



NICK VOTAVA

PROBLEMS IN DESIGN I: FORM
AND STRUCTURE 01D:021
THE UNIVERSITY OF IOWA
SCHOOL OF ART &
ART HISTORY

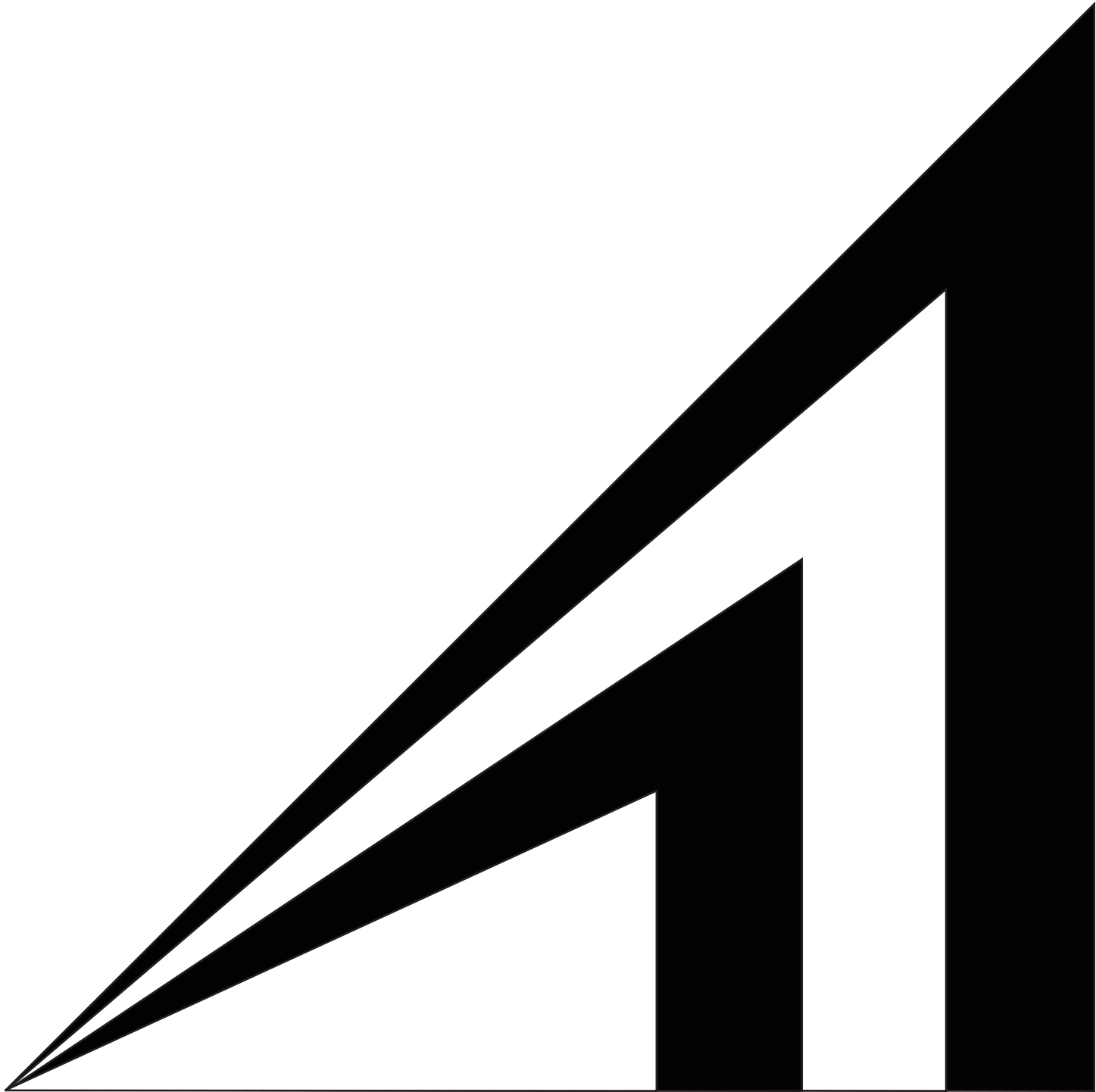
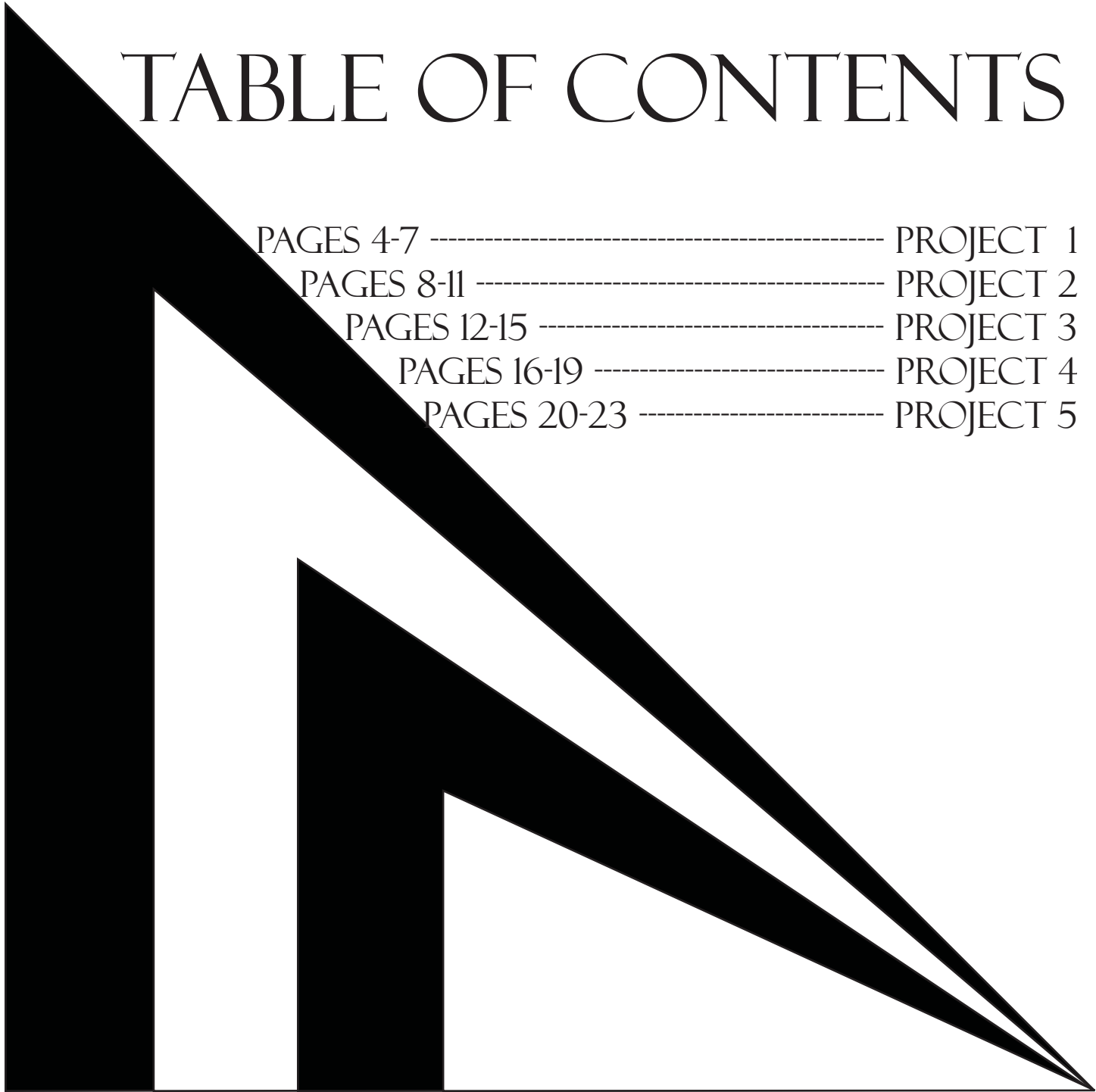
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FALL 2009
PORTFOLIO

