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Mack Scogin Merrill Elam mediates deftly between the man-made and the natural in its Herman Miller **CHEROKEE OPERATIONS** plant

Set amid the rolling hills of north Georgia, the plant is clad in standard tilt-up concrete panels—but with surprisingly subtle and poetic results (this spread and opposite, inset).

By Christine Kreyling

In Cherokee County, Georgia, north of Atlanta, the Appalachian Mountains relax into hills that roll with vigorous contours reminiscent of a Thomas Hart Benton painting. From certain vantage points, the hills read as a series of layered planes receding into the horizon. A similar language of layering emerges in the Herman Miller Cherokee Operations plant by the Atlanta firm of Mack Scogin Merrill Elam Architects.

At the outset, furniture manufacturer Herman Miller presented a straightforward program—to merge, under one roof, the operations of its three separate Georgia facilities for office-system production and distribution. One of those facilities, located in Roswell, had been designed nearly 20 years earlier by Mack Scogin, AIA, and Merrill Elam, AIA, then working in the offices of Heery & Heery [RECORD, January 1983, page 122]. But subsequent changes in property values and land use, coupled

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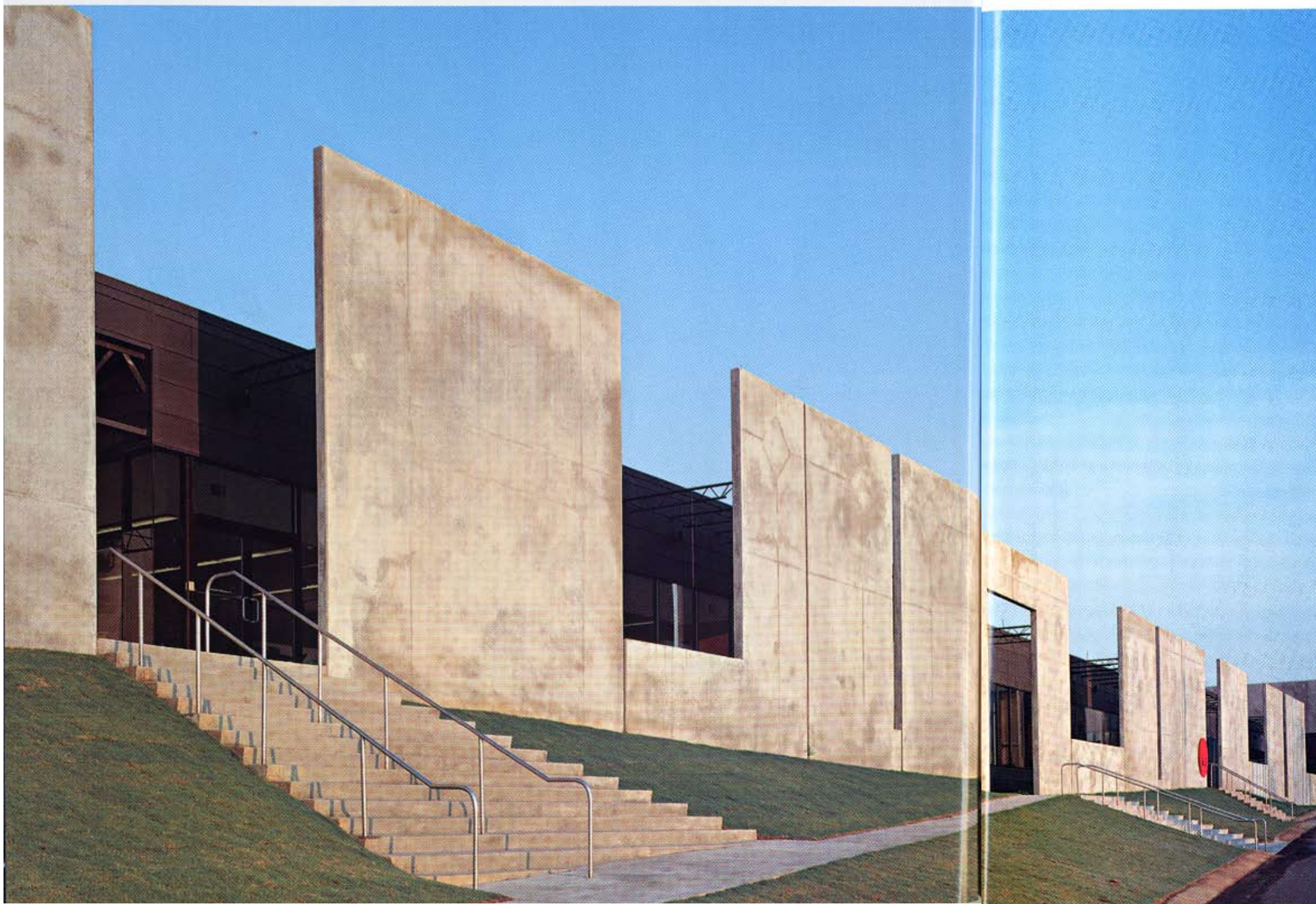
Project: Herman Miller Cherokee Operations plant, Canton, Georgia

