

Architecture, Design & Materials Studio

Spring 2007, CMU, Arch #48-205, M/W/F 1:30-4:20
Class Website: www.andrew.cmu.edu/course/48-205

Coordinator: Kai Gutschow
Email: gutschow@cmu.edu
Off. Hr: M/W 12:30-1:30pm & by appt. in MM307

(7/16/07)

PROJECT 2: BUILDING STUDY (M&A)

MINDSET

The single most important source, and tool, for learning about architecture, is architecture. This is never more true, than when studying the materiality and unique construction of great works of architecture.

This graphic and modeling assignment will focus on two important issues pertaining to the making of architecture. The first is to understand how designers use structure & materials to inform space or, at times, use space to inform structure. The second aspect of this assignment is to study how details can be used to create a thematic whole to the building of which they are apart.

WORK PROCESS:

Depending on your studio instructor, each student will choose or be assigned a building to study over the course of the semester (see next page for final list).

The first step is to gather as much documentary evidence of the design of your building as possible, from the overall context, to the detail level, from as many sources as possible (internet, library, books, journals, foreign language sources, letters to the building owner, etc.). Thorough research takes time: your instructor may send you back several times to look for images or drawings of relevant parts of the building, or ask you to draft to-scale plans from photos, if accurate drawings seem unavailable. Create a large poster-sized exhibit about the "Materials & Assembly" aspects of your building so that your whole studio can learn from the building.

Once you understand the basic formal principles, materials experiences, and construction details of your building, determine how to re-represent these ideas. While a certain level of abstraction is always necessary in making a drawing or model, an attempt must be made to maintain the essence and accuracy of the building. Through sketches, axonometric drawings and a chip board model, analyze any two of the following aspects of your building:

1. Structure: Primary and Secondary
2. Structure: Structural System 1 & 2, # etc.
3. Enclosure: Skin/ envelope
4. Components: How the assembly of small parts lead to form and space
5. Material: How primary building materials lead to form and space
6. Material: How the ground or roof plane is manipulated
7. The relationship of circulation to structure
8. Loadbearing to non-loadbearing

DELIVERABLES

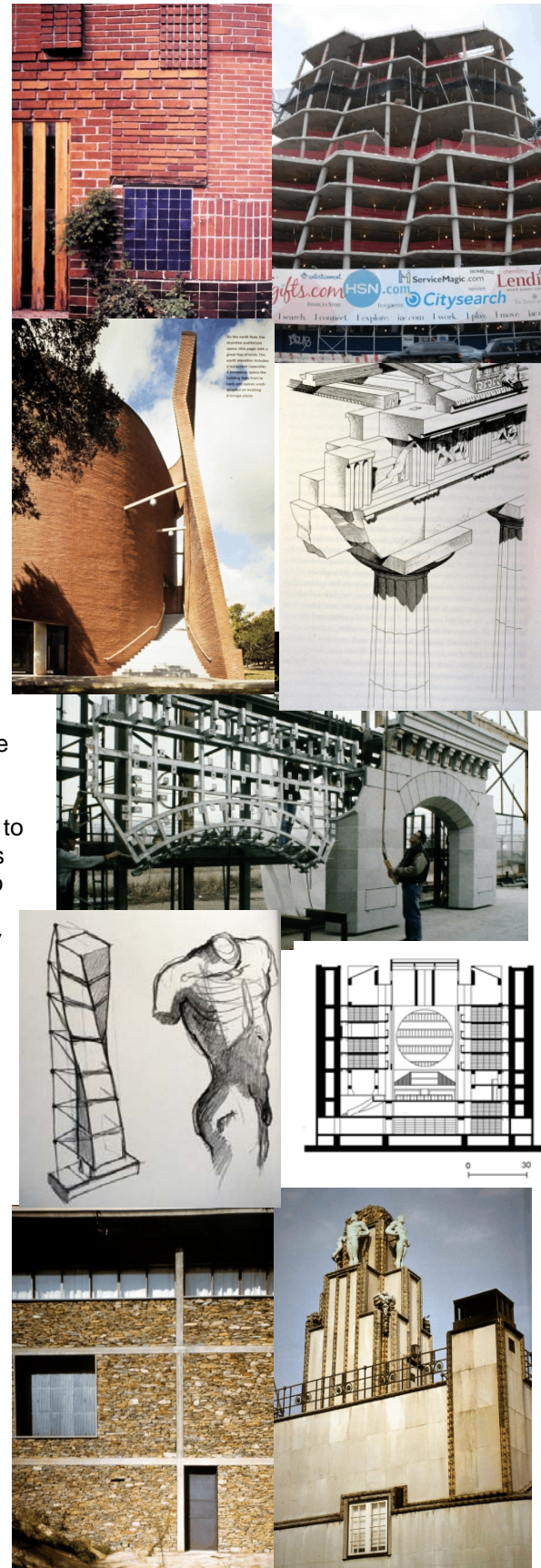
Every student must create at least one large scale analytical drawing, and one analytical model of their building, and must prepare a 2-page "template" about the analysis of your building. Individual studio instructors will add more requirements, as appropriate.

