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A Sense of Place



Studio 431 understands the power of place. We are a resource for businesses, organizations, municipalities and design professionals seeking to create high quality custom site elements that contribute to the sense of place on their projects through the expression of unity, identity, history, culture, and aesthetic character. Studio 431 partners with designers and clients to engineer, develop and manufacture custom elements that help define place on projects ranging from branded entertainment and sports venues to major transportation facilities, corporate and university campuses, urban streetscapes and municipal parks. It is an intense collaborative process. It works because our team of mechanical, product, CAD, and manufacturing engineers understand design and make it their business to express and preserve the designer's intent. Relationships are key. Every project has a designated engineer who communicates with designers and manages the process from beginning to end. Team members have wide-ranging expertise and exceptional capabilities. They engineer structural and functional solutions, advise on appropriate materials and finishes, and devise innovative installation methods where required. From problem solving through CAD 3-D modeling and production drawings, building and testing prototypes and final manufacturing in the Landscape Forms manufacturing facility to the company's unsurpassed standards of quality, they provide the most creative, capable and professional custom services in the industry. The following case studies provide a brief overview of exceptional projects by leading firms in which custom site designs engineered, developed and manufactured by Studio 431 help create a ***Sense of Place.***

Southeast False Creek Olympic Village

design firm: PwL Partnership, Landscape Architects Inc.

