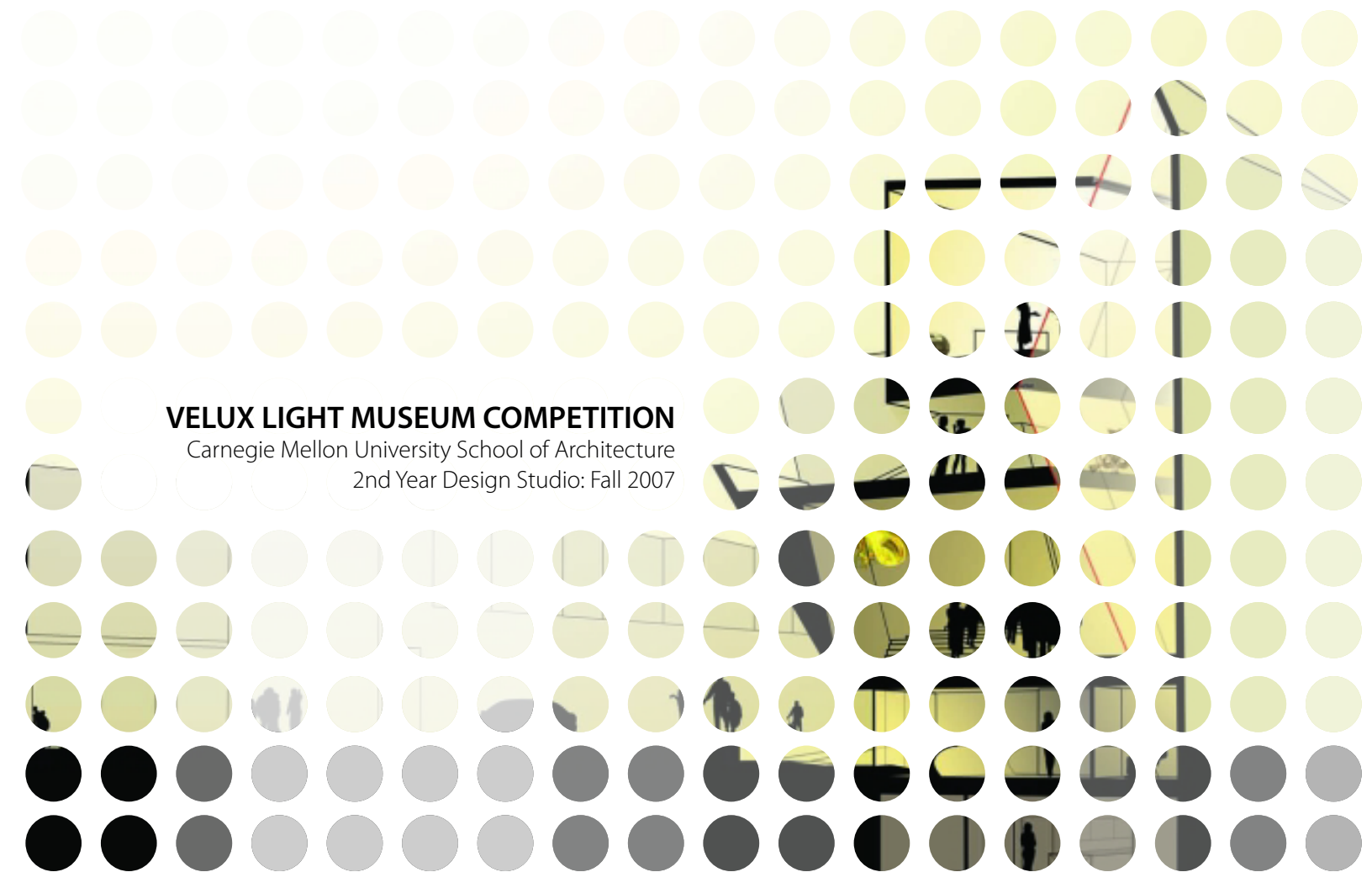

VELUX LIGHT MUSEUM COMPETITION

Carnegie Mellon University School of Architecture

2nd Year Design Studio: Fall 2007

SPONSORS

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VELUX LIGHT MUSEUM COMPETITION

2nd Year Design Studio : Fall 2007

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MINDSET

In this project, students moved from a relatively quick design of a small, simple park structure, to an extended exploration of a larger, more complex cultural program dedicated to observation and the arts in a tight urban setting.

In addition to the general studio charge of creating rich and memorable spatial experiences, there were three primary agendas in this project:

1) a focus on DAYLIGHT (or its absence), how to amplify and control light, and the effects it can have on observation and experience, particularly in a museum

2) a focus on the role of PROGRAM and the process of determining the hierarchy, adjacency, and quality of each space as an integral part of the design & inspiration process

3) a focus on the URBAN setting, the implications of context, and understanding the influences of architecture from and onto the surrounding city context.

PROCESS

The design process began with research into existing museums, into the contingencies of the urban site, and the construction of programmatic massing models in order to shape the optimal adjacencies, opportunities for enhanced light conditions, open spaces, and exciting museum experiences. Further research investigated the use of light, ideas, and space in the work of several important modern artists. After being introduced to very detailed program requirements, students were expected to work methodically towards satisfying the primary agendas of the project while insuring memorable observations and spatial and light experiences.

It was crucial for students to develop a rich and effective design process that would allow them to understand and synthesize solutions for a wide array of complex issues in a systematic, gradual, and progressive way, making and sticking to important decisions along the way.

PROJECT BRIEF

Based on the success of the Carnegie Museum's 2001 "Light!" exhibit, and the rich tradition and continued importance of "light" in modern and contemporary art, the museum had decided to expand its Oakland building complex with a "Light Museum," an annex across Forbes Avenue that would be purpose-built to explore light in art and architecture. The students' charge was to design a small but innovative exhibition and study center for a growing collection of modern and contemporary art that relates to "light" in a broad variety of ways. The building was to enrich the visitor's and observer's understanding of light as central to how we see and understand all art, architecture, and the world around us.

The increasing use of digital and electronic technologies in the conception, design, realization, and experience of architecture today, combined with the mandate that architects marshal resources and energy-use in an increasingly responsible and sustainable way, makes the savvy use of light, and especially daylight in architecture, all the more urgent.

The annex required three primary programmatic elements with support spaces:

1) a series of linked exhibition spaces, each with specific light requirements, and some minimal support and staging areas
2) a study and art storage center that will allow curators and a select public to study a greater array of art works more closely
3) an entry space that facilitates access to these two spaces, but also conceptually and physically connects the "Light Museum" to the main museum, the street, and neighborhood.

The annex was to be designed as part of a larger and ongoing effort to improve the Oakland Cultural Corridor, and continue to reinforce the importance of culture and the arts for Pittsburgh more generally. It was to be designed as an integral part of the street and neighborhood, and Pittsburgh region, to engage the urban context and the existing CMoA building in a manner that ties in closely to the concept and program.

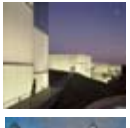
PROJECT STATEMENT

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

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

(11/6/07)

PROJECT 4 – LIGHT MUSEUM ANNEX



Mindset / Objectives / Agendas: In Project 4 we will move from the relatively quick design of a small, simple park structure, to an extended exploration of a larger, more complex cultural program dedicated to observation and the arts in a tight urban setting.

In addition to our general studio charge of creating rich and memorable spatial experiences, there will be three primary agendas in this project:

1) a focus on DAYLIGHT (or its absence), how to amplify and control light, and the effects it can have on observation and experience, particularly in a museum;

2) a focus on the role of PROGRAM and the process of determining the hierarchy, adjacency, and quality of each space as an integral part of the design & inspiration process;

3) a focus on the URBAN setting, the implications of context, and understanding the influences of architecture from and onto the surrounding city context.

It will be crucial to develop a rich and effective design process that will allow you to understand and synthesize solutions for a wide array of complex issues in a systematic, gradual, and progressive way, making and sticking to important decisions along the way. With such a complex program, you can't wait until the end to bring all the ideas together.

Project Brief: Based on the success of the Carnegie Museum's 2001 "Light!" exhibit, and the rich tradition and continued importance of "light" in modern and contemporary art, the museum has decided to expand its Oakland building complex with a "Light Museum," an annex across Forbes Ave. that will be purpose-built to explore light in art and architecture.

Your charge is to design a small but innovative exhibition and study center for a growing collection of modern and contemporary art that relates to "light" in a broad variety of ways. The building must enrich the visitor's and observer's understanding of light as central to how we see and understand all art, architecture, and the world around us.

The increasing use of digital and electronic technologies in the conception, design, realization, and experience of architecture today, combined with the mandate that architects marshal resources and energy-use in an increasingly responsible and sustainable way, makes the savvy use of light, and especially daylight in architecture, all the more urgent.

To encourage creative and in-depth explorations of daylight by young architects, the Velux Corp. will sponsor a small competition in our studio related to the theme of "Light in Architecture." With the help of personal research, discussions with your studio, as well as a series of studio lectures, you are expected to develop a sophisticated and detailed proposal about light in a "Light Museum" that will judged by invited critics and publicized by Velux.

The annex will require three primary programmatic elements with support spaces: 1) a series of linked exhibition spaces, each with specific light requirements, and some minimal support and staging areas; 2) a study and art storage center that will allow curators and a select public to study a greater array of art works more closely; 3) an entry space that facilitates access to these two spaces, but also conceptually and physically connects the "Light Museum" to the main museum, the street, and neighborhood. The annex will have access to all of the of the existing CMoA resources, support, and administrative spaces, but should serve as a relatively self-sustaining exhibit and work space. More detailed program requirements will be developed and released in the course of the project.

The annex should be created as part of larger and ongoing effort to improve the Oakland Cultural Corridor, and continue to reinforce the importance of culture and the arts for Pittsburgh more generally. It must thus strive to become an integral part of the street, neighborhood, and Pittsburgh region, to engage the urban context and the existing CMoA building in a manner that ties in closely to the concept and program.

Process: The design process will begin with research into existing museums, into the contingencies of the urban site, and the construction of programmatic massing models in order to shape the optimal adjacencies, opportunities for enhanced light conditions, open spaces, and exciting museum experiences. Further research will investigate the use of light, ideas, and space in the work of several important modern artists. After introducing very detailed program requirements, students will be expected to work methodically towards satisfying the primary agendas of the project while insuring memorable observations and spatial and light experiences.

Requirements & Due Date: All projects will be **DUE Sun. Dec. 2, 10:00pm**. Computer printouts will be due SEVERAL DAYS EARLIER! The overall presentation should be carefully composed of an integrated set of "technical" and "experiential" drawings, as well as computer & physical models, likely at 1/4" scale. All presentations will be on 44"x88" panels. A list of final presentation requirements will be distributed after the mid-review.

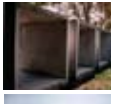
DESIGN ASSIGNMENTS

Architecture Studio: 2nd Year Fall
Fall 2007, CMU, Arch #48-200, M/W/F 1:30-4:20
Class Website: www.andrew.cmu.edu/course/48-200

Coordinator: Kai Gutschow
Email: gutschow@cmu.edu
Off. Hr: M/F 12:00-1:00pm & by appt. in MM202

(10/24/07)

PROJ. 4 – Artist Research & Presentation



Mindset: In this research project all students will be assigned to a group to do research on two (un-related) modern artists, and then present to the entire studio the significance of each artist, and how their concepts about light, space, form, perception, and experience might be of interest in the design of a "Light Museum." The intent it to uncover a range of ideas that reveal overlaps and common possible strategies between art and architecture.

This assignment is NOT about copying or using their forms or ideas, or about exhibiting their work in your museum, but rather about understanding the fundamental ideas and forms behind their art, asking about architectural equivalents or what might change when the ideas are translated into architectural design. Although your team will only study 2 artists, eventually, all students should know all artists and their associated ideas & works.

Artists & Student Groups

1.	Larry Bell & Joseph Kosuth	Covington, Farrell, Hong, Kriegler, Kwan, Legrady, Marshman, Mingle, Noh, Sroub
2.	Olafur Eliasson & Gordon Matta-Clark	Arocena, Branick, Bridgeman, Garrett, Kokoska, Korah, Smith (Eric), Smith (Randi), Tinari, Wang (Jerry)
3.	Dan Flavin & Bruce Naumann	Abraham, Agren, Burton, Duray, Huber, Kim, Rosenberry, Soh, Tam, Wang
4.	Dan Graham & Robert Morris	Doyle, Ichikawa, Mannion, Martini, Myung, Park, Schrantz, Wong (Eddie), Wong (Kevin), Yoon
5.	Robert Irwin & Donald Judd	Amorosa, Branch, Carter, Day, Hur, Lehrer, Lightfoot, Miciunas, Podraza, Viray
6.	Erwin Redl & Rachel Whiteread	Adams, Aviles, Chou, Gaur, Haskell, Himes, Hudock, Kong, Kuwahara, Uribe

Powerpoint Presentation: Collaborate with the other 9 students in your group to create an 8-10 minute PC-based Powerpoint presentation on the most significant aspects of your assigned artists to the entire studio on **Wed. Oct. 24** . Keep your presentation SHORT and TO THE POINT! Avoid biographical or too much factual info (place in handout instead)

Focus on the intellectual, theoretical, spatial and light-based concepts addressed by each of the two artists assigned to your group. What aspects or works by each artist might be of greatest interest to someone designing a "Light Museum." What relationship does the artist and their artwork have to architecture? Space? Light? Perception? Experience? Try to answer "WHY" the artists' work looks, and is experienced, the way it is. What are the most important pieces by the artist? Why?