Architect: Mack Scogin Merrill Elam Architects—Mack Scogin, AIA, principal in charge; Lloyd Bray, AIA, and

Merrill Elam, AIA, collaborating principals; Tim Harrison, project architect

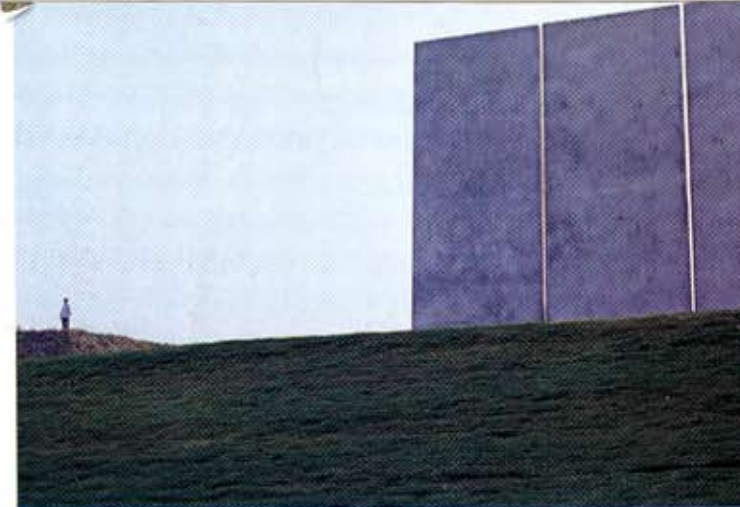
Landscape architect: Michael Van Valkenburgh Associates—Matthew Urbanski, principal





PHOTOGRAPHY: © TIMOTHY HURSELEY, EXCEPT HELEN HAN/MACK SCOGIN MERRILL ELAM ARCHITECTS (TOP RIGHT)

Tilt-up concrete slabs screen the entry route into the building (opposite, bottom). Openings within the slabs and thin slots between them create a pattern of repetition and variation that evokes the rhythm of the assembly line (this page, photos at right). Truck containers, used for storage, occupy a yard bound by concrete walls (bottom right). Trucks, extending out from the loading docks, accentuate the long, low character of the building (opposite, top). A state highway along the site's northwest edge provides the main access to the plant, while to the site's southeast, views open up toward the Etowah River and some of its tributaries (above left).



A forest of telephone poles, some holding lighting, punctuates the parking lot (this page and opposite), mediating between the building and surrounding hills. Wildflowers bloom in the meadows (right). Ivy will eventually cover the inside of the concrete screening walls (below), "greening" close-range views from within the glazed office areas.



with the inefficiencies and costs of decentralization, prompted the company to consolidate. The new plant, as Herman Miller engineers calculated, called for a 330,000-square-foot space all on one level.