Readings:

The Architecture of the Well-Tempered Environment by Reyner Banham

"Slowness", T. Williams & B. Tsien (on course website)

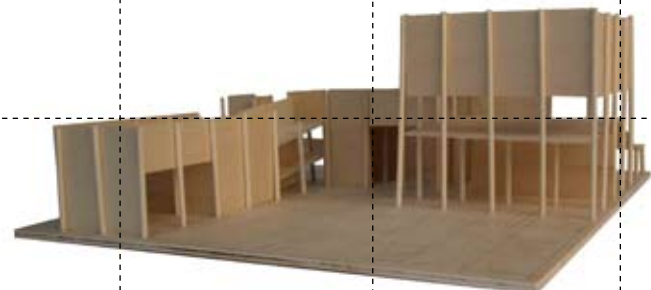
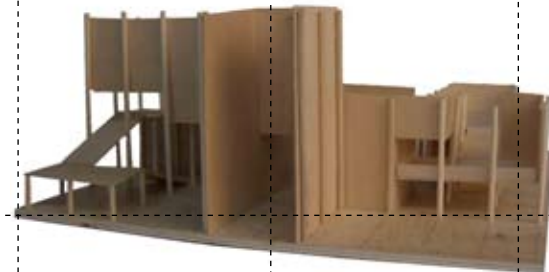
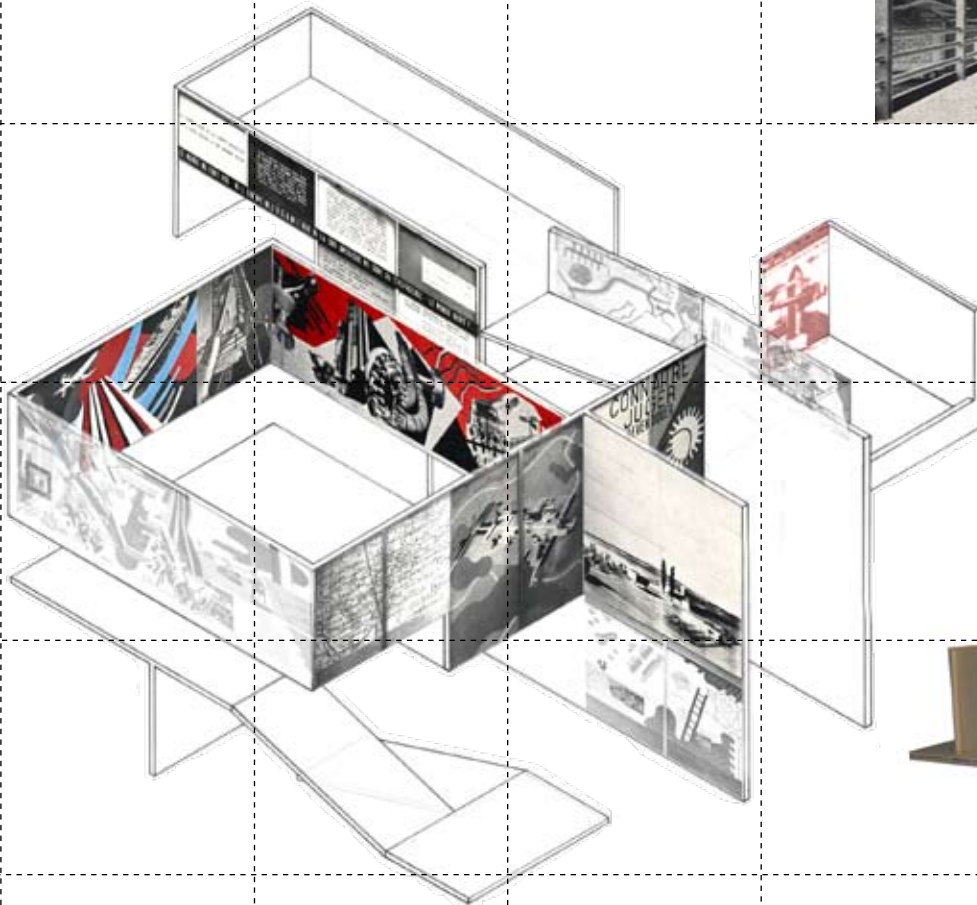