In order to be more efficient about the research, you may divide the group to undertake various parts or the research, but the every member of the group should become well-versed in the ideas of BOTH assigned artists.

All presentations should be gathered, uploaded, and ready to present on a SINGLE PC at 1:30 on Wed. Oct.24. Please TEST all presentations BEFORE 1:30. In order to maximize time & efficiency, each group should designate someone to be sure the group's presentation is loaded and ready to present in the order listed above.

Informative Handout: Design an informative, double-sided, 8.5"x11" handout to summarize the research results (text + images) on each artist assigned to your group, according to the research criteria outlined above. Each group will thus produce two double-sided handouts. Consider adding more biographical information, and to discuss the artistic context, including associated artists, groups, style, era, geography, etc. Also include on each:

1) bibliography of most important theoretical writing BY the artist;
2) bibliography for FIVE best sources ABOUT your artist,
3) names of all 10 students in group.

** Prepare a pdf to be uploaded to Blackboard, and bring 6 copies of both handouts to class on **Fri. Oct. 26**. Be sure your pdf is no bigger then 1-2MB. "Flatten" your image, and "print to pdf", as Michelle advised.

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

Coordinator: Kai Gutschow
Email: gutschow@cmu.edu
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.

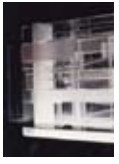
3) **ABSTRACT, REDUCE & ORGANIZE** the complexity and number of all the pieces and components down to the essential "blocky" components. GROUP them into the major categories listed above. Possibly subdivide the groups to indicate major differences of program, if it leads to a much clearer understanding.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

Cont'd...

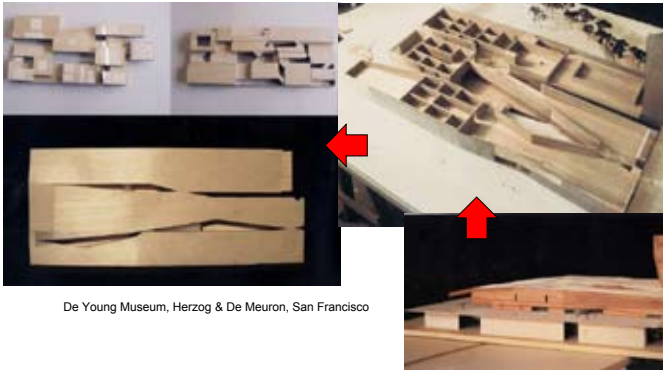
ABSTRACT the building into a set of distinct "BLOCKY" component chunks. You will reach a greater level of abstraction, and likely a greater CLARITY of understanding and communication, and make your model construction EASIER and faster, if you reduce everything to a RECTANGULAR SOLID. Ideally, every piece 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

DESIGN ASSIGNMENTS

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

Coordinator: Kai Gutschow
Email: gutschow@cmu.edu
Off. Hr: M/W 12:30-1:30pm & by appt. in MM307
(10/15/07)

PROJ. 4 – PROGRAMMATIC MASSING MODELS - Assignment #2

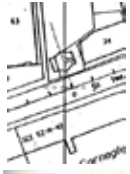
Mindset: The basic intent of this assignment is the reverse of the last one, working to create a first massing model for your "Light Museum" in the context of the Forbes Ave. site, ideas about light, and experiences for a museum visitor, using abstract, blocky program masses. **DUE: Wed. Oct. 17, 2007**. The suggested work process:

1) **READ** carefully the detailed program for your "Light Museum" on the back of this page. Note the larger categories (galleries, study center, entry, support). Note the number of detailed spaces described within each category. Note the different ways that each room has been defined in terms of size (some by square footage, some by number of people, some by furnishings), and the light conditions for each space. Consider how this museum compares to or differs from the museum you studied in Assignment #1.

2) **TRANSLATE & SKETCH** as you read the program, take VISUAL NOTES of ideas for each space that comes to your mind in terms of LIGHT conditions, LOCATION in relation to the street, roof, and other spaces, the SIZE in plan and in section, and perhaps the kind of ART you would like to see exhibited in each space.

Use some sort of system to chart relative sizes of each space. The simplest one is drawing a series of separate boxes with correct square-footages on paper or on the computer. Another way would be to start with a series of "volume blocks" (perhaps 100sf. X 12ft high each), and begin to group them, then pile them according to your ideas on spatial sequence, etc. Are there other ways to do this even more creatively? Try to include ideas about light (direction, amount), adjacency (what is next to what), and general spatial quality (long and skinny, tall, dark, welcoming, etc.) in your first sketches.

As you create each program space, keep coordinating it with the overall intent. How big is your whole museum footprint (2500sf max)? What is the overall sq. ft. of programmed space (ca. 7000sf + outdoor spaces)? How high is your building (3+ stories)? How "porous" (20%)?



3) **ABSTRACT & ORGANIZE** the great complexity of the program, and the great number of separate rooms and spaces, into a smaller set of "blocky" masses that will begin to define your "Light Museum." Avoid merely duplicating the program groups: start to include your own more specific ideas for a Light Museum on Forbes Avenue. Should each gallery be its own "block? Why? How will each space be proportioned in your first sketch? Why?

As you abstract the groups of spaces, you should confirm a HIERARCHY (which is/are the most important? which is/are the biggest?), as well as SEQUENCE (which comes first, how does it lead to the next, where does it end, what is the "return trip" for the visitor), and the LIGHT conditions required and allowed in each space. Stay ABSTRACT.

Your process of reducing the complexity, abstracting the program, and organizing the pieces should eventually translate into a DIAGRAM of some of your spatial and programmatic thinking--hopefully more than just a bubble diagram.

4) **BUILD** a 3D programmatic massing model from your sketches that includes adequate "void" or "open" space to fit other subsidiary pieces of your program: build in a certain "POROSITY." As you "pile" the blocks, choreograph the kind of spatial and light experiences you want visitors to have. Remember: this is NOT about the SHAPE or FORMS.

This will require several attempts, several "drafts." You should devise a flexible 3D block system that you can rearrange several times. Consider working with small "chunks" of space (e.g. 100sf x 6 ft – using a 6ft height block may help relate it to (tall) human scale, and when doubled to 12ft will yield a good floor-to-floor height for support and study spaces, or when tripled to 18ft., starts to define a minimum height for a decent gallery space).

Work quickly and flexibly at first. The first 3D models can be done as sketches, or on the computer, but must at some point be translated into a physical model. Work without permanent glue at first (perhaps double-stick tape at first) so you can rearrange easily. Document or keep several of these "drafts," so you can remember your own creative process. You will be expected to create several updated versions of this massing model over the next few weeks, always revising existing ideas, beginning to incorporate more inspirations and constraints and produce a richer, more sophisticated set of spaces and experiences.

The model should follow the same guidelines as in Assignment #1, except that you should build it on an expanded version of the SITE PLAN. It must be solid, ideally of rectangular blocks, except for dimension, proportion, and orientation, and each of the main spaces should be identified through color, material (orientation of grain), or with words. .

5) **DRAW** a series of vignettes to describe the QUALITIES of each of the main programmatic spaces you have identified, much like in Assignment #1.

Program:
Your building MUST contain ALL of the following programmatic elements:

1) **GALLERIES**: A series of four flexible exhibition spaces for rotating installations dealing with light in art, architecture, and the world around us, according to the following criteria:

a) a 1000sf gallery that receives NO NATURAL LIGHT, and can be completely closed and dark, to be used for showing very sensitive drawings, or appropriate light art (e.g. neon), or video installations. The room must have an entry sequence that prevents all light from entering the space, using either two sets of doors, or a snaked entry space.

b) a 1000sf gallery that receives only INDIRECT LIGHT from ABOVE, some of which must be natural daylight that filters through a plenum space, or clerestories, screens, filters, or baffles.

c) a 1000sf gallery which has EXTENSIVE DAYLIGHT, and has direct access to exterior walls from at least two directions, through separate surfaces of the room (ceiling and wall, or two separate walls).

These three gallery spaces (a-c) must be a fully enclosed rooms, secure, and conditioned (heated, cooled, and humidity controlled) to exacting museum standards. The three indoor exhibit spaces should be flexible to allow a great variety of installation types, including plenty of tall wall surfaces for wall-mounted objects, and open space to place partitions, sculpture, or display cases.

In addition, these spaces should be clearly linked horizontally, vertically, or diagonally into a carefully choreographed sequence for the museum visitor. Where the above-mentioned light-requirements allow, they can be open to each other, or separated by a moveable partition, door, or short circulation space such as corridor, stair, or elevator. Although you have access to the loading dock and storage facilities of the main museum, you should consider how large artworks will enter your spaces. Will a large sculpture fit through your front door? If not, how else might it get in?

d) an OUTDOOR exhibit space, exposed to (some of) the elements, either on the roof or large balcony, or an open space partially nested in the "porous" building volume, but still outside. It must be secure, accessible only through the museum entry, and thus likely not at street level on our tight site. The outdoor space can be any size, though it should be large enough to hold a reception for 25 people alongside some art pieces.

2) **STUDY CENTER**: A series of four linked rooms that together make up a museum-quality study center for art and artifacts related to light in art, architecture, and the world around us, according to the following criteria:

a) a "reading room" for viewing art that includes: a) two large reading tables (each at least 5ft x 10ft) with accompanying chairs; a) a large vertical wall surface for hanging a painting; c) two computer stations. The room must receive indirect daylight, though the computer terminals must be screened from glare.

b) a room with no natural light to hold and access 6 large plan-file drawer cabinets, each 60" wide x 48" deep and 48" tall. Be sure to allow enough room to fully open the drawers and stand in front of them.

c) an art and artifact storage space with no natural light, to include 25 linear feet of shelving units, and appropriate racks to hold at least 25 large (at least 5ft x8ft) paintings in frames.

d) a curatorial office for at least two museum staff and requisite office desks and equipment.

3) **ENTRY HALL**: Access to the museum should be choreographed through a small but memorable museum entry hall, a node that connects the neighborhood and other Carnegie Museums to your gallery spaces, with the following criteria:

a) it should be no more than 500sf., a small, efficient space that leads to generous galleries.

b) include a ticket and information counter.

c) include open floor space for a group of 25 people (such as a group of school kids) to stand without restricting the accessibility of the counter, entry, or galleries.

d) clear entries to galleries and to all requisite support and circulation spaces (elevators, etc.)

e) the entry space must be primarily daylit, and must be able to be naturally ventilated or partially exposed to the outdoors in a secure way on nice days. Because of the daylight and natural ventilation amenities of this space, access to the galleries must be through doors or an airlock system to prevent humid air and harmful light from reaching the art works.

Koolhaas, Ca' Musica Program

4) **SUPPORT SPACES**: Since the "Light Museum" has access to specialized support spaces in the main museum across the street, you will be able to keep these to a minimum. Nonetheless, you must include the following in your building:

a) a coat-room directly adjacent to the entry space with 10 linear feet of coat and bag racks and a desk for the entry hall staff.

b) at least one women's, and one men's handicap accessible toilet;

c) ADA accessible circulation space to ALL the main rooms and spaces in the museum, with vertical circulation either through an elevator, or ADA-approved ramps.[1]

d) mechanical spaces (a total of approx 400sf).

[1] "The Americans with Disabilities Act (ADA) guidelines recommend a slope no steeper than 1:12 - 1 ft. change in elevation for every 12 ft. of length. This means you need 1 ft. of run for every inch of rise. There's nothing to say that you can't make a ramp longer, with a more gradual slope. The degree of slope depends on the user's physical abilities. For example, if a person has a motorized wheelchair, the 1:12 slope might be fine. But if the user relies on his or her own power to wheel up or down a ramp or walk up with crutches or a walker, a more gradual slope is easier to negotiate, such as a 1:16 or 1:20 slope."

Ordinarily, a museum like this would be subject to many more code regulations, including having a fire stair or escape that ensures two means of egress from all primary floors of the museum. Because this is your first complex program, you are encouraged (but not required) to investigate and include all such architectural requirements in your building.

Architecture Studio: 2nd Year Fall

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

Coordinator: Kai Gutschow
Email: gutschow@cmu.edu
Off. Hr: M/W 12:30-1:30pm & by appt. in MM202

(11/17/07)

PROJ. 4 PRESENTATION GUIDELINES & REQUIREMENTS, F'07

DUE DATE: Sun. Dec. 2, 10:00pm

Below are MINIMUM REQUIREMENTS for all studios. All work should be thought-fully crafted using effective techniques to reinforce the content and communicate the meaning, materiality, and experience of your design without needing much verbal introduction.