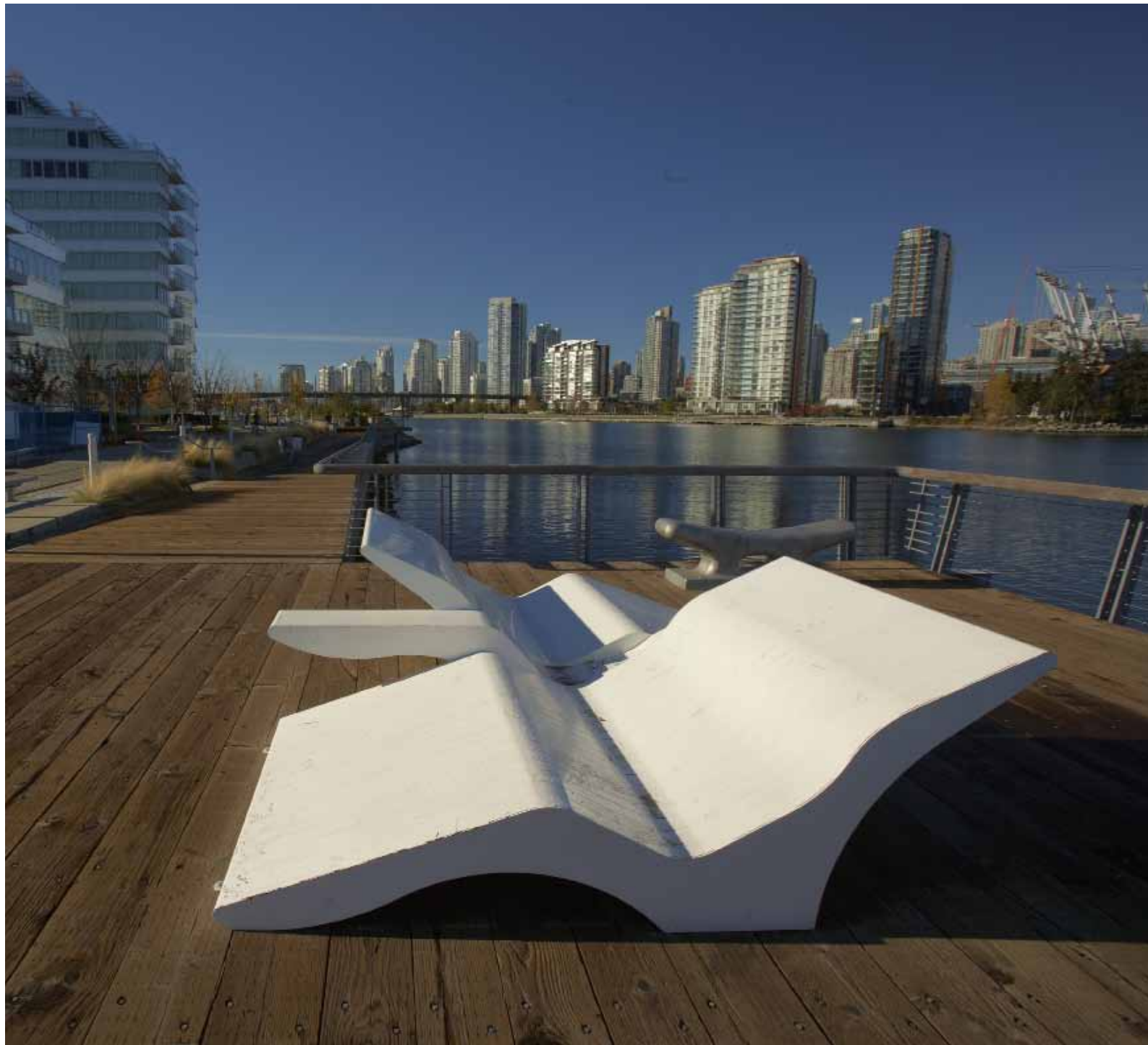
location: Vancouver, B.C., Canada

PwL is the public realm designer of Southeast False Creek, an 80-acre sustainable mixed-use port development that is dramatically revitalizing a former industrial site and neglected waterfront close to Vancouver's thriving downtown. During the 2010 Olympic Winter Games Southeast False Creek was temporarily transformed into the Olympic Village, home away from home for athletes, officials and hosts. All buildings have since been returned to the City and ambitious development of residences, schools, retail facilities, parks and habitat continues.

PwL's custom site furnishings for Southeast False Creek pay homage to the heritage of the site. In their industrial aesthetic, robust materials, and generous scale they evoke a place historically defined by lumbering, shipbuilding and rail. Landscape Forms' Studio 431 engineering and manufacturing team worked closely with PwL designers to develop and produce custom designs that contribute to a signature sense of place.







Custom site elements at Southeast False Creek include six different benches, similar in form and varied in detail; a swivel chair that rotates 360°; playful family lounge seating; a recycling unit that compliments a standard solar-powered litter receptacle; and a smoothly contoured Ipe wood handrail that tops a leaning rail along the water's edge. All metal furnishings are tough carbon steel with polyester powdercoat finish.

The swivel chair presented a special engineering challenge. To avoid potential injury from moving metal parts, Studio 431 engineers incorporated an automotive hub bearing for the swivel mechanism, attaching it out of sight and reach below the wood decking on which the chairs are mounted. The family lounge seating is the showpiece. Five feet wide and ten feet long with two seats separated by an attached table, it can accommodate a family on each side. PWL so admired the internal structure devised by Studio 431 engineers, it called for a perforated panel in seat backs to provide a view of the elegant ribs inside.



Target Field Plaza

design firm: oslund.and.assoc.

location: Minneapolis, Minnesota

Tom Oslund's Target Field Plaza has garnered accolades for its happy combination of high design and attention to the purposes of public space. It's a small site with a big agenda. Just seven-acres in size and constructed in large part over a highway, it serves as both entry to the new Minnesota Twins' downtown ballpark and as a public plaza for commuters in transit, business workers on breaks, and families enjoying the national pastime. The intention was to create memorable public gathering spaces within an active and engaging urban plaza, on game day and every other day of the year.

Oslund designed custom seating for the plaza that welcomes and accommodates visitors and supports the powerful Target Field branding message. Studio 431 engineers developed a group of built-in benches common in their materials and varied in form, including cube seating under baseball-bat shaped topiaries and "mound benches" that wrap around a circular core. The result is plentiful seating within limited space and a vibrant visual identity that projects a unified sense of place.



