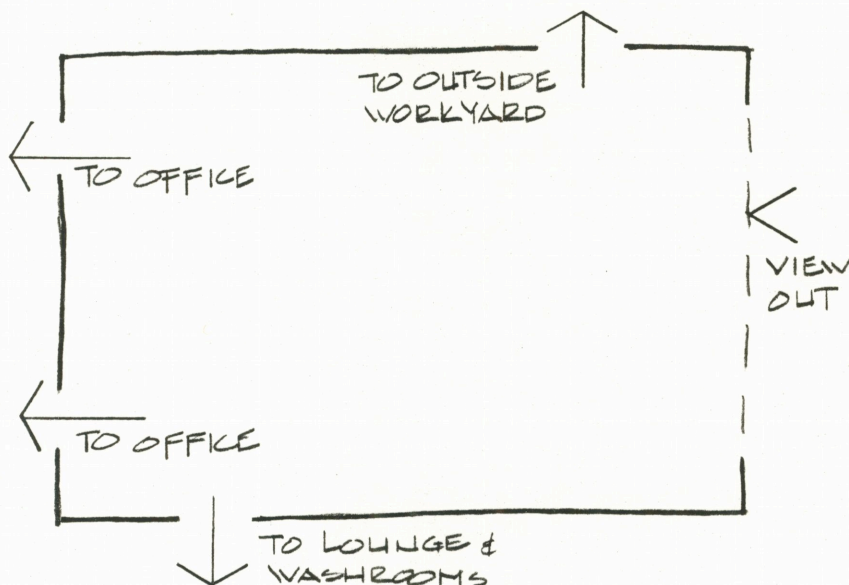
SEMI- PRIVATE

Acoustics

MODERATE to VERY LOUD

Illumination

N.L./G.L./T.L.



Required Area 2140 $\square$

Ceiling Height

Zone

B. - STUDIO AREA

Area

SCULPTURE - ARTIST(S) OFFICE (2)

Function

Privacy

SOLITUDE & INTIMATE

Interaction

PRIVATE

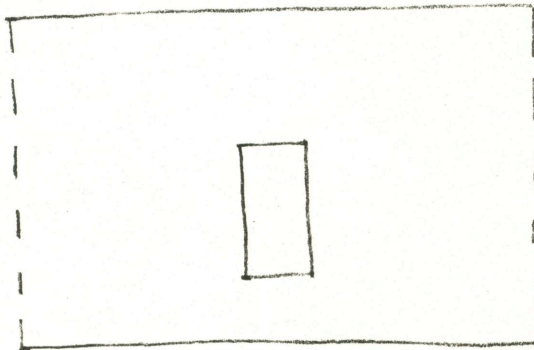
Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.

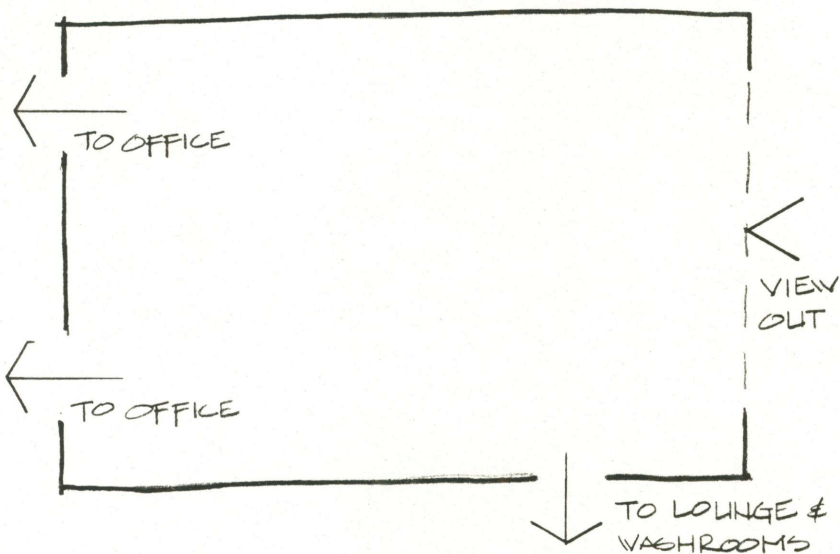
SEE CERAMICS



Required Area 300 #

Ceiling Height 8'6" - 9'0"

Zone	B- STUDIO AREA
Area	PAINTING / DRAWING
Function	
Privacy	INTIMATE to RESERVE
Interaction	SEMI-PRIVATE
Acoustics	FAINT to MODERATE
Illumination	N.L. / G.L. / T.L.



Required Area	1700 sq ft	Ceiling Height	10'-0"
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Zone

B - STUDIO AREA

Area

PAINTING / DRAWING - ARTIST(S) OFFICE

Function

Privacy

SOLITUDE to INTIMATE

Interaction

PRIVATE

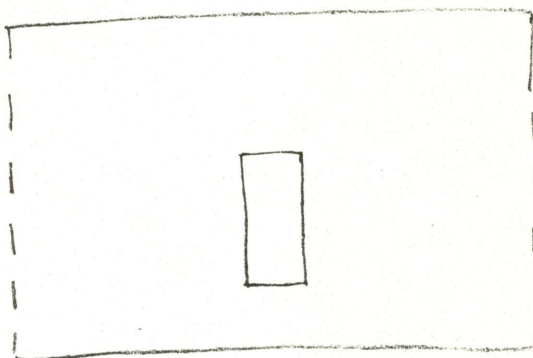
Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.

SEE CERAMICS



Required Area 300 $\square$

Ceiling Height 8'-6" - 9'-0"

Zone B- STUDIO AREA

Area = METALSMITHING

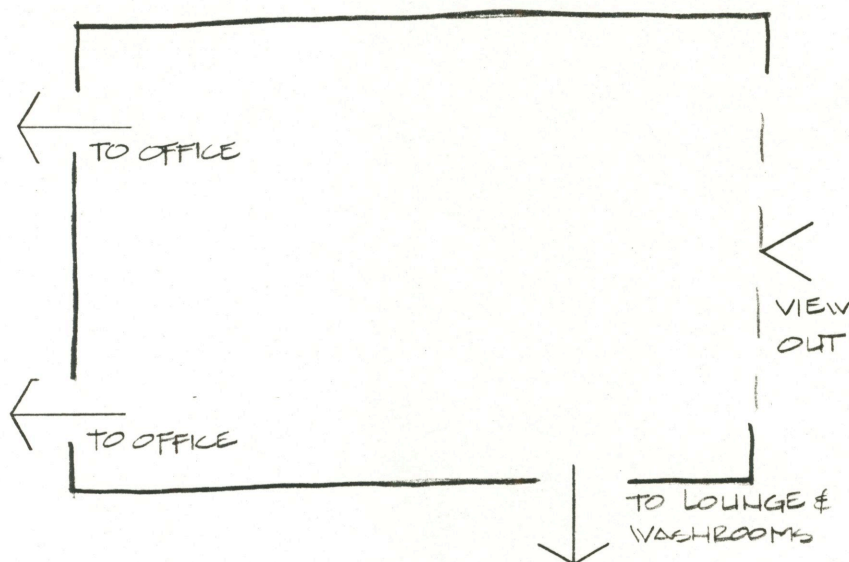
Function

Privacy INTIMATE to RESERVE

Interaction SEMI-PRIVATE

Acoustics MODERATE to VERY LOAD

Illumination N.L. / G.L. / T.L.



Required Area 1750 $\square$

Ceiling Height 10'-0"

Zone

B-STUDIO AREA

Area

METALSMITHING - ARTIST(S) OFFICE (2)

Function

Privacy

SOLITUDE to INTIMATE

Interaction

PRIVATE

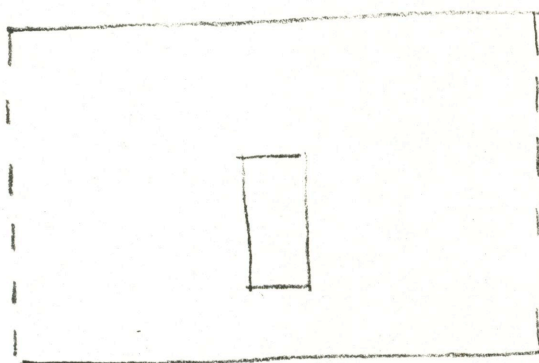
Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.

SEE CERAMICS



Required Area 300 $\square$

Ceiling Height 8'-6"-9'-0"

Zone

B - STUDIO AREA

Area

BATHROOMS w/ LOCKERS (2)

Function

Privacy

SOLITUDE to INTIMATE

Interaction

PRIVATE

Acoustics

MODERATE

Illumination

G.L. / H.L.

Required Area 1600 $\square$

Ceiling Height 8'6" - 9'0"

Zone B- STUDIO AREA

Area = SEMINAR ROOMS (2)

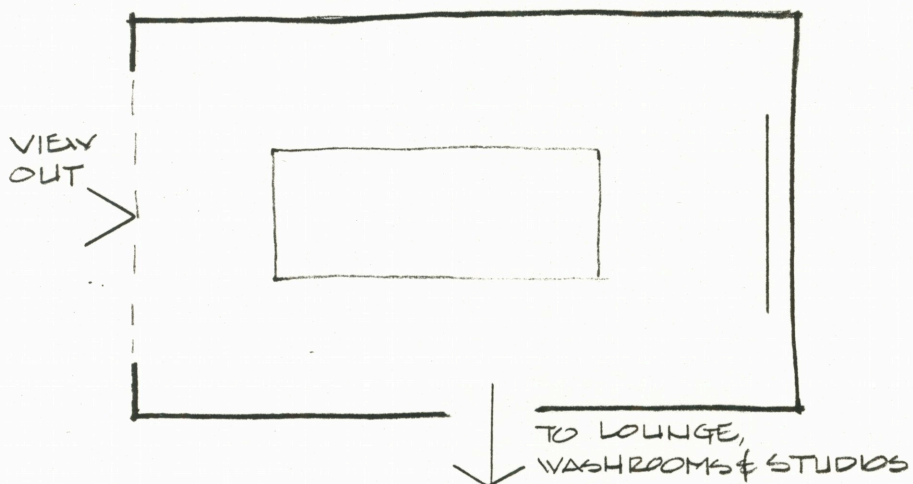
Function

Privacy INTIMATE

Interaction PRIVATE

Acoustics FAINT

Illumination N.L./G.L.



Required Area 600 sq ft

Ceiling Height 8'-6" - 9'-0"

Zone

B - STUDIO AREA -

Area

PRIVATE STUDIOS (10)

Function

Privacy

SOLITUDE to INTIMATE

Interaction

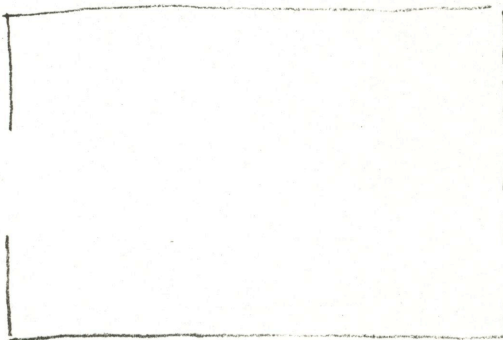
PRIVATE

Acoustics

FAINT to MODERATE

Illumination

N.L. / G.L. / T.L.



Required Area 1000 sq ft

Ceiling Height 10'-0"

Zone B- STUDIO AREA

Area = LOUNGE

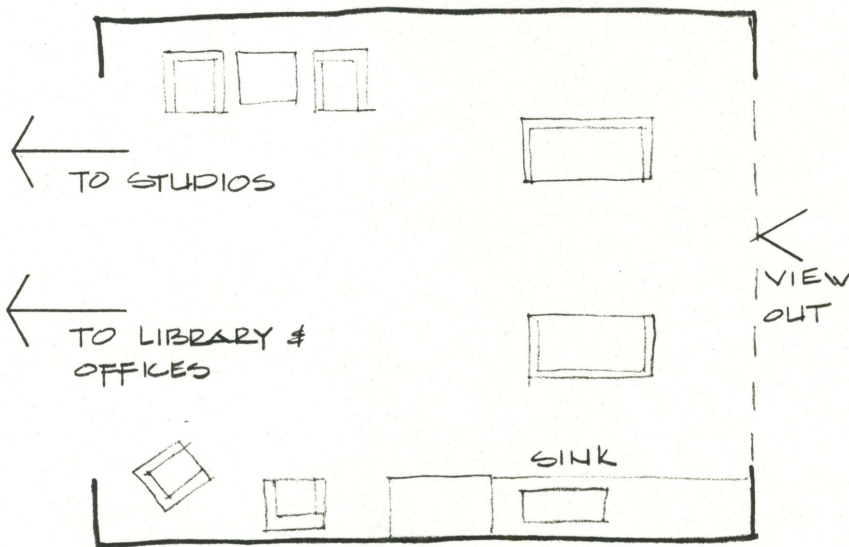
Function

Privacy SOLITUDE to RESERVE

Interaction PRIVATE to SEM-PRIVATE

Acoustics FAINT to MODERATE

Illumination N.L. / G.L. / T.L.



Required Area 1000 sq ft

Ceiling Height 8'-6" - 9'-0"

Zone

B₁ - STUDIO AREA - SUPPORT

Area

= ART SHOP - RECEIVING / MARKING

Function

RECEIVING & PRICING OF ART SUPPLIES

Privacy

INTIMATE

Interaction

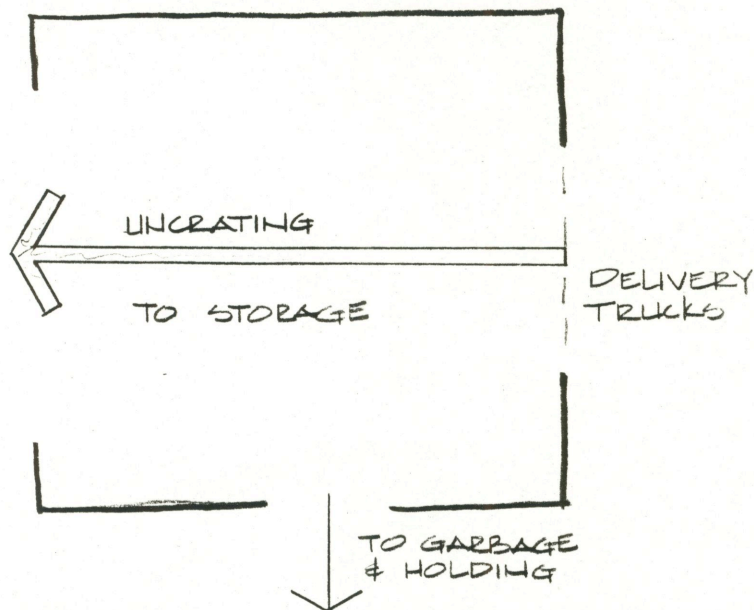
PRIVATE

Acoustics

MODERATE to LOUD

Illumination

N.L. / G.L. / T.L.