0) PRESENTATION SIZE

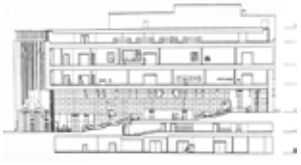
-- Carefully compose all your work into an OVERALL COMPOSITION that FILLS the ENTIRE 4'x8' vertical presentation panel. You MUST fill the entire panel.
-- No matter what the medium, work on large sheets of paper (24"x24" minimum) to FILL the board, combining multiple drawings on each (scan and compile, or paste sheets together).
-- Work to satisfy the requirements below with a minimum number of drawings, combining information into a few powerful, effective, and communicative drawings. Avoid repetition.
-- Use any appropriate medium approved by your instructor (B+W strongly recommended for most drawings). Drawings must be CLEAR, BOLD, read well from 20ft, reproduce well, and distinguish between line weights!
-- Carefully consider the issue of HIERARCHY: highlight one or two drawings on which you spent the most time, make them BIGGER than the rest, and center them on the panel.
-- Avoid lots of small printouts or plots of your 3D computer model: pick only the best views. Be sure the color, lightness, and quality of the printout match what you see on the screen (watch out for overly dark renderings!!).

1) LIGHT MUSEUM & VELUX COMPETITION

-- Be sure your drawings and verbal presentation focus on the concept of LIGHT. Consider including light conditions in all drawings, including shaded plans, light streaming through sections, night views, etc.
-- The most convincing projects will be entered into an in-house competition focused on "Light in Architecture," sponsored by VELUX, with prize winners announced at a S'08 lecture.
-- Be sure each program space has met the lighting requirements, especially "indirect light from above" gallery.

2) PLANS

-- Be sure that the COMPLETE SPATIAL ORGANIZATION, the arrangement of all program spaces, and the sequences of experiences of your Light Museum, are clearly communicated in your plans, sections, and 3D drawings. They should be able to stand alone, without model or words.
-- Where desirable, some of the plans and/or sections may be incorporated into 3D orthographic drawings (exploded axos of each floor plate or sectional axos that show the entire floor).
-- The ground floor plan must include the SITE CONTEXT, including the brick apartment building, the curb, the corner, and possibly the Carnegie Museum and Greek church.
-- Orient with "Project North" UP (Forbes Ave. at bottom of sheet)
-- Plans should contain accurate and evocative rendering of wall thickness (NO ONE-LINE WALLS), columns, bathroom fixtures, windows, door swings, built-in furniture, counters, stairs, glass, etc.
-- Clearly distinguish walls that are CUT versus short walls or railing through line weight (cut = HEAVY)
-- Indicate important overhead features like skylights, clerestories, prominent beams, double height spaces, roof overhangs, etc. with dotted lines.
-- Show CUT line for all STAIRS on lower floors, but entire stair on upper floor plans (see attached sheet).
-- Identify all rooms either through furnishings (toilet, desk, plan files...) OR a small type-written label.



3) SECTIONS

-- Cut multiple SECTIONS through your building, especially the important spaces, to communicate the *light*, *space*, *materiality*, and *experience* of your building.
--Your sections should show the SPACE behind your cut, including the LIGHT flowing through the spaces or projected onto the walls, especially through "sectional perspectives" and "cut-away axos."
-- Clearly distinguish elements that are cut (HEAVY) vs. things in elevation through line weight. Walls and floors should be shown with accurate thickness (THICK floors and walls).
-- All sections must contain a heavy GROUND LINE that extends well out from your building to include the curb, the red apartment building, and perhaps even the Carnegie across the street, as well as renderings of the context and views behind your section cut.
-- All sections must contain SCALE FIGURES and a sampling of ART WORKS installed in the galleries.

4) MODEL (1/4"=1'-0")

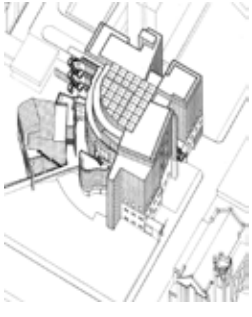
-- Create a 1/4"=1'-0" or your building that clearly communicates: a) relationship to ground plane, street, and context buildings; b) the main exterior massing volumes; c) the entry; d) main exterior features of the building, including all openings and glazing, balcony and roof conditions.
-- All models must also "come apart" fully, in a simple way, so that they reveal the COMPLETE INTERIOR sequence of spaces. Anyone (including guests) should be able to put your model together easily. Devise a way to make your model more instructive when it is open, not merely a "jumble" of pieces. Do NOT just "lift the lid" of your building. Avoid merely stacking room-boxes on top of each other. It should be robust, easily handled.
-- To save time, you should seek to "abstract" the materials and details. Avoid trying to make a "miniature."
-- Make your model look "architectural" and "constructed": show actual wall thickness and true size of all walls, roofs, ceilings, and structural members needed to hold up cantilevers, large sheets of glass, etc. Show ALL ramps and stairs, avoid large sheets of styrene and single-ply chipboard, add mullions to large sheets of glass. .
-- Include a professional looking "scale figure" in your model.

5) EXPERIENCE DRAWINGS

-- Your presentation must contain "experience drawings" of both the EXTERIOR and INTERIOR.
-- Exteriors should show the building in CONTEXT, especially views from a distance
-- All presentations must contain a "perspective" or similar drawings showing the interior space, showing how light and space create memorable museum experiences for the visitor. Interiors should contain the important architectural elements, as well as details such as railings, mullions.
-- Be sure all the drawings are well integrated into an overall presentation: consider scanning hand-drawn perspectives from your drawing class, or re-drawing them to match the overall aesthetic of your presentation.

6) GENERAL NOTES

-- There will be NO WORK ALLOWED after the deadline. Anyone caught will risk FAILURE.
-- At the discretion of your instructor, incomplete work will NOT be allowed to pin-up, but will be reviewed later.
-- In the final push, respect your peers, respect your work environment, watch your fingers.



THE JURY

The Velux Corporation, the world leader in roof windows and skylights, has been running international student competitions for several years around the very broad theme of "Light in Architecture." The CMU competition was an in-house process based loosely on these competitions. On January 18, 2008, a distinguished jury of local architects and professors met to review, discuss, and decide on the winners of the 2007-2008 Velux Competition, held in the 2nd year studios of the CMU School of Architecture. The winning schemes and honorable mentions will be encouraged to submit their schemes to the Velux International Student Competition, due this May, with judging in June 2008 and a big awards ceremony in Turin in November 2008.

JURORS:
Gary Carlough, AIA, Principal, EDGE-Studio, Pittsburgh
Ed Shriver, AIA, Principal, STRADA Architects, Pittsburgh
Greg Galford, AIA, Rothschild-Doyno Architects
Khee Poh Lam, PhD, Professor of Architecture, CMU
Jeremy Ficca, AIA, Assistant Professor of Architecture, CMU
Charles Rosenblum, Adjunct Assistant Professor, CMU
Terry Lynch, Velux

AWARDS

CMU and VELUX announced a public lecture on January 28, 2008, featuring architect Paul Lewis of the award-winning New York City firm Lewis/Tsurumaki/Lewis, to cap off the VELUX student design competition. Lewis, the 1998 winner of the Mercedes T. Bass Rome Prize in Architecture from the American Academy in Rome, spoke on issues of light, materials and assembly in architecture—themes that students explored in the VELUX competition.

Professor Laura Lee, Head of the CMU School of Architecture, announced the winners, and handed out awards to the winning students at the end of the lecture. The awards were: Grand Prize ($750), 2nd Place ($500), 3rd Place ($250), and Honorable Mention. Speaking for VELUX, Lee noted: "We applaud the efforts of these aspiring architects in thinking about the way light in architecture can enhance a cultural experience, as well as our daily living experience."

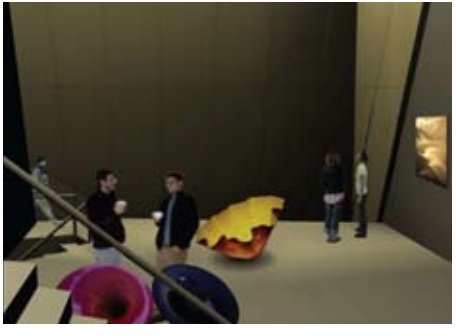
AWARDED PROJECTS

1st Place	Roxanna Viray
2nd Place	Joshua Marshman
3rd Place	Hiroyuki Ichikawa
Honorable Mention	Judyta Podraza
Also Noted	Filip Agren
	Kaitlin Miciunas
	John Soh
	Bizhou Wang

1st Place: ROXANNA VIRAY

Insructor: Jonathan Golli

"This clear project is a mature and nuanced synthesis of form, experiences, and urbanism based on the unifying theme of subtly modlated light. While sculpturally adventurous, this design is also structurally practical and responsive to program. Its compelling presence in both day and nighttime conditions underscores the sensitivity to light throughout."



Light Manifesto

Contrast is the "juxtaposition of different forms, lines, or colors in a work of art to intensify each element's properties and produce a more dynamic expressiveness." (dictionary.com)

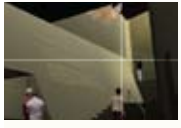
Natural light enters only from a skylight to filter into a light well, diffusing the harsh rays. This volume of light provides illumination for the extensive, outdoor and indirect galleries, lobby and office space. Inaccessible to the public, it is a display of light as an object from the aforementioned galleries. This light volume is contrasted by the heavy mass of the dark gallery. This negative gallery penetrates though the other public spaces to produce a dialogue between light volume and black mass. This disparity is further intensified in the journey through the galleries, following the path of a light beam reflecting off of oblique walls, where the dark space interrupts the flow through the day lit galleries.

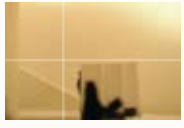
A museum is thought of as a meditative space, but yet it is a museum that commemorates a vibrant energy: light. By defining an experience of contrast, the museum becomes a celebration of light.

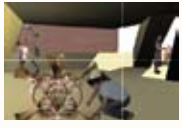
LIGHT MUSEUM

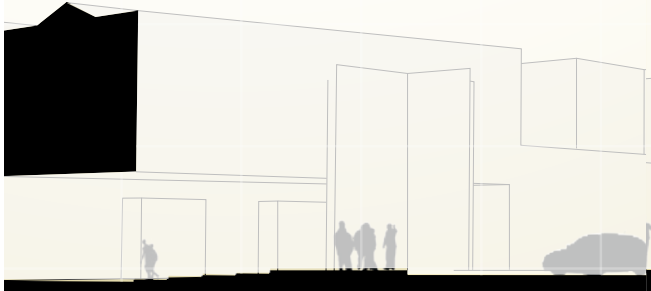
Pittsburgh, PA

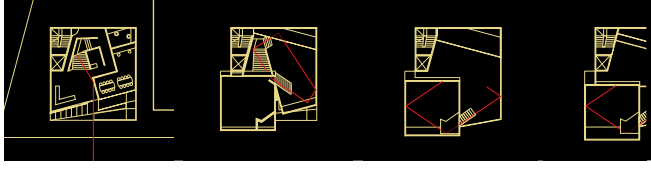
Studio Instructor: golli
roxanna viray
CMU School of Architecture

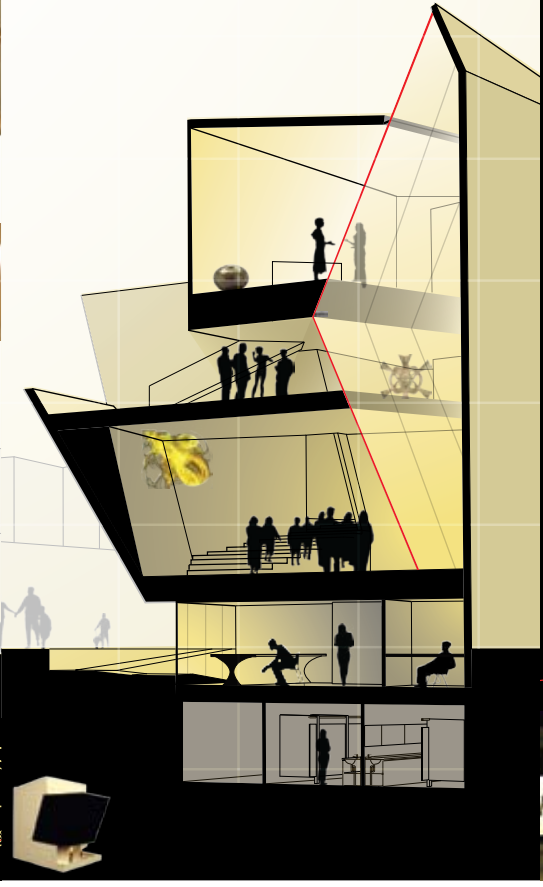








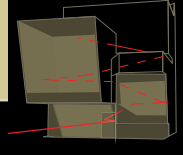




STATEMENT

starting with the idea of using re ection in the way it relates to the movement of light, as an organizational tool for the circulation path, subsequently the form of the museum annex was derived from this. a beam of light originating from the mother carnegie museum of art, shoots across the street and enters the annex. re ecting o of angled planes, the laser moves a visitor through the primary spaces. all of the light enters the museum through a skylight in the roof as a means to avoid the glare and harsh beams of transparent walls. this light is then collected into a light well located at the back of the museum. this light volume is inaccessible to the public, but provides natural daylight for the extensive, outdoor, and indirect galleries as well as the lobby and o ce space. this light volume is contrasted with the heavy mass of the dark gallery. this solid form penetrates all of the other primary spaces to create a dialogue between light and dark. the contrast between dark mass and light volume is heightened by the path of circulation in which the dark gallery interrupts the ow through the light galleries. this contrast de nes an experience which celebrates light.

