Collaborative Team: Logan, Marinic, Qureshi, Robbins, Rogers

JASON LOGAN, GREGORY MARINIC, ZIAD QURESHI, JOSH ROBBINS AND SUSAN ROGERS
University of Houston
FIFTH WARD RENAISSANCE
Design Advocacy through Neighborhood-Based Collaboration and Social Engagement

ACSA DIVERSITY ACHIEVEMENT SUBMISSION
Fifth Ward Renaissance is a collaborative framework of curriculum-based endeavors developed by our team of educators in the College of Architecture and Design. Our endeavors have been carefully assembled into the second-, third- and fourth-year studios and support courses. Through these efforts, we have committed ourselves, our curriculum, and our students to a position of social advocacy by means of architectural research and practice. More specifically, our pedagogies have been tuned to serve the most socio-economically disadvantaged neighborhoods in Houston.

The Fifth Ward is a predominantly African American neighborhood that has witnessed a profound level of dis-investment and socio-economic hardship. Over the course of the last three years, Fifth Ward Renaissance has been structured as a flexible ecosystem of ongoing strategies between our program and the neighborhood. Several semesters of continual, on-the-ground engagement have provided phenomenal opportunities for our students and faculty to directly work with and learn from the citizens of the Fifth Ward. Their generosity and support have allowed us to explore and respond to architecture through adaptive reuse.

It is our intent to serve diversity and to celebrate an inherently humanist call to action. Fifth Ward Renaissance has initiated a dialogue that cuts across boundaries to engage historically underrepresented stakeholders. Our efforts are leveraged through curriculum-based strategies, and mobilized by small grants and pro bono activities drawing awareness and activation to the Fifth Ward. Neighborhood stakeholders including the CDRC (Community Design Resource Center), UH Small Grants Fund, RDA Initiatives for Houston Grant Fund, Olevia Community Development Corporation, Olivet Missionary Baptist Church, JW Peavy Senior Center, and Neighborhood Centers Inc. have provided our faculty and students with encouragement and resources. Our collaborative group has pursued various opportunities for competitive funding and strategic partnerships with these institutions and the citizens of the Fifth Ward.

This submission to the ACSA Diversity Achievement Award highlights multi-faceted aspects of the program framework including studio curriculum, small grants, collaboration with the CDRC, historical documentation of the African American community in the Fifth Ward, Inside/Out design-build, social advocacy speculative studios, and partnership with two primary stakeholders—Olivet Missionary Baptist Church and Neighborhood Centers.

Through Fifth Ward Renaissance, our predominantly minority students have been exposed to the potential for social advocacy existing within architecture, while they acquire leadership experience in the real world. The program serves the interests of diversity achievement in a complementary manner, developing diverse leaders while enabling diverse needs in an underserved neighborhood.

Our College of Architecture and Design is among the most diverse in the United States. We believe that our greatest resource is the students, of whom, a disproportionate number represent minority communities. Fifth Ward Renaissance has allowed us to critically reconsider our role as architecture educators and to more actively develop design leadership through our enviably diverse talent base. We believe that an exceptional opportunity exists to shift and mobilize significant demographic change in architecture—within academia as well as practice. Bringing together the diversity of our students with the diversity of the Fifth Ward proposes a new model for incremental and ongoing interchange.
Established in 2005 at the University of Houston by Susan Rogers, the Community Design Resource Center’s mission is to serve the public interest through design, research, education, and practice focused on enhancing livability in Houston.

Over the last ten years, the Community Design Resource Center has partnered with twenty-nine community-based and non-profit organizations to complete twenty-two funded design projects. The projects range in scale from community visioning—Collaborative Community Design Initiative—to the implementation of small scale design projects such as the “Zona de Juego” in Magnolia Park, a 600’ long public art project celebrating the history of the neighborhood and encouraging active play for children. CDRC projects illustrate the capacity to work creatively and collaboratively at different scales and with multiple partners and diverse communities.