Required Area

1000 sq ft

Ceiling Height

10'-0"

Zone

B₁ - STUDIO AREA - SUPPORT

Area

ART SHOP - STORAGE

Function

STORAGE OF ART SUPPLIES

STORAGE OF SHOP SUPPLIES

Privacy

—

Interaction

PRIVATE

Acoustics

MODERATE

Illumination

G.L.

Required Area 350 sq ft

Ceiling Height 8'6" - 9'0"

Zone B₁ - STUDIO AREA - SUPPORT

Area - ART SHOP - MANAGERS OFFICE

Function ADMINISTRATIVE OFFICE

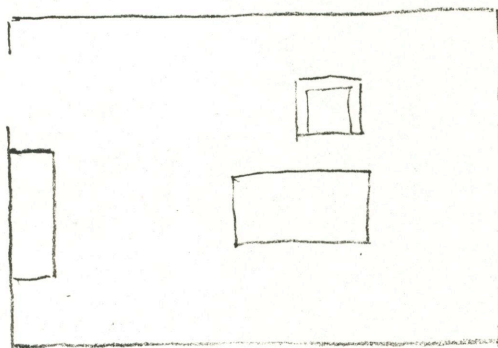
Privacy SOLITUDE to INTIMATE

Interaction PRIVATE

Acoustics FAINT

Illumination N.L. / G.L. / T.L.

SEE KITCHEN MANAGERS OFFICE



Required Area 150 sq ft

Ceiling Height 8'-6" - 9'-0"

Zone

B₁ - STUDIO AREA - SUPPORT

Area

= ART SHOP - DISPLAY / SALES

Function

MAIN STORE AREA

DISPLAY / SALE OF ART SUPPLIES

Privacy

INTIMATE to ANONYMINITY

Interaction

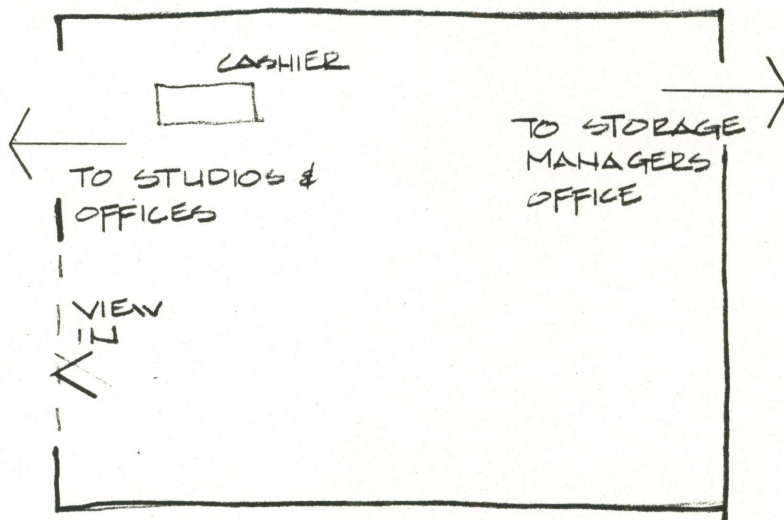
PUBLIC

Acoustics

MODERATE

Illumination

N.L. / G.L.



Required Area 2500 sq ft

Ceiling Height 8'6" - 9'0"

Zone

B₁ - STUDIO AREA - SUPPORT

Area

JANITORIAL ROOM

Function

STORAGE OF CLEANING EQUIPMENT
AND MATERIALS

Privacy

SOLITUDE

Interaction

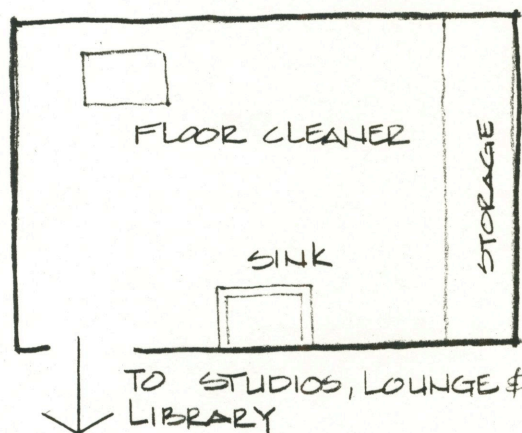
PRIVATE

Acoustics

FAINT to MODERATE

Illumination

GL. / T.L.



Required Area 100 sq ft

Ceiling Height 8'6" - 10'0"

THE LIBRARY

This area will house the complex's collection of books and periodicals. It will serve as a center for scholarly study and research. In addition this area will contain a workplace and lounge, Librarians office and private carrels.

The library is more than a place for research. It is also an oasis for relaxation. This area of the complex has to set an atmosphere of solitude and solace in the sense that this area will be used for introspection and reflection on ones ideas while being a place for inspiration.

Zone B₂ - LIBRARY

Area - OPEN STACKS

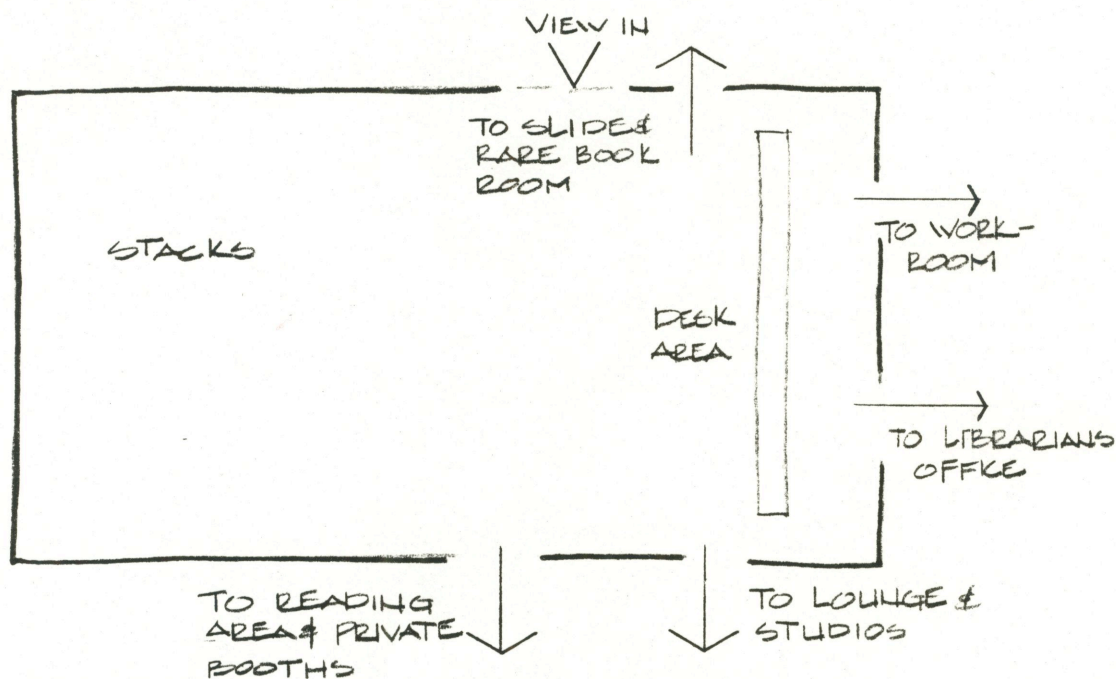
Function STORAGE AREA OF LIBRARIES MAIN
VOLUME OF BOOKS, DOCUMENTS &
PERIODICALS

Privacy INTIMATE to RESERVE

Interaction PRIVATE to SEMI-PRIVATE

Acoustics FAINT

Illumination G.L.



Required Area 3000 sq

Ceiling Height 10'-0"

Zone

B₂ - LIBRARY

Area

LIBRARIANS OFFICE

Function

ADMINISTRATIVE OFFICE

Privacy

SOLITUDE to INTIMATE

Interaction

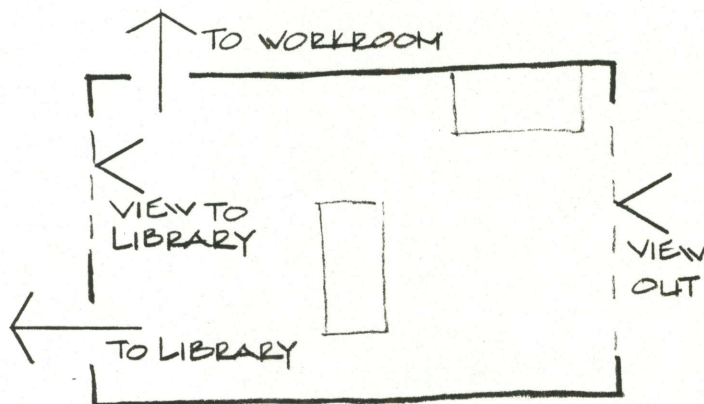
PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.



Required Area 150#

Ceiling Height 8'-6"-9'-0"

Zone

B₂ - LIBRARY

Area

= LIBRARIANS WORKROOM

Function

CATALOGING, PREPARING, REPAIRING
LIBRARY ACCESSIONS

Privacy

SOLITUDE

Interaction

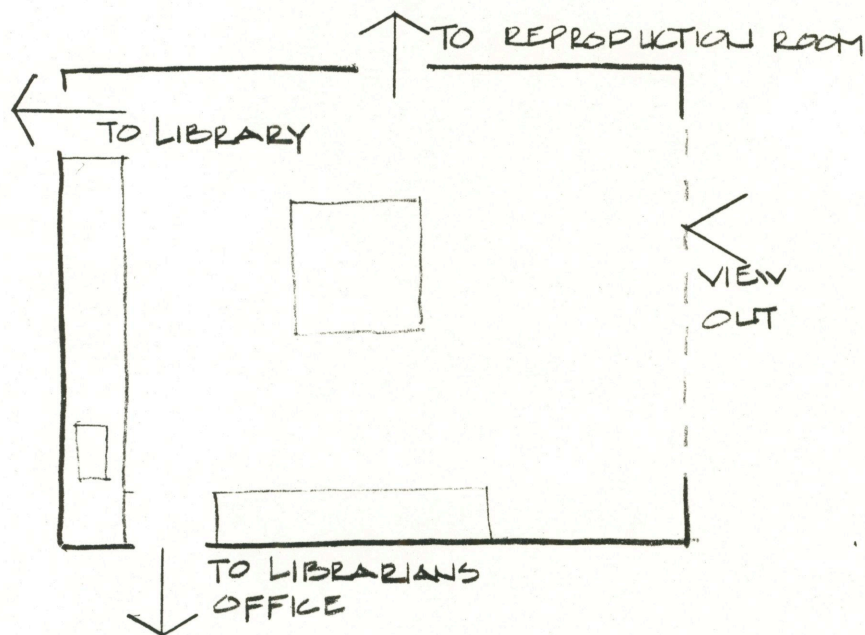
PRIVATE

Acoustics

MODERATE

Illumination

N.L. / G.L. / T.L.



Required Area 250 #

Ceiling Height 8'-6" - 9'-0"

Zone

B₂ - LIBRARY

Area

LIBRARY REPRODUCTION ROOM

Function

REPRODUCTION MACHINES FOR
REPRODUCING RESEARCH MATERIALS

Privacy

SOLITUDE

Interaction

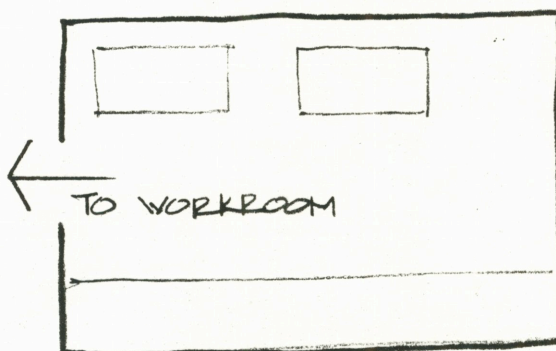
PRIVATE

Acoustics

MODERATE

Illumination

G.L.



Required Area 150 ft²

Ceiling Height 8'-6" - 9'-0"

Zone

B₂ - LIBRARY

Area

SLIDE ROOM

Function

STORAGE OF SLIDES USED FOR
RESEARCH & LECTURES

Privacy

SOLITUDE to INTIMATE

Interaction

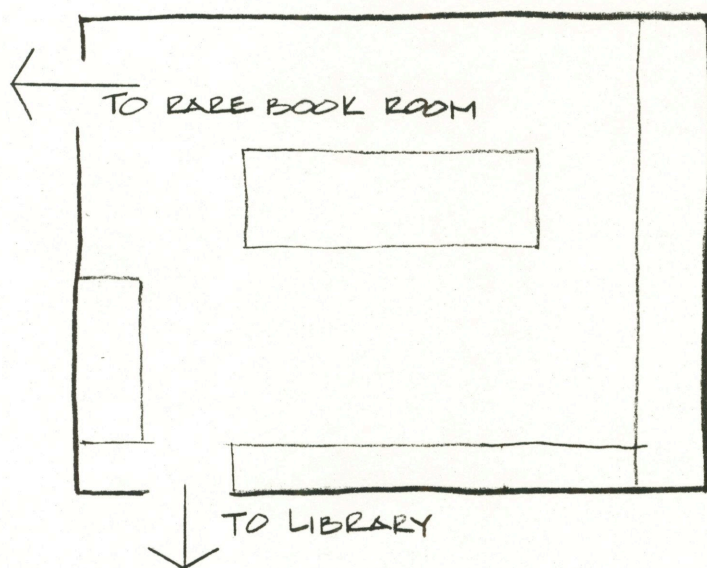
PRIVATE

Acoustics

FAINT

Illumination

G.L. / T.L.



Required Area 350 #

Ceiling Height 8'-6"-9'-0"

Zone

B₂ - LIBRARY

Area

RARE BOOK ROOM

Function

CONTROLLED STORAGE OF RARE &
OUT OF PRINT BOOKS & DOCUMENTS

Privacy

SOLITUDE to INTIMATE

Interaction

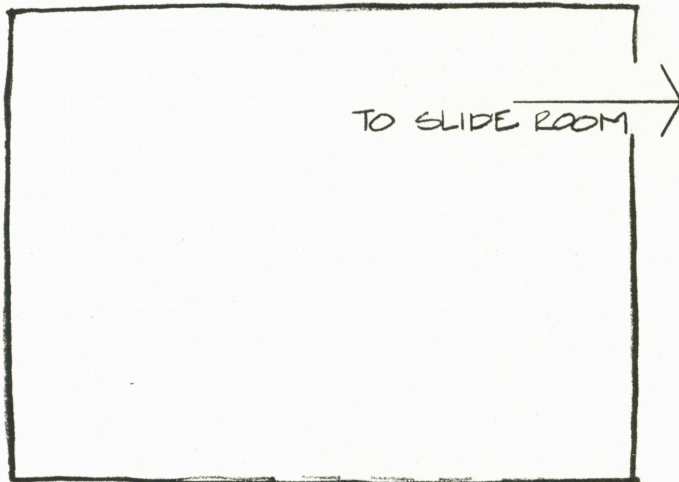
PRIVATE

Acoustics

FAINT

Illumination

G.L./T.L.



