

## LAB

Design research institute run by a joint partnership between Monsanto Corporation and Columbia University. We will develop concepts and design strategies directly from project 2 with new speculations on the laboratory's broader organization, a more rigorous relationship to its New York City site, and by experimenting and developing structural and envelope ideas at the scale of the building. Design strategies and techniques used throughout the semester will be synthesized and cross-referenced at a higher level of complexity and broader scales of influence, from the material, program, building, and urban scales to the global. Projects are asked to take a more determined stance on Monsanto's practices with regards to atmosphere, ecology, and laboratory.

### Client objectives

As in project three, your clients are climatologists working in Columbia's Lamont-Doherty Earth Observatory (LDEO), who partner with researchers from multiple disciplines and institutions around the world to study the impact of human activities on global climate. We will assume that LDEO is forming a downtown extension of its own campus to provide monitoring facilities within the downtown area and to invite greater dialogue and collaboration with scientists, collaborators, and specialists based in Manhattan. Scientists can work in the lab on a project by project basis. Please see the all-studio handout for further information on the client and their potential objectives and collaborators.

### Required Readings

Reyner Banham, *The Architecture of Well-Tempered Environment, selected chapters* – see ftp site.

### Recommended Readings

- on labs: *Laboratory Life* by Bruno Latour: 45-53, 69 (top)–72, photographs 91-103. (available in eBooks-see CLIO)  
*Pandora's Hope*, Bruno Latour  
“The world wide lab” in *Wired*, Bruno Latour
- on site: Wigley, Mark. “On Site,” Identity and Difference Catalogue (Milan Triennale 1996).
- on structure: *Balmond, Cecil*, “Bordeaux Villa” and “Kunsthall” in *Informal*.
- on program: *Kobayashi Hiroto*, “Processing Information” in *Toyo Ito: Sendai Mediatheque* ed. By Ron Witte

### Deliverables (Final Review)

Site plan including context and ground floor plan (1:50)

Building plans (1/8" = 1'-0")

Building sections (1/8" = 1'-0")

Program detail sections (1/2")

Massing model in site model 1/32" = 1'-0"

Physical model (1/8") with adjacent site information

Renderings (interior, exterior, sited, populated)

All other work necessary to explore/explain the project:

site sections, program diagrams, site photographs, site models, renderings, animations, animated diagrams, modified powerpoint, exploded axonometrics, walk-throughs, narratives, perspectives, interpretive models, advertising brochures, etc.  
note: All work to be presented in presentation boards, using layout to communicate ideas.

**Schedule:** UPDATED OCT 19

**week six**

Oct 12 Wed desk crits + portfolio review  
Oct 14 Fri desk crits

**Site**

**Week seven**

Oct 17 Mon no class  
Oct 19 Wed **PINUP**  
Oct 21 Fri no class

**Program**

**week eight**

Oct 24 Mon informal pinup  
Oct 26 Wed desk crits  
Oct 28 Fri desk crits

**week nine**

Oct 31 Mon desk crits  
Nov 2 Wed **MIDREVIEW Buell Hall 300N**  
Nov 4 Fri desk crits (10-2pm, or after 6pm)

**Site and Program synthesis**

**week ten**

Nov 7 Mon holiday  
Nov 9 Wed desk crits  
Nov 11 Fri desk crits (10-2pm, or after 6pm)

**week eleven**

Nov 14 Mon 3/4 REVIEW  
Nov 16 Wed desk crits  
Nov 18 Fri desk crits

**Structure/Enclosure**

**week twelve**

Nov 21 Mon desk crits (10-2pm, or after 6pm)  
Nov 23 Wed **PINUP**  
Nov 25 Fri THANKSGIVING

**Final Design Day + Affect / Effect**

**week thirteen**

Nov 28 Mon desk crits  
Nov 30 Wed desk crits  
Dec 2 Fri desk crits

**week fourteen**

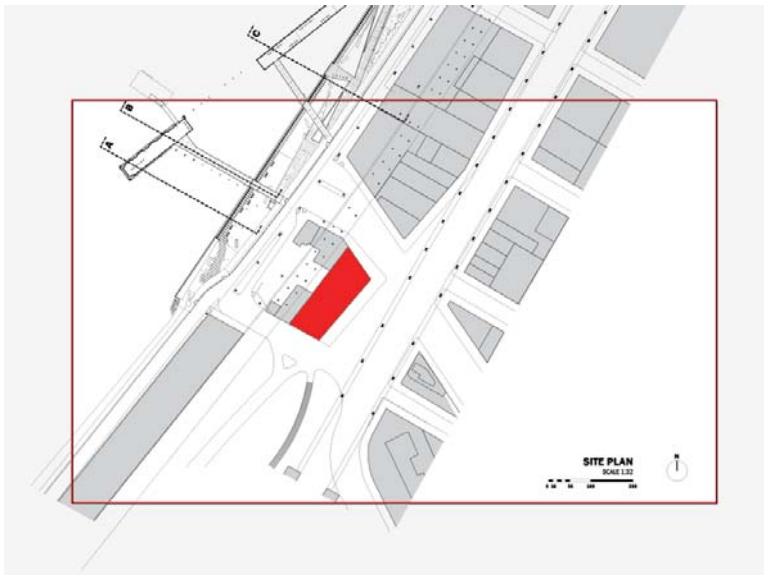
Dec 5 Mon **FINAL REVIEW Avery Hall 408/412**  
Dec 7 Tue **final review – other studios**

# SITE

Develop a site strategy by considering a range of social and formal issues: ground, foundation, massing, edges, void/solid relationships, landscape to building relationship, environmental factors on site, public experiences on site, infrastructures present on site, recent and proposed developments to the neighborhood, and possible urban programmatic relationships.