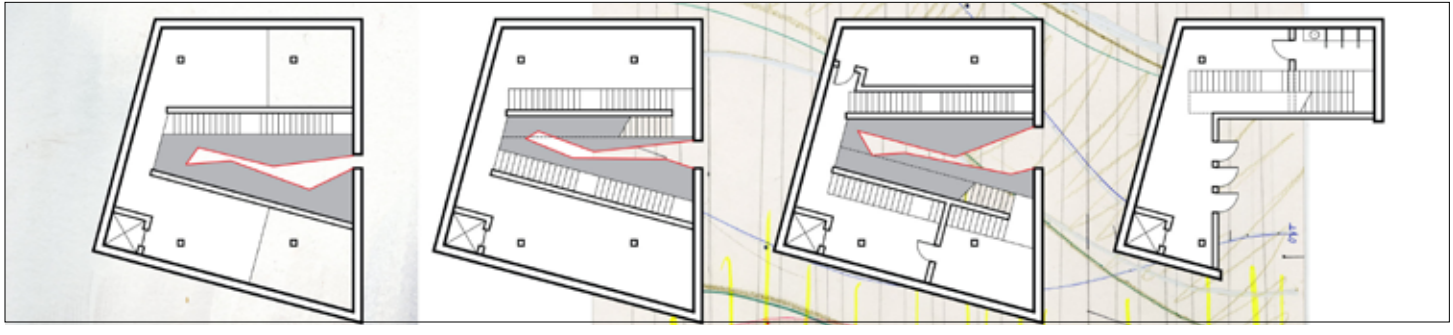
roxanna viray

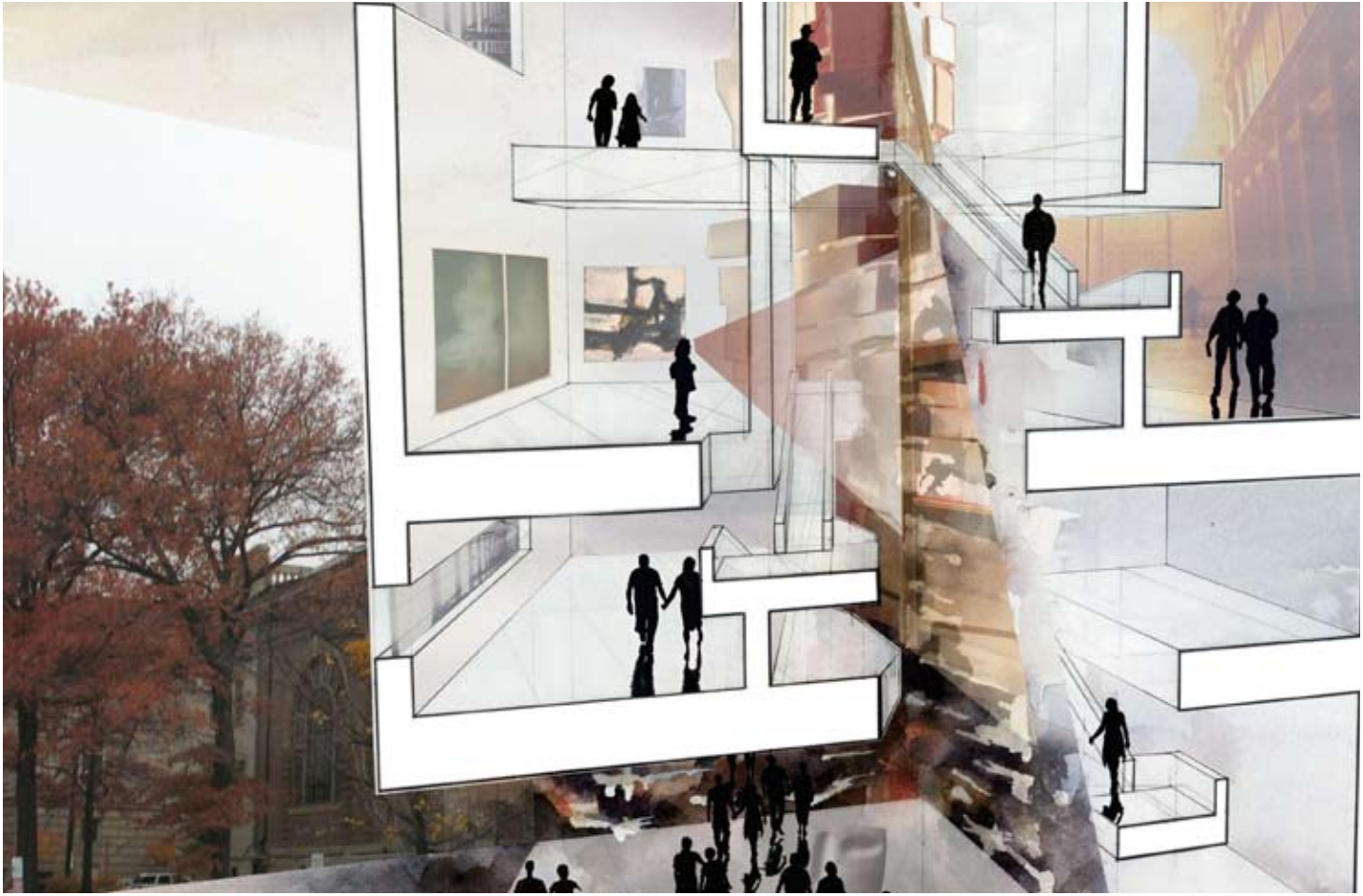


2nd Place: **Joshua Marshman**

Insructor: Lee Calisti

"This project has a vivid sense of how light can percolate through a building and animate the experience of space and art. A wide range of graphic skills gives energy to the rich concepts underlying the design."

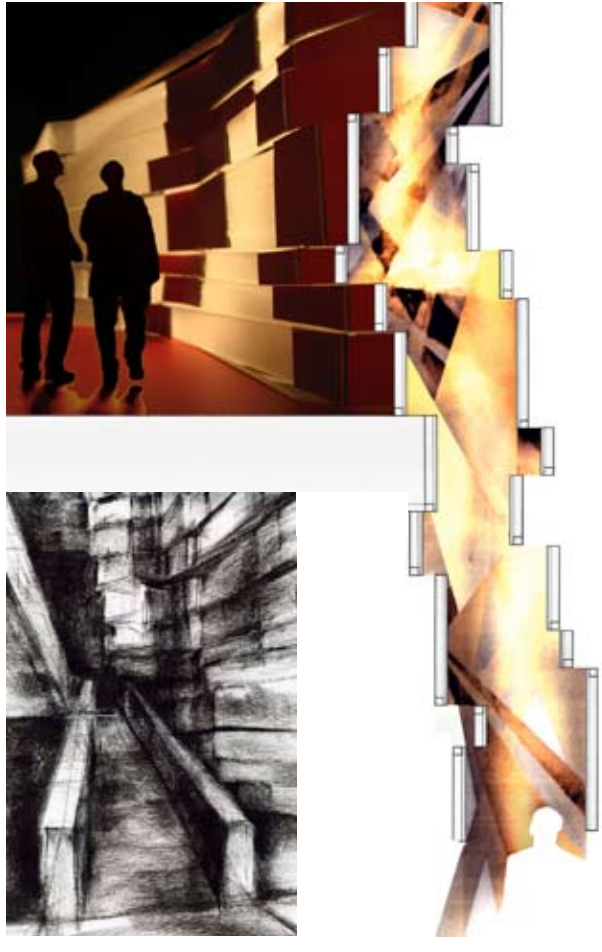




Light Manifesto

Light pours into the building through a central fissure that affords each gallery specific qualities of natural light through an interior skin. The exact nature of light in each space is informed by a central contrast in programmatic requirements: the indirect light gallery, where light is diffused and most dynamic, suggests an experience where the architecture has a profound and altering effect on the viewer's experience of art, while the natural and artificial light galleries remain as unimposing, highly modifiable spaces for the artist.

The architectural fissure occurs between the natural light and artificial light galleries, creating an indirect light gallery that circulates through the building about a central split. Light diffusing through the indirect light galleries defines a public entrance space, where views upward through the museum allow the building to become one massive object for the filtering of light.



LIGHT MUSEUM

Pittsburgh, PA

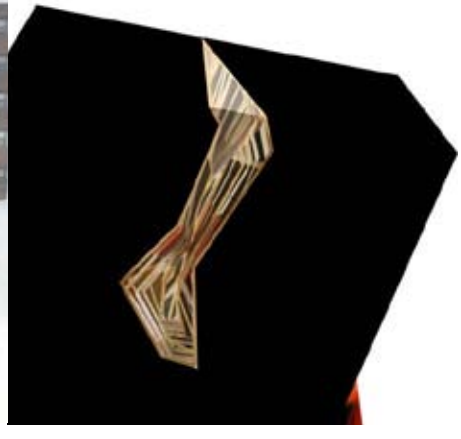
Lee Calisti
Josh Marshman
CMU School of Architecture









STATEMENT

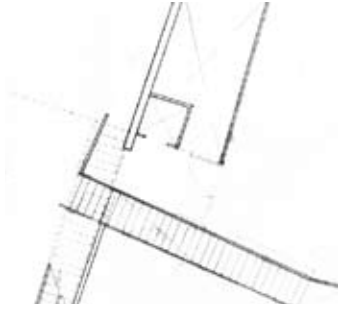
The concept is derived from the relationship between the indirect light gallery and the other three galleries. Given the nature of the program, there is a potential in the indirect light gallery for art and architecture to be in dialogue and dependent on one another, where the walls and spaces of the gallery greatly affect the viewers experience of art. Architecturally this is manifested as a fissure between the natural light and artificial light galleries, creating an indirect light gallery that circulates about a central split. The natural light and artificial light galleries remain as unimposing, highly modifiable spaces for the artist, and light filtering down through the indirect light galleries defines a public entrance space, which is a free and open outdoor gallery. Views upward from this public space enable the building to become one massive object for filtering light.

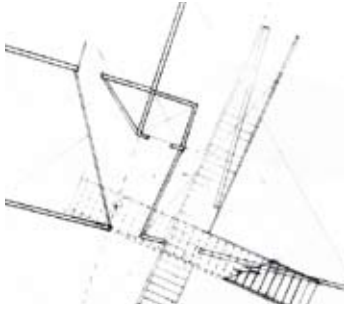
Josh Marshman

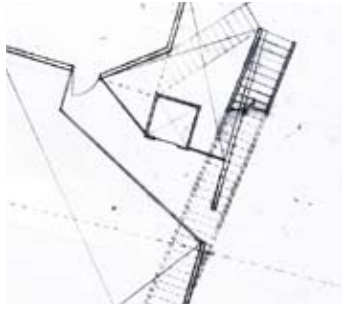
3rd Place: **Hiroyuki Ichikawa**

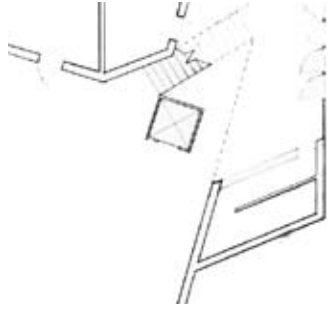
Insructor: Chris Minnerly

"This highly experiential design is based on very practical plans that grow to richness and complexity in three dimensions. An especially dramatic perspective rendering gives heroic scale to a delicate palette of illumination."







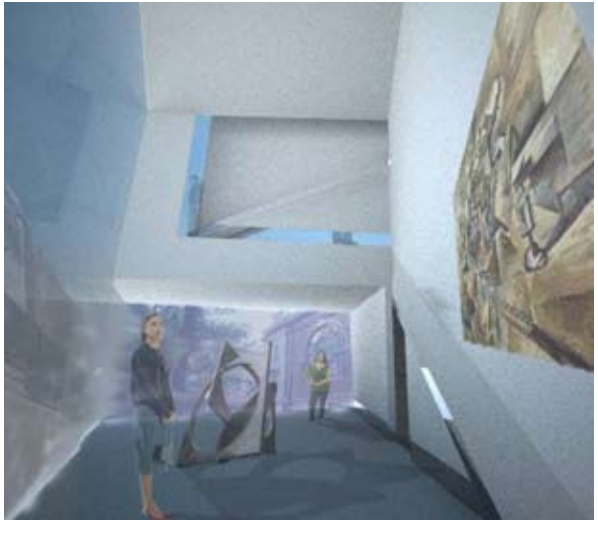


Light Manifesto

Museums are often static and detached in experience due to fragmented spaces and surreal glowing lightings. My design is a reaction to that notion; a dynamic experience where the movement of people filters the light like an ever-changing kaleidoscope.

The galleries overlap each as they spiral up around a central void. Slits at the intersection of galleries allow for light and movement to penetrate through multiple spaces and into the central void. Transparent paths that connect galleries puncture out into the void where light from the galleries and from the top of the museum are scattered like paints of light upon the visitor.

As the visitor is immersed in the kaleidoscope of light, one connects the once detached spaces into one unified, dynamic experience of light and shadow.



LIGHT MUSEUM

Pittsburgh, PA

Chris Minnerly Studio
Hiroyuki Ichikawa
CMU School of Architecture

STATEMENT

My design is a reaction towards my notion of museum gallery spaces being very static and the often-filtered glowing lights making the spaces detached from the other galleries and to the outside world.