Required Area 1500 ft²

Ceiling Height 10'0"

Zone

B₂ - LIBRARY

Area

OPEN READING

Function

READING / WORK AREA

Privacy

SOLITUDE to RESERVE

Interaction

PRIVATE

Acoustics

FAINT

Illumination

N.L. / G.L. / T.L.

Required Area 200 $\square$

Ceiling Height 8'-6" - 10'-0"

Zone

B₂ - LIBRARY

Area

= PRIVATE BOOTHS (10)

Function

PRIVATE, QUIET READING/WORK AREA

Privacy

SOLITUDE to INTIMATE

Interaction

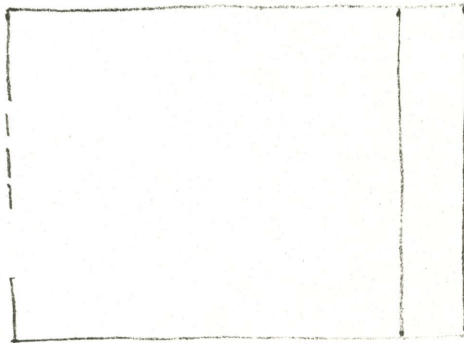
PRIVATE

Acoustics

FAINT

Illumination

G.L.



Required Area 600 #

Ceiling Height 8'-6" - 9'-0"

Zone B₂ - LIBRARY

Area LOUNGE

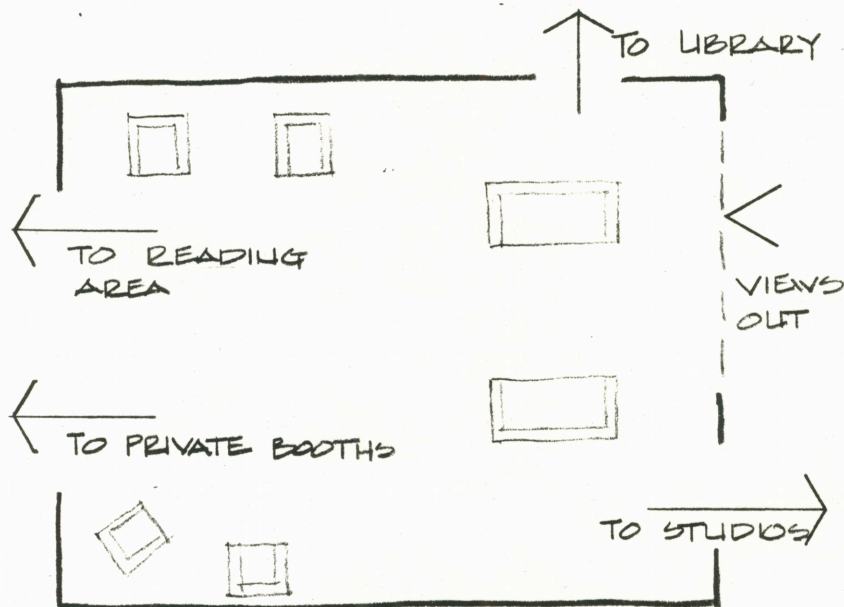
Function CONVERSATION / RELAXATION AREA

Privacy INTIMATE to RESERVE

Interaction PRIVATE

Acoustics FAINT to MODERATE

Illumination N.L. / G.L.



Required Area 500 sq ft

Ceiling Height 8'-6" - 9'-0"

THE RESIDENCES

The residential area of the complex will be where each individual artist can retreat from the rest of the community and /or their work. It is here that each artist can be themselves, it is a "...relief from monitoring ones own behavior, from behaving the way other s expect one to" (Pastalan). One needs their personal autonomy "...the desire to avoid being manipulated or dominated by others" (Pastalan) - to maintain a sense of individuality, for without privacy there is no individuality.

It is here, in their own little world, that each person creates and arranges "their" space to make it feel as their own, where each artist can reflect on the events of the day and the work that they have done. It is these "...moments of reflective solitude or "daydreaming" that most creative, non-verbal thoughts take place" (Pastalan). It is this privacy that is an instrument for achieving individual goals of self relaxation.

Zone

C- RESIDENCE HOUSING

Area

STUDIO TYPE

Function

SINGLE ARTIST RESIDENCE

SINGLE INSTRUCTORS

GUEST HOUSING

Privacy

SOLITUDE to INTIMATE

Interaction

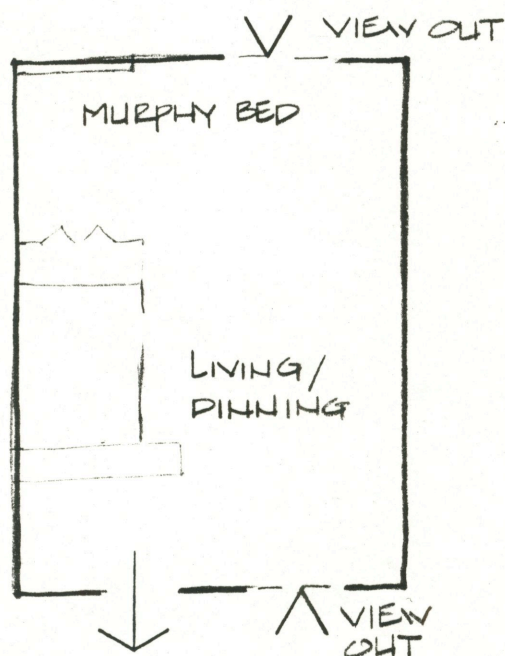
PRIVATE

Acoustics

FAINT to MODERATE

Illumination

N.L./G.L./T.L.



Required Area 420 #

Ceiling Height 8'-6"-10'-0"

Zone

G - RESIDENCE HOUSING

Area

ONE BEDROOM

Function

MARRIED ARTISTS - NO CHILDREN

MARRIED INSTRUCTORS - NO CHILDREN

Privacy

SOLITUDE to INTIMATE

Interaction

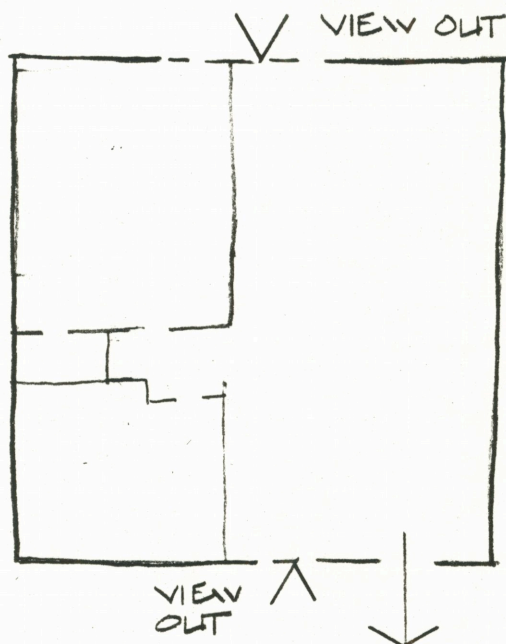
PRIVATE

Acoustics

FAINT to MODERATE

Illumination

N.L. / G.L. / T.L.



Required Area 470 $\pm$

Ceiling Height 8'-6" - 10'-0"

Zone - C - RESIDENCE HOUSING

Area - TWO BEDROOM

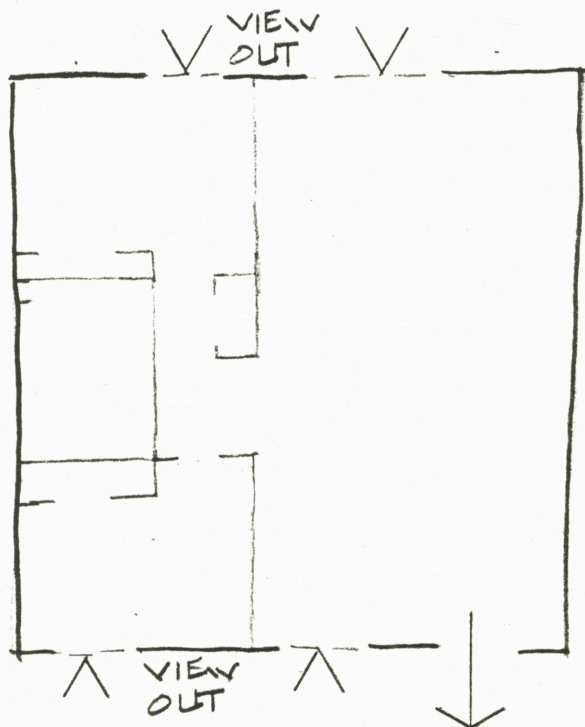
Function MARRIED ARTISTS w/ CHILDREN
MARRIED INSTRUCTORS w/ CHILDREN

Privacy SOLITUDE to INTIMATE

Interaction PRIVATE

Acoustics FAINT to MODERATE

Illumination N.L. / G.L. / T.L.



Required Area 520 sq ft

Ceiling Height 8'-6" - 10'-0"

Zone

C₁ - RESIDENCE HOUSING - SUPPORT

Area

RECREATION ROOM

Function

VARIOUS RECREATIVE ACTIVITIES

SMALL EXERCISE EQUIPMENT

Privacy

SOLITUDE to RESERVE

Interaction

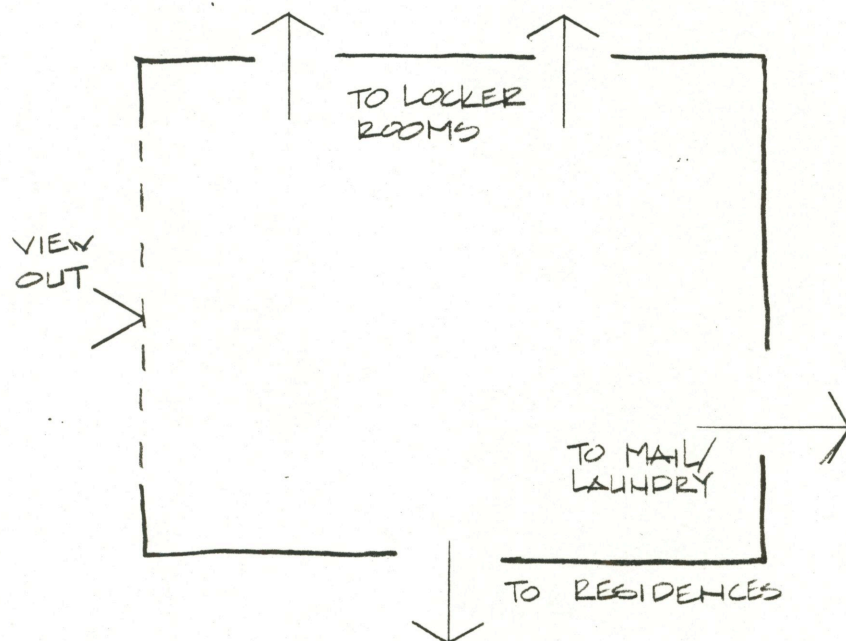
PUBLIC

Acoustics

MODERATE to LOUD

Illumination

N.L. / G.L.



Required Area 800 sq ft

Ceiling Height 10'-0"

Zone

C₁ - RESIDENTS HOUSING-SUPPORT

Area

MAIL/LAUNDRY FACILITY

Function

Privacy

SOLITUDE to ANONYMINITY

Interaction

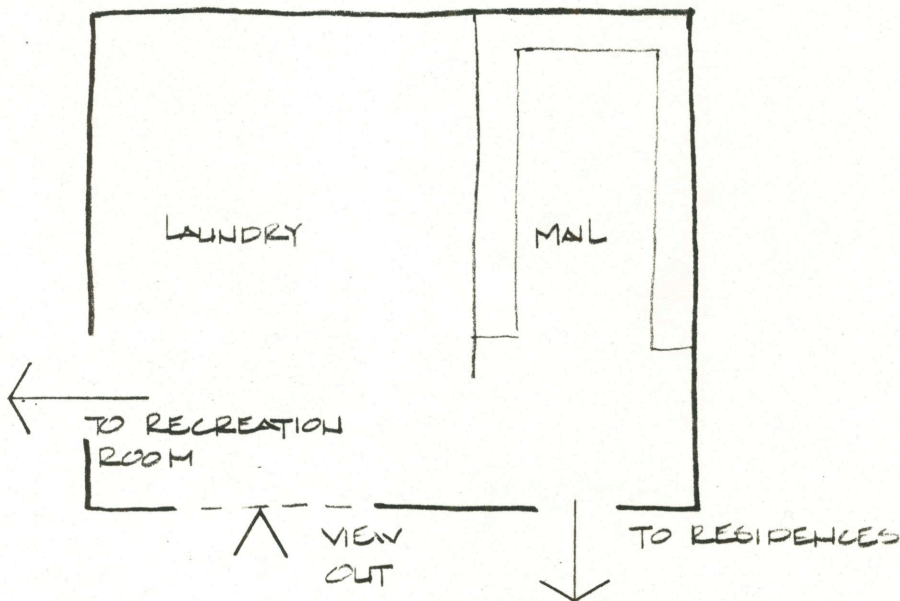
SEMI-PRIVATE

Acoustics

MODERATE to LOUD

Illumination

N.L./D.L.



Required Area

450 sq

Ceiling Height

10'-0"

Zone

C₁ - RESIDENTS HOUSING-SUPPORT

Area

LOCKER ROOMS (2)

Function

Privacy

SOLITUDE to INTIMATE

Interaction

PRIVATE

Acoustics

FAINT

Illumination

G.L.

Required Area 800#

Ceiling Height 8'-6"-9'-0"

Complex/Site Relationship

Having considered the form, scale, textures and colors involved in the natural setting (climatic and physical site analysis) and knowing the proposed development project (building/spatial analysis) I can determine the impact on the landscape and consider the means of achieving harmony between the two. "The human need to relate architecture to the site stems from the ecological relationships of the climate, soils, plants and animals of the region" (Greene).

Each overall response to a site takes on a unique form that stems from the emotional images that the site exhibits. It is this visual/emotional uniqueness of the site that would be wise to preserve. The feel or visual images that a setting or area are able to call forth are important for mood stimulation. This can be accomplished through the use of landscaping, lighting, path networks and open spaces that exhibit a sensitivity to the natural surroundings. The use of natural features as visual anchors increases the natural mood of a place.

The buildings themselves must have a somewhat inconspicuousness about them so as to relate to the site. Through the sensitive manipulation of landform and using the natural building materials of the area with an imaginative integration of glass and highlight materials a feeling of natural repose can be obtained.

STATEMENT OF PROBLEM:The Barren Island Art School

FUNCTION: The primary focus of the school is upon the stimulation and growth of artistic creativity. The architecture must respect this requirement.

The studios areas will be open to the students and faculty twenty-four hours a day. The auditorium, galleries, and dining hall will be used after hours for meetings, lectures, films, small performances and exhibit openings. Secure access must be provided to the appropriate facilities.

