ACTIVATING UNDERUTILIZED URBAN SPACES
THE ROOF DECK
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As SOM’s first Interior Design Partner, Stephen has been pivotal in defining SOM Interiors as a practice focused on the future. Through Stephen’s leadership, SOM’s multidisciplinary design practice has been augmented with an emphasis on defining innovative concepts and programs for interior architecture. His creative studio addresses projects holistically, including designing furniture, integrating technology, curating artwork and accessories, and conceiving branded environments.

An innovator, Mr. Apking has pioneered the concept of the “performative workplace,” which emphasizes creativity, innovation, flexibility, knowledge-sharing, efficiency and sustainable design. Stephen’s work targets the design of healthy environments through the integration of systems, and his projects often provide a platform for the development of next generation products by manufacturers.

Stephen’s global project portfolio includes creative and corporate workplaces, financial offices, hotels, residences, retail spaces, governmental facilities, performing arts spaces and historic renovations. His projects span the United States, Europe, the Middle East and Asia and clients include Global Hyatt, Alcoa, WPP Group, the IMF, NATO, the UN, Kirkland & Ellis, Deloitte, Goldman, Sachs & Co., Charles Schwab, JP Morgan Chase, Morgan Stanley, the New York Stock Exchange, The James, Starwood Hotels, Jumeirah, and the Four Seasons Hotels and Residences among others.

Projects by Stephen have been featured in such publications as BusinessWeek, Architectural Record, Interior Design Magazine, Interiors, Contract Magazine, Metropolis Magazine, and numerous others.

THE HYBRID WORKPLACE

Synthesizing qualities of interior and exterior, of natural and urban space, roof decks are emblematic of ongoing paradigm shifts in the nature of intellectual work. In a cloud-based economy where people can be productive wherever they choose, the physical work environment is more important than ever for organizational success. Office designs are becoming increasingly diverse, with a new emphasis on collaborative zones and amenities.

When large open offices were first created in the early 20th century, their promise of efficiency was predicated on an underlying spatial regularity; the work process was understood as linear and the architecture reflected this.

In recent years, the reality of new contexts for intellectual work underscores the benefits of providing alternative spaces for both collaborative and heads-down work within the office.

Weyerhaeuser Corporate Headquarters, Federal Way, WA, 1971

JTI Headquarters, Geneva, Switzerland, 2013
ROOFTOP OPPORTUNITIES

Urban settings are desirable for business because they facilitate the production of social capital as people invest their time together. But cities also place constraints on expansion, especially with real estate costs still a priority. The real estate above our heads is strikingly underutilized: for example, there are an estimated 37 square miles of roof atop New York City, or 12% of the urban footprint, with only a tiny fraction designed for active use. In the early 20th century, modernist designers championed roof decks in response to the scarcity of ground-level space, but saw them primarily as residential amenities. After a century of changes in the workplace, one of the most economically compelling uses for rooftop space is as an extension of the office.

BENEFITS TO BUSINESS

New context for productive social interaction:
As boundaries between home and work life continue to blur, coworkers inhabit the office beyond the 9-to-5 framework. Well-designed offices can help employees build meaningful relationships, learn from one another, receive feedback, and build camaraderie.

Contribution to employee well-being:
Doctors have emphasized the restorative value of reconnecting with the outdoor environment. Even the opportunity to walk outside for a stretch break can boost motivation and productivity.

Enhancement to organizational identity:
With an iconic architectural expression, a roof deck can function as a three-dimensional expression of a company’s philosophy, reinforcing the brand to employees and visiting clients.

ROOF TOP SURFACES

Podium Surfaces
A single large urban roof is an opportunity to create a major outdoor amenity. For an urban academic institution, a podium roof became a 65,000-sf landscaped campus commons with a large grass lawn, tree-lined seating areas, and decks for outdoor study and dining.

TOWER SETBACKS

In traditional “wedding cake”-style office towers, a series of setbacks create roof surfaces with different shapes. Decks that wrap around the building offer sweeping views and the chance to articulate each side as a distinct setting, allowing for a variety of activity types.

