

RICHARD BUCKMINSTER FULLER & ANNE HEWLETT FULLER
DOME HOME
(Bucky Dome)
407 South Forest Avenue
Carbondale
Jackson County
Illinois

HABS IL-1234
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA
REDUCED COPIES OF MEASURED DRAWINGS
FIELD RECORDS

HISTORIC AMERICAN BUILDINGS SURVEY
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RICHARD BUCKMINSTER FULLER AND ANNE HEWLITT FULLER DOME HOME (Bucky Dome)

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Location: 407 South Forest Avenue, Carbondale, Jackson County, Illinois.

The coordinates for the Fuller Dome Home are lat: 37.723019 and long: -89.225290, and they were obtained through Google Earth in November 2011 with WGS84 datum. There is no restriction on the release of the location data to the public.

Significance: This geodesic dome was the home of visionary engineer Buckminster Fuller and his wife Anne. It illustrates his architectural philosophy and was the only dome his family lived in or owned anywhere in the world. Six of Fuller's patents were issued with this address and, reportedly, twelve of his books were published during Anne and Bucky's residence in the Dome Home.

Description: The geometry of the home is a three frequency, 3/8th sphere geodesic dome consisting of six pentagons (pent's) and five hexagons (hex's) comprised of three differing length modular struts forming a total of 60 triangular panels. Each isosceles triangular panel consists of 1 ½ inch by 3 inch (actual size) wood framing with nominal one-half-inch plywood sheathing.

The only exterior vertical surfaces are five trapezoidal two by four inch stud walls with textured finish plywood having 3/8" cut grooves at 6" centers. The five vertical wall assemblies are symmetrically arrayed around the perimeter and provide for fenestration.

Documentation for the original white roof material or membrane has not been found, but Celastic tape joints with methylethyl-ketone "hard shell" is documented at the edges. Reportedly approximately three years later a spray urethane foam roof membrane was applied. Soon after the asphalt shingles such as those still extant were applied.

The floors are twelve inch or six inch square Loft cork tiles. The interior walls and ceiling are painted smooth face nominal ¼ inch plywood panels with ½ inch half-round trim at the interior edge joints.

Natural lighting was accomplished with skylights. Interior ventilation incorporated a stack effect and central fan allowing air to circulate from the lower level to the upper level via ceiling grills and a perforated "peg-board" base at the Loft built-in bookcase. Radiant hot water circulating heat was incorporated into the floor slab and is still active.

History: Assembled in approximately seven hours on Tuesday, April 19th, 1960, for Anne and "Bucky" Fuller as their private residence, the geodesic dome shell is a panelized wood frame assembly prefabricated by the Pease Woodworking Company of Hamilton, Ohio. The entire Dome Home with foundation, and mechanical/electrical systems was constructed by Carbondale, Illinois Contractor Ira Parrish on a concrete foundation and floor slab for an overall cost of \$7,000 to \$8,000.

Historian: Thad Heckman, Architect, submitted for 2011 Holland Prize competition