



# SITE PLANNING

## NYC Zoning Historical Overview

# Historical timeline

- <http://www.nyc.gov/html/dcp/html/zone/zonehis.shtml>

## 1916

- \* 1st zoning ordinance
- \* establish regulations:
  - district
  - story
  - conforming vs. non-conforming use
  - zoning envelope
  - sky exposure plane
  - street wall height
- \* yard + bldg coverage
  - lot coverage
  - lot area
  - setback

## 1961

- \* Incentive zoning
- \* establish regulations:
  - FAR
  - density
  - dwelling unit
  - air rights
  - variance
- \* aesthetics
  - Landmarks Preservation 1965
  - Midtown zoning 1982
- \* Quality housing
- \* Contextual Zoning

## Today

- \* establish regulations:
  - Buildable Area
  - conditional use
  - single versus “multiple dwelling “unit
- \* Environmental impact statement
- \* Planned Unit Development (PUD)

# Historical Background

- NYC Zoning Ordinance of 1916 – first in US

- **Zoning ordinance** a law or regulation by which a government exercises its police power in regulating and controlling the character and use of property.

- for the sake of public welfare, order, and security.

## ZONING ORDINANCE



CITY OF REDDING  
DEVELOPMENT SERVICES DEPARTMENT

[www.ci.redding.ca.us](http://www.ci.redding.ca.us)

# Zoning Purposes

- Exclusivity of Fifth Avenue
  - no garment industries/lofts
  - to protect property values



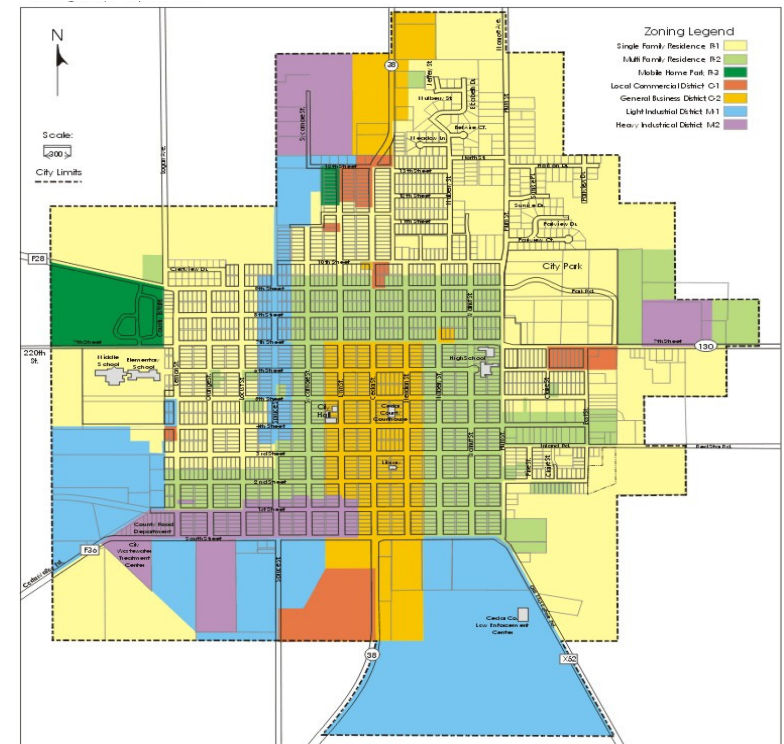
# Zoning Purposes

- prevent large skyscrapers, 120 Broadway Equitable Life Building 537ft tall (40 story)
- healthy, well-planned city



