

**DESIGN VI/ ARCH 41121 (& AME 47431)**

BUCCELLATO STUDIO SPRING 2015  
Environmental Stewardship through Interdisciplinary Research and Design

**PROJECT 2: COMMUNITY: TRADITIONS, CULTURE, AND PLACE:**

A new neighborhood masterplan and model sustainable multi-family residences for  
Graduate student housing at the University of Notre Dame

ISSUED: FEBRUARY 6, 2015

*“The best way to validate a community as a prototype is to (first) show it as a meaningful type.”<sup>1</sup>*

**Introduction:**

In response to both the recent and projected growth of the graduate population on our campus, the age and condition of specific graduate resident complexes, and the increasing expectations of students and families living on (or near) college campuses, the University acknowledges the need to address the growing and mission-critical challenge of graduate student housing and infrastructure.

In support of the University’s goals, for the duration of the semester you will undertake the design of a new neighborhood for graduate students at Notre Dame, including the design of model multi-family residential buildings on a recently acquired site east of campus. While your proposal will be focused on the development of the identified site – an approximately 4 acre parcel in the Morningside Neighborhood – you are expected to thoughtfully incorporate the population and values of the *existing* married graduate student community at the University of Notre Dame, known as The University Village, *within a broader vision (yours) for the north Twyckenham/ Morningside/ east campus corridor.*

In doing so, you will advance your expanding understanding of the relationship between place and culture and meanwhile help the University maintain and promote the unique – and beloved – values, customs, and traditions of the current resident population housed in University Village. Your design proposals are intended to provide greater insight into what can be learned *and meaningfully retained* from this particular existing community while establishing new standards for environmentally and culturally sustainable multi-family residential housing on our campus – and elsewhere (see quote above).

Through this project, you are expected to consider the following: **How does our built environment shape us, and us it, and what can we learn about crafting lovable, livable, and sustainable communities through the study of this unique segment of our campus population? And, how do we assert – and insert – those values into the broader context of the site? How can this effort by the University serve to further identify and perhaps better define the character and direction of future development along the Twyckenham/ Morningside/ east campus corridor?** Refer to the course syllabus for the overarching Project objectives and pedagogical goals (Page 2).

**Methodology:**

You will undertake the Project in several phases, involving whole studio collaboration, small group collaboration, cross-disciplinary collaboration, and individual work.

---

<sup>1</sup> From *Parallel Utopias*. Richard Sexton, Chronicle Books (1995).

## PROJECT 2 - PHASES:

1. **Understanding Context: Site Analysis and Precedent Research** (Project 2a)
2. New Neighborhood Master Plan & Comprehensive Building Design (Project 2b)
3. Comprehensive Final Report (Project 2c)

Using your knowledge of the specific ways that climate and context – the simultaneous consideration of locality, function, resources, program, and culture – influence building design and performance along with your recent employment of these ideas and techniques in the design of small residential structures in the context of highly critical circumstances, you are well prepared to consider and contribute the design of a new neighborhood and the next generation of high performance residential buildings at the University of Notre Dame. Of course, as you know from your two recent projects for this course, building performance is not only tied to resource and energy consumption; the design of high performance, site responsive architecture involves the thoughtful – and simultaneous – consideration of *both* the physical and cultural context of a given site, the specific functional requirements, as well as regulatory and other related (i.e., budget) constraints.

### **Project 2a: Understanding Context -- Site Analysis & Precedent Research**

In order to understand how to best serve the needs of this particular community, you must necessarily become familiar with the site and all of the various external forces (largely climate) upon it. In addition to the physical forces on the site, you must also establish a firm understanding of the resident community, the strengths and weaknesses of the current residential complex, including its unique culture and traditions, and the current and future needs of graduate students living at the University of Notre Dame, particularly those who are married and married with families. Further, as the University of Notre Dame continues to embrace sustainability campus wide, sustainable design concepts, regulatory compliance, and energy codes (both state, national, and international) are also driving forces that need to be understood and recognized.

Over the course of the next two weeks, you will undertake a series of studies that will help you establish a Basis of Design (or critical design goals/ values) for the new neighborhood and residential buildings:

#### **Part 1: Site Analysis:** (ARCH – teams of two)

Given your recent and thorough exploration of the external forces present on any given site, you will apply your increasing survey and analysis skills to understand and *thoroughly document* both the natural and man-made physical conditions, liabilities, and opportunities present at the new Morningside site. Suggestion: studio may decide to divide the study and documentation of specific site characteristics and documentation among the teams.

#### **Part 2: Precedent Research:** (ARCH – individual)

Are there existing prototypes, similar communities situated in similar urban contexts, with analogous values and needs that could serve as good examples – precedents – for how one might approach the design of a new neighborhood for this specific community? Your exposure on Monday (2/9) to the existing University Village complex and analysis of the 2014 Resident Survey, along with your visit to the Morningside/ Twyckenham site are important opportunities to begin thinking about useful precedents for this project and *its place in the surrounding (yet to be fully developed) context.*

#### **Part 3: 2014 Resident/ Community Life Survey Analysis** (ARCH Studio):

Using the data collected by your peers in this studio last spring, you will thoughtfully evaluate the outcome of the 2014 Resident/ Community Life Survey of University Village Residents to gain useful insight into your clients and who your design proposals will serve: who they are, what are their values, customs, traditions, needs, and what are the dominant issues of graduate residence life at Notre Dame?

**Part 4: Building Energy Codes and Performance Requirements** (ENG – teams of two & team of 8)

With the increasing emphasis at the University on sustainability and sustainable design, you must answer the question: How must your building(s) perform to be considered sustainable? Using existing building energy codes including from the United States, State of Indiana, and international bodies, define the performance metrics that will be used to determine if your designs are 'sustainable'.

Your successful completion and presentation of Project 2a requires the following (at minimum):

ARCH: Resident Survey and Analysis (evaluated and presented as a studio)

Documentation and Analysis Drawings (ARCH individual):

- Site Analysis (including zoning and adjacency studies/ diagrams)
- Precedent Research *and* Analysis
- Bibliography

ENG: Building Energy Codes Survey and Setting of Performance Metrics (ENG team of 8, present at studio - Powerpoint)

Documentation of Building Energy Code Analysis (ENG teams of two):

Technical Memo overviewing various building energy codes, essential definitions and parameters, and how the performance metrics are defined for this project.

**DEADLINE FOR PROJECT 2a & REVIEW: MONDAY, February 16 @ 2:00 pm**

Presentation Schedule:

- 2:00 Engineering Energy Code Survey and Performance Metrics
- 2:30 Site Analyses & Survey Analysis
- 3:00 Precedent Studies

**DEADLINE FOR PROJECT 2a ARCH DOCUMENTATION: MONDAY, February 16 @ 1:30 pm**

**DEADLINE FOR PROJECT 2a ENGINEERING DOCUMENTATION: FRIDAY, February 20 @ 2:00 pm**