

MIT Department of Architecture

Core I Studio

Fall 2024

Instructors

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Teaching Fellow

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Teaching Assistants

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Meeting Times

Tuesday, 1:00-5:00

Thursday, 2:00-4:00

Friday, 1:00-5:00

Core I Studio Aims & Responsibilities

1. *Welcome* our new M.Arch cohort to the Department, the School, the Institute, the discipline and the profession.
2. *Orient* our students toward faculty, staff, students, and resources who/that can help them be successful.
3. *Frame* a cohesive series of design exercises that enable students to rehearse design processes iteratively.
4. *Encourage* an interpretive understanding of the design brief and context (early stages of the formulation of an "agenda").
5. *Nurture* incoming students' backgrounds, while questioning preconceptions of the constitution of architecture.

6. *Foster* a culture of drawing and making as an inextricable method of design inquiry.
7. Introduce and experiment with different modes of authorship.
8. *Instill* healthy and respectful work habits for the duration of the M.Arch and beyond.
9. *Draw-out* and cultivate a unique identity to the M.Arch cohort.
10. *Inspire* the pursuit of different forms of agency in architecture.

Studio Overview

The studio establishes foundations for architectural design through three exercises that build up in scope to engage issues of form, space, organization, structure, circulation, use, tectonics, and agency. The design process is introduced as an iterative form of research that enables students to develop conceptual ideas about architecture and translate them into representational, material, and physical manifestations. Each exercise introduces an increasingly fuller set of relationships with regard to site, program, and building systems with the last exercise emphasizing the interrelationship of these fundamental aspects of architectural design. The exercises will test both conceptual and analytical thinking as well as aid in the development of representational skills.

Studio Context

The exercises (posed as riddles) will bracket particular design dilemmas; they are designed to prompt students to articulate their own logics, to experiment with a range of existing biases, or to produce through the lens of appropriated intellectual positions. In a sense, precisely which ideological position students operate within is less crucial for the time being, and it is rather that they are trying on, experimenting with, and becoming well-versed in the critical and conceptual languages of a range of intellectual positions. The exercises in Core I are aimed at eliciting new forms of architectural coherence—architectures that are forward looking, yet able to communicate with a disciplinary history; and architectures that are able to articulate their unique polemic, and in turn are able to offer the means by which they may be critically-assessed.

Pedagogical Objectives

Our primary pedagogical objectives for Core studio I are:

- (1) The development of an ability to conceptualize abstractly and represent architecturally. This includes modes of drawing and modeling that are analytical and

observational (about discovery) and correlated modes of drawing and modeling that are declarative (about provocation).

(2)The development of two and three-dimensional dexterity, and an ability to conceive of form, space and matter. This considers “conceive” as both an act of comprehension, and as well as an act of imagination.

Completion Requirements

At the end of the course students should be able to translate an idea into an architectural proposition, and understand the intentions and consequences behind design decisions. Students should also be able to engage with an increasing level of design-research through iterative studies, and move fluidly between different modes and scales of design. Conventions of architectural representation and communication through drawing and modeling should be engaged with clarity and intentionality. Completion of each of the exercises, dedication and investment in process, and clarity in representation, as well as the overall progress of the semester will be fundamental factors in the final evaluation.

Schedule

The schedule of exercises is founded on the idea that each exercise increases in duration by approximately twofold; the first exercise is approximately 3 weeks, the second is approximately 4 weeks, and the third and final exercise is approximately 7 weeks.

The studio will hold meetings with the instructors primarily on Tuesdays (1:00-5:00) and Fridays (1:00-5:00) , with the occasional Thursday being substituted for a Friday where necessary based on holidays or final review(s). Thursdays (2:00-4:00) will be ordinarily utilized as days to hold either TA-run workshops, staff-run tutorials that are topical for the work being conducted in the studio that week, and/or mentorship talks. Mentorship talks are talks that provide an opportunity for students to understand potential career trajectories and identify commonalities between their outlooks and the outlooks of the faculty, laying the groundwork for potential, eventual mentor/mentee relationships.

Generally, activities on Thursdays will not last the duration of the studio session, which will leave some time for working in the studio, in preparation for the meetings with instructors the following Friday.