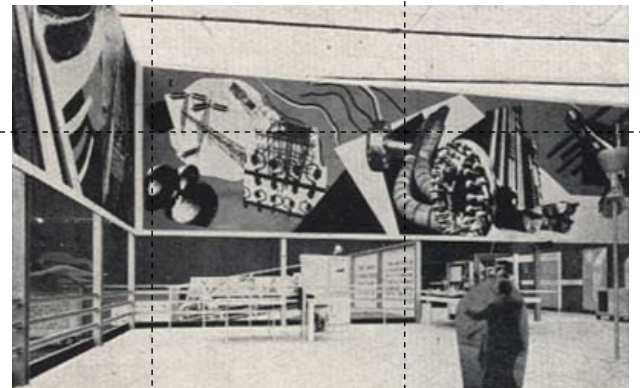
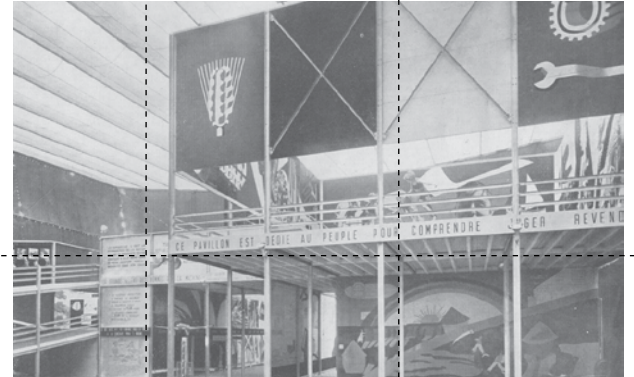
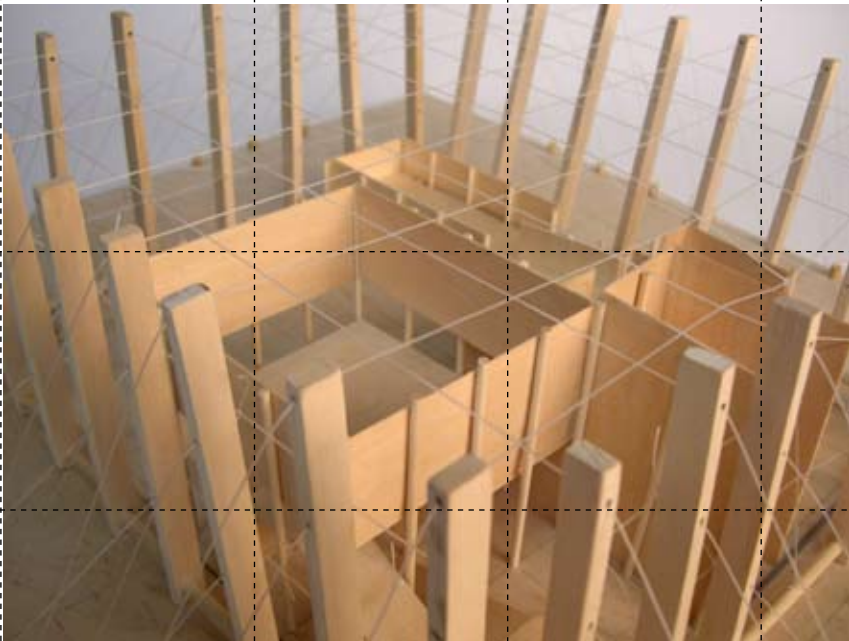
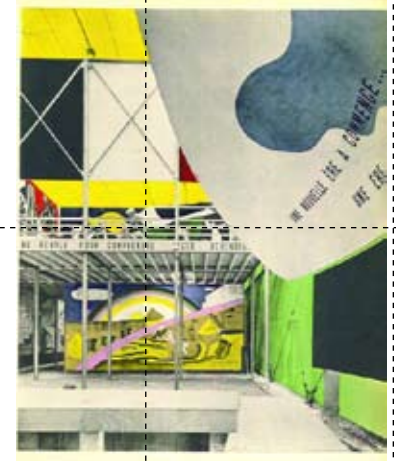
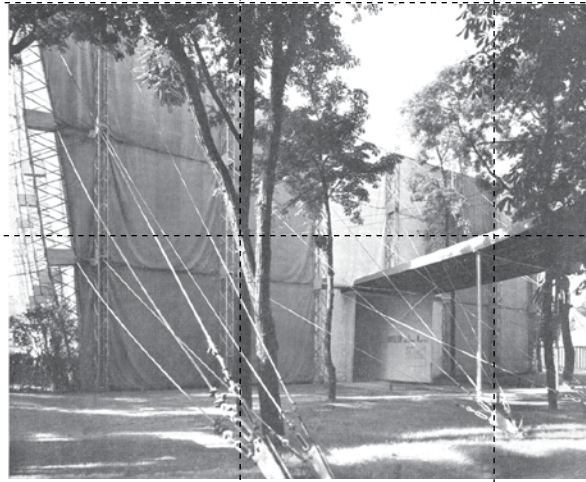
"Is Drawing a Lost Art?" Bill Bouchey

