

Fast and Furious

How might nimble and expeditious implementation processes make a significant impact on the discipline and profession of architecture, one that relies traditionally on iterative development and lengthy time-scales? In cities where a chronic lack of funding perpetuates widespread acceptance of an architectural ‘status quo,’ it is vital for architects to instigate action to palpably generate alternative effects in the community.

How might nimble and expeditious implementation processes make a significant impact on the discipline and profession of architecture, one that relies traditionally on iterative development and lengthy time-scales? Indeed, “Pop-up” and pavilion-type interventions—seeing an increase in both academia and practice today¹—demonstrate tendencies instead toward quick, activist agendas in social, economic, and environmental terms. But have these tactics—or responsive interventions—been less direct in addressing “core” disciplinary concerns such form, space, materiality, and structure? In other words, do the contingencies of quickly-paced installation projects positively impact qualities of *firmitas*, *utilitas*, and *venustas* in the production of architectural artifacts?

This paper will argue for the potential of small-scale interventions to advocate not only for socio-political positions, but also for the discipline of architecture itself. Specifically, I will discuss the process and impact of the Hive City Bee Habitat Competition—a student competition organized by faculty at the University at Buffalo School of Architecture and Planning—in bringing public awareness to the critical importance of urban species, as well as shaping the perception of architectural possibilities in an economically-depressed post-industrial city.

In cities that lack substantial municipal funding and private investment, the notion of implementing less-familiar aesthetic agendas is often met with skepticism. Referencing this tension, I will discuss the public reception of the Hive City project, from its initial media coverage (and its revealing public commentary) during its design process to its post-installation perception, both locally and internationally.

SILO CITY AS ECOLOGICAL, MATERIAL, AND ECONOMIC CONTEXT

To introduce the Hive City project, it is important to first outline its “context,” particularly its physical location—an underused 14-acre property in South Buffalo, filled with vacant grain silos and industrial warehouses—and the socio-cultural associations around it. Before this property was established as a “place” and named “Silo City,” it sat abandoned for decades as part of Buffalo’s crumbling, yet monumental, post-industrial landscape. Any mention of

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the city's vestigial industrial structures, such as those in Silo City, often gravitated toward discussions about urban decay and demolition. Despite having inspired highly-influential architects and design thinkers—from Le Corbusier to Reyner Banham—Buffalo's grain silos were not unanimously beloved by a significant portion of the city's 21st century inhabitants. While there were a critical mass of architects, artists, preservationists, and historians who rallied to save the repurpose the silos, the public imagination did not have much in store for these vacant sites. While they were rich with cultural history and biodiverse landscapes, they were, for the most, part seen by urban citizens as post-industrial wastelands.

In the early 2000s, a Buffalo-based businessman, Rick Smith, purchased the 14-acre plot of land. The decision to become a landowner of the property was somewhat incidental. As the owner of Rigidized Metals, a manufacturing corporation located on the adjacent parcel, his original intention was simply to buy a right-of-way, to allow for ease of movement for trucks and other vehicles toward his plant. Given Buffalo's downtrodden real estate market at the time, buying the entire property—grain silos and all—was more economical than carving out a right-of-way; thus, Smith purchased the land, along with the abandoned buildings that came with it. In 2006, Smith initially devised a plan to transform the property into something potentially useful and profitable: an ethanol plant.² However, the plan did not come to fruition³, and the land continued to sit in a quasi-vacant state during subsequent years.

During this time, several faculty members at the UB School of Architecture and Planning⁴ were gradually cultivating a relationship with Smith and Rigidized Metals—beginning with a lecture sponsorship by Smith at the university, and growing with ongoing conversations about shared interests such as Buffalo's industrial heritage, historical preservation, and the city's waterfront. When Smith opened the site of Silo City to UB professors and students, the grain silos and the property itself became regular fixtures on class field trips, served as sites for speculative studio projects, and even hosted studios that produced design-build projects in situ.