Note on Generative AI

We will not be teaching generative AI this semester. This, however, does not represent a stance of the instructors being against the usage of it as part of students' workflow; we ask that the use of it be acknowledged by the student. This may provide an opportunity for the benefits and limitations of the tool to be openly-discussed in the studio context.

Key Dates

Exercise 1 Final Review: Thursday, 9/26

Exercise 2 Final Review: Tuesday, 10/22

Exercise 3 Mid Review: Tuesday, 11/12 and Final Review: Monday, 12/9

Exercise 1 Section A (Jaffer and Sloan)

Sima Akdurak

Imani Bailey

Alisa Belaya

Nathaniel Chavez-Baumberg

Christina Cuningham

Valeria Duenas

Samantha Eddy

Zaynab Eltaib

Exercise 1 Section B (Carrie and Celia)

Constantinos Gallis

Ya Gao

Nandini Goel

Geoffrey Hazard

Amelia Kenna

David Lafond

Sunnie Li

Jonathan Lira

Exercise 1 Section C (Liam and Evan)

Linda Qian

Farnaz Seyed Hosseinkhani

Shengtao Shen

Serene Soyannwo

Joyce Tullis

Justin Wan

Catherine Yu

Studio Culture

Work in the studio will build sequentially. Therefore, commitment to incremental development on a daily basis is of paramount importance. Charrettes before reviews will not suffice. The demanding nature and pace of the studio course will necessitate your consistent attendance and will require that deadlines are consistently met. Working in the studio, instead of at home, will allow you to participate in the dialogue fostered by the studio setting. Magnification of your development as a designer is made possible by the collective nature of the studio. Group reviews are collective for good reason, as each of you has something valuable to gain from your peers. Therefore, attendance in the studio and for the duration of all formal reviews is required. Greater than two absences from studio without medical excuse supported by a doctor's note or verifiable personal emergency could result in a failing grade for the studio.

In an effort to promote healthy and respectful working habits, we find it our responsibility to articulate and implement a version of a "pens down" policy. We want to encourage habits which allow students to practice architecture in a way that demonstrates self-respect and underscores an awareness of the importance of our health. The intensity of architectural practice can be incredibly rewarding. On the other hand, we recognize the existence of unhealthy, all-consuming work cultures within the discipline. As a way to draw attention to this issue, and to help our students strike the appropriate balance between inspired production and reflective equanimity, we request that students

complete and submit their final deliverables by 9:00PM the evening before the Final Review of each exercise.

Exercise I

Design a stair to there and a stair to nowhere.

Considerations

This is an exercise that is, in part, concerned with the relationship between different modes of representation. What is discovered/argued for in one mode of representation might be complimentary yet different than what is discovered/argued for in another. The two modes of representation required in this exercise provide occasions to explore different sets of questions that are fundamental to the discipline of architecture. The 2D axonometric drawing, for instance, (which will be drawn in Rhino/CAD in two dimensions, as opposed to modeled in three dimensions) affords the opportunity to be challenged by, and revel in, the spatial and formal ambiguities that come with the limited information provided by the two-dimensional representation of a three-dimensional object.

Meanwhile, the model is somewhat less capable of being elusive formally given the facts of its physicality, but prompts one to consider aspects of the object such as its weight, its possible orientations, and its intrinsic solid/void relationship(s). The model also provides a way into considering part-to-whole relationships, to consider it as a kind of construct, defined by decisions made around the design and assembly of the formwork. In this case, it is no longer, by default, an abstract mass (as it might remain in the 2D line-drawing), but rather uses materiality and modes of formwork-assembly as a way to demonstrate ideas about its status as a work of architecture.

Each of the modes of representation should be considered opportunities to discover and convey complementary and overlapping ideas about the design. No single mode of representation, in this case, can adequately convey the concept(s) of the design fully, rather it is only through the strategic coordination of the suite of modes of representation that one is able to convey the concept(s) of the design to its fullest.

Guidelines

The bounding box that describes the volume within which the design will be made has proportions of 2:3:5. The size of the objects will be described by a bounding box of 4" x 6" x 10". The design should be contained within, as well as touch, each of the six sides of the bounding box of the specified volume. The eventual physical manifestations should be capable of resting in two orientations.

