



The Science of Entertainment

Arata Isozaki creates an enigmatic container for



Columbus, Ohio's Center of Science and Industry. By Aaron Betsky

Isozaki's oblong, abstract Center of Science and Industry forms a new frontispiece for a 1920s neoclassical building that originally served as a high school (facing page, at right). The Japanese architect clad his arced exterior (above), technically a clothoid curve, in 6-by-62-foot precast concrete panels. Each panel curves in two directions.



The pure 1,000-foot-long concrete curve of the science center addition (above) provides a horizontal, monumental foil to downtown high-rises. The former high school (below) at the rear of Isozaki's new wing faces downtown Columbus to the east across the Scioto River.

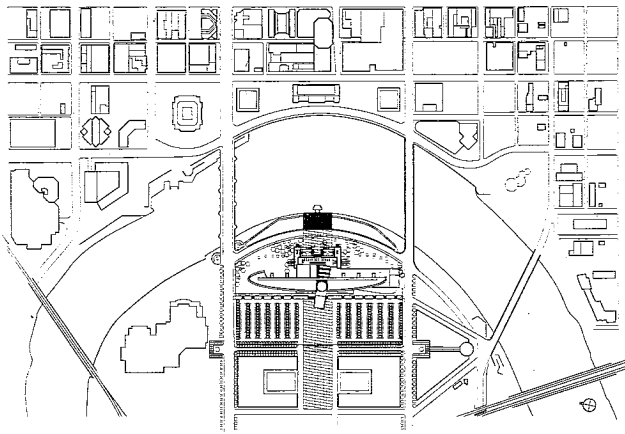


Arata Isozaki's design for the Center of Science and Industry (COSI) in Columbus, Ohio, raises the question of whether architecture can be both universal in form and address local conditions. The zeppelin-like shape of his hangar for science exhibitions is loosely related to its riverfront site, yet it appears as a closed, mysterious, and imposing presence in Columbus' otherwise rather homogenous landscape. A large collaborative crew of exhibition designers, technical consultants, and graphic artists filled the gaps between his big forms and the way the building is used.

The tensions between form and content, and between form and place, were inherent both in the way the institution's director, former NASA astronaut Katherine Sullivan, sees COSI, and in the choice of Isozaki as its architect. Sullivan states, "Our heart and soul is in Columbus, but science is not a local issue." She wanted exhibitions that would "let visitors experience the global threads that run through every American's life."

Isozaki, meanwhile, is a Japan-based architect as interested in universal issues as in the specific concerns of a site. Like many architects, Isozaki uses certain forms repeatedly: The curved form he decreed for COSI is similar to shapes that house his Nara Convention Center (1999) and Domus Interactive Museum (1997) in La Coruna, Spain. All shapes are abstract, incomplete, and in search of a perfection Isozaki knows and deliberately shows he cannot achieve.

COSI's site is formed by a bend in the Scioto River that separates it from downtown Columbus. Isozaki played his \$125 million design against the brick neoclassical forms of the Central High School (1924), to which the museum was technically an addition. "The new building looks west to the future, while the high school looks east to the past," he claims.



Site plan 470' <

The new building, which houses 140,000 of COSI's 230,000 square feet, indeed looks like a futuristic monument and was constructed like a science experiment. Its west facade is a 1,000-foot-long "clothoid curve," a lozenge-like shape with sharp ends that tapers both horizontally and vertically. Six-foot-wide and 62-foot-high precast concrete panels, each of which curves in two dimensions, make up this smooth surface. On the east side, where his addition plugs into the U-shaped high school, Isozaki carved out the back of the lozenge and plugged in a row of stair towers clad in black-painted corrugated-metal panels. A plinth intersects the building's ground floor on the south side and contains the service functions that, because of the museum's position on the Scioto's floodplain, cannot be placed in the basement. Two rectangular boxes protruding from the west wall and a cylindrical entrance rotunda in that facade's center complete the interruptions to the pavilion's sweeping envelope. The power of the addition's overall shape, which seems to change continually while maintaining an overall form, is strong enough to subsume these breaks. Symmetrical yet interrupted,