Therefore, I created a dynamic experience where the light is filtered by the movement of the people, which relates the relations of the viewer and the spaces in an overall kinetic experience.

The galleries overlap each other as they spiral around a central void where a staircase or pathway connects the different spaces. Here, at the core, the light is filtered by the movement of the people – which the way the light is filtered may change due to season, time, etc. to create a ever changing experience of light and space. There is a horizontal strip on each gallery that allows light to penetrate and filter the movement within the galleries down in to the void.

In both the light and dark galleries, the slits filter light and movement from the other galleries and allow the visitor to reconnect the museum expirience as a whole.

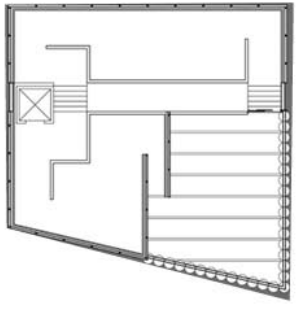
The light filtered by movement activates multiple spaces simultaneously in an overall dynamic and fluid expirience.

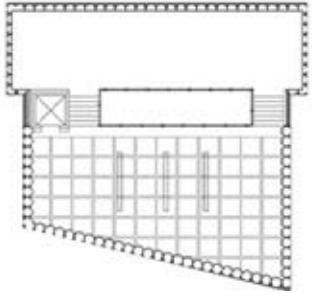
Hiroyuki Ichikawa

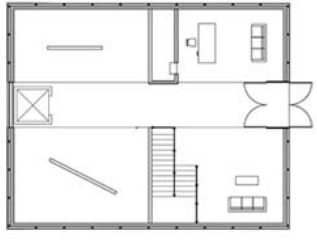
Honorable Mention: **Judyta Podraza**

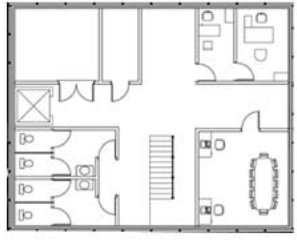
Insructor: Spike Wolff

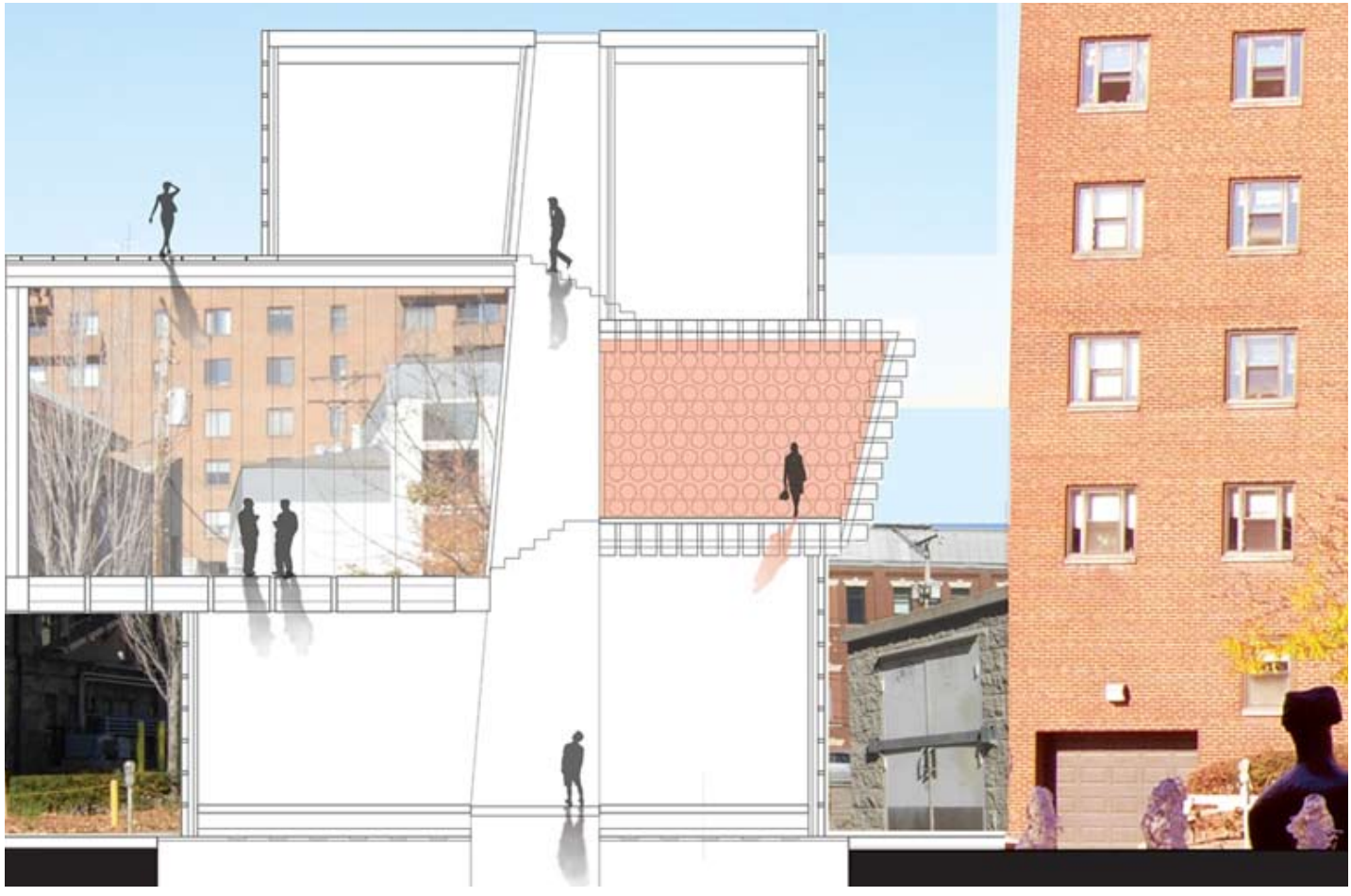
"A wonderfully believable scheme, with a well constructed sequence of spaces, and great attention to light filtering through a series of different screens."











Light Manifesto

A museum is a public space for viewing art. However, museum-goers tend to have a private interaction with the art, shutting off the distractions around them. Nevertheless, in the light museum, the public becomes more aware of their surroundings are they are forced to acknowledge the other museum patrons and the surrounding site. Each space in the museum filters light and shadow through the different materials causing changing lighting conditions.

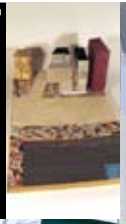
The light entering the direct-light gallery causes people's shadows to affect the brightness of the lobby and indirect gallery space below. Similarly, this happens when people walk in the outdoor gallery space above. This is shown in the main rendering.

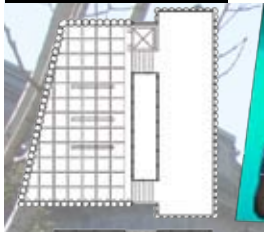
On the other side of the museum, the adjacent building's red brick wall gives off a red glow through the translucent walls, thus making the museum-goer aware of the context outside. Each room in the museum uses the changing conditions of light to create different experiences inside.

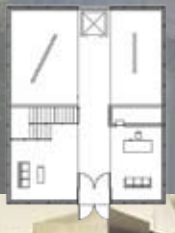
LIGHT MUSEUM

Pittsburgh, PA

Judy Podraza
48-200 Composition Studio / F07
Studio Instructor: Spike Wolff
CMU School of Architecture







STATEMENT

A museum is known to be a public place for viewing art. However, museum-goers tend to have a private interaction with the art often times shutting off the distractions around them. Nevertheless, in the light museum I designed the public becomes more aware of their surroundings as they are forced to acknowledge the other museum patrons and the surrounding site. Each space in the museum filters light, shadow, image, and/or sound through the use of different materials. For example, when entering the lobby the noise and footsteps on the metallic floor are amplified through the internal slit in the build. In the light gallery, art work is displayed on the backdrop of Forbes Avenue. People's shadows, as they walk, affect the lighting conditions in the lobby and indirect gallery spaces below. Similarly, this happens when people walk in the outdoor gallery space above. On the other side of the museum, the adjacent building's red brick gives off a red glow through the translucent walls, thus making the museum-goer aware of the context outside. The outdoor and dark galleries are located on the top floor to emphasis the contrast from existing a dark, enclosed space to an open, bright area where sculpture pieces are displayed with the city in their background.

Judy Podraza

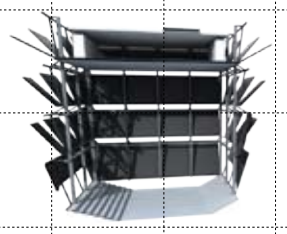
Also Noted: **Filip Agren**

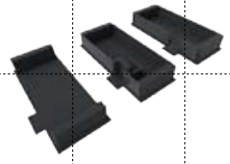
Insructor: Lee Calisti

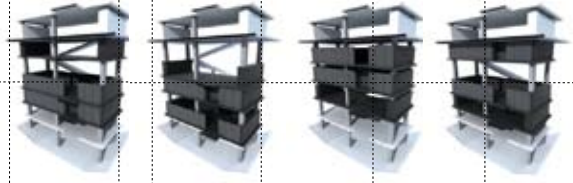
LIGHT MUSEUM

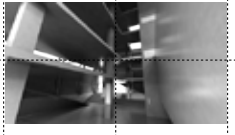
Pittsburgh, PA

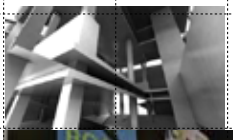
Lee Callisti
Filip Agren
CMU School of Architecture

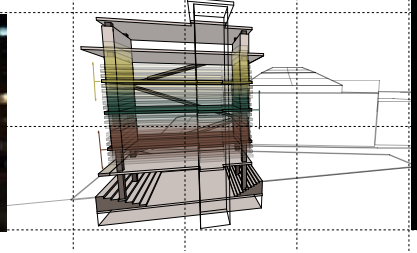












STATEMENT

The Goal of my project is to provide the artist with a malleable exhibition space. To do this I created systems where light quality and sequence can be manipulated to fit the vision of the artist. The galleries sit on their own independant structure system on which they can move up and down allowing them to assume diffrent arangements. Once the galleries have been moved into place configurable wall systems can be inserted to control light intake. THe skin also serves to control the light intake. It primarily recieves light from steep angles only, allowing the relative gallery heights to control the light intake. However the light wells can be opened up to recive more light if nessecary. With these systems in place a level of flexibility is attained where the artist or curator can control the experiential qualities of the the building and the work.

Filip Agren

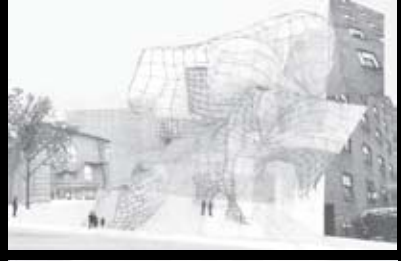
Also Noted: **Kaitlin Miciunas**

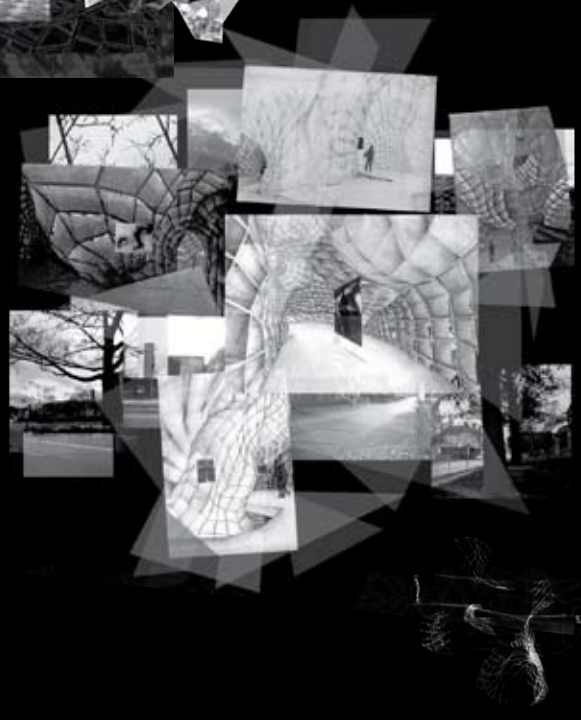
Insructor: Spike Wolff

LIGHT MUSEUM

Pittsburgh, PA

Kaitlin Rose Miciunas
Instructor: Spike Wolff
CMU School of Architecture





STATEMENT

focusing on creating a museum annex that promotes public interation and expressed relationships between visitors, pockets of interior space are defined through the swelling, splitting and merging of two systems. The mutated grid surface is not bounded by the edges of the ground plane, thereby creating ambigous definitions of space. and the grid modulated the amount of light allowed into each space according to functionality of the program, spaces are laid out in response to natural light conditions on the site as well as to encourage space for conversation.

kaitlin rose

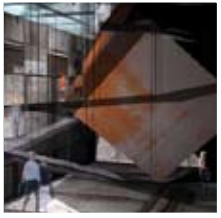
Also Noted: **Bizhou Wang**

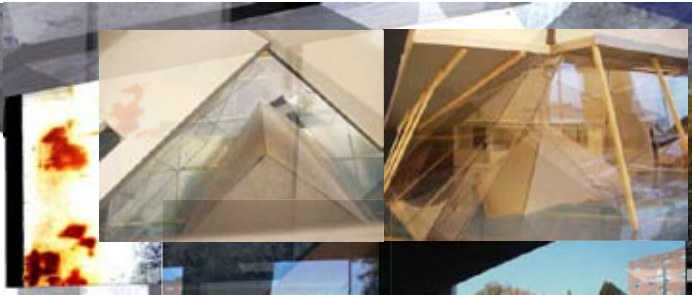
Insructor: Arthur Lubetz

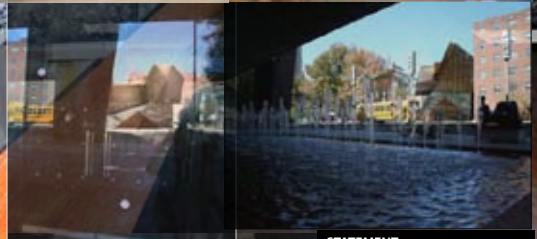
LIGHT MUSEUM

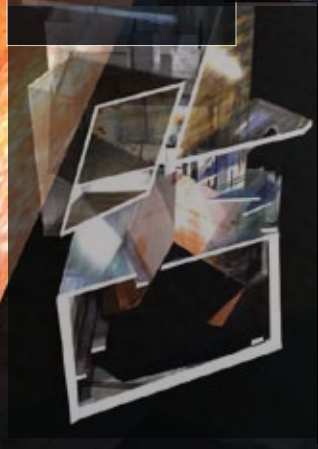
Pittsburgh, PA

Art Lubetz
BIZHOU WANG
CMU School of Architecture









STATEMENT

Approaching the light museum from the Carnegie Museum of Art, the mass of the building peeks out from behind the Richard Serra sculpture, revealing a hint of the steel mass in the center. Approaching it them from the sides, the building dispels the tradtional relationship of the frontal facade and instead splits it in half to distinguish the unique view from the Carnegie and those from the sides.