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PROJECT: 1

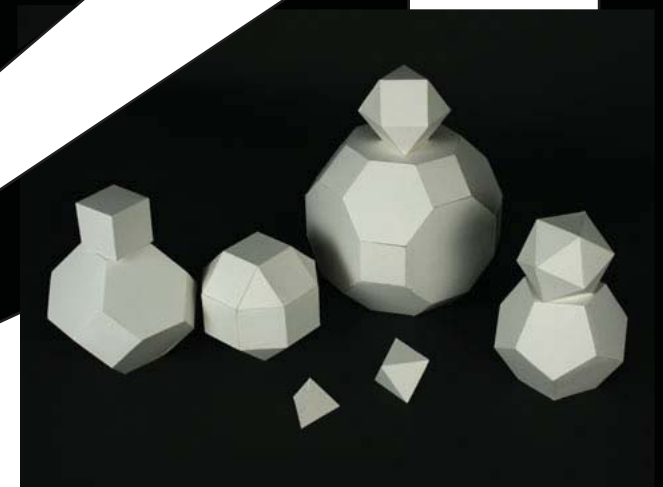
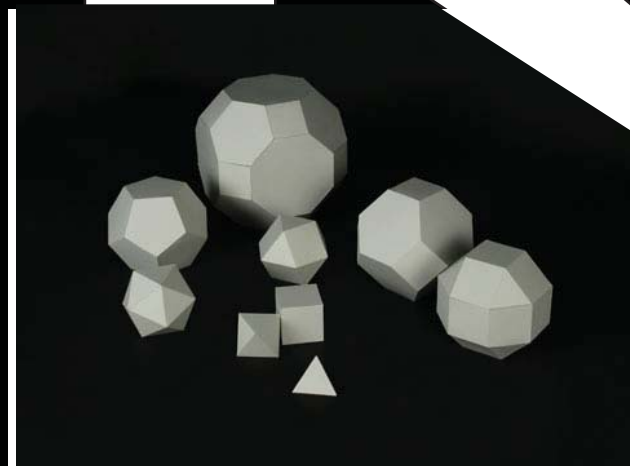
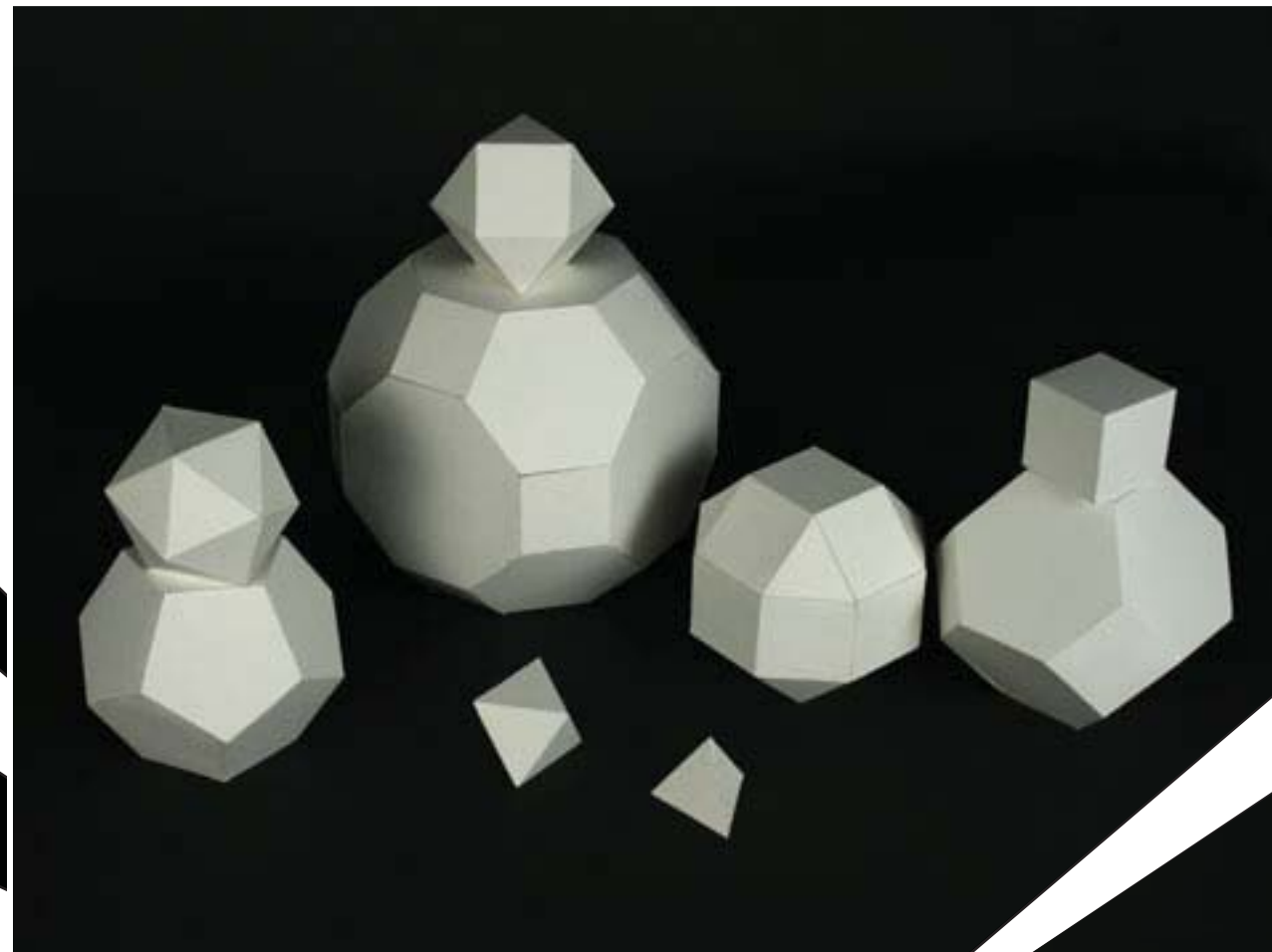
CONSTRUCT THE PLATONIC SOLIDS
AND FOUR ARCHIMEDEAN SOLIDS