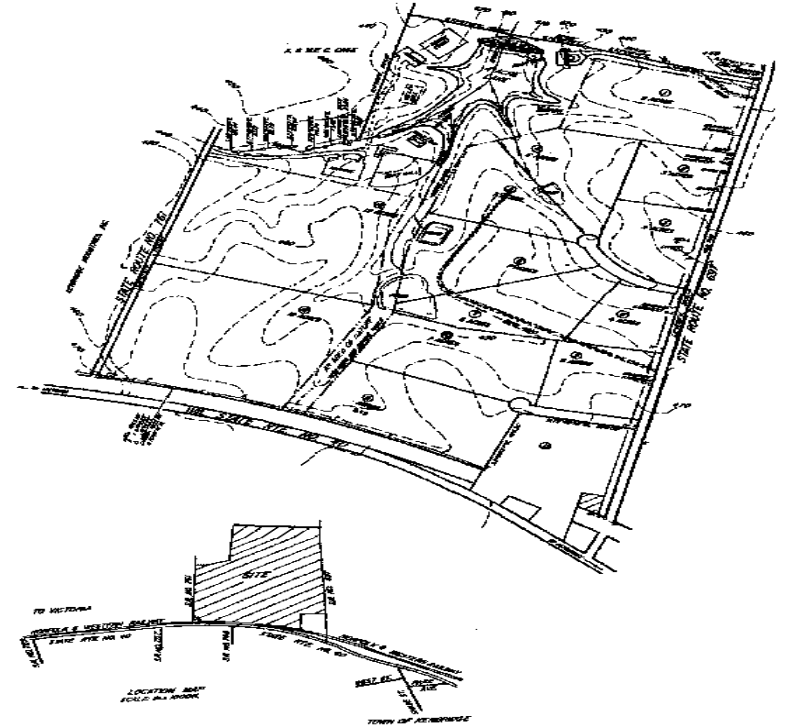
# Zoning Provisions

1. system of mapped districts of height, area and use
  - **District** any section of a city in which the zoning regulations are uniform
  - 3 basic types of districts—residential, commercial, manufacturing (R,C,M)
  - **Story** the vertical portion of a building between the surface of any floor and the surface of the floor above.



# Zoning Provisions

- **Conforming use**  
the lawful use of a building or lot that complies with the applicable zoning ordinance.
- **Non-conforming use**  
use does not conform or meet the current applicable zoning
- **Grandfathered use**  
acceptable use has changed since a building was built and no longer confirms to current zoning. Such non-conforming uses may be grandfathered in and are therefore acceptable

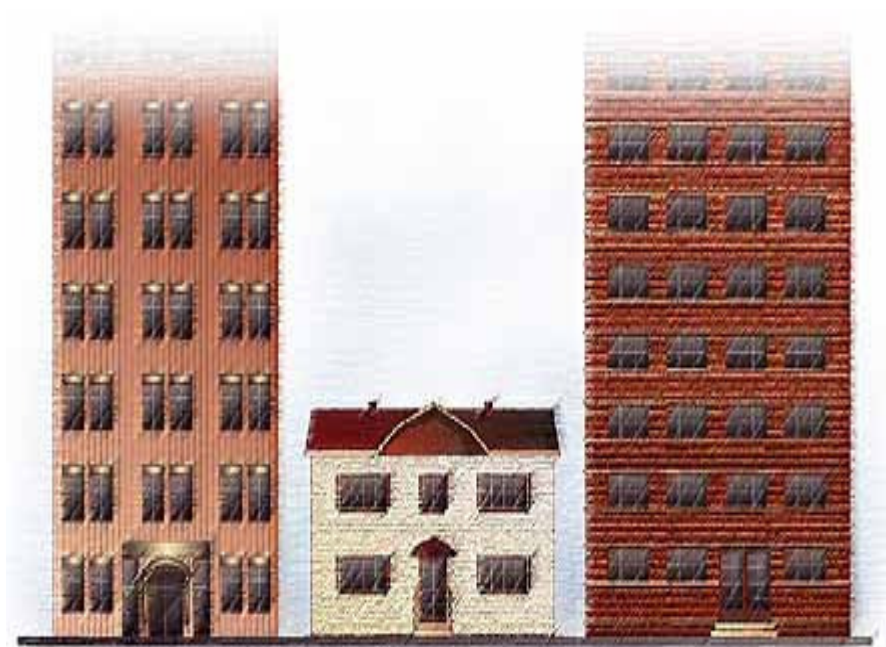


# Zoning Resolution of 1999

- ***Non-conforming use***

*a particular use of land or a structure which is in violation of the current applicable zoning ordinance.*

