# The Steel House
Imitation and Artifact

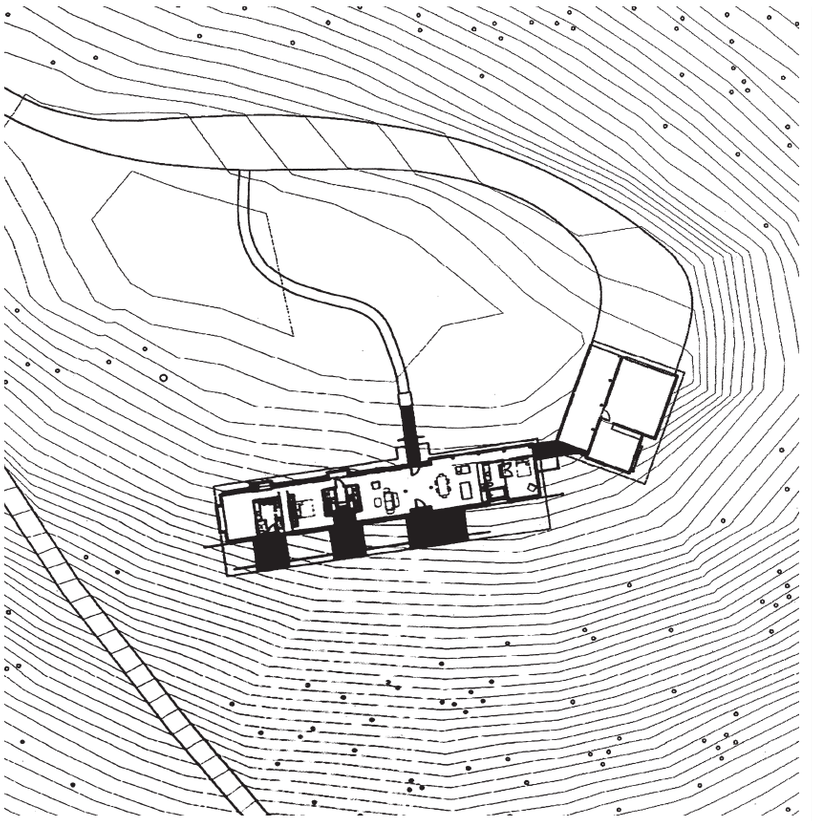
*Alan Purvis*

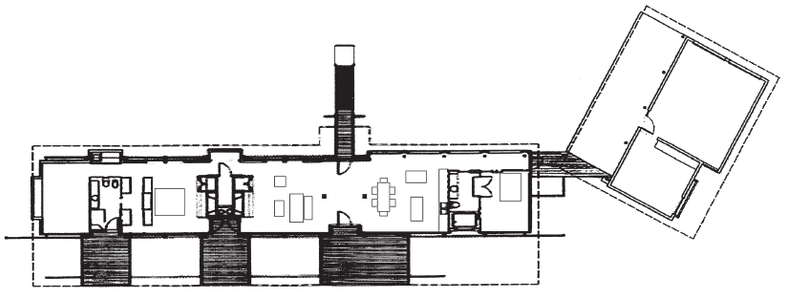
## New Associations

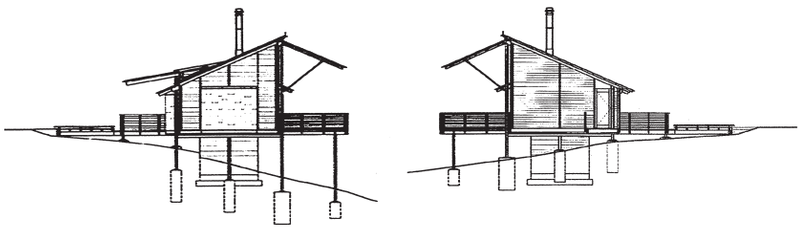
The work of Surrealist artist Joseph Cornell responds to his fascination between collecting and assimilating "found objects" and images within constructed frameworks of his own design. His interests were situated in the beauty of banal objects or objects that at one time had a life of their own, but now had been discarded or forgotten. The uniqueness of his work was found in his ability to eliminate the categorization or grouping of similar objects, as is the case within most "collections." Instead of bringing similar objects together within a given constructed framework, he chose to find beauty within the qualities of dissimilar objects and the manner in which these dissimilar objects created new associations. As with most collections, Cornell constructed physical frameworks, often in the form of wooden boxes having partitioned portals in which these dissimilar objects were displayed. His attempt to deny categorization or strip these objects of their intended meanings was evident in the manner in which the constructed frame or box supported the objects within unusual adjacencies or proximities. This recombination of existing meanings suggests much for architecture in that issues such as building program, tectonic conventions, and site strategies can be shifted or recombined to imitate the model or artifact while suggesting an entirely new set of meanings.