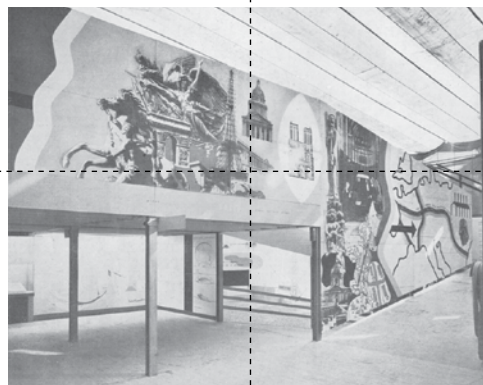
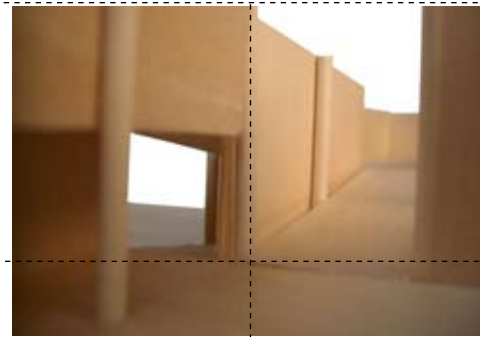
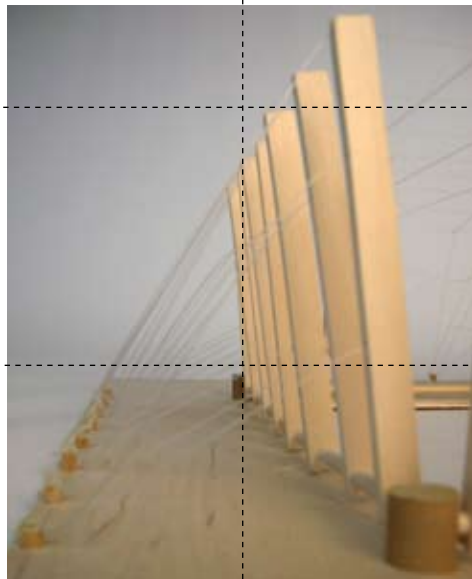
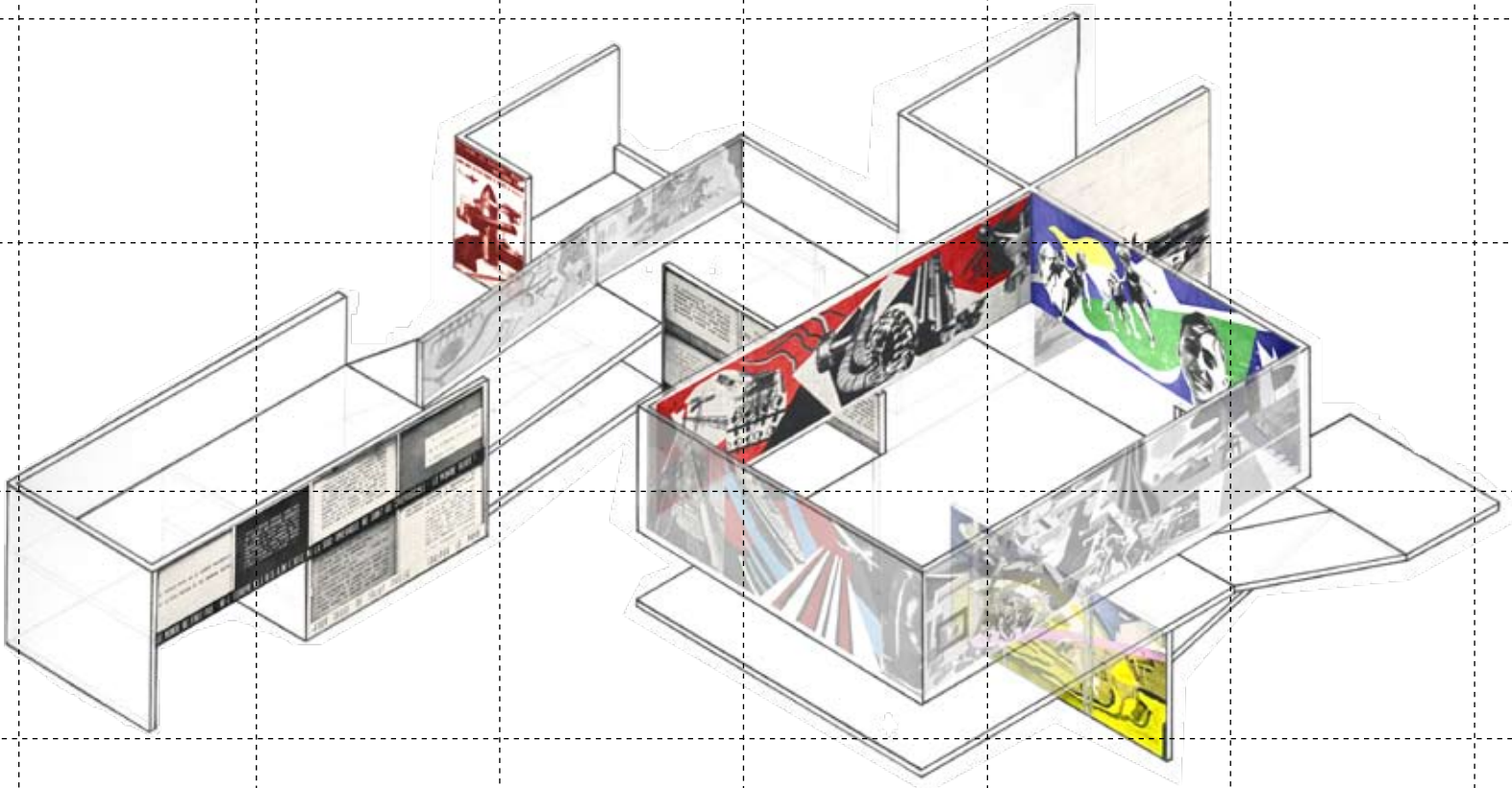


