

2004 AISC I.D.E.A.S. AWARDS



Sponsored by the American Institute of Steel Construction, the I.D.E.A.S. awards (Innovative Design and Excellence in Architecture with Steel) recognize architectural designs using structural steel as a prominent architectural feature.

AISC presented each project's architect with their I.D.E.A.S. award at the AIA 2004 National Convention and Expo in Chicago in June. Awards were presented in four categories based on project cost: less than \$10 million; \$10 million and greater, but less than \$25 million; \$25 million and greater, but less than \$100 million; and \$100 million and greater.

Eligibility

→ Structural steel must form a prominent architectural feature of the build-

ing, either as an interior or exterior application.

- Building construction must have been completed after January 1, 2001.
- Projects must have been designed by architects licensed in the United States.

Judging Criteria

- Creative use of exposed structural steel in the architectural design
- Overall aesthetic and visual impact of the project
- Design resolution demonstrating exemplary sensitivity in the resolution of formal, functional and technical requirements as outlined in the project description
- Technical advancement in the use of structural steel in the architectural expression
- Creativity and sensitivity in the com-

ination of structural steel elements with other materials

This Year's Jury

Charles Linn, FAIA

Senior Editor, Architectural Record, New York City

Thomas Meyer, AIA

Principal, Meyer, Scherer & Rockcastle, Ltd., Minneapolis

David Brems, AIA

Principal, Gillies Stransky Brems Smith PC, Salt Lake City

George D. Halkias, AIA

Associate, Astorino, Pittsburgh



National Winner—\$100M and greater

David L. Lawrence Convention Center— Pittsburgh

Rafael Viñoly Architects, P.C., New York City

The David L. Lawrence convention center in Pittsburgh is a 1,450,000-sq.-ft, steel-framed convention space. The 900'-long, five-story structure is situated on the Allegheny River, and is part of Pittsburgh's redevelopment plan to generate activity on its waterfront. The facility has two levels and 330,000 sq. ft of exhibition space, (250,000 sq. ft of which is column-free), 53 meeting rooms, 37 loading docks, a large concourse, teleconference and telecommunication capabilities, and open public terraces. The architect and engineer designed a custom roof structural system with suspension-bridge technology. This system provides the main architectural form to the lightweight long-span cable-roof structure, and makes it a distinctive part of the city's skyline. For more information on the David L. Lawrence Convention Center, turn to the article on page 30.

© Roman Viñoly, New York City.

Merit Award—\$100M and greater

Soldier Field and North Burnham Park Redevelopment—Chicago

Wood + Zapata, Boston

Lohan Caprile Goettsch Architects, Chicago

The challenge of a \$606-million master plan and adaptive reuse project for Soldier Field, home of the Chicago Bears, was squeezing a modern stadium within the confines of an existing historic structure that was approximately 80' narrower than typical stadiums—in just 20 months. The result is an asymmetrical solution, with four levels of skybox suites stacked on one side of the stadium and cantilevered seating bowls. Long spans and cantilevers meet width and height restrictions and provide unobstructed views. Twenty-one tuned mass dampers minimize vibration. The design-build team used 3-D modeling and electronic data interchange technology to complete the project. For more on Soldier Field, see the article on page 36.



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Merit Award—\$25M or greater, but less than \$100M

Erie on the Park—Chicago

Lucien Lagrange Architects, Ltd., Chicago

Rising from an urban setting in Chicago's rapidly transforming River North neighborhood, the Erie on the Park condominium building is a 25-story, 124-unit tower. The glass-and-steel residential building consists of a concrete base topped with 21 stories framed in wide-flange shapes, supporting closely spaced steel joists. Complementing this gravity system is a lateral system comprised of concrete shear walls at the base and three-story mega-braces in the steel stories. In the north-south direction, the mega-braces were moved from the interior to the exterior to resolve torsional issues, presenting an opportunity to make a distinctive statement using exposed steel in architectural design. Read more about Erie on the Park in the May 2002 and June 2003 issues of *Modern Steel Construction*.



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Merit Award—\$25M or greater, but less than \$100M

ADC Telecommunications, World Headquarters— Eden Prairie, MN

Hammel, Green and Abrahamson, Inc., Minneapolis

The new Corporate World Headquarters for ADC is designed to facilitate employee collaboration and comfort. The first phase includes a four-story building with laboratories and offices, cafeterias, a parking deck, and an auditorium. Skyways and a tunnel provide climate-controlled access to all campus elements. The steel-framed facility is adaptable to a number of work configurations, ensuring its viability throughout its life cycle. The building conserves energy through skylights, atriums, a raised-floor air-distribution system with personal energy modules, and efficient lighting and mechanical systems. The building's transparent plan, with stacked glass-wall conference rooms and ample stairways, provides connectivity for employees. Read more in the May 2002 issue of *Modern Steel Construction*.



© George Heinrich Photography, Minneapolis.



© Werner Sagarra, Phoenix.