## Imitation

The notion of "image" and "artifact" as a generative tool for design has formed the basis for much of our understanding of architecture. With the belief that we form recognitions of architecture based on a set of both language and image-based connections, it is evident that these connections form the basis of our collective past. The recognition of these collections point to "signs, signifiers, and symbols" that intrinsically form a multiplicity of interconnections between known and "emerging" meanings. The relationships established between these existing and emerging meanings therefore suggest that all architecture possesses an "imitative" quality, owing much to its predecessors. This is not to suggest







that architects have exhausted the possibilities for architecture, rather there continues to be new connections made between existing associations within the realm of both language and image-based processes. The issue becomes a matter of choosing to process or questioning that which we see while attempting to find new relationships between these existing conditions and their contemporary counterparts or frameworks.

**Circumstance**

It is the preoccupation with images, particularly those that comprise local or indigenous artifacts that we seek to study and exploit. Given the desire to seek out and particularize that which already exists, one must recognize that both images and artifacts have a certain history that must be told and made relevant to the place and time in which they reside. Once a history and narrative has been established,

the particulars of that time and place can be brought forth while seeking to establish its parallel contemporary situation. Issues such as building technology and methods of production assist in grounding artifacts and their images within these frameworks for study. From these methods, it is possible to speculate upon indigenous methods of "making" that give form, purpose, and meaning to architecture. From a pragmatic view, we continue our studies with first understanding "what" something *is,* however, our ultimate goal is to discern what it *does.* It is this aspect of operational utility that gives purpose to its technology, artistic form, structural expression, qualities of surface, and its perceived meaning. This preoccupation with the making of objects for specific utility allows architects the ability to produce buildings which are grounded within the particulars that define each situation at hand. This suggests that architecture should be circumstantial in nature and can be critiqued based upon its adaptation and relationship to previously known values and associations. One such example would certainly include Fay Jones's Thorncrown Chapel in Eureka Springs, Arkansas. The artifact or image of the Gothic cathedral has been meticulously reinterpreted and made particular to the unique setting in which this building exists. The building is highly circumstantial through its adaptation of specific site conditions, use of indigenous materials and technologies, and implicit attention to building program.

