

**Stephen C. O'Connell
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Gainesville
USA**

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Gainesville

*Landscape
Architect* CRS, Inc
Houston, Texas

*Structural
and Mechanical
Engineer* Geiger-Berger
Associates
New York, N.Y.

*Electrical
Engineer* Flack & Kurtz
New York, N.Y.

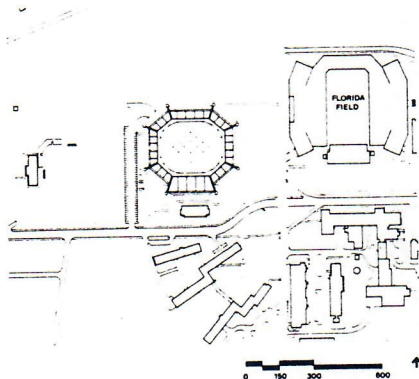
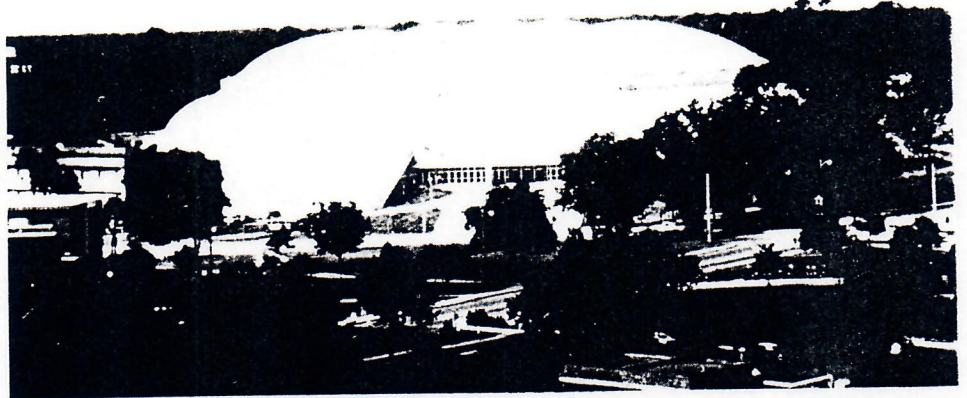
*Acoustical
Engineer* Coffen,
Anderson & Associates
Mission, Kansas

*Aquatic
Consultant* R. Jackson Smith, AIA
Stamford, Connecticut

*Aquatic
Engineer* The Eggers Group
New York, N.Y.

