Architectural Awards of Excellence 1975





The Architectural Awards of Excellence were established by The American Institute of Steel Construction in 1960 to recognize and honor outstanding architectural design in structural steel and to encourage further exploration of the many aesthetic possibilities that are inherent in steel construction. This year a distinguished jury named thirteen buildings for Architectural Awards of Excellence. In the opinion of the AISC Committee on Awards, each building represents design of the highest standards, and all awards are equal in stature. The award-winning architects are listed on the following pages with pictures of the buildings for which they received commendation.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

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Jury of Awards

MILO S. KETCHUM, F.ASCE Professor of Civil Engineering University of Connecticut Storrs, Connecticut; Consultant Ketchum, Konkel, Barrett, Nickel & Austin Denver, Colorado



MAX ABRAMOVITZ, FAIA Harrison & Abramovitz New York, New York





FRED BASSETTI, FAIA Fred Bassetti & Company/Architects Seattle, Washington



CHARLES WILLIAM BRUBAKER, FAIA Perkins & Will Chicago, Illinois



HARLAN E. McCLURE, FAIA Dean, College of Architecture Clemson University Clemson, South Carolina

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Architectural Awards of Excellence 1975





CAUDILL ROWLETT SCOTT

Fodrea Community School

CAUDILL ROWLETT SCOTT Ivan G. Smith Elementary School

GIFFELS ASSOCIATES, INC. Allison Park Research Center

IBSEN NELSEN & ASSOCIATES Leckenby Company Office Building

C. F. MURPHY ASSOCIATES Crosby Kemper Memorial Arena

ODELL ASSOCIATES Blue Cross and Blue Shield of North Carolina Service Center

SETTER, LEACH & LINDSTROM INC. The Minneapolis-Plymouth Radio Tower for the Northwestern Bell Telephone Company

SKIDMORE, OWINGS & MERRILL Baxter Corporate Headquarters— Central Facilities Building

SKIDMORE, OWINGS & MERRILL First Wisconsin Center

SKIDMORE, OWINGS & MERRILL Fourth Financial Center

SKIDMORE, OWINGS & MERRILL Sears Tower

SKIDMORE, OWINGS & MERRILL Westinghouse Research and Development Center-Administration Building

WOLFF ZIMMER GUNSUL FRASCA PARTNERSHIP PIETRO BELLUSCHI (CONSULTING ARCHITECT) Visitors Information Center, Trojan Nuclear Plant

















Architect/Engineer Caudill Rowlett Scott, Los Angeles, California Project Fodrea Community School, Columbus, Indiana

General Contractor Repp and Mundt, Inc., Columbus, Indiana

Steel Fabricator Woodward Steel, Inc., Bedford, Indiana

Steel Erector Repp and Mundt, Inc., Columbus, Indiana

Owner Bartholomew Consolidated School Corporation, Columbus, Indiana

This community school was designed in response to a city-wide program initiated to encourage community education at all levels. The project's goal was to provide the community with an educational facility that not only accommodated elementary teaching programs, but also offered a variety of adult avocational and recreational opportunities. Many of the innovative design ideas were suggested by the school's primary occupants, the students themselves, and by other members of the community. The result is truly a community-inspired facility.

The organizing element of the design is a community concourse which invites people to come in and interact, to exchange ideas, to read and to play. The school functions year-round, from early morning to late evening, and the concourse never closes. Within the split-level design, mezzanine learning areas relate to the media center, the Kiva (the link between the media center and instructional areas), and to the community concourse. Spiral stairs and slides funnel children from the mezzanines to the media center, and a tunnel connects the learning areas with the dining room. The geometric design, with its clerestory vistas, enhances the team teaching concept and encourages the natural flow of people and information.

The school was constructed with industrialized building systems. A pre-engineered steel space frame with metal deck supported on concrete columns is used for the structure, an aluminum sandwich panel system for cladding, and rooftop multi-zone units for heating, ventilating and air conditioning. The open frame contains electrical and mechanical runs and allows for specific audiovisual and lighting potential in keeping with the reactive quality of the school. Mechanical equipment and plumbing are concentrated in service cores at the edges of the unobstructed learning space.





