

Thin-Shell Concrete and Modernism: An Overlap of Function and Form

- Thin-shell concrete as a structural technique**
- The overlap of thin-shell concrete and modernism**
- Photographs of thin-shell concrete buildings and structures**

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May 12, 2021

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Thin-Shell Concrete

- Relatively thin compared to span or radius
 - Curved or folded to increase strength****
- Combines support and enclosure in one element**

Forms

- Barrel vault
 - Dome
- Hyperbolic paraboloid
- Hyperboloid of one sheet

Modernism

- **Thin Shells in the US: 1934 - 1975 the “golden era”**
 - **Modernism in the US: 1930s - 1970s**
 - **One didn't cause the other — fortunate timing**
- **Thin Shell is not an architectural style, but meshes well with some**

Photographs

- **A few out-of-state examples to set the stage**
- **We have quite a few still standing in Colorado!**
 - **Close but no cigar: Imitation, flattery, etc.**
 - **Departed Shells: We've lost some gems**



Anton Tedesko
Photo from *STRUCTURE*, April 2007



Hershey Arena

Hershey, Pennsylvania



Postal Service Facility

Providence, Rhode Island





Champagne-Urbana,
Illinois

University of Illinois Assembly Hall

Warm Mineral Springs Inn

Warm Mineral Springs, Florida





Jolly, Texas

Picnic Shelters



Colby, Kansas





Columbus, Ohio

Scioto Downs

Meanwhile, back in Colorado...

- Anton Tedesko**
- Milo S. Ketchum**
- And More!**

Denver Coliseum



Anton Tedesko
Photo from *STRUCTURE*, April 2007

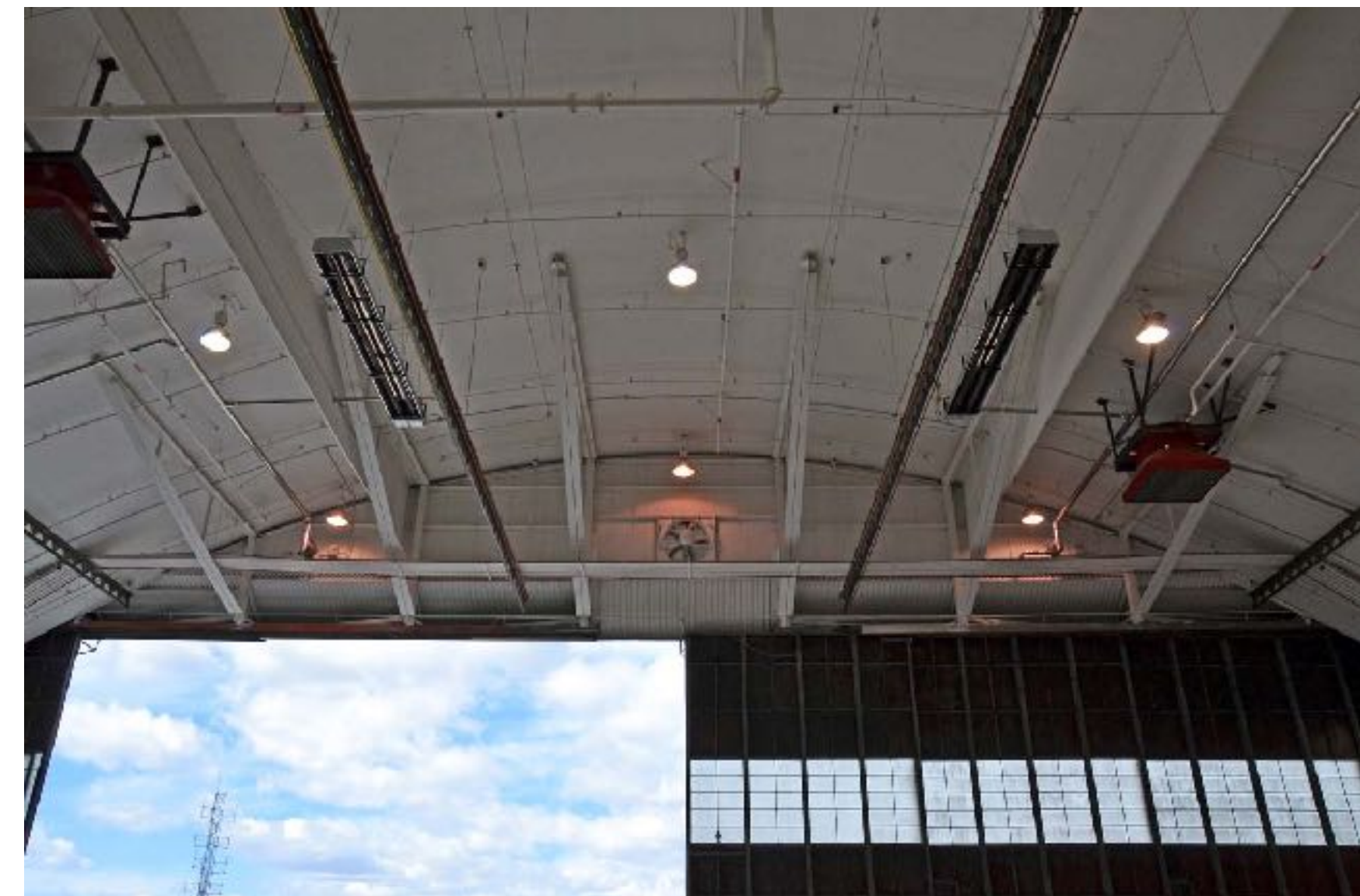


Naval Air Reserve Training Hangar

Naval Air Station Denver (now Buckley Air Force Base), Aurora



Anton Tedesko
Photo from *STRUCTURE*, April 2007



Western Electric Warehouse

Denver



Anton Tedesko
Photo from *STRUCTURE*, April 2007



Denver



Milo S. Ketchum Jr.