PROJECT 1: CONSTRUCT THE PLATONIC SOLIDS
AND FOUR ARCHIMEDEAN SOLIDS

MY GOAL WITH THIS PROJECT WAS FAIRLY
STRAIGHTFORWARD. I WAS INSTRUCTED TO
CREATE THE PLATONIC SOLIDS AND FOUR
ARCHIMEDEAN SOLIDS USING 3-PLY WHITE
BRISTOL BOARD. EACH SHAPE WAS
DRAFTED WITH EACH EDGE
MEASURING TWO INCHES. EACH WAS
THEN CUT AND GLUED TO FORM
THE FINAL SHAPES. OVERALL I
WANTED MY SHAPES TO COME
OUT CLEAN AND CRISP.
I FEEL I WAS ABLE TO
ACCOMPLISH THIS
THROUGH PRECISE
DRAFTING AND
OVERALL
PATIENCE.

PROJECT: 1

CONSTRUCT THE PLATONIC SOLIDS
AND FOUR ARCHIMEDEAN SOLIDS



PROJECT: 2

WALL

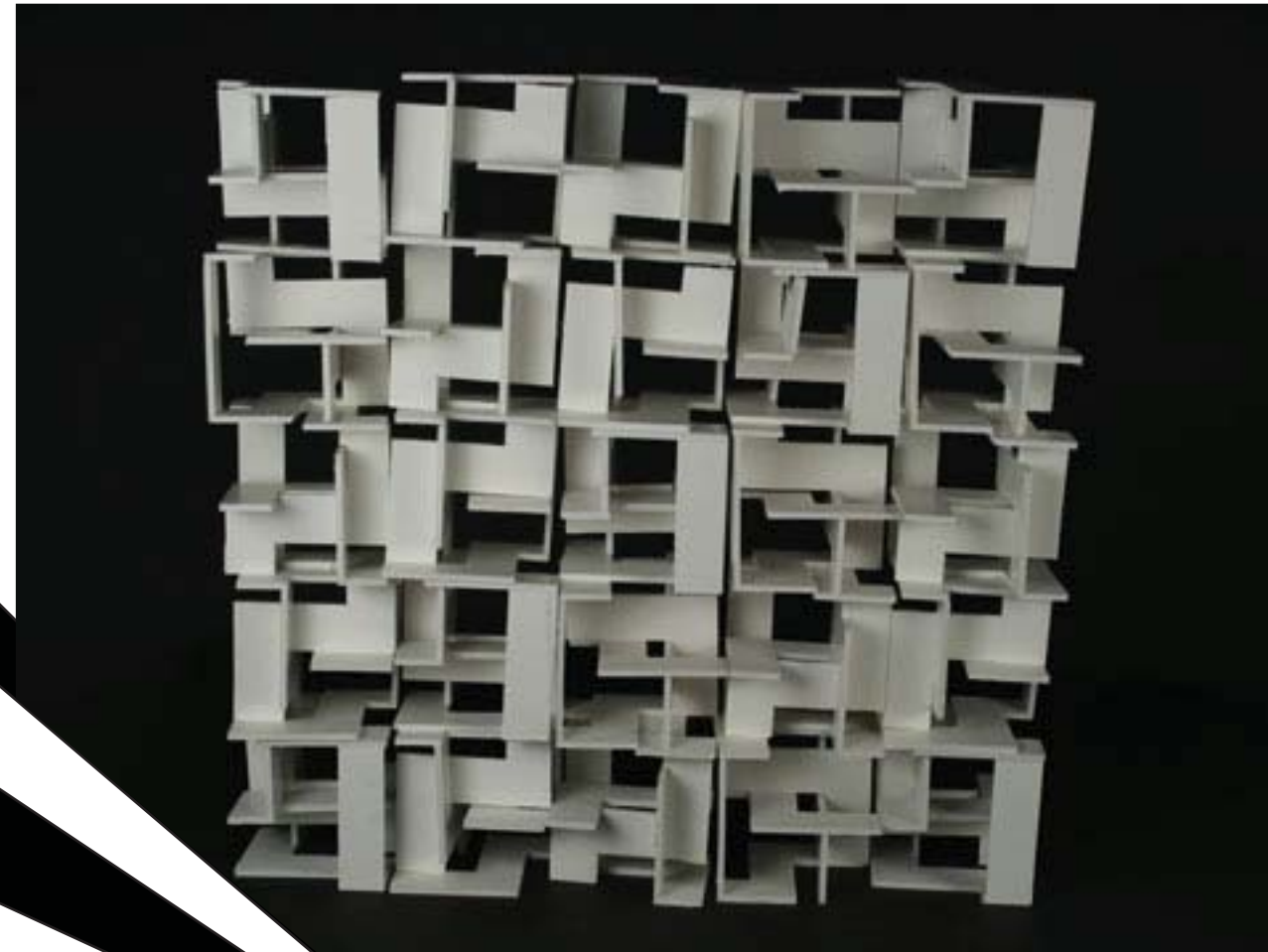
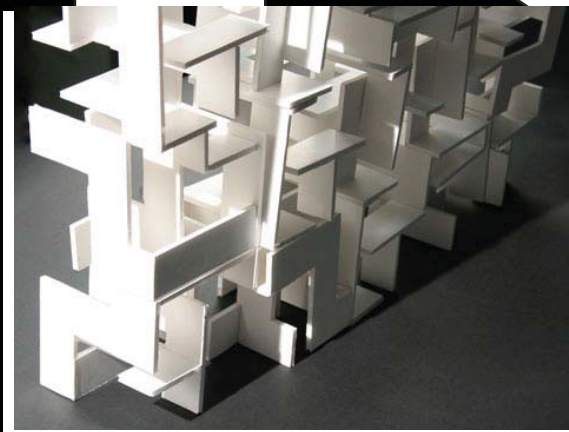
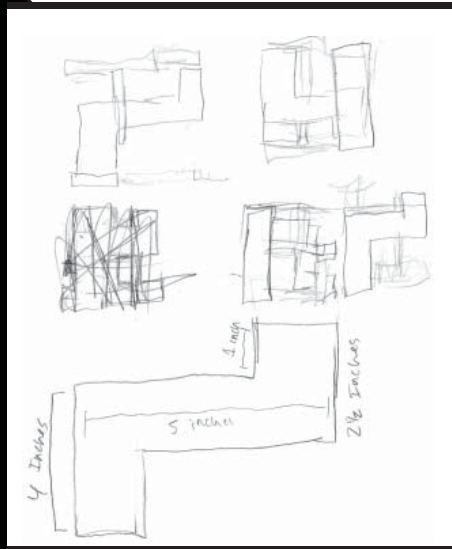
PROJECT 2: WALL