Charlotte Area Transit System

design firm: Kimley-Horn, Concept Design
Red Line Design Group, Product Design

location: Charlotte, North Carolina

The Charlotte Area Transit System (CATS) is the largest transit system between Atlanta and Washington DC, operating bus service and light rail across six counties. As it consolidates operations and expands services CATS is upgrading facilities to better serve riders and introducing new branding that conveys its commitment to the community. Studio 431 partnered with CATS and design firms Kimley-Horn and Red Line Design Group to refine, develop and manufacture two new bus shelter designs. The shelters have shared structural attributes with individual variations that reflect the character of their neighborhoods and define a unique sense of place.

The 12-foot rectilinear shelter has a sharply angled roof and graphics, and features historic images of local families on its screened glass panels. The 18-foot shelter has a curved roof, built-in bench and leaning rail, and etched glass. Both are manufactured of robust carbon steel finished with durable polyester powdercoat.





The Studio 431 team developed solutions that ensure structural integrity, comply with applicable codes and meet Category 4 Hurricane conditions. But the major challenge was the client's requirement that shelters be shipped as large sub-assemblies that could be installed in minimal time on site. The CATS bus shelters shown here were engineered and manufactured to successfully meet these goals. Shelters were shipped in three parts: fully assembled frame, glass panels, and roof panels. On-site installation was accomplished in three hours working time.



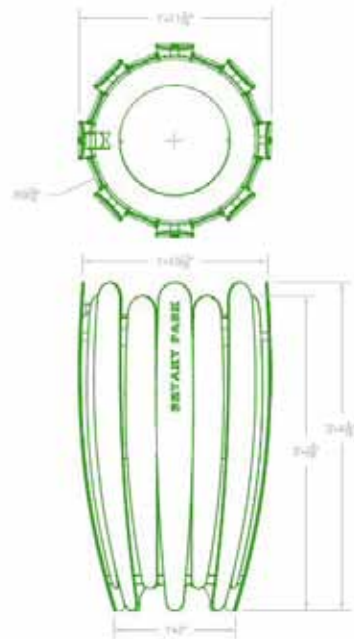
Bryant Park

design firm: Bryant Park Corporation/34th Street Partnership BID
Ignacio Ciocchini, Product Design

location: New York City, New York

Bryant Park in busy midtown New York is one of the city's best-loved public places. It is also one of the great comeback stories in urban lore. From dereliction and virtual abandonment in the late 1970's, to restoration in the 80's and reopening in 1991, it has become a model for thriving, people-centered parks worldwide. More than 4,000 people visit Bryant Park daily. One of the contributing factors to the turnaround was a management focus on "softscape:" small things that make a big difference. These include thousands of movable chairs, hundreds of small tables and enough litter and recycling receptacles to handle the remains of several thousand lunches in a two-hour period on a typical day.

As humble elements that impact the comfort, hygiene and aesthetic experience of visitors, litters are the unsung heroes of public places. The Bryant Park Corporation recognized their added potential as bearers of the brand and design icons in their own right. It chose Studio 431 as its partner to develop and manufacture whimsical workhorses that celebrate nature in the center of the city and capture the spirit of this special place.



Studio 431 engineers worked closely with Bryant Park's Director of Design, Ignacio Ciocchini, to develop and manufacture litter and recycling receptacles that are highly original and seriously strong. The tulip-petal shapes are delicate in appearance but built to withstand heavy use. Cast aluminum bodies make them light enough to move around in this most flexible of spaces, while cast iron bases keep them from tipping over. Recycling units for newspapers and magazines are incised with linear motifs that suggest New York's scraper-scape, while those intended for bottles and cans have bubble shaped cutouts that are just plain fun. Park litters and recycling units in green, red and blue bear the Bryant Park logo. Units placed in other parts of the Business Improvement District carry the logo of their neighborhood.