Students are asked to observe and manage the volume of mass that they are designing. The volume occupied by the mass of the object should constitute no more than 60% of volume, and no less than 30% of the volume, within the bounding box. This guideline is meant to encourage objects which are characterized by a significant amount of void space, to prompt considerations about composition, while preventing objects that are unsubstantial and too fragile to cast.

Large-Scale Assembly

After our mid-review, we will collectively curate a small selection of projects to continue to develop into large-scale assemblies. This will give us the opportunity to extend the projects' conceptual logics into questions of part-to-whole relationships. Students will build the large-scale assemblies in groups.

Schedule

Week 1

Thursday	9/5	Introductions, Teaching Team and Students Introduction of Core 1 Studio Introduction of Exercise 1 Axonometric and Work-Flow Workshop
Friday	9/6	Collective Pin-up Due: Design of Object in 2 orientations on 11"x17"

Week 2

Tuesday	9/10	Group Discussion
Thursday	9/12	Model-Making Workshop

Friday 9/13 Desk-crits

Week 3

Tuesday 9/17 Mid-Review of Exercise I

Thursday 9/19 Desk-crits with groups

Friday 9/20 Student Holiday, No Studio Meeting

Week 4

Tuesday 9/24 Desk-crits

Wednesday 9/25 Pens-down at 9:00PM

Thursday 9/26 Final Review of Exercise I

Mid-Review Requirements

Models

Axonometrics - 2, illustrating different orientations, 1/2 scale

Final Review Requirements

Large-Scale Assembly

Precedent List

Livio Dimitriu, Stairwells

Rachel Whiteread, Untitled (Stairs)

Josef Albers, Structural Constellations + Homage to Mexico + Graphic Tectonic

Incan stairs and unusable stairs

Pier Vittorio Aureli, The Marriage of Reason and Squalor

Giambattista Piranesi, The Prisons

M.C. Escher

Peter Eisenman, House VI

Do-ho Suh, Staircase III

Theo van Doesburg

John Hejduk

Auguste Choisy

Eduardo Chillida (Lurra G-191, Harri IV, Hildokatu III)

Enric Mestre

Isaac Brest (the works with blue painters tape)

Richard Serra, Equal, 2015

Olgiate, Visiting Center Swiss National Parc

Siah Armajani, Dictionary for Building, also 'Fallujah 2004'

Alice Aycock, functional and fantasy stair

Mary Miss (field rotation, mirror way)

House in Dazaifu by Hiroyuki Arima

Exercise 2

Design a hall; for one, for some, and for all.

hall:

1. an area in a building onto which rooms open; a corridor.
2. a large room for meetings, concerts, or other events.
3. an event at which an official addresses an audience by answering questions posed by individual members.

Concert Hall

Dance Hall

Dining Hall

Entrance Hall

Exhibition Hall

Great Hall

Hallway

Prayer Hall

Reading Hall

Town Hall

Village Hall

Considerations

During Exercise 2, students will work in groups of three or four to design a hall for the Department of Architecture community. The hall will be a place for events of several kinds and scales—in both size (space) and duration (time). This exercise will be an

opportunity for students to consider the body(ies) in relation to at least three scales of design—that of the furniture element, the room, and the building (and potentially beyond to urban scale). The role of the body will be considered in spatial, circulatory, and ergonomic terms. Simultaneously, we will be considering the hall as providing experiences for individuals, groups, and larger collectives.

The following events should be considered, among others, to be held in this hall:

The One (one from this list):

- Reading Nook(s)
- Study Carrel(s)
- Individual Prayer Space(s)

The Some (one from this list):

- Architectural Design Review (Small, 12 Individuals)
- Group Discussion Space

The All (two from this list):

- Architectural Design Review (Large, 30 Individuals)
- Lecture and Film-screening (Amphitheater Seating)
- Circulation through the Hall
- Temporary Exhibition

Other:

- Storage (Chairs, A/V Equipment, Lectern)

It is important that the program be considered not only in spatial terms that involve the calibration of dimensions to the scales of particular events, but also in terms of time. Understanding and designing around the frequency, duration, and cyclicity of events will be an important aspect to the project. There are a constellation of approaches to address the programmatic complexity of the project that should be considered; these range from, perhaps, a reliance on flexibility by way of mechanisms, movement and

mobility, to the usage of semantic and graphic tools, to more minimal and well-calibrated, fixed configurations. It should be noted that solutions engaging moving parts—projections screen, door swings, as existing—are likely the exception rather than the default/norm.