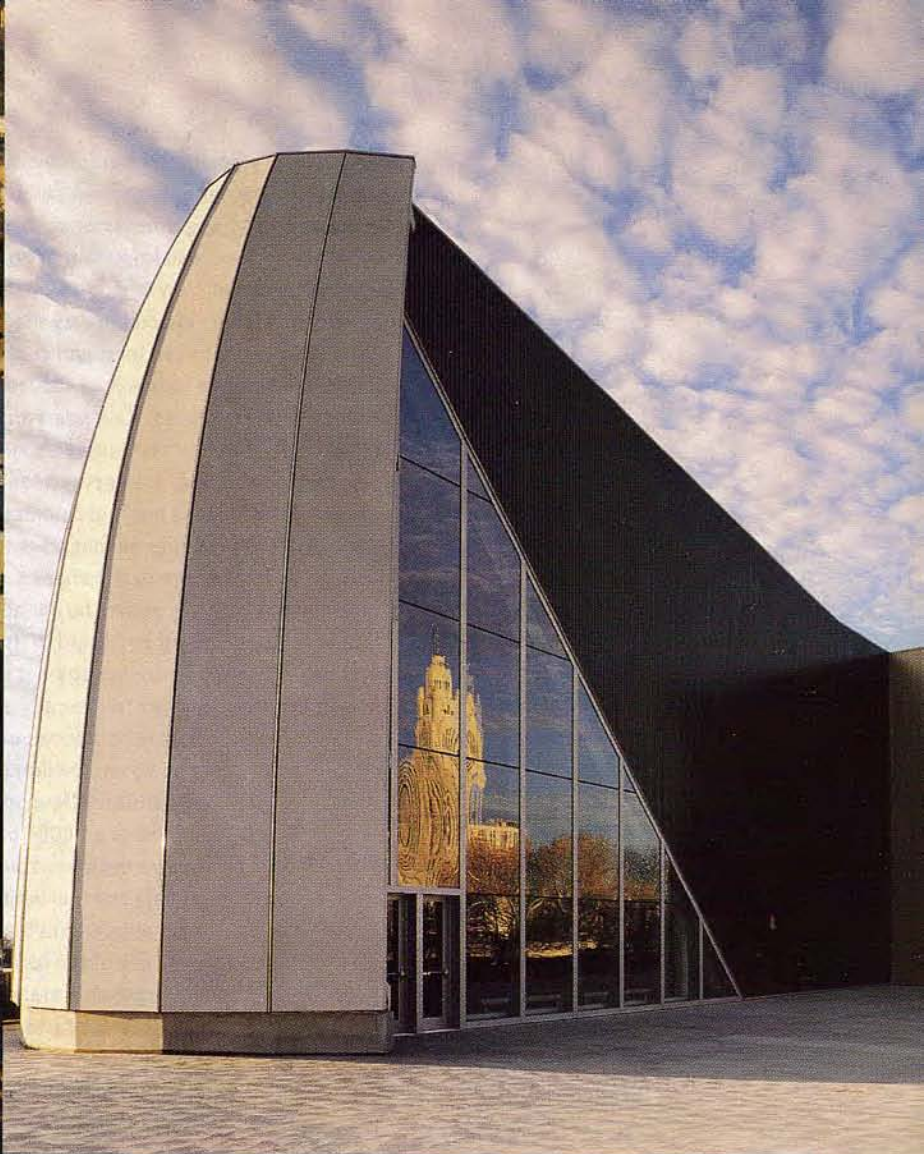
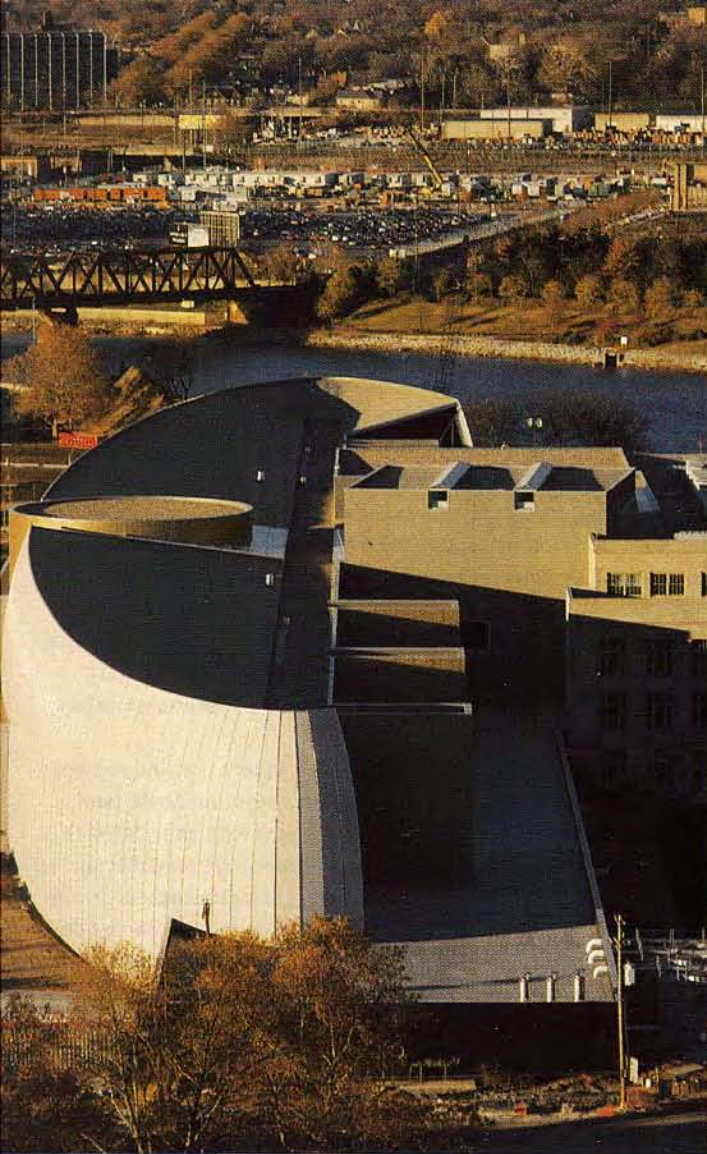
clearly articulated yet sweeping, singular yet always moving away from what the eye and the mind can comprehend, COSI's west facade is one of Isozaki's most successful recent designs.