"This is a lively geometric complex with very good functional organization for a contemporary school. The spaces are varied and stimulating. The use of metal as an aesthetic expression is dramatic and tastefully done."—Jurors' Comments





"The designer has used industrialized building system components expertly and effectively to create an attractive and functional structure. The extremely interesting and lively spaces are in striking contrast to the dull areas often found in open plan schools." —Jurors' Comments





Architect/Engineer Caudill Rowlett Scott, Houston, Texas Project Ivan G. Smith Elementary School, Danvers, Massachusetts

General Contractor Wexler Construction Company, Inc., Newton Highlands, Massachusetts Steel Fabricator/Erector ROMAC Steel Co., Inc., Fort Myers, Florida

Owner Danvers Public Schools, Danvers, Massachusetts

Taking advantage of a sloping site to permit two separate entries, this school was designed to serve the educational needs of elementary students and the recreational needs of the community. On the exterior, the building is a study in contrasts: White metal accented by yellow, orange, red and blue set against green trees and overlooking a small pond. On the interior, the school is open plan and retains the bright primary colors of the exterior.

The two levels of the building permit a separation of the main academic area on the upper floor from the potentially disruptive physical education/community activity area, cafeteria, music room and service entry on the lower level. By using the natural slope of the site, the school retains a humanistic scale and blends with the nearby residential area.

The school is designed around a media center with a sunken storytelling area lighted from above by a clerestory. The media center is surrounded by three classroom clusters, a kindergarten cluster, a reading area, study carrels and an audiovisual viewing area. Each classroom cluster contains four classrooms and small seminar rooms. Administrative areas are located near the entrance of the school.

Constructed with industrialized building system components, the steel structural system is combined with an integrated ceiling/lighting system and packaged rooftop units for heating, ventilating and air conditioning. The factory finished exterior insulated metal wall panel system allowed the basic color scheme selection and a modified fast-track schedule cut approximately six months from the project delivery time.



Architect/Engineer Giffels Associates, Inc., Detroit, Michigan Project Allison Park Research Center, Hampton Township, Pennsylvania

General Contractor Mellon-Stuart Company, Pittsburgh, Pennsylvania Steel Fabricator Ridgeway Steel Fabricators, Ridgeway, Pennsylvania Steel Erector Adams Steel Erection, Kittanning, Pennsylvania Owner PPG Industries, Inc., Pittsburgh, Pennsylvania

Three major one-story buildings make up this 73,000 square foot complex, designed specifically to harmonize with its 67-acre site. The structures have been carefully tailored to their hillside site and located to save as many of the existing large trees as possible.

The visual attractiveness of the center's exterior is heightened by the use of sweeping glass walls. The heated window units, which comprise 13,000 square feet of exterior wall, produce year-round thermal regulation through a combination of electrically heated glass, double glazing, and a heat reflective coating. Exposed steel, both interior and exterior, is finished in a bright orange-red silicone alkyd coating.

The two research buildings house laboratories, which are grouped along central service spines. They each are approximately 170 feet long and 80 feet wide and are connected by a two-floor structure. The administrative building is approximately 180 feet long and 60 feet wide, and contains space for offices, a library, a lunchroom, conference and computer areas, first-aid room and other administrative facilities.

The buildings are framed with structural steel, exposed on both the interior and the exterior. The strong clean lines of the exposed steelwork complement the bold simplicity of the architectural design.





"This is a clean, straightforward design that clearly expresses its structure. The vivid color and strong lines of the exposed steel framing contrast effectively with the sweeping glass window walls on both the interior and exterior of the building."—Jurors' Comments





"A good solution on a difficult site. The exterior responds to the environment, while the interior—spacious and beautifully colored works for people."—Jurors' Comments



Architect Ibsen Nelsen & Associates, Seattle, Washington Project Leckenby Company Office Building, Seattle, Washington

Structural Engineer Mahan, Howe & Associates, Seattle, Washington General Contractor The Glad Co., Seattle, Washington Steel Fabricator/Erector Leckenby Company, Seattle, Washington Owner Leckenby Company, Seattle, Washington

This building is an addition to an existing manufacturing plant and is located in a rather drab immediate environment. The owner's requirement was for new offices which would reflect the vitality and progressive spirit of the company and provide an inspirational working environment for the company's executive, business, and engineering personnel.