BUILDING STUDY

Pavilion des Temps Nouveau
1938 Paris, France
Le Corbusier

Alyssa Kuhns
48-205 Materials Studio / S07
Instructor: Gerard Damiani
CMU School of Architecture





STATEMENT

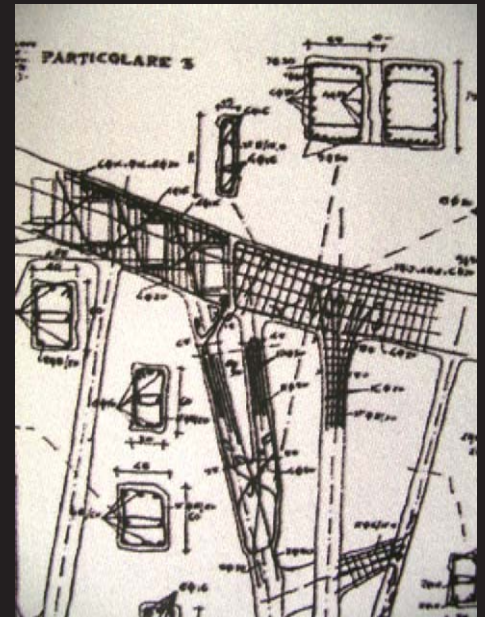
The Pavilion des Temps Nouveau, or Pavilion of New Times, was a museum for contemporary art in the 1938 Paris World Fair. It was an exhibition that held many of Corbusier's sculptures and murals. Corbusier used his artwork to express Paris' current political and economical situation. He commented on Paris' history as a city and the industrialization that brought about cultural change. The pavilion itself is made up of two independent structures. The exterior shell uses steel trusses and cables in tension to suspend a canvas tent. It is a lightweight skin that acts translucent when hit with direct sunlight. The interior is a series of panels and ramps supported by a gridded system of steel I-beams. The panels fold and wrap in order to create space. These panels house the colorful murals, and, therefore, the murals themselves become three-dimensional space. Corbusier's juxtaposition of these two structures creates an interesting dialog. This museum served as both a cultural exhibit and a means for Corbusier to express his ideas about the future. It depicted the past, present, and future of Paris in times of industrialization and change.