REQUIREMENTS:

SPATIAL CELL FORM SHOULD BE BASED IN A CUBE MEASURING 5" X 5" X 5"
SPATIAL CELLS WILL BE STACKED IN FIVE ROWS AND FIVE COLUMNS TO
CREATE A WALL SURFACE (WITH SIDES TOUCHING)
SPATIAL CELL SHOULD NOT LOOK LIKE AN ENCLOSED CUBE
SPATIAL CELL DESIGN NEEDS TO HAVE A CONCEPT FOR EXAMPLE
MOVEMENT OR TRANSPARENCY
SPATIAL CELL DESIGN CAN EMPHASIZE SURFACES, LINES,
SOLIDS OR A COMBINATION OF THESE THREE
SPATIAL CELLS CANNOT BE GLUED TOGETHER
SPATIAL CELL STRUCTURE SHOULD BE DESIGNED
TO GUARANTEE STABILITY WHEN STACKED

MY GOALS WITH MY CUBE WERE TO USE ONE MAIN
SHAPE, BUT TO ARRANGE THEM IN A WAY THAT WHEN
VIEWED FROM ALTERNATIVE ANGLES LOOKS VASTLY
DIFFERENT. IN THIS WAY WHEN THE WALL WAS
FORMED THE NEGATIVE AND POSITIVE SPACE
WOULD CREATE A WALL THAT DOES NOT
APPEAR TO HAVE UNIFORM SHAPES. I FEEL
THE OVERALL LOOK IS VERY
STRUCTURAL AND APPEALING TO
THE EYE. WHILE ASPECTS OF THE
PROJECT WERE FRUSTRATING I
FEEL THE OVERALL RESULT
WAS WELL WORTH THE
TIME.

PROJECT: 2 WALL



PROJECT: 3

DESIGN AND BUILD A 3D FORM WITH
NINE LINEAR FRAMEWORK UNITS

PROJECT 3: DESIGN AND BUILD A 3D FORM WITH NINE LINEAR FRAMEWORK UNITS

REQUIREMENTS:

FRAMEWORK UNIT DESIGN NEEDS TO MAKE REFERENCE TO ONE OF THE PLATONIC OR ARCHIMEDEAN SOLIDS.

EACH EDGE OF THE CHOSEN SOLID MUST BE REPRESENTED TO MARK THE BORDERS OF THE FACES AND FORM THE VERTICES WHERE THEY JOIN.