Portland Transit Mall

design firm: ZGF Zimmer Gunsul Frasca Architects LLP

location: Portland, Oregon

As landscape architects for the renewal and expansion of the Portland Transit Mall, ZGF designed upgrades and additions to the 1970's urban transit corridor through downtown Portland, considered an icon of progressive planning and urban design. For the new public/private project, which advances the city's commitment to civic space, urban revitalization and sustainable transportation, ZGF designed site elements that continue the Mall's legacy of quality place-making and urban design. The Studio 431 team developed and manufactured ZGF's handsome designs for a stainless steel litter receptacle, bike rack and leaning rail. ZGF liked the results and wondered if the team could help with benches. Not just any benches, but original Lawrence Halprin-designed benches that had been removed from the site and relegated to scrap. Studio 431 engineers accepted the challenge. In the absence of original design drawings the team reverse-engineered the bench. Frames were re-welded where necessary. All frames and end caps were refinished, old wood was replaced with new, the round backrest was redesigned to replace original exposed bolt heads with hidden connections, and a new armrest made of the same stainless steel bar as ZGF-designed elements was added to visually relate the benches and custom furnishings. Studio 431 is proud of its dual role in the innovation and restoration of site furniture that is helping define this high-profile streetscape as a civic place.







The Yards Park

design firm: M. Paul Friedberg & Partners/MPFP

location: Washington, DC

The Yards Park is the 5.5-acre centerpiece of a LEED Gold certified mixed-use development on a former wharf and industrial site along the Anacostia River. Adjacent to the Washington Navy Yard and connected to National Park stadium by a striking new pedestrian bridge, the park includes a riverfront boardwalk, public art, a great lawn for recreation and events, and landscaped outdoor rooms designed as places for respite and quiet enjoyment. Friedberg & Partners Managing Director, landscape architect Rick Parisi, designed custom site furniture elements that compliment the park's design and reflect its maritime history. Studio 431 provided creative engineering and precision woodworking to achieve the distinctive curves and fine joinery that give the furnishings a character that is both robust and refined. Working closely with the designer, the Studio 431 team refined, engineered and manufactured the "wave" benches, deck-style lounge chair, lattice table and shade canopy that contribute to the site's compelling sense of place.



"Wave" benches in 5-foot and 10-foot versions, with and without backs, are mounted to granite slabs. The precision-cut oiled ipe boards of the undulating wood seats are flat on the bottom, curved on top and thin out at the crest of the curve, where they are held in place by a threaded rod. Six-foot diameter tables have an intricate basket weave patterned top and steel perimeter rim. Canopies, designed to provide sun protection for retail shops in the park, are made of thinner formed ipe slats and mounted to a concrete wall. At the request of the designers, Studio 431 developed and manufactured all custom pieces, including the 12-foot long canopies, to ship fully assembled to ensure high quality fit and finish.





