BANK OF AMERICA STAIR

Flights of Fancy

Facing and above The stair's red glass core, known as the "media wall," subtly projects the bank's brand within the office and onto the street.

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For The Bank of America Tower at One Bryant Park time is money. An extra second waiting for an elevator can spell a missed trading opportunity, or a crucial piece of economic data neglected. So when outfitting its headquarters, the bank leadership commissioned interior architects and workplace specialist Gensler to design an ornamental stair connecting its main trading rooms—dispersed because of their enormous size—among the third, fourth, fifth, and sixth floors. "An interconnecting stairway means instant movement and information," says Gensler principal EJ Lee, benefits that would not have been so easily achievable had the building's superstructure been framed in a material other than steel.

Strikingly visible behind the 42nd Street facade of One Bryant Park, the interconnecting stairway is broken up at each flight by two intermediate landings, achieving a petite 10-by-20 footprint and conserving valuable square footage for trading desks. Gensler chose to expose the stair's structural steel framing, displaying it for ornamental purposes and signaling an aesthetic alliance with Bryant Park's wrought iron street furniture. Pedestrians, however, will note the staircase's big marketing impact: Investment bankers travel up and down, in a kind of vertical theater, on treads that wrap around a steel core clad in glass, colored the red of Bank of America's logo. "We went through many different iterations of emphasizing the staircase," Lee says of the unique lighting. "We started with pixelated pictures formed in LEDs, for instance, but we finally went with a simple red, glowing box."

The simplified branding is deceiving, while the construction of the stair is anything but. Installation had to be intricately coordinated with the construction of the tower.

Facing and above A tremendous amount of coordination was needed since the stair framing was erected after the steel superstructure. A 3D drawing in Revit helped to coordinate between subcontractors.
Overleaf The exposed steel stringers nod to the wrought iron street furniture of Bryant Park, while the superb detailing smoothly integrates the stair into the modern office.

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Overleaf: Paul Rivera

"The stair framing was erected well after the building steel had been erected and the concrete fill placed on metal decking," says Andrew Mueller-Lust of structural engineer Severud Associates, "meaning that the floor openings for the stair had to be framed in coordination with the base building construction manager." (The stair was part of a fit-up contract, not core-and-shell.) To facilitate this coordination, contractor Leonard Spector of Structure Tone says he used an intricate three-dimensional drawing prepared in Revit to coordinate between subcontractors. In the words of Carlo Valente, vice president of ornamental metal and glass fabricator A-Val Architectural Metal, "A tremendous amount of coordination was required to produce quality work. Because the structure is exposed, you see every aspect of the stair's construction; there's no opportunity to bury a mistake beneath sheetrock or metal."

The structure of the stairwell's core, known as the "media wall," resembles an H in shape, and is composed of two columns of 8x8 HSS and steel pipe bracing, both of Grade B ASTM A500 steel. Landings connect to the media wall via 6x4 HSS of Grade B ASTM A500, and similar members are field-welded to the tower's framing, tying each landing into the building's ASTM A992 Grade 50 steel structure. The stair appears to float on a 6x4 HSS stringer whose spine is lined in LEDs. "Most of the tube-to-tube connections are welded," explains Mueller-Lust. "Where the surfaces of the connected members are flush, the welds are j-groove complete joint-penetration welds; otherwise the welds are fillet welds." All of the welds were ground smooth after they were completed, and connections of tubes to wide flange and other steel shapes were mostly bolted. Other grades of steel used include

A992 for rolled sections, Grade 50 A572 for plate and miscellaneous shapes, and A36 for connection material. Thirty-six tons of recycled steel were used in all.

T5 fluorescent lamps nestle into each corner of the media wall construction: They are backed by baffles that A-Val customized for the project to enhance and better distribute illumination, and protected by off-the-shelf fluted acrylic lenses. The combination of mast steel and integrated luminaires is encased on either short end by eighth-inch-thick aluminum plates, powder-coated to resemble blackened steel. A series of imperceptible panels allows maintenance workers to access the T5s by compression clips.

On both long sides of the media wall, a series of spider fittings holds in place the laminated Bendheim glass that mixes red into the fluorescent lamps' glow. These and three-quarter-inch clear handrail glass fittings are both installed with countersunk connections. The connections are so precise, Valente explains, that they were calculated in AutoCAD and realized in the factory rather than on site. The handrail is so delicately installed that "the glass appears like it is just passing by the stair," says Gensler team member Christopher Baglino. In all, the combination of structural steel and perfectly finished glass, Lee says, "mixes the raw and refined. We did not want this to look like a typical, traditional bank office." In that spirit, too, the steel plate treads are topped in Siberian marble to evoke a carpet runner. The marble is slightly set back from the edges of the steel plate, like a two-tier sheet cake.

Gensler's nod to the vernacular of Bryant Park differentiates Bank of America from the traditional corporate headquarters lining Avenue of the Americas. Indeed, the elevated public space above the sidewalk is reminiscent of the terraced form of the stair treads. And the stair's mix of the so-called raw and the refined evokes the park's ability to accommodate both casual film screenings and glamorous fashion shows. Baglino points out in a tribute to all involved—designers and fabricators—that a design that can inspire so many moods and interpretations is no piece of cake. Although highlighted by the carefully choreographed construction, the design "was a collaborative effort with everyone really involved from day one—this wasn't something we designed and then put out for bid." **M**

BANK OF AMERICA STAIR

Location: **1 Bryant Park, New York, NY**
Owner: **Bank of America at One Bryant Park, LLC**, a joint venture between The Durst Organization and Bank of America, *New York, NY*
Stair Design: **Gensler**, *New York, NY*
Architect: **Cook + Fox Architects, LLP**, *New York, NY*
Executive Architect: **Adamson Associates Architects**, *New York, NY*
Structural Engineer: **Severud Associates**, *New York, NY*
Mechanical Engineer: **Jaros, Baum & Bolles**, *New York, NY*
General Contractor: **Tishman Construction Corp.**, *New York, NY*
Interior Fit-Out Construction Manager: **Structure Tone Inc.**, *New York, NY*
Curtain Wall Consultant: **Israel Berger & Associates, Inc.**, *New York, NY*
Structural Steel Erector: **Cornell & Company**, *Woodbury, NJ*
Miscellaneous Iron Fabricator: **Empire City Iron Works**, *Long Island City, NY*
Miscellaneous Iron Erector: **Skyline Steel Corp.**, *Brooklyn, NY*
Ornamental Metal Erector: **Melto Metal Products**, *Freeport, NY*
Curtain Wall Fabricator: *Permasteelisa Cladding Technologies, Ltd.*, *Windsor, CT*
Curtain Wall Erector: **Tower Erectors**, *Clinton, NJ*
Metal Deck Erector: **Cornell & Company**, *Woodbury, NJ*