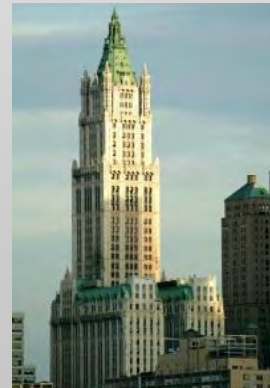
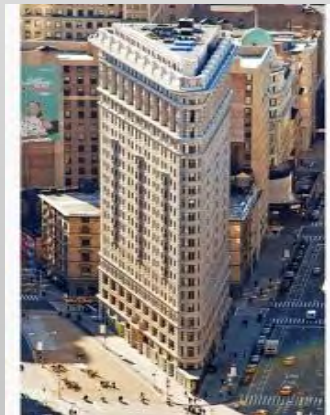

**BOMA CHINA
PRESENTATION
BOMA中国专题演讲**

**NEW YORK CITY
MAJOR BUILDING CYCLES
LONGEVITY OF
REAL ESTATE
纽约市重要建筑房产寿命周期**

Pre-1920's Skyscrapers

- " The Flatiron Building . 1902
- " 1902
- " The Woolworth Building . 1913
Now Being Redeveloped as Mostly Residential
1913
- " 120 Broadway . 1915



Late 1920's through 1930's The Depression Era – NYC's Biggest

20
30
-

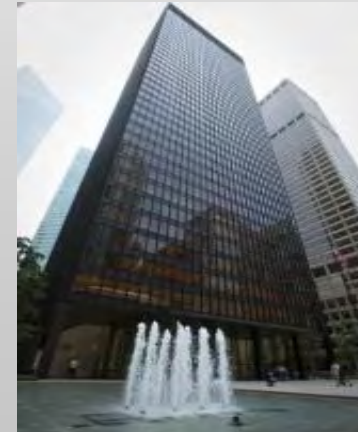
- " Rockefeller Center
- " The Empire State Building
- " The Chrysler Building
- " Waldorf Astoria
- " 40 Wall Street 40
- " 20 Exchange Place & 70 Pine Street 20 70

Now Redeveloped as Residential



Post WW-I I The 1950's and 60's The Next NYC Real Estate Boom 50 60

- " The GM Building @ 767 5th Avenue @ 767
- " The Mobil Building @ 150 East 42nd Street @42 150
- " The Pan-Am Building @ 200 Park Ave. @ 200
- " 345 Park Ave. 345
- " The Seagram Building @ 375 Park Ave. @ 375



Post WW-I I The 1950's and 60'

The Next NYC Real Estate Boom

50 60

" The 3rd Avenue Boom

605, 633, 675, 711, 730, 733, 750, 757, 777, 825

845, 850 and 909 3rd Avenue

13 Buildings Comprising nearly 8 MM sq. ft.

"

	605	633	675	711	730	733	750	757	777	825
845	850	909								
	13			800						

" 1 Chase Plaza - Now 28 Liberty

1

28

" 1 New York Plaza

1

" 2 Broadway

2



The 1970s and 80s

" The World Trade Center*
1, 2, 4, 5, 6 and 7 WTC

1 2 4 5 6 7

" 55 Water Street

55

3.5 MM Sq. Ft.

350

" 1 Liberty Plaza

1

*No Longer Standing



The 1970s-80s

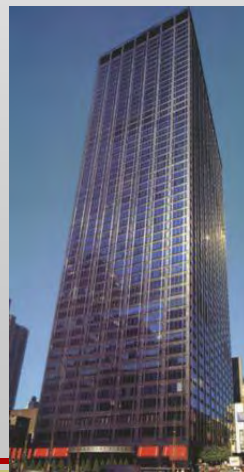
“ 1211, 1221 and 1251 Ave of the Americas 1211 1221 1251

“ 601 Lexington Ave. 601
Originally Citigroup Center

“ 9 West 57th Street 57 9

“ 1633 Broadway 1633

“ Brookfield Place 1 2 3 4
Originally 1, 2, 3, & 4 World Financial Center



2000 ' sBeyomdd
2000

- " Bank of America Tower @ 1 Bryant Park @ 1
 Completed in 2010 . 2.35 MM sq. ft. 2010 235
- " Hudson Yards
 Office . 2, 3, 10, 30, 40, 55 and 66 Hudson Blvd.
 Residential . 15 & 35 Hudson Blvd. + Others
 2 3 10 30 40 55 66
 15 30 +