CDRC partnerships have significantly contributed to the public debate on the role of architecture and good design in catalyzing community change. As the organization moves forward, it is designing new ways to engage community partners, and new ways to enhance the mutuality, reciprocity and impact of its activities. The CDRC was the catalyst for Fifth Ward Renaissance, providing the ‘connective tissue’ and acting as a neighborhood liason linking UH faculty and students with communities in need.
The Olivet Missionary Baptist Church (OMBC) is located in the historic Fifth Ward Community of Houston. Its mission is faith-based and systemic; responsible citizens cannot simply take resources and leave the community bare. The church is taking an active role in its community by developing people, property, and resources so that the Fifth Ward becomes a supportive and revitalized ‘village’ in the city.

With this focus, the OMBC is working across denominations, socio-economic boundaries, and racial lines to teach credit repair, homeownership (PrimeWay FCU), individual development accounts, (Covenant Community Capital), financial literacy, and G.E.D curriculum (Houston CC) in the community.

The OMBC is committed to neighborhood nutrition through a discounted fresh fruit and vegetable program. The church is located in a food desert and is attempting to fund the construction of a mobile grocery store within a refurbished city bus. The OMBC is an agent of positive change in the Fifth Ward.

Led by Pastor Robert Thomas, the OMBC serves as a primary partner and supportive mentor for UH faculty and students in Fifth Ward Renaissance. Their guidance has allowed us to contribute to the neighborhood by establishing citizen connections with the church and larger Fifth Ward leveraged through architecture and design-build opportunities such as Inside-Out and the JW Peavy Senior Center project.
Neighborhood Centers Inc. has a rich history in building communities that work since the early days when it was part of the Settlement House. When Alice Graham Baker founded the agency in 1907, the main intention was to help socio-economically disadvantaged residents in Houston access opportunities for education, health, and work while learning how to become actively engaged in participatory democracy.

One hundred years later, the purpose of Neighborhood Centers has not changed. The organization connects low-income families and individuals to opportunities so they can achieve their goals. This principle frames the core attributes of Neighborhood Centers since its origin—that neighborhoods offer bridges to opportunity and that citizens can transform their own communities.

Our partnership with Neighborhood Centers is a critical, long-term commitment that offers the potential for our curriculum to be continually energized through social advocacy, speculative thinking, and design-build opportunities throughout Houston. Our current collaboration with Neighborhood Centers connects Fifth Ward Renaissance faculty and students with senior citizens in a multi-phased renovation and improvement project in the JW Peavy Senior Center. This project is improving the functional, performative, and aesthetic qualities of the facility through small-scale design interventions.
The JW Peavy Senior Center provides a safe place for the elder population of the Fifth Ward to visit during the day for social activities. Programs include educational opportunities, a noon-time meal, fitness, health and nutrition counseling, and recreation. The center assists fixed-income residents with completion of an application for payment of their city water bill. The center provides space for public meetings, receptions, workshops, banquets, and seminars. It serves a predominantly African American and Hispanic population with a significant number of recently settled non-English-speaking immigrants.

Through our initial efforts with the Olivet Missionary Baptist Church, the Fifth Ward Renaissance team established this ongoing partnership with the JW Peavy Senior Center to address an even larger organization and citizen group through better design. The JW Peavy Senior Center serves many members of the OMBC and Fifth Ward neighborhood.

Our current initiative, facilitated through a collaborative effort of Meggin Lorino, Director of Neighborhood-based Services; and faculty members Ziad Qureshi and Gregory Marinic, has established a collaborative framework to work with the seniors and pursue ongoing building renovations and improvements to the JW Peavy Senior Center. By mobilizing social advocacy through architecture, speculative design proposals produced by UH students act as a catalyst for the center.
Fifth Ward Renaissance: From History, a Future

“One of the differences between this neighborhood and one like River Oaks is that they have lots of support and all kinds of resources available. Here, in the Fifth Ward, it’s the exact opposite— these people have no resources at all. There’s one clinic, one library, no YMCA, very few activities, and the community is very fragmented. It’s not the kind of environment that helps a child excel.”

