

**Engineer:** Ketchum, Milo S.  
**Birth/Death Dates:** 1910-1999  
**Practice Dates:** 1943-1989  
**Firms:** Milo S. Ketchum Consulting Engineer  
Ketchum & Konkel  
Ketchum, Konkel & Hasting  
Ketchum, Konkel, Ryan & Fleming  
Ketchum, Konkel, Ryan & Hastings  
Ketchum, Konkel, Barrett, Nicke, & Austin  
KKBNA

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## Biographical Information

Milo S. Ketchum (Milo Ketchum, Jr.) was born in Denver, and received his B.S. in engineering in 1931 and his M.S. in 1932 from the University of Illinois where his father was dean of engineering at the time. Milo Ketchum, Sr., was regarded as one of the top engineering educators in the twentieth century, and also served as dean of the College of Engineering at the University of Colorado and as the head of the Department of Engineering at the University of Pennsylvania. Ketchum Jr. was also an educator for a portion of his career, teaching engineering at the Case School of Applied Science, Cleveland, Ohio, from 1937 until 1943, and later at the University of Connecticut in Storrs from 1967 through 1978.



He first left teaching in 1943 when he joined a firm in private practice in Marion, Ohio. Two years later, he opened his own consulting engineering firm in Denver. E. Vernon Konkel became a partner in 1954, and until 1989 the firm was variously known as Ketchum, Konkel & Hasting; Ketchum, Konkel, Ryan & Fleming; Ketchum, Konkel, Ryan & Hastings; Ketchum, Konkel, Barrett, Nicke, & Austin; and KKBNA. Ketchum's firm prepared the structural engineering plans for numerous thin shell industrial plants, commercial buildings, shopping centers, schools, clubs and hotels. Ketchum also opened a branch of his firm in Connecticut while teaching there.

Milo Ketchum was recognized both nationally and internationally for his thin shell concrete designs, and was considered "among the foremost of the small group of engineers who fully understand and appreciate this type of construction."<sup>1</sup> Other engineers who were prominent in this field included Anton Tedesko of Roberts & Schaefer, Felix Candela of Mexico, Pier Luigi Nervi of Italy, and Robert Maillart of Switzerland. Throughout his career, Milo Ketchum kept copious notes and files, and corresponded regularly with Candela, Maillart and other prominent engineers about thin shell structures.

Ketchum's notable projects in Colorado include Currigan Exhibition Hall (1969, demolished), McNichols Arena (1975, demolished), the Ideal Basic Cement Company Corporate Hangar at the

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<sup>1</sup> Consulting Engineer Magazine, February 1958; Cited from Milo Ketchum, "Milo Ketchum Archive," 20 November 2005 <<http://www.ketchum.org/milo/Memoirs>>.

former Stapleton Airport (1959), and the International Center at the Broadmoor Hotel in Colorado Springs. He was also responsible for the structural design of the McDonnell Planetarium at the St. Louis Science Center, the Morris Mechanics Theatre in Baltimore, and the Mummers Theater in Oklahoma City. His firm received awards for the Trans World Airlines airframe overhaul facility in Kansas City (the 1973 American Consulting Engineers Council outstanding engineering achievement award) and for the University of Idaho football stadium (the 1976 American Society of Civil Engineers outstanding structural engineering achievement award).<sup>2</sup>

Ketchum took time from his practice to write, resulting in several published magazine articles as well as a book, *Handbook of Standard Structural Details for Buildings* (1956). He was editor of the journal *Structural Engineering Practice - Analysis, Design, Management* in the early 1980s, and wrote several editorials for that magazine. Ketchum noted, "The reason one writes is not because one knows everything about a subject, but because one wants to learn, and writing is the best way to accomplish this."<sup>3</sup> In October 1958, he was a featured speaker at the Institution of Structural Engineers Fiftieth Anniversary Conference in London, presenting a paper on "The Status of Structural Engineering in the United States of America."

Ketchum is probably most recognized as an expert and promoter of thin shell concrete designs. He prepared a short booklet, "Types and Forms of Shell Structures," which he sent to clients. Ketchum felt that this led to several commissions for shell structures. The Portland Cement Association was so impressed with the booklet that it distributed several copies as well, which eventually led to an extensive lecture tour of many cities in the United States for Ketchum. Many of the lectures were at architectural schools, including two weeks at Yale University. This gave Ketchum "further insight into the 'Architectural Mind,'" and he wrote several articles on the roles of structural engineers and architects.<sup>4</sup>

While living in Cleveland, Ketchum met and married Gretchen Allenbach. The couple raised four children. Gretchen died in 1990 followed by Milo on December 8, 1999, at the age of 89.

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### Credited Buildings and Structures (partial list)

Building/Structure Name	Location	Site No.	Date*	Status
Ideal Basic Cement Company Corporate Hangar (Hangar 61)	8695 Montview Blvd Denver	5DV.9446	1959	State Register
Fan Fair Discount City (with architect William Muchow)	333 Havana St. Aurora	5AH.1435	1961	Vacant
Morris A. Mechanic Theatre	25 Hopkins Plaza Baltimore		1967	Theater
Currigan Exhibition Hall (with architects Muchow, Ream and Larson)	1324 Champa St. Denver	5DV.1720	1969	Demolished in 2002

<sup>2</sup> "Milo S. Ketchum Jr.," [obituary] 22 December 2005 < <http://www.ketchum.org/MiloObit.html>>.

<sup>3</sup> Ibid.

<sup>4</sup> Milo Ketchum, "Milo S. Ketchum Memoirs: 3. Promotion - Care and Feeding of Architects."

Mummers Theater Oklahoma Theater Center with architect John M. Johansen	Oklahoma City		1970	Theater
McNichols Arena	Denver		1975	Demolished in 2000
<b>Undated Projects</b>				
Marriott Hotel	Denver			
International Center Broadmoor Hotel	Colorado Springs			
Ketchum, Konkel & Hasting Building	Boulder			
Casey Middle School	2410 13 <sup>th</sup> St. Boulder			
First National Bank	Boulder			
McDonnell Planetarium St. Louis Science Center	St. Louis			
Rainbow Bread Bakery	Denver			
Unnamed bank building	Casper, WY			
Chase Hotel auditorium	222 N. Kings Hwy. St. Louis			
Colony Supermarket	Boulder			

\*Completion date is stated if known. Plan, building permit, or assessor date is shown if completion date is unknown.

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### **Information Sources**

Ketchum, Milo. Website, [www.ketchum.org](http://www.ketchum.org). Accessed April 1, 2004.

Site Files Database, Office of Archaeology and Historic Preservation, Colorado Historical Society, Denver.

Wolfenbarger, Deon. "Ideal Basic Cement Company Corporate Hangar," State Register of Historic Properties nomination, November 21, 2005. Office of Archaeology and Historic Preservation, Colorado Historical Society.

Revised: August 21, 2006