

reciprocity
a design thesis



a d e s i g n t h e s i s
r o c i t y

Submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements
for the degree of Master of Architecture

APPROVED:

Pia Sarpaneva, chair

Joseph L. Mashburn

V. Hunter Pittman

Fred C. Wallace III
January, 1998
Blacksburg, Virginia





r e c i p

c o n t e n t s

a b s t r a c t



p r o c e s s



b u i l d i n g



a f t e r w o r d



a b s t r a c t

There are two objects to which this book points:

One- a process in which both the designer
and the designed take part.

The process was “sensed” in the making of the book itself, and the
thesis was named. The book is at once an expression of this process,
and a part of the process expressed.

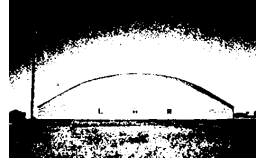
Its nature is a result of a relationship described as reciprocal.

The other- a building.

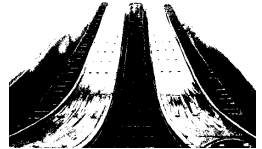
In designing an addition
to the Blacksburg Virginia Middle School, thoughts about light and
surface, ground and figure, earth and sky
guided decisions made in the process.

The result is regarded as both created and discovered.

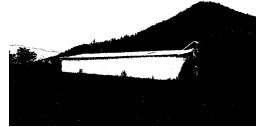
P r o c e s s



Airplane hangar, Iowa



Metro escalator Washington D.C.



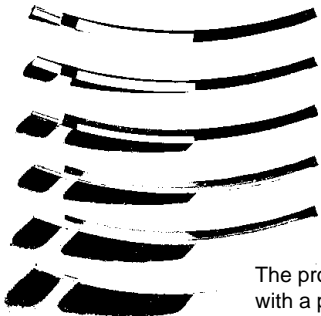
Barn, Blacksburg Virginia

The object of design
is the clear manifestation
of an idea.

Yet we do not know ideas
in themselves.

Ideas are that by which we
know other things.

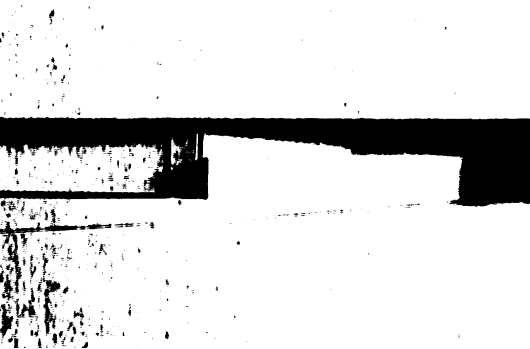
Ideas need things
in order to exist.



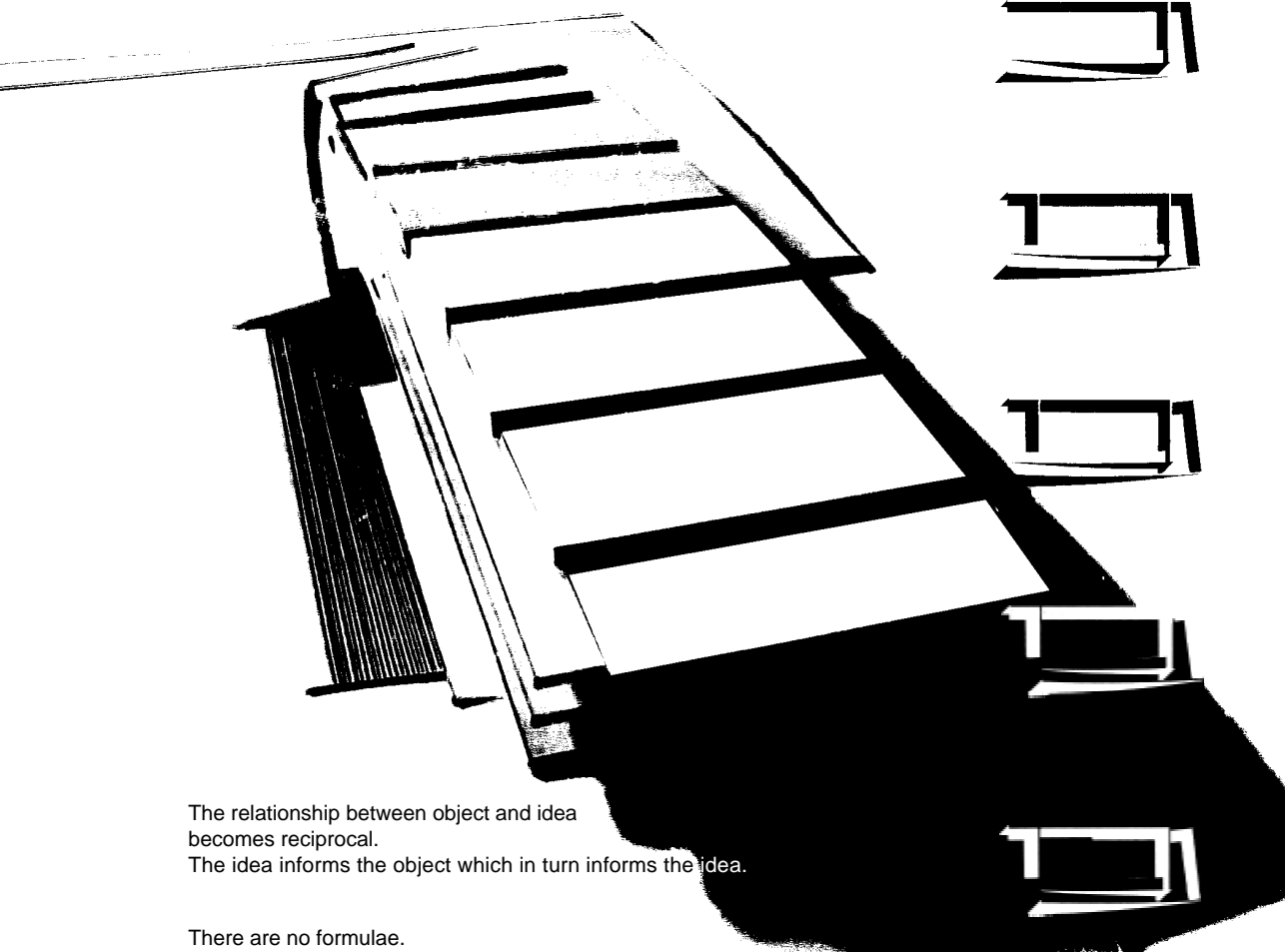
The process of design begins
with a physical act- a gesture or a mark.

This is the birth of the idea. The idea is of the act.



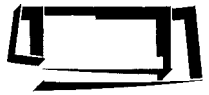


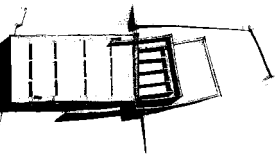
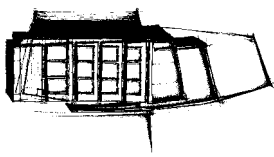
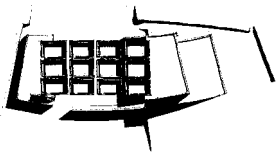
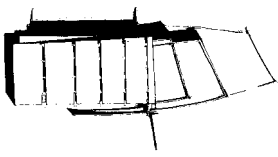
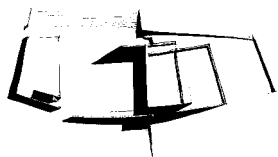
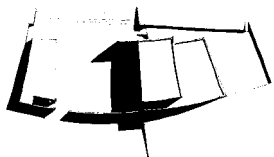
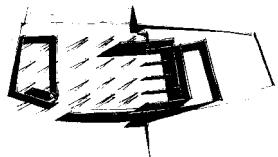
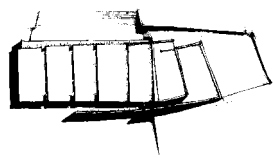
It is through making that
the idea itself develops.
As the object grows,
so does the idea.
The idea then speaks
back to the object.