Ernest McMillan
Community Activist and Contributor to the Fifth Ward Enrichment Program

This proposal for the Rice Design Alliance Grants Program: Initiatives for Houston 2014 will engage design-research toward the rebuilding an historic African-American community in Houston’s Fifth Ward. It will partner with the Fifth Ward CDC, CDRC, and the Olivet Missionary Baptist Church to build an e-Reading Room that enhances literacy and learning in the neighborhood. Furthermore, this proposal seeks to mobilize history in the rebuilding of a modest and threatened structure in the neighborhood, while activating undergraduate students in the design-build studio of the Interior Architecture program of the University of Houston Gerald D. Hines College of Architecture for which I serve as director.

ORIGINS: A Prominent Past

After the Civil War, newly freed slaves began settling in the sparsely populated areas of northeast Houston. In 1866, this district was designated as the Fifth Ward, and by the 1880s, the neighborhood became home to a substantial African-American working-class community whose livelihood was primarily based on work found in Ship Channel industries and homes of wealthy Houstonians. Although the Fifth Ward was always predominantly African-American, immigrants from Italy, the Philippines, Latin America, and South Asia have also called the neighborhood home.

Before desegregation, the neighborhood housed African-Americans of all occupations and income levels in a socially and economically diverse community. In the 1930s, the Fifth Ward was one of the proudest, most influential, and prosperous black neighborhoods in the United States, as evidenced in more than forty African-American businesses along Lyons Avenue.

Desegregation opened the suburbs of Houston to middle class African-Americans. In the 1970s, the Fifth Ward had lost a significant part of its population and many houses were abandoned as residents followed prosperity toward the periphery. The Lyons Avenue retail district became increasingly vacant and several buildings fell into disrepair or were demolished. By the 1980s, the Fifth Ward had become notorious throughout Houston for violence and disinvestment.

FUTURES: A Renaissance Awaits

The proposal offers a two-fold agency—one that blends history with design-build community advocacy. Using the archives of various African-American churches in the Fifth Ward, this proposal will result in the development of an exhibition that chronicles the historical rise, fall, and projected rebirth of the Fifth Ward in its most extensive form to date. The proposed e-Reading Room will be housed in a building of historical significance to the African-American community in the neighborhood. A diminutive and poetically crumbling shotgun storehouse will offer an opportunity for students of the newly formed Interior Architecture program at the University of Houston to serve as community advocates, designers, and re-builders of the Fifth Ward. This shotgun storehouse represents a quintessential vernacular building type that is unique to our region. Time-worn yet beloved, the structure is in critical need of stabilization and offers an opportunity to support resilience in the neighborhood. The new e-Reading Room will establish a permanent shared environment that encourages learning in the Fifth Ward. One of the primary intentions of this project is to illustrate how Architecture can promote social advocacy to serve and support underrepresented communities.
The shotgun storehouse will be transformed through modest means of interior reconstruction using high-technology digital fabrication equipment in the Keeland Center and resources of the University of Houston Community Design Resource Center. Archival research will foster a way for students to activate scholarship through technology and community service. Furthermore, Fifth Ward Renaissance provides a chance for the Gerald D. Hines College of Architecture—and more specifically the new Interior Architecture program—to support the stabilization of historically significant structures in our city and to advance community advocacy.

The University of Houston is located in similarly impoverished district, and it is my hope that Fifth Ward Renaissance will serve as a bottom-up exemplar of hybridized archive-design-research scholarship in the discipline. Such forms of engagement are quite rare, yet particularly well-suited to the fledgling Interior Architecture program since our work is contingent upon existing structures. Modest structures are often very poorly documented, so this approach to neighborhood research fosters a way in which the program may incrementally steward our city’s material culture—and to become a model for the nation.

The new Interior Architecture program at the University of Houston investigates the discipline by positioning our program in the reuse, adaptation, and transformation of existing buildings. Poised at the intersection of architecture, conservation, spatial design, and ecological performance—the trans-disciplinary nature of Fifth Ward Renaissance will allow archival scholarship, technology, and the art of making to converge. Focusing on the technological, material, ecological, and social promise of Interior Architecture as a specialization within Architecture, this endeavor will allow our students to critically address contemporary challenges in Houston—and to translate those lessons to cities across the globe.