HIVE CITY INITIATION

During those years of initial conversations, a beehive had emerged in one of the buildings on the property. The hive grew considerably over a number of years, and eventually occupied the space of an entire second story window in height. With a plan to renovate this vacant building, Smith wanted to remove the beehive and initially considered conventional solutions, such as hiring a local beekeeper to remove the bees. Seeing this as a potential architectural opportunity, several faculty from UB's School of Architecture and Planning⁴ became involved in discussions about the unwanted beehive, and offered to explore the situation and address it not as a nuisance, but rather as an architectural issue. To motivate students to think about the significance of design in considering contemporary ecologies, several of the faculty⁵ decided to initiate a Bee Habitat Design Competition for UB students, and titled it "Hive City."

COMPETITION PHASES: INDETERMINACIES AND LIMITATIONS

When we started planning the competition schedule, we were not certain how far the process would run. Would students even be interested? Would Rigidized Metals back down from sponsorship? What if the juries are unable to choose a winner? What if students are not available (nor able) to build the project? Would the bees thrive in a new, constructed setting? The aim of the endeavor was to introduce a novel eco-architectural product into the context of Silo City; yet, given all the uncertainties in the process, we felt a pressing need to address the many contingent factors first and foremost. I will summarize the competition phases, and discuss how our initial attention to disciplinary externalities positioned the team to more capably address the formation of the architectural object at a later point in the development process.

Figure 1: Beehive in the window of a vacant building at Silo City, Buffalo (2012).

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First, we were acutely aware of the criticality of time restraints, given the seasonal contingencies in considering bee habitats, as well as pressures of the academic calendar. We therefore structured the competition schedule around tight deadlines upfront, giving extremely limited time to early phases. Out of a total of three competition phases, the first was only 24-hours long, and required the submission of only one board that explained a primary idea for the site and the intervention. From the initial group ten student teams, four semi-finalist teams were selected by a jury composed of both architecture faculty as well as stakeholders. For the second phase of the competition, students were given only a couple of weeks to develop a schematic design presentation. Predictably, the short timeframe impacted the morphological development of the projects. With little time to fully explore formal innovation or nuances, the projects—at this point in the competition—were arguably easy to criticize, particularly considering their spatial and formal qualities. One could conclude that it was quite possibly the demands of the project’s time restraints that influenced the four student teams to each propose very simple, underdeveloped geometries. One entry was literally a wooden cube with a door, while another was an arch. A more adventurous proposal attempted material experimentation with fabric-formed concrete, but the resulting geometry of the proposal was a deformed dome. Even the entry that ultimately won the competition began as an awkwardly truncated tower, a design that incorporated a perhaps too easy metaphorical reference to the beehive through its hexagonal honeycomb geometries.

It will not come as a surprise that our judging criteria for the jurors did not place emphasis on formal issues. While “design” and “creativity” were factors in assessment, more emphasis was placed on contingent factors—such as siting, response to context, constructability, “hiveability”(a term we used to describe the design’s appropriateness as a working beehive), and even team dynamics, that is, whether it seemed that the student teams were

Figure 2: Hive City Competition, Semi-finalists proposals. See endnotes for project credits.



able to work together effectively. These criteria were critical to the project's stakeholders and potential sponsors⁶, and it was important for the project's development to maintain their support and interest. Further, given all the uncertainties in the competition process, we wanted to ensure that contingent factors would not become impediments to realizing the design.

After the second round of competition, the four semi-finalist teams⁷ were reduced to two finalist teams⁸ (The Arch and the Tower). In this final phase of the competition, we set the required deliverables to include a set of drawings and models that detailed the construction methods for the installation, in addition to providing a budget for the cost of materials. We organized meetings between the student teams, the stakeholders, and material manufacturers—to ensure that the students understood the kinds of logistical, material, and economic-driven dynamics they were about to encounter.