The solution required the precision of smoothly meshing gears. In transforming a manufacturing flow diagram into architecture, the designers had to efficiently and economically shelter the path leading from raw materials, through fabrication and assembly, to trucks poised for product delivery to the world. Large parking aprons would accommodate truck containers—an inexpensive means of inventory storage. Minimal showroom and office space were needed. And a lean budget of \$17.9 million set a cap of \$55 per square foot.

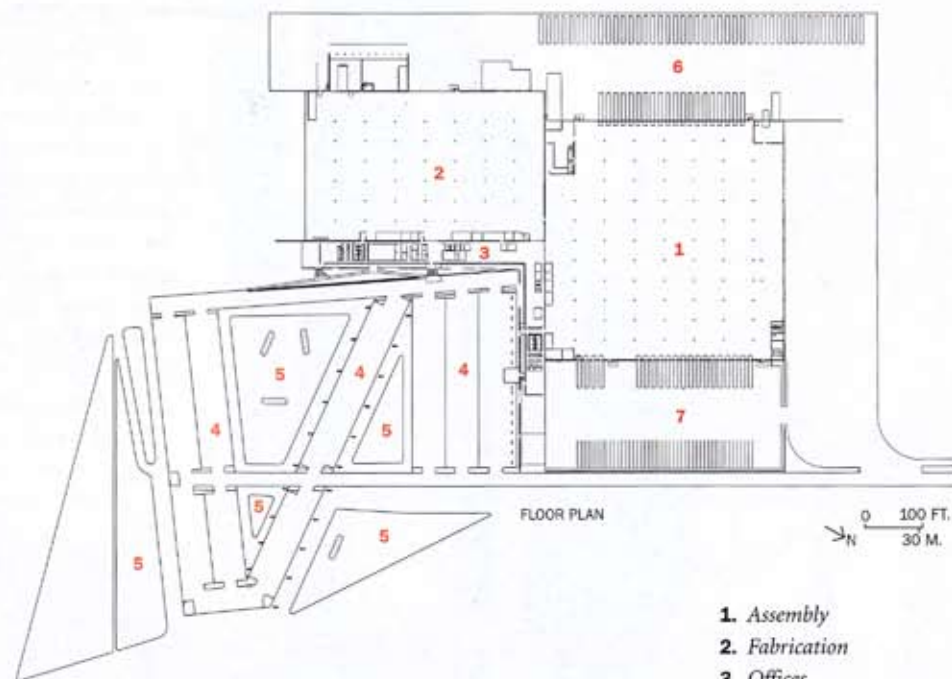
For such a large footprint, rolling terrain is not the obvious choice. In fact, Herman Miller selected a site in Cherokee County only after receiving inducements, such as local tax abatements, job-training assistance, and infrastructural improvements. In Canton, the county seat, the company found a reasonably flat site: 70 acres of open pasture that required some grading but no removal of dirt or trees.

The massing and site plan—with landscape design by Matthew Urbanski of Michael Van Valkenburgh Associates—open the building's sight lines to the rear, away from the road and toward the property's southwest edges, licked by the Etowah River and its tributaries. "The idea was to retain the feel of the original promontory, to take advantage of the views of

hills and river," explains Elam. The forms and style, however, are decidedly not suburban picturesque. As she puts it, "We chose not to domesticate."

Instead, architecture and landscape speak a complementary idiom of simple materials shaped into severe, consciously manipulated forms. A major goal was to distinguish human from machine space. "This is a big place," Elam explains. "You have to be selective about making 'moments,' surprises—detailed human encounters with site and building."