Photo from *Leadership and Management in Engineering*, October 2006



Ketchum and Konkel Office

Mile-Hi Church of Religious Studies

Lakewood



Milo S. Ketchum Jr.

Photo from *Leadership and Management in Engineering*, October 2006

Frank R. Ross House

Arapahoe County



Milo S. Ketchum Jr.

Photo from *Leadership and Management in Engineering*, October 2006

Ideal Cement Co. Hangar

Former Stapleton Airport, Denver



Milo S. Ketchum Jr.

Photo from *Leadership and Management in Engineering*, October 2006

Centennial Junior High School

Boulder



Milo S. Ketchum Jr.

Photo from *Leadership and Management in Engineering*, October 2006

Key Savings & Loan

Englewood



Sculptured House

Genesee



St. Stephen's Lutheran Church

Northglenn



Calvary Temple Fellowship Hall

Denver



Johnson-McFarlane Hall

University of Denver



Vehicle Canopy

Denver



Things aren't always what they seem....

- Get a closer look**
- Plywood or aluminum stressed-skin roof systems**
 - Laminated timber arches**
 - Plastic foam**

Folded Plates, but not Concrete

Beck House, Denver



Tastee-Freez, Denver

Morrison-Merrill Warehouse, Denver



Hyperbolic Paraboloids, but not Concrete

United Airlines Building, Denver



Chicken Delight Restaurant, Denver



Dome, but not Concrete

Melon Dome,
Rocky Ford



Sculptured, but not Concrete



Brenton House, Boulder

I can't believe they tore that down...

R.I.P. Fan Fair Discount City

Aurora



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Photo (c) Atom Stevens,
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Milo S. Ketchum Jr.

Photo from *Leadership and Management in Engineering*, October 2006

R.I.P. May D&F Canopy

Denver

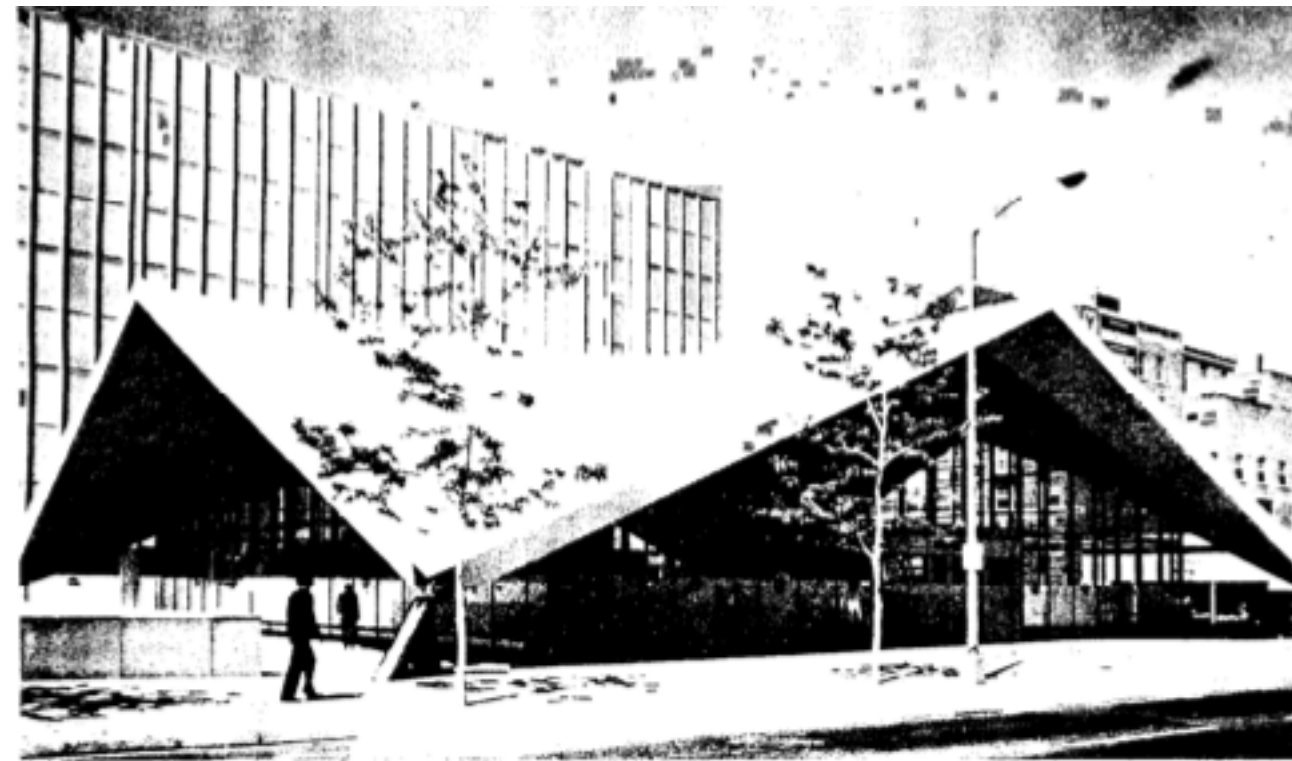


Photo from *Journal of the American Concrete Institute*, October 1960



Anton Tedesko

Photo from *STRUCTURE*, April 2007



Photo from *APT Bulletin*, Vol. 43, No. 1 (2012)



Photo from NRHP Multiple Property Documentation Form
"Historic Resources of Downtown Denver."

R.I.P. Moore Equipment Company

Commerce City



Building photos from *Architectural Forum*, February 1955



Milo S. Ketchum Jr.

Photo from *Leadership and Management in Engineering*, October 2006



Questions?