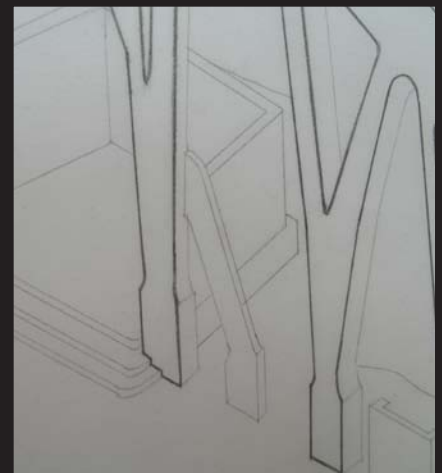
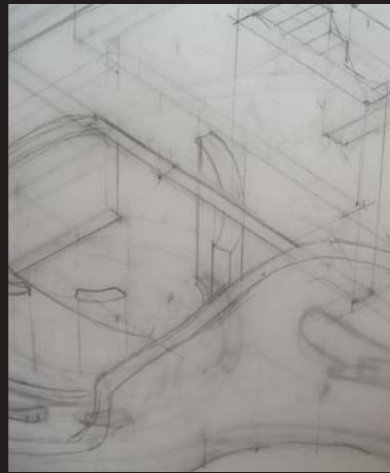
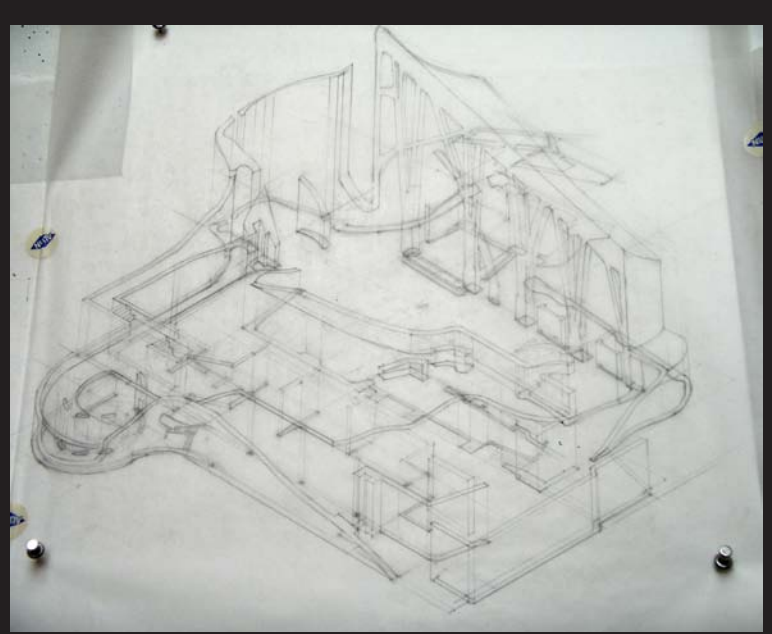
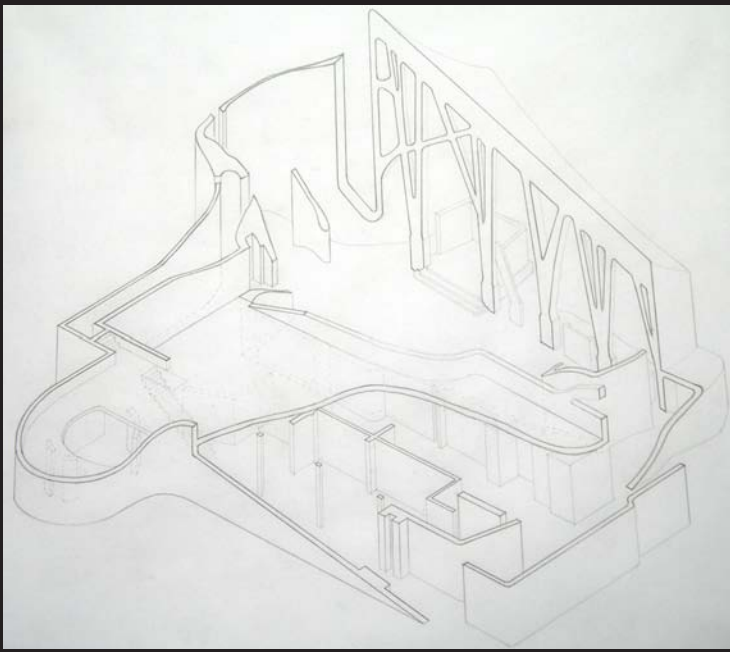
Alyssa Kuhns

BUILDING STUDY

Chiesa dell'Autostrada
Florence, Italy, 1960-1964
Giovanni Michelucci

Misha Varshavsky
48-205 Materials Studio / F'07
Instructor: Gerard Damiani
CMU School of Architecture





STATEMENT

In 1960 Giovanni Michelucci, Italy's most nationally esteemed architect, was commissioned to design a church off the Autostrada del Sole freeway in honor of the 100 workmen who died during its construction. The site constraints included the already laid foundations of a previous controversial design from which Michelucci raised his revision. The primary materials of concrete, masonry, and copper were chosen to utilize the artisan skills and building traditions of the area. His design carries metaphors of pilgrimage tree and tent that manifest themselves in the sitecast reinforced concrete columns and roof. The irregular shapes wrap in a vortex to reverse support and its covering; so too the contained space and the container. Four different engineers cycled through the work with Michelucci, but the true heart behind it lay in his bond with the craftsmen. Though in his 70s, he visited the site every day for three years, redesigning on the fly in response to the various improvised material tests to make the gestures possible. Everywhere the conscientious hand of the maker is made visible.

For my drawing documentation, I focused on piecing apart the sequence of spaces while highlighting the building's unique character of form. In model, I reinterpreted the solid concrete mass as transparent resin to reveal the ingenuity of its making and in wood directly express the masonry wall's assembly.

Misha Varshavsky