*General
Contractor* Dyson & Co
Pensacola, Florida

Completion 1980



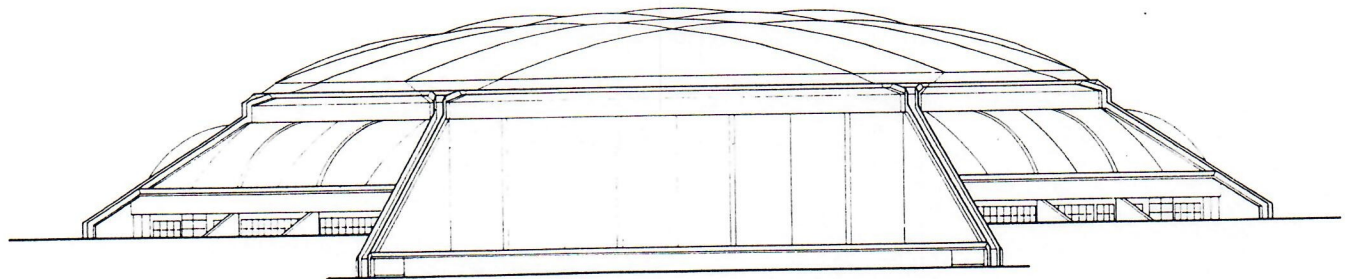
Program Requirements

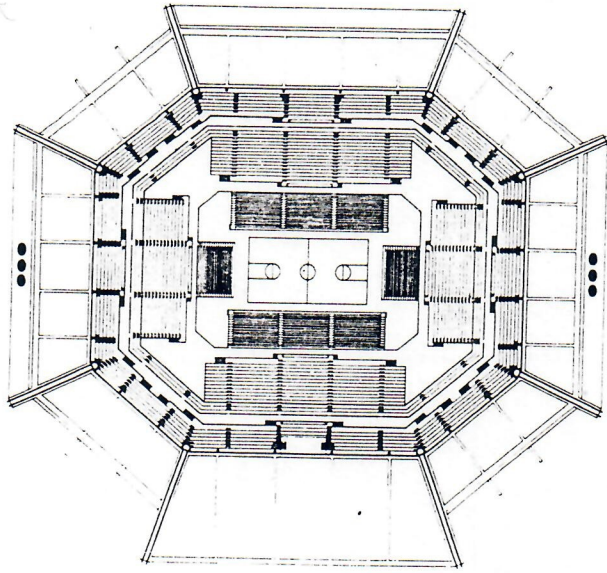
To provide a student activity center for the mixed-use recreation and the indoor varsity athletic events of a major university campus.
To provide an energy-conserving facility that functions in its southern climate sixteen hours a day, twelve months a year.

Design solution

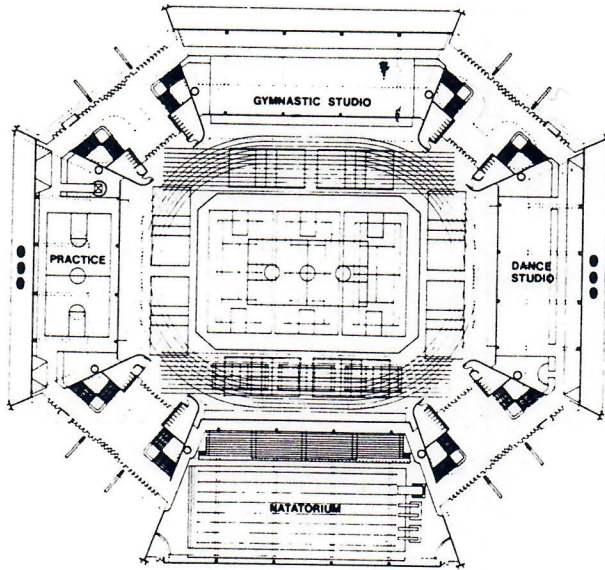
To establish a new campus symbol of vital activity and dynamic spirit:
By creating a stimulating and kinetic experience with a strong sense of place that allows simultaneous visual and physical participation in events.
By developing an aesthetic system that expresses that synthesis of architecture, structure and mechanical systems.
By the layering of events spaces that fosters interaction of activities, participants and spectators.

Simultaneous-use opportunities by spectators, classes and recreation activities are realized by organizing the main spectator arena within an air-inflated structure and smaller-scale activities within the tension-supported perimeter "skirt".
By creating "Piranesi-like" imagery of vaulting spaces and deep penetrating natural light.
By encapsulating event places with a fabric sky that transmits a spiritually-uplifting quality of light and creates a "Baths of Caracalla" new technology with an arched frame tension structure, designed to withstand hurricane forces, and a concrete compression ring to support the lightweight air-inflated arena dome.
By creating an energy-conscious roof and wall system, constructed with a double layer fabric, that transmits natural light for daytime use, provides insulation and acoustical control.