National Winner—\$10M and greater, but less than \$25M

Airmore - Hangar One—Scottsdale, AZ

Swaback Partners, Scottsdale, AZ

The Airmore Hangar One project in Scottsdale, AZ is a private club for jet owners. Twin 30,000 sq.-foot hangars accommodate up to 15 personal and corporate aircraft. A fully integrated 68,500 sq.-ft multi-purpose space includes below-grade parking, pilot and staff offices, aircraft maintenance facilities, a gallery, a garage for the display of vintage cars, and space for everything from small parties to large gatherings. Two fabric-shade canopies feature 80'-long cantilevers composed of twenty 16"-deep exposed square HSS. A steel-framed, aluminum-clad, 120'-long "paper airplane" makes a signature architectural statement. Steel HSS columns are anchored to concrete walls, the assembly of which transfers gravity, lateral wind, and wind uplift forces into concrete diaphragms and shear walls. For more information, see the article on page 43.



Courtesy Tom Fox and SWA Group.

Merit Award—\$10M and greater, but less than \$25M

Tunica RiverPark—Tunica Resorts, MS

Williamson Pounders Architects, Memphis

The Tunica RiverPark allows tourists and residents to view and experience the Mississippi River. Its three major components are a harbor, a visitors center and a "Nature Experience" trail area. The curving harbor shelters a custom-designed floating steel dock that accommodates excursion riverboats and small leisure craft. Secured by three 80'-tall steel towers, the dock rises and falls with the changing river levels. A 200'-long steel HSS truss gangway bridge is hinged to accommodate the dock's vertical movement. The Visitors Center is a two-story steel-framed building that showcases the river's life and history. Its "sail" is framed with a curving horizontal truss attached to vertical three-dimensional trusses and veneered with perforated aluminum panels. The four-story-high observation platform within the sail structure provides spectacular vistas of the river. Read more about the Tunica RiverPark on page 45.



© Farshid Assassi, Santa Barbara.

National Winner—Less than \$10M

Reiman Gardens Conservatory Complex—Ames, IA

Smith Metzger Architects, Des Moines

The 30,000 sq.-ft conservatory is organized about a pergola-like circulation "street" that recalls elements and materials from the existing adjacent botanical gardens. In the Butterfly Wing, a large triangular shaped truss forms the "body" of a butterfly and rests on two tapered piers. Smaller arched-bottom steel pipe trusses span from the main truss to a series of steel pipe columns at the perimeter of the structure, forming the "wings" of the butterfly. Diagonal bracing in the walls was avoided to emphasize the vertical and horizontal elements of the structure. Field-welding of the steel pipe and HSS components helps give the buildings a unified look—as if the entire structure were brought to the site in one piece. Read more about the Reiman Gardens Conservatory complex in the April 2004 issue of *Modern Steel Construction*.

Merit Award—Less than \$10M

Tower House—Chicago

Frederick Phillips and Associates, Inc., Chicago

Built on a thought-to-be-unbuildable, triangular lot on the edge of Chicago's Cabrini Green neighborhood, this 1,200-sq.-ft house consists of two principal components: a four-story exposed steel structure on a 13' plan module and a 10'-square, 40'-tall concrete-block stair tower connecting the four levels of the steel structure. The first and fourth levels of the steel structure are open, and the second and third levels are fully enclosed. The house is vertically inverted with the principal outdoor space occupying a fourth-level roof terrace. The first level provides space for parking and covered access to the front door at the base of the concrete block tower. Since Chicago codes do not allow unprotected steel, Fire-Trol™ columns are used. By using a concrete lateral system that attaches to the steel gravity system, the building maintains structural integrity without compromising the architect's vision.



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Merit Award—Less than \$10M

The John Chrystal Center, Grinnell College—Grinnell, IA

Herbert Lewis Kruse Blunck Architecture, Des Moines

The John Chrystal Center is a 27,650-sq.-ft welcome center for Grinnell College. The design recalls the solidity of the main-campus buildings while alluding to adjacent residential construction. Roof forms consist of gables and half gables that are exposed on the interior, allowing the exposed steel structure and cedar decking to be the main focus of the space. The cedar decking spans over 12" WT purlins, which are supported on double 12" channel beams. Steel columns consist of four 3.5" by 3.5" angles configured in a cruciform shape. The angles forming these columns are held 2" apart with steel HSS spacers, creating a light and open structure, and an integrated beam connection. The interior organization provides a two-story public porch that focuses views onto the main campus and bathes the interior with light. High-volume ceilings and a large clerestory window provide dynamic light and shadow.



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Merit Award—Less than \$10M

Will Rogers World Airport Snow Barn—Oklahoma City

Elliot + Associates Architects, Oklahoma City

The Will Rogers World Airport Snow Barn provides storage for the airport's snow-removal equipment. The 18,000-sq.-ft structure also includes related offices, support functions and mechanical space. A 25' roof cantilever creates outdoor space for equipment parking. The steel-framed structure provides space to maneuver, park and maintain the snow-removal equipment, maximize the available volume, and provide a durable building for potential future modifications or expansions. The building form was designed with materials and colors that relate to flight. The Snow Barn's soaring wedge form, reflective "fuselage" materials, and the caution yellow color relate to the building's place, function and use. Monumental bollards, 6' high and 20' high, provide wall protection; corrugated metal panels reflect sun and heat; translucent white fiberglass wall panels provide light diffusion, and overhead doors act as art panels.



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