9:00am Opening Remarks and Introduction to Session I

Session I: 9:15-10:30am
Design-Build: Estimating and Evaluating the Built Environment


In 2008 a group of professional cost estimators began collaborating on a project to develop a standard for the U.S. National BIM Standards (NBIMS). The project’s goal is to define the information exchange requirements for cost estimating in BIM specific to new construction for commercial facilities. The information exchange requirements are the basis for an information delivery manual (IDM) and explicitly state the information exchange required from the designer to estimator. Without accurately defined requirements for information exchange, estimators run the risk of receiving a BIM that is populated with inaccurate or incomplete project information necessary for a cost estimate. This presentation reports the workgroup's progress on the project.

Tammy McCuen, Associate Professor, Construction Science

Space Utilization—Introduction to an Unobtrusive Method of Building Analysis for Evaluation and Programming

The most valuable assets of organizations are their facilities second only to human capital. Facilities do not only provide an environment that can enhance the performance of their users, house the operations, but also contribute to the desired image of an organization through their aesthetic and utilitarian qualities. For users to perform daily tasks at a certain level of comfort within these facilities requires a layout that reflects the type and sequence of activities of the organization and the efficient use of spaces of different functions. From time to time organizations go through changes in their daily and long-term operations that, in turn, make new spatial arrangements necessary. As a result of such changes, there would be need for a growth in certain room types and their support areas, whereas certain type of spaces would shrink in size and utilization or simply converted to other uses. Before any of these changes are planned and implemented, it is only rational to measure how efficiently the existing facilities—buildings, spaces—are being used and if the desired changes can be realized without costly building additions and alterations. The research first presents utilization metrics, such as time and occupancy related measures, followed by a new and combined umbrella of derived metrics, namely space use intensity (H), yielding a single index of utilization (E), which combines the two previous measures as a means for an understanding, rooted in decision-making for normative (programming), and explanatory (evaluation) roles of utilizations of both existing and planned buildings. Throughout, the method, its concepts—variables and their relationships are introduced by means of examples of practical and simplified calculations.

Eren Erdener, Associate Professor, Architecture

Residence Hall for the College of William and Mary
Design-Build Institute of America (DBIA) Competition

In September 2013, Construction Science students Holly Snow, Martin Kornhaas, and Adrian Sopher collaborated with Architecture student Erik Medina to compete in Phase I of the Design Build Institute of America’s second annual student competition. The DBIA Student Competition serves to challenge and inspire the next generation of practitioners through applying design-build best practices to successfully propose a delivery solution and engaging students from both design and construction disciplines. Phase I required teams to respond to a Request for Qualifications (RFQ) for a new Residence Hall for the College of William and Mary within one week. This integrated team won first place regionally and fifth place nationally.

Martin Kornhaas, Ardmore, OK: B.S. in Construction Science
Erik Medina, Oklahoma City, OK: Bachelor of Architecture
Holly Snow, Montague, MI: B.S. in Construction Science
Adrian Sopher, Oklahoma City, OK: B.S. in Construction Science

Faculty Advisors: Tammy McCuen, Associate Professor, Construction Science
Lee Fithian, Associate Professor, Architecture
Hurst, TX Justice Center: Proposal for Construction Manager at Risk Services
ASC/TEXO Region V competition

Students competed against teams from other schools in the region on a project selected by a DFW-based contractor. With a written proposal and formal presentation, the teams responded to solicitation for Construction Manager at Risk services for the new Hurst Justice center in Hurst, TX. The project scope contains new construction of a four story administration and courts building with three levels of parking as well as renovations to the existing administration building and jail. Teams were given the RFP at 8:00 am on Saturday, February 22nd and the written proposal was due at midnight that same day with the presentation the following Monday.

Dylan Arnold, Edmond, OK: B.S. in Construction Science
Jessica Blankenship, Oklahoma City, OK: B.S. in Construction Science
John Bledsoe, Chouteau, OK: B.S. in Construction Science
John Harlow, Oklahoma City, OK: B.S. in Construction Science
Caleb Jenkins, Moore, OK: B.S. in Construction Science
Omar Salas, Oklahoma City, OK: B.S. in Construction Science
Jared Scarborough, Oklahoma City, OK: B.S. in Construction Science
Tyler Sublett, Norman, OK: B.S. in Construction Science

Faculty Advisor: Matt Reyes, Assistant Professor, Construction Science

 Session II: 10:45am-12:00pm
Design Education and the Role of Competitions

Philosophical Foundations for Design Education

An historical exploration of design education and practice coupled with a philosophical investigation of the conditions that distinguish design education should provide a more robust understanding of what it means when we talk about design. There has been much written on design teaching, learning, thinking, and even design knowing, but little has been written on what grounds all of these variously related ideas in relation to design education. A foundation for design education allows for critical conversations about teaching methodologies, learning strategies, and most importantly the conditions that are sufficient to distinguish design education as essentially different from other forms of education.