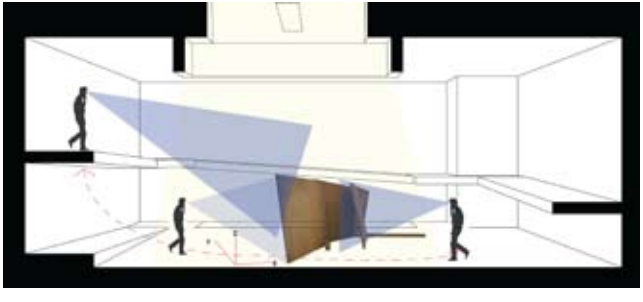
The building also makes a distinction of the circulation from the public visitor who may only wish to wind to the lower level to enjoy the cafe and the private visitor who wishes to pay and enjoy the art. Each group is a ccomodated with different entrances, and circulation routes, each having a unique expe-rience.

The finale of the experience occurs when a visitor is taken into the entirely dark elevator, unaware of their weight, direction, or destination, until they are thrust onto a suspended path lit only by the works of Erwin Redl's Matrix series, revealing the spacial conditions of the cube. Upon exiting the cube, they are met with the people who have just come in, bringing the experience full circle.

BIZHOU WANG

Also Noted: **John Soh**

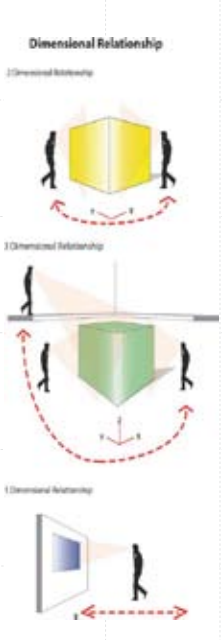
Insructor: Jonathan Golli

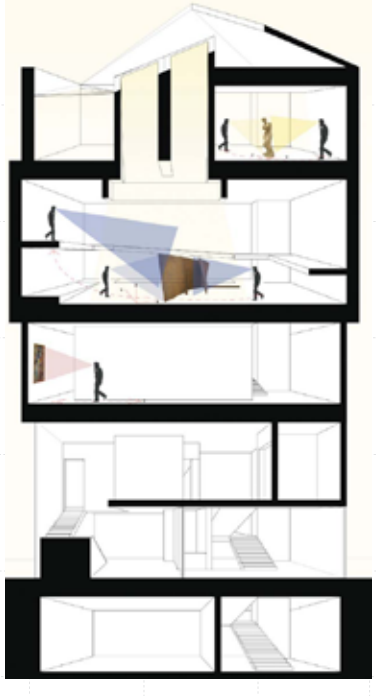


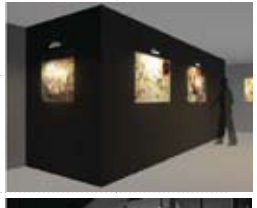
LIGHT MUSEUM

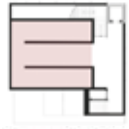
Pittsburgh, PA

Golli Studio
John Soh
CMU School of Architecture









STATEMENT

An art museum should be a tool in which allows the viewers to learn better about that piece of art. Then the relationship between viewer and the art had to be emphasized. Through analysis, this relationship between the art and the viewer could be categorized into dimensional relationships. These categories were divided into 1-dimnesional, 2-dimensional, and 3-dimensional relationship. In a 1-dimensional relationship, the viewer is supposed to view the artwork either closer or further away from the art from directly in front of the art. In a 2-dimensional relationship, the viewer views the artwork by walking around the artwork but not necessarily from the top. In a 3-dimensional relationship, the artwork can be viewed from the top along with other views. These were then assigned to certain light galleries. 1-dimensional art went into dark gallery so that light sensitive art can be displayed. 2-dimensional art went into direct light gallery where shadows could create another interesting condition. And finally, 3-dimensional art was put into indirect light gallery where light could be controlled so that the artist and the curators really have to think about what kind of art piece goes into the gallery and how to light it specifically for that art piece.

John Soh

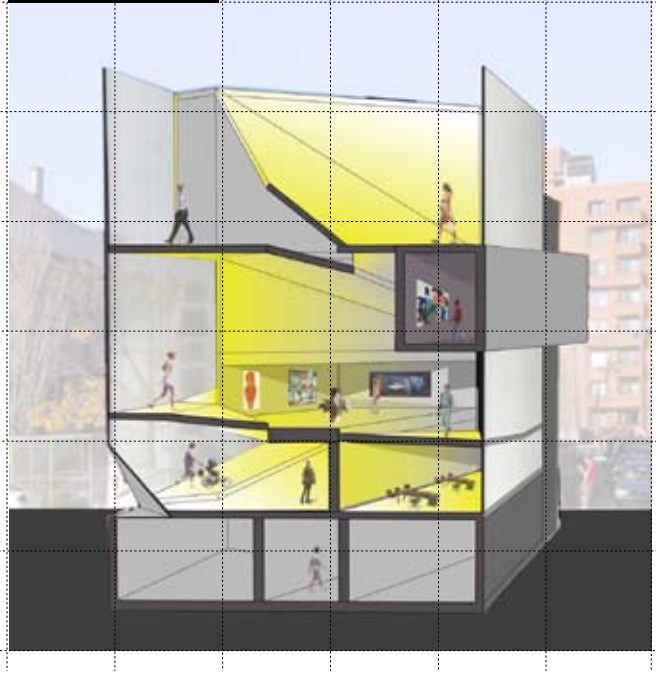
PARTICIPANT ENTRIES

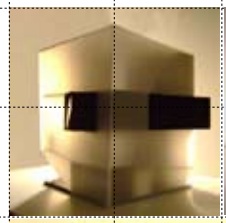
Mekha Abraham
Max Arocena
Adam Aviles
Abigail Branch
Karen Branick
Samantha Carter
Lowell Day
Elizabeth Duray
Josiah Haskell
Adam Himes
Matthew Huber
Ranjit Korah
Benjamin Lehrer
Lindsay Mannion

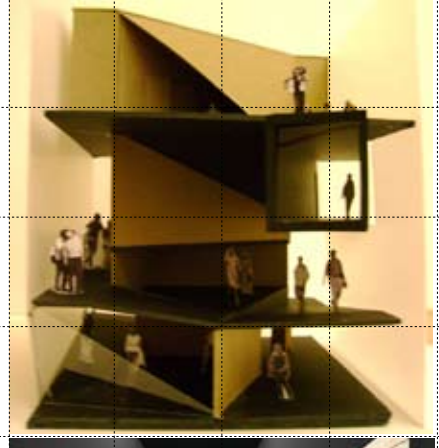
LIGHT MUSEUM

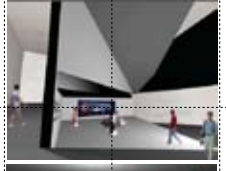
Pittsburgh, PA

Mekha Abraham
Instructor: Jonathan Golli
CMU School of Architecture









STATEMENT

The focus of this musuem was to create a dynamic and continuous experience for visitors through a circulation system of ramps that allow the visitor to travel throughout the museum and enter into the light specific galleries.

The ramps cause the visitor to experience a changing perspective of art as they travel along the ramps, through changes in the position of their body in relation to the static art.

In addition, a person also experiences an altered perception both within and outside the museum as they view glimpses of movement along the ramps from the inside. At night a person outside the musuem will view soft shadows of movement through the polycarbonate exterior that illuminates at night.

Mekha Abraham

Student: Max Arocena
Instructor: Spike Wolff

LIGHT MUSEUM

Pittsburgh, PA

Spike Wolff
Maximilian Arocena
CMU School of Architecture

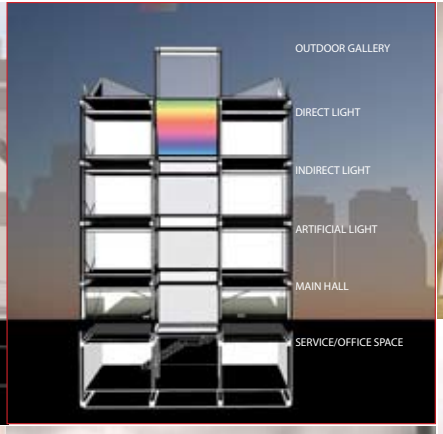
1. ambient and direct sunlight is deconstructed into its component colors by passing through the prism.

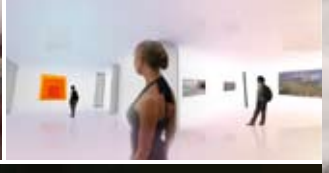
2. the collection of colors is beamed strategically through the inside in order to bathe both the exterior and the interior of the museum

3. interior beam of colors is bounced through the reflective air shaft towards the main hall, slightly diffusing light+color into the galleries

4. exterior beam bathes forbes avenue with an ambient collection of colors, creating a light connection between the annex and its mothership

5. interior beam reaches main hall, already mixed into a chromatic spectrum, then diffuses through the pool into the study area.





STATEMENT

To deconstruct light into its basic elements and use these as atmospheric special conditions in which to view art; the beam of colors is beamed either unto the outside, creating a "light" connection between the museum and it's annex, or inside, bouncing down and diffusing into the galleries through the floor.

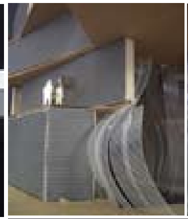
Max Arocena

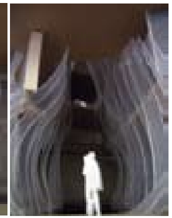
Student: Adam Aviles
Instructor: Spike Wolff

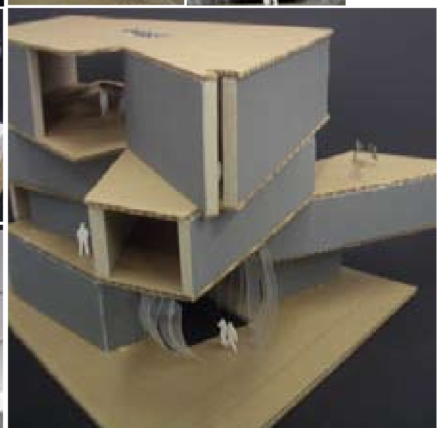
LIGHT MUSEUM

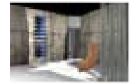
Pittsburgh, PA

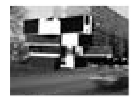
Spike Wolff
Adam Aviles
CMU School of Architecture

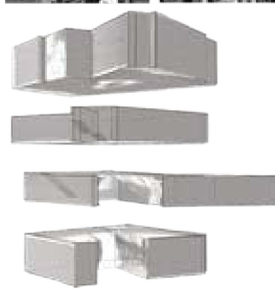












STATEMENT

For my light museum annex, I wanted to focus on the viewer being enveloped in two main circumstances-one being the heavy. rigid geometry of my structure, and the second being the light glassy upwards-flowing surface that leads the eye up to the open-air atrium space. The views to and from the annex space was how I derived my form of three main viewing windows-one view to and from the CMU area, one view to and from the Pitt/Oakland area, and the last view to and from the Richard Serra sculpture/CMoA. i wanted my museum to serve as a beacon at night and to "reach out and pull in" the various Pittsburgh demographics.

