

KETCHUM BUILDING

730 Kalamath Street, Denver, Colorado 80204



Architect: Milo Ketchum

Year Built: 1958

The home of Sprocket Design + Planning is a unique example of thin shell concrete construction and is one of the first examples of the technique in Colorado. Milo Ketchum, a Denver born structural engineer and influential proponent of concrete shells, designed this building to house his engineering firm and to showcase the construction technique that he grew to specialize in. His firm was founded in 1945 and went through many iterations before it was purchased by Martin Associates Group in 1988. Today, it exists as the well-known Martin/Martin.

Concrete shell (or thin shell concrete) is used as a roof system, but this oversimplifies its versatility. The common analogy for how they work is a sheet of paper; thin and flimsy, until it is folded into a more structurally supportive shape like an arch or a dome. But this too is oversimplifying as many concrete shell buildings take on complex geometries, most notably that of a hyperbolic paraboloid, a kind of saddle shape. These geometries can be combined into even more complicated, undulating roofs that swoop to touch the ground at multiple points and soar into high parabolic arches in between. This allows for the thin roof to span large distances with little need for central support columns. They are ideal for airplane hangars, an application that Ketchum used in what is perhaps his most well-known building in Colorado. Thought to be the only diamond-shaped building in the world to use shell concrete, Hangar 61 at 8695 Montview Boulevard in the Stapleton redevelopment was built just one year after this building (and almost destroyed by developers until the nonprofit Colorado Preservation, Inc. bought it, preventing its razing during the renewal).

The concrete shell roof of the Sprocket building is in the form of a 5-barrel vault, supported by concrete beams above large transom windows. More windows directly below form large ribbons that run full length on the north and south facades. The east and west sides of the building are the short ends of its rectangular form and possess doors as their only fenestration, with the main entrance on the west at Kalamath. The remainder of the building is clad in stacked bond brick. Above the main entrance a large upsloped eave was placed to highlight the narrow profile of the concrete shell roof for which Ketchum has become so well known. Milo Ketchum died on December 8, 1999 in Denver following his long career as an engineer, an educator and a writer.

References

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