Architecture Studio: 2nd Year F'07

Fall 2007, CMU, Arch #48-200, M/W/F 1:30-4:20
Class Website: www.andrew.cmu.edu/course/48-200

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Off. Hr: M/W 12:30-1:30pm & by appt. in MM307

(10/15/07)

PROJ. 4 – PROGRAMMATIC MASSING MODELS - Assignment #1

Mindset: The basic intent of this assignment is to research an existing museum, and then "reverse engineer" and decipher the original, abstract, blocky, programmatic massing model that generated the final museum. **DUE: Mon. Oct. 15, 2007.**   The work process:

1) **FIND** as much visual and text-based INFORMATION on the museum building that you have chosen (or been assigned) as you can in a brief period of time. You will need:
> -- accurate floor plans to be enlarged -- sections to be enlarged -- orthographic 3D views such as axos -- diagrams or other visual devices used by the architect to explain the building's design & intent -- photos, perspectives, etc. -- statements by the architects and/or critics.

All of the buildings in the list I circulated are by very well-known architects. You should be able to find information in the following places:
> -- monographs on your museums (only few museums have this) -- monographs on the architects -- books on museums -- more general books such as "Dutch Architecture" or "The New Generation in Germany" -- architecture magazines in ANY language (use Avery Index to find citations) -- the world-wide-web (useful for photos, but usually not for technical plans; remember to check "Google Images" but also websites that seem not to have much visual info)

You should be prepared that many books will be checked out. Ask around the studio for who is doing buildings by the same architects. You may need to rely exclusively on magazines if everything is checked out. If you have trouble finding enough info, email me and your instructor immediately.

2) **ANALYZE & INVENTORY** the plans, sections and other information you found. Locate and IDENTIFY the "primary programmatic components" of your museum design, as conceived by the architect. Work to find "categories" or "types" of programmatic elements, such as the following main categories:
> 1) all the main galleries, as well as specialty or subsidiary galleries (e.g dark vs light galleries) in a separate grouping
> 2) all the major non-gallery, public spaces such as auditoriums, cafes, bookstore
> 3) the major entry and circulation spaces, including lobby, main corridors, main stairs/escalators, roof-top terraces, elevators
> 4) the major agglomerations of "non-public" spaces such as staff offices, curatorial spaces, study spaces, art storage spaces, meeting rooms, etc;
> 5) where appropriate, also locate the main structural & mechanical components or spaces of your building, especially if they are clearly visible in your plans and their mass (even just thick posts) seem to come up in diagrams or as an organizing principle of your building.
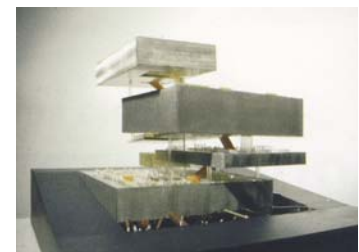
The intent is to find all the "major" programmatic components, though not necessarily catalogue EVERY space. Your analysis will still LEAVE OUT many of the spaces in your museum such as public bathrooms, coat rooms, as well as a host of subsidiary functional components. This will lead to a certain POROSITY in your model.

Some reference sources will have more information on this than others, but in all cases YOU will need to INTERPRET the technical information you find. This analysis will require a good bit of guess-work, intuition, and creative thinking.

3) **ABSTRACT, REDUCE & ORGANIZE** the complexity and number of all the pieces and components down to the essential "blocky" components. GROUP them into the major categories listed above. Possibly subdivide the groups to indicate major differences of program, if it leads to a much clearer understanding.

Identify the ADJACENCIES intended by the architect, what pieces are located next to, or on top of which others. Understand WHY the architect arranged the pieces as s/he did, both in plan, and in section, as well as in SEQUENCE. What is the procession of major spaces experienced by the visitor? What are the major LIGHT conditions created by locating the space near an exterior wall or on top of the building? Are there separate major circulation systems for staff or for art works from loading docks into the galleries?

You should look for CONFIGURATION, but NOT necessarily the SHAPES or FORMS used by the architect. Work to separate the "components" from the "envelopes." Reducing the complexity will necessarily leave out much of the major design and experiential aspects of the building, even such things as whether the building seems more "fluid," "curvy," "choppy," or "rectangular."

ABSTRACT the building into a set of distinct "BLOCKY" component chunks. You will reach a greater level of abstraction, and likely a greater CLARITY of understanding and communication, and make your model construction EASIER and faster, if you reduce everything to a RECTANGULAR SOLID. Ideally, every piece should be a rectangular building block, each slightly different in dimension, proportion, and orientation only.

4) **ENLARGE** the technical information (plans, etc.) you found so that the massing model is approx. 18" in the longest direction (the "piles" of blocks that result should be of similar size for all buildings, no matter what the actual size of your building is).

5) **BUILD** a SOLID MASSING MODEL of the major programmatic spaces of your museum. Show the main PROGRAM BLOCKS, the void spaces and POROSITY, and make clear all the important ADJACENCIES.

The model can be any scale you want, though it must be "TO SCALE", which means that basic proportional and configurational aspects of the actual building should be reflected in your model. (e.g. a tall and skinny space should read that way in the model, a space that is on top of another one, should read that way).

Find a method to IDENTIFY and DIFFERENTIATE the different components and groups of spaces. Consider using color, or variations in a material, or labels to make it clear which pieces correspond to which program elements (e.g. yellow blocks = galleries).

You must use SOLID modeling materials. Cut the component programmatic blocks out of solid wood (e.g. old 2x4ds) or insulating foam. Or consider stacking plywood or thick cardboard to create solid chunks that can be piled together. Wood (or plywood) models will likely be the most professional looking, so you'll need access to the bandsaw, etc. You are prohibited from using thin materials to create hollow volumes.

Think carefully about how to balance abstraction, the need for efficiency and speed of construction, with the need for clear communication.   Avoid using more than one major type of material: make your model all wood, or all plywood, or all styrofoam, etc. When creating your blocks, us the "grain" or "direction" of the wood, plywood, or stacked cardboard to help orient your spaces, giving qualities to your massing model.

The wood shop will offer regular (but limited) hours this weekend. Please go EARLY to secure the necessary materials and tools.

6) **CREATE A DRAWING** that includes information about the QUALITATIVE aspects and LIGHT CONDITIONS in the main spaces, especially the entry lobby and gallery spaces. This is not just copying photographs, but ABSTRACTING the experiential essence. Does the space feel tall and skinny? Is it bathed in light from the side? Does it feel cold and intimidating? Consider using diagrams with words, or creating perspectives, especially with SOFT pencils or conte to convey information about LIGHT.

De Young Museum, Herzog & De Meuron, San Francisco