Faced with this new set of contingencies, the development processes of each project was informed not by an autonomous form-finding process, but rather focused more on confronting the “realities” of structural stability, feasible constructability, and economic constraints, as well as environmental factors in beehive construction, and having to quell the competition jury's fear of bees.

In April 2012, the winning team was selected—a group of 5 graduate students: Courtney Creenan, Kyle Mastilinski, Lisa Stern, Scott Selin, and Daniel Nead. Rick Smith agreed to sponsor the construction of their project, a 22-foot tall tower titled “Elevator B.”

FABRICATION AND INSTALLATION

After the selection of the winning team, refinements and adjustments were still being made. In the process of producing shop drawings, the students discovered further constraints of construction, labor, and time. Working directly with fabrication specialists at Rigidized Metals required a high degree of organization and management on the part of the student team, in order to meet the fast-paced calendar set by the manufacturer. Most of the spatial experiments that the students had initiated were ultimately simplified during the shop drawing process. For example, the students were interested in producing a varied gradient of openings in the exterior skin panels. The idea was to allow for more air ventilation in areas of the project that was exposed to more sunlight. To develop this idea, they⁹ wrote a grasshopper script to produce a richly patterned drawing for the exterior panels. When it came time to coordinate with the fabricators, however, they were told that it would be virtually impossible—within our time constraints—to produce the pattern that was drawn, which included a unique pattern for each of 66 hexagonal panels. To address this situation, the students were challenged to reduce the number of unique panels, while still ensuring that the overall pattern would convey the same dynamic sense of variation and density gradients—which they were ultimately able to accomplish by designing 6 unique panels that would each be rotated differently to give the impression of randomness and variation.

CHALLENGING CONVENTIONAL WISDOM

It is important, at this point, to reflect on the status of this endeavor and to recognize the significance of Smith's decisions—first, to engage in our student competition process and provide a context to work with (Silo City), and second, to fund the project's fabrication and installation. At the juncture of both decisions, Smith took risks that were, on the surface, seen as somewhat unorthodox for a businessman and landowner in Buffalo. While he was interested in the potential of student-designed work and in supporting the School in general, his decision to entertain the competition process went against the path of least resistance—that is, to simply ask a beekeeper to remove the hive. His decision to financially support the construction of a new bee habitat also went against conventional wisdom. One might ask the question: In the context of a city like Buffalo where neighborhoods suffer from significant disinvestment and a large portion of the city's residents live in

Figure 3: New bee hive taking shape in Elevator B's “bee cab.” Photo credit: Hive City/Kyle Mastalinski.

poverty, why invest significant funds in moving a colony of unwanted “pests” elsewhere on private property? Even after construction had initiated, and a well-intentioned and highly supportive article was published about the project in the local news, Smith and the UB team still encountered various forms of ridicule from the public. In the “comments” section after an early Buffalo News article¹⁰, readers chimed in with remarks such as:

“...How in anyway is a beehive on someone’s private property in anyway going to help downtown Buffalo or the waterfront? Sound’s ridiculous. Why do we want more bees downtown, to drive the last three tourists out? Build something useful on the land that everyone can use.”

“I don’t know what to say. The waterfront ideas presented each week get increasingly worse. Next week we’ll read that some other fringe group has decided to plant 14 acres of poison ivy on the waterfront and water it with recycled waste water from the city. All paid for by a grant from the US Botanical Society a new 14 member panel appointed by the governor to explore the best possible uses for a waterfront he that he will never visit.”¹¹