Because of the unrewarding character of the near surroundings, the functions were composed around an interior court, lighted from above by a great skylight. Second floor offices, where distant views were possible, were oriented to take advantage of them. The engineering room has a huge north facing window which frames a spectacular view of Seattle's downtown skyline seen across Elliott Bay to the north.

The scale of the interior is derived from the 10-foot bay spacing of the round steel columns, which were oversized to set a comfortable and human scale. A similar approach is used in handling the ventilation; not all of it is exposed. The principal ducts are exposed and treated as scale-giving elements around the central space.



Architect/Engineer C. F. Murphy Associates, Chicago, Illinois Project Crosby Kemper Memorial Arena, Kansas City, Missouri

General Contractor J. E. Dunn Construction Co., Kansas City, Missouri

Steel Fabricator/Erector Kansas City Structural Steel Company, Kansas City, Kansas

Owners City of Kansas City, Missouri, and American Royal Arena Corporation, Kansas City, Missouri

The building occupies a key site in an industrial district, the former area of the stockyards, now in the process of redevelopment. Immediate site access is by perimeter road to 4,000 parking spaces and a ringroad around the building for public transportation and service. Landscaping is used along walks and driveways and on the berm around the structure.

This multi-purpose indoor arena seats 16,000 to 18,000 people to accommodate hockey, basketball, track, boxing, music, show and variety programs, horse and livestock shows, and conventions. The master plan envisions a one-story structure with combination use for horse and cattle stalls and covered parking in the future.

The exterior of the building reflects varying plans. The ground level is buried in an earth berm, which provides a walkway around the building at concourse level. The oval form of the concourse level represents the seating shape and transforms into a rectangle in the upper level through the addition of four mechanical rooms. A two-tiered oval seating plan, chosen after careful comparison with a circular plan resulted in the largest percentage of seats close to the arena and a reduction in the span of the superstructure (324 feet compared to 400 feet in a circular arrangement).

The concourse is open to seating areas for better orientation and spatial experience. The necessary acoustical environment is achieved with an acoustic fiberboard ceiling suspended below the decking.

The building consists of two major elements: the concrete substructure, including the seating, and the steel-framed superstructure with the enclosure of the building. In the superstructure, wet trades were virtually eliminated from the construction process to achieve a fast construction schedule.







"This handsome arena has an aesthetic of its own that is consistent and sophisticated. The beautifully detailed tubular steel trusses express the structural system as sculpture."—Jurors' Comments



"This is a fantastically successful piece of sculpture in a rural setting. Its geometry in the landscape is not only visually striking, but the design is completely functional as well."—Jurors' Comments







Architect/Engineer Odell Associates Inc., Charlotte, North Carolina Project Blue Cross and Blue Shield of North Carolina Service Center, Chapel Hill, North Carolina

General Contractor Nello L. Teer Company, Durham, North Carolina Steel Fabricator Peden Steel Company, Raleigh, North Carolina Steel Erector Tri-State Erectors, Inc., Greensboro, North Carolina Owner Blue Cross and Blue Shield of North Carolina, Chapel Hill, North Carolina

Because of the merger of two well-known insurance companies, a structure was required to combine corporate facilities and ancillary functions into one location. A 38-acre rural site was chosen along a major highway. Emphasis in design was placed on projecting a dynamic image, while demonstrating corporate responsibilities to the public and the environment.

The building is in the shape of a rhomboid, a three-dimensional parallelogram, 500 feet long and 100 feet wide, containing three office levels, raised above a plaza on six structural cores. The exterior walls are composed of reflective insulating glass at a 45-degree slope. Beneath the plaza, one additional level contains computer, printing, and cafeteria facilities, as well as utility functions.

The rhomboid form of the building required large cantilevers, long spans and major tension members, making steel the natural material for structural framing. Structural framing of the superstructure consists of rigid frames with alternate bay spaces of 62 feet and 23 feet. Vertical cross bracing between the vertical column elements of the frame provided additional stiffness. The floor system consists of three-inch-deep composite steel floor deck with a lightweight structural concrete topping. All 62-foot span floor beams use composite beam-slab construction. Electrified floor cells are provided at five-foot centers throughout the building for present and future electrical power and communication needs.

