



The Betty & Clint Josey Pavilion

Client / The Dixon Water Foundation

Architecture Firm / Lake | Flato Architects

An on-going series of case studies that feature projects by AIA members participating in the 1+ program that exemplify standards of excellence in pro bono service.



Proiect The Betty and Clint Josey Pavilion Location **Decatur**. Texas Date 2012-2014 Client The Dixon Water Foundation **Client liaison Robert J. Potts** Architecture firm Lake | Flato Architects Design team **Bob Harris, FAIA, LEED Fellow** Tenna Florian, AIA, LEED AP BD+C Cotton Estes, LEED AP BD+C Jacqueline Fisher, LEED AP BD+C Uma Patwardhan Heather Holdridge, EIT, LEED AP BD+C Corey Squire, LEED AP 0+M Area 5,400 sq. ft. Pro bono contribution 1.537 hours **Project collaborators Biohabitats Datum Engineers TLC Engineering for Architecture Lincoln Builders** More info dixonwater.org lakeflato.com aiatopten.org/node/476 living-future.org/lbc



Architect / Tenna Florian, AIA, LEED AP BD+C, Associate Partner, Lake | Flato Architects

Betty and Clint Josey donated the land to the Dixon Water Foundation (DWF). The Josey Pavillion is an important project to honor their legacy and support for the Foundation. Initially, we spoke to the DWF about the type of facility they wanted and they were disinterested in the burden of having to maintain complicated systems, in terms of heating and air conditioning. We asked questions regarding rainwater collection and solar power, but these factors weren't necessarily the highest priority initially because the focus of the DWF is the promotion of land and herd managment practices that can restore the native prairie and protect our watersheds.

LakelFlato (LIF) discussed the possibility of this design being part of the Living Building Challenge. DWF did not come to us asking for a Living Building. Though DWF had never heard of the Living Building Challenge, the mission of the Foundation is to demonstrate how cattle can be a part of a healthy ecosystem and they saw a Living Building as an opportunity to strengthen their message by providing an educational venue that Nonprofit / Robert J. Potts President & CEO, Dixon Water Foundation

The Dixon Water Foundation (DWF) was in need of a facility to host group gatherings, presentations, and occasional lunches for activities off the field. DWF promotes water conservation and land sustainability through ranching, which requires a lot of time being out in less populated, natural areas. We had been familiar with Lake I Flato's (LIF) work for over twenty years, and their approach towards architecture was a great fit for this building design.

Conversations regarding the Living Building Challenge arose when we communicated not wanting controlled temperature in the Pavilion. Instead, we focused on finding a way to blend inside and outside so that the community could experience the outdoors while being inside. The Challenge was perfect for our facility design because it was very consistent with the goals and mission of the Foundation. It has only enforced what we are already doing by physically expressing our values.





Architect /

seeks to achieve the same ecological equilibrium as their range management program. They wanted a building that did more good than harm to the environment. The 1+ program allowed us to propose the additional hours towards pursuing certification as part of our pro bono work that we annually perform for nonprofits.

DWF had a 1.8-acre development area within a 900-acre conservation easement. That 1.8 acres, encompassed by two Heritage Live Oak trees, is the only area of the ranch where the conservation easement allows a building. We decided to select the location near the southern tree and arranged the Pavilion around the tree in a way that captured the cooling southeastern breezes desired in the summer, and blocked out the cold winds from the northwest in the winter. Based on this assessment, we placed the buildings on the north and west side of the shaded tree area that would

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— Tenna Florian, AIA, LEED AP BD+C

"The facility expresses the values of the Foundation while working with nature to live sustainably."

— Bob Harris

soon become the courtyard. The building's simple, low-lying form speaks to the horizon and prairie. Windows are positioned so that someone sitting at the conference table can view the horizon and native grasses. Designed to be flexible and adapt to climatic conditions year round, the building connects seamlessly to its surrounding landscape. It's a very flexible space that provides good daylight, air quality, cross ventilation, and human comfort on any particular day despite weather conditions.