Isozaki tried a similar tactic of forceful form-making on COSI's interior by designing a cube at the core of the addition to contain the museum's main public spaces. Light enters through skylights, the back facade of the high school forms a stage set at the space's eastern end, the lozenge's entrance rotunda plays off against the cube's orthogonal frame, and most of COSI's program elements open up to this grand lobby. Here, one can understand the building's pieces and its construction.

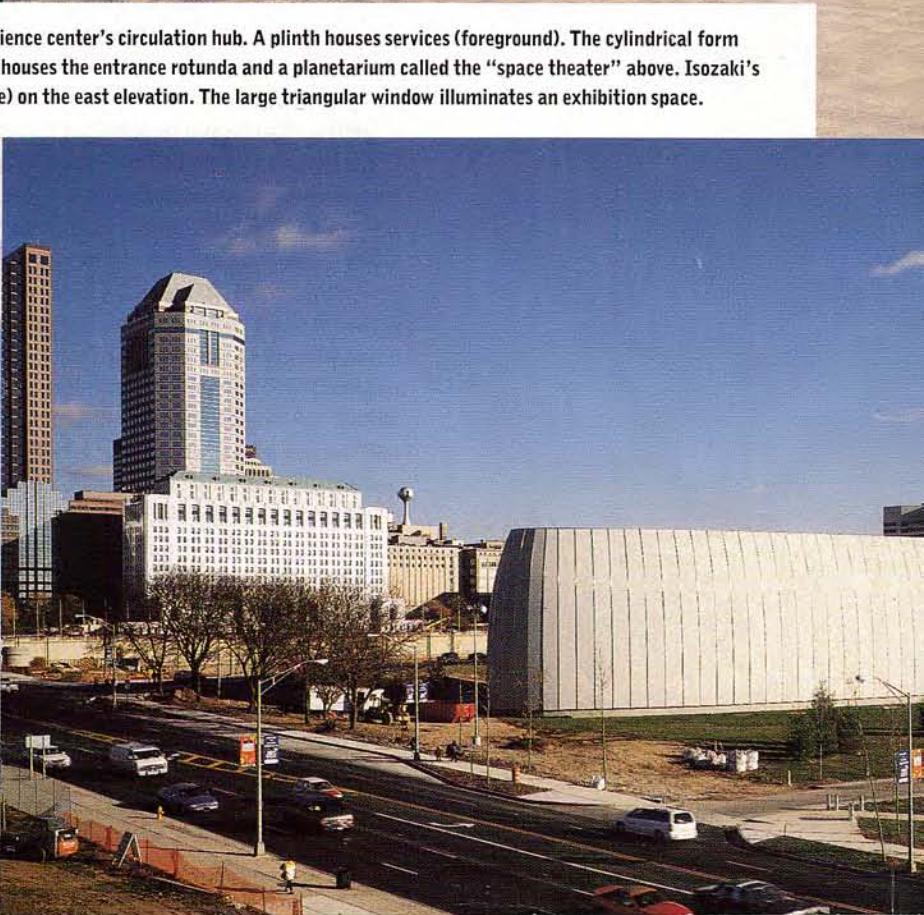
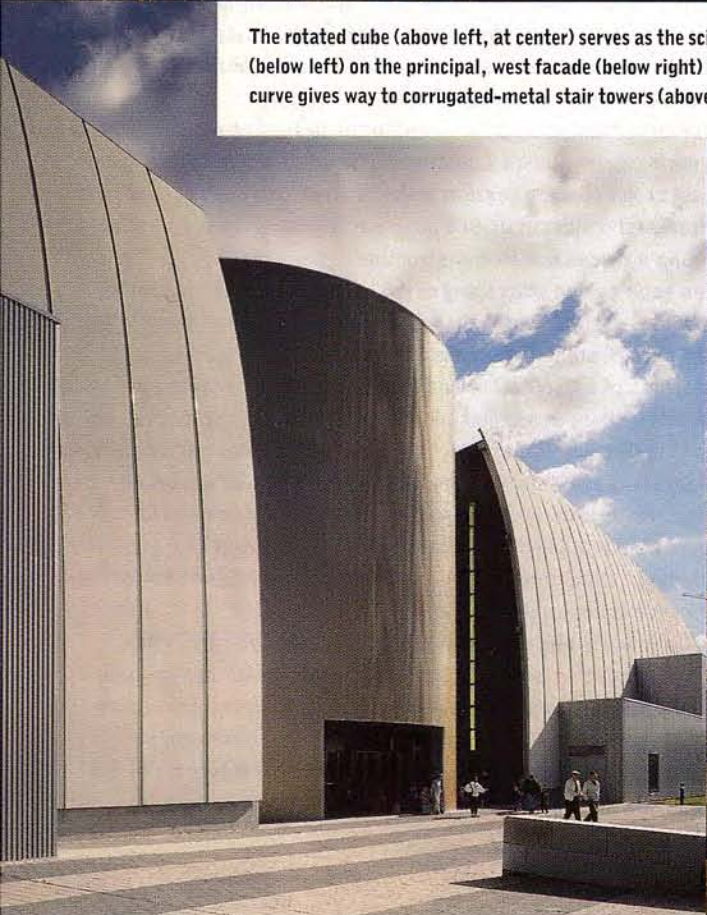
All that clarity disappears, however, as soon as one enters any of the exhibits. COSI is not just a museum, but a collection of "Learning Worlds"—scientifically thematized fantasy environments—that occupy Isozaki's 27-foot-high interiors: an underwater world complete with waterfalls and faux submarines, 19th- and 20th-century evocations of a "typical" Main Street, and a gadget-filled room meant to look like a laboratory. To tell a story here, the client depended on an exhibition team rather than the architect to frame, validate, or otherwise place its functions. Sadly, these exhibit environments are nearly indistinguishable from their more commercial equivalents in shopping malls or amusement parks.