The structure is designed to minimize the effect of solar radiation on exterior walls, thus reducing glare and heat gain. The building's location, shape, and orientation were selected to eliminate any direct solar gain into the building. Heating and air conditioning is provided by an all-air, all-electric variable volume system. Mirror-glass curtain walls were specified to blend with the surroundings, and the sloped reflective glass reduces the need for draperies and wall decorations.



Architect/Engineer Setter, Leach & Lindstrom Inc., Minneapolis, Minnesota Project The Minneapolis-Plymouth Radio Tower for the Northwestern Bell Telephone Company, Plymouth Village, Minnesota

General Contractor L. H. Sowles Company, Minneapolis, Minnesota Steel Fabricator Crown Iron Works Company, Minneapolis, Minnesota Steel Erector L. H. Sowles Company, Minneapolis, Minnesota Owner Northwestern Bell Telephone Company, Minneapolis, Minnesota

The owner required a structure for supporting equipment that sends and receives microwaves. Project criteria included:

- Pleasing appearance to surrounding residential area.
- · Low maintenance materials designed to weather naturally.
- · Provisions for optimum flexibility in the orientation of microwave cornucopias (horns).
- · Ability to add and remove horns as future needs warrant.
- · Provision for future dismantling of the structure.
- Allowance for the proper trajectories of wave guides from the horns into adjacent radio building.
- Maximum deflections of one half degree twist and one quarter degree tilt under 100 mph wind load.

The design developed to respond to these criteria resulted in a 300-foot high, unguyed tower of high strength, weathering steel. The superstructure has a 30-foot diameter at the base and, at present, has three 51-foot diameter platform levels for horn mounting and maintenance. The structure's outstanding or unique features include its:

- · Ability to be dismantled if and when it is obsolete.
- Inherent strength and rigidity, which allow the tower to stand alone and not be dependent on guyed cables.
- Orientation of platform levels and patterning of bracing, which do not inhibit the installation of highly sophisticated microwave equipment.
- Adaptability to future expansion.
- Visual simplicity and simple form as contrasted with microwave towers of the guyed derrick variety.





"A functional piece of sculpture that has rhythm and vitality. There is a good sense of scale in the landscape, achieved by the use of materials, form, and color." —Jurors' Comments





[&]quot;This is a dramatic, attractive structure. The space relationships are very well done and there is a fine open feeling to the interior."—Jurors' Comments



Architect/Engineer Skidmore, Owings & Merrill, Chicago, Illinois Project Baxter Corporate Headquarters—Central Facilities Building, Deerfield, Illinois

General Contractor Morse/Diesel, Inc., Chicago, Illinois

Steel Fabricator/Erector Wendnagel and Company, Inc., Chicago, Illinois

Owner Travenol Laboratories, Inc., Deerfield, Illinois

The Central Facilities building is part of a corporate headquarters complex that also includes four typical office pavilions, an executive pavilion, and two garage structures, for a total gross area of just under one million square feet. All buildings are steel frame and are linked by free-spanning enclosed walkways at the second floor level.

free-spanning enclosed walkways at the second floor level. The Central Facilities building, 144 feet by 288 feet, includes a cafeteria on the upper floor; an auditorium, a large sales training center, an executive dining room, and reception facilities on the ground floor; mechanical equipment, and support facilities in the basement.

The dramatic cable suspended roof provides an exciting columnfree space for the employees dining room, and a focal point for the entire campus style complex.

Architect/Engineer

Skidmore, Owings & Merrill, Chicago, Illinois

Project First Wisconsin Center, Milwaukee, Wisconsin

General Contractor Carl A. Morse, Inc., Chicago, Illinois

Steel Fabricator/Erector American Bridge Division, United States Steel Pittsburgh, Pennsylvania

Owner

First Wisconsin National Bank of Milwaukee Milwaukee, Wisconsin

This 42-story bank and office tower rises from a doublelevel glass-enclosed podium. The first level of the low-rise structure houses the main banking facilities, safe deposit area, and a landscaped garden. On the second level, a skylit galleria includes the bank's commercial lending divisions plus shops, restaurants, and clubs.