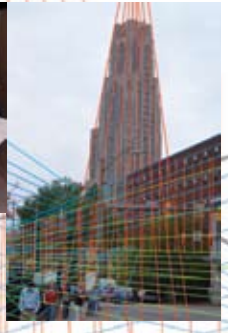
Adam Aviles

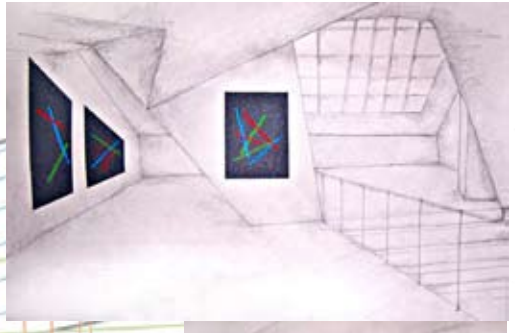
Student: Abigail Branch
Instructor: Lee Calisti

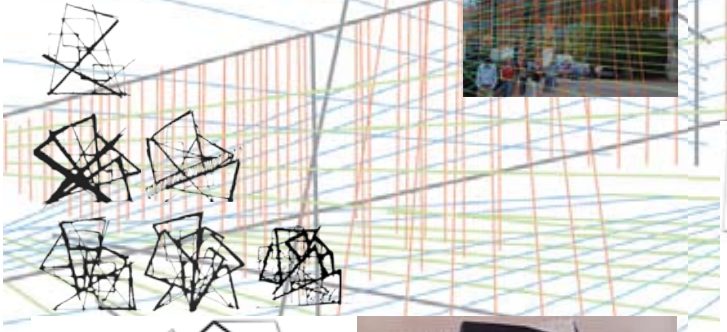
LIGHT MUSEUM

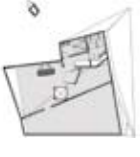
Pittsburgh, PA

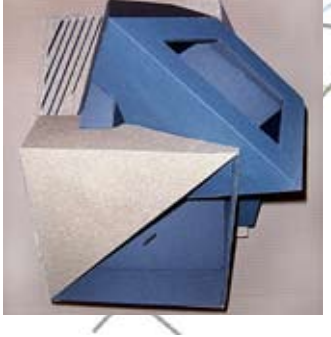
Studio Instructor: Lee Calisti
Abby Branch
CMU School of Architecture











STATEMENT

For my museum annex I focused on a concept of perspective convergences or a visual "pull." The site creates this effect from different viewpoints along the street while walking toward it. In order to create this "pull" in my building I first created an overall form that pulls the visitor toward the museum. I then used artificial and natural lighting to move the visitor from one gallery to the next within it. The form of the museum is created by projecting spaces from specific points to the general organization of my galleries. This organization has a central spiraling circulation with the galleries alongside. This is where the artificial and natural light gain their greatest effect. As the visitor goes from one gallery to the next the light pouring from another leads the visitor toward it. This combined once again with the slanted form moves the visitor through my museum annex in the form of a visual "pull."

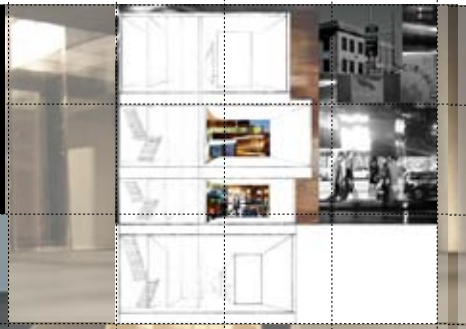
Abby Branch

Student: Karen Branick
Instructor: Spike Wolff

LIGHT MUSEUM

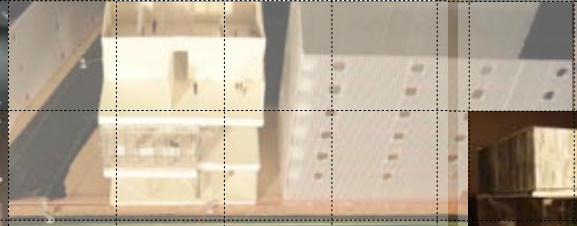
Pittsburgh, PA

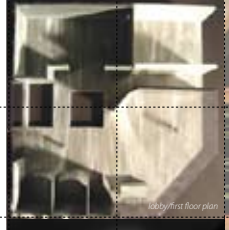
Studio Instructor: Spike Wolff
Karen Branick
CMU School of Architecture



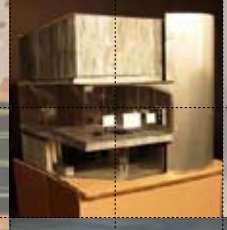
direct daylight gallery: night rendering

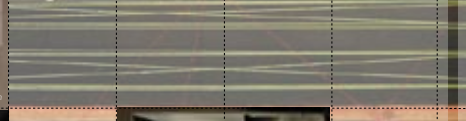
indirect daylight gallery

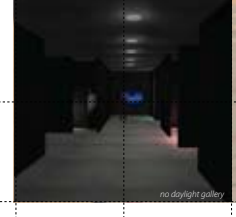




lobby/first floor plan







no daylight gallery

dark gallery/basement plan

direct daylight gallery

STATEMENT

The museum is often viewed as a blank, "white box" that acts as a sanctuary for artwork. For my museum, the context of the urban site on Forbes Avenue is integrated into the museum visitor's experience and encorporates an observation of motion with the visitor's observation of art. By having a reflective facade that wraps into the interior of the building, the blurred reflection of the movement on the site is pulled into the interior of the museum. Not only does this wall affect the interior lighting conditions, but it also establishes as blur between exterior and interior movemnt. Furthermore, in the direct daylight gallery, artwork of Pittsburgh is displayed against the reflective wall, while abstract art is displayed against a direct view of the site. In the indirect and no daylight galleries, the observation of motion is included in a more subtle way to accomodate artwork that requires a more sensitive environment. For example, the indirect light gallery features translucent walls for artwork display, allowing for the shadows of other museum visitors to appear. The no daylight gallery features artwork that explores movement, such as video installations. This museum challenges the conventional attitude towards what a museum should be and gives the observer a different museum experience that embodies movement and context into the viewing of art.

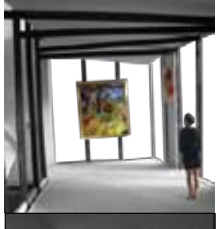
Karen Branick

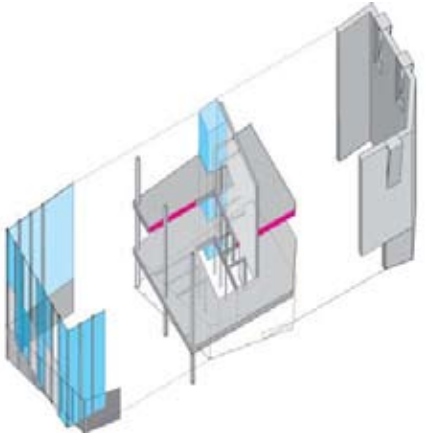
Student: Samantha Carter
Instructor: Chris Minnerly

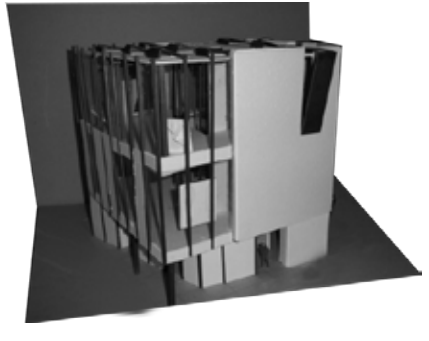
LIGHT MUSEUM

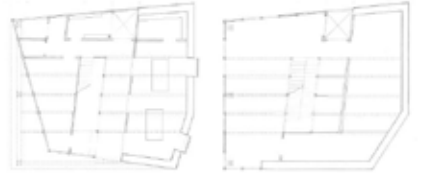
Pittsburgh, PA

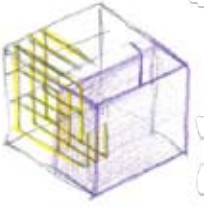
Chris Minnerly
Samantha Carter
CMU School of Architecture

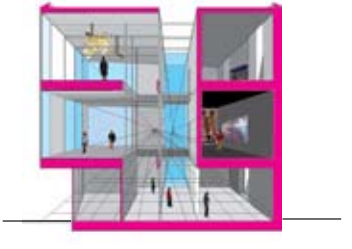












STATEMENT

There are many ways to manipulate light and approach the idea of light. Instead of just interpreting light in the sense of light coming from the sun or from a bulb, this museum annex derives the idea of "light" as in light verses heavy. This idea of light is used to generate the language of the museum. There are two structural systems created to represent light and heavy materials. They join together in the center of the building where an opening in the ceiling allows massive amounts of light to enter in the circulation core and trickle down to the bottom of the building. The two structural systems are a light structural grid and a heavy masonry wall. The structural grid allows light to enter into the part of the building that receives the most exposure to light while the masonry wall system darkens the eastern part of the building that has a large shadow cast on it by the apartment building next door. The masonry wall system is continued onto the ground and spills over into the grid area and the structural steel beams are continued under the floor and then pierce into the floor in the masonry area. Light is also considered highly in the circulation core where there is emphasis put on the filtering of light through the building with the help of the elevator's verticality.

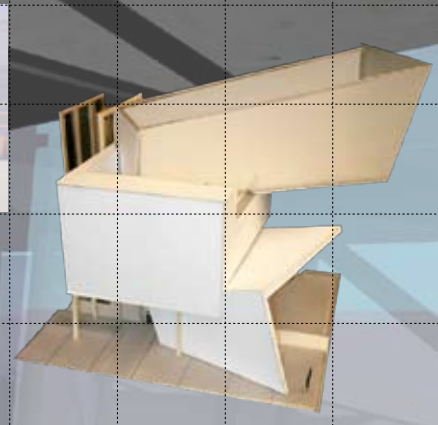
Samantha Carter

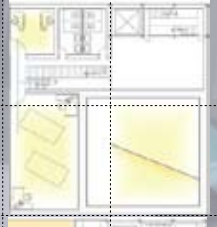
Student: Lowell Day
Instructor: Arthur Lubetz

LIGHT MUSEUM

Pittsburgh, PA

Lubetz Studio
Lowell Day
CMU School of Architecture





STATEMENT

A museum is a place where artworks can be put into conversation with one another and where people congregate to view art in the presence of one another. A museum therefore acts as a physical and cultural nexus of ideas and opinions. The form of this building was dervied from a response to specific conditions of the context to reinforce the visitors connection to the site, the artwork, and eachother. Daylight penetrates into the core of the building, dynamically lighting the space with natural light. The use of translucencies allows visitors to actively engage in affecting the lighting conditions of adjacent spaces. The constant movement of the sun and visitors throughout the building causes the lighting conditions to be in a permenant state of flux, allowing for unique spatial experiences within each gallery. Through the use of translucencies, spatial ambiguity is achieved in the indirect light gallery, where shadows cast by visitors from above manipulate the amount of light entering the space. In the artificial light gallery, the visitors sense of balance is challenged by a titled floor plane, raising their awareness of the space around them. Finally, in the direct light gallery, two south facing glass panels allow for sunlight to filter in from sunrise to sunset, reflecting it upwards as the space cantilevers over the sidewalk.

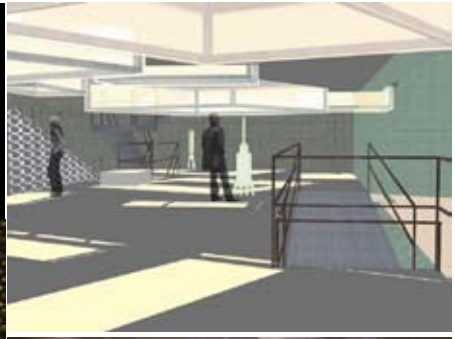
Lowell Day

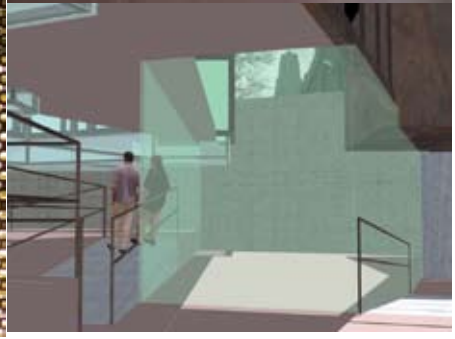
Student: Elizabeth Duray
Instructor: Arthur Lubetz

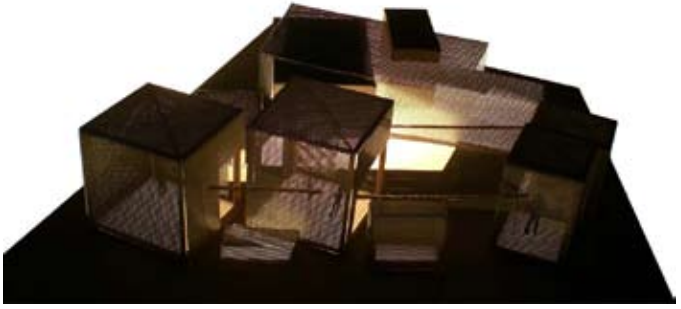
LIGHT MUSEUM

Pittsburgh, PA

Lubetz Studio F07
Elizabeth Duray
CMU School of Architecture







STATEMENT

Light is not an object. Although it must originate from some source, light "extends beyond the object," as artist Dan Flavin has said. It is a medium. This has a reciprocal relationship to the Carnegie Museum of Natural History and Art. Rather than do what has already been accomplished by this museum of objects, this is an opportunity for a different kind of museum, a museum of light. Embedded in the typology of the museum is the veneration and preservation of objects in a sacred manner. It is didactic and elitist. It encourages the viewer to swallow others' ideas without question. It is not provocative or modest.