**RESEARCH PAIRED WITH COMMUNITY OUTREACH**

Fifth Ward Renaissance is a research initiative that will be paired with on-going course development of the INAR 3501 Interior Architecture Design-Build Studio Interior at the University of Houston Gerald D. Hines College of Architecture. Parallel to faculty-led research, course participants will research and visualize the narrative of Houston vernacular architecture in the Fifth Ward.

**INTENT**

- Support resilience in the Fifth Ward through building stabilization and adaptation
- Expand understanding of the complexities of Interior Architecture in a Houston context
- Reveal social issues relative to urban regeneration at an interior scale
- Rebuild a modest building of significant neighborhood interest as an e-Reading Room.

**BUDGET**

FIFTH WARD RENAISSANCE proposes an operating budget of $5,000 that builds upon a Phase I grant awarded to Gregory Marinic by the University of Houston in Spring 2014. The RDA grant will be used to stabilize the structure and build an on-site interior transformation. Generate research/visualizations in-studio and independently.

**DISSEMINATION PLAN**

This proposal will stabilize an existing structure rebuilt through a digital fabrication interior transformation. A permanent e-Reading Room will support on-going intergenerational learning in the Fifth Ward.

**GRANT RECIPIENT / PROGRAM DIRECTOR**

Gregory Marinic, Director of Interior Architecture & Assistant Professor, University of Houston

**TEAM**

Neighborhood Liasons: Susan Rogers/CDRC, Pastor Robert Thomas/OMBC; Studio Instructors: Jason Logan, Josh Robbins; Curriculum-Archival Research-Grants: Gregory Marinic; Guest Critic & Consultant: Ziad Qureshi
UH New Faculty Grant 2014
Grant Proposal: ‘Fifth Ward Renaissance: From History, A Future’

In Fall 2013, Gregory Marinic submitted a grant proposal to the UH New Faculty Grant Program. The proposal, ‘Fifth Ward Renaissance: From History, A Future’, was awarded a $6,000 grant in Spring 2014.

A primary component of this research was to engage in archival documentation of the African American community in the Fifth Ward. Archival studio research was collaboratively led by Jason Logan and Gregory Mainic in Spring 2014. Students engaged in a studio-wide research effort collecting information on various contextual, ecological, material, social, and cultural conditions in the Fifth Ward. A smaller team of students formed the core archival research group.

More specifically, this research was focused on the interface of the African American community with the built environment of Fifth Ward, alongside larger socio-political influences in African and African American culture throughout the United States and around the world.

A graphic compilation of this archival research is shown at right. The original printed size of this illustrative visualization was 20'-0" x 6'-0".
A $6,000 UH New Faculty Grant awarded to Gregory Marinic incorporated archival research documentation of the African American community in the Fifth Ward, as well as a final built intervention. Students worked in the design studio, fabrication lab, and on-site under the guidance of studio instructors Jason Logan and Josh Robbins. Collaborators Susan Rogers/CDRC, Pastor Robert Thomas/OMBC, Ziad Qureshi, and Gregory Marinic served as consultants and design critics. As part of the UH grant deliverables, the following visualization represents a small portion of our historical documentation of the African American community in the Fifth Ward. This research was performed by students under the guidance of Jason Logan and Gregory Marinic—in consultation with local archives and the Olivet Missionary Baptist Church.
Fifth Ward Renaissance mobilized grant funding, social advocacy design-research, archival documentation, digital fabrication, and building to rethink an obsolete and abandoned structure in the Fifth Ward. Working with the Olivet Missionary Baptist Church, neighborhood advocates, faculty, and students collaboratively delivered ‘Inside-Out’ an e-reading room for residents in an underserved African American community. This studio was directed by Jason Logan and Josh Robbins.