The galleria bridges a major arterial to a separate 850car garage located on the southern segment of the superblock site. The glass-walled truss bridge provides a sheltered pedestrian path through the site and is the first element in a potential expansion of an elevated covered walkway system.

The tower establishes strong corporate identity, while the galleria creates an active public space not otherwise available downtown. The tower is clad in white-coated aluminum to minimize its effect on the skyline.

Structural steel was selected as the primary framing system based on a comparative economic evaluation, which included direct material costs plus the following factors: (1) the ability to obtain a structure of minimum weight in order to reduce the critical foundation costs; (2) the ability to obtain a structural system which would provide the most rapid erection rate to reduce the owner's total costs; and (3) the ability to obtain a structural system whose integrity complements the architectural expression.



"This is a well designed, rational high rise building that looks very good on the skyline. It works with the landscape, rather than against it."—Jurors' Comments









"This is a beautifully organized design that presents a remarkably clear statement of the designer's intent. The building is clean-cut and attractive, without any unnecessary distractions. The interior spaces are exceptionally handsome."—Jurors' Comments



Architect/Engineer Skidmore, Owings & Merrill, Chicago, Illinois Associate Architect Schaefer, Schirmer & Associates, P.A., Wichita, Kansas Project Fourth Financial Center, Wichita, Kansas

General Contractor Martin K. Eby Construction Co., Inc., Wichita, Kansas Steel Fabricator Geo. C. Christopher & Sons, Inc., Wichita, Kansas Steel Erector Martin K. Eby Construction Co., Inc., Wichita, Kansas Owner The Fourth National Bank and Trust Company, Wichita, Kansas

This nine-story banking center is the headquarters of a large midwest financial institution. In addition to the bank's own facilities, the building contains tenant offices, commercial space, restaurants, a 200-seat meeting room, and a private club. The focus of the building is an enormous glass-enclosed landscaped courtyard. The 160-foot square by 130-foot high skylit atrium features a mobile by Alexander Calder. Offices are arranged in an L-shaped configuration so that all open onto the court.

Striated concrete pylons support a steel frame wrapped with bronze-tinted glarereducing glass. The 15-foot square pylons also house mechanical and electrical equipment as well as fire stairs. A 350-car parking garage, which includes a mini-bank, is located across the street and is connected to the banking center via an enclosed steel-framed pedestrian bridge. Total gross area of the project is 386,000 square feet.

Because the atrium court extends the full nine-story height of the building, the window wall in this open area had to be supported at every floor level. Girders spanning 60 feet were turned on edge and hung from the roof, supported every 20 feet. Because the entire web area of these girders is not structurally required, architectural voids could be created in a predetermined pattern. The voids in the exposed girders contributed a visual lightness essential to the character of the court.



Architect/Engineer Skidmore, Owings & Merrill, Chicago, Illinois Project Sears Tower, Chicago, Illinois

General Contractor Diesel Construction Company, Chicago, Illinois Steel Fabricator/Erector American Bridge Division, United States Steel, Pittsburgh, Pennsylvania Owner Sears, Roebuck and Co., Chicago, Illinois

Owner Sears, Roebuck and Co., Chicago, minois

The "step-back" geometry of the 110-story Tower was developed as a direct result of the owner's interior space requirements and corresponding vertical transportation needs. The architect devised a configuration which incorporated the unusually large office floors that were required, along with a variety of smaller floors which provide long range expansion space, yet are suitable to interim rental tenants.

The Tower's structural concept involves the bundled tube system, a cluster of nine interconnected vertical tube modules, each of which is virtually a skyscraper in itself.

Unlike a conventional tubular design, in which perimeter columns act as windbracing, bundled tubes have common interior columns that make up two diaphragms, trisecting the building in two directions and stiffening it. Here, belt trusses at three levels (29th to 31st floors, 66th floor and 90th floor) tie the tubes together, acting as vertical shear diaphragms.

In addition to providing the structural integrity necessary for effective performance at 110 stories, the bundled tube concept responds to one of the most challenging problems of the ultra-high-rise building: steel weight. Using traditional framing methods to reach a height of 1,450 feet would have resulted in steel weights up to 70 psf. With the bundled tube system, the Tower's steel weight is only 33 psf.