Context

The location of the hall will be what is currently known as the Long Lounge. There are several layers of context that the hall design will engage; some directly and physically, others abstractly or conceptually. The most immediate context within which the hall will engage is the walls, floor, and ceiling of the existing Long Lounge. The interior liner of the existing Long Lounge will be the primary site of your investigation. Also to be considered, is what is ongoing behind the surfaces of the walls, floor, and ceiling, in terms of the thickness of poche, the structural/tectonic conditions within the walls, and the spaces beyond the thickness of the walls. Sectionally, in the transverse, the Long Lounge is uniquely situated between the dome of the entry of 77 Massachusetts Avenue and the building's entablature. It is also special in that it has access to light by way of skylights. Maintenance of natural light through the engagement with these thresholds is encouraged. Planometrically, the Long Lounge is part of a system of corridors that should be maintained.

Guidelines

The themes around the objects that were designed in Exercise I will provide a launching pad for your conceptual design thinking for solutions for the hall. Not coincidentally, the proportions of the object that you have been working with in Exercise I are approximately those of the Long Lounge. The brainstorming process at the outset of this project will benefit from the speculation of the usage of the themes that manifested those objects. One direct way of thinking is, perhaps, that those objects provide new liners to the Long Lounge, and/or elements that host seating and lounging of varying capacities, and/or devices that bring ordering principles to the design of the hall. It is understood that the programmatic demands of the hall will ultimately transform the objects (and potentially the themes associated with them) designed in Exercise I to become something other in its manifestation as a proposal for the hall. That being said, there is much to be gained from the process of analyzing your “found objects” as an act of provocation and stimulation.

Please take stock of the parameters for variation that your objects contain, and speculate about their potential deployability in the context of the design of the hall, as a way to begin.

Modes of Representation

In Exercise 2 we will be focusing on three primary categories of representation that will help us to develop and convey the narratives that our designs support. We will be deeply invested in (A) the section and plan, as devices to illustrate the interiority of the hall, and (B) physical models of several scales and types—ranging from small study models to large dollhouse scale models. There will be a range of other modes of representation utilized in a supplemental capacity as well—scenario diagrams, interior elevations, reflected ceiling plans, perspectives, and collages, among others.

Groups

The groups have been curated by your instructors to bring similarly themed work in dialogue. Those themes are loosely reflective of work in Exercise 1, as well as projective of potentially rich themes that could be the origination points of ideas for Exercise 2. Groups were formed with an aspiration for diversity in terms of backgrounds in order to enrich the conversations.

Schedule

Week 4

Tuesday	9/24	Introduction of Exercise 2 Documentation Workshop
Thursday	9/26	Desk-crits (1:30PM) Due: 2-3 Drawings of Thematic Observations Coordinated Diptych/Triptych
Friday	9/27	Working Session in Groups

Week 5

Tuesday	10/1	Horizontal Pin-up in Groups Due: Sketch Models ($\frac{1}{8}'' = 1'$ or $\frac{1}{4}'' = 1'$), Plans/Sections ($\frac{1}{4}'' = 1'$) Documentation of Exercise 1 Due, 1:00PM
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Thursday 10/3 Mentorship Talk, Liam (2:00PM, 9-451)
Representation Workshop
Friday 10/4 Horizontal Pin-up in Groups
Due: Revised Design

Week 6

Tuesday 10/8 Student Holiday, No Studio Meeting
Thursday 10/10 Long-crits (3 groups)
Large Model Workshop
Friday 10/11 Long-crits (4 groups)

Week 7

Tuesday 10/15 Pin-up in Groups
Due: Large Model Development
Thursday 10/17 Courageous Conversations Option, Check-in (Carrie)
Friday 10/18 Courageous Conversations Option, Check-in (Mohamad)

Week 8

Tuesday 10/22 Final Review of Exercise 2

Final Review Requirements

Large Model, 1/2"=1'

Study Models

Plans & Sections, 1/4"=1'

Interior Elevations & Reflected Ceiling Plan (as relevant), 1/4"=1'

Scenario Diagrams

Perspectives

Precedent List

Furniture/Building/Body:

Ettore Sottsass, New Domestic Landscape (1971)