Thomas Cline, Assistant Professor, Architecture

DAME
RDI International Student Store Design Competition

Katie Keck, Tulsa, OK: Bachelor of Interior Design

Faculty Advisor: Hans-Peter Wachter, Associate Professor, Interior Design

Fresh Start
RDI International Student Store Design Competition

Small decisions can have a large impact in a space. Generally, we all have preferences on color, as a designer, however, we base the decisions we make about a space on good reason and with a purpose. Understanding the psychology and theory behind color allows for well-educated choices throughout the design process. In the retail industry, the customers’ buying behaviors determine the success of a business. Strong design research and information gathering, as part of the store programming, will enable the interior designer to influence behavior and the well-being of a customer in a store. Thus, the design also influences money spent and the customers’ overall experience. The presentation of "Fresh Start" summarizes my research and highlights the store experience achieved.

Melissa Reddout, Midland, TX: Bachelor of Interior Design

Faculty Advisor: Hans-Peter Wachter, Associate Professor, Interior Design

Integrating Structures and Design in the Studio

Simple longitudinal boxes are often mistaken as reductions of architectural design and form. Big box retail (Wal-Mart) and pre-fabricated metal buildings (Butler Corporation) may be in part responsible for this misconception (Yu 2012). Our academic exercise, however, reveals the prefabricated paradigm holds a variety of lessons for the architectural student. One strategy foregoes the student’s agonizing search for a project concept and replaces it with a restrictive covenant. Student’s initial floor ‘pattern’ in the industrial bay helps forge structure, connections, and framing plans. This paper challenges pedagogical biases and prejudices of form-based exercises as the sole producer of aesthetic architecture (Gonchar 2009).

Marjorie Callahan, Associate Professor, Architecture
**Indy Park**
National Organization of Minority Architects Student (NOMAS) Design Competition

As the area around downtown Indianapolis, Indiana faces problems of high building vacancies, the community itself is taking initiatives to increase the retention of its people. This commitment prompted an initial design concept focused on supplying tools to help facilitate the re-growth of the city by its motivated patrons. Designed around a community center, the proposed INDY PARK neighborhood plan focuses on the key elements of community services, transportation, sustainable practice and income-producing mixed-use development with the intention of creating a safe environment for the community to heal itself.

The community lies in the middle of the site and is the predominant feature that welcomes transit users and pedestrians coming from the main entryway of 25th street. The location also sets the Community Center in perfect viewing distance to the affordable housing on the south end of the site, as well as framing the skyline view of Indianapolis to the Southwest. From here, the center impacts the rest of the site and influences the formation of other green community spaces.

These spaces are connected by a north-south axis that acts as a main pedestrian artery for the site. It also creates an opportunity to introduce a strip of retail, which will offer everyday services for the community. Placing these ammonites along the west side facing the majority of the residential context introduces an opportunity to comfortably serve both those in the existing homes as well as those who will be moving into newly built residential units. Three other secondary pathways, all derived from the surrounding context, draw members into the new community space while allowing it to further integrate itself into the neighborhood.

Lena Detter, Tulsa, OK: Bachelors of Architecture
Oscar Estrada, Oklahoma City, OK: Bachelors of Architecture
Ana Hernandez, Oklahoma City, OK: Bachelors of Architecture
Erik Medina, Oklahoma City, OK: Bachelors of Architecture
Lisa Om, Dallas, TX: Bachelors of Architecture
Ana Ruiz, Los Cabos, Mexico: Bachelors of Architecture
Mehdi Shahidi-Anvar, Tehran, Iran: Masters of Landscape Architecture
Garrett Stouffe, Flower Mound, TX: Bachelors of Architecture

Faculty Advisor: Dave Boeck, Associate Professor, Architecture

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12:00pm-1:30pm: Lunch in the Gould Hall Living Room

**Session III: 1:30pm-2:45pm**
Designing, Regulating and Improving the Built Environment

National Weather Center Green Roof Experiment

Mehdi Shahidi-Anvar, Tehran, Iran: Masters of Landscape Architecture

Faculty Advisor: Tom Woodfin, Professor, Landscape Architecture

A Reverence of Historic Preservation

This Great Plains, Oklahoma-based, project focused on authentic Historic Preservation issues associated with sensitive architectural design and planning in a small community. The historic site was located in Blanchard, OK. Constructed in 1930, the building originally functioned as a Methodist Church. The vision, goals and requirements of the Blanchard City Council were developed to meet industry standards and guidelines with a conscious effort to preserve the site’s existing heritage. Through genuine practice and implementation, preliminary design documentation was provided to the client for pursuit of soliciting further historic preservation-focused design by a professional Architectural & Engineering firm.