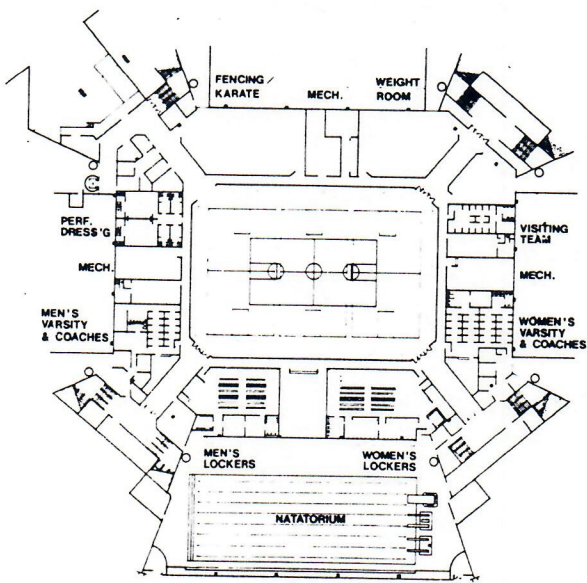




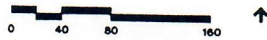
Seating Plan

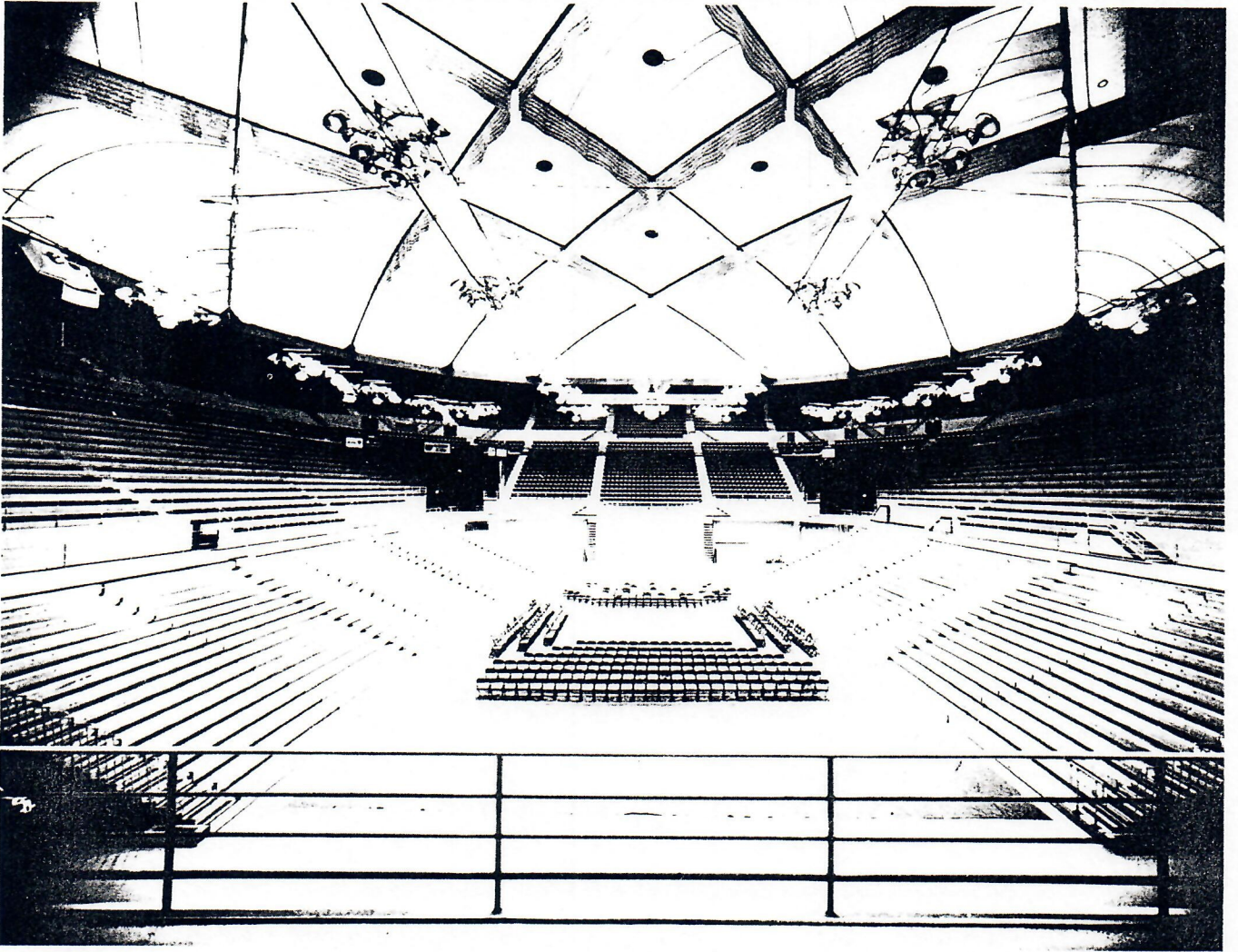
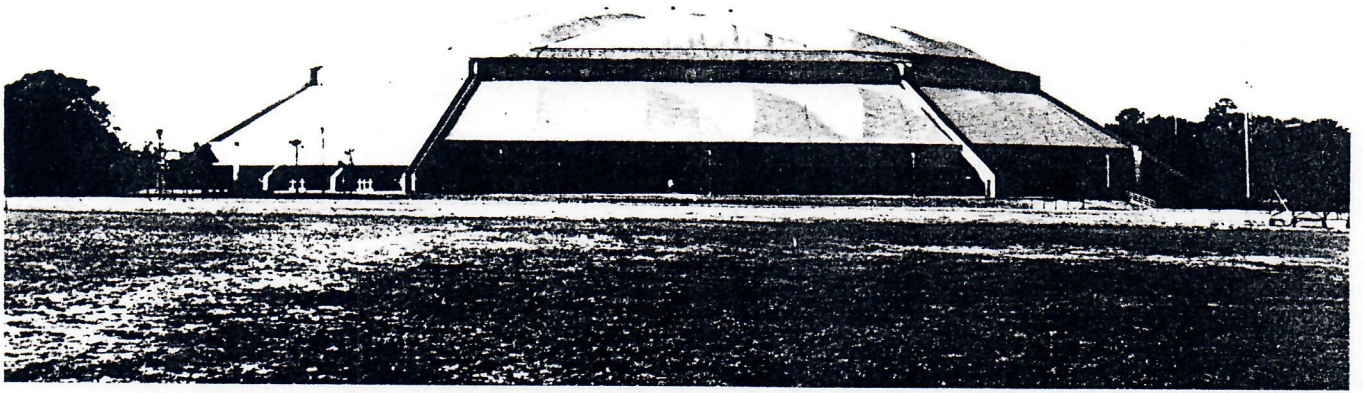