Students: Christopher Al-Jumah, Beatriz Arellano, Maricela Calderon, Jessica Garrett, Grace Kim, Kana Kim, Kevin Pham, Tania Rodriguez, Priscila Rivera, Martin Rodriguez, Sara Skinner; Neighborhood Liaison: Susan Rogers/CDRC; Advocate/Client: Pastor Robert Thomas/OMBC; Grants/Curriculum: Gregory Marinic; Supporting Grants: Rice Design Alliance & University of Houston
At the conclusion of the fourth week, each team presented to the client and a panel of critics. Rather than selecting a “winner,” comments were taken from the review first studio review, students were grouped into three teams. The three teams worked for two weeks to synthesize the ideas that each member brought to the project.

Adapting a Shotgun Storehouse for the Greater Fifth Ward

The exhibition is a cross-disciplinary effort between the Interior Architecture program (INAR) and the Community Design Resource Center (CDRC) at the University of Houston, in collaboration with numerous community partners and supporters. The exhibition showcases research, developed during the Community Design Initiative, an effort organized by the University of Houston’s CDRC in 2013-2016. This research generated a conversation for the design/build studio, and the exhibition provides a way for the public to engage with this research. While the students worked to develop a design and build a structure (at the connection nodes) to remove any complex cuts during fabrication.

Inside/Out

Adapting a Shotgun Storehouse for the Greater Fifth Ward

Over the course of the spring 2015 semester, students were asked to develop a structure that would simultaneously stabilize the existing building and provide a new public reading space for the community. The adaptive reuse of a shotgun storehouse in the Fifth Ward neighborhood was selected by the client and critics. The design was chosen for its simplicity and legibility as a structural, formal and spatial interior structure that allowed for a variety of programs. Following the midterm review, the studio operated as a single design team. Each student had specific tasks assigned to them as the studio transitioned.

The exhibition, in early September, the structure will be disassembled, transported, and stored on-site until additional funding is raised for the reassembly of the structure. The exhibition is a cross-disciplinary effort between the Interior Architecture program (INAR) and the Community Design Resource Center (CDRC) at the University of Houston, in collaboration with numerous community partners and supporters. The exhibition showcases research, developed during the Community Design Initiative, an effort organized by the University of Houston’s CDRC in 2013-2016. This research generated a conversation for the design/build studio, and the exhibition provides a way for the public to engage with this research. While the students worked to develop a design and build a structure (at the connection nodes) to remove any complex cuts during fabrication.

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Inside/Out
Adapting a Shotgun Storehouse for the Greater Fifth Ward

WEDNESDAY SEPT 2

LECTURE: 6-7pm in the theater
RECEPTION: 7-8pm in the atrium (food and drinks will be served)

SPEAKERS
JASON LOGAN Adjunct Professor
JOSH ROBBINS Adjunct Professor
SUSAN ROGERS Associate Professor, Director of the CDRC

LOCATION
The University of Houston, College of Architecture and Design
122 Hines College of Architecture and Design, Houston, TX 77204-4000

EXHIBITION: August 3rd - September 4th, in the atrium of the College of Architecture and Design
HOURS: M-F 9am - 6pm

For more information, please call: 713-743-2400 or visit www.arch

INSIDE-OUT | FIFTH WARD RENAISSANCE

Photograph: Luis Ayala
In our global, complex, and continually evolving society, architecture and spatial design are undergoing profound transformations. This alternatively framed convergence of perspectives relates, connects, and blends trans-disciplinary thinking within a new blurred territory. Critical and theoretical investigations, design-research, and didactic explorations shape a rich terrain of emerging architectural practices.

A sequenced, three-semester studio curriculum supports the social advocacy goals of Fifth Ward Renaissance. Our curriculum seeks to embrace the full potential of social advocacy, community building, critical practice, and technological innovation in architecture.

**INAR 2501: ‘Social Intervention’ Design Studio**
**INSTRUCTORS: Ziad Qureshi, Gregory Marinic**
INAR 2501 engages with the potential for community building in architecture. The semester is currently sequenced in two projects. The first project rethinks an underused skybridge as a performative space for social engagement. The second project intervenes within an abandoned building to determine alternative futures for socio-economically disadvantaged urban communities. Projects call specific attention to the health and wellness of migrant groups and displaced persons.