Given these and other external resistances, a critical factor in courting (and maintaining) Smith’s confidence in the project was ensuring that the students and faculty consistently demonstrated a high degree of accountability and responsiveness toward a multitude of contingent issues, whether large or small, including economic factors, physical site resistances, and public opinion. While it was important to the UB Architecture team that the constructed artifact demonstrate integrity as an architectural object, it was equally significant to anticipate and at least provisionally address the project’s many indeterminacies. Fortunately for our team, public reception of the constructed project, “Elevator B,” shifted from one of doubt (prior to its completion) toward one of local pride and celebration. After the project’s implementation, the tower received favorable media coverage from a wide range of local, national, and even international outlets¹², including Wired¹³, Fast Company¹⁴, and The Globe and the Mail¹⁵. The project also made numerous appearances in discipline-specific outlets, for example Architect Magazine¹⁶, Dezeen¹⁷, and Curbed¹⁸. This newfound public fascination with the project brought a range of new visitors to Silo City, from tourists



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Figure 4: Elevator B, the winning project from the Hive City Bee Habitat Competition, installed at Silo City, Buffalo.



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to groups of local schoolchildren. For a long time, the site had been a location of wonder and inspiration to many members of the Buffalo community. In a way, the addition of Elevator B to an already-charged context definitively cemented Silo City as a place that would be shaped by cultural and artistic curiosity, a reputation which it enjoys increasingly year after year, as it continues to host an ever greater variety of events and installations.

BEYOND THE PILOT PROJECT

Elevator B is a pilot project, touted as the first “permanent” installation in Silo City. Despite the fast-paced and highly contingent design process, the piece still exhibits a notable degree of tectonic integrity and spatial intensity—in other words, its status as an architectural object has not been diminished by the competition’s focus on addressing contextual indeterminacies. In addition, the constructed installation also played a significant role in urging and enabling the continuation of further architectural pursuits at Silo City. Indeed, the high degree of accountability and trust that was established during the Hive City Competition process only strengthened the collaborative relationship between Rigidized Metals and the University at Buffalo’s School of Architecture and Planning, thereby planting seeds for future possibilities. Since the completion of the project, several UB faculty members initiated further research and design opportunities at Silo City. Working with Rigidized Metals, Chris Romano (one of the faculty who managed the Hive City process) and Nick Bruscia designed and constructed an installation, titled 2xMT, to test the structural and specular qualities of using thin-gauged rigidized stainless steel to build a tall structure. 2xMT was installed in Silo City as another demonstration project. This experiment led to several similar projects, generated from collaborative efforts between Romano and Bruscia and Rigidized Metals. Additionally, other architectural works by UB faculty and students have emerged at Silo City. A few examples include Painted Topography by Sergio Lopez-Pineiro and various landscape and planning efforts by Sean Burkholder and Karen Lutsky, among others.

