Report from New York

Carol Willis, Founder and Director
The Skyscraper Museum

Towards a Quality and Sustainable Built Environment

Organized by Department of Building and Real Estate,
The Hong Kong Polytechnic University
and sponsored by
The Real Estate Developers Association of Hong Kong

23 April 2009
HOME > LOCATION

VISITING US

The Skyscraper Museum is located at 39 Battery Place, New York, NY 10280. The Museum shares a building with the Ritz Carlton in Battery Park City, at the southwestern tip of Manhattan. Nearby landmarks include Bowling Green, Battery Park, and Castle Clinton.

HOURS
Museum hours are 12-6 PM, Wednesday-Sunday. General admission is $5, $2.50 for students and seniors.

Call 212.968.1961 for information on upcoming lectures, exhibitions, walking tours, and membership.

DIRECTIONS AND MAP

GROUP VISITS

The Museum schedules tours and group visits to community organizations, seniors groups, and corporations. To schedule a 40-minute visit for your group, or to
THE SKYSCRAPER MUSEUM
In conjunction with its current exhibition VERTICAL CITIES: HONG KONG|NEW YORK, The Skyscraper Museum convenes an international conference that examines the dramatic vertical urbanism of Hong Kong and New York and asks: “Is density a strategy for sustainable cities?” Three separate programs are presented in partnership with The Regional Plan Association, The New School’s India China Institute and The Tishman Environment and Design Center.

What is vertical density? There are two ways to conceptualize urban density: on the ground plane and in the skyline. The world’s densest major cities—Hong Kong, Cairo, Mumbai, and Manila—display wildly disparate models of urban development in the vertical and horizontal dimensions. Hong Kong’s built environment stacks its seven million people into high-rises, averaging 70,000 per square mile—the same as Manhattan. Is vertical density a product of rampant capitalist markets or of particular cultures? Is it an attribute of affluence? A virtue or a curse?

With more skyscrapers than New York—most built since 1980—Hong Kong faces the challenges of an evolving capital of global finance and a growing city of everyday needs and desires. International architects, developers, planners, and public officials will illustrate how Hong Kong accommodates pressures to intensify central commercial districts and creates transit-based, remarkably dense, vertical communities in the New Territories. The panels will address how rising issues of cultural heritage, urban regeneration, and sustainability confront both Hong Kong and New York.

www.skyscraper.org/verticaldensity
The Skyscraper Museum: Vertical Density Symposium

HONG KONG NEW YORK

VERTICAL DENSITY SUSTAINABLE SOLUTIONS

OCTOBER 16, 17, 18, 2008

HOME
Current Exhibition

Conference Highlights

Conference Archives:
- Learning From Hong Kong, 10/16
- Debating Density, 10/17
- Designing Density, 10/18

Series Themes
- Schedule
- Premises
- Participants
- External Resources

Subscribe to the Podcast (RSS)
Add to iTunes

Plenary: Hong Kong-New York Dialogue: Mrs. Carrie Lam
MIXED GREENS
An international survey of state-of-the-art sustainable Separation design

THE SKYSCRAPER MUSEUM & THE NEW YORK ACADEMY OF SCIENCES

GREEN TOWERS FOR NEW YORK: FROM VISIONARY TO VERNACULAR
HOME | EXHIBITIONS | GREEN TOWERS
GREENTOWERS: HOW SUSTAINABILITY SUCCEEDS IN BUSINESS
The GREENTOWERS Web Archive presents video recordings, sound clips, and written essays by the Museum's Winter/Spring 2006 lecture series on the state of the art in sustainable skyscraper design.

Right-overs and panel discussions included professionals in the green building movement, including developers, architects, engineers, environmental consultants, and government officials. Highlighting the innovative collaboration among architects and designers, each panel explored a major tower project or architectural practice, public policy issues, and questions for the future.

The GREENTOWERS Web Archive also includes the online version of GREEN TOWERS: DESIGNING FOR NEW YORK. From Visionary to Vernacular, an exhibition documenting 18 projects that represent the next generation of high-performance high-rise buildings.

THE ARTIST STATE IS BEING RESERVED TO PARTS BY THE NAMSEOM EXHIBITORS. THE NAMSEOM IS-FORFREED FROM FORD" & "THE NEW YORK TIMES FROM THE NAMSEOM COLLECTION OF ARCHITECTURAL MASTERS.

Green Towers Map
The Green Towers Map feature represents a new generation of sustainable skyscrapers that are currently under construction or planned for the future. The Map includes all buildings that will be built by the end of 2006.

Green Towers: Separation is a major component of the new green building movement. It involves the separation of non-renewable energy sources from the building's operation, reducing the building's carbon footprint. This is achieved by using renewable energy sources such as solar, wind, or geothermal energy.

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New York’s first zoning law, 1916
Regulating height and bulk
The New York Zoning Law, with the intention of placing limitations upon the bulk of buildings, provides that they may rise, on their lot lines, to only a certain height (which is made dependent upon the width of the lot).
Unlimited tower above this level.
Area 25% of total lot area not to project beyond planes shown here.

OFFICE BUILDINGS ON CORNER LOT 100'-0" x 150'-0"
HEIGHT = 2 x STREET WIDTH, MAX. HEIGHT 400'-0" WITHOUT TOWER
The New Architecture

Evolution of a City Building Under the Zoning Law
STUDY OF ECONOMIC HEIGHT FOR OFFICE BUILDINGS

J.J. KINGSTON
ARCHITECT
a new approach

The Chase Manhattan Building and Plaza, on the two-block site bounded by Nassau, Liberty, William and Pine Streets, represents a new concept in building planning for New York’s crowded financial district. For decades in the past monumental structures were pushed upward in this area of narrow streets, without regard for the increasing problems of traffic circulation or the need for space, light and air which have come to be recognized as an important part of modern planning.