The relationship between object and idea
becomes reciprocal.
The idea informs the object which in turn informs the idea.

There are no formulae.
The dialogue between object and idea is unique to each instance.

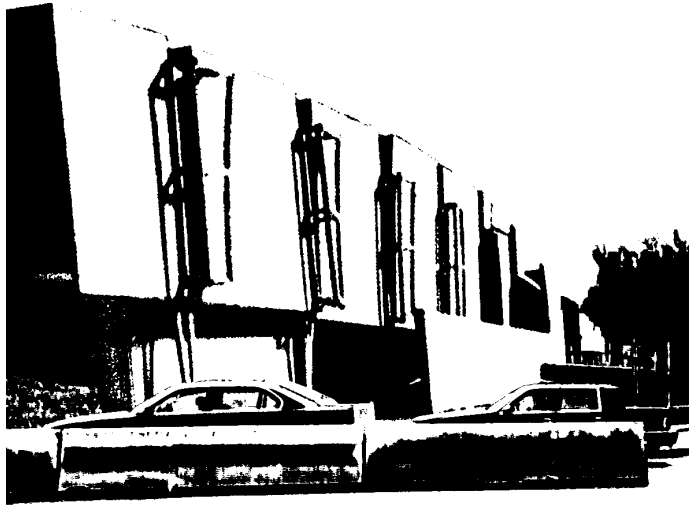




Object and idea
mature together.



b u i l d i n g



Proposed as an addition to the Blacksburg Middle School is a separate structure to be situated behind the existing building. Since the addition is necessitated by overcrowding, the existent structure could be used by lower grades, with students moving to the addition as they advance.

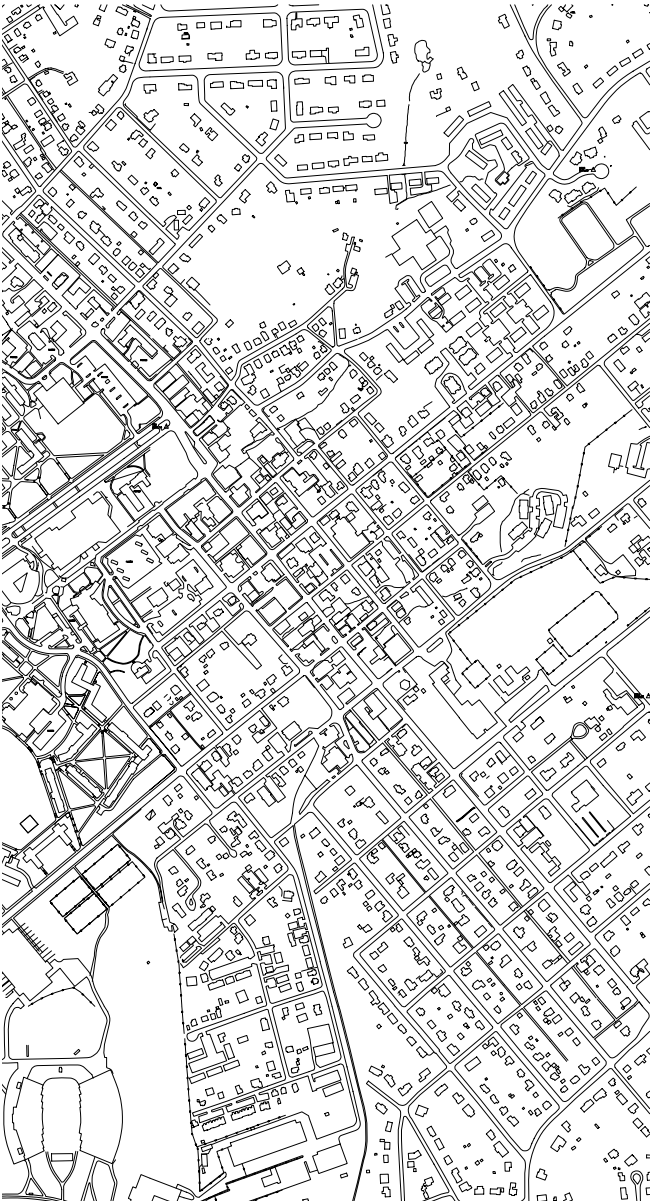


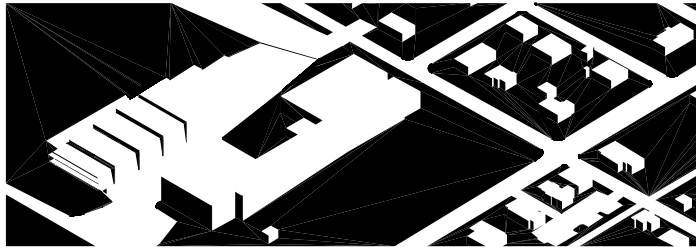
The new structure contains a cafeteria more than double the size of the current one, creating enough space to accommodate both buildings while providing needed classrooms, computer rooms, a woodshop and a subterranean auditorium/community space.



The addition cuts into the steep slope of a hill, engaging an existing retaining wall which defines an existing parking lot.

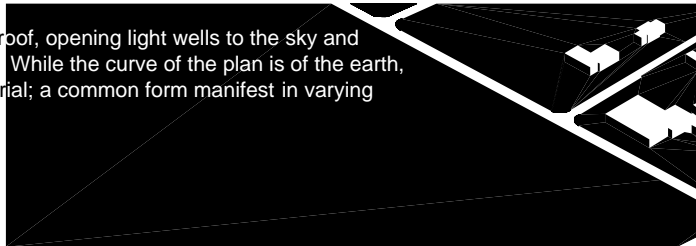




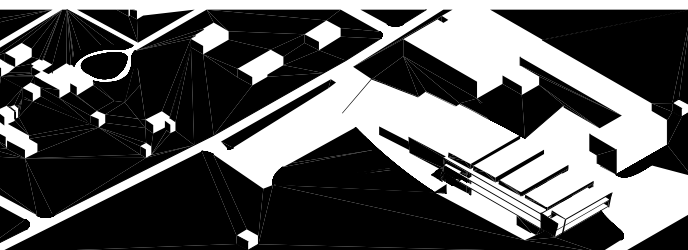
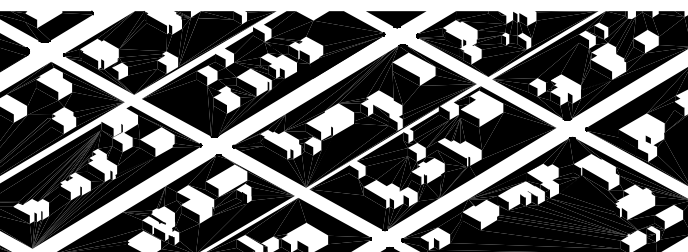


The curve of the front wall is the initial mark in the design of the building- a sweeping gesture to the hill of the site, indicative of fluid motion. Thereafter, while the curve itself serves as a formal influence on the drawing of the plan, its physical interpretation is fueled by thoughts of how the building could relate to the hill and later, in elevation, to the sky.

The curve of the plan is rotated into the arc of the roof, opening light wells to the sky and windows to the existing school through a thin skin. While the curve of the plan is of the earth, the arc of the roof is of the sky, and is light in material; a common form manifest in varying intentions.

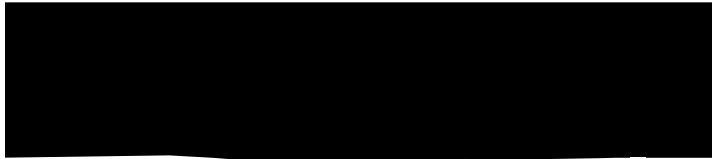
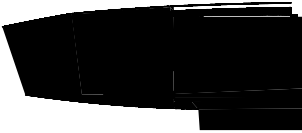


As a whole, the building is an expression of motion. The concrete sublevels reach forward, up and out of the hill, pushing the lighter steel classrooms to the sky. The structure of the classrooms arcs forward itself, splitting apart to allow light to pass down and through. The building flows out of the initial gesture in form and intention.