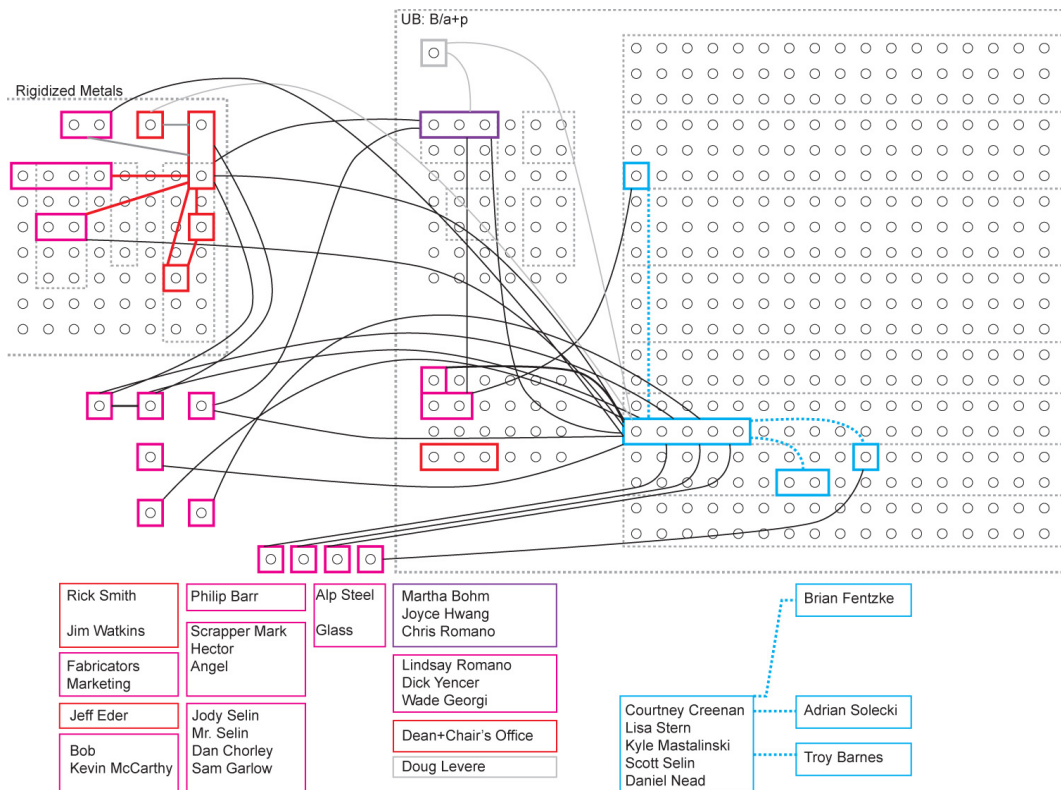
The point here is to emphasize how Hive City—as a project that did not specifically embody a formal agenda—was not only able to contribute critically to a discussion about the qualities of architectural “objecthood,” but was additionally able to spur the initiation and multiplication of design endeavors that did tackle formal and tectonic (read: disciplinary) questions more explicitly.

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Figure 5 and 6: Public children’s event at Silo City. Photo credits: Hive City/ Kyle Mastalinski.

Figure 7: Looking up inside Elevator B. Photo credit: Hive City/ Kyle Mastalinski.



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CONCLUSION

My position is not to argue against the importance of autonomous processes in architectural exploration in the pursuit of commodity, firmness and delight, but rather to argue for the potential impact of ecologically and socially responsive interventionist practices—those that directly confront the dynamics of temporal contingencies as principal drivers. Certainly, in the case of the Hive City project, one could criticize many design qualities of the student competition entries—for example, the easy metaphorical references, the arguably superficial use of parametric tools, and the relative lack of formal exploration—and attribute them to the relentless pace of the competition calendar. However, as I have argued, the fact that the winning project was designed quickly, coordinated effectively, and installed expeditiously (and within budget) was critical to producing its resulting design integrity, and ultimately made a difference in the project’s public impact.

In cities where a chronic lack of funding perpetuates widespread acceptance of an architectural ‘status quo,’ it is vital for architects to instigate action to palpably generate alternative effects in the community. In order to stimulate advancement and foster integrity in the discipline, I contend that it is the responsibility of the architect to move beyond our disciplinary comfort zone and embrace external resistances and contingencies as part of the exploratory process.

Figure 8: Collaboration Diagram, illustrating relationships between Rigidized Metals, UB, and other external entities during Hive City’s fabrication phase..