*If the use was established prior to the ordinance, it may be "**Grandfathered**" and continue to exist.*



co.jefferson.co.us



# Zoning Provisions

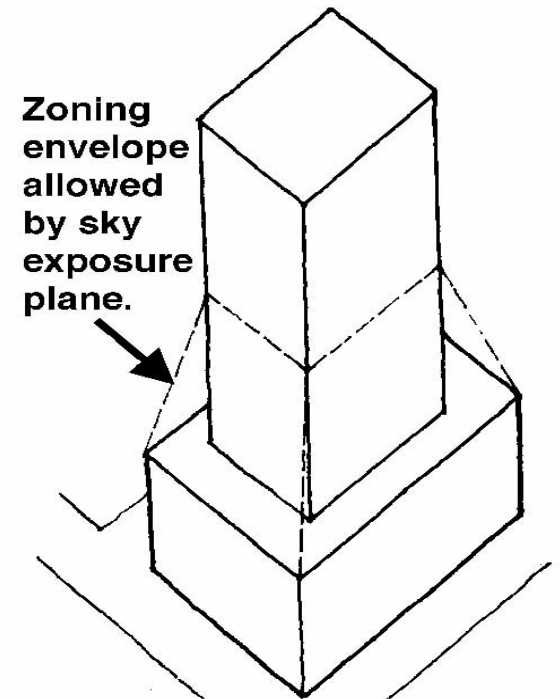
New buildings were to fit an imaginary envelope based on size of lots and location on a block in order to provide adequate light and air to the street

## Zoning envelope

the established volume in which a building may be legally be placed.

Length x Width x Height

Tower on a base.



From An Introduction  
to Urban Design  
by Jonathon Barnett,  
Harper & Row [1982]

# Glossary of Terms : NYC Zoning

- <http://www.nyc.gov/html/dcp/html/zone/glossary.shtml>

## Zoning GLOSSARY

[Zoning Text](#) | [Zoning Maps](#) | [Zoning Districts](#) | [Zoning Tools](#) | [About Zoning](#)

### Glossary of Planning Terms

This glossary provides brief explanations of planning and zoning terminology highlighted in the Zoning Handbook. Words and phrases followed by an asterisk (\*) are legally defined terms in the Zoning Code. Words and phrases followed by a dagger (†) are found primarily in [Section 12-10](#) of the Zoning Code.

#### Accessory Use\*

An accessory use is a use that is in principal use. An accessory use must be related to the principal use, and it must be located on the same lot as the principal use. (Off-site accessory parking facilities, for example, are not accessory uses.)

#### Air Rights (see [Development Rights](#))

#### Arts Bonus (see [Incentive Zoning](#))

#### As-of-right Development

An as-of-right development complies with all applicable zoning requirements and does not require any discretionary action by the City Planning Commission. Most developments and enlargements are as-of-right.

#### Floor Area\*

The floor area of a building is the sum of the gross area of each floor of the building, excluding mechanical space, cellar space, floor space in open balconies, elevators or stair bulkheads and, in most zoning districts, floor space used for accessory parking that is located less than 23 feet above curb level.

#### Floor Area Ratio (FAR)\*

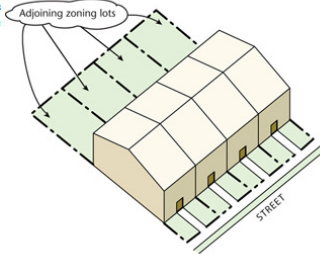
The floor area ratio is the principal bulk regulation controlling the size of buildings. FAR is the ratio of total building floor area to the area of its zoning lot. Each zoning district has an FAR which, when multiplied by the lot area of the zoning lot, produces the maximum amount of floor area allowable on that zoning lot. (For example, on a 10,000 square foot zoning lot in a district with a maximum FAR of 1.0, the total floor area on the zoning lot cannot exceed 10,000 square feet.)