This project places the art literally and figuratively under what Louis Kahn would call "servant" spaces: toilets, office, study rooms, coat room, ticketing, storage, and mechanical space. Light enters the underground galleries through the translucent floors and ceilings of these spaces casting shadows based on their use. From underneath, the servant spaces become the objects on display, making provocative reference to the old typology and removing the sacred atmosphere from the artworks.

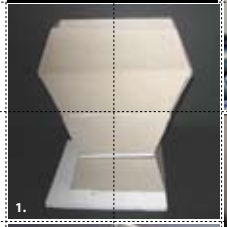
Liz Duray

Student: Adam Himes
Instructor: Lee Calisti

LIGHT MUSEUM

Pittsburgh, PA

Studio Instructor: Lee Calisti
Adam Himes
CMU School of Architecture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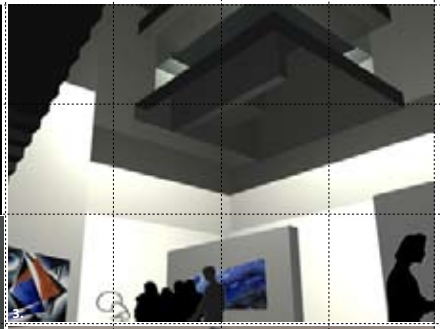


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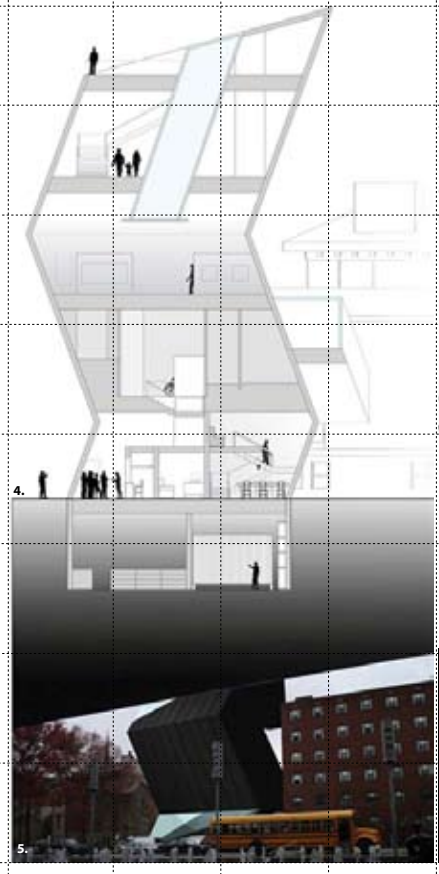
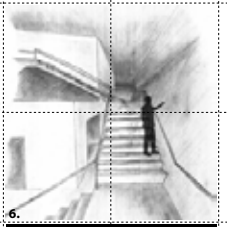

4.

5.

1. Study Models
2. Final Model
3. Rendering of Indirect Gallery
4. Section
5. Exterior Rendering
6. Interior Perspective


6.

STATEMENT

The design of this museum annex is based on the concept of contrast. The contrasts in the exterior movement is coupled with contrasts in the changing light conditions of the interior galleries. A visitor enters under the outermost point of the building into the lobby. There, one ascends a series of circling stairs through a half level and subsequently into the darkest gallery. The stairs run along the slanted walls throughout the building to allow the visitor to interact with the architecture as it slants towards or away from them. The floor of the first gallery is gently sloped to continue the upward movement of the circulation until one reaches the indirect natural light gallery. Here, all upward movement ceases as one's eyes are directed at the large section of the ceiling punched into the room. An ambient half-light is allowed to emanate into the room from a light well above. Up until this point, the interior has been tense and brooding while the exterior has leaned out ominously over the entrance, allowing the maximum amount of light to enter the direct light gallery. In the direct light gallery, the tension of the building is released as the building reverses direction and allows daylight to flood the gallery. The visitor completes this reversal when they enter the outdoor gallery before descending via lift. As one floats down, they are able to experience the exterior of the architecture before reenetring the lobby once more.

Adam Himes

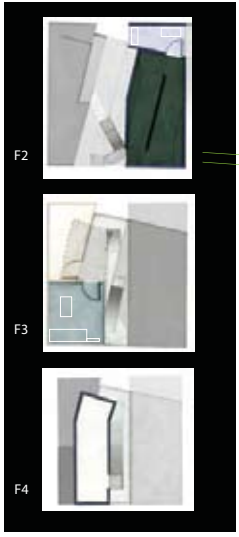
Student: Matthew Huber
Instructor: Chris Minnerly

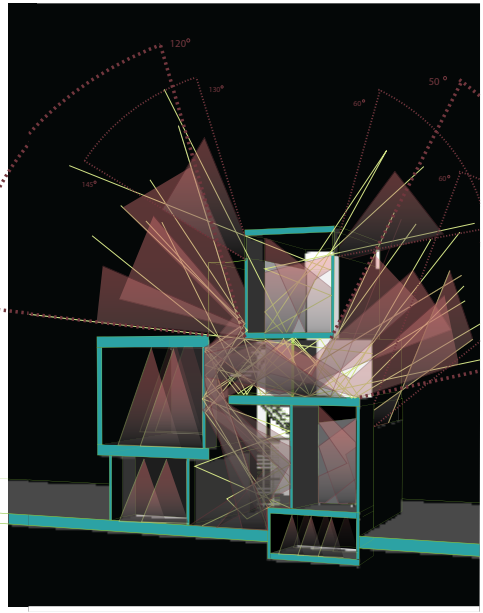
LIGHT MUSEUM

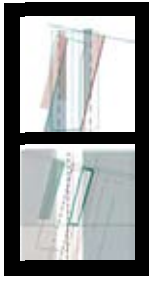
Pittsburgh, PA

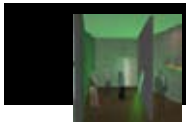
Studio Instructor: Chris Minnerly
Matthew Z Huber
CMU School of Architecture

Forbes Ave









STATEMENT

Programmatic investigations, studies in the definition of light, and rigorous analysis of urban context culminated in my design strategy for a museum of "light." The physical characteristics of light, its state of duality, and attributes of its movements are manifested in the geometric orders and languages of the project; meanwhile the phenomenological and experiential aspects of light are explored in the order of sequence, material tactility of the masses, and the inversion of the figure ground relationship of light as universal field or object in the light and dark galleries respectively. Further, the indirect light gallery investigates aspects of diffusion. In addition to the subtle, geometries inspired by light, the museum responds dually to the existing urban conditions: shifted grids, academic versus commercial, planned versus sporadic, vast versus dense. The active, pedestrian, urban passage of forbes ave. is connected to the potential entrance from the back parking lot via a schism in the form. By dichotomizing the site's volume, staggering, and interweaving program, I create an interstitial space energized by the diagonal reflections and refractions of circulation. These actions imprint themselves in the programmatic masses by carving in, shifting, and shearing.

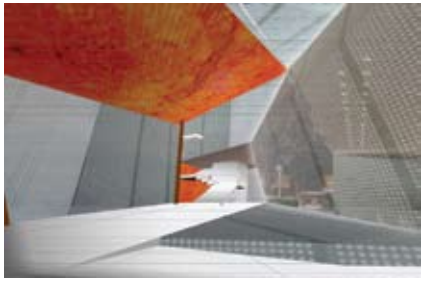
| Matthew Z Huber

Student: Ranjit Korah
Instructor: Arthur Lubetz

LIGHT MUSEUM

Pittsburgh, PA

Art Lubetz
Ranjit Korah
CMU School of Architecture



STATEMENT

Light defines time and space through a duality of the presence and absence of light. This museum annex derives its shapes, forms, and circulation through a direct correlation of the unique qualities that light exhibits. Light, as an ideal element, is boundless – unconstrained and able to permeate all limits. With this idea in mind, the museum strategically challenges the ability of light to activate the main spaces above ground individually.

The museum then moves underground, emphasizing the surreal capacity of natural light to pierce even into the depths of the Earth. The final space is a large, dark gallery which is buried deep into the Earth to create a deep, explicitly constrained space that can only be illuminated through the work being exhibited in the space.

The museum also creates a direct visual relation to the existing Carnegie Museum, naturally engaging people following the flow of traffic to enter the museum. The outdoor space located underneath the direct gallery space provides a public area for display of art and community gathering. This space expands upon Andrew Carnegie's passion and vision of providing the light of knowledge and culture to the people at large

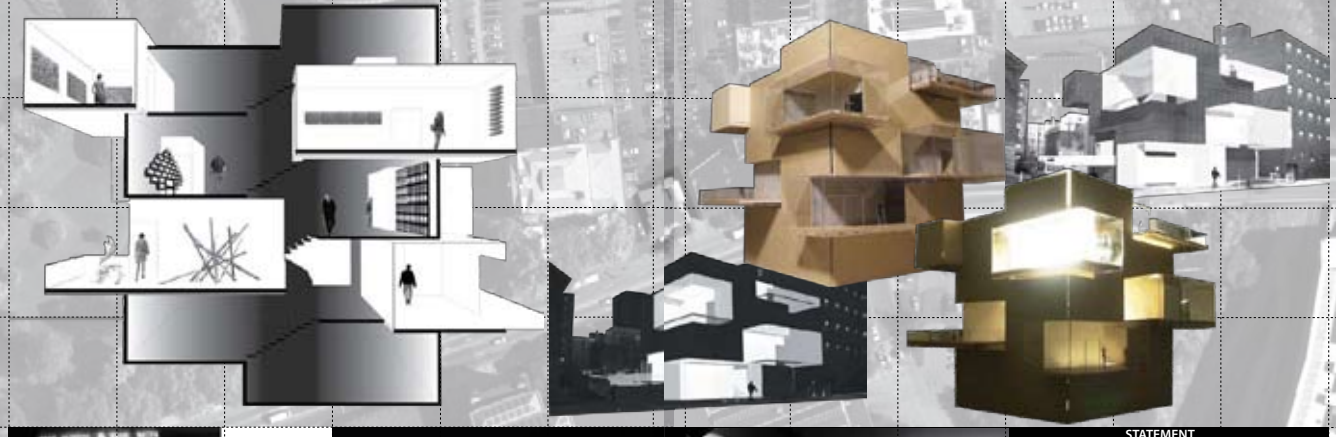
Ranjit Korah

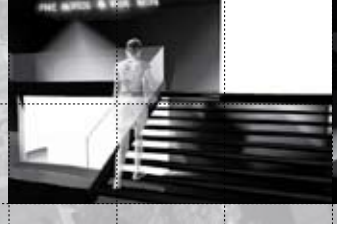
Student: Benjamin Lehrer
Instructor: Jonathan Golli

LIGHT MUSEUM

Pittsburgh, PA

Studio Instructor: Golli
Ben Lehrer
CMU School of Architecture





STATEMENT

The program called for a museum annex to exhibit all types of art. A gallery with direct lighting, a gallery with indirect lighting, a gallery with arifical lighting, and an outdoor gallery were required to offer various settings for art. By using the the artificial, outdoor, and directly lit galleries as a means of filtering light into the indirect gallery the museum becomes a series of galleries inserted into a central gallery space. These inserted galleries capture light in their interior translucent walls and appear to be made of light. In this way visitors are constantly confronted with light as an object as they travel throughout the museum.

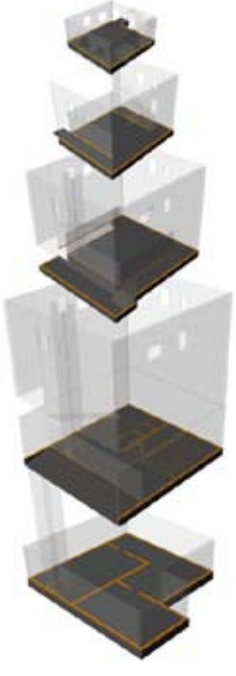
Ben Lehrer

Student: Lindsay Mannion
Instructor: Spike Wolff

LIGHT MUSEUM

Pittsburgh, PA

Studio Instructor: Spike Wolff
Lindsay Mannion
CMU School of Architecture



STATEMENT

The design for this museum uses light as a medium to assist in its purpose of challenging the traditional function and role of a museum as a barrier to its outside environment. This is accomplished through the choreographing of sequence of spaces which creates a gradual enclosure from the outside context into the closed-off, sacred, contemplative ambience museums have historically provided. The galleries light conditioning transitions from outdoor, entirely open to natural daylight, to extensively daylit by the illumination of translucent concrete, to strictly artificially lit. As the visitor moves through these galleries, with an inwardly spiraling path of circulation, the spaces grow progressively more constricting, and the subsequent destination is a constant presence, looming overhead. Once the visitor has reached the final gallery and become enveloped in the traditional museum atmosphere, they are met with views that pierce through the confines of the building to the outside environment and are displayed alongside works of art, affording them the opportunity to be valued and considered with the same careful observation and contemplation as art that is deemed worthy of being displayed in a museum.

Lindsay Mannion