



## **Austin's Central Library is an Experience in Orchestrated Delight: White Paper**

by Kathy Zarsky, Certified Biomimicry Specialist, LEED®AP, BD+C  
Founder and Director, BiomimicryTX

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Photo credit: Kathy Zarsky

*The 198,000 square foot library, pursuing LEED Platinum certification, is considered the best daylit library in the country. Over 61 percent of the outdoor site area is dedicated open space, and the site captures stormwater runoff and condensation to reduce potable water by 100 percent for irrigation needs and sewage conveyance. The building conserves over 87 percent potable water for internal use. The design has resulted in an energy cost savings of 33 percent with 10 percent on-site renewable energy.*

### Wonder in Architecture

Austin's Central Library is a highly anticipated public structure sited along Shoal Creek and Lady Bird Lake on the western edge of downtown. Its climatic responsive design and use of local materials lend a timeless and iconic fit to its place amongst the many towering giants that are commonplace in the urban core. It's a place that visitors relish and dream of frequenting, coining it "Austin's living room." The building's atrium

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captivates and signals an irresistible invitation the moment you walk inside, and gravity is no match for the stairs that bait feet to Escher-like stairs in an upward, spiraling ascent. Whether arrival takes place on foot, bicycle or car, the library is a destination that connects visitors to nature inside and out in ways that are immediately sensed if not easily articulated. The building siting and design arouse delight and well-being through experiences of connection, activity, mindfulness, learning and curiosity.

### **Local to Global Benefits of Integrating Nature**

Paul Hawken, in his book *Drawdown*, outlines an extensive variety of technological and ecological solutions to the urgent predicament of climate change. *Drawdown's* research emphasizes many of the same solutions recommended by Biophilic Cities, namely the protection and promotion of nature within cities. Austin's Central Library includes five "drawdown" design elements worth emulating elsewhere within the city.

The first biophilic solution is design that promotes walkable cities. If anything, the Central Library is a destination that is enjoyable to access on foot. The most popular way to approach the building is along the Shoal Creek Trail or across the new Butterfly Bridge. This path introduces visitors to a vital link to the pulse of one of Austin's primary watersheds. The Shoal Creek Trail will include ten miles of connections to neighborhoods, schools, parks and employment centers when completed. Walkability correlates with livability, and the desire to walk carries into the circulation design within the building. Trails that meander along riparian edges and stairs that twist and turn in midair indoors are powerful design accomplices. Walking becomes the favored choice when feelings of discovery, curiosity, risk and play are evoked.

Austin is also investing more in bike infrastructure within the Seaholm EcoDistrict and beyond, and the library serves as the primary catalyst for more biking surfaces, maintenance stations and parking for the general public. Employees of the library enjoy gracious biking accommodations and changing facilities, making the commute a viable means of transportation all year long. The public has access to one of the most extensive and protected bike corrals in the city, making the library a likely staging area for a variety of nearby attractions. The health, energy and nature connection through bike infrastructure is the second biophilic solution.

Once settled in, it doesn't take visitors long to discover the library's green roof on the sixth floor, which is the third biophilic drawdown solution. It is by far one of the most cherished design features. It offers expansive views of Lady Bird Lake, Shoal Creek and

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the always changing downtown skyline. The native vegetation is diverse and lush with a variety of textures and massing to attract people, pollinators and wildlife. The dappled light under the photovoltaic canopy is similar to sitting under the shade of a tree, with soft slits of light slowly shifting across the wood decking as the sun travels across the sky. It is exactly the kind of design element sorely needed with a population craving more ways to work and recreate in comfortable, nature inspired outdoor settings. Buildings with integrated vegetation, if scaled across contiguous transects, can turn cities into life-supporting systems.



Photo credit: Kathy Zarsky

What may not be readily apparent to infrequent visitors is the way in which the library is creating community. Metaphorically, it draws a diverse group of individuals and groups and creates opportunities for intersection and interaction. Quite literally, however, it is reintroducing a community of trees that together will moderate the extremes of heat and cold, erosion, water quality, evaporation and more. The ecosystem services of trees is hidden yet well studied, and this represents the fourth biophilic drawdown for cities. While these beneficial tree community traits often get taken for granted, the qualities that trees bring to the environments we inhabit are understood from early childhood. We enjoy their shady protection, the habitat they offer, the sound of wind through their leaves, and the seasonal changes they display.

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There are many lessons and experiences to be gleaned from these statuesque wonders, not least of which is that every tree is a valuable member of their ecological community. Biophilia can also inspire reciprocity, the fifth drawdown concept that looks to human behavior to play a mutualistic role. The library site has left ample space to restore a once thriving, functional ecological corridor in the heart of the city that we can enjoy as amenity, but the opportunity for the city is to encourage robust extensions of similar natural corridors that link with other life-supporting systems in three dimensions. These biologically diverse and connected nature networks support more effective ecosystem services and also create more ways for people to connect to, learn from and nurture as symbiotic partners.