"This monumental structure is innovative in concept and design. The structural system of bundled tubes is expressed visually by the "step-back" geometry in which the "tubes" terminate at different levels."—Jurors' Comments





"Simple but complete, this is a well designed and well detailed building. Long, low, and virile, it is elegant in its rural setting. The use of cantilevers and external steel cladding is consistent, subtle, and nicely done."—Jurors' Comments





Architect/Engineer Skidmore, Owings & Merrill, Chicago, Illinois Project Westinghouse Research and Development Center-Administration Building, Churchill Borough, Pennsylvania

General Contractor Navarro Corporation, Pittsburgh, Pennsylvania Steel Fabricator Littell Steel Company, New Brighton, Pennsylvania Steel Erector Penn Erection and Rigging Company, Turtle Creek, Pennsylvania

Owner Westinghouse Electric Corporation, Pittsburgh, Pennsylvania

The client for this project has a number of research and development buildings located on beautiful meadowland just outside a major eastern city. The purpose of this new building was to relocate and concentrate administrative personnel. The client wanted to extract the administrative functions of individual departments from all existing buildings in order to provide an executive cluster within a single structure.

In addition, a primary planning goal was to use the new building to energize an existing plaza which is somewhat isolated and consequently underused, since it is severed from part of the complex by an entrance road which bisects basic facilities already on the site.

The design solution visually emphasized the building's relationship to the meadow. The long, low character reinforces the horizontal ambience of the land. Cantilevered edges eliminate vertical columns. Butt glass eliminates expressed vertical mullions. The horizontal is strengthened even further by deep, unbroken spandrel pieces.

The administration building serves as a gateway to the entire center. A steel truss system forms the base of the building, which allows it to span the roadway while traffic flows unimpeded underneath. The once neglected plaza is now readily accessible and used by employees throughout the day. A deceptively simple but sophisticated design, the building is a good neighbor to existing structures, a sympathetic addition to its natural countryside site.



Architects

Wolff Zimmer Gunsul Frasca Partnership, Portland, Oregon Pietro Belluschi (Consulting Architect), Portland, Oregon

Project

Visitors Information Center, Trojan Nuclear Power Plant Rainier, Oregon

Structural Engineer UMA Nortec Inc., Portland, Oregon

General Contractor James S. Hickey, Inc., Portland, Oregon

Steel Fabricator/Erector Portland Wire & Iron Works, Portland, Oregon

Owner

Portland General Electric Company, Portland, Oregon

This 16,000 square foot facility, although comparatively small in relation to the powerful landscape and main plant structures that surround it, is the "public lobby" for the site of a nuclear plant adjacent to the Columbia River.

Because the building is the focus of activity in relation to the general public, the exterior is painted in vivid colors to strongly contrast with the massive gray cooling tower and reactor structures. A pre-engineered space frame truss over the main lobby provides an open, transparent quality appropriate for the entrance activities of the entire complex.

The structure is provided with generous overhangs for bus and passenger car loading. The lobby provides a holding area for persons entering or leaving the display area. Office facilities for staff and a conventional 150-seat auditorium for educational purposes are provided adjacent to the lobby. A snack facility and seating area are provided with views of the plant site across a large reflecting pool. A display room with informational displays operates from the lobby on two basic levels with a divided entrance and exit system to allow for unguided as well as guided tours. A multi-dimensional movie display ("ecosphere") takes place at the end of the display.



"A little steel gem set in timber country. Both in color and form, this handsome building fits beautifully into the landscape."—Jurors' Comments



Photo Credits

Fodrea Community School Balthazar Korab

Ivan G. Smith Elementary School Nick Wheeler

Allison Park Research Center Guild Photographers

Crosby Kemper Memorial Arena Paul S. Kivett

Blue Cross and Blue Shield of North Carolina Service Center Gordon H. Schenck, Jr.

The Minneapolis-Plymouth Radio Tower for the Northwestern Bell Telephone Company *G, Edwards Photography*

Baxter Corporate Headquarters-Central Facilities Building Steve Grubman

First Wisconsin Center Ezra Stoller-ESTO

Fourth Financial Center Ezra Stoller-ESTO

Sears Tower Hedrich-Blessing (interior view) Ezra Stoller—ESTO (exterior view)

Westinghouse Research and Development Center-Administration Building Ezra Stoller-ESTO

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