The approach adopted by Chase Manhattan is to build space into its plan, not only for the benefit of the Bank and its tenants, but for the benefit of the entire area. The 60-story building will stand on a 2½-acre open plaza, covering the greater part of two city blocks. This open space amid the Wall Street “canyons” will undoubtedly become a center and focal point for the entire downtown area.
New York 1961 zoning law

FAR: Floor area ratio
and bonus incentives
BUILDING FOR THE FUTURE

The Chase Manhattan Bank
GREEN & GREEN $$
Sustainability and speculative real estate markets
The Skyscraper Museum presents GREEN TOWERS FOR NEW YORK: FROM VISIONARY TO VERNACULAR, on view January 25 through August 2006, an exhibition that surveys a new generation of skyscrapers recently completed or under construction in New York City that have embraced sustainability and green building strategies as a central tenet of their design. Ranging from high-profile corporate headquarters to speculative office towers, and from "green" apartment blocks to mixed-use and institutional projects, these buildings represent a leading-edge of energy efficiency and environmental responsibility for high rise architecture in the U.S. today.

In conjunction with the exhibition, the Museum organized an 8-lecture series, "GREEN TEAMS: How Sustainability Succeeds in Business" to highlight the creative collaboration among clients, developers, architects, engineers, and building-systems designers who have designed the new generation of high-performance green buildings. The series also explored the dynamic of design and dissemination of green building strategies, asking: Is New York ready to go green on a big scale? What are the mechanisms that support sustainability in a market-driven model?

GREEN TOWERS FOR NEW YORK: From Visionary to Vernacular is supported in part through generous support by OldCastle Glass and the Hugh L. Carey Battery Park City Authority.
rain harvest

Rain water is collected on all roof areas.

Water tanks on 4 different levels reduce pumping needs for lavatories.

Zero storm water discharged to the city system.

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Government’s role
Wednesday, April 8, 2009
Mayor Bloomberg and Agriculture Secretary Vilsack Announce $2 Million Federal Grant to Create...
Improving Urban Design

East River Waterfront
Improving Urban Design

East River Waterfront
Revitalize the Waterfront and Enhance Public Open Spaces
Facilitate Housing Production

Greenpoint / Williamsburg
Waterfront Inclusionary Housing Program

Without bonus: 3.7 FAR
Reduced from 4.3 FAR

With bonus: 4.7 FAR

20% - 25% of units affordable

Facilitate Housing Production
Empire State Building's $20 Million Green Makeover

BY ARIEL SCHWARTZ  Mon Apr 6, 2009 at 6:03 PM

The Empire State Building is already the world's most famous office building. Now the New York icon is getting a $20 million green makeover (part of a $500 million overhaul), led by backers including Johnson Controls, the Clinton Climate Initiative, and the Rocky Mountain Institute. When finished, the Empire State Building will likely qualify for Leadership in Energy and Environmental Design (LEED) Gold status.

The building's upgrade--under the aegis of the "Empire State Building Leadership in American Progress in Sustainability" project--will include refurbished windows, high-efficiency heating and cooling systems, improved insulation, and better ventilation control. The upgrade will take two years. When complete, the building's energy
Empire State Building Getting Energy Efficiency Overhaul

The mother of all office buildings is getting the mother of all energy retrofits.

To make an example of how existing structures can be refitted to improve energy efficiency and sustainability, the Empire State Building is receiving a $20 million overhaul. Planners say the upgrades should result in $4.4 million in energy savings annually, or a 38 percent energy reduction.

The energy upgrades are part of a larger $500 million refurbishing of the building, which was constructed in 1931.

The energy upgrades are being coordinated by the Clinton Climate Initiative.
PROGRAM ON HOUSING AND URBAN POLICY

WORKING PAPER SERIES

WORKING PAPER NO. W08-001

DOING WELL BY DOING GOOD?
GREEN OFFICE BUILDINGS
NEW YORK CITY

Pop: 8,250,567
Area: 789.4 km²
Density: 10,452/km²
HONG KONG

Pop: 7,000,000
Area: 1,104 km²
Density: 6,341/km²
The Green Future City
New York’s historical perspective as the original vertical city can be useful to Hong Kong, which is repeating New York’s century-long evolution at an accelerated pace. What are possible lessons from New York’s experience?

Brief background of The Skyscraper Museum and its mission

History of regulation of commercial buildings

1916: New York City passes the first comprehensive zoning law, which separates zones by use and also introduces a new concept: a template for form—the height and bulk formulas.

1961 major zoning law revision: created FAR (floor area ratio) and bonus space incentives for public amenities; plazas and privately-owned public spaces (POPS)

Urban Design issues

What has worked in NYC: plazas and privately-owned public spaces (POPS)

Government planning initiatives and incentives

Sustainability and speculative real estate markets

Incentives work, but are they necessary? Recent experiences in NYC suggest that green features will pay for themselves—either first cost (ROI) or retrofits.

Empire State Building retrofit announcement: April 6, 2009
An ambitious cycle of three exhibitions will juxtapose a retrospective of American visions of the skyscraper city of the future from the early 20th century with an exploration of Chinese cities today, principally Hong Kong and Shanghai, pursuing the parallel conditions of rapid modernization and urbanization.

**China Prophecy**
Spring 2009 through October 2009

Future City 20 | 21 culminates in a close look at Shanghai, as a model for 21st century urbanism. Using architectural photography of recent towers, architectural drawings of existing and proposed towers and computer animations, documenting both the recent high-rise developments and future plans for the next generation of Shanghai’s development, this installation will lead to an inquiry into the economics, laws, and culture shaping the present-day Chinese metropolises.