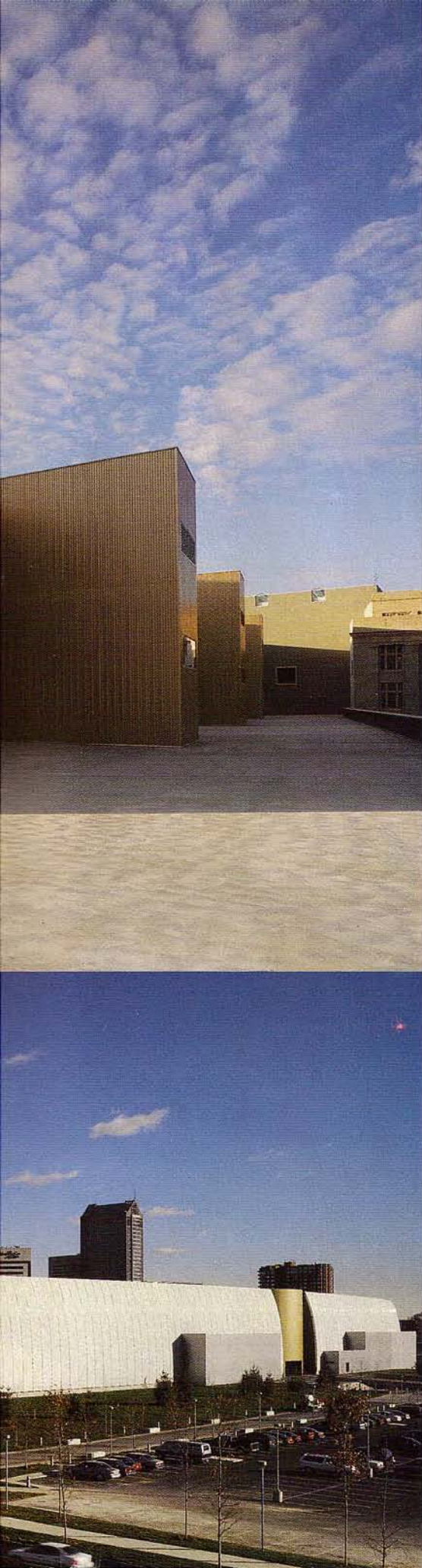
Director Sullivan claims there is a relationship between the exhibitions and the architecture: "This is a place where you learn through constructed fun and playful experience," she says, "and those moments of delight in discovery resonate with the building." Unfortunately, her sense of play and discovery makes little use of architecture to provide a critical or contextualizing framework.

Isozaki's task, then, has been reduced to this: He has created a building whose abstract, highly seductive appearance makes one understand that this is an important place where perhaps strange and unknowable things occur. His interior space sets forth an order in which the journey of discovery can take place. Yet as is the case in most of our recent cultural institutions, the actual exhibits are so hyperactively thematized, so concerned with telling a story, that the architecture disappears. For the client this may be enough. Unfortunately, for those of us who admire Isozaki, and expect more from our architecture, COSI is a disappointment. ■

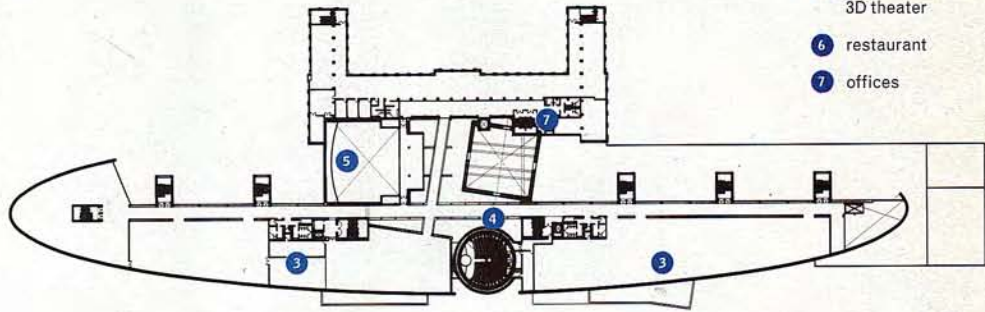


The rotated cube (above left, at center) serves as the science center's circulation hub. A plinth houses services (foreground). The cylindrical form (below left) on the principal, west facade (below right) houses the entrance rotunda and a planetarium called the "space theater" above. Isozaki's curve gives way to corrugated-metal stair towers (above) on the east elevation. The large triangular window illuminates an exhibition space.

