### PROJECT 0:

# MATERial, archiTECTURE SPACE

"Materiality is more than a technical property of a building: it is a precondition that promotes ideas, creativity, and pleasure in architecture and it guides us to loftiest aspirations...." Jorge Silvetti

# $Project \ 0^{I}$ – Due Friday, January 14<sup>th</sup>

Materials evoke emotions and trigger memories. The intent of project 0 is for you explore in depth a material that is used or could be used in the construction of architecture. First acquire some samples of the material. These can be found at a building supply store, recycling houses, manufacturer's samples, internet distribution points etc. Start the collection immediately; it should be expanded with variants (samples) as the semester evolves. Get to know the qualities of the material – use all your senses. Is it reminiscent of something? Is it heavier or louder than you thought? Be able to describe the material – its qualities, its history, its typical and atypical uses, and its environmental impact and the impact the environment has on it.

Collect images that indicate the diversity of uses. Gather working drawings (especially wall sections) of typical and atypical installations that inform us of the relationship between assembly method and the experience. Present your samples and assemble a power point presentation (with two sets of  $8.5 \times 11$  printouts) documenting your newfound knowledge and excitement about the material. Quite often innovative uses of materials are executed in small projects by less well know architects so architectural periodicals are often one's best source for up-to-date installation and techniques. Remember to include building and architect ID as well as bibliographic information for each example.

# $Project \ O^2$ - Due Friday, January 21<sup>st</sup>

Through fabrication and working with our hands we manipulate matter to create things. Every time we form and then deploy an object into space we have created a structure that modulates light in a specific and unique way. All shapes and all materials such as stone, metal, glass are able to selectively reflect, bend, absorb, color, project, focus, diffuse, split & scatter light. The light informs the material. Your challenge in project 0.2 is to create a simple construct of shelter in which material informs the light.

You are to create a Material Shelter of Sun - a refuge of sun controlled by material- a place of shade and a shelter for sun. The shelter is to exist as sun and shadow. The sun and shadow is defined by the nature of the material separation. Likewise,the nature of that separation is the definer of the space for it is the cause of the light and shadow.

A horizontal and a vertical plane are the constructs of a shelter. Their orientation relative to the sun is the means for constructing the experience. The method of assembling the material and the contrast between the planes are the language for informing the light.

There are many types of materials with all types of properties. Some are loud, some silent, some bright, some brittle, some soft & some have odors. It is your challenge to craft a material shelter that speaks eloquently through the changes in light about such qualities of the material(s). An experience that engages more of our senses (touch, sound smell etc.) is welcomed but the emphasis is on how your exploration of a material can inform light to create a meaningful, beautiful well crafted space.

To confront a person with his own shadow is to show him his own light. Carl G. Jung, psychiatrist (1875-1961)



architecture design & materials cmu spring 2005 sarah drake(sdrake@andrew.cmu.edu)

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Project 0.1 – Due Friday, January 14<sup>th</sup> Project 0.2 – Due Friday, January 21<sup>th</sup>

#### MATERial

Every student will select one material to research and explore in project 0.1 and 0.2. Some potential material include: Concrete, CMU precast, site cast, finishes, Masonry - Brick, rough stone, cut slabs, Plastic tubing, fiberglass, vinyl Wood -framing, plywood, engineered lumber, bamboo, shakes Metal - Steel tube, channel, bar, corrugated panels, seamed panels, flashing, tension cable, light framing, fencing, Insulation batt insulation, rock wool, rigid insulations, straw Glass, Polycarbonate, structural glass, fiber optics Fasterners rods, screws, hilty anchors, masonry ties, glues, sealants Building paper, EPDM,fabrics, Sod, straw, paper tubing. Recycled wood, paper, plastic, carpet, rubber etc.

### **SPACE**

Your shelter should fit within a 10 foot cube and must accommodate a human. The actual size and proportions of your shelter should depend on the unique properties of your material. The presentation requirements for Project 0.1 are two models; the shelter modeled at 1"=1'-0" scale with the materials depicted accurately and a 2' square life size mock-up or detail about the material.



### PROJECT 1:

# MATERiality of archiTECTURE

"The pleasure to be found in objects of great beauty and ornament is produced either by invention and the working of the intellect, or by the hand of the craftsman, or it is imbued naturally in the objects themselves. The intellect is responsible for choice, distribution, arrangement, and so on, which gives the work dignity; the hand is responsible for laying, joining, cutting, trimming, polishing, and such like, which give the work grace; the properties derived from Nature are weight, lightness, density, purity, durability, and the like, which bring the work admiration. These three must be applied to each part of the building..."

Leon Battista Alberti

Project 1 - Mid Review January 31<sup>st</sup> Final review February 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>,

Architecture is formed with material. Materials are assembled to inform space. The design challenge in Project 1, the Bike Kiosk, is for you to explore and articulate your architectural intent for a bicycle shed on the bank of a river as a work of architecture. Materials, their qualities, assemblies and crafts are the language for your exploration.

The materials of architecture are the supports, the enclosures and even the apertures for human experience. The materiality of architecture permits the exploration of issues such as time, transformation, lightness/heaviness, permanence/ impermanence, and adaptable/stationary.

The project is to celebrate the process of discovery and the process of making. Materials are the pallet; craftsmanship and fabrication are the tools for framing, joining, layering and weaving your design intent into an architecture celebration. Let the cultural history of the site, river and trails inform you about the specifics of place while your enthusiasm and knowledge about current bicycle trends and technologies inspire you to search for new experiential quality for your materials.

Through the patient commitment and exploration of a limited pallet of materials from Project 0 create a simple, spiritual, participatory, discovery experience that informs us about the material, the site and the program. The kiosk should address (or deny) each of the seven senses. You should consider all natural elements that will influence your installation, including site, sun, season, climate, wind, time, views, visitors, etc. This bike kiosk should be about the qualities of the material(s) in this specific time and place.

The essence of the project is materiality, joinery, and their relationship to our bodies. How does the material meet the earth?... the sky?... the body?... other materials? How does the body meet the material(s)?... the earth?... the sky?... The experience should delight and educate us about the material, the environment, and ourselves. It should emanate Alberti's notion of architecture through dignity, grace and material admiration.

#### Schedule

January 15th - Start research on Bikes. Washington's Landing, Bike trails & River January 19th – Site visit, documentation and history presentations January 24th - 1/16" Scale site model completed, Material selected, 3 study models of concepts, Plans and sections with site at a 1/8",and bring one object or crafted piece that emits the spirit, ideal of your design, material, texture, etc. January 26th January 28th January 31 – mid review Februar;y 16, 17, 18 - review