Living Buildings are something that only a few firms have done - as of 2016, there are only 11 certified Living Buildings. Typically, if a client comes to a firm requesting a Living Building, they want a team that has been involved with one previously. DWF's Josey Pavilion allowed us to get that valuable experience under our belt while donating more than 1,500 hours as part of our firm's participation in the



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DWF was very involved with the building design process. We held several phone calls with LIF per week, as well as sketched ideas while providing feedback and input. Quite a few of our meetings were regarding the waste water wetland and how to integrate ranching and cattle services along with the facility programming. We discussed building design, functionality, and aesthetics. Together with LIF, we studied past examples of DWF ranches and facilities for design ideas. One of our other ranches has an old airplane hangar that we use for hosting groups and it serves well for that purpose. It has big doors that swing open to catch the breeze. If anything, the hangar was the inspiration for the Pavilion's openness.

Our greatest concern about the Living Building Challenge was that no one had done it before in Texas. There would be costs associated with it above and beyond what we would normally pay for a building of this type. There were also the extra costs particular to the materials used, since it is a bit harder to find materials that qualify. The application, paperwork and documentation process was time consuming for the architects and builders as well, which would typically translate to a larger cost associated with their work. The 1+ program allowed LIF to be in charge of all of these responsibilities as their pro bono work. On the architectural side, it didn't cost any more than it would have for an un-certified building, which helped the board decide to continue on with the Challenge.

Since it opened, the Pavilion has hosted a number of large and small gatherings, including our ongoing board meetings. The dedication of the building took place during a big education event with a nonprofit partner that hosts educational offerings related to the ecological realms of livestock grazing. We had about 150 people from all over the world come out to that event, and the building functioned well with that amount. We have also had a lot of school, rancher, and cultural groups as well as people primarily interested in the architecture come out. Our main purpose has been to educate audiences about ranching and our ecological approach, but people have also been interested in coming out just to see how the building functions. This has become an opportunity for DWF to introduce our ranching methods to those who might not be aware of sustainable livestock management.

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1+ program. Now we can pursue Living Building Challenge Certification with other projects. As the first Living Building in Texas, Josey Pavilion has brought diverse audiences out to learn about the DWF. It is a fully restorative building that doesn't have a carbon footprint, is net positive energy, and net positive water.

The project consultants and the contractor also saw the value in delivering a Living Building and worked closely with LakelFlato to ensure the strenuous documentation requirements for the project were met. TLC Engineering for Architects, the MEP engineers for the project, were important collaborators and helped evaluate the comfort and daylighting characteristics of the project. Biohabitats brought their knowledge and experience with regards to wastewater treating systems, which was necessary for the design in order to meet the Challenge specifications. The contractors, Lincoln Builders, were a huge piece of the success of the Living Building. They had never built a LEED project, much less a Living Building. We informed them on the process specifications and submittals, and they did a wonderful job

Arguably the most challenging and impactful performance category of the Living Building Challenge is the Material Petal, which includes disclosing 100% of the chemical components of every building material as well as avoiding a list of 13 chemicals that cannot be found in any of the building materials. There's also the sourcing imperative which requires either sourced, manufactured, or extracted materials to be locally found. Some red list chemicals are still ubiquitous in materials throughout the construction industry - it vastly varies based on the material. The research and documentation involved toward ensuring that we met the strenuous material and sourcing requirements was extraordinary. About 85-90% of our pro bono hours spent on this project were due to material research. We vetted over 186 materials and published them on our firm's blog to promote a culture of transparency and help other teams pursuing Living Building Challenge. Though it required heavy lifting, we believe these requirements create a regenerative and socially equitable materials economy, substantially decreasing the negative impact of materials on human and ecosystem health.



Providing pro bono work on the Josey Pavilion revealed new ways our office can be creative about our 1+ time. As a firm, it allowed us to explore ways we could help nonprofits beyond providing design services. Through 1+, we were able to set a structure for how to obtain pro bono work and the program successfully serves as a vehicle for empowering staff to suggest new pro bono projects. Being involved also brings more work onto our radar. That's the power of pro bono — pushing the boundaries of a project and intensifying its impact.

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The most successful aspect of this project is the way that the Pavilion relates to the landscape both philosophically and visually. While it's not on a busy street in a city, it makes it all the better when you arrive on the ranch because the Pavilion fits into the landscape so nicely. The facility expresses the values of the Foundation while working with nature to live sustainably. We are able to easily share these ideas with people. The attractiveness of the building enables us to further project our educational aspects to people who are otherwise unaware of our ranching methods.





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