#### Bonus (see [Incentive Zoning](#))

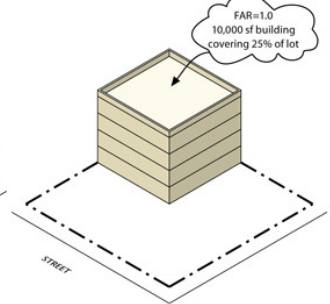
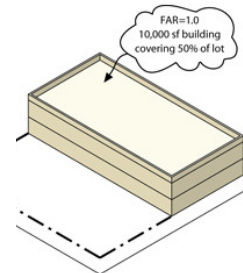
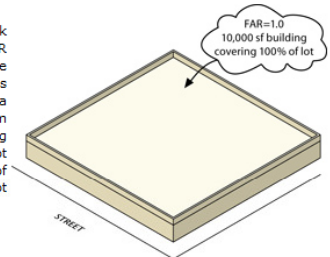
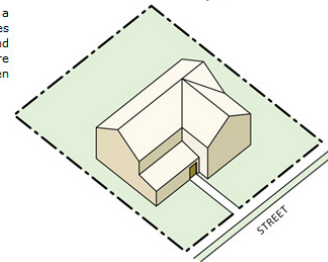
#### Building\*

A building is a structure that has one or more floors and a roof, is permanently affixed to the land and is bounded by open areas or the lot lines of a zoning lot.

An **attached building\*** abuts two side lot lines or is one of a row of abutting buildings.



A **detached building\*** is a freestanding building that does not abut any other building and where all sides of the building are surrounded by yards or open areas within the zoning lot.



not require  
and Appeals.

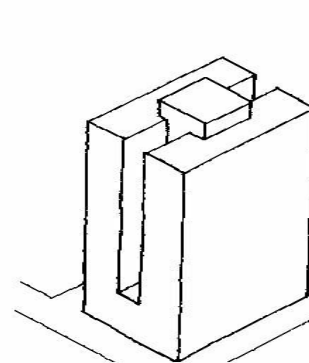
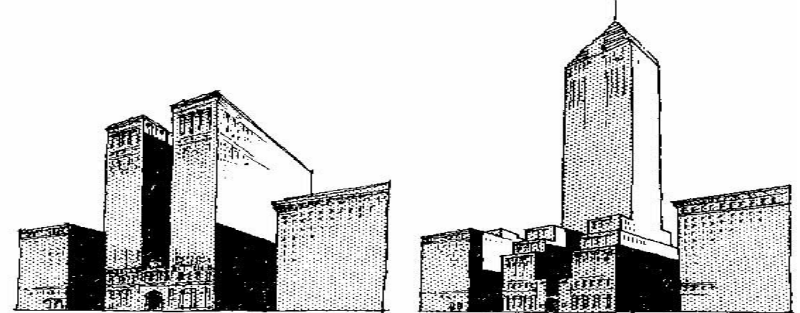
# Zoning Resolution of 1999

## New Zoning Envelope

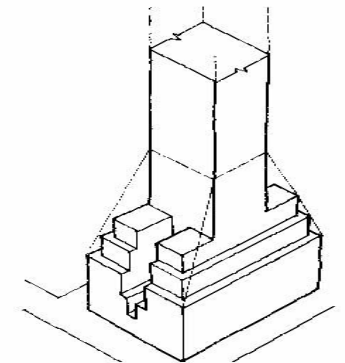
- **Zoning envelope**

the volume within which a building may be legally be placed.

- The updated zoning envelope after 1916 created “Wedding Cake” building setbacks.



**Pre-1916 Building,  
New York City**

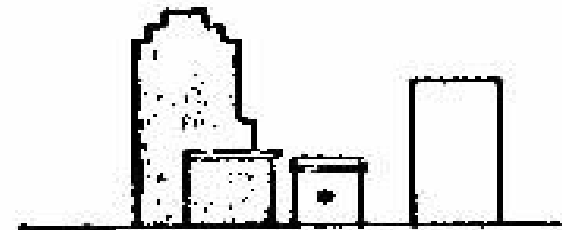
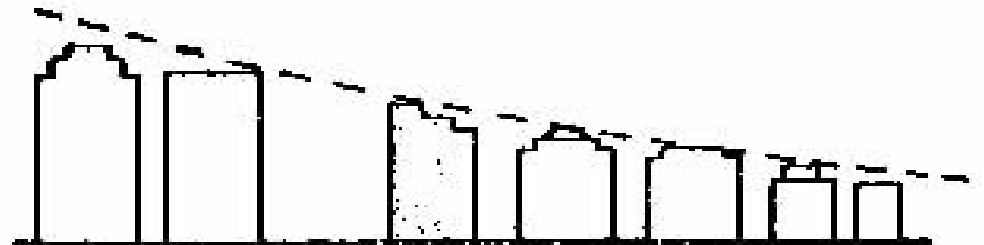


**Typical "Wedding Cake"  
Building after 1916,  
New York City**

# Zoning Provisions

Each district had a maximum street wall height.

