Mixing Design-Build Models: Stitching Community and Technology

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Design-Build programs within Schools of Architecture have traditionally taken the form of either; 1) a community-based project, or 2) a exploration of technology an its spatial implications. The former projects typically involve a community partner or non-profit, a program, budget, and interaction with a client/collaborator. This community-based project model often results in a permanent structure built at full scale. The latter technology-based Design-Build studios are typically explorations in the opportunities embedded in technology, and often result in provocative installations with a range of scale and temporality.

This design + research project proposal looks at a project built in the Fall of 2013 which combines the community-based design-build model with the explorations and equipment of the technology-based model to produce a permanent, full scale, technologically innovative design solution to a non-profits programmatic needs.

The community partner/collaborator in this studio project is LOOP, the Louisiana Outdoor Outreach Program. LOOP engages students in outdoor education programs through adventure-based activities on their challenge course. After engaging LOOP staff to assess needs, students designed a shade pavilion that incorporates storage and seating into a large shade structure used for gathering before and after challenge course activities. The design is inspired by the tree canopy surrounding the challenge course, which is located on an island without power or water supply. Blank aluminum yield signs are utilized as a modular, exterior grade unit and is connected by hundreds of custom joints milled with a CNC machine to create an abstracted, high-performing canopy overhead. Through iterations of computer modeling and milling the team worked through a series of mock-ups and reached a design solution which allowed for the creation of a responsive shade canopy that is an aggregation of many small parts. The custom CNC joints were mechanically fastened with the triangular sign blanks on the remote site to create a single sheltering aluminum form.

The presentation of this project includes a focus on the studio's design process and the methods through which the team balanced the needs of a community partner with the agenda of a technology-driven investigation.