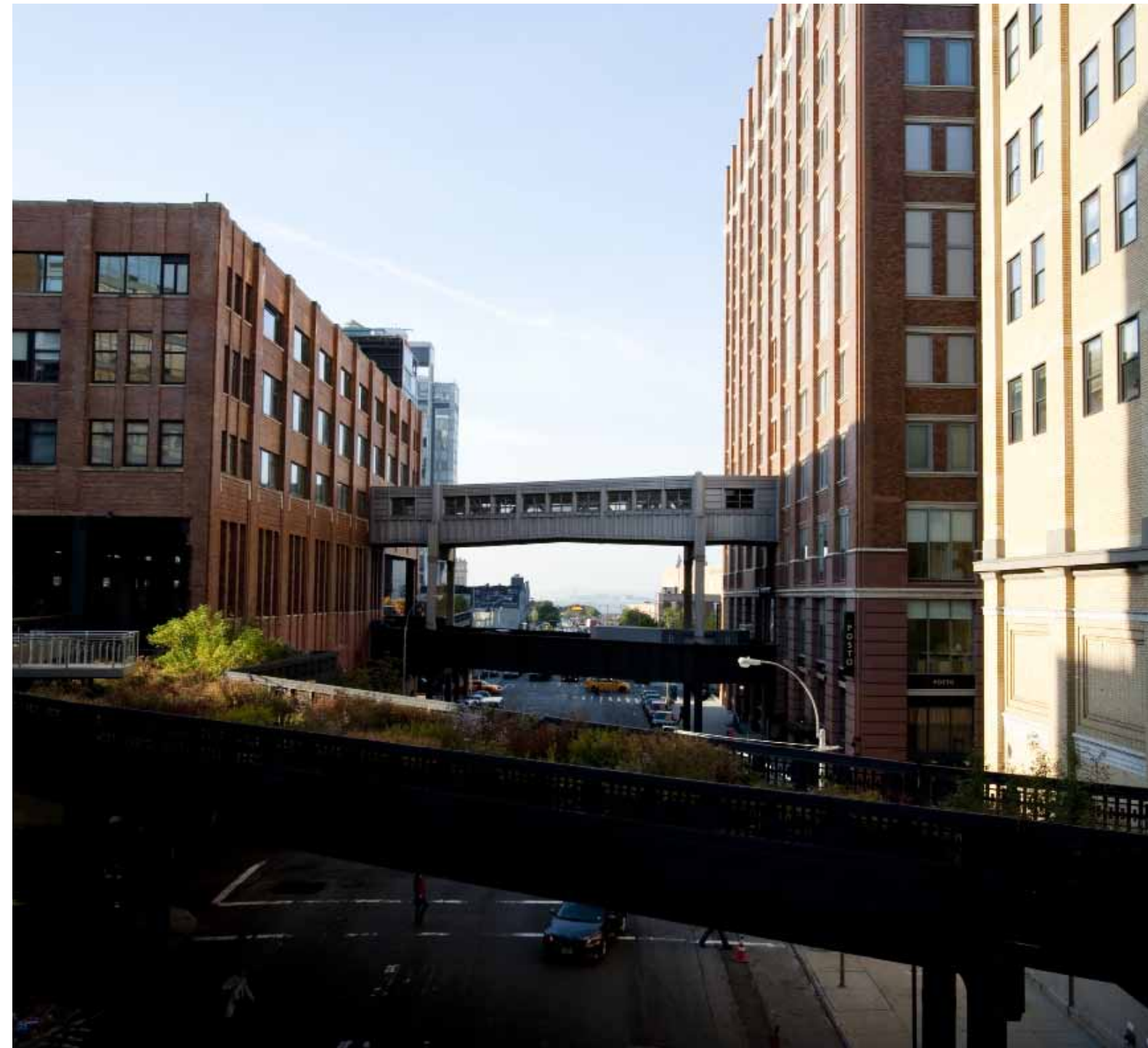
Chelsea Improvement District

design firm: Chelsea Improvement Company
Ignacio Ciocchini, Product Design

location: New York City, New York

New York's westside Chelsea neighborhood has been dramatically transformed. The streets beneath the High Line that once constituted the meatpacking district are now home to luxury lofts, high-fashion boutiques and restaurants in the vanguard of the city's foodie frenzy. Industrial designer Ignacio Ciocchini's custom streetscape elements play an important role in the Chelsea Improvement Company's goal to enhance pedestrian safety and aesthetic experience in this busy part of the city. Studio 431 engineers collaborated closely with the designer to develop a bench, litter receptacle, signpost, and tree pit enclosure that share the area's stylish vibe while paying homage to its industrial history. The custom products developed and manufactured for Chelsea by Studio 431 help create an authentic sense of place for this thriving urban enclave.