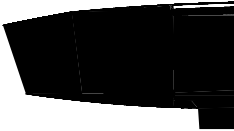




1.



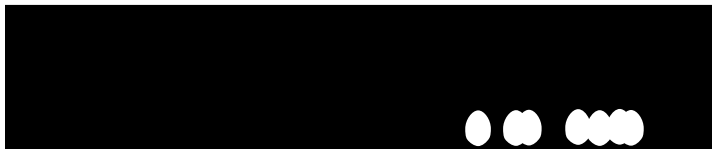
2.



3.

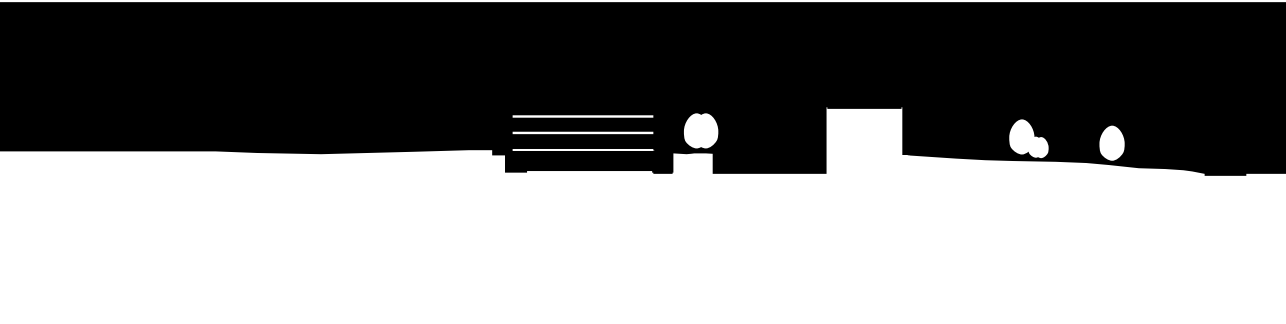


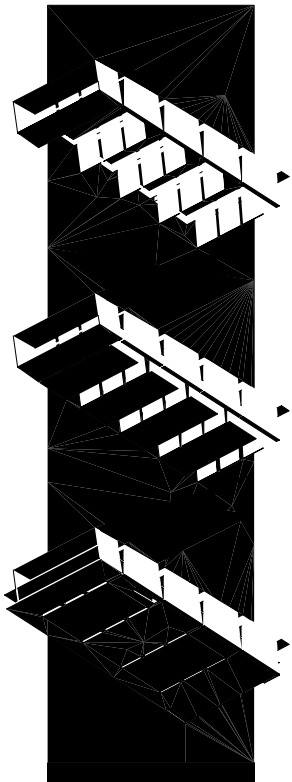
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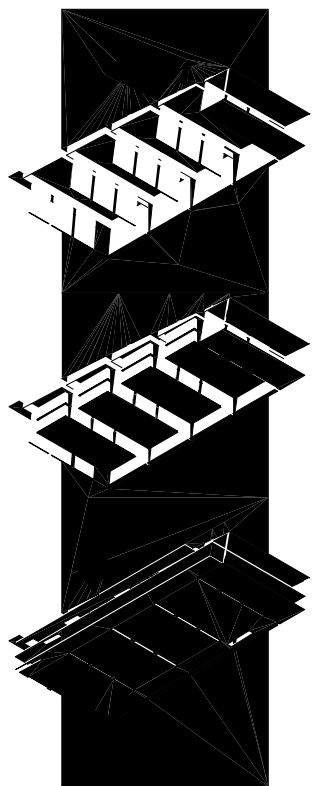
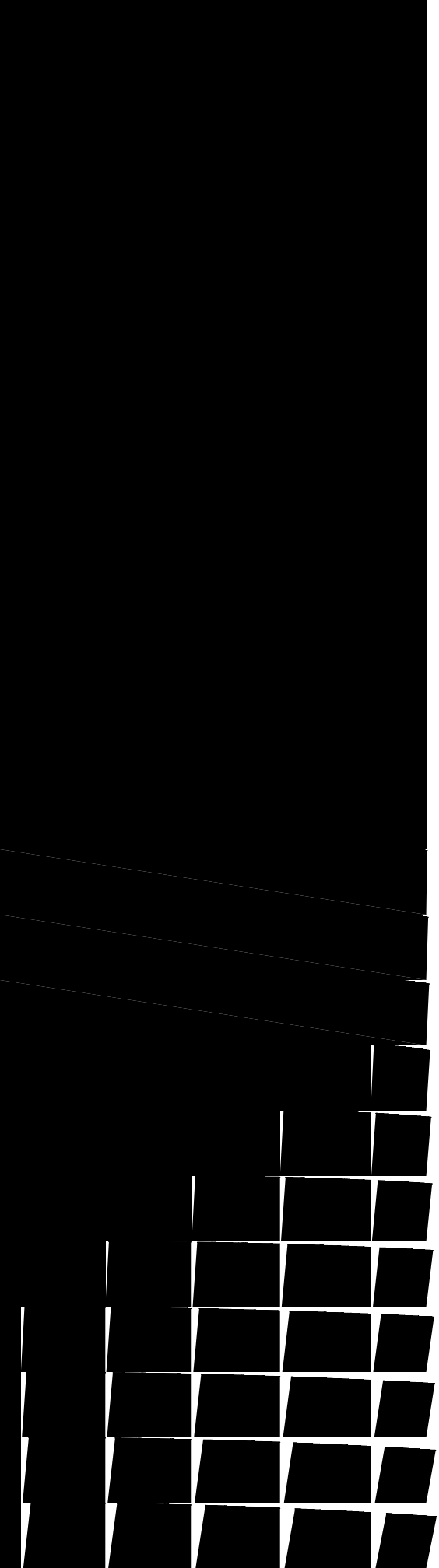