**1. site research drawing.** Combine at least 1 photograph, 1 section, and 1 plan of the site on one presentation board, and use layout, text, and diagramming techniques to highlight and analyze aspects of the site that are relevant to your project's concepts and intentions. Work is to be rigorous and selective – information is to be precise and measured but is to focus solely on your key themes. 900 square inches minimum.

**2. presentation quality site model.** Create one finished quality studio site model at  $1/32'' = 1'-0''$  (see below) and a shared rhino model.



- $1/32'' = 1'-0''$  (approx 24"x36")
- $1/16''$  chipboard for buildings, streets, sidewalks, and bridge columns
- $1/8''$  chipboard for bridge deck
- Two layers of  $1/2''$  plywood, mdf, or gator board base for total 1" thickness
- Building heights can be approximated via Google streetview: 12'/floor for residential structures, 16'-20' for warehouses
- All flat roof buildings to be built with a parapet of 4'
- No windows need to be modeled
- Continuous facades to be built as one piece. Party walls to be built as one-ply chipboard
- Building site footprint to be cut out of base
- Orient model edges on north-south axis.
- area approximately as drawn above

**3. site strategy model.** Experiment and develop design ideas using massing models at  $1/32'' = 1'-0''$  scale. Models are to be scaled representations of a massing scheme of roughly 22,400 sf on the site (i.e. do not model abstract forces, lines of sight, or movement trajectories). You are encouraged to consider how the precise use of materials inform your design ideas.

## Schedule

Oct 12 wed	desk crits	site research drawing v1 + portfolio review
Oct 14 fri	informal pinup	site research drawing v2 + finished site model + 5 massing models
Oct 17 mon	desk crits	develop site strategy models and research drawing
Oct 19 wed	<b>PINUP</b>	final research drawing + 1 final site strategy model

# PROGRAM

**1. Program diagram: organization.** Draw a diagram that represents hierarchies, groupings, and proposed relationships among all required programs in your building. You may redefine, replace, or add programs if you wish. Diagrams are to emphasize overall program logic through adjacency, associations, and sequences. One drawing @ 18"x24"

**2. Program diagram: action.** Draw a diagram that describes the precise activities/events of three crucial areas of your building. Action diagrams are to show people, objects, events, and effects, with a particular emphasis on hydroponics. This drawing is to develop and build on design ideas from Project 2. One drawing @ 18"x24"

**3. Physical model at 1/32" and 1/16" scales.** Create a 1/16" scale model of your building that includes circulation, and all major program or program groups. Develop your spatial and material ideas from Project 2 in relationship to program organization. At the same time, continue to create quick massing models testing the gestural qualities of your designs in the site model, at 1/32" scale.

Oct 24 Mon	pinup	2-3 organization diagram drafts + Action diagram v1 + Model v1 (1/32")
Oct 26 Wed	desk crits	Organization diagram v2 + Model v2 (1/32" and 1/16")
Oct 28 Fri	desk crits	Action diagram v2 + Model v3 (1/32" and 1/16")
Oct 31 Mon	desk crits	Action diagram v3 + Model v4 (1/32" and 1/16")
Nov 2 Wed	<b>MIDREVIEW</b>	<b>Buell Hall 300N</b>

## REVIEW DELIVERABLES:

### MID REVIEW, NOV 2 WED

- Research Drawing, Project 2
- Abstract models, Project 2
- Site research drawing
- Physical Massing model in site model (1/32" = 1'-0")
- Program diagrams: organization + action
- Physical Building Model (1/16" = 1'-0")

### 3/4 REVIEW DELIVERABLES, Wed Nov 2

- Research and conceptual diagrams covering Monsanto, Site, and Program
- Overall Building Plans (1/16" = 1'-0") - one for each floor, with main floor at 1/8" scale.
- Full Building sections (1/8" = 1'-0") - minimum 1 long section + 1 cross section
- Rhino Model development
- Two perspective views

### FINAL REVIEW DELIVERABLES, Mon Dec 5:

- Research, conceptual diagrams, and drawing layout to communicate project's approach to Monsanto, site, and program
- Site Section and plan (1:50)
- Physical Massing model in site model (1/32" = 1'-0")
- Overall Building Plans (1/16" = 1'-0") - one for each floor, with main floor at 1/8" scale
- Full building sections (1/8" = 1'-0")
- Physical Building Model (1/16" = 1'-0")
- Section/Building model (1/4" = 1'-0")
- Two perspective views