### Scales of Biophilic Design



*Natural light, filtered light, light and shadow*  
Photo credit: Kathy Zarsky



*Natural Materials – Mesquite Flooring*  
Photo credit: Theresa Cascio

The design of the library as a building is widely reported, but lesser known is the influence that the library's designs play across scales of block, street, neighborhood and community. The building prominently incorporates natural, local materials like limestone and mesquite, and it offers a variety of views and vistas in all directions from every level. The quality of the extensive daylighting is undeniable. The perimeter window seating goes fast because the natural light and views are so calming and restorative. The use of color, spatial gradients and volume have maximized the degree to which daylight is employed throughout the building. There's truly not a bad seat in the house.

The central focus of the library is the atrium with grackles serving as the motif for a giant cuckoo clock rising as tall as the maze-like stair ascends. The entire library is filled with spatial variability and transitions to indoors and outdoors. The design lends to experiences of prospect, refuge, mystery and risk. All of these elements and experiences are translations of sensations that are typical in the natural settings that we are hardwired to seek out.



*Natural Analogue*

*Light + Space*

*Complexity*

*Prospect + Risk*

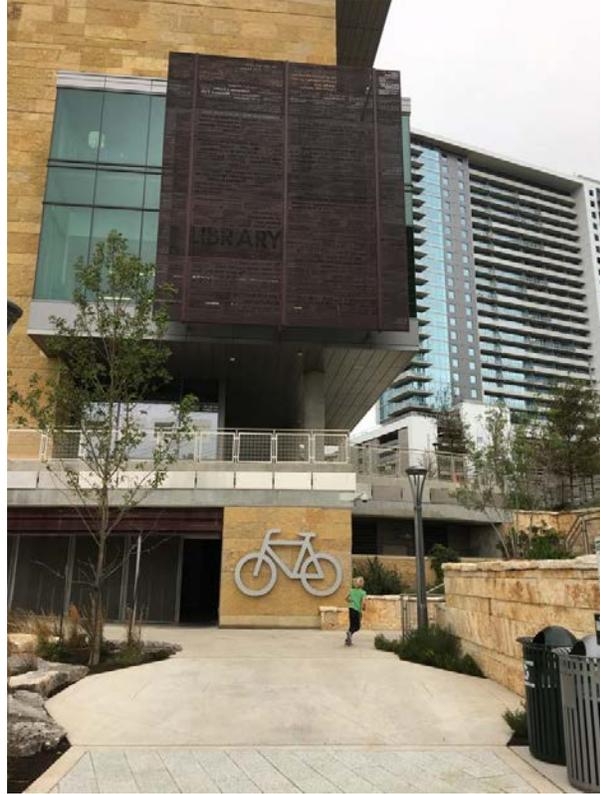
*Exploration + Discovery*

Photos credit: Kathy Zarsky

The place-based biophilic design becomes more apparent with jumps in scale. The building opens up to the east to create areas for congregating and circulation along Shoal Creek. The vegetation transitions from maintained to wild, signaling both habitat and watershed edges. The creek connects to the largest water body in Austin, Lady Bird Lake, less than 200 meters away. The surrounding neighborhood is contained within the Seaholm EcoDistrict, a historically and culturally significant part of downtown Austin due to its industrial relationship with water. The new developments within the EcoDistrict have shifted their relationship to water to one of reverence and attraction.

The primary limestone building materials are reflected in similarly scaled office and civic structures nearby, paying homage to the character of place. More than any other downtown site, the library feels integrally linked with pedestrian and cycling infrastructure. Boundaries are soft and blurred, allowing for interpretation for a variety of community uses outdoors. The outdoor spaces meander and traverse elevation changes that nudge curious visitors to explore. This act of discovery quickly connects visitors to the site, street, neighborhood and eventually community as time and distance allows. It is nature and the qualities it offers with breezes, sounds, daylight and glimpses of wildlife and watercourses that make these linkages so attractive. The library offers a new vision: that buildings in Austin can and should enhance the quality of day-to-day life through integrating nature at multiple scales, bridging building to place and place to community.

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***Kathy Zarsky** served as the LEED Consultant for the new Austin Central Library. She is a sustainable and regenerative building advisor, process mapper, biomimicry and biophilia practitioner, educator, and speaker. As a systems and strategy designer, Kathy's work has focused on the dynamic relationship between people and the built environment at multiple scales. Her goal is to enable solutions that lead to a greater natural ecology through exploration of design and systems using biomimicry and biophilia frameworks.*

*In 2011, Kathy became one of the world's first Biomimicry Specialists, bringing unique perspective and innovative thinking to design challenges. That same year Kathy founded BiomimicryTX, one of a growing number of global network affiliates of the Biomimicry Institute. Since that time, she has led partnership efforts with SXSW Eco, organized a biomimicry design challenge focused on water with Southern Methodist University, spoken at conferences around the country, written education curricula and developed resources for camp and school programs. Recently, Kathy led in the exploration of biomimicry and biophilia applications for a global technology company.*

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