- **street wall height** is the height of building at the street lot line

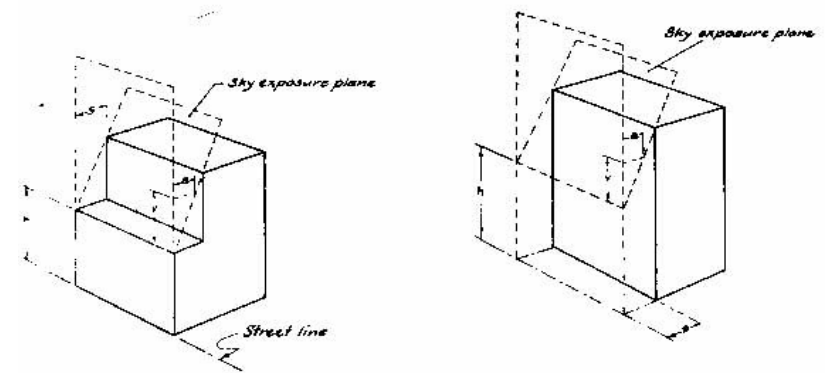


# Zoning Provisions

Building setbacks and the sky exposure plane, were designed to provide light and air at street level in medium and higher density districts.

- **Setback** the minimum legal distance between a property line and a structure

- **Sky exposure plane** a theoretical inclined plane, through which the volume of a building may not penetrate



$h$  is the height of sky exposure plane above street line  
 $s$  is the initial setback distance  
 $v$  is the vertical distance  
 $a$  is the horizontal distance

ILLUSTRATION OF SKY EXPOSURE PLANE  
$$\text{Sky Exposure Plane} = \frac{\text{Vertical Distance}}{\text{Horizontal Distance}}$$

$h$  is the height of sky exposure plane above street line  
 $s$  is the depth of the optional front open area  
 $v$  is the vertical distance  
 $a$  is the horizontal distance

ILLUSTRATION OF ALTERNATE SKY EXPOSURE PLANE  
On narrow streets, the slope will be less than on wide streets. The height ( $h$ ) should relate to the general scale of the neighboring structures.

6-4: Illustrative analysis of sky exposure plane (Source: Joseph DeChiara and Lee Koppelman. *Urban Planning and Design Criteria*. New York: Van Nostrand Reinhold Company Inc., 1975).

From *The Urban Design Process* by Hamid Shrivani, Van Nostrand Reinhold [1985].  
WSU Holland Library, Call No. HT166.S463

# Zoning Provisions

## Sky exposure plane

The Grace building on 42<sup>nd</sup> street between 5<sup>th</sup> and 6<sup>th</sup> avenues in Manhattan across from Bryant Park slopes gracefully back in a smooth curve to remain within the **Sky Exposure Plane**



# Zoning Provisions

Skyscrapers were allowed to be any height if they occupied less than 25% of the lot



etsu.edu

# Zoning Provisions

Yard and building coverage regulations were imposed.