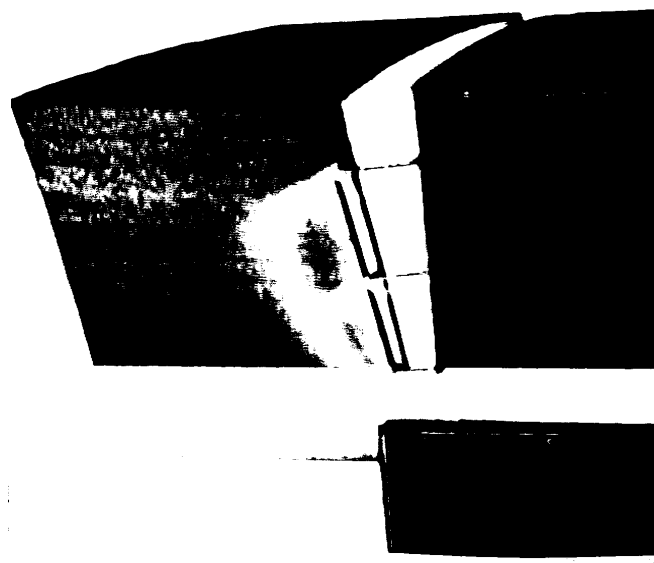
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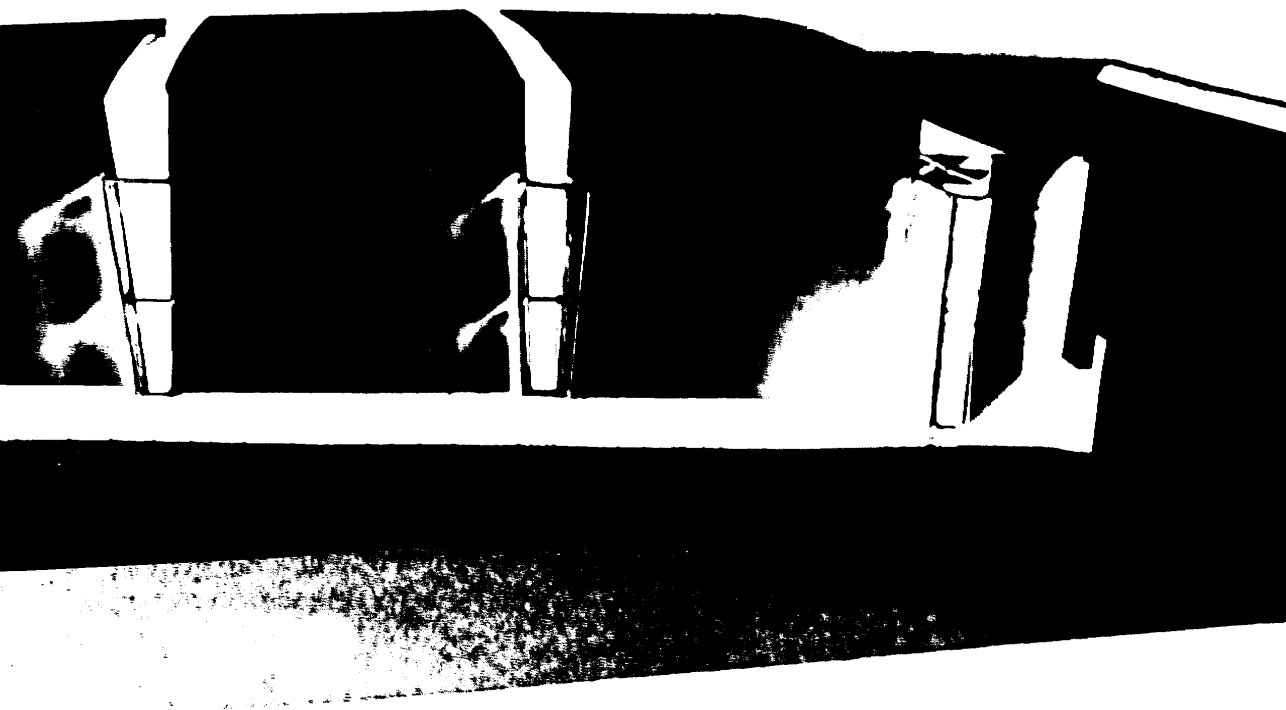
- 1. skin
- 2. light wells
- 3. upper levels- classrooms
- + administrative base
- 4. auditorium
- 5. common