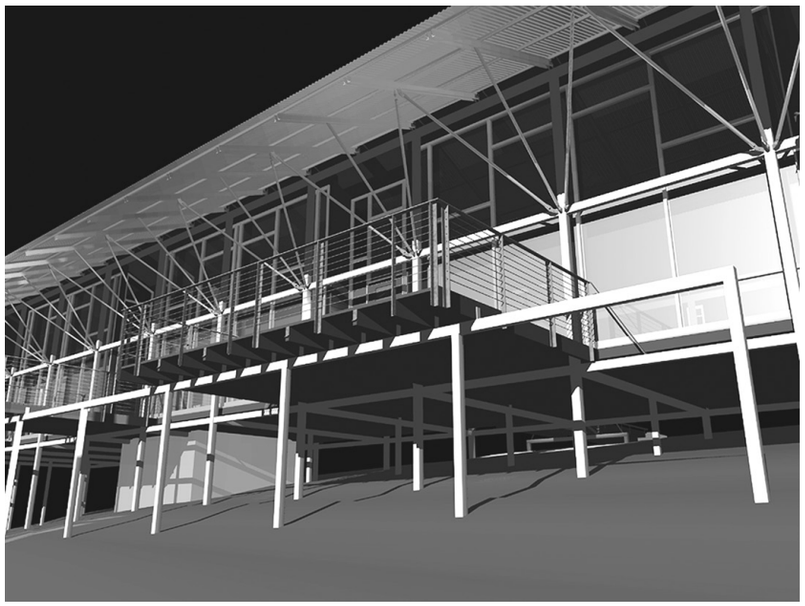
**Indigenous Artifacts**

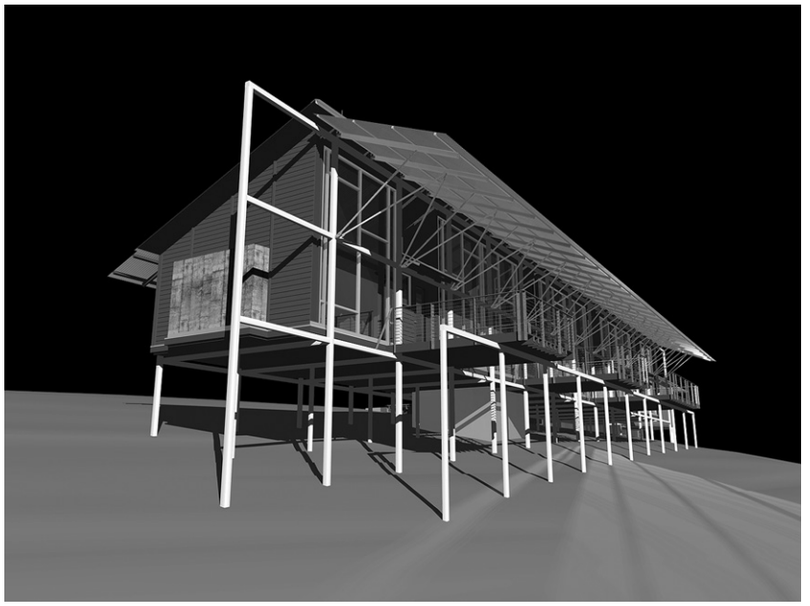
Upon knowing what something is or does based on its relationship to its predecessor or model, we can speculate upon new utilities and meanings for that which we choose to imitate. It is then the deliberate connections that are made between these objects or processes with their new imitative counterparts that situate our understanding of architecture. Examples that were studied for this particular project included local vernacular farm buildings and artifacts such as Amish post-and-beam structures, chicken coops, cattle feeders, and mobile homes. When looking at the chicken coop, a very clear sense of order and purpose emerges through its longitudinal organization, single-loaded circulation system, and double-sided system of cross ventilation. Issues of orientation suggest the possibility of maximizing exposure to both sun and shade through predominant east-west

orientations. An extended sense of space is achieved by minimizing internal compartmentalization. The cattle feeder provides ideas to be imitated within its longitudinal organization of post and beam construction and large overhangs to protect the contents of the feeder box. The repetition of structure and quality of "lightness" proposes an elegant solution for a rather banal activity. The mobile home provides an interesting departure regarding thoughts on prefabrication and the systemization of parts. Upon passing a particular residence during initial visits to the building site, we grew more aware of the beauty and value of this "customized" prefabricated home. Although it is a typical mobile home, it has been modified by a site-built post and beam structure that serves as a separate enclosure system, which operates to "cradle" the mobile home while providing support for a shaded porch and secondary roof membrane. This merging of site-built and prefabricated technologies suggests a very intimate relationship between program and structure as if the mobile home found its final resting spot beneath a pre-existing covered shelter. The image of this found condition and its corresponding tact in addressing both site and environmental conditions provided what became a very direct method of "making" within our building proposition.

**Site**

The multiple images and artifacts which form an imitative basis for our specific building proposal cannot exist as a prescriptive set of guidelines as this would deny the particulars of the situation at hand. Building program, a single-family residence, and specific site conditions provide the critical basis for reinterpreting the images, artifacts, and ideas presented with their correlated discoveries. The site, a 1,200-acre buffalo ranch in Southwest Missouri provides expansive views overlooking the James River Valley. The immediate site, a sloping south-facing hillside comprised of native field grasses and cedars suggests a delicate placement of the house within the fragile landscape. Upon initial assessment of the site, the placement of the house presents an elongated east–west organization that straddles the plateau of the hillside while maximizing the near views of the river valley and distant views of rolling hills and local farmsteads. Images of local corn cribs, devices used to store and dry corn upon harvest bring to mind a building strategy that relies

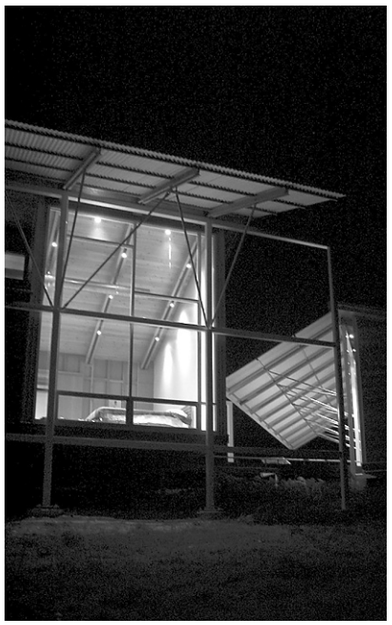




upon an elevated and open structure to insure maximum drying and ventilation. Typically constructed of wood post and beam systems, this building type is admired for its straightforward articulation of structure and skin as well as its ability to sit lightly upon the land. Natural breezes consistently blow from the south and accelerate as they climb the hillside. The opportunity for placement of outdoor areas and apertures within the building skin for passive cooling reinforces the initial desire to elongate the building for maximum exposure, much like the model of the local chicken coops and corn cribs. The yearly life cycle of field grasses brings constant changes to the site, a condition that is celebrated by raising the house above these grasses, thereby allowing their ever-changing conditions to reshape the base of the house. These grasses grow to heights in excess of five feet in August to their dormant height of mere inches during the winter, thereby accentuating the constantly changing relationship of the building to the ground.