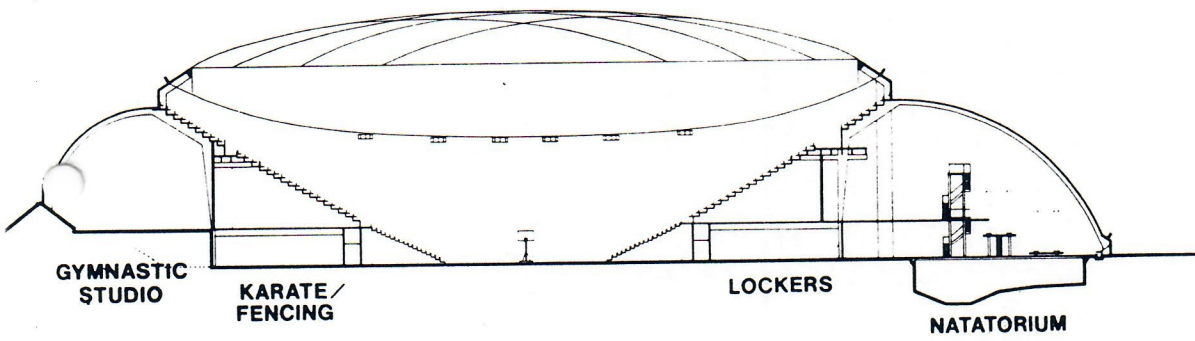
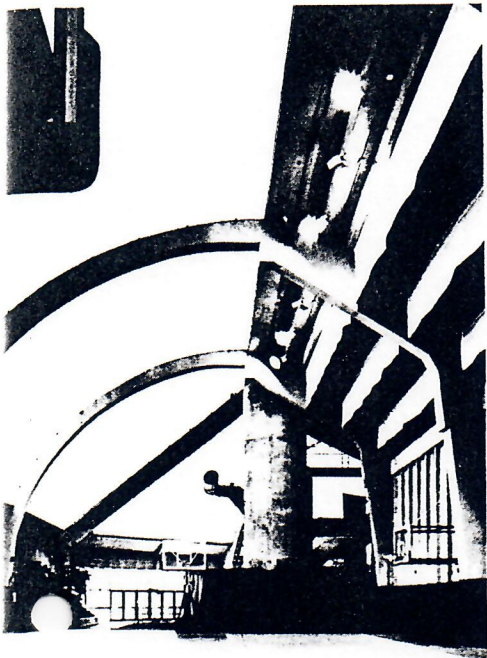
Ground Floor Plan



