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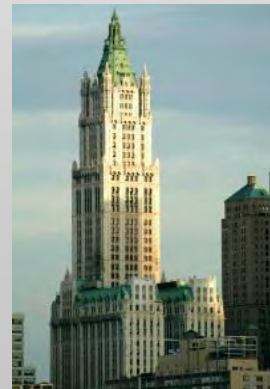
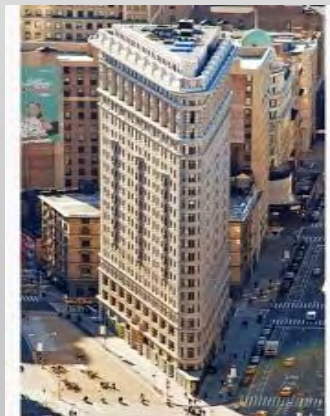
**BOMA CHINA  
PRESENTATION  
BOMA中国专题演讲**

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

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# 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 5<sup>th</sup> Avenue @ 767
- " The Mobil Building @ 150 East 42<sup>nd</sup> 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 3<sup>rd</sup> Avenue Boom

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

845, 850 and 909 3<sup>rd</sup> 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-80s

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

1 2 4 5 6 7

" 55 Water Street

55

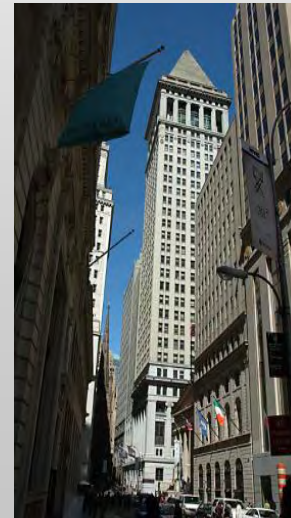
3.5 MM Sq. Ft.

350

" 1 Liberty Plaza

1

\*No Longer Standing



# The 1970s-80s

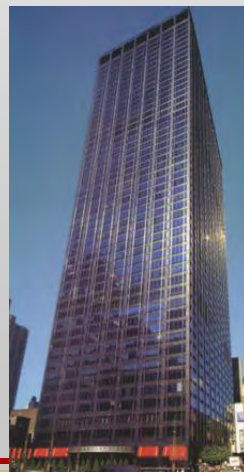
“ 1211, 1221 and 1251 Ave of the Americas 1211 1221 1251

“ 601 Lexington Ave. 601  
Originally Citigroup Center

“ 9 West 57<sup>th</sup> Street 57 9

“ 1633 Broadway 1633

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



# 2000's Beyond 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

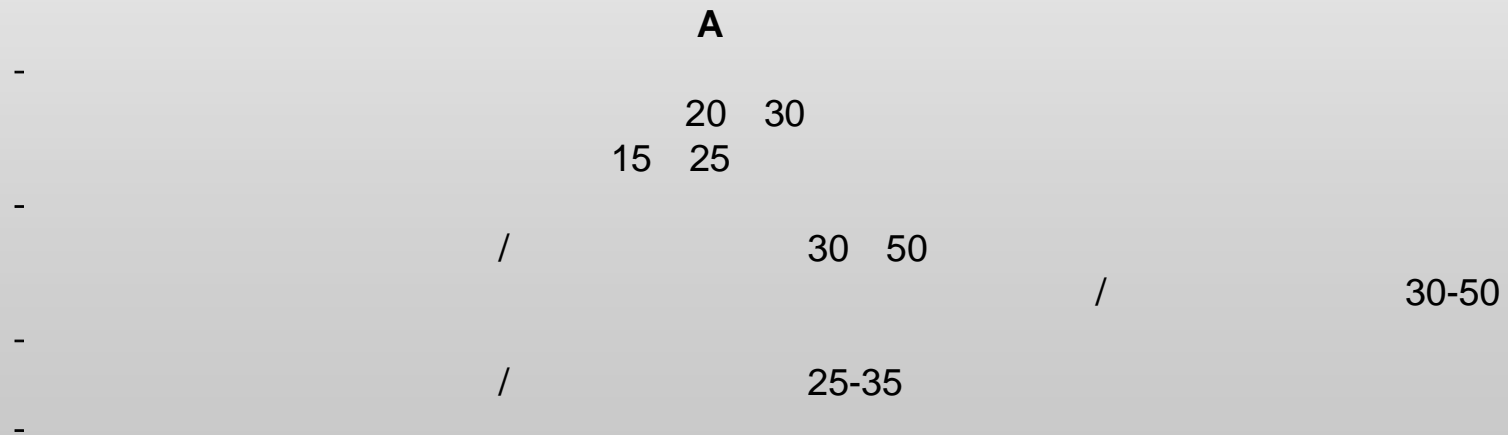
**-Distributed or Package Air Conditioning Units**

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