Street trees add to Chelsea's ambience and the street pit enclosures designed specifically for the district eschew typical arches in favor of geometric forms. Stainless steel rods crisscross powdercoated steel posts in a crisp repeating pattern. Studio 431 engineered the mounting system to be embedded in flexible epoxy, rather than attached to the concrete sidewalk, to avoid heaving from ground freeze and rusting from contact with salt used to melt ice and snow.





The custom bench has three 24-inch wide seats separated by arms, giving users a sense of personal space and providing a deterrent to skateboarding and “urban camping.” The bench base and arms are stainless steel and the seat is powdercoated steel in the “Chelsea grey” color chosen for elements throughout the district. The side panels of the stainless steel litter incorporate a repeat pattern that marks its Chelsea pedigree. The signpost, which is stainless steel on the bottom and powdercoated aluminum on top, has a built-in mechanism for changing signs. A robust replacement for standard city signposts it has the heft to support the unplanned for bike.

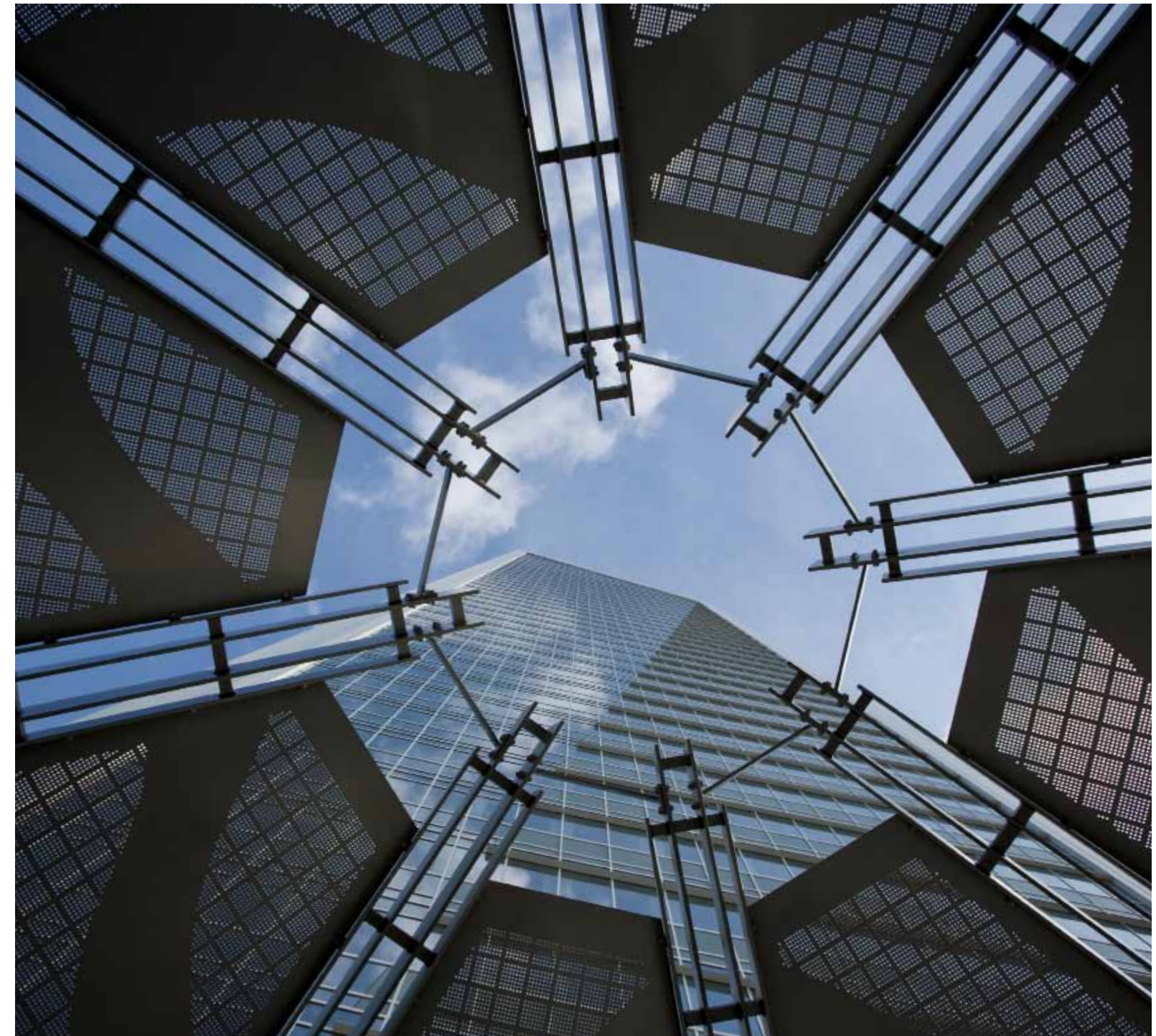


Duke Energy Center

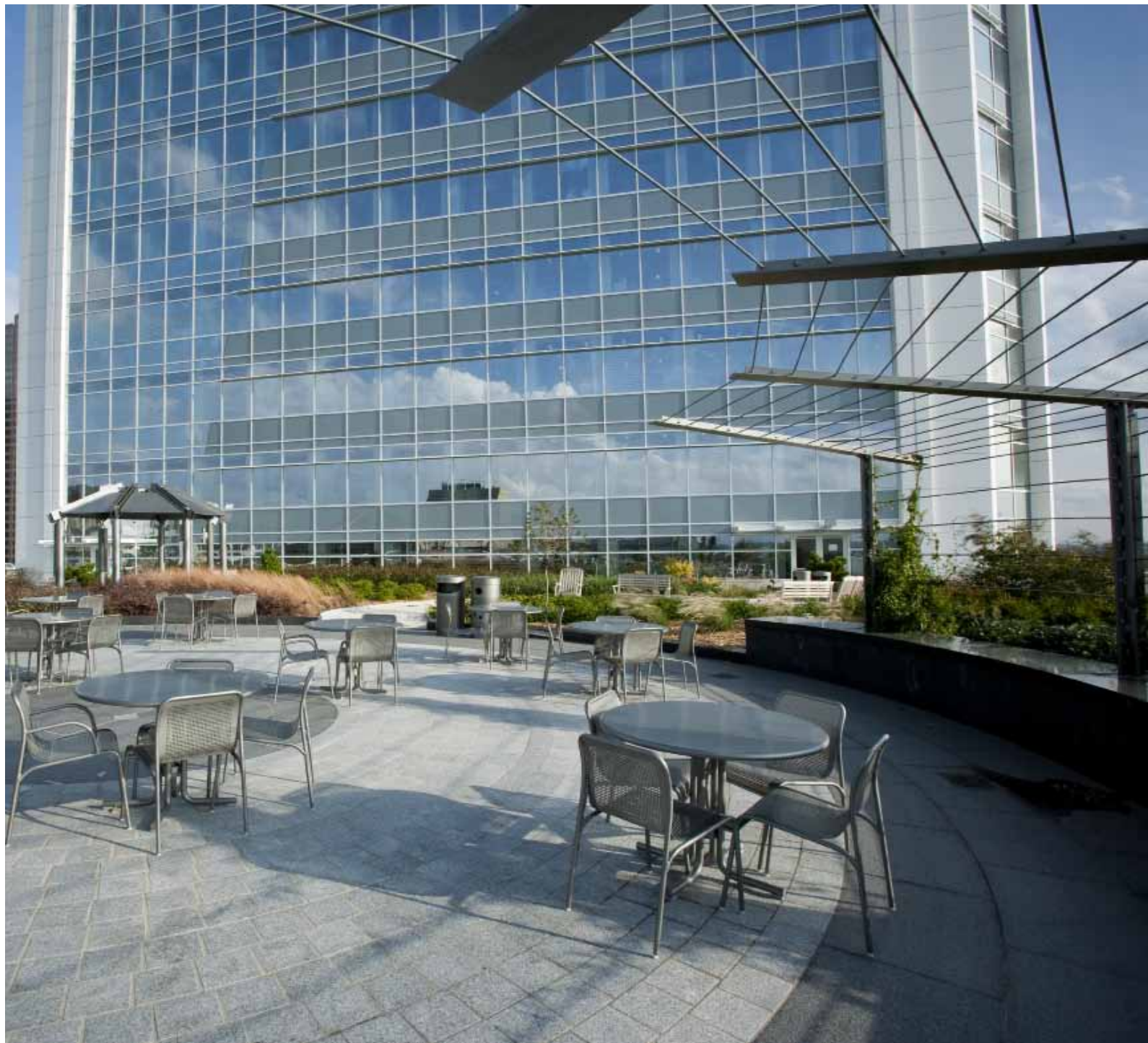
design firm: HGOR Inc.