PROPORTIONS CAN BE CHANGED IF VISUAL REFERENCE STAYS CLEAR.

FRAMEWORK CAN VARY IN SIZE AND PROPORTION IN DIFFERENT UNITS.

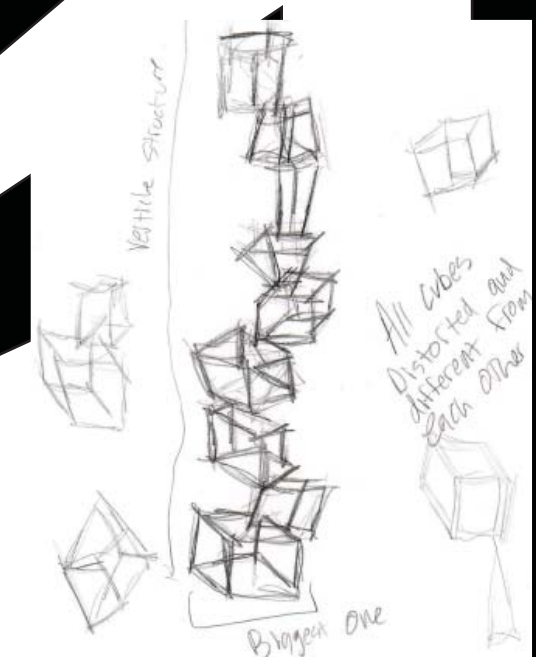
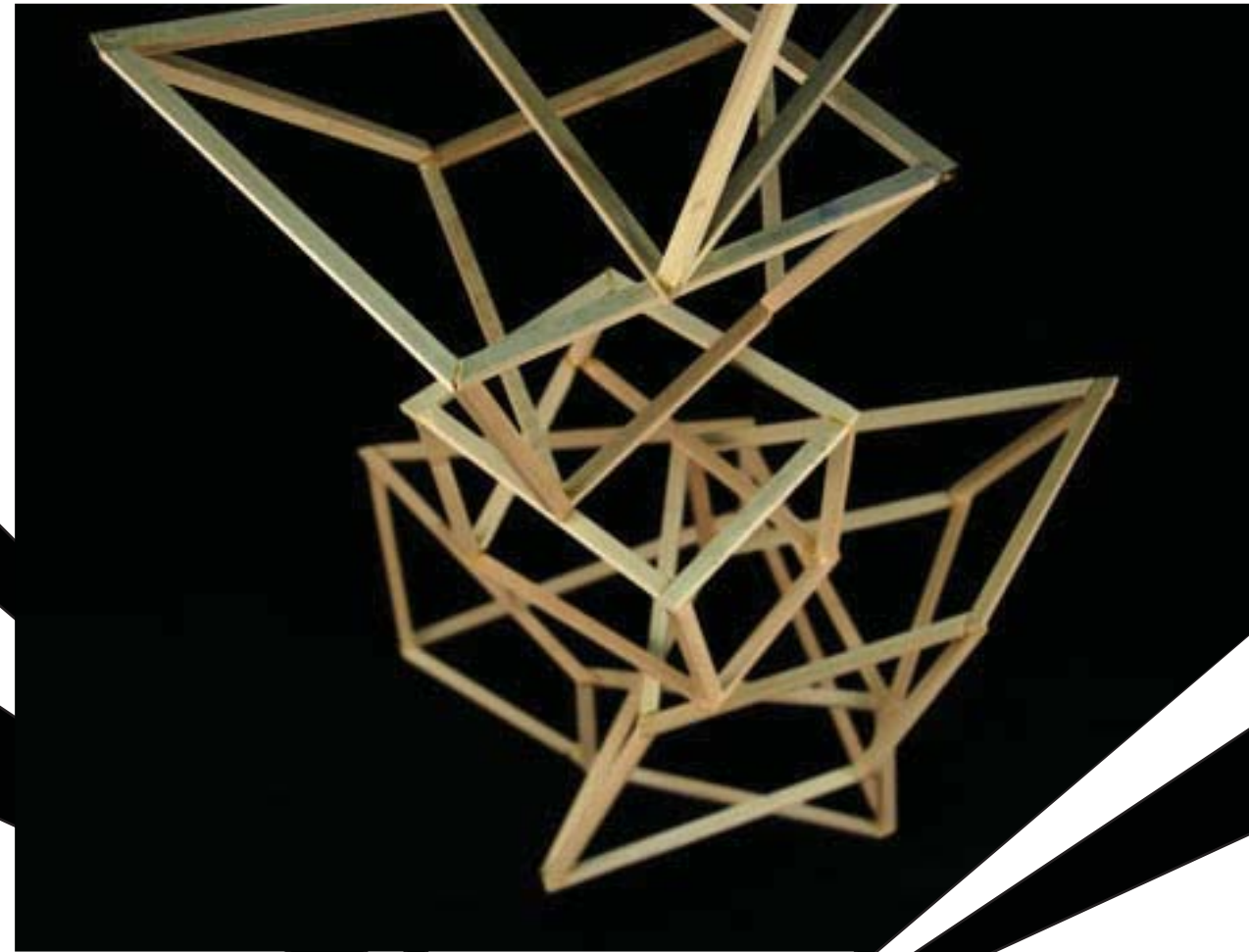
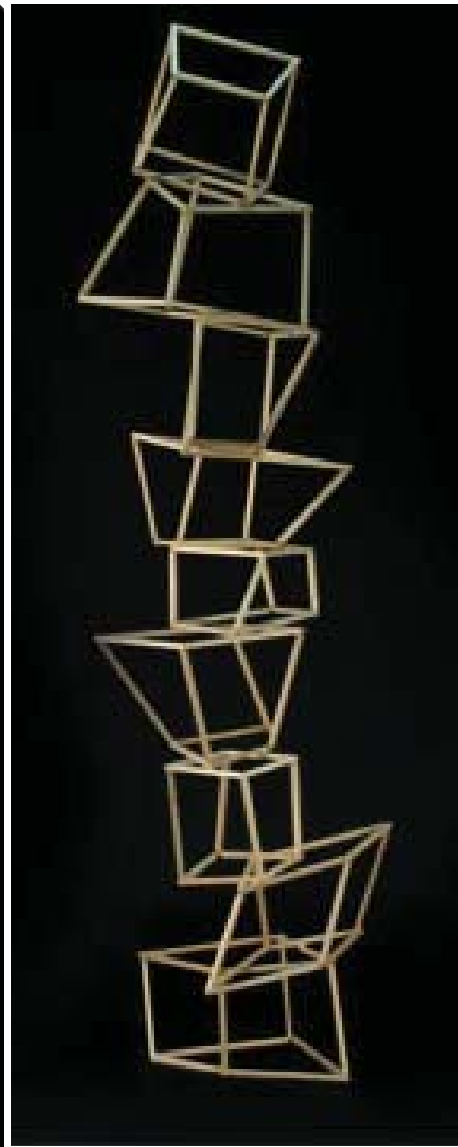
3D FORM NEEDS TO CONVEY VISUAL MOVEMENT.

