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Afterhouse at completion of REI Part III funding – Fall 2014

AFTERHOUSE PART III – FINAL REPORT

AFTERHOUSE is a collaborative art and architecture project by artist Abigail Murray and University of Michigan architecture professor Steven Mankouche who together invented the word. AFTERHOUSE is simple project based on a dead end street called Burnside in a Detroit community just north of Hamtramck. Its basic premise is to convert a fire damaged derelict house, the only one left on the street, into a passive solar greenhouse. AFTERHOUSE has received three REI grants. The third and final grant has enabled us to see the project through its final construction phase.

Like too many Detroit houses irreparably damaged by disuse, vandalism and fire, the house at 3347 Burnside must come down. Rather than razing it and leaving fallow land, a group of students, artists, architects, and urban farmers have been actively working to deconstruct the house reusing the foundation to build a semi subterranean passive geothermal greenhouse called AFTERHOUSE. Through this work, AFTERHOUSE will serve as a prototype that can be used to on other abandoned house foundations throughout Detroit and beyond.

Passive geothermal greenhouses can dramatically extend growing seasons and expand crop possibilities without the use of additional energy. Through our first grant and with the help of greenhouse experts from the Matthaei Botanical Gardens we have researched growing the following crops in Detroit: citrus, pistachios, mangos, pomegranates, figs, ginger and kiwi. During our last grant our community garden partner and next-door neighbor, Burnside Farms, has taken ownership of the derelict house and will continue to be the owner of AFTERHOUSE, using it to provide fresh, local, affordable produce to the community through the winter months.

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Working with students we have developed three designs and have refined them to a single one that can not only fit on the Burnside property but on numerous other abandoned houses in the NoHam (North of Hamtramck) neighborhood that have the same foundation footprint, but different sun exposure. With the assistance of a second REI grant we were able to get a building permit for the project, complete the partial demolition of burned down house and purchase some materials to begin its re-construction. The demolition, completed manually, helped us salvage considerable amounts of construction material for our new greenhouse. The third and final REI grant (Afterhouse Part III) enabled us to fund two students and assist them in completing the framing phase of construction construction. The derelict house is now being transformed from something that is a hazard to something that is beautiful and useful to a city block that now integrates an urban farm and family homes.

The neighborhood of 3347 Burnside is similar to many blocks in Detroit. Abandoned homes sit next to occupied ones and serve as a drag on the neighborhood. After receiving the first REI grant and with the promise of the greenhouse on the horizon, our project has spurred Burnside Farms to start a CSA program, transforming three vacant lots into urban farmland that helps created a more sustainable, safe community and that has actively fostered entrepreneurship contributing to a stronger community economic base. Since receiving our second grant and with the demolition of the 3347 the block no longer is blighted. Neighbors now in the evenings stroll by the project watching its progress engaging in conversations on what we will be able grow there this coming winter. AFTERHOUSE has generated genuine excitement form all type of people, long-term residents and newly arrived ones as well. The third REI grant allowed us to build the house until a point where we could leave the framed and protected enough to withstand the winter and allowed us to resume building in the spring.

Different from many urban agriculture projects that require a lot of space, AFTERHOUSE is discrete, almost hidden, because it reuses an existing house's foundation and keeps its residential scale. Although we are using some inexpensive greenhouse materials to increase durability and functionality, we are also using materials salvaged from the original structure that fit in the vernacular to the surrounding homes so that AFTERHOUSE can easily integrate into the urban neighborhood. Since REI funding we have secured the donation of scrap insulated sheathing panels (SIPs) from Insulspan, a regional manufacturer and have received the donation of hardwood miss matched siding, a byproduct of milling process from Hardwoods of Michigan. AFTERHOUSE is not only reducing the amount of industrial waste with the support of regional manufacturers, but through our design process is creating value for these materials by increasing their palatability.

AFTERHOUSE also makes use of an otherwise troublesome resource– the concrete block foundation. A typical 1600 square-foot residence has nearly 70 tons of concrete in its foundation and in a typical demolition, all that material must be removed from the site. The process of removal is energy and labor intensive as the concrete is ground up and sent to a landfill. Reusing these structures in place represents a double or triple savings at no additional cost or energy. Since receiving the second REI grant we negotiated with a local demolition company who trained their employees to efficiently do partial demolitions by hand. This has become a significant savings for AFTERHOUSE because it removed the burden of hauling and land filling concrete, saved us the cost of regarding the lot and allowed us to salvage a considerable amount of structural lumber. With the completion of construction of the first AFTERHOUSE we hope our project could foster a new service in Detroit as an alternative to full demolitions.

With our first REI grant our student leader, Travis Williams, a native Detroiter and other students have been involved in the design and community interaction aspects of the project; measuring and documenting the existing structure, researching historical precedents, designing high performance low cost transparent building envelops, testing solar angles to maximize thermal performance, learning to assemble construction documents and understand the nature of construction budgets. With the second REI grant students became familiar with the building permit process, experienced how different materials are properly assembled, learned some practical building skills, studied the logistics behind garden planting

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and passive irrigation systems and lastly they have been gaining some field experience seeing the project being demolished and preparing the foundation for the new greenhouse. The third grant enabled the students to see the project all the way through completion of framing.

Over the last few years, the dead end block of Burnside has seen five homes damaged by arson, demolished and replaced by Burnside Farms community garden. 3347 Burnside was irreversibly damaged by fire as well and was not on the city's long list of demolitions. AFTERHOUSE is transforming this house into a lively place not just now, in the summer when the community garden is in full bloom, but will this coming winter as well. During the cold winter months when fresh produce is hard to come by and expensive to afford, AFTERHOUSE will be a place of warmth bringing people together to share in a local crop of fresh fruits and vegetables. Since receiving our second REI grant our team has managed to raise $14,800 from a crowd sourcing non-profit funding organization. As a way to raise these funds students developed a number of incentives. These not only include mementos of the project such as framed drawings and bumper stickers, but we have raised funds by promoting a series of charity dinners to be held in the completed AFTERHOUSE using food grown in the structure. After our third REI grant, Afterhouse was selected by the Kresge Foundation for their Innovation Projects Detroit program, a grant designated for shovel ready projects. With out REI funding we would not have been ready to apply for this type of funding which has brought to the project an additional $135,000. This funding will see AFTERHOUSE through completion.

Unlike other successful urban farming projects with greenhouse structures, AFTERHOUSE will preserve the urban fabric of the neighborhood, a discrete architecture that maintains the scale and site of a single family home. Because communities are made of not just people, but places and collective experiences, we believe that retaining the history and character of the architecture is paramount to the success of our project. Since receiving REI funding, Andrew Malone, former owner of 3347 and local artist developed a collection of oral histories of the home he translated into a comic style visual narrative. Using this narrative and our design work we have managed to get national recognition of for the project through two prestigious design awards: an Un-built Architecture Award from the Boston Society of Architects and a 2014 R+D (Research and Development) Award from Architect Magazine. This an example of how REI has helped us diversify the way we disseminate the spirit of AFTERHOUSE to not only other urban farming and community gardeners in the region, but to nationally audiences as well.

As a concept for reusing existing house foundations AFERHOUSE has picked up momentum. Communities in South West Detroit, Flint and Muskegon have approached us for future collaborations. We are extremely thankful for REI support and are look forward to building upon cross-institutional and cross-community partnerships the grant has fostered.

Additional project images to follow

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Framing

Volunteer Sunday

Interior view after REI Part III

Waiting for cement truck

Afterhouse before