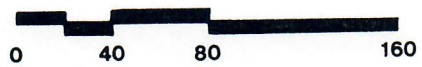
Lower Floor Plan



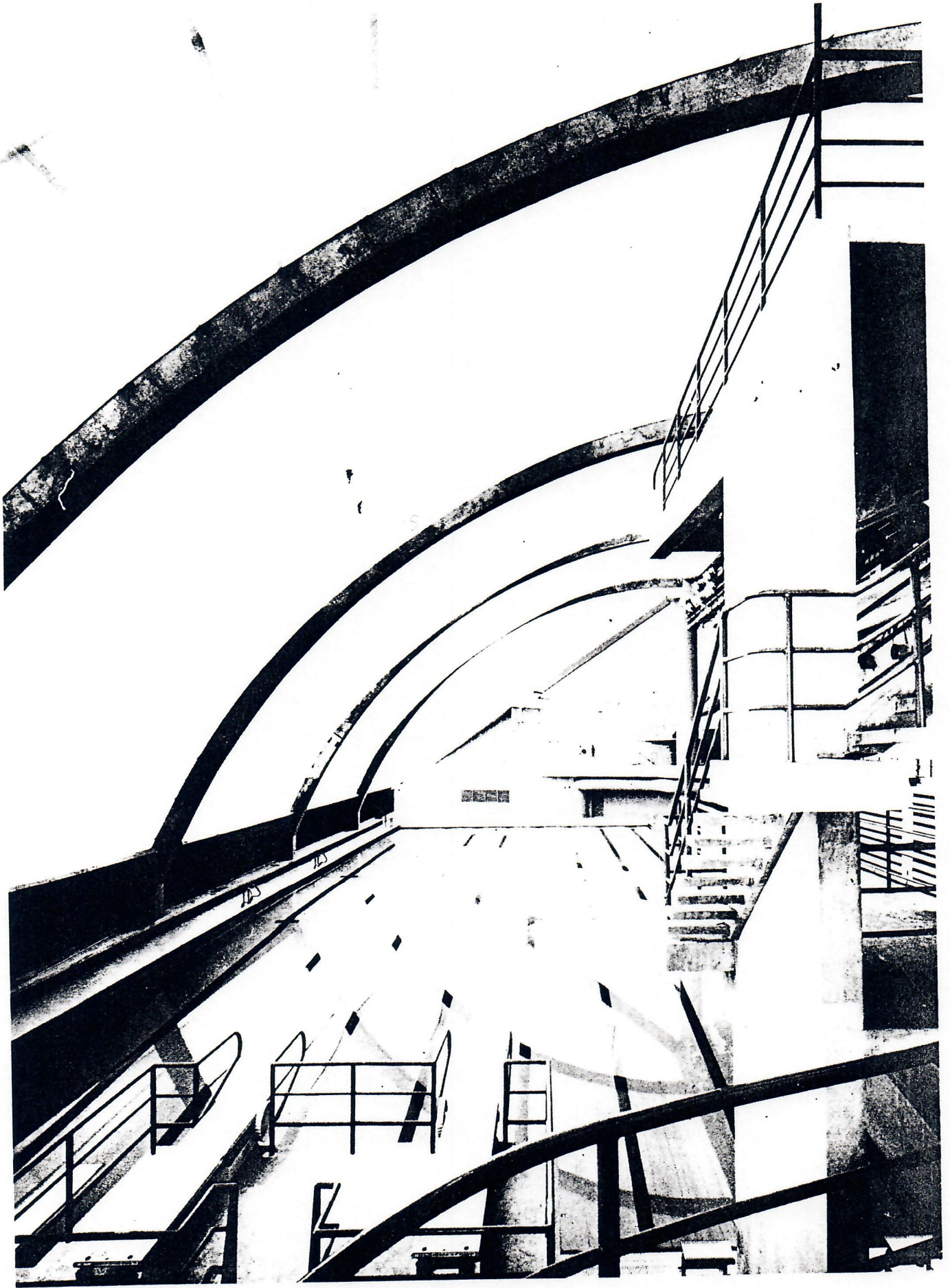


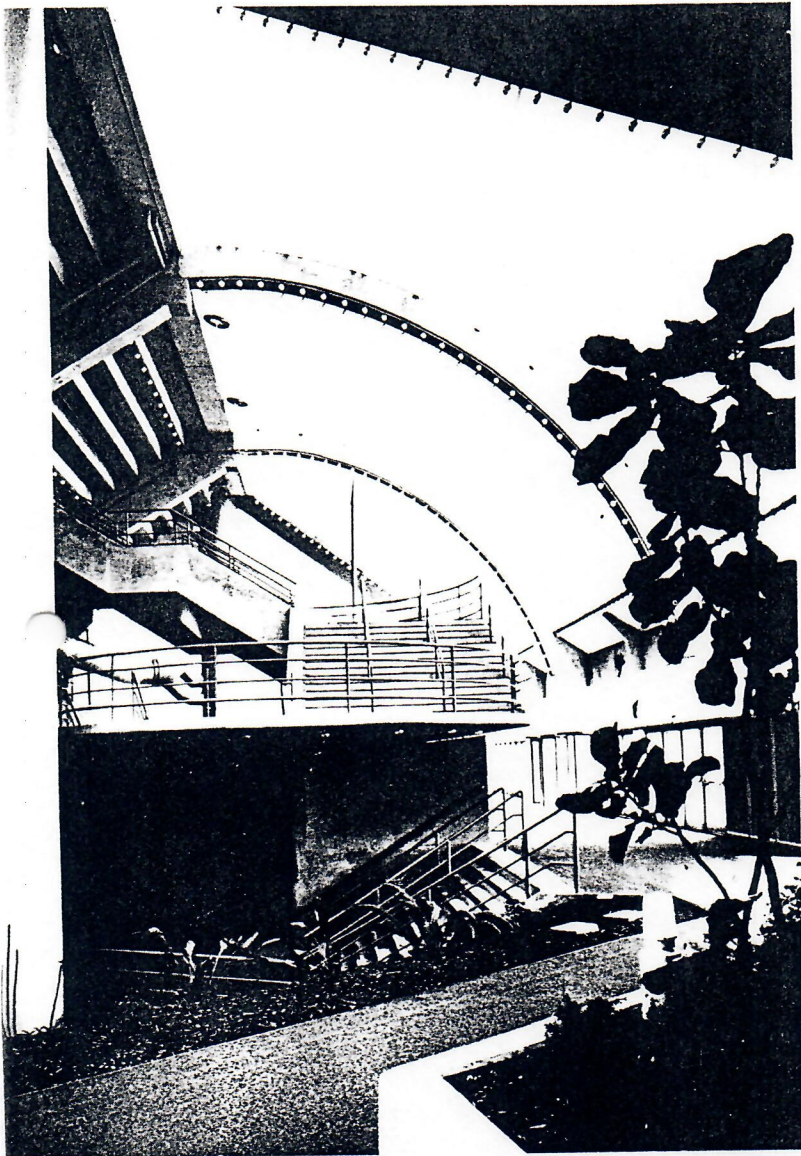


480,000 sq. ft.
 246,900 sq. ft.
 100,000 sq. ft.
 23,100 sq. ft.
 7,300 sq. ft.
 \$ 11,954,418
 \$ 48.42



by campus on all sides.





Construction

Major Materials

Main roof is a cable-restrained, air-supported fiberglass membrane coated with teflon; perimeter roof is fiberglass tension membrane. Support structure is cast-in-place and precast concrete.

Construction system

Precast concrete bents and arches with eight cast-in-place hollow columns at each entry quadrant. Eight steel cables support the inflated fiberglass roof.

Mechanical system