location: Charlotte, North Carolina

HGOR were planners and landscape architects for Charlotte's new downtown cultural arts campus, which includes a major plaza with a Performing Arts Center, two museums and the Duke Energy Center, the corporate anchor of the development. One of the largest electric power companies in the US, Duke Energy occupies 21 floors and the 20,000 square-foot green roof of its LEED accredited headquarters building. HGOR partnered with Studio 431 to create a gazebo and trellis wall for the roof garden, where company employees enjoy breaks and lunch in the open air. The 30-foot diameter gazebo provides a sunshade in the hot Charlotte summer and the 60-foot long trellis forms the structure for a green wall that offers a sense of enclosure and privacy. Set amid the rooftop's paths and gardens, the custom elements engineered and manufactured by Studio 431 help create welcoming people-focused places with exceptionally high standards of quality and amenity.







The gazebo is constructed of steel piers and lightweight perforated aluminum panels. The trellis has posts of powdercoated steel with stainless steel rods between verticals that hold and support plant material. Studio 431 engineers averted potential deflection in the rod by building in a camber or "bow" that straightens under its own weight to span openings and support dense green growth without sagging.

While every Studio 431 product is custom designed, engineered and manufactured, all comply with Landscape Forms uniform standards of quality and sustainability. Studio 431 custom products are made with recycled-content, recyclable steel and aluminum in a manufacturing facility that recycles all steel, aluminum, wood scrap and sawdust and 99% of the water used in processes. Painted metal parts are finished with Landscape Forms' proprietary Pangard II polyester powdercoat, which is lead free, HAPS free, virtually VOC free and does not generate hazardous waste. Recycled plastic timbers and engineered plastics containing recycled content material are used where appropriate. Natural woods are sourced from sustainably managed forests and FSC wood is offered as available. And all Studio 431 products are covered by Landscape Forms' 3-year warranty. Studio 431 creates custom site furnishings that help designers create a sense of place as they serve, endure and delight.

STUDIO 431 PROJECT LIST

34th Street :: New York City, NY

East River Park :: Brooklyn, NY

Millennium Park :: Chicago, IL

34th & Chestnut :: Philadelphia, PA

Smothers Park :: Owensboro, KY

Discovery Green Park :: Houston, TX

East River Science Park :: New York City, NY

Detroit Metro Airport :: Detroit, MI

U of M Ross School of Business :: Ann Arbor, MI

Fan Pier :: Boston, MA

Calgary Riverwalk :: Calgary, AB

Duke Energy Center :: Charlotte, NC

Waterfront Park :: Mount Pleasant, SC

Century City Streetscape :: Los Angeles, CA

"The Yards" - Southeast Federal Center :: Washington D.C.

North Point Park :: Boston, MA

World Trade Center Streetscape :: New York City, NY

Brooklyn Academy of Music :: Brooklyn, NY

Great Park :: Irvine, CA

Bryant Park :: New York City, NY

Santa Fe Railyard :: Santa Fe, NM

CATS Bus Shelters :: Charlotte, NC