**Repetition**

The organization of the house is central to the ideas taken from many of the indigenous structures, however, it is the relationship to the modified mobile home that is of particular interest. There is a certain sense of rigor and resolve within the techniques of mass production that are brought to bear within the construction of prefabricated living units. This can be attributed to many factors of which budget constraints and the systemization of parts play a vital role. Our interest in systemizing the construction processes within the project stems from the desire to question the relationship between the notions of repetition and craft. These issues have evolved through constructing relationships between the many types of indigenous buildings that also seem to gravitate between similar notions of repetition and craft. All of the building types noted thus far have many similarities in that they seek to standardize their system of parts while seeking inventive and highly refined levels of craft and detail. The repetitive "structural frame" is valued for emphasizing flexible building programs and the sharing of space. This brings about a desire to accentuate new associations within the house through the integration of building structure, external skin, environmental systems, and freestanding units of casework. As



with the modified mobile home, the structure is seen as encompassing the volume of the internal units as if the mobile home had been "slipped" into the sheltered framework. The idea of erecting a framework to be infilled is central to the design of the Steel House. Unlike the modified mobile home, the positioning of the framework is now used as a generative device to order key components of the building; program, skin, outdoor areas, environmental systems, casework, and services.

## Craft

There exists a high level of craft and a richness of materials within the vernacular structures of the surrounding area. Many of these buildings are of an agricultural nature and rely on the use of durable materials such as cedar for exterior cladding and corrugated galvanized steel for roofing and canopies. Given our desire to emulate these materials and their corresponding techniques of construction, the house uses a system of cedar board and batten siding and a corrugated metal roof system. Rather than the conventional vertical orientation of wide-plank siding, a horizontal system of five-foot long pieces have been arranged to modulate the vertical battens along the spacing of exposed roof joists and structural frame. As with regional barns, the shortened lengths of siding allow for battens to conceal all exposed butt joints, thereby emphasizing the modular nature of the house and minimizing exposure to rain. Corner joints of siding are concealed by overlapping layers of exposed metal flashing, a tactic employed to emphasize both the thinness of material and the dislocation of building skin beyond the structural frame. The same technique of separating structure and skin is carried throughout the interior as seen in the design of interior walls and multiple pieces of casework. Interior walls, being void of the need for insulation, emphasize their relative thinness through a system of exposed Douglas fir studs and layers of veneer plywood.

## Layering

Many of the regional barns and outbuildings also utilize large south-facing canopies that project from structural framing members. These canopies provide shelter from the environment for numerous entities including people, animals, farm implements, and hay. The south-facing expanse of window walls and outdoor decks within our proposal require protection from the sun and rain as well. Two large canopies, supported on galvanized steel frames bolt to the main structural frame and indicate the specific nature of building orientation and qualities of "lightness." Regional barns do not have qualities of insulation and thermal conditioning, therefore, separations between layers of building skin emphasize the component nature of individual parts. This is a quality that we find compelling and seek to imitate by layering and overlapping areas of the building skin where insulation is not required. One example of this would include the manner in which all roof projections and outdoor decks pull away from adjoining assemblies, thereby promoting their independence. All interior casework is based on the notion of layering and independence in that cherry "boxes" are cradled within Douglas fir frames, which in turn are supported by stainless steel tube supports. This method of interior construction seeks to imitate the exterior framework consisting of vertical steel frames, Douglas fir secondary structure, and wood cladding.

## Inspiration

The advantages in looking closely at our immediate surroundings are immense and serve as a wealth of inspiration for finding beauty within seemingly banal things. We are all products of our surroundings, therefore it is to our advantage as architects to seek out the hidden qualities that define an object, place, or technique. We too can learn much from particular people such as farmers, as they have elevated the act of building to that of a craft. Our ultimate challenge might therefore reside in finding inspiration through acts of critical imitation.

## Project Team

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Billy Joe McNeil, Project Foreman (Daybreak Framing)
Bruce Wrightsman, Architect
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