SMALLEST EDGE SHOULD BE BIGGER THAN 4".

MY IDEA FOR THIS PROJECT INVOLVED CREATING A VERTICAL STRUCTURE USING A DISTORTED CUBE FORM. I WANTED EVERY SHAPE TO BE DIFFERENT AND I WANTED TO BALANCE THEM IN A WAY THAT LOOKED LIKE THEY WERE WEIGHING EACH OTHER DOWN OR ABOUT TO FALL. I ENJOY THE HEIGHT OF THE STRUCTURE AND FEEL IT DIRECTS THE VIEWER'S EYE AND GIVES THE OBJECT MOVEMENT.

PROJECT: 3

DESIGN AND BUILD A 3D
FORM WITH NINE LINEAR
FRAMEWORK UNITS



PROJECT: 4

Design and build a 3D form
with linear layers

Project 4: Design and build a 3D form with linear layers

Requirements:

3D Form needs to convey visual movement

Form has to be created with at least 100 identical wood sticks

Wood sticks must be stacked to form layers

My goals with this project were to create a form that started from a relatively narrow base and then extended both vertically and horizontally. I wanted to create a structural form then had an organic appearance.

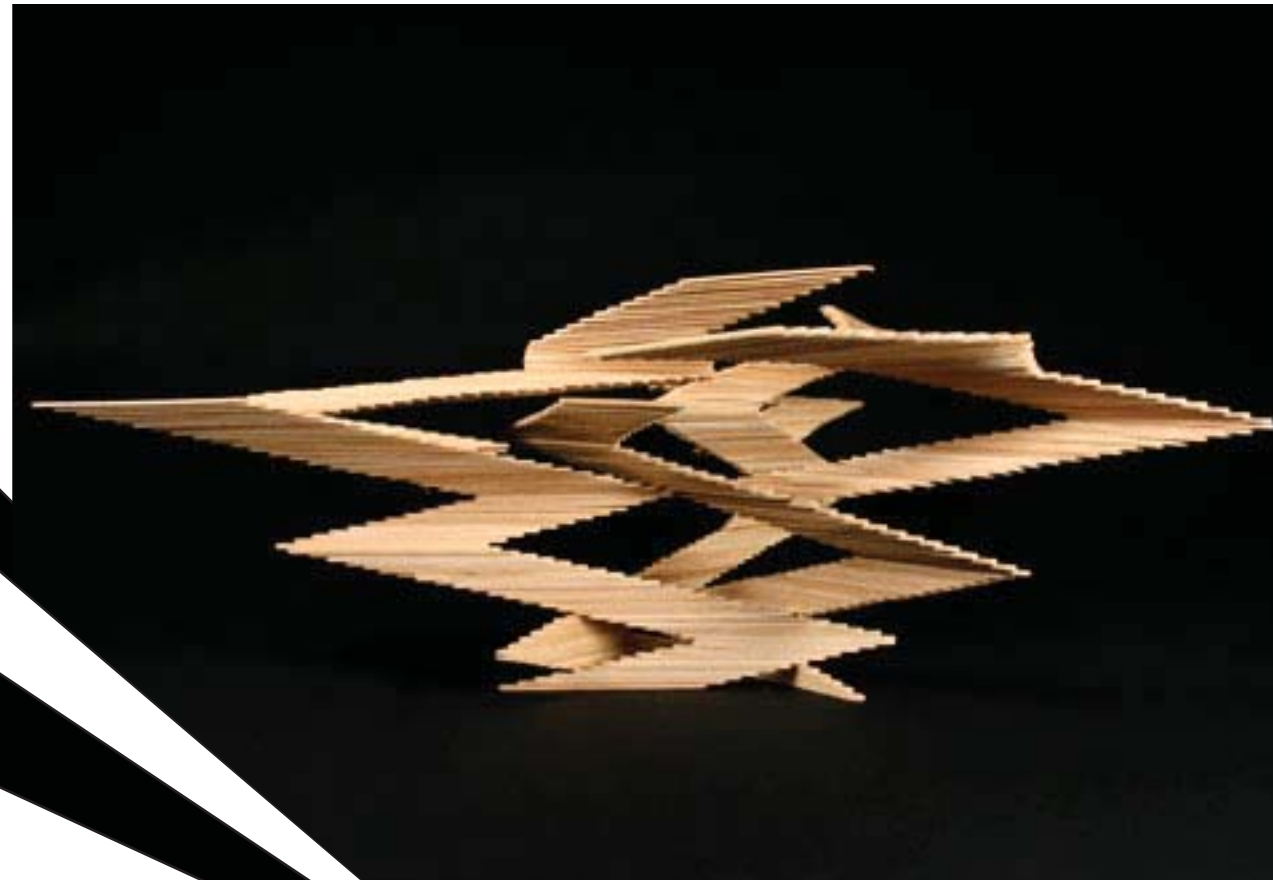
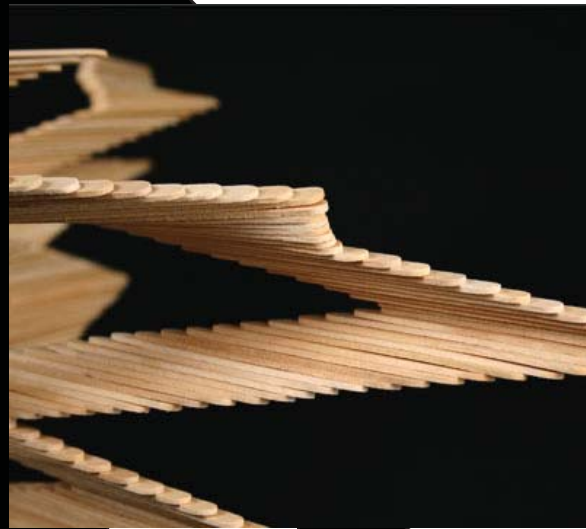
I believe I was able to accomplish this the lack of symmetry amongst the three main branches.

The shapes within are similar throughout the object creating interest in the arrangement of each piece.

The movement is created from the base and follows the lines upward and outward.

PROJECT: 4

DESIGN AND BUILD A 3D
FORM WITH LINEAR LAYERS



PROJECT: 5

Design and build a 3D form with interlinking lines and framework based on a photographic research.

Project 5: Design and build a 3D form with interlinking lines and framework based on a photographic research.

Requirements:

Designed structure should reflect the structure portrayed in the photo.

Framework needs to support tension/compression caused by interlinking lines.

Form should have interlinking lines standing out

Design can derive of geometric or organic forms

The concept I envisioned was an abstracted form of the human eye. I felt the strings served as good eyelashes showed the various lengths under tension. I did not want all of the spring to go the same way in fear of predictability and obviousness. I fell flipping the middle section upside down was a good idea and furthers the interest of the design.

PROJECT: 5

Design and build a 3D form with interlinking lines and framework based on a photographic research.