FORM: The schools buildings will maintain a unique liaison with the site. A visual and psychological (mind/image) connection between the buildings and the sites natural environment is important.

The buildings must project an image of creative repose to the students and faculty.

ECONOMY: The source and amount of financial support for the school is to come from the State Council on the Arts and the State University system as part of its graduate program in the Arts. A budget will permit an ideal facility to be constructed, while emphasizing minimum construction, operating and construction cost will be assumed.

TIME: Growth of the school will be minimized on the outset so as to maintain a small, intimate yet creative atmosphere between the students, faculty and nature.

SOURCE: Pena, William Problem Seeking: An Architectural Program Primer (Canners Books International, 1977)

CASE STUDIES

The Philchuck School of Glassmaking

- Stanwood, Washington
- Thomas Bosworth, Architect

Cranbrook Academy of Art

- Bloomfield, Michigan
- Eliel Saarinen, Architect

The Alfred C. Glassell, Jr. School of Art

- Houston, Texas
- Eugene Aubry, Architect

The Philchuck School of Glassmaking

Situated in the wooded landscape of northern Washington the Philchuck School of Glassmaking looks more like a rustic camp than an artistic community. Yet it is here during the summer months and well into the fall that students and instructors from all over the country (and increasingly the world) come to create works of glass in both the blown and flat forms.

The setting for the Philchuck school is exciting. Situated in the western foothills of the Cascade Mountains the school has a commanding panoramic view of Puget Sound, the San Juan Islands and the Juan Fuca Strait. A breathtaking and inspiring experience to say the least. Along with these views the residents of the school have the mountains and the meadows for inspiration and relaxing contemplation.

The Philchuck School is a Unique experience. Its energy and dedication have been captured in its isolated presence. One cannot imagine, unless they visit this school, the incredible experience one must find here when the school is in full use in the summertime.

Designed by Thomas Bosworth, the buildings are as charming as the site is spectacular. Clearly regional and vernacular in expression, the structures make an art of simplicity in form and setting. Each building is rich with interest in its own right. The Hot Shop is boldly shaped by the need for proper convection to carry off furnace heat (the furnaces run 24 hours/day when school is in session) Where as the Flat Glass Shop by comparison, attains a lightness and delicacy. The glazing of the building permits light to flood well into it toward the bermed south wall. The structure is both assertive and fanciful. The staff and student housing are spartan in comparison yet playful through the use of quiet but effective detailing. It is through this use of materials and shapes that the school becomes more than just buildings, it becomes a place of experience.

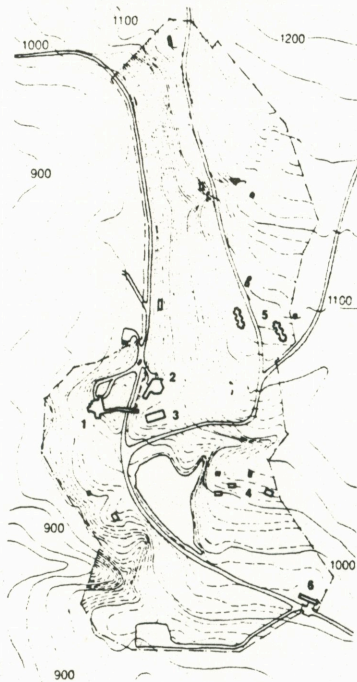
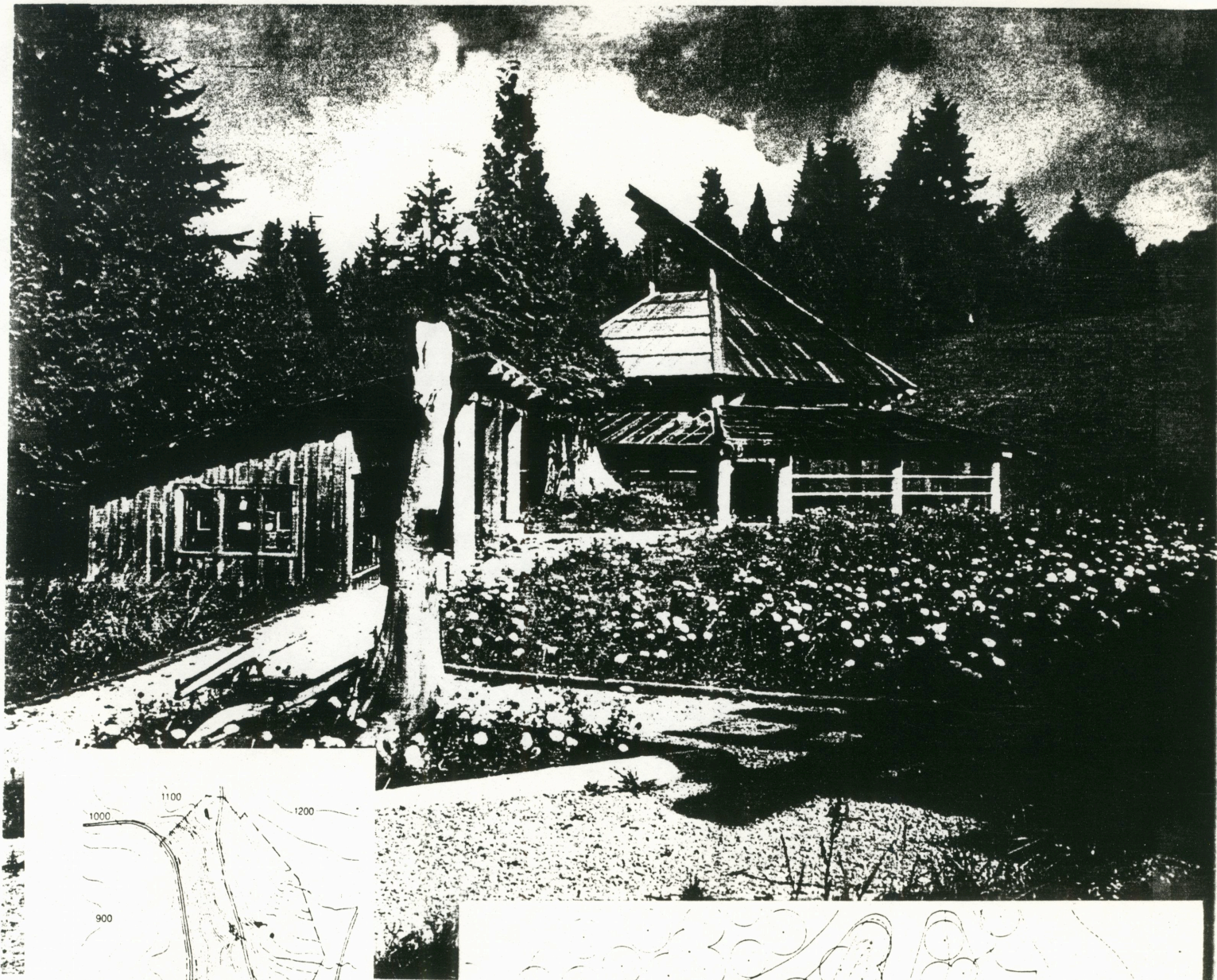
In its outset the founders, Ann and John Hauberg, wanted to create a free community that was unrestrained and to establish glassmaking as an art geared toward professional interests. Through the devotion of the founders and artists an increased interest in glassmaking has come about. The Philchuck School seems assured of continued and deserved success.

Good Points

- sensitive to the environment
- compactness of school means easy access to buildings
- excellent use of natural light to bring out the natural beauty of the buildings
- Ease of access to the site

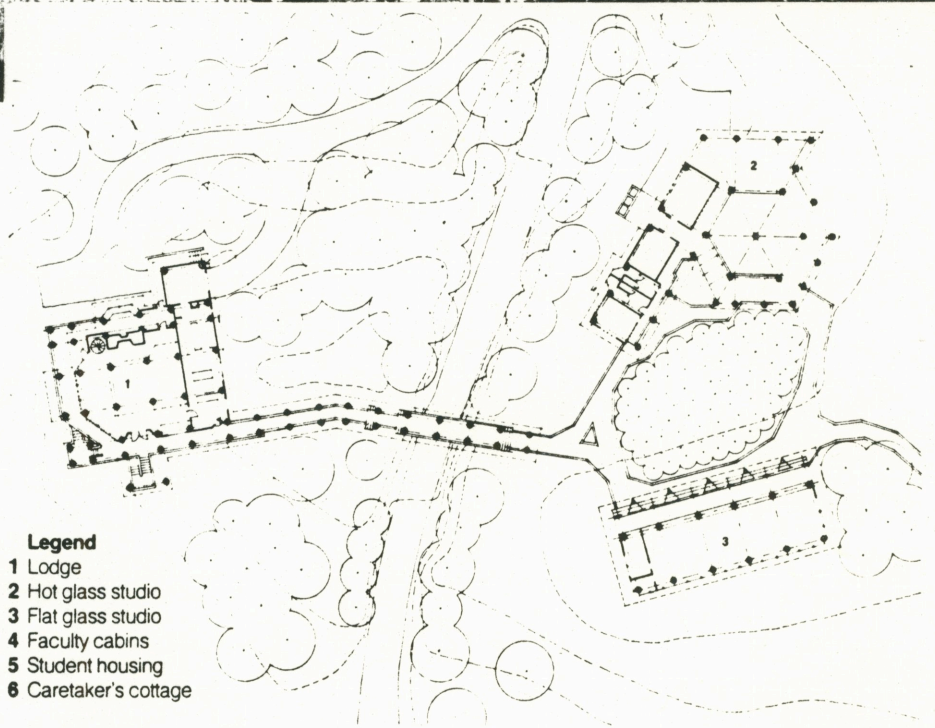
Bad Points

- too far from any major city; seems to ostracize the artists from a larger public



SITE PLAN

▲ N 100' 30m

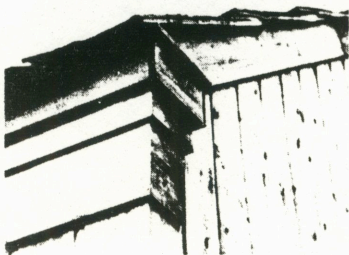


Legend

- 1 Lodge
- 2 Hot glass studio
- 3 Flat glass studio
- 4 Faculty cabins
- 5 Student housing
- 6 Caretaker's cottage

SITE PLAN AND MAIN FLOOR PLAN

▲ N 20' 6m



Jim Murphy

Cranbrook Academy of Art

The Cranbrook Academy of Art is located 19 miles north of Detroit, Michigan on the 260 acre, rural estate, bequested by George G. Booth, in Bloomfield Hills, Michigan. It is here in this congenial atmosphere that young and mature artists come to study and develop their creative ability.

Designed by Eliel Saarinen as an outgrowing design for the Cranbrook Foundation, the buildings are of a romantic nature. It seems natural only being located a short distance from a major city that Cranbrook became a compact community. It seems that Saarinen was relating the compact density of the city to that of the open, intimacy of nature.

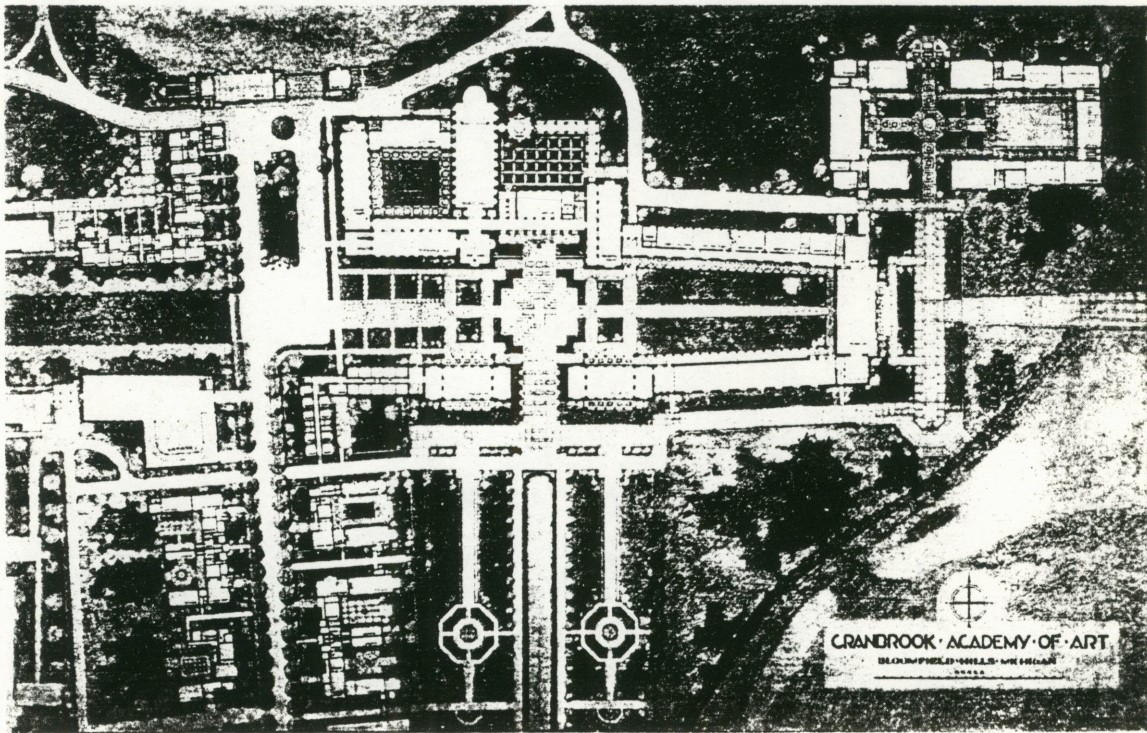
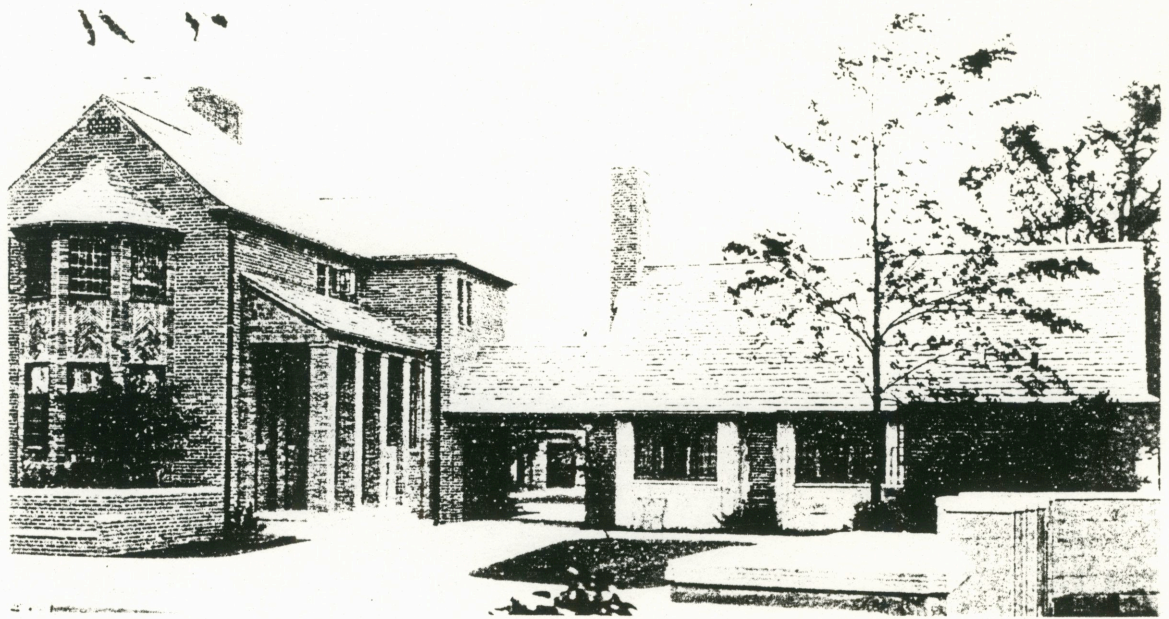
Nature abounds at Cranbrook for it was of the utmost importance to Saarinen. ("In order to understand both art and life one must go to the source of all things: to nature.") To Saarinen every student must be able to watch a squirrel play and leaves turn color. To help enhance this feeling he linked the buildings in a web of walkways, passages, courts, terraces and stairs thus moving you through nature, framing inspirational views and surprising you with creative vistas.