ENDNOTES

1. The recent surge of “pop-up” architectural interventions are well-documented in the 2012 Venice Architecture Biennale’s U.S. Pavilion exhibition, “Spontaneous Interventions.” <http://www.spontaneousinterventions.org/> (accessed October 27, 2015).
2. “The Buffalo River Ethanol Project,” *Buffalo Rising*, 2007, <http://buffalorising.com/2007/04/the-buffalo-river-ethanol-project/> (accessed October 27, 2015).
3. Jonathan Epstein, “Plug gets pulled on ethanol fuel project; Conversion of former milling facility on Buffalo River abandoned as firm seeks ‘new and exciting adventure’,” *The Buffalo News*, October 18, 2011.
4. Initial conversations with Smith included UB faculty Lynda Schneekloth, Beth Tauke, and Kerry Traynor. Later, Joyce Hwang, Laura Garofalo and Martha Bohm joined the discussions.
5. The Hive City Habitat Design Competition was initiated by Lynda Schneekloth, Joyce Hwang, Laura Garofalo, and Martha Bohm. Hwang, Garofalo, and Bohm co-organized the first phase charrette. From the start of the second semi-finalist phase until the completion of the project, faculty advisors and competition coordinators included: Hwang, Bohm, and Christopher Romano.
6. See the Hive City website for a full list of acknowledgements: <https://hivecity.wordpress.com/design-competition/acknowledgements/>, (accessed October 27, 2015).
7. The competition’s four semi-finalist teams included: 1) Joey Swerdlin, Alex Galante, Kim Dai, Danielle Krug (“Mound” project); 2) Joseph Sevene, Anne Camilla, Scott Archambault (“Box” project); 3) Andrew DelleBovi, Juan Andres DeRisio, Vincent Ribeiro, Sergio Taveras, Nate Heckman (“Arch” project); and 4) Courtney Creenan, Kyle Mastalinski, Lisa Stern, Daniel Nead, Scott Selin (“Tower” project).
8. Two finalist teams included: 1) Andrew DelleBovi, Juan Andres DeRisio, Vincent Ribeiro, Sergio Taveras, Nate Heckman; and 2) Courtney Creenan, Kyle Mastalinski, Lisa Stern, Daniel Nead, Scott Selin.
9. The student team’s parametric grasshopper model was produced in collaboration with Yinan Zhang, also a UB graduate student in the Department of Architecture.
10. Michelle Kearns, “Creating a buzz on the waterfront; Inspired by a giant bee hive, entrepreneur Rick Smith hatches the idea to create a collaborative design ‘theater’ to stimulate innovation and downtown development,” *The Buffalo News*, June 2, 2012, http://www.buffalonews.com/creating_a_buzz_on_the_waterfront_inspired_by_a_giant_bee_hive_entrepreneur_rick_smith_hatches_the_idea_to_create_a_collaborative_design_apostheaterapos_to_stimulate_innovation_and_downtown_development.html (accessed October 27, 2015).
11. Ibid. See the comments section.
12. See a list of press at the Hive City website: <https://hivecity.wordpress.com/press/> (accessed October 27, 2015).
13. Ian Steadman: “Gallery: architecture students build ‘skyscraper for bees,’” *Wired*, May 8, 2013, <http://www.wired.co.uk/news/archive/2013-05/8/tower-for-bees> (accessed October 27, 2015).
14. Sammy Medina, “Students Build a 22-Foot-Tall Home For Local Bees,” *Fast Company*, May 14, 2013, <http://www.fastcodesign.com/welcome.html?destination=http://www.fastcodesign.com/1672560/students-build-a-22-foot-tall-home-for-local-bees#1> (accessed October 27, 2015).
15. Lisa Rochon, “Building sweet buzz in an urban wasteland,” *The Globe and the Mail*, June 29, 2012, <http://www.theglobeandmail.com/arts/art-and-architecture/building-sweet-buzz-in-an-urban-wasteland/article4380988/> (accessed October 27, 2015).
16. Blaine Brownell, “A Tower for Bees,” *Architect Magazine*, June 28, 2012, http://www.architect-magazine.com/technology/a-tower-for-bees_o (accessed October 27, 2015).
17. “Skyscraper for bees by University at Buffalo students,” *Dezeen*, May 6, 2013, http://www.dezeen.com/2013/05/06/skyscraper-for-bees-by-university-at-buffalo-students/#disqus_thread (accessed October 27, 2015).
18. Rob Bear, “Buffalo Honeybees Move Up to Shimmering Skyscraper,” *Curbed*, May 6, 2013, <http://curbed.com/archives/2013/05/06/buffalo-honey-bees-move-up-to-shimmering-skyscraper.php> (accessed October 27, 2015).