- **Lot coverage**

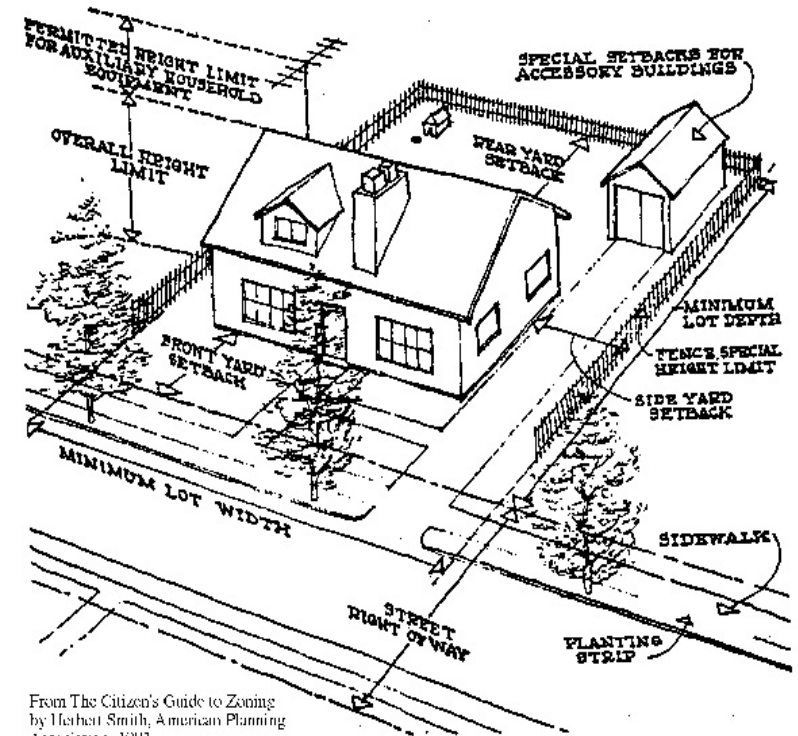
$\frac{\text{Building footprint}}{\text{total lot area}} = \%$

- **Lot area:**

total area of a parcel of land.

- **OSR Open Space Ratio:**

a percentage of the lot must remain open to the sky above.



From The Citizen's Guide to Zoning  
by Herbert Smith, American Planning  
Association, 1983.





# The open space ratio (OSR)

## **Open Space\***

Open space is the part of a residential zoning lot (which may include courts or yards) that is open and unobstructed from its lowest level to the sky, except for specific permitted obstructions, and accessible to and usable by all persons occupying dwelling units on the zoning lot. Depending upon the district, the amount of required open space is determined by the open space ratio, minimum yard regulations or by maximum lot coverage.

## **Open space ratio (OSR)\***

is the amount of open space (in square feet) required on a residential zoning lot in non-contextual districts, expressed as a percentage of the total floor area on the zoning lot.

## **Example\***

If a building with 20,000 square feet of floor area has an OSR of 20 (percent) 4,000 square feet of open space would be required on the zoning lot ( $0.20 \times 20,000 = 4,000$ ).

