Man's heart, away from nature, becomes hard;
[the Lakota tribe] knew that a lack of respect for growing, living things
soon led to lack of respect for humans too.[1]

-Luther Standing Bear

Sustainable building encompasses more than just the chosen materials. To me, sustainability is about respect—respect for the earth and its precious resources, for other living things, our fellow man, and our future generations. Sustainability also means ensuring that our children develop a respect for and a connection with nature, so that they will continue healing the wounds we have caused. I incorporated these beliefs into each decision I made, and hope that is conveyed through my design.

I chose a site in Texas (my home) because building and contributing locally is a key element in sustainable design. My selected site was an old marina/bait & tackle shop on Lake Sam Rayburn in East Texas located about midway between Dallas/Fort Worth and Houston. This selection provided users with directly access to nature, but was an easy commute (short drive = fewer resources used) allowing for frequent visits (more interaction). My chosen site also revitalized and contributed to an area with less economic prosperity or prospects than the larger metropolitan areas. Furthermore, I can re-use the existing gravel drive; the waterfront decking/boat slip; and the already cleared area eliminating the need to clear-cut any trees. I identified an old barn locally that I re-purposed as my timeshare structure—this not only saves valuable resources, but also contributes to the natural aesthetics—the old wood and height of the roof blends well with the tall, ethereal pines that surround the lot. The bait shop structure was utilized as a carport.

By orienting my timeshare with its long sides facing the North and South (with shaded fenestration) and limiting fenestration on the East & West sides, I've decrease the solar heat gain while optimizing available daylight. A post-and-beam structure minimizes the labor and resources required to create a level building area, while ensuring minor disturbance is caused to the land and natural drainage. Hydronic radiant heating in the concrete slab takes advantage of the concrete's thermal mass and the rising heat warms the vaulted spaces more efficiently than a forced air system. The addition of fly-ash to the foundation strengthens the concrete, as well as effectively

utilizes the coal by-product. Natural cross-ventilation cooling was accomplished using operable windows, which also contribute to better indoor air quality. Furthermore, selecting materials and finishes with low- or zero-off gassing (GREENGUARD fabrics, low-VOC paints and stains, etc) help maintain this healthy air. Rain-collection cisterns for landscape irrigation, dual-flush toilets, and low-flow fixtures were specified to minimize water usage. LED and fluorescent lighting as well as, energy-efficient appliances were specified in the design. South-facing photovoltaic cells on the light colored metal roof ensure that light is either reflected (reduce heat island effect) or collected as energy. All finishes, fabrics, equipment, and materials were chosen based on local availability and eco-friendliness—resulting in a space that is not only respectful of our earth, but actively conscience of its role in helping preserve it.

1. Louv, Richard. *Last Child in the Woods.* New York: Workman Publishing, 2005. (pg. 123).