It is this twinkling of nature which is in his architecture which provides a setting, the stimulation and opportunities for good artists to become better ones.

Cranbrook is not a school or academy in the ordinary sense, it is a community of artists. It is a friendly and encouraging atmosphere where all students have easy access to experienced artists for advice and sympathy. The design of Cranbrook is such that it encourages interaction. Academy Way is a kind of Main street where potters, painters, architects and designers, students and masters constantly run into each other.

Good Points

- creation of community and main street creates sense of neighborhood
- sensitively relates buildings to user through the use of soft textures and places of interest
- use of nature as inspiration and relaxation



The Alfred C. Glassell, Jr., School of Art

It was the endowment of Mr. Glassell that made the dream of a new art school—a reality. The Alfred C. Glassell School of Art is located in a gracious and highly visible neighborhood in Houston, Texas. A branch of the Houston Museum of Fine Arts, the school had existed for fifty-three years in a rather primitive surroundings. Now the complex completes a triangle of modern cultural institutes.

Since the inception of the school the city of Houston has grown and now surrounds the complex on three sides. The fourth side to the southwest is still occupied by full canopied trees.

Designed by Eugene Aubry of S.I. Morris Associates, the school at once has a strongly sculptural, a;most scaleless visual quality. Yet an equally strong utilitarian organization. Though the urban planning considerations called for a substantial massing, the building is partially dematerialized in favor of the trees and smaller scaled older buildings that surround it.

The poured-in-place concrete structure is partially exposed on the exterior for visual definition and support of the glass block wall which gives it its industrial image. The interior structure is fully exposed in recognition of the almost industrial nature of some of the activities. Industrial design and fine arts seem strange bedfellows yet seems to work well here since the philosophy of the school is toward maximizing productivity.

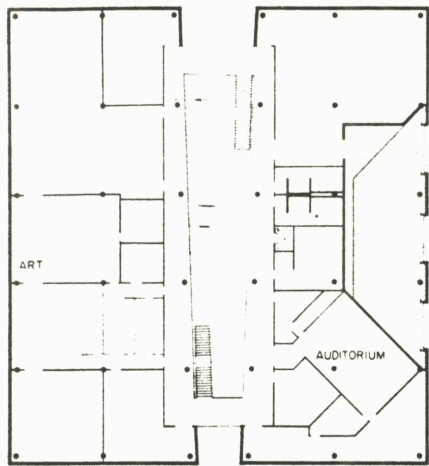
The school serves both the seriously minded art student and the community at large. It offers an array of art courses including painting, sculpture, photography and others. It serves the community not just as an art school but also as a place where the people can be more in contact with the arts.

Good Points

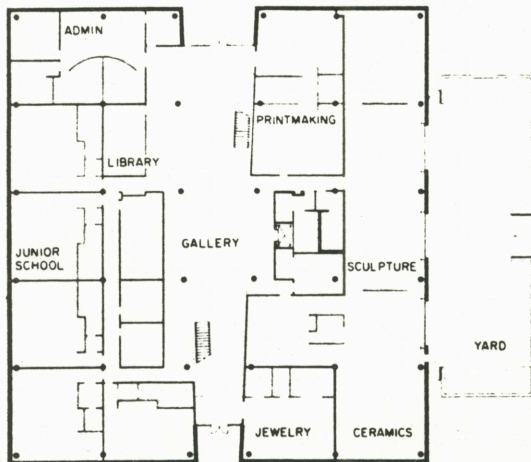
- use of natural light for work areas
- fits well into low urban context

Bad Points

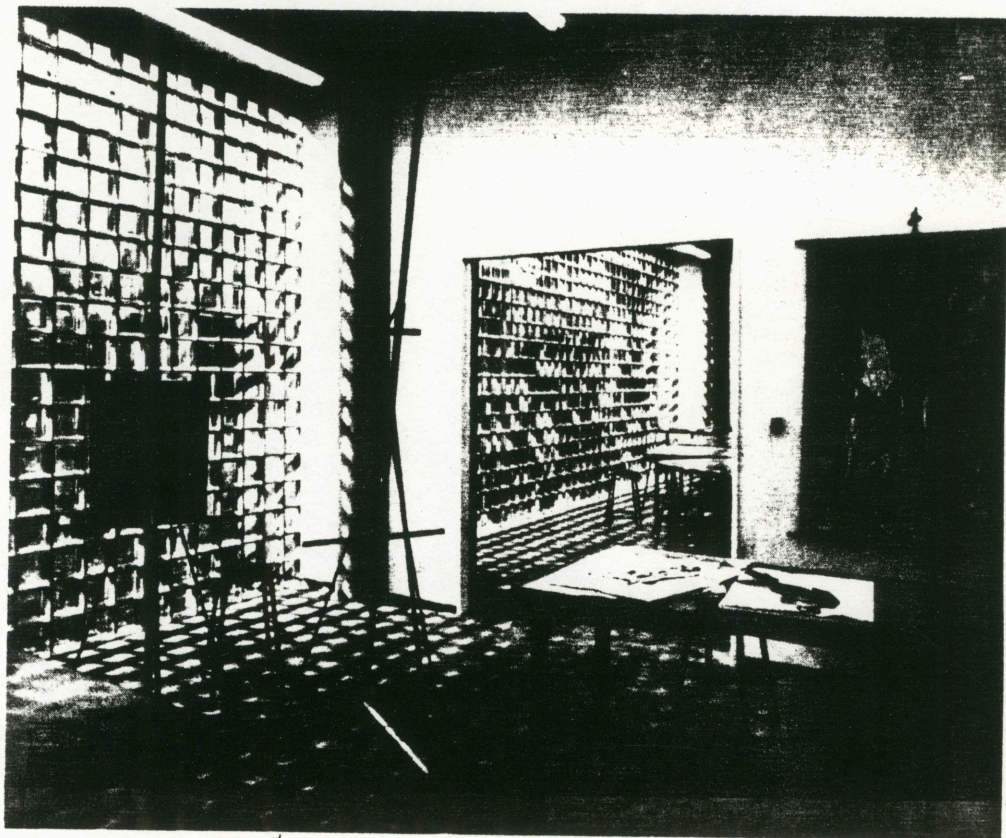
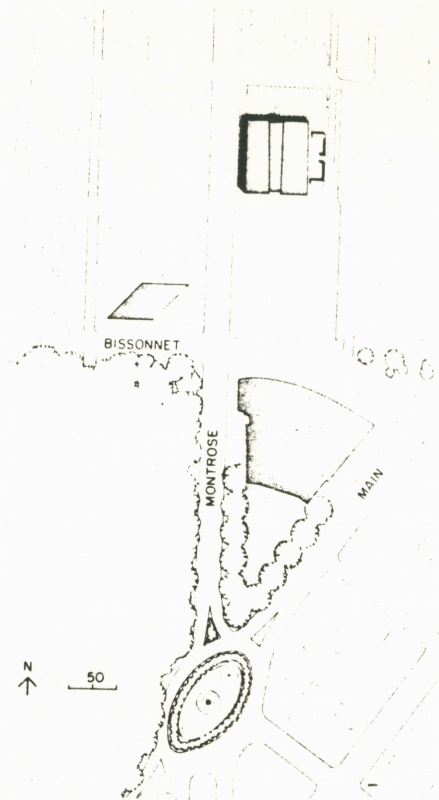
- insensitive use of materials in relation to the user
- to compact- no sense of individual places or nodes of interest
- to industrial in form and content



SECOND FLOOR



FIRST FLOOR



DESIGN DATA BASED ON SUN AND WIND ANALYSIS

FACTOR	GENERAL INTERPRETATION	SITE AND ORIENTATION PLANTING	INTERIOR PLAN
D HOURS OF SUNSHINE	For 54% of hrs sun is above horizon, weather is sunny. Least sun in winter. Winter sun rises at such low angle that, along with 60% reduction in effectiveness due to cloudiness, there is virtually no reliable amount of midwinter solar heat. During summer, 60% of time sun is effective, requiring some shade.	Shade desirable for about 60% daytime hrs Jun thru Sep, primarily on W side. Full shade useful about 1 in 3 days & partial shade only 1 in 3 days due to natural cloudiness. Overshading should be avoided because of greater benefit of sun for summer drying & winter light & warmth. Orientation of house & lot should make max use of sun.	Principal rooms should be located on S side as far as possible. Shield summer sun but admit sun in fall, winter & spring—with care to avoid fading of int furnishings. Long periods of gloomy cloudiness in winter make large, double-glazed windows desirable for light in spite of heat loss. Strong color will help decrease int gloom.
E CLEAR & CLOUDY DAYS	Both partly cloudy & cloudy days outnumber clear days. Av of 10 to 11 clear days/mo in summer & 6 or 7 in winter. Cloudy days av 15 to 16 days/mo in winter.		
F SOLAR HEAT	When sun is at highest in Jun & Jul av radiation amounts to about 250 BTUs/sf/hr on av days & 345 BTUs for clear days. In Dec & Jan radiation drops to 130 on av day & 190 on clear day. Ax total daily accumulation of heat on 1 sf horizontal surface: Jan 737 — clear day 996 Feb 982 — clear day 1364 Mar 1265 — clear day 1807 Apr 1654 — clear day 2397 May 1754 — clear day 2618 Jun 2045 — clear day 2691 Jul 2018 — clear day 2691 Aug 1746 — clear day 2360 Sep 1329 — clear day 1954 Oct 1193 — clear day 1549 Nov 818 — clear day 1106 Dec 424 — clear day 848		L or U-shaped plans, shielded by sun screens, will serve to eliminate or capture sun at appropriate seasons & provide protection from wind.
G SUN HEIGHT H HOURLY DIRECTION OF SUN	Graphs should be used together to determine most favorable house orientation for sun & in combination with wind diagrams to get sun-wind effect. In summer sun shines about 15 hrs/day, reaching 69° elevation. In Dec & Jan day is reduced to about 9 hrs with av noon elevation of 25°. Data is given in apparent solar time & should be corrected to local civil or daylight time if precise shadows are desired at a specific time.	Sun direction a major factor in house orientation. Use diagrams to plan shade patterns of house & landscaping. Placing of house on lot will determine to large extent most desirable plan.	
I WIND ANALYSIS	Throughout yr winds are strongest in afternoons. Nights generally calm, especially in summer in low areas. Winter winds generally stronger than summer. Summer av 7-8 mph, winter 10-11 mph. Primary summer ventilating axis N-S with some W & NW breezes, particularly in afternoon. Most common winter winds are from S, W, NW, or N. E is consistently most protected direction. Strongest winds from W & NW, reaching velocity around 40-45 mph. Property damage from wind not common. Tornadoes & hurricanes virtually unknown. S direction of summer winds may require protection to permit full outside enjoyment. S side of house naturally protected from W & NW winds in winter.	House should be faced so that major summer ventilation is in N-S direction. W & NW summer breezes may be sacrificed in order to provide max protection for winter winds. Porch location mainly determined by wind direction. S porch misses summer breeze from W & N but, if glazed, provides sun nook & windbreak in winter. W porch gets N-S breeze but should be shaded from sun glare. E porch pleasantest in summer; N least satisfactory. Wind directions in order from calmest to most windy (helpful in planning entrances, etc.) are: E-NE-SW-SE-N-NW-S-W (most windy).	Plan should permit passage of major breezes from S & in most cases avoid those from W. Calmness of summer evenings may create int discomfort because of excess heat stored within house. Local experience indicates desirability of attic fan exhaust in spite of usual temp drop below 65°.

DESIGN DATA BASED ON SUN AND WIND ANALYSIS

ROOF	WALLS	OPENINGS	FOUNDATIONS & BASEMENT	MECHANICAL
On calm, clear sunny days roof & walls will receive much solar heat—a benefit in fall, winter & spring but detriment in summer & requires insulation, shading or even evaporative cooling. Preferred method of latter is by spray or film—not by pool, since any volume of water tends to heat up & re-radiate over a period of time.		If sunglare is controlled by int blinds an extensive heat buildup will form between blind & window causing blind to heat & radiate into room. Use ext shading wherever possible or provide vents above windows. Full-glazed storm doors facing sun may form good suntrap with inner door left open.		Control sun by shading & blinds to prevent glare—frequent changes from cloudy to clear days. Special attention should be given to winter lighting arrangements. Generous provision for artificial light essential, indoors & out.
Insulation against summer radiant heat should be sufficient to withstand thermal gradient of about 85° to maintain about 75° on int wall & ceiling surfaces. W walls particularly need summer protection. Vertical surfaces receive more radiation than horizontal in winter & less in summer. Roof insulation, helpful for summer comfort & heat loss prevention in winter, does not seriously interfere with winter solar radiation. Keep S & W shaded by overhangs in summer but exposed to low angle sun in winter. 4' overhangs found practicable.		Solar windows on S are desirable features.	Basement light-wells might be converted to solar heat traps or conservatories by covering with glass or transparent plastic. Arrangements will also serve to avoid damage from flooded areas or heavy accumulation of snow. Solar heating of basement in spring & fall will help heat entire house & in summer will raise temp to that of house & dry it out.	Elaborate solar heating devices are not warranted because of low sun & cloudiness in winter months.
		Consult diagrams for sun direction & height during early planning to determine effectiveness of summer shading & desirable depth of winter sunshine penetration.		
Max probable wind force on roof & walls of a dwelling not likely to exceed 45-50 mph.	E wall is most protected from winds but will have strong parallel flow from N-S. S wall will require protection from head-on S winds.	Eliminate openings on W, NW, & N or keep to min size. Major entrances should be on E side for winter protection. Entrances should be recessed or protected from wind by baffles.	Areaways should be protected from drifting of leaves & snow. Ventilation of basement in summer is generally not suitable means of drying it out. Dewpt temp wind flowing into cool basement will feed condensation.	Place vents & chimneys on lee side of house—SE or E—not on W, S or N.