# Zoning Provisions

- Yard:**

open space along the lot lines,  
based on the required setbacks

- Setback:**

minimum legal distance between  
a lot line and a structure

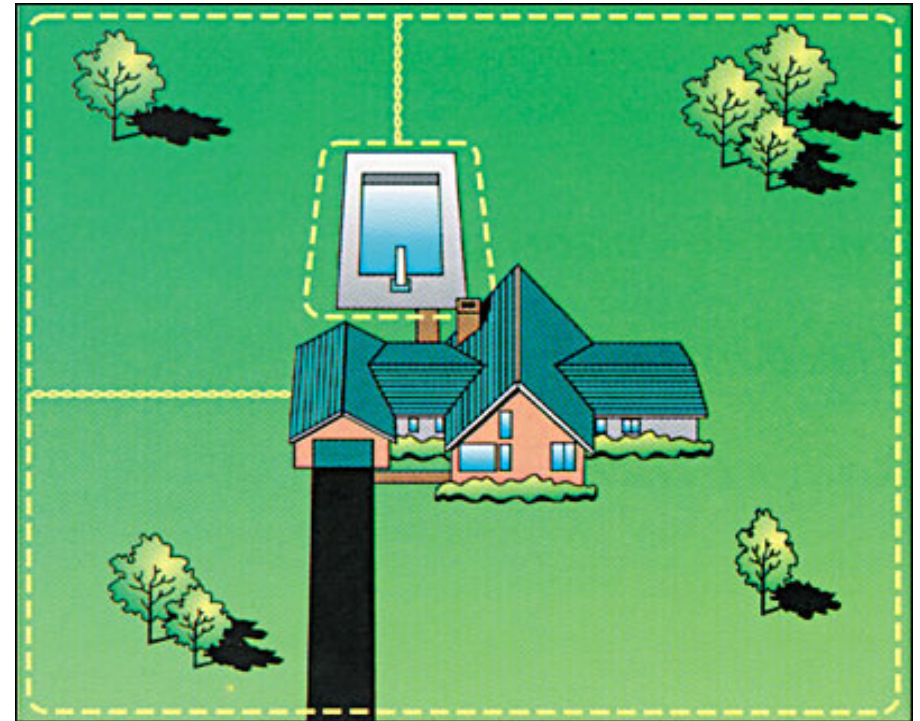
- Front Yard

- Side Yard

- Rear Yard

- Exclusions:**

include detached garages



# Zoning Resolution of 1961

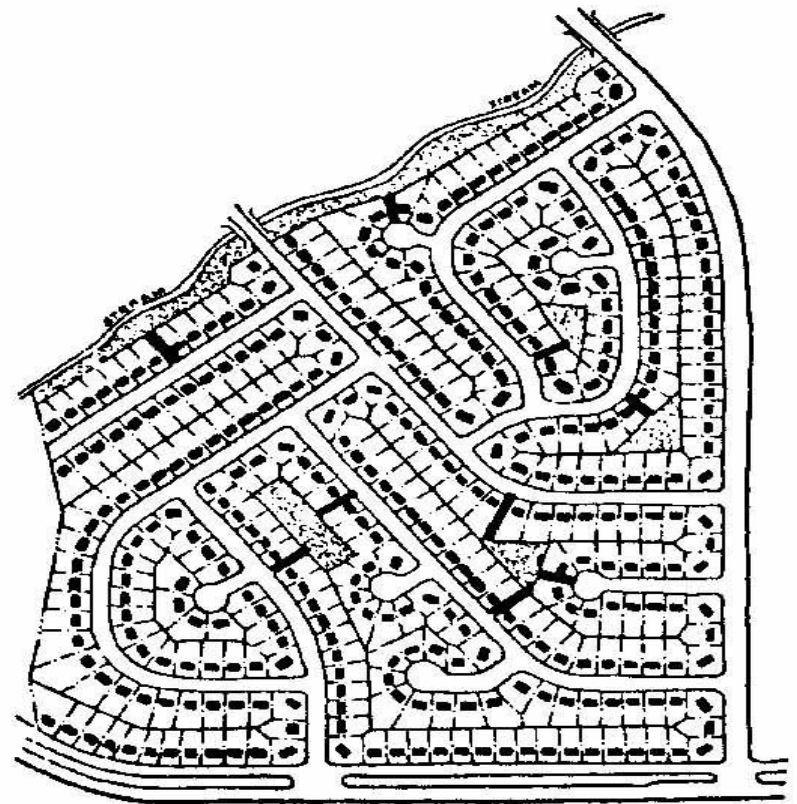
- based on European modernist principles of town planning - tower in the park
- incentive zoning