**INAR 3500: ‘Urban Regeneration’ Design Studio**
**INSTRUCTORS: Ziad Qureshi, Gregory Marinic**
INAR 3500 considers architecture as a participant in urban regeneration. The semester is sequenced as a single-duration program focused on social advocacy, spatial complexities, and contemporary issues. Students explore themes of obsolescence, abandonment, durability, and re-use by rethinking futures for existing buildings in downtown Houston and the Fifth Ward. Framed through ecological awareness and densification, students reimagine structures into high-density residential environments.

**INAR 3501: ‘Advanced Fabrication’ Design Studio**
**INSTRUCTORS: Jason Logan, Josh Robbins**
INAR 3501 explores the material and fabrication opportunities of advanced computation and digital fabrication in architecture. This studio is framed through a scalar lens of “1:1”. The 1:1 studio examines the particularities of interior space—material, light, surface, etc.—which it may be argued, are best understood at full-scale. The studio locates itself in the gap between drawing (representation) and building (fabrication), leveraging the digital tools of the Keeland Design Center and the generative potentials of advanced software for their perceptual, spatial, and formal effect. Oscillating between the virtual and the physical, whereby the digital techniques and methods of making inform each other in a continuous space of mutual feedback, the 1:1 studio acts as a form of applied research in which material, form, space, and technique are all categories to be designed and re-imagined. This studio critically examines and questions the graphic technique of describing the separation of space—inside/outside or inside/inside—as an inert and inaccessible boundary.
Fifth Ward Renaissance reconsiders neglected neighborhoods in Houston to rethink social problems through the lens of architecture. The third-year fall studio INAR 3500 offers a speculative forum for students to contemplate their role as critically-engaged design advocates for disadvantaged people and their communities. This example of student work re-considered abandoned and obsolete buildings as higher-density residential environments serving displaced persons. INAR 3500 offers a speculative forum for social advocacy prior to the spring semester design-build studio. In the spring semester, INAR 3501 students engage directly with socially-lensed built interventions leveraged at full-scale. Studio Instructor: Ziad Qureshi; Curriculum: Gregory Marinic; Liaison: Susan Rogers/CDRC
Fifth Ward Renaissance reconsiders neglected neighborhoods in Houston to rethink social problems through the lens of architecture. The third-year fall studio INAR 3500 offers a speculative forum for students to contemplate their role as critically-engaged design advocates for disadvantaged people and their communities. This example of student work re-considered abandoned and obsolete buildings as higher-density residential environments serving displaced persons. INAR 3500 offers a speculative forum for social advocacy prior to the spring semester design-build studio. In the spring semester, INAR 3501 students engage directly with socially-lensed built interventions leveraged at full-scale. Studio Instructor: Ziad Qureshi; Curriculum: Gregory Marinic; Liaison: Susan Rogers/CDRC
**Fifth Ward Renaissance** is currently working with Neighborhood Centers to rethink the spatial configuration and performance of its existing buildings. Speculative proposals have been produced for the JW Peavy Senior Center. Students, faculty, and stakeholders are working together to find cost-effective ways to improve the architectural and functional potentialities of the center. Students and faculty are working hand-in-hand, on-site directly with the seniors in this under-represented minority community. JW Peavy Senior Center has been provided with several speculative proposals with an example shown herein. Prototypes and full-scale interventions are being developed. Studio Instructor: Ziad Qureshi; Curriculum/Liaison: Gregory Marinic; Client: Meggin Lorino/NCI
2014 Initiatives for Houston Grant Winners

This $5,000 Rice Design Alliance Initiative for Houston's 2014 winners were awarded for projects proposed by a faculty member and an undergraduate student at the Gerald D. Hines College of Architecture at the University of Houston. For 31 years, the Rice Design Alliance, led by the School of Architecture at Rice University, and the Department of Urban Planning and Environmental Policy at Rice University, have worked to develop and implement projects shaping Houston's built environment and our understanding of it.

2014 Houston Grant winner Gregorius Villanueva, Assistant Professor and Director of Urban Architecture, and Josenhaft, a fourth-year student in environmental design.