Zacary Miller, Norman, OK: Masters of Architecture

Faculty Advisor: Ron Frantz, Associate Professor, Architecture

A for Play!

The task was straightforward; design and build a playhouse to be raffled for a charitable organization. A team consisting of students, volunteers, and faculty banded together to not only meet the requirements but to exceed the typical preconceived ideas of a totally enclosed miniature home. Based upon the needs of juvenile clients, the design team focused more on “play” than on “house” when working out conceptual ideas. The playful design was based upon the enclosure being partially open to allow air flow, sunlight, and the ability for the
inhabitants to have an aural connection to the outside. The idea of having partially open space on the lower level, a mere 5’-0” x 5’-0” footprint, flanked by stepped bands of cedar and cypress yielded a particular acoustical presence. The space is not only visually unique, but the selection of materials, how they were cut and assembled, and the scale in relation to a seated child enhance the fun factor by creating an enveloping and somewhat amplified acoustic. This project provided pedagogical opportunities within an atypical learning environment. The final inhabitable playhouse exceeded our visual and acoustical expectations of a small space and proves acoustics “plays” an intrinsic role despite occupant age.

Dan Butko, Assistant Professor, Architecture

Community Aesthetics: How Far Can a Community Go to Prescribe Aesthetics?

Relying on the police powers, municipalities frequently seek to regulate on premise signs in an effort to reduce visual blight. They often rely on interpretations of sign law that do not fully spell out the First Amendment protections afforded to on premise signs. The underlying basis for these regulations is that unattractive places are impediments to a healthy commercial economy, as well as the overall psychological health and well-being of city residents. The courts are divided as to the legality of sign regulations that are primarily grounded in aesthetics. This presentation examines the appropriate scope for municipal regulations related to on premise signs.

Dawn Jourdan, Associate Professor, Regional and City Planning

Session IV: 3:00-4:15pm
Place-Making and Collaborative Design

Addition to Hillcrest Elementary, El Reno, Oklahoma

The addition to Hillcrest Elementary was designed in response to the need for a secure underground storm shelter able to accommodate 600 children and staff. Our team maximized the value of the space by creating a flexible multi-purpose auditorium that serves as a community shelter and also a gathering place for large meetings and group activities. Technology-sensitive classrooms above ground accommodate all possible needs of advanced future generations. Locally manufactured, durable, and cost-efficient materials are used throughout the addition; other sustainable initiatives include maximum daylighting, natural ventilation, and individual thermal control in every classroom, and a proposed learning garden with native drought-resistant landscaping which reduces the need for maintenance. Additional improvements include the installation of secure-access doors on every hallway, a dynamic pavilion and entry sequence at the main entrance, and a new landscaped, terraced parking lot.

John Bledsoe, Chouteau, OK: B.S. in Construction Science
Kymber Kincanon, Slapout, AL: Bachelor of Architecture
Jourdan Neustadt, Dallas, TX: Bachelor of Interior Design

Faculty Advisors: Tony Cricchio, Assistant Professor, Architecture
Tammy McCuen, Associate Professor, Construction Science
Elizabeth Fober, Assistant Professor, Interior Design

Sulphur Dell: A Bridge for Community
Gerald D. Hines Urban Land Institute Student Design Competition

Sulphur Dell, the former site of an old and historic baseball stadium located in Nashville, TN, sits at the intersection of two neighborhoods that currently lack diversity. Its location offers the perfect opportunity for a new sustainable development to act as a bridge between the existing communities. The proposal involves a new stadium sitting in the heart of the neighborhood, the influx of people drawn to the area on game days are supported by the increase in density and other various attractions in the area. Firmly rooted in the principles that make Nashville a great place to be; the new Sulphur Dell sustainable development proposal brings with it a strong sense of civic pride, a rich artistic culture, and a distinct focus on healthy living. These ideals are promoted through maximized open public spaces, a focused support of athletics and the arts, ample greenways, and accessible options for healthy eating; with these improvements, Sulphur Dell will become a bridge for an increasingly diverse and vibrant community.