Imposed Floor Area Ratio (FAR)  
density control

**FAR**

**Density**

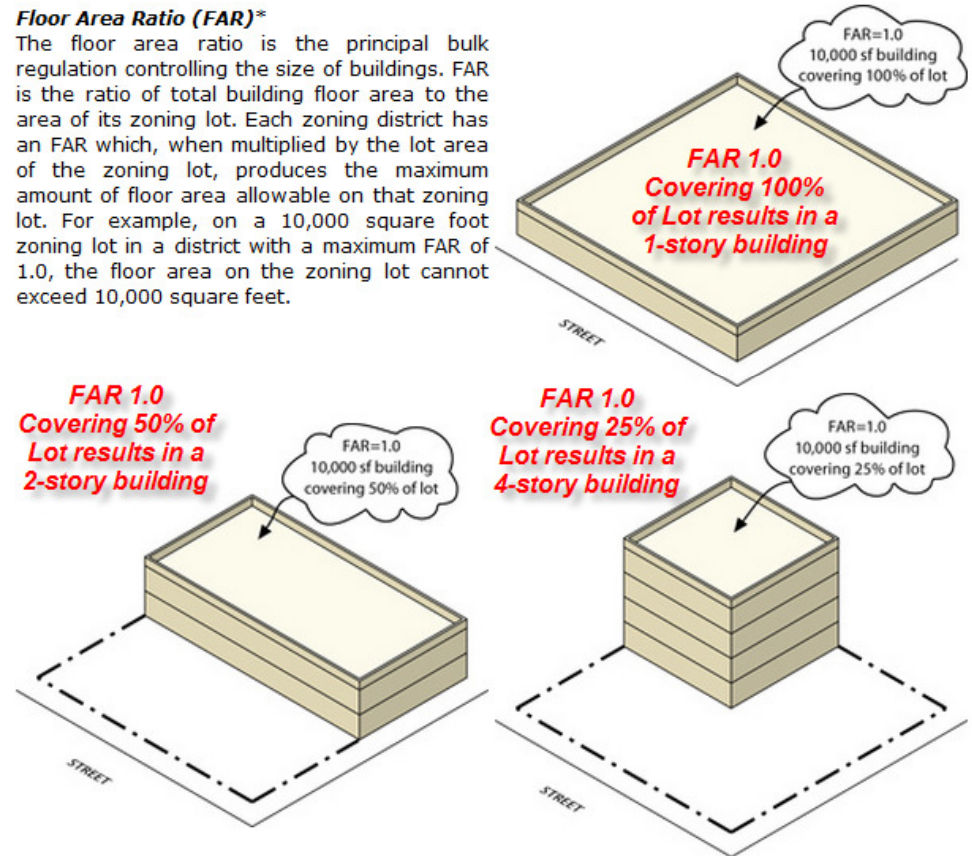
**Dwelling unit**



# Zoning Resolution of 1961

## FAR “floor area ratio”

the ratio of the floor area of a building to the area of the lot.

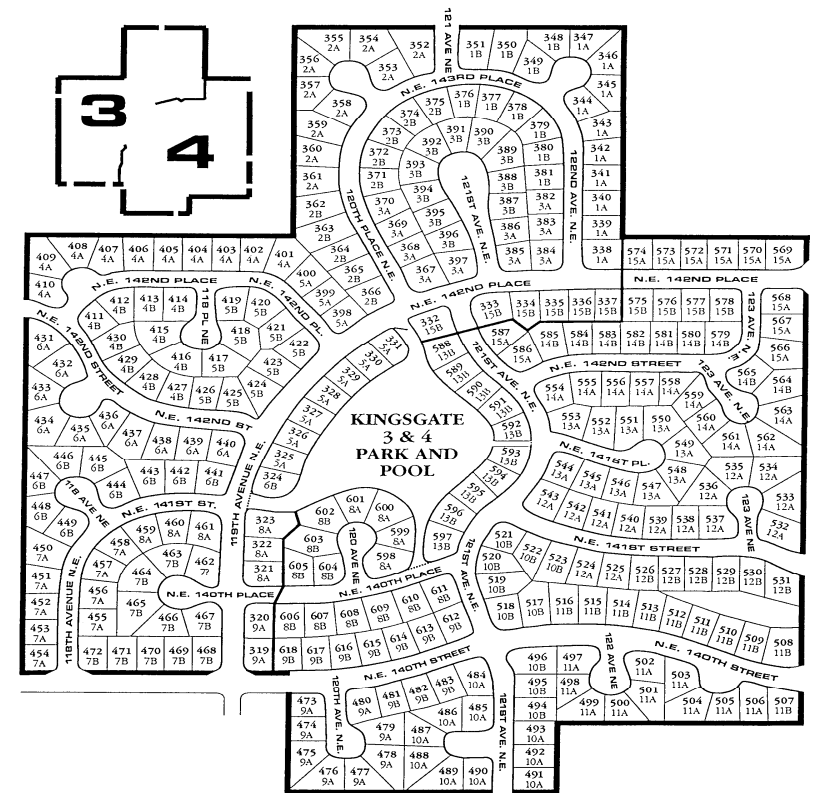


$$\text{Floor Area Ratio (FAR)} = \frac{\text{Gross Building Area (all floors)}}{\text{Lot Area}}$$

# Zoning Resolution of 1961