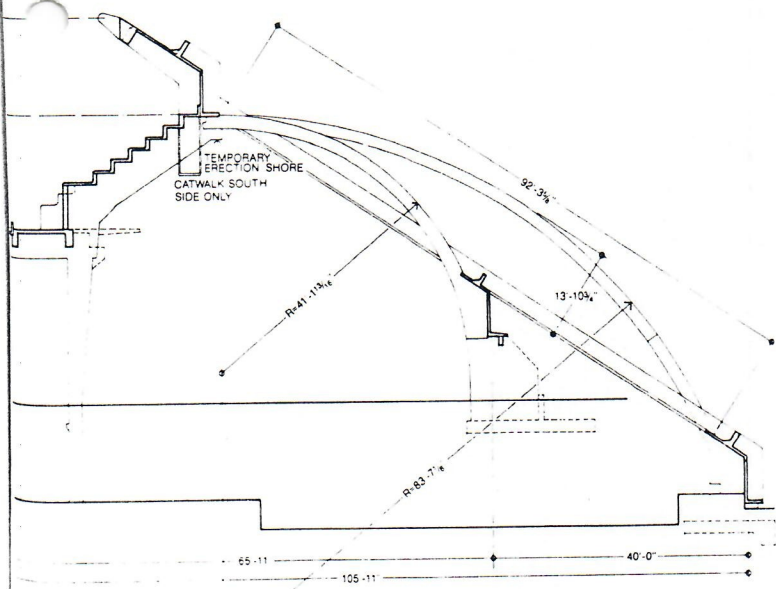
Four 100-horsepower fans with an air conditioning capacity of 750 tons. Separate swimming pool air handling units are capable of 60 tons of air conditioning.

Resource

In 1975 CRS designed the heralded, Thomas E. Levey Activities Center, and Harold L. Toso Pavilion at the University of Santa Clara, Santa Clara, California, which was, like O'Connell, an air-supported structure with fiberglass roof skin.

Significance

O'Connell Center is the first such facility to combine both air-supported and tensile structures in a single entity.



Cross section through "skirt" spaces

Bibliography

Progressive Architecture Nr. 8
August 1981
AC Contemporary Architecture 1982

Photos Balthazar Korab