DESIGN DATA BASED ON THERMAL ANALYSIS

ZONE	GENERAL INTERPRETATION	SITE AND ORIENTATION PLANTING	INTERIOR PLAN
A2 HOT	Highest shade temp ever recorded, 104°—1 hr in 75 yrs. Normally only surfaces exposed to sun reach Very Hot Zone. Only 2.1 hrs/yr require consideration of protection from uncomfortably hot shade temp. Temp never remains in Hot Zone over 24 hrs. Daytime comfort requires increased ventilation & protection from solar heat.	Heat traps & radiation glare near house should be avoided. Heavy shade desirable at height of summer, but should be used with caution to prevent loss of solar effect in cooler periods. Shading in W & NW can serve as windbreak in winter. Deciduous shade preferable for other sides but evergreens prevent sky glare year 'round.	Porch & terrace living should be planned for summer in order to maintain int emphasis on winter conditions. Temps or humidity seldom high enough to require brisk ventilation. Moisture & mothproof closets should be provided for dead storage in summer — winter clothing, heavy bedding, draperies, etc. Use porches & yards as extension of interior.
A3 WARM	This zone occurs about 23% hrs/yr—optimum comfort zone. Because Albany house must be designed mainly for winter conditions, indoor living in this zone may be less comfortable than outdoor. High humidity will cause discomfort for about 1/3 of time temp is in this zone. Typical weather Jul & Aug, daytime conditions Jun & Sep, occasional days in Apr, May, Oct, Nov.		
A4 COOL	Over 29% hrs/yr fall in this zone; characteristic of May & Oct, daylight hrs of Apr & occasionally in Nov.	Max use of solar effect should be made in this zone. Min shade desirable. Solar nooks desirable on S & SE, protected from S & W winds.	
A5 CHILLY	About 39% hrs/yr fall in this zone—major winter climate with frequent frost, freeze-thaw, wet snow & muddy conditions. Typical of Mar, Nov, Dec, daytime in Jan & Feb & night in Apr & late Oct. Although outdoor humidity will be high, indoors will be excessively dry.	Evergreen shrubbery useful for winter landscape. S orientation desirable for max solar effect. Care must be taken to prevent frost damage. Av penetration: 3½' to 4'.	Winter conditions mainly determine house plan. Compact type preferable to rambling type to min heat loss. Arrangement should permit reduction of int air circulation in winter & closing off of lesser-used rooms in extreme weather.
A6 COLD	Over 13% hrs/yr fall in this zone. Typical of cold nights in Dec, Jan, Feb, Nov, & Mar, generally clear, calm & dry.	Site should be designed to drain surface water away from foundation walls & all paved areas.	
A7 VERY COLD	Lowest temp ever recorded: -26° (1 hr in 74 yrs). Only 0.7% hrs/yr fall in this zone. Not significant for design, except for selection of materials to withstand extremes of cold. Extreme drying stress indoors & creation of static.	Any protection from winter winds, especially to W, NW & N, will reduce fuel bills.	
B HOT & COLD DAYS	On only 9 days/yr is temp likely to exceed 90° & then for but 3 or 4 hrs. Hot days expected in Jun, Jul, Aug, occasionally May & Sep. On av, 46 days will be below freezing throughout 24-hr period. Freezing occurs almost daily in Dec, Jan & Feb. Only 9 days likely to have temp below 0°. Ruggedness of area causes considerable variation in frost factor. Suburbs likely to be colder than city. Av first frost Oct 14, but has come on Sep 15; latest Nov 7. Av last frost Apr 23, latest frost on record May 12.	Primary blooming period Jun thru Sep, growing season about 174 days. Avoid plants which depend upon extensive periods of temps above 85°.	
C DEGREE DAYS	Caution in use of degree days is urged because they neglect other important factors involved in cooling a building—humidity, wind, solar radiation—each of which can result in considerable variation from basic values.	Impact of degree days can be reduced by windbreaks & sun exposure in winter. In spring & fall solar heat can be used to cancel degree days.	Effective fuel requirements for degree days in winter can be reduced by insulation in walls, roof, double-glazing of windows storm doors & weatherstripping.

DESIGN DATA BASED ON THERMAL ANALYSIS

ROOF	WALLS	OPENINGS	FOUNDATIONS & BASEMENT	MECHANICAL
Roof materials should resist heat stress up to 160° with daily range of as much as 100°. Avoid construction that will create high temp lag indoors, delaying nocturnal lag in summer, by well-vented attic & x-ventilation. Shaded portions of roof & walls may have inflowing insulation differential of 13° with recommended max design temp of 88°.	W walls should be given max protection from summer sun because they warm up to high air temps before late pm sun impact. E walls receive sun before air temp rises.	Screens essential but windows need not be of type to open wide for summer ventilation. Ordinarily normal lag will prevent int from becoming uncomfortably hot if windows are kept closed on hottest days & int need never reach Hot Zone. This is feasible because night temps drop well below 65° almost every night & by closing openings some of coolness may be kept inside.	Basement temps remain more constant throughout yr than other parts of house—about 60° in mid-summer (at 6-8 ft below ground).	Recommended design temp for summer conditions is 88°. Mechanical cooling & ventilating devices not ordinarily necessary but certain micro-climates may require attic fan. Recommended max dewpt temp 72°. Provision for outdoor sprinkling desirable for dry season. Other methods of irrigation unnecessary.
Insulation requirements of all zones except A4 are in conflict with desirable solar heat absorption during A4.	Walls should be insulated, especially on N & NW to prevent heat loss.	Doors & windows will be kept closed ¾ of yr. Windows on E side may be permanently sealed. E side thus especially desirable for picture windows. Min of windows should be placed on W & NW. S windows should be designed to get max solar effect in cool zone & double-glazed.	Dry basements the rule in this zone & temp about equal to outside air temp. Lowest temp of basement floor about 36° in winter.	Some heat will be required about 75% of yr.
Upper ceiling or roof ventilation essential to min heat loss. Av thermal gradient Dec, Jan, Feb, approx 40°.		When windows are not needed for light they should be shuttered or draped to prevent heat loss. Double-glazing or storm windows & doors & weatherstripping essential. Avoid possibility of icicle formation above entrances.	Care must be taken to protect walls & foundation walls from frost heave. Foundations should be carried at least 5' below surface. Well-drained subgrade essential under all walks, drives, terraces, etc.	Positive humidification recommended during months house is heated.
Roof materials must withstand cold stress of -26°. Gutters must be well drained & flashing carried well up under shingle type roofs to avoid formation of icicles.				
			(MECHANICAL)	
Full impact of degree days greatly reduced by good quality insulation & air-tightness of roof, walls & openings.			Winter degree days range from 6000-8000. In whole yr: 830 hrs air conditioning advantageous. 1260 hrs no heating or cooling. 2560 hrs low heat, fireplace, solar. Av daily deg day 10. 2790 hrs medium heat. Central system. Av daily deg day 30. 1156 hrs high heat. Av daily deg day 50. 61 hrs max heat required. Av daily deg day 75.	

DESIGN DATA BASED ON MOISTURE ANALYSIS

FACTOR	GENERAL INTERPRETATION	SITE AND ORIENTATION PLANTING	INTERIOR PLAN
J PRECIPITATION	Av rainfall about 36.8" fairly uniformly distributed throughout yr but with great variation from yr to yr & between corresponding months. Winter tends to have somewhat less rain than summer. Summer rains come in brief showers with rapid evaporation; winter rains are light but long & steady creating frequent periods of muddiness. Severe dry periods in summer are uncommon. Annual moisture effectiveness almost always in humid & never in dry zone.	Avoid landscaping that may result in permanent damp areas near house. Outdoor terraces will be more useful if provided with shelter against sudden showers.	Porches should have wide overhang as rain protection. Indoor laundry-drying facilities required, particularly in winter.
K SNOWFALL	Av snowfall about 50" with annual variations from 16.6" to about 102". Jan & Feb are snowiest months. Midwinter snows are dry, drifting type; Snows in Nov, Dec, Mar & Apr usually are wet & melt rapidly. Heaviest snowfall in 24 hrs—15".	Snow cover not likely to remain for long periods, except in mid-winter (Jan-Feb). Short, straight driveways desirable for easy snow removal.	Provide mats, mudscrapers, etc, to minimize tracking in of mud, snow & slush.
L PRECIPITATION DAYS	Av 135 rainy days/yr. Trace or more of snow falls av of 68 days/yr. Heavy fog occurs about 1 day/mo except in Sep, Oct & Nov which av 2-3 days & Apr & May which may be without heavy fog. Light fog occurs about 135 days/yr with highest frequency—1 in 2 days—in summer. Thunderstorms reach av max of 6/mo in Jul.	Generous use of paved areas around house will aid in controlling mud & provide outdoor living & play space.	Provide heated storage space for wraps near entrance & ample entry space for putting on & removing bulky wraps & overshoes.
M MAX RATE OF PRECIPITATION	Under worst conditions 1" of rain has fallen in 10-15 min. Max hourly rainfall 1.8"—5" max precipitation in 24 hrs. Flash floods not common.		
N RELATIVE HUMIDITY	Highest av RH comes in late summer & early fall—58% to 75%. Greatest variation in RH occurs in winter, least in summer. Even though dewpt temp or vapor pressure remains fairly constant throughout day, RH varies inversely with temp—generally highest in cool of night & lowest in heat of day.		Moderate air movement essential during summer months to prevent excessive int humidity. Natural x-ventilation ordinarily will be sufficient. Avoid int stagnant air pockets.
O VAPOR PRESSURE	Extremes of vapor pressure during summer approach tropical conditions, but more than ½ of summer months have pleasant humidity conditions. Av vapor pressure in Jul & Aug 13.3 mm Hg which is just below point at which vapor pressure begins to exert stress on human comfort for those who are inactive. Extremes of vapor pressure during summer indicate conditions almost comparable to tropics. Vapor pressure in winter extremely low—more than 75% of Dec, Jan & Feb have vapor pressures below 4 mm.		

DESIGN DATA BASED ON MOISTURE ANALYSIS

ROOF	WALLS	OPENINGS	FOUNDATIONS & BASEMENT	MECHANICAL
Roof & walls should be proof against moisture seepage or sifting snow, should be able to sustain long periods of dampness under freeze-thaw conditions. Avoid water pockets. Because of air-borne chemicals, materials should be resistant to chemical stain & corrosion. Use non-absorbent ext materials under all conditions. Avoid parapets, they crack, retain leaves, ice, etc.		Windows should be protected by roof overhangs, preferably on lee sides, to permit opening during summer showers. Entrance doors should be recessed or provided with canopy for rain protection.	Because of splashing, surfaces that show dirt should be avoided near ground. Apron protection of gravel or pavement will help.	Storm sewers should be capable of handling 6" of rain/day.
Snow guards on sloping roofs are desirable to prevent damage to gutters, shrubbery & hazard over entrances. Albany building code requirement 50 psf on flat roofs.		Entrances should be protected against drifting snow. Consider winter views of trees, shrubs, evergreens, since winter period is longer than summer.	Excessive moisture builds up in surface of ground in early spring due to lower stratum of frozen soil preventing drainage of surface water. Keep it away from foundations as much as possible by grading or impervious apron.	Snow-melting systems not usually justified because snowfall is not excessive. Drain ext hose cocks from end of Sep to beginning of May.
Roof & walls may remain damp for many days at a time during winter. Unless insulation is adequate, evaporation of this moisture in winter will be a serious heat loss.				
Design gutters to carry off accumulation of 1" in 10-15 min or 2"/hr. Gutter & drainspouts & parapet walls should be protected from clogging to prevent damage from freezing. Arrangement should permit easy cleaning.		Doorsills low to ground & window wells or areas may flood unless properly drained. Check chimneys, coal chutes for possible leakage during cloudbursts.		
Enclosed portions such as uninsulated attics exposed to excessive solar heat should be well ventilated.		Windows should be kept above 52° temp in winter to prevent heat loss from condensation. (Based on outside design temp of +2°—this permits int temp of 72° & 50% RH.)	Condensation will be problem in basement during summer unless sealed from ext air or warmed by sun or artificial heat or provided with mechanical dehumidification. Fresh air circulation will not dry a basement when dewpt temp is above temp of walls, but on contrary, will add to quantity of moisture in air. Exterior basement walls may advantageously be waterproofed & vapor-sealed.	Mechanical devices for dehumidification not essential in house planned for N-S summer ventilation. Winter humidification system highly desirable; should be put in operation in early Oct & continued thru May.
Int faces of outer walls & roof or upper ceiling should be vapor-proofed to prevent moisture loss in winter. If during summer, indoor temp is held to 76° with RH 50% in Jul & Aug, higher vapor pressure outside would try to force its way in 70% of time. In winter, there are 8 months when over 75% of time (3 months 100%) vapor pressure forces its way out thru walls from inside if indoor temp is kept at 72° F & 50% RH. Therefore more important to have vapor seal on inside of walls.				

Symbolic Aspects of Architectural Form

Human evaluations are not directly derivable from the physical attributes of architecture. They are instead reflective of the meanings that are generated by the architectural forms. An important attribute of the architectural space is the expression of symbolic significance and an important response to architecture is the interpretation of these symbolic meanings. In this context architecture can be considered a symbolic representation that can be read by observers within a particular culture for the purpose of inferring the purpose of a place, understanding the intent of its creation and identifying that for which it stands outside itself.

Symbolic aspects are critically important, as it is the symbolism of the building that is responsible for individual assessment of architecture. Symbolic representations provide the conceptual formations which is beyond simple spaces and surfaces. They provide for the illusions that make architecture real, the void in which lives pass, and dreams that surpass physicality, through perception, to humane form. For it is symbolism conveyed by all attributes of an architectural form that is real. It is the primary basis upon which individuals interpret architectural form. A beautiful and successful architectural form is the house whose 'presence' is the home (Kahn).

This communication is not simple, as an important criteria for good architectural communication is this provision of multiple messages that can be read by different individuals in different ways, and by the same individual in different ways at different times. People may agree on an experience of a space yet disagree upon the reasoning for such an experience. Cues must be provided within the form that interact effectively with past experiences (memories) of the observer.

It is the complexity introduced by the different meanings of the architectural form that will provide liveliness to the form. "...a valid architecture evokes many levels of meaning (multivalence) and combinations of focus: its spaces and its elements become readable and workable in several ways at once" (Venturi).

Architecture must evoke contradictory images and descriptions which provide it with a sense of place, a liveliness and realness. Since architecture is created by the human mind it should convey symbolic messages beyond its physical form. It should elicit spiritual as well as cultural symbolic responses.