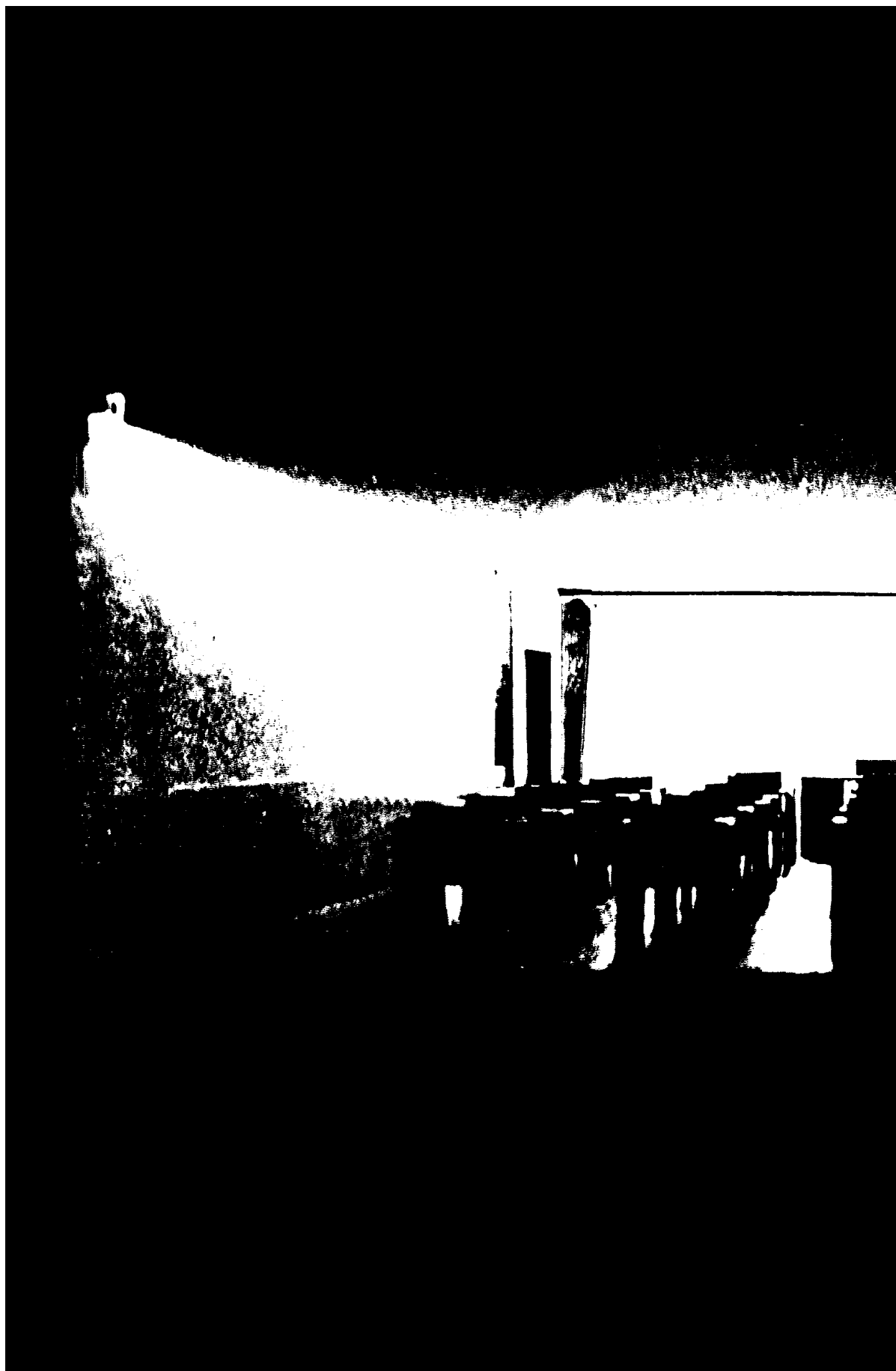




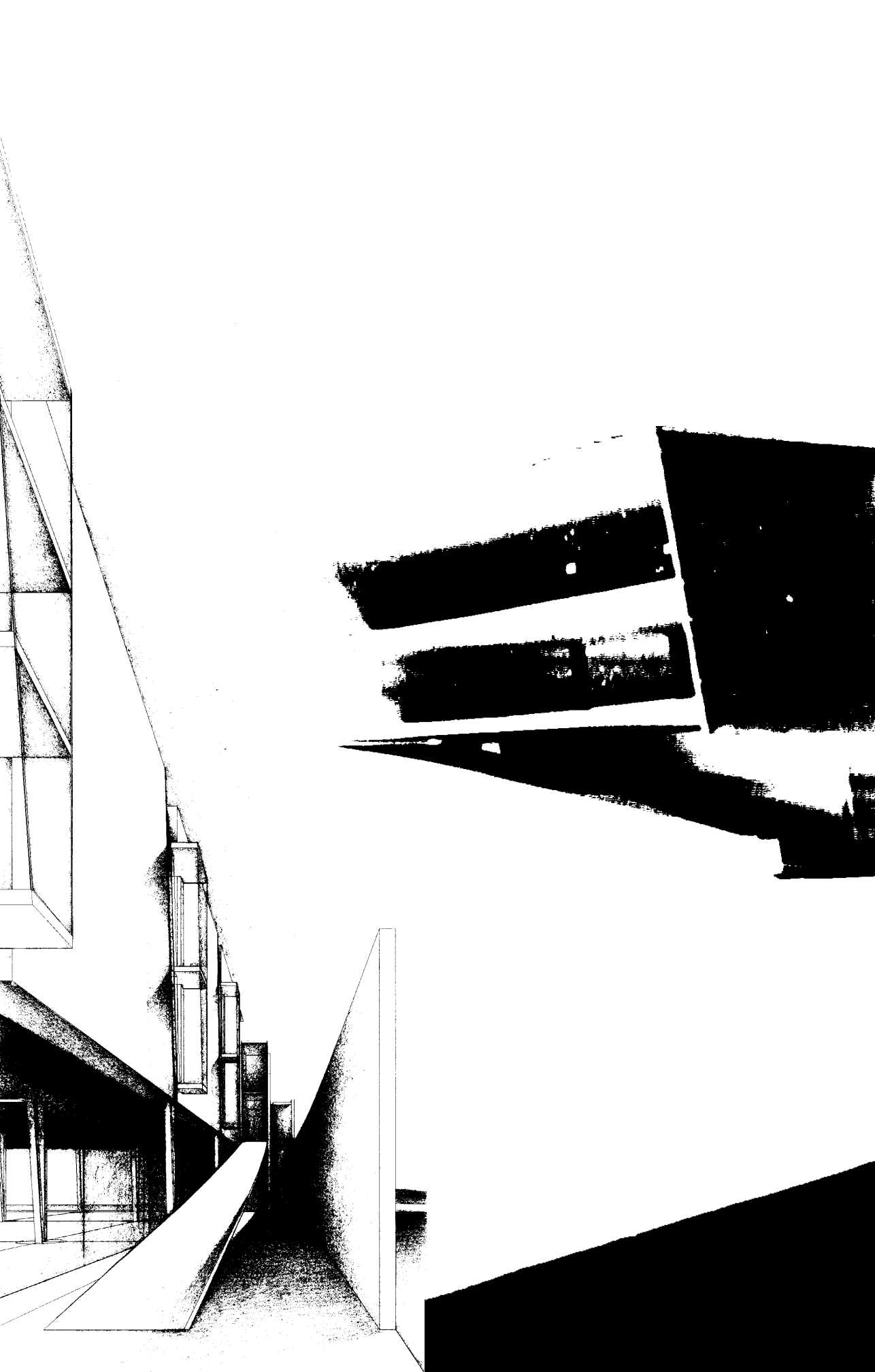






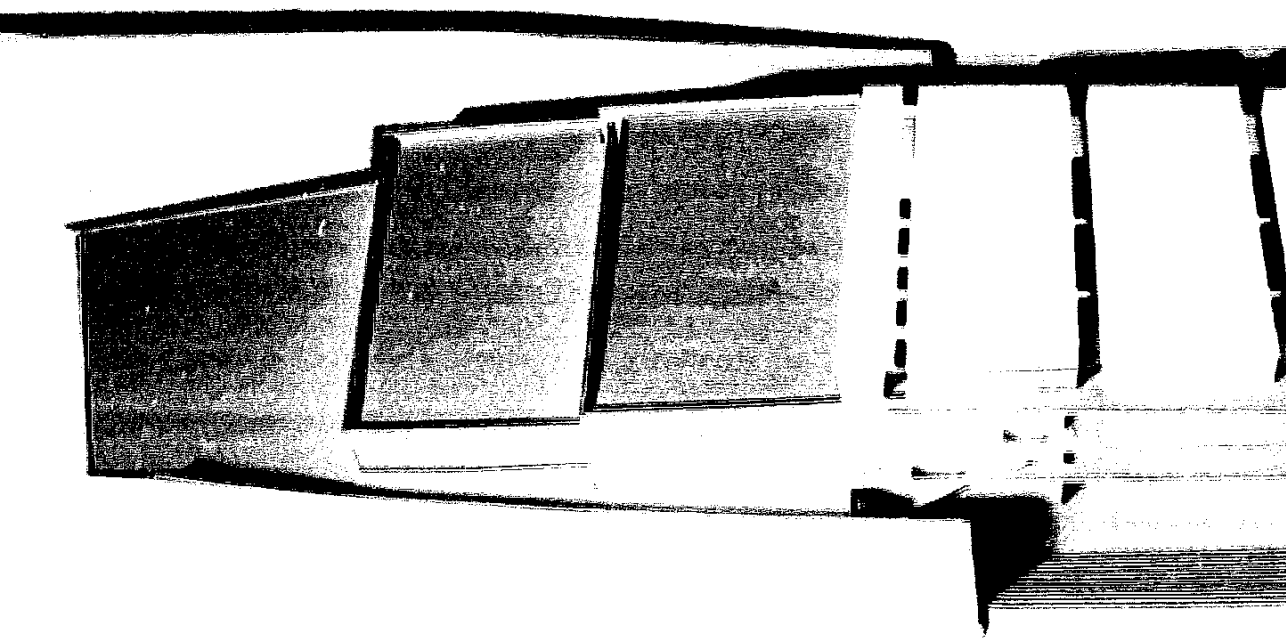




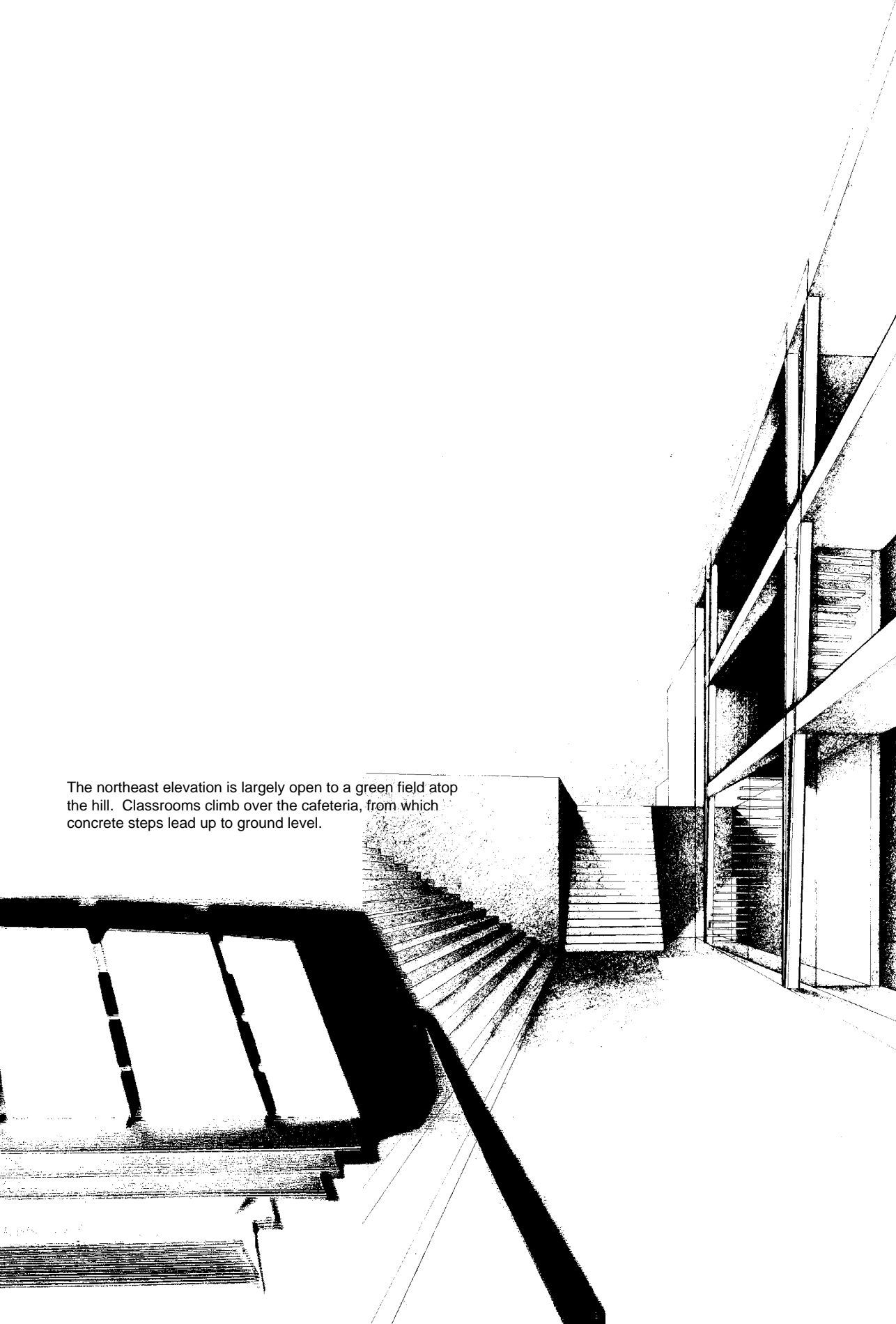




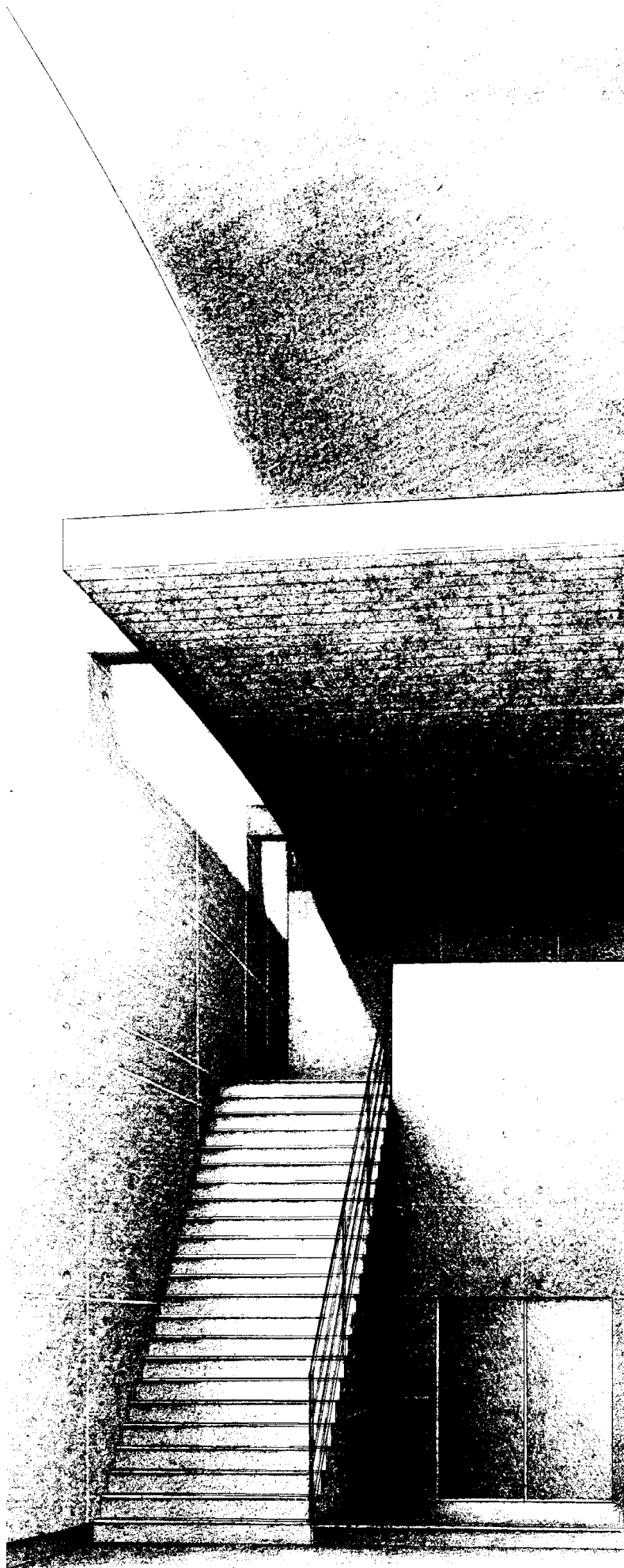
A ramp reaches down to accept students into the elevated classrooms, as others descend into the supportive administrative spaces.

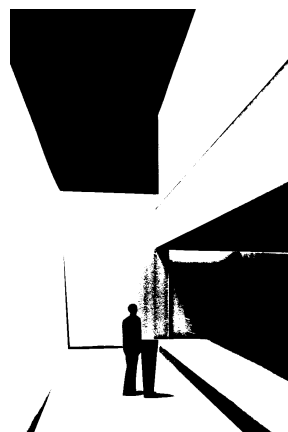
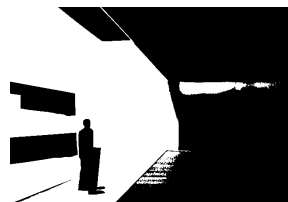


The northeast elevation is largely open to a green field atop the hill. Classrooms climb over the cafeteria, from which concrete steps lead up to ground level.

