

ANALOG HOUSE

OLSON KUNDIG AND FAULKNER ARCHITECTS

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Mechanical Engineering by Rock Point Engineering • Lighting Design by Niteo Lighting



Nestled in California's Martis Valley, within striking distance of Lake Tahoe, is an elemental dwelling perched around 1,800 metres above sea level. Jointly designed by Olson Kundig and Faulkner Architects, Analog House – situated in the mountain town of Truckee – metamorphoses throughout the year to echo its alpine surroundings.

In Martis Valley, no two seasons are alike. In the winter, steady snowfall blankets the landscape, whilst the summer typically heralds dry winds and a steep rise in the mercury. Unlike the seasons, the evergreen forests remain unchanged, characterised by thick ground cover, clusters of manzanita and sage and ponderosa pines that stand as high as 40 metres. The area's rugged alpine terrain served as the point of departure for Analog House.

"The structure was shaped both functionally and figuratively by the mature pine trees that occupy the 2.5-acre [10,100-square metre] site. In the same way that one would weave through the trees on a forest walk, this home changes direction to respect and make way for the foliage," says Olson Kundig Principal Tom Kundig. The 504-square metre, four-bedroom home was designed for and with Greg and Lesa Faulkner, the husband-and-wife architect-designer team behind San Francisco-based

Faulkner Architects. As Tom recalls, there was an immediate understanding with regard to the compartmentalisation of roles. "It was probably one of the most satisfying architectural partnerships I've personally been involved in. From the start, it felt like we were colleagues," he notes.

To keep the built form shielded from the elements, the architectural envelope was developed with recessions on all sides. Other form-fortifying interventions included tempered glass openings, walled courtyards and a 10-gauge weathering steel rainscreen intended to protect the engineered lumber framework. The design team took cues from the landscape, weaving the structure around the existing pine trees and using the clearings to establish habitable ground. The result is a series of perpendicular cement, steel and glass volumes that afford panoramas at every angle and blur the line between nature and nest.



A large central courtyard with pockets of verdure and a trifecta of adult trees occupies the heart of the home, surrounded by a sequence of rooms, patios and passages that freewheel across the landscape. The pièce de résistance of the dwelling is the steel tower, a three-storey structure that rises from the main volume. Designed as a guest wing, it comprises bedrooms with ensuite bathrooms and a rooftop deck with sweeping views. Secluded from the street by way of solid steel cladding, it transitions to a state of transparency on the remaining sides, where year-round tree cover is par for the course. “The site is very different from our typical projects, where big, outstanding views usually become the visual centrepiece. Greg and Lesa did not want that, so instead the tower is meant to provide a kind of bird’s nest experience,” Tom avers, adding that the design was inspired by a traditional treehouse.

The entrance gives way to a steel mesh stairwell housed inside the central tower. As one space parlays into the next, it is evident that nature dwells

in the architectural interludes. For instance, the living room and primary bedroom suite are demarcated from the kitchen and dining area by way of a long, glass-walled ‘forest hall’ with panoramic views to the surrounding woods. Likewise, upper-level clerestory windows welcome in daylight, casting the interior with a luminous glow.

The primary suite features a sitting room, an open casework closet, a sleeping area and a bath. The latter, in turn, unfolds into a private courtyard, whilst the powder room sink uses a standard off-the-shelf shower valve as a unique, gravity-responsive tap that recalls Japanese sōzu fountains. Greg and Lesa custom designed the bed, orienting it to face the majestic trees. The décor is equally considered. The custom fireplace between the kitchen and porch, for example, can be converted into an Argentinian grill using a hand-cranked mechanism, and the custom steel armature above the dining table serves to conceal electrical cords for the pendant lighting.





The double concrete walls and horizontal roofs insulate the interior and offer protection from the elements.



The architecture was conceived to be environmentally sensitive. The glass doors and exterior rainscreen are made of recycled steel and the wood frame utilises engineered wood studs, joists and rafters. In the same vein, the structure's steel skin requires no maintenance and is fire-resistant. To insulate the interior from the frigid winter, the architects erected double concrete walls and specified horizontal roofs for additional snow retention.

Having lived in the area for years, the Faulkners were keen to keep wild-fire mitigation central to the design. "We had to consider the resilience of every design decision," says Tom. Greg adds that "the Caldor fire of 2021 came within 40 kilometres of the house and destroyed over 1,000 structures. Being cognisant of this threat, we integrated non-combustible

and protected material systems into the built form." Their efforts were validated when the couple acquired a new insurance policy on the home and received a 10 out of 10 for fire preparedness, despite the proximity to the woodland.

The design vocabulary is redolent of the surrounding valley. The floors are composed of the same flamed basalt as the boulders outside and the oak floor inlays are all from trees within an 80-kilometre radius. Some walls are composed of glass and direct the gaze outward, whereas others wear sandblasted concrete that hold a mirror to the mountains. As a home that harks to people and place in equal measure, Analog House is a year-round sanctuary that serves as nature's nearest neighbour.



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