INNOVATIVE TYPOLOGIES

Not all office buildings fit the traditional tower forms. In a firm headquarters under construction in Geneva, the large program is tied together by a “continuous landscape” that spirals through the building, weaving together interior and exterior space.

RANGE OF DESIGN POSSIBILITIES

CASE STUDY: GREY GROUP

Programming

The Manhattan headquarters of advertising giant Grey Group accommodates a mobile and highly collaborative workforce and also hosts client presentations, so its roof deck had to adapt as a hospitality space that visibly embodied the firm’s values. It needed to shift scales seamlessly to accommodate a quick stretch break, an impromptu team huddle, structured values. It needed to adapt as a hospitality space that visibly embodied the firm’s values.

Modulating Environmental Forces

The great benefit of a roof deck is, of course, having access to the richness of the outdoors. One of the critical design problems is to provide this access while modulating extreme wind, sunlight, distractions from building infrastructure, and views.

1. Wind: 3-second gusts of up to 98 miles per hour could not only disrupt work, but might tear a pavilion with too much surface area off the roof. SOM mitigated uplift forces by covering it with an open louver system rather than a continuous surface. We articulated the south and west edges with screens and plantings to block prevailing winds.

2. Sun: SOM carried out sun angle studies to modulate daylight effectively. By optimizing louver angles, width, and spacing, we evolved a design that provides the necessary shade with a pattern of filtered light that changes throughout the day.

Schematic Design

SOM reviewed several alternative models with the client to find the most effective layout for their needs. We evolved a design that extends the form of the New York rooftops based on a steel and wood pergola, a meeting space with grandstand seating, and an enclosed support area with restrooms and storage.

Structure and Life Safety

While egress codes permit 360 people on the roof, Grey’s landlord had already allocated 286 to other tenants. The deck could only host more than 74 people if it were classified as an assembly space, but the roof structure fell short of the required 100 psf live load capacity. To avoid costly structural reinforcing, Grey opted to obtain a Temporary Place of Assembly permit from the Department of Buildings when they hold large events. During these events, fire marshals are present and the limit increases to 240 people based on the capacity of Grey’s stairs.

3. Building Infrastructure: To hide water pipes running through our site, SOM developed a screening system that can be disassembled for maintenance. We sculpted the forms of our design to frame the architectural context. Landmarks Preservation Commission required that new construction be invisible from street level, so we constructed the tallest elements from plastic tubing on site to qualify for a Certificate of No Effect.

4. Views: The skyline is one of the greatest built-in assets of almost any urban office building, so we sculpted our Pavilion and perimeter design elements to frame curated views. Grey’s building overlooks Madison Square to the east, and across the park you could see the hundred-year-old Met Life building. The roof also commands a spectacular sunset view west, toward the Hudson River, while the Empire State Building rises farther uptown.

Leisure, beer garden, BBQ, cumbayah, lounge, sun deck

Systems

The deck is equipped with weatherproof electrical outlets, hardware data connectivity access points and telephones, satellite television, and security cameras. Safety regulations required uniform lighting at 2 fc, but achieving this with pinpoint lights on poles required careful calibration. The roof is accessed by one of the building’s two elevator banks plus a small stair and wheelchair lift, and egress stairs are located in the core and at the western edge. The enclosed area includes restrooms to serve 74 people. SOM specified black birch trees, which can survive in minimal soil, survive the New York winter, and resist the wind forces. Custom planters are fed by concealed irrigation lines.

Furniture and Finishes

The furniture and materials harmonize with the New York rooftops while setting a professional tone. Architectural steel is coated in weather-resistant paint that complements existing mechanical systems. Precast concrete pavers are white to reflect heat. Pergola louvers are in dialogue with the seating below, which strikes a balance between casual sociability and a modern office. SOM specified ipê wood, whose resinous structure resists weathering. Different kinds of seating accommodate various programmatic scenarios, and movable tables and benches can be placed in storage when not in use.

SOM ended up with a design that can support the kind of social and work programs that will help Grey Group remain an industry leader. Roof decks represent one of the best ways we’ve found today to achieve our larger goals of helping companies position themselves for the future, increase organizational effectiveness, and push the envelope of what a workplace can be.
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