

**NATIONAL WINNER**  
**COLORADO CONVENTION CENTER EXPANSION**

Photo courtesy James P. Scholiz.



The original 1 million sq. ft Colorado Convention Center was completed in 1990. In 2004, to meet projected business demands, the center expanded to 2.4 million sq. ft with a bold and forward thinking architectural design solution.

Rising 155' from the street, steel trusses form the 125' cantilevered roof. Galvanized steel panels conceal the trusses, giving the roof its aesthetic appeal. The blade roof simply yet vividly contrasts with the vertical nature of the downtown skyline and makes a sophisticated architectural statement for both the building and the city. Inside, expansive lobby spaces are bathed in natural light from the 190,000'-long glass curtain wall, which is anchored by 95'-tall steel columns connected with rod bracings. Through the glass curtain wall, visitors are exposed to views of the city and the Rocky Mountains.

The program dictated that the exhibit hall, originally built on top of the ballroom, be expanded to 600,000 contiguous sq. ft, which would allow for trucks to drive directly on the floor. To support a 250 psf live load on the exhibit hall floor, the gravity system in the ballroom ceiling used steel trusses spanning 180'. Below, a spacious, column-free 50,000 sq. ft ballroom can be separated into 18 rooms, making it ideal for any gathering. The roof structure in the 5,000-seat auditorium consists of 110' radical trusses spanning to a 100' girder truss over the stage.

The \$304 million expansion now spans nine city blocks. Undulating stainless steel panels line the façade to mask the building's expanded size while creating a dynamic experience for those passing by the center. Acting as a visual screen, perforated stainless steel wraps around the 1,000-space double helix parking structure. Perforated steel allows enough daylight for the garage to remain unlit, providing huge energy savings. The air flow provides proper ventilation for the parking garage.

**OWNER**

City and County of Denver

**ARCHITECT**

Fentress Bradburn Architects, Ltd., Denver

**ASSOCIATE ARCHITECTS**

Bertram A. Bruton & Associates, Denver

Harold Massop Associates, Denver

ACLP Architecture, Denver

**STRUCTURAL ENGINEER**

Martin/Martin, Inc., Lakewood, CO

**ENGINEERING SOFTWARE**

RISA 3D

RAM Structural System

**FABRICATORS**

Hirschfeld Steel Company, Inc., San Angelo, TX, AISC member

Zimkor, LLC, Littleton, CO, AISC member

**ERECTOR**

Derr & Gruenewald Construction Co., Hederson, CO, AISC member

**GENERAL CONTRACTORS**

Hensel Phelps Construction Co., Greeley, CO

J.A. Walker Co., Inc., Denver

Alvarado Construction, Inc., Denver



Photo courtesy Martin/Martin, Inc.



Graphic courtesy Fentress Bradburn Architects, Ltd.

## MERIT AWARD BOSTON CONVENTION CENTER

Photo courtesy Feinknopf Photography.



This new 2,000'-long, 1.7 million sq. ft convention and meeting facility, located in the developing Seaport District of Boston, includes a 514,000 sq. ft exhibit hall, a 40,000 sq. ft grand ballroom and ballroom pre-function area, 84 meeting rooms, meeting room pre-function spaces, a 750-seat food court, and a full commercial kitchen and bakery.

The \$500 million project extends from the new business and commercial district adjacent to Boston Harbor to the residential neighborhoods of South Boston. The steel-framed, double curvature of the roof features an 80' cantilever that soars over the Summer Street entry to the north. Sloping steel columns that support this cantilever, combined with the projecting grand ballroom, create a dramatic entry plaza. The roof, which varies from 100' to 75' above the exhibit hall floor, slopes gradually toward the south, gently arching over the exhibition space.

Supported on columns spaced 90' by 180' apart, the roof features exposed trusses and purlins in addition to a network of catwalks and rigging supports for use by exhibitors. The exhibit hall also features lower 35' roofs on the side of the central exhibition space that are supported by sloping steel "tree" columns resting on 7'-tall concrete pedestals. This arrangement minimizes the impact of structure on the exhibit hall floor while simultaneously providing a system that resists lateral forces on the building. A continuous ribbon of clerestory glazing just below the eaves of the roof combines with careful detailing of all exposed connections to create a roof structure that floats above the building.



Photo courtesy Feinknopf Photography.

### OWNER

Massachusetts Convention Center Authority

### ARCHITECTS

HNTB Architecture, New York  
Rafael Viñoly Architects, New York  
Primary Group, Boston (associated)

### STRUCTURAL ENGINEER

LeMessurier Consultants, Cambridge  
Walter P. Moore & Associates, Tampa, FL

### ENGINEERING SOFTWARE

SAP2000  
Chiquita (LeMessurier in-house design program)

### FABRICATOR

Canam Steel Corp., Easton, MA, AISC member

### DETAILERS

Canam Steel Corp., Boucherville, Quebec, Canada, AISC member  
Steltec, Inc., Ste-Therese, Quebec, Canada, AISC member, NISD member  
Les Dessins Trusquin, Inc., Laval, Quebec, NISD member  
M & D Drafting Ltd., Edmonton, Alberta, Canada, NISD member

### DETAILING SOFTWARE

SDS/2  
Xsteel

### ERECTORS

CDSP Erectors  
Capco Steel Corporation, Providence, RI, AISC member

### GENERAL CONTRACTORS

Clark Construction Group, LLC, Bethesda, MD  
Huber Hunt & Nichols, Indianapolis  
William A. Berry Construction, Danvers, MA