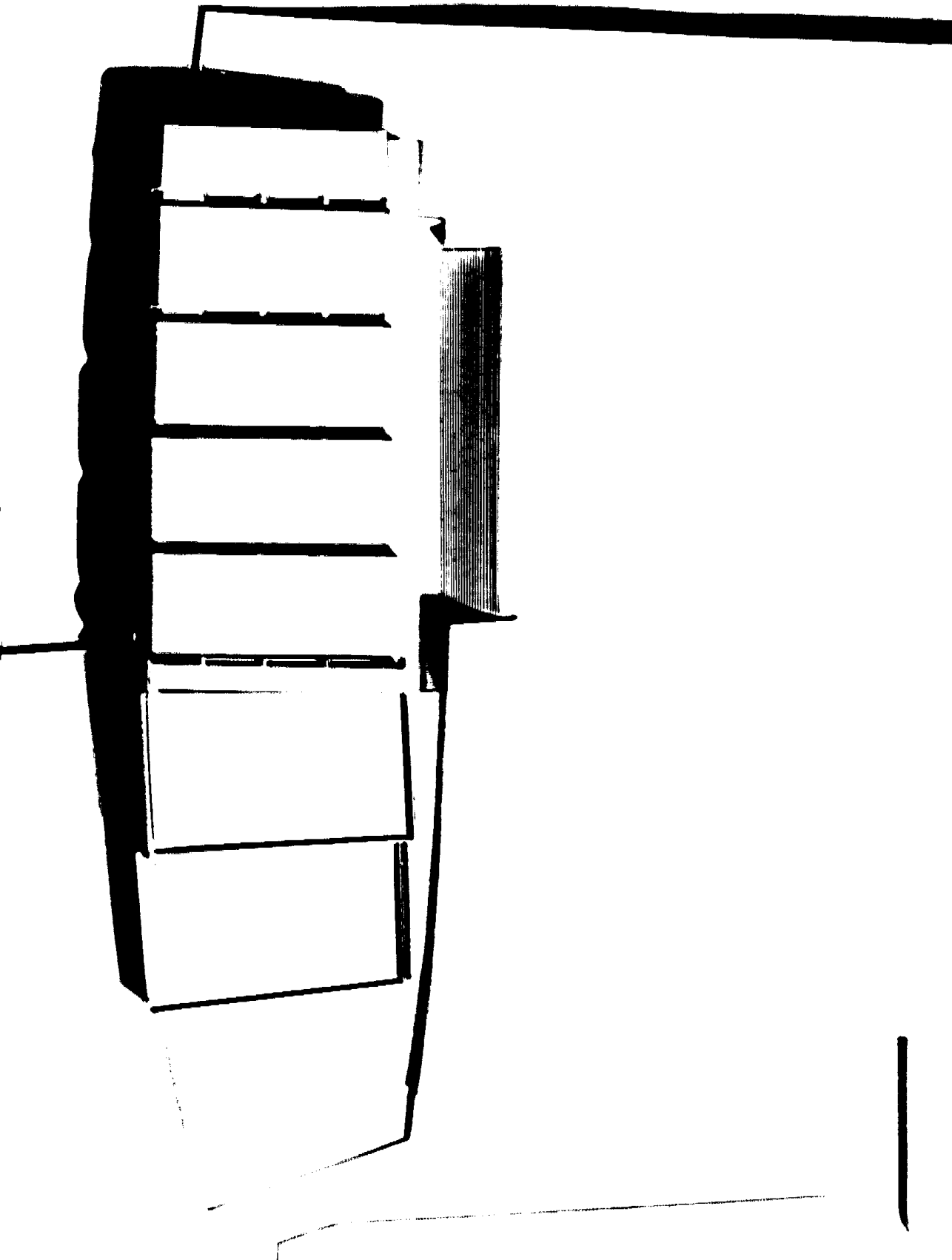


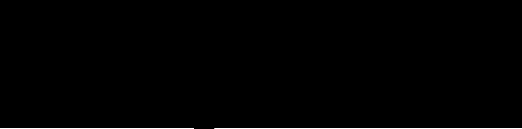
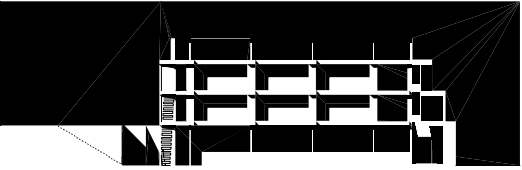
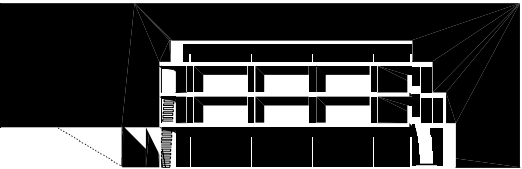
As one descends to the auditorium and wood shop below,
light drops from above, offering points of reference
to one's position inside the hill.

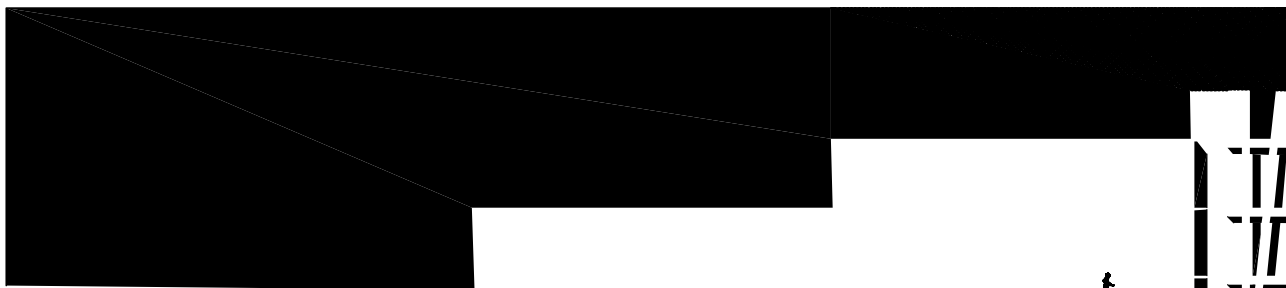
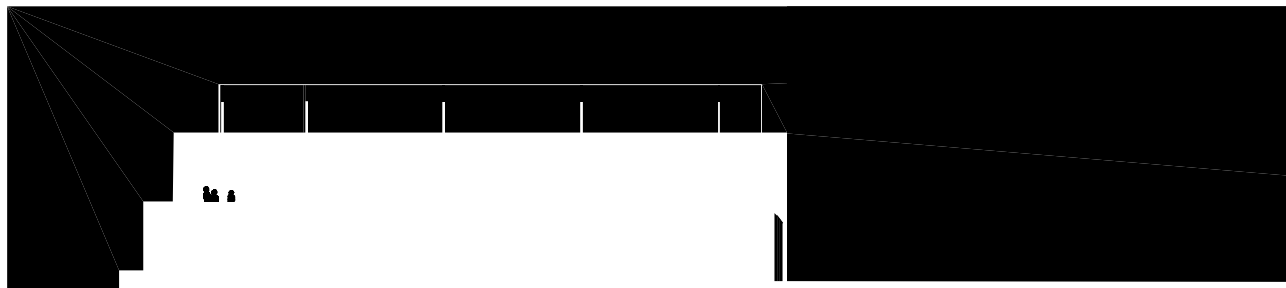