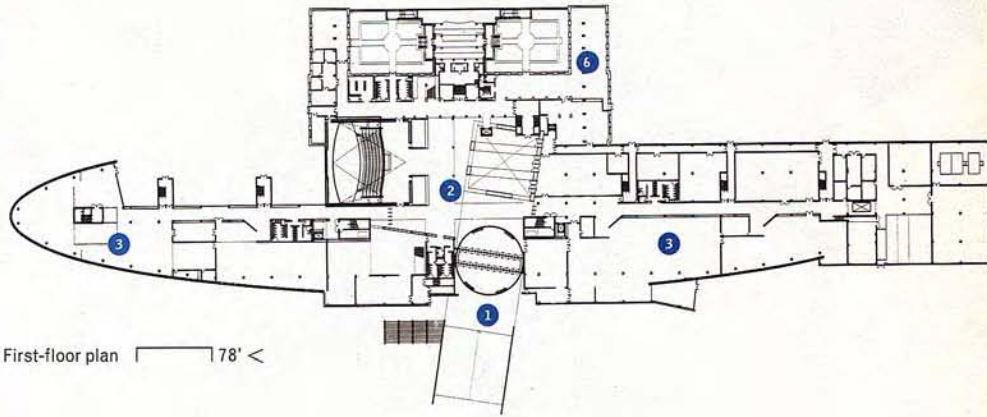




- 1 entrance
- 2 lobby
- 3 exhibits
- 4 planetarium
- 5 large-format 3D theater
- 6 restaurant
- 7 offices

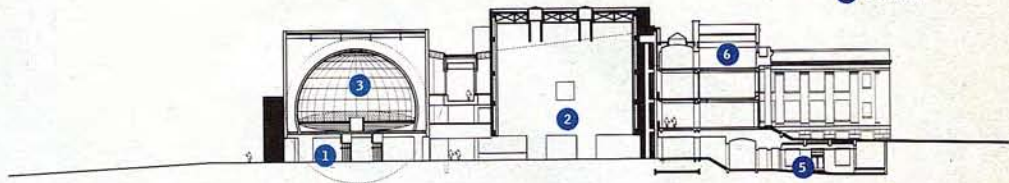


Second-floor plan



First-floor plan 78' <

- 1 entrance
- 2 foyer
- 3 theater
- 4 exhibitions
- 5 restaurant
- 6 offices



East-west section



East-west section 35'





In the cubic pavilion at the center of Isozaki's addition (facing page), linear waterfalls designed by the late artist Eric Orr inscribe the center of each wall. A carpeted, 1,000-foot circulation spine (above and below) runs the length of the addition, bypassing the corrugated-metal entrance rotunda (below, at right) and the central cubic pavilion (below, at left). Hanging columns in the hallway are light fixtures (above and below).



CENTER OF SCIENCE & INDUSTRY, COLUMBUS, OHIO

CLIENT: State of Ohio/Center of Science & Industry, Columbus, Ohio—John W. Kessler (chair, Ohio Arts & Sports Facilities Commission); Katherine D. Sullivan (president and CEO, COSI)

ARCHITECTS: Arata Isozaki & Associates, Tokyo—Arata Isozaki (principal-in-charge); Yasuyori Yada, David Gauld, Fumio Matsumoto, Atsushi Aiba, John Bohn (project team); NBBJ, Columbus, Ohio—Bernard Costantino (principal-in-charge); Jerome Scott (project architect); Kathy Kelly, Jim Lenhert, Steve Rice, Ed Mendelson, Ray Skonce, A.J. Montero (project team)

LANDSCAPE ARCHITECTS: Sasaki Associates; Peter Walker and Partners; NBBJ

ENGINEERS: Moody/Nolan (civil); Korda Nemeth Engineering (structural); HAWA (mechanical, electrical, HVAC)

CONSULTANTS: Acoustic Dimensions (acoustics); William Caruso & Associates (food service); Fisher Marantz Stone (lighting)

GENERAL CONTRACTOR: Ruscilli Construction **COST:** \$125 million **PHOTOGRAPHER:** Timothy Hursley