Joe Cesare Colombo, The Total Furnishing Unit (1972)

Archigram, Living (1990)

Enric Miralles, Ines Table (1993)
Alison and Peter Smithson, Collectors Table (1983)
Imi Knoble, Raum 19 (1968)
Franz Erhard Walther (1967)
Archigram, Cuchicle and Suitloon (1967)
Hans Hollein, Working in a Bubble (1969)
Micheal Rakowitz, ParaSITE (1998)
Shinguru Ba, Naked House, (2000)
Wooden House, Sou Fujimoto, (2006)
Alles Wird Gut Architekten, Turn-on (2000)

Events-based:

Yokohama Port Terminal Time/Program Diagram, OMA
Sarah Wigglesworth Table Drawing
Bernard Tschumi, La Villette

Dollhouse-sized models precedents:

Christian Kerez
Junya Ishigami

Other:

Bruno Munari, Abitacolo (1971)
Eilee Gray, Extending Wardrobe (1933)
Ikea Disobedients (2012)
Le Corbusier, Le Carbanon, Roquebrune (1952)
Pierre Chareau, Bernard Bijvoet, Maison de Verre (1932)

Exercise 3

Design a building that is a part and stands apart.

It is a container for collection, a space for projection, and a center for connection.

part:

1. a piece or segment of something such as an object, activity, or period of time, which combined with other pieces makes up the whole.
2. some but not all of something.

apart:

1. (of two or more people or things) separated by a distance; at a specified distance from each other in time or space.
2. to or on one side; at a distance from the main body.

Context

In the near future, the MIT SA+P will migrate to establish its new home in the Metropolitan Warehouse. In part, to commemorate this move, we will design a building that will be an archive to house the work and research of MIT SA+P faculty and students, an exhibition hall to display and curate work—both new and from the archives—an auditorium to hold events, symposia and lectures, and a visitor center to provide linkage to the public. The building will be both *a part of* the MIT institutional context as well as be *apart from* it, distinguishing itself as an entity that spans MIT and the public.

The site is located within the court framed by Buildings 1, 3, 5, and 7. MIT has a long history of building in on itself, and this strategy of growth through increased density has many instantiations across campus. Sectionally, the site is incredibly rich, having intriguing characteristics at multiple scales. At an architectural scale, there are sectional shifts that will need to be negotiated as one connects between two, three, or all four existing buildings. At an institutional scale, there are opportunities to engage the subterranean network of corridors that exist under much of MIT's campus. And at an urban scale, there are rich challenges to be worked through in order to connect the new building to the city.

We will begin the exercise by developing thorough understandings of the complexities of the site through close observation. As per the outset of Exercise 2, students are asked to consider one of a series of lenses to perform a close reading of the existing physical site conditions. Aspects of the four buildings that surround the site to be considered are elevational patterns and differences, sectional shifts and floor-plate spacing, plan

configurations in the zones that meet the walls that define the court, and the definition of structural patterns across the four surrounding buildings. Other aspects of the site to be considered are the sectional characteristics of the ground of the court in two directions, ground plans of the neighboring buildings in anticipation of the eventual requirement to connect the new building to the public, and the sunlight and sightlines that penetrate the court.

It would be beneficial to consider the act of drawing upon the existing conditions as an exercise in *drawing out* new information, new relationships, that are, perhaps, not readily observable or that have been until now overlooked. This allows the exercise of site observation to be a generative one, revealing previously unknown relationships within the site and, in turn, providing opportunities to intervene. This method of observation should yield a discovery about the site that could become the underpinning of a project.

Acts of *drawing out* begin by looking closely. Using the lenses, below, as vehicles for your observations, draw out one or more existing condition(s) in a minimum of two drawings. Emphasis is to be placed on *what you see*, or the material content of the actual building site being observed. Additionally, please consider the impact of *how you see*, or the techniques by which observations are translated into drawing. Techniques of emphasis may include selective use of color, contrast through increased detail, lineweight, selective elimination of information, or hatches, to name a few. Include dimensions and annotations where needed. Possible drawing types include floor plans, reflected ceiling plans, exterior and interior elevations, building and wall sections. Axonometric, oblique, or combinations of these views are permitted and encouraged.