Light as the Giver of Symbol

There is an essence in nature, a force if you will, which creates, stimulates, a force that is the threshold of emotion. It is a force that makes the non-existent tangible, a force that is unmeasurable which becomes measurable only to be unmeasurable in the end. -

It surrounds and penetrates, it gives consciousness and character to all that it comes in contact with.

This force is a spiritual essence, a giver of life. It is important to recognize and realize this force because "...you must live with the sense that light is important... without it there is no architecture" (Kahn).

Light, this changeable substance that creates emotional responses, this maker of presence and consciousness, is nature's most powerful and essential element that is given to man. Without it there would be no symbols, no feelings, no 'place', no space, no architecture.

Feelings as Evoked by Symbol

Feelings, the emotional elements of consciousness. While they are of obscure origins, they are nonetheless a product of the mind. From the recesses of the mind a response, conscious or unconscious becomes awareness. Awareness is a function of the senses.

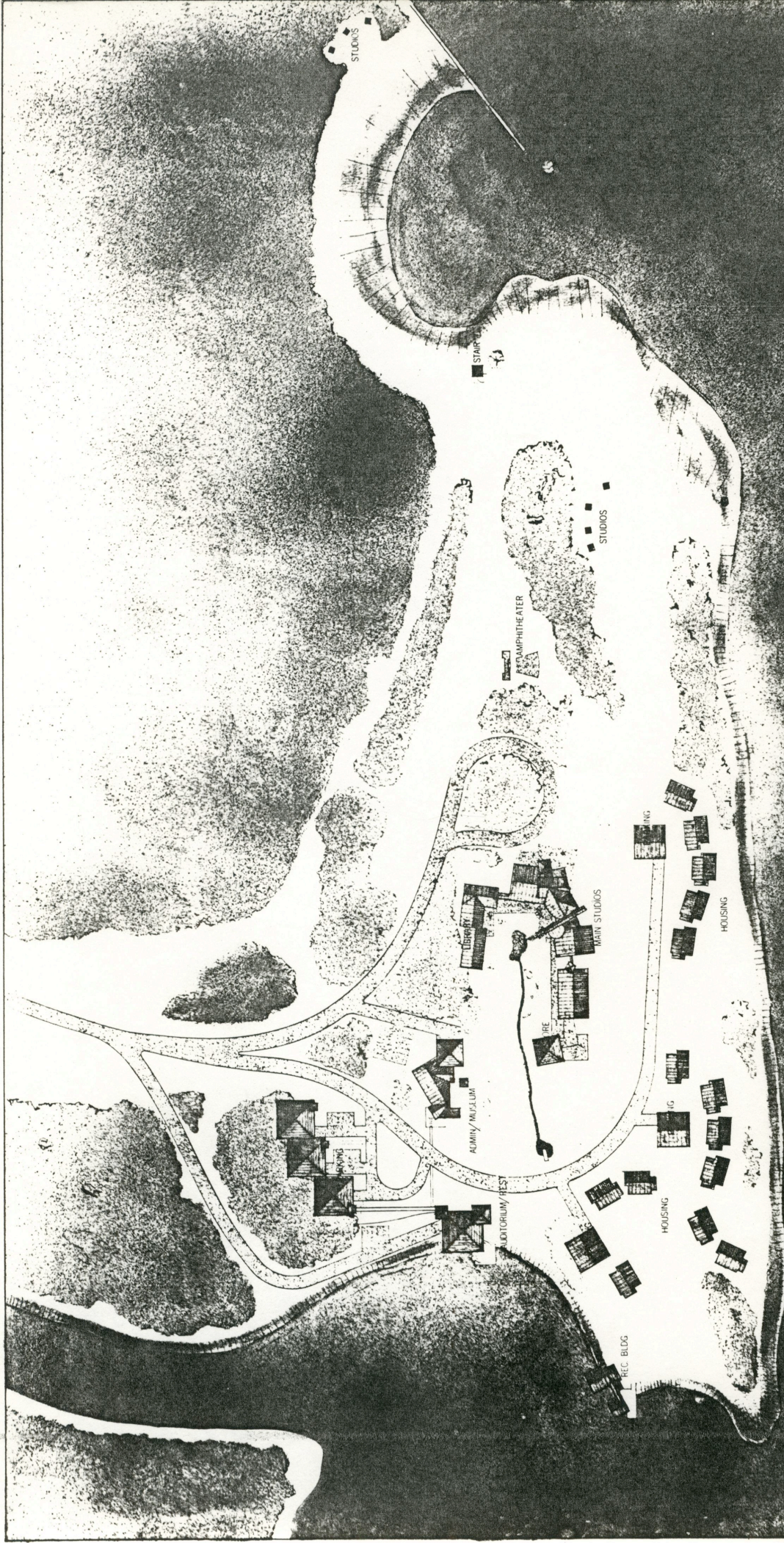
The senses are the pleasures of the eye and ear, of imagination and memory making the tangible out of the non-existent. They are the material elements that perceive beauty, factors of emotional response, the tools of expression.

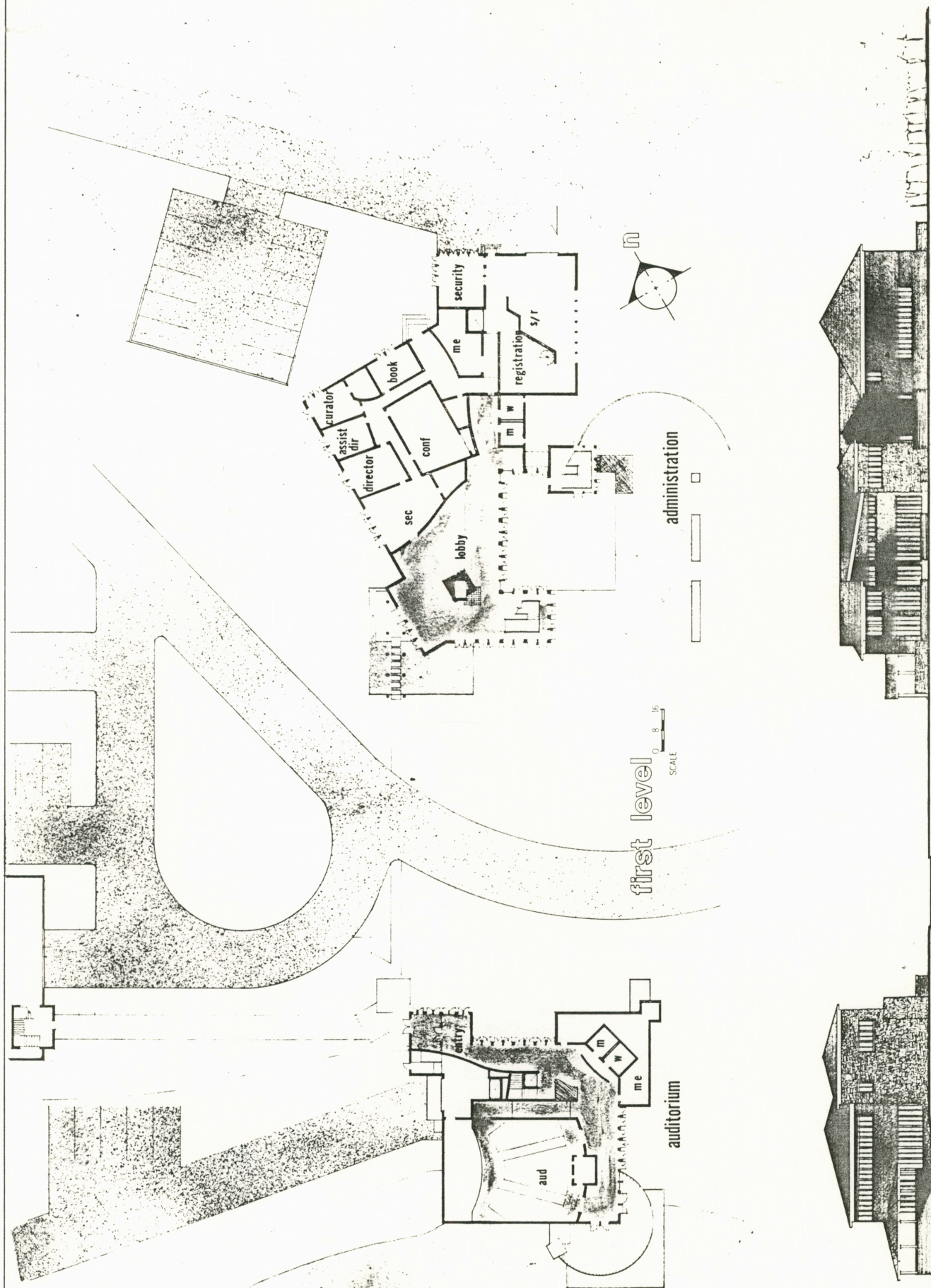
Through the senses man perceives his environment. It is the senses that allow people to review what each contributes to the beauty of the world. Beauty, not beautiful but beauty itself "...the total harmony one feels without knowing, without reservations, without criticism, without choice" (Kahn). It is this feeling of beauty, of harmony, that an artist perceives when he/she has finished a piece of work. It is an a priori knowledge, intuition, when he knows that the painting needs no more color, a sculpture no more work. It is an insight and understanding which comes from within.

Place as Created by Symbol

This essence of 'place' is the culmination of mans mind/image connection of feelings and perceptions as they relate to the environment. It is this function of sensory awareness stemming from his memory and imagination that creates a feeling of being naturally at home in a space.

In experiencing 'place' one is conscious of oneself in space and time through an emotional response to the perception of context. People may agree on an experience of a space yet differ on the reasoning for such an experience. Place "...is a created thing, an ethnic domain made visible, tangible, sensible...an illusion of self contained, self sufficient perceptual space" (Langer). Place then becomes the soul of a space, without it the space would be lifeless and empty.



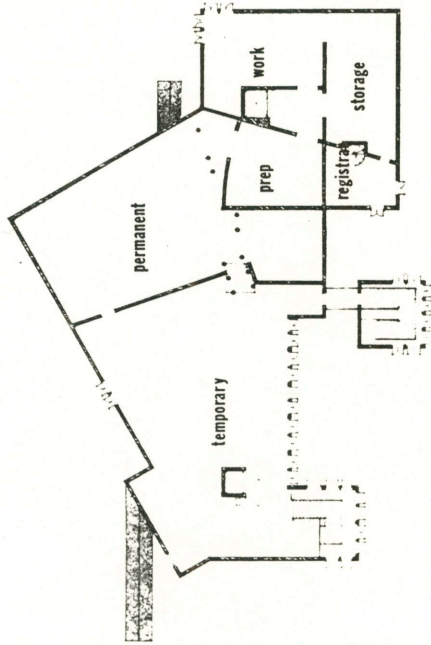
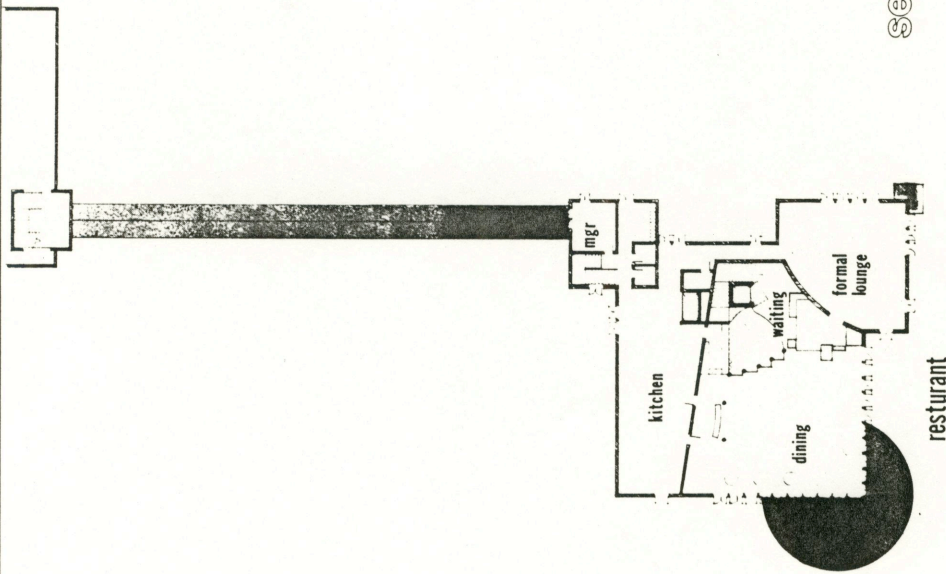


first level

administration

auditorium

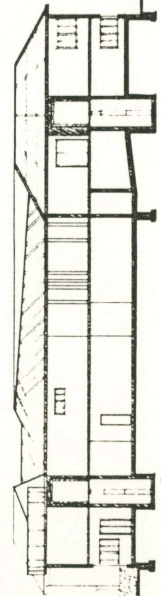
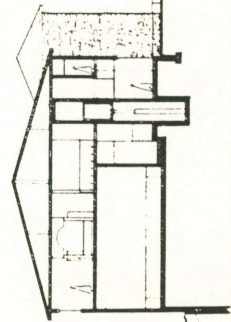
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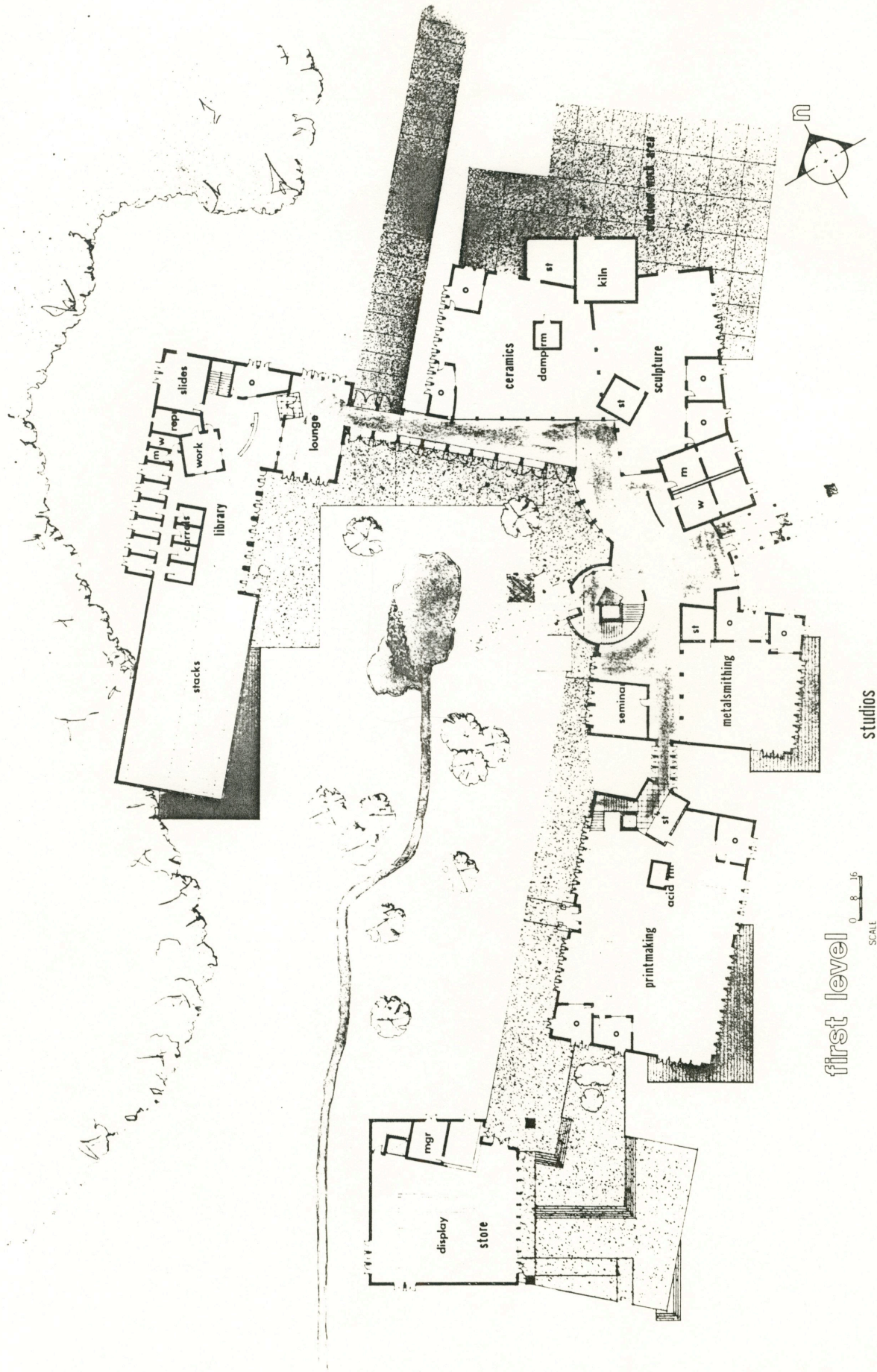
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galleries