2000's and Beyond New and Presently Under Construction 2000

" The New World Trade Center Buildings

- Tower 1 . 2014 1 . . . 2014
- Tower 3 - Scheduled for 2018 3 . . . 2018
- Tower 4 . 2013 4 . . . 2013
- Tower 7 . 2006 7 . . . 2006
- Tower 2 . In Progress 2 . . .
- Transportation Hub . 2016 . . . 2016



Experience in a well maintained "Class A" following a replacement cycles.

-Elevators

Starting from new, the first cycle average 20 to 30 years of service and then conduct first modernization. Later cycles after first modernization average 15 to 25 years

-Central Air Conditioning Plant Chillers

Starting from new, the first modernization/replacement cycle falls into the 30-50 year range. Ancillary equipment including pumps, fans, dampers, piping and electrical switch gear maintained in place with first replacement/modernization cycle in the 30-50 year range

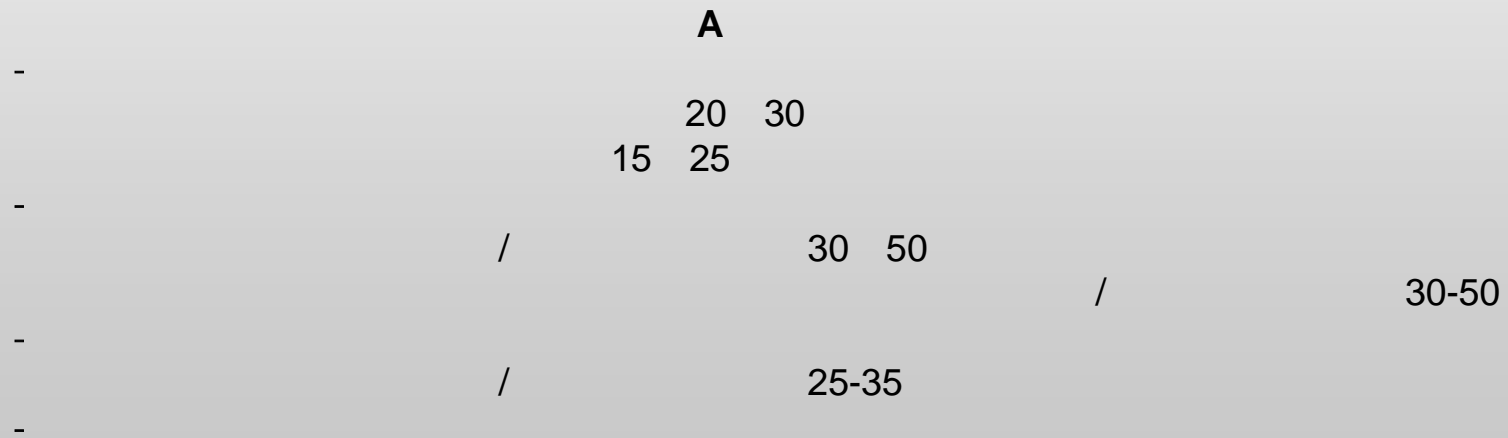
-Distributed or Package Air Conditioning Units

Starting from new, the first replacement/modernization cycle falls into the 25-35 year range.

-Building Structure (Framing and slabs)

Starting from new periodic inspections perform any identified repairs to maintain the structural integrity of the building.

100+ years



-Building Façade (mandated for buildings above 75 feet)

Starting from new, critical inspections of building exterior and façade performed in five year cycles. Engineers report and work scope issued and repairs promptly conducted 50+ years

-Roofing Systems

Starting from new, periodic visual and moisture inspections are conducted with repairs promptly conducted. Properly installed built up asphaltic and inverted roof membrane systems are lasting 30+ years

-Building Automation/Energy Management Systems

Starting from new, maintain in place with head end replacement and computer software updates every 10-20 years.

-Fire Alarm Systems

Starting from new, maintain in place for 25-30 years. (core system)

-Emergency Power and EPDS

Starting from new maintain in place for 40-50 years