Rice's proposal, "Fifth Ward Renaissance" focuses on the rehabilitation of a "salmon-colored" house, turned into a community re-reading Room." He writes, "where educators will call 90,000 grants will help to fund necessary structural improvements for the building, as well as an interior overhaul, including a reinstallation of all of the original graphics on paper and archival documents chronicling the history of the Fifth Ward. His design will also come to hand with a "niche" that centers on the idea of a "niche" in the community. An urban design plan for the project is currently under review by the City of Houston Planning and Zoning Commission.

Fifth Ward Renaissance: UH Students Work on New Storefront with E-Reading Room

You can learn more about "Fifth Ward Renaissance" at a lecture and reception on the Gerald D. Hines College of Architecture at the University of Houston on Thursday, September 26, starting at 6 p.m. Visit the project's website or contact the authors for more information about this project.
The University's interior architecture program is bracing new. This project is the program's first and an ambitious start, for sure. It was led by Gregory Martinez, who was awarded a Rice Design Alliance Fellowship for his annual grant to launch the project. Martinez has since taken a teaching job elsewhere.

From the beginning, it was clear that this was not going to be a typical studio program. "There was a desire to push the limits of the curriculum," says Jason Logan, professor and director of architecture firm U:5:15. "We had a vision for a student architecture that could shape space in ways and at a scale that would be traditionally expected of larger, more traditionally conceived architectural projects."

When given the challenge to teach in Spring 2014, Logan and his faculty partner Josh Robbins immediately set out to find an opportunity for the students to test these new convictions. Critical to this endeavor was the ability to build at a one-to-one scale.

But where to find such an opportunity? Susan Rogers, professor and director of the Rice Community Design Center, had just the connection. Having worked in the Fifth Ward for several years, Rogers was aware of some of the needs in the community. The Oliver Missionary Baptist Church, led by Pastor Robert Thomas, had a vision for improvement, willingness to involve a student project, and several vacant properties, including the plumbing supply store. "We asked, what could we do to transform the building for young and old — to make it safe and available for people to come and read with technology as a driving force?" explains Pastor Thomas. "So we came up with the idea for a pop-up library and that eventually led to this idea of an e-library."

With a site in hand and a willing client, Logan, Robbins, and their students began to work. The organization of the studio was simple and straightforward — emphasizing teamwork and building consensus. Pastor Thomas was in attendance for all reviews, and after each design phase the students would go back to the studio and analyze the best elements of all the projects. Says Robbins, "People worked individually to develop schemes but quickly the studio organized itself into groups of students pursuing groups of ideas. It was collaborative, as much as possible."

"We gave the students a series of design constraints that they had to operate within," says Logan. "Obviously there's the structurally sound part of it, but the students also had to navigate budget constraints, digital fabrication techniques, construction issues, as well as their desire to synthesize the structural components into a whole environment."

A turning point in the project came when cost and time estimates for the project came in over budget. Determined not to sacrifice their design's intent and still produce a quality structure, the students resolved to use only "off-the-shelf" materials and, more importantly, straight-line materials for construction.

But the challenge was to devise a way to make those straight-line materials twist. Intro the curving space of the design, each stud took slightly more than its neighbor, and each connection point — from stud to beam — is unique. It's a daunting number of connections requiring a high degree of precision. If it were done by hand, it might have taken months to complete.

Logan and Robbins turned to digital fabrication tools to streamline what would otherwise be a very labor-intensive process. Using the 3D modeling program Rhino3d and its parametric modeling interface Grasshopper, the students created a custom algorithm to identify the specific connection points at every joint. Those connection points were then mapped to a two-dimensional plan that could be computer-cut on a large router table at the Burdett Keland Jr. Design Exploration Center at UH. In a fraction of the time a traditional method would have required, the students had designed and produced the precise beam plates to connect the straight lines of the framing timber into their curving surface, without every single step. And, surely, it just takes your vocabulary away!"

He also stresses the building's intended use: "As we take spaces back and make them usable, it's important that we not only improve them but that they become resources for the next generation. It's not just a repurposing of the building but adding a value to the community."