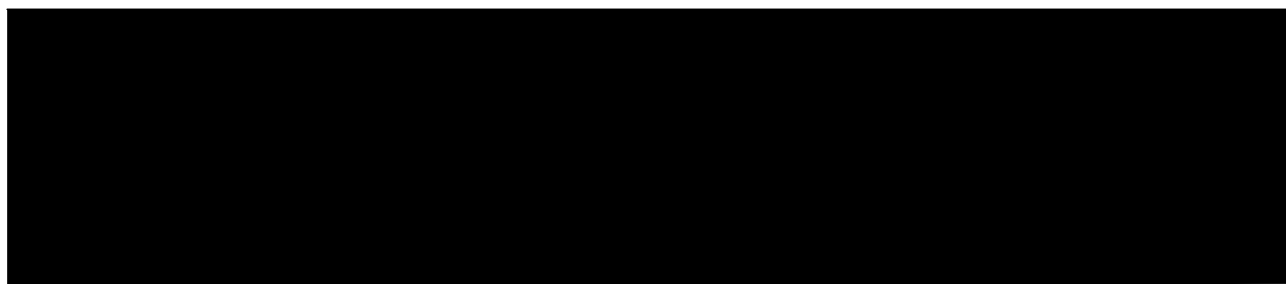
auditorium



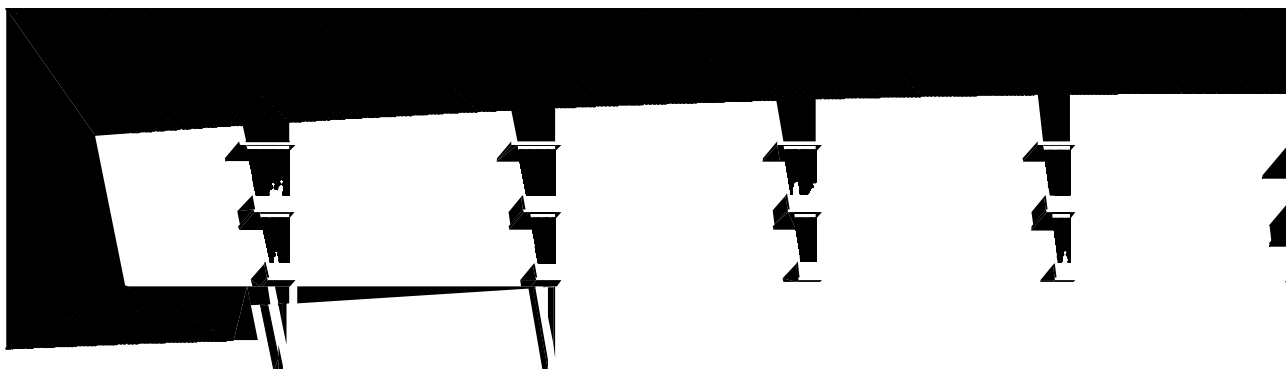




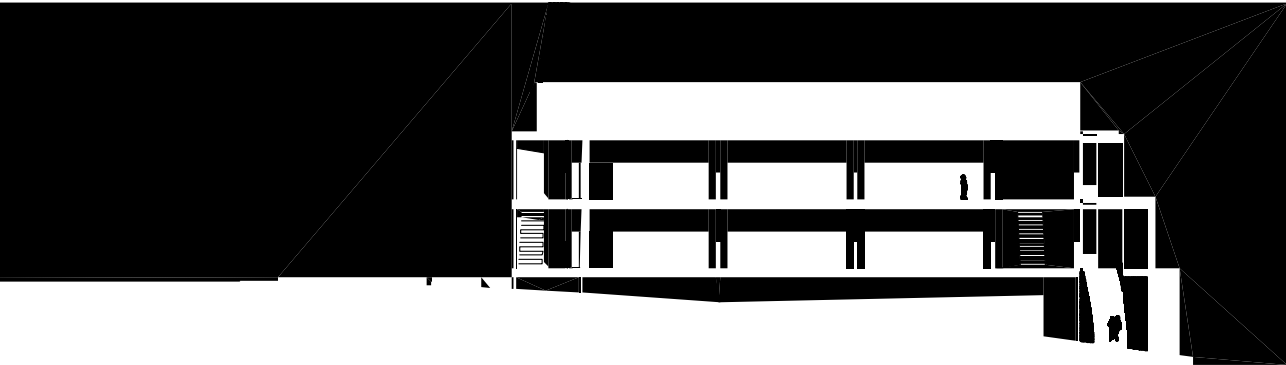
n o r t h e a s t



n o r t h w e s t



southeast

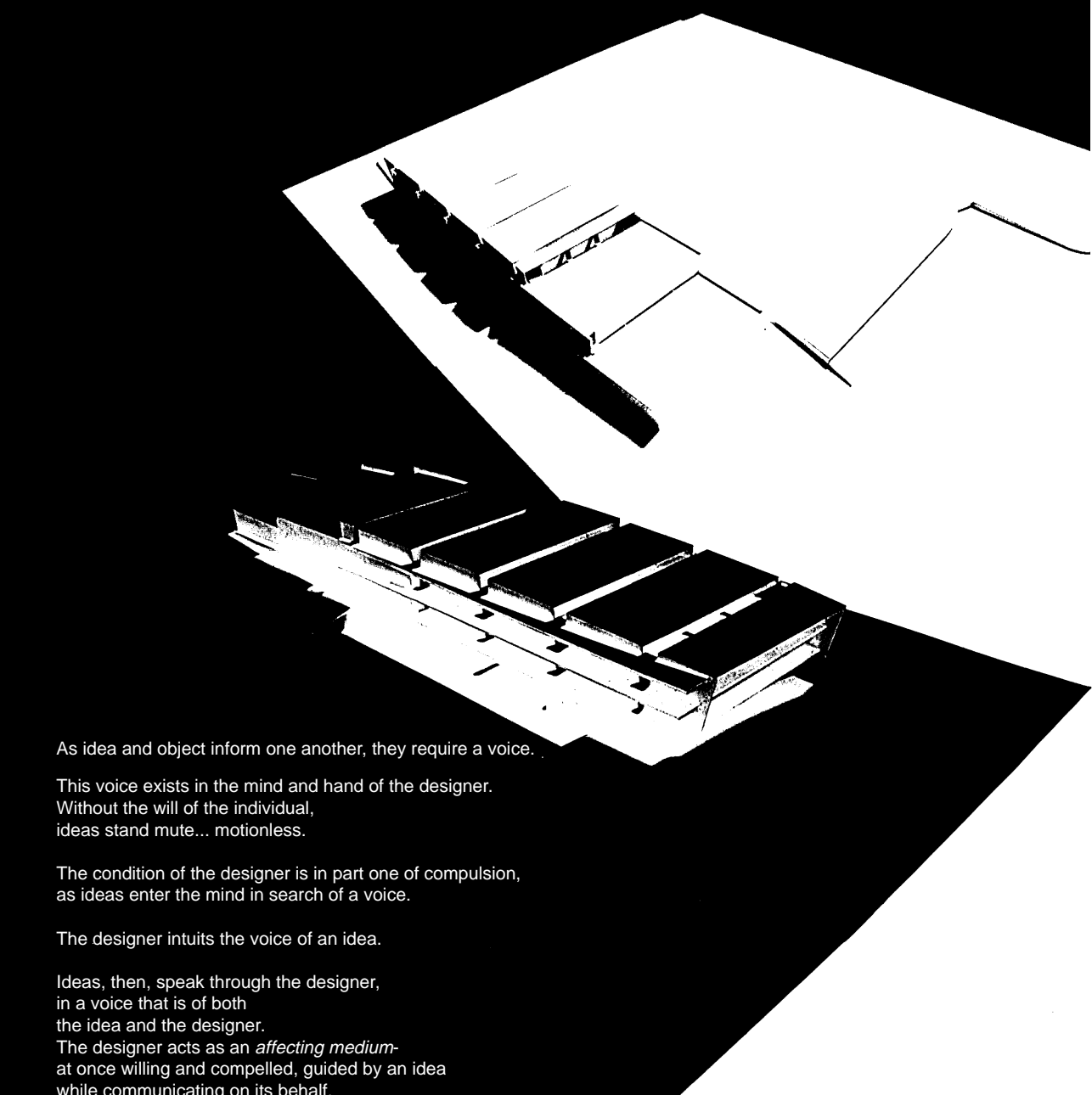


southwest



The building gives measure to the hill and sky.

a f t e r w o r d



As idea and object inform one another, they require a voice.

This voice exists in the mind and hand of the designer.
Without the will of the individual,
ideas stand mute... motionless.

The condition of the designer is in part one of compulsion,
as ideas enter the mind in search of a voice.

The designer intuits the voice of an idea.

Ideas, then, speak through the designer,
in a voice that is of both
the idea and the designer.

The designer acts as an *affecting medium*-
at once willing and compelled, guided by an idea
while communicating on its behalf.

Without the inspiration of ideas, designers do not exist.



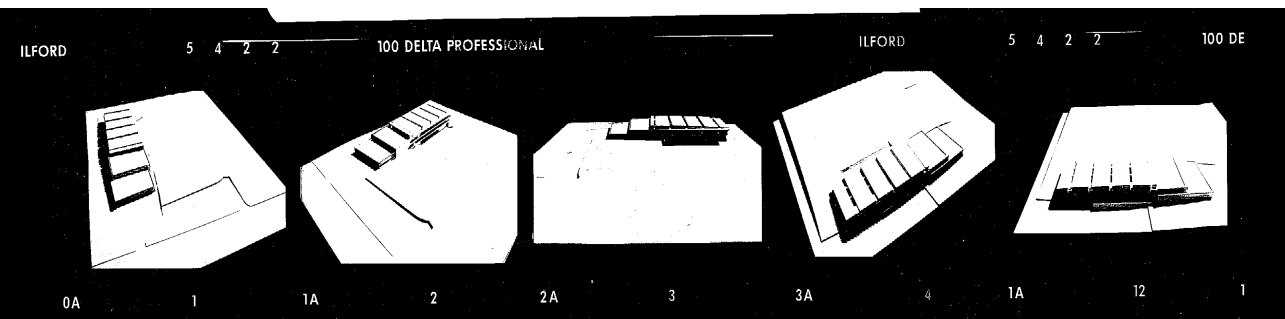
“Intuition is your most exacting sense,
it is your most reliable sense. Intuition
stems from the inspiration to live”.

- Kahn

t h a n k s -

Pia Sarpaneva
Joe Mashburn
Hunter Pittman
Hans Rott
Ryan Mingo

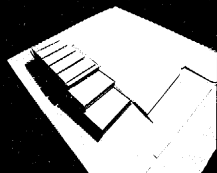
-for advice, inspiration and friendship



and my parents

-for love and support
I couldn't do without.

ILFORD



4 2

ILFORD

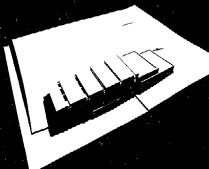
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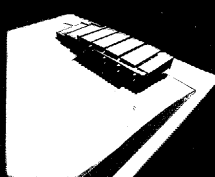
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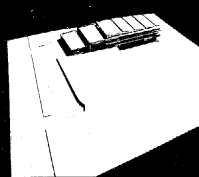
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1A



2A

V i t a

Fred Clarence Wallace III
April 17, 1970

Master of Architecture
Virginia Polytechnic Institute and State University
Blacksburg, Virginia
1998

Master of Philosophy
University of Mississippi
Oxford, Mississippi
1994

Bachelor of Arts
University of Mississippi
Oxford, Mississippi
1992