Amber Conwell, Ft. Myers, FL: Bachelor of Architecture
Leah Schroeder, Guthrie, OK: Bachelor of Architecture
Anna Sipriko, Moscow, Russia: Masters of Regional and City Planning
Balaji Sridharan, Chennai, India: Masters of Business Administration
Yichen Wang, Beijing, China: Bachelor of Architecture

Faculty Advisors: Ron Frantz, Associate Professor, Architecture
Shane Hampton, Institute for Quality Communities

Classical Definition of Architectural Character and the Concept of Place-Making
The question of exterior and interior and the three-dimensional interaction between them was an essential consideration in many architectural treatises, from Alberti to de l'Orme. In Place-Making, the importance of an opening as a medium for transition is included among the architectural principles advocated by the classical method of composition. These principles comprise environment, terrain, organization, walls, ceiling and opening. The concept of character is particularly associated with the method of design at the Ecole des Beaux-Arts which demanded that all architectural compositions start with a study of the plan. Although to some extent facades and interiors were also envisioned, the plan was the initial inspiration for the design; the former would be the result of the latter. Guadet pointed out that a beautiful plan is one that promises and permits beautiful interiors and facades. When composing their plans, Beaux-Arts architects, usually began with an investigation of the character of the building. This subsequently determined the 'parti'. In other words, "...the elements of the plan should be regulated by an intelligent comprehension of the character and purpose of the place-making.

Khosrow Bozorgi, Professor, Architecture

Interactive Synchronicity
Association of Collegiate Schools of Architecture (ACSA) Submission

Professors and practitioners typically evaluate small-scale models and drawings produced for academic project proposals by referencing knowledge rooted in personal experiences of full-scale spaces with similar materials and properties. Although necessary as a common instructional denominator, this is not the only method of imparting knowledge. The language, development, and methods of architecture can be complemented by full-scale interactive constructs, serving as platforms for augmenting cumulative learning through participatory, experiential, and sometimes experimental means.

Architecture is a dynamic framework of research, analysis, and execution, providing a specific sculpted experience. Congruent with Constantin Brancusi’s proclamation, "architecture is inhabitable sculpture," interaction with architecture is necessary for personal experience. The five human senses inform first-person participants, determine opinions, and subsequently conjure emotions. Opportunities to build full-scale constructs quickly introduce students to a series of challenges predicated by structure, connections, safety, and a spirit of inquisition to learn from human interaction.

The College of Architecture and student chapter of AIA annually sponsor C3 Week: five days of activities, guest lectures, and exhibits focused upon supporting collaboration, creativity, and construction. To promote the events, a student-designed and constructed installation is placed on display in the college’s gallery for campus-wide appreciation. Students are encouraged to demonstrate lessons learned, be creative, invite participation, and rouse commentary. The 2013 C3 Week installation was an interactive intervention undertaken by two students, allowing visual translation of acoustical impulses to educate, entertain, and evoke continued interest in architectural sensory design. The students developed and calibrated the installation based upon the gallery's lively acoustics and outward display to the campus, employing excessive reverberation time and resonance as a method of visually demonstrating the persistence of sound waves beyond typical human hearing range.

The amalgamation of aluminum angles, frosted acrylic, cellophane, LED lights, and acoustical sensors defined particular textures, translucencies, material intricacies, and relational adjacencies only conveyable via the full-scale interaction. People quickly realized the lights were triggered by airborne impulses such as voices or laughter, impact impulses such as footfall or slamming doors, and equated continual light flutter to lingering impulses outside human perception. Some participants were instantly provoked to make more or specific sounds to cause illumination, while others attempted to cease the dancing lights. People physically inhabiting the space were the participants and critics - not by their words as comments in a formal jury setting, but by their real-time reaction to their personal interaction. The students provided an amplified speaker tower, allowing observers and participants the ability to project samples of music as a method of interacting with familiar media. The various frequencies triggered a tempo-driven synchronized motion of lights, inciting impromptu moments of karaoke.

The learning process complemented studio-based instruction by reiterating an awareness of health, safety, and welfare through hands-on building and interaction with physical materials and elevated architectural education to a series of interactions with people. This poster celebrates the 2013 C3 Week project as a teaching tool outside the common formats of studio project representation while enticing classmates, faculty, and complete strangers to interact with inhabitable space.

Haven Hardage, New Boston, TX: Bachelor of Architecture
Michelle Oliphant, Edmond, OK: Bachelor of Architecture

Faculty Advisor: Dan Butko, Assistant Professor, Architecture