Observational Lenses

Elevations

Sections

Plan-Zones adjacent to Court

Structure

Site Sections and Subterranean

Site Plan through Buildings to Public

Sunlight and Sightlines

Program

Storage - 11,500 sq. ft. (Approximately 50%)

Archive (Storage of flat files, models, and texts.)

Conservation Lab

Freight Elevator

Research - 4,600 sq. ft. (Approximately 20%)

Reading Room (Visiting the objects from the archive.)

Workshop/Classrooms

Materials Library

Event - 6,900 sq. ft. (Approximately 30%)

Auditorium with A/V Room (Double-height; Provide raked seating.)

Gallery

Visitor Center

Circulation (As needed; typically 30% additional sq. ft.)

Total - 34,500 sq. ft. (+ approximately 10,000 sq. ft. dedicated to circulation)

Considerations

Students should be thinking through the distribution of program following the conceptual logics that have been established in observational drawings at the outset of the exercise. Sequencing and access are two important lenses through which to consider the ordering of program. Students should be mindful of the different itineraries that constitute the use of the building. There are members of the public, visitors, and the various members of the MIT community—staff, researchers, faculty, students. It is likely that each of these user groups has a different itinerary throughout the building. The mapping of these distinct yet interwoven itineraries should be regarded as an important way to understand and evaluate the organization of the building.

Note that there are aspects of the program that are designed, from a pedagogical perspective, to provide opportunities to develop and demonstrate three-dimensional dexterity. The area of the program, when the square footage of the circulation is included, is more than 1X the square footage of the area of the courtyard. Additionally, the Auditorium with A/V Room is required to have raked seating and should be a bonafide auditorium with opportunities for distinct lighting set-ups, etc.; this will yield a significantly larger sectional dimension than the rest of the program. Each of these aspects of the program should be addressed explicitly, and understood to enrich the massing and/or composition of the parts of the building.

Schedule

Week 8

Thursday 10/24 Mentorship Talk 2, Carrie (2:00PM)
Introduction to Exercise 3 Part A

Friday 10/25 No studio

Week 9

Tuesday 10/29 Collective Discussion, Observational Drawings

Thursday 10/31 Mentorship Talk 3, Mohamad (2:00PM)

Friday 11/1 Collective Discussion, Conceptual Models, 1/64"=1'

Week 10

Tuesday 11/5 Desk-crits
Due: Next round of Conceptual Models, 1/64"=1', One Plan and
One Section, 1/32"=1'

Thursday 11/7 Mentorship Talk 4, Skylar (2:00PM)
Workshop/Clinic

Documentation of Exercise 2 Due, 5:00PM

Friday 11/9 Veterans Day, No Studio Meeting

Week 11

Tuesday 11/12 Mid-Review

Due: Model, 1/32"=1', Refined Plans/Sections, 1/32"=1',
Site Plan

Thursday 11/14 Positions and Core 1 Studio Joint Session (2:00PM)

Friday 11/15 Desk-crits

Due: One Plan and One Section, 1/16"=1'

Week 12

Tuesday 11/19 Desk-crits

Due: Refined Plan and Section, 1/16"=1'

Thursday 11/21

Friday 11/22

Week 13

Tuesday 11/26 Desk-crits

Thursday 11/27 **Thanksgiving Day, No Studio Meeting**

Mentorship Talk 5, Rosalyne (2:00PM)

Collective Discussion

Due: One Plan and One Section, 1/16"=1', Three Views

Workshop/Clinic

Friday 11/28 **Thanksgiving Day, No Studio Meeting**

Potluck (Mohamad's place, 3:00PM)

Week 14

Tuesday 12/3 Penultimate Pin-up

Due: Plans and Sections, 1/16"=1', Perspectives, In-Progress

Model, 1/16"=1'

Thursday 12/5 Long-crits (Half A)

Friday 12/6 Long-crits (Half B)

Week 15

Sunday 12/8 Pens-down at 9:00PM

Monday 12/9 Final Review of Exercise 3

Exercise 3 Mid Review: Tuesday, 11/14 and Final Review: Monday, 12/11

Exercise 3 Final Review Requirements

Conceptual Models, 1/64"=1'

Final Model, 1/32"=1' or 1/16"=1'

Site Plan

Plans, 1/16"=1'

Sections, 1/16"=1'

Perspectives