The final results reveal appropriately huge, boxlike sheds for fabrication and assembly. Adjacent, but slightly staggered in plan, they have tilt-up concrete walls with corrugated metal ceilings and a steel truss system overhead. Perimeter skylights articulate the shed walls and provide balanced illumination for the truck-loading docks that flank the assembly zone. Within the great scale of the manufacturing processes, glazed doors signify access for people. Similarly, a transparent layer of offices—forming a thin, L-shaped zone along the assembly and fabrication sheds—defines with storefront glazing the project's most intimately scaled spaces. Twelve-foot-high picture windows open up views between offices and manufacturing. At the front of the building, large, thin tilt-up concrete slabs form two parallel screening layers, connected to the building core by steel joists. Penetrating these layers, the entry route is democratic, welcoming the arrival of both white- and blue-collar workers, as well as visitors, through a central door.



1. Assembly
2. Fabrication
3. Offices
4. Parking
5. Water filtration
6. Receiving
7. Shipping

The manufacturing areas (opposite) evoke a huge, finely tuned machine. Glass walls inside the offices (below right) yield views into assembly and fabrication zones. Herman Miller products furnish the offices and a lounge (below left).



Openings in the tilt-up slabs create a pattern of repetition and variation that evokes the assembly-line process. The fenestration frames views from within, while thin slots between the panels allow the sun to cast precise slashes of light—examples of what Elam calls “moments.” Outside, the rhythm of apertures turns a simple box into an exploration of geometry—a play of light and shadows worthy of a De Chirico painting.

The architects selected tilt-up concrete in part for its economy—but this method also holds a more-than-respectable place in the history of American architecture. Irving Gill and then Rudolph Schindler used it to pioneer concrete construction in southern California in the early 20th century. In more prosaic applications, the technique is ubiquitous in north Georgia today. “Tilt-slab is a local custom for warehouses and transportation facilities—it’s a method tried and true,” Elam says. “But the concrete is usually painted. We were going for honesty of materials.”

The need for economical solutions, done with style, influenced not only the building, but also the landscape design. The challenge, according to Urbanski, entailed storm-water management on a site with rivers and streams on three sides. Water quality had to be maintained, even where impervious surfaces tend to concentrate the runoff. “The normal solution,” Urbanski says, “is to jam parking close to the building, and then link both by piping, with fairly deep storm-water retention ponds farther away.” Instead, the landscape designer devised a more mutually beneficial way to recombine the same three components: building, traffic infrastructure, and storm-water filtration.

Urbanski made what he describes as a “collage” of shallow ponds distributed across the asphalt parking area. The shallowness, he says, helps prevent “a violent change in pond ecology when it rains—so you can put

plantings in them and create marshland.” By eliminating the need for curbs, drain inlets, and extensive piping, this strategy reduced infrastructure costs—and, as the landscape architect suggests, “added visual interest by breaking up the scale of parking with a variety of shapes.”

Those shapes include hedgerows of trees bordering the marshland. A “forest” of phone poles, some of which support lighting, also punctuates the parking lots. The poles are taller and more numerous than the lighting required, but they give the space vertical definition, providing a transition between the building and the surrounding hills and valleys.

Roof and truck-apron runoff flows to the front of the site. “Such a giant pulse of water is too violent for marshes,” Urbanski explains—so, in front of the building, he created a large pond, excavated down to the bedrock. The pond’s organic shape contrasts with the building’s geometry, reinforcing tension among natural, apparently natural, and explicitly constructed elements. While the green infrastructure and its processes mimic nature, the orthogonal concrete forms are clearly man-made.

“We haven’t invented anything here,” says Elam. “All the materials are standard off-the-shelf. What we were looking for was not experimentation, but a different way of assembling things.” ■

Sources

Tilt-up concrete: T & M Tilt-Up
Zinc cladding: VM Zinc
 (preweathered Anthra-Zinc)
Exterior paint: Tnemec
Skylights: Naturalite Skylight
 Systems; Polygar Solar Grade

Fabric wall panels: Herman Miller
Glazing system: Trainor Glass
 (storefront)

For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.