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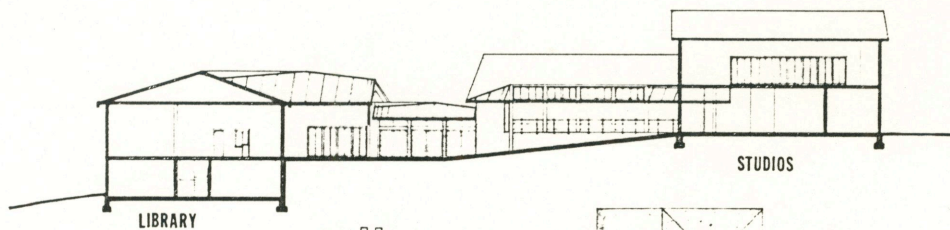


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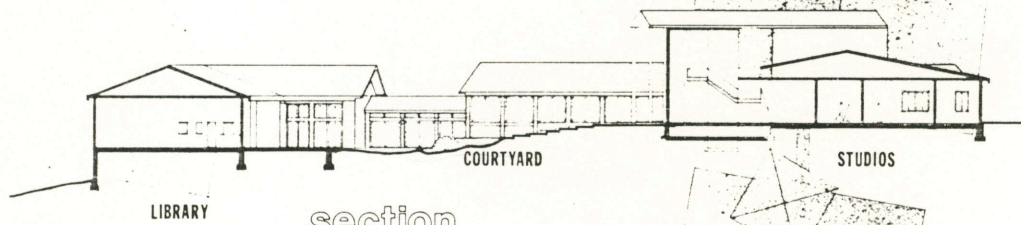
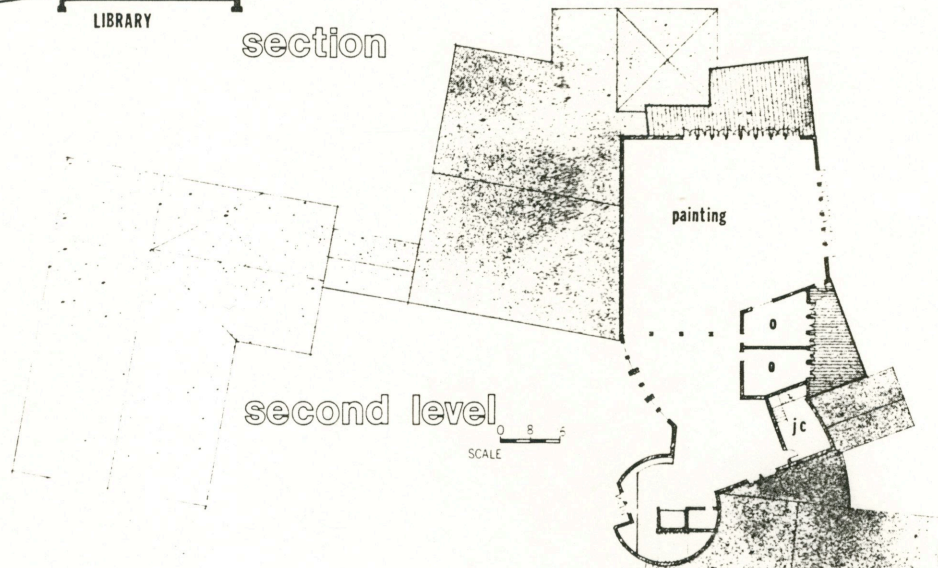


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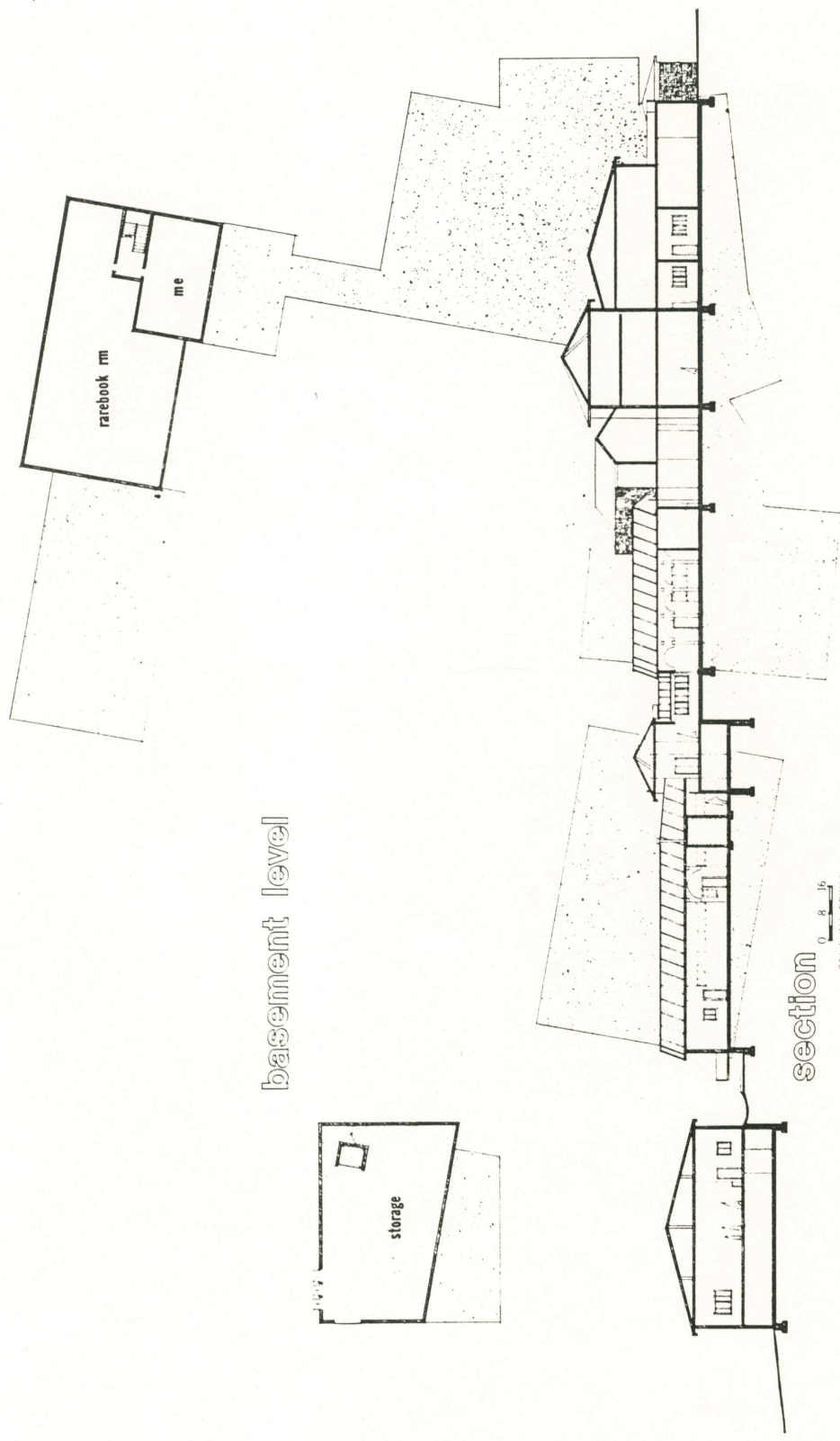


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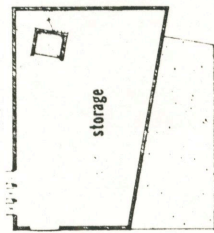




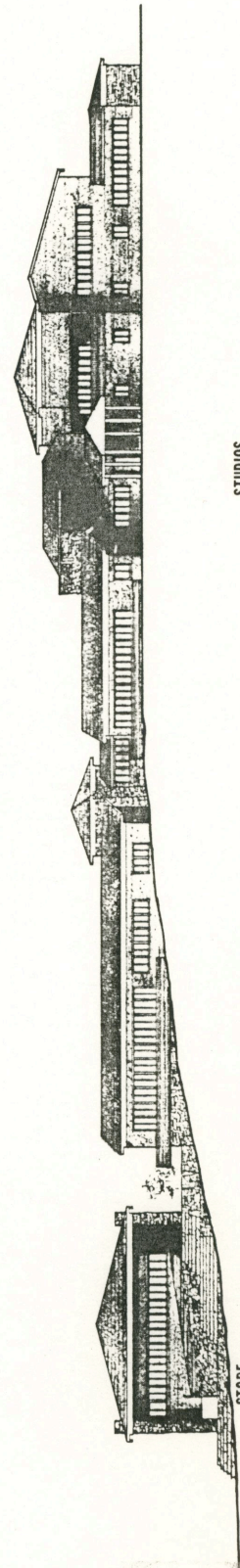
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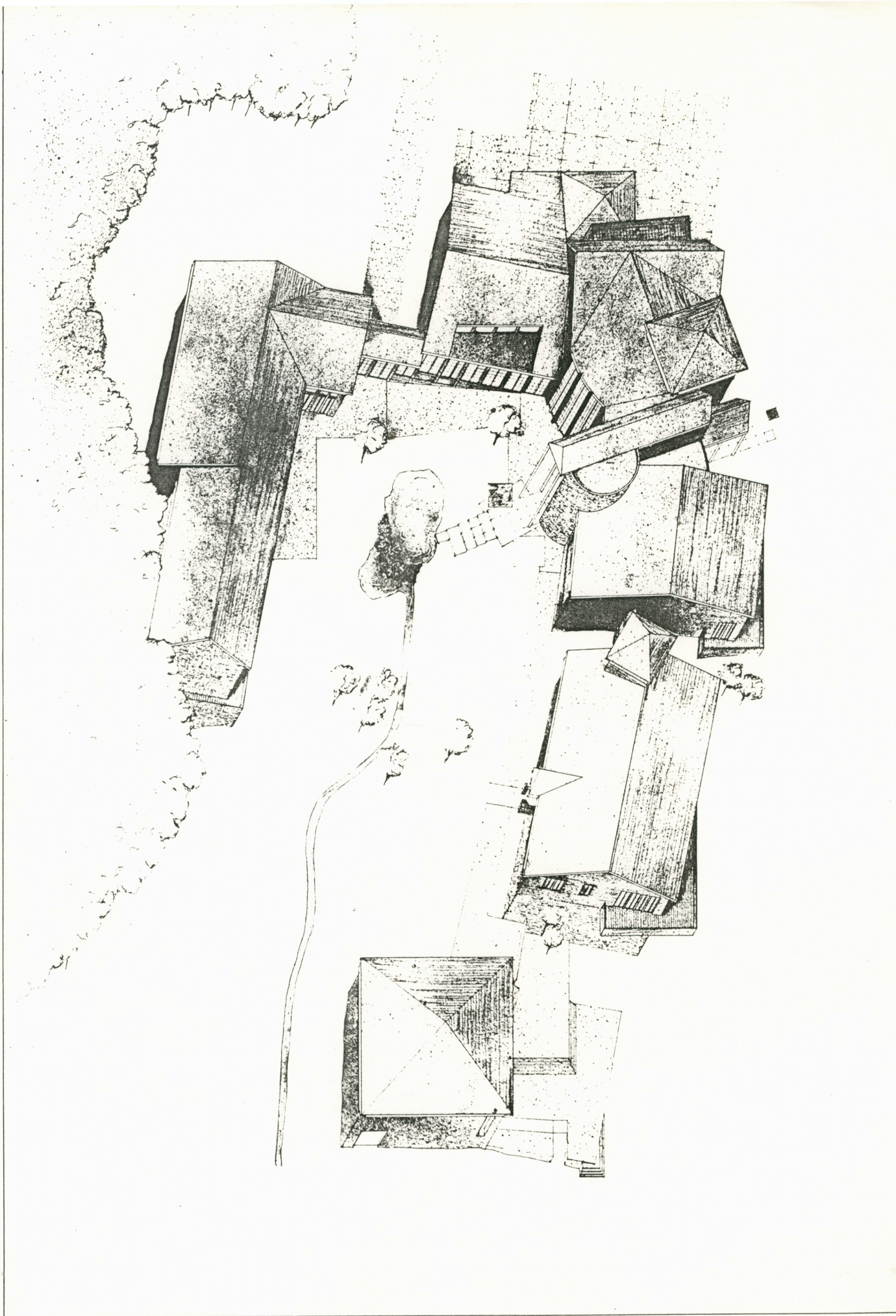
storage



east elevations

STUDIOS

STORE



ENDNOTES

- 1) Howett, John K. The Hudson River & It's Painters
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- 2) ibid. pg. 15
- 3) Numbers compared to various Theses, artists manuels and floor
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- 4) Greene, Herb Mind & Image: An Essay on Art &
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- 5) Pawley, Martain The Time House cited in Mind & Image
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- 6) Pastalan, Leon "Privacy as an Expression of
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- 7) ibid. pg. 325
- 8) ibid pg. 326
- 9) Greene, Herb Mind & Image: An Essay on Art &
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- 10) Lobell, John Silence and Light: Essays of Louis Kahn
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- 11) ibid. pg. 26
- 12) Langer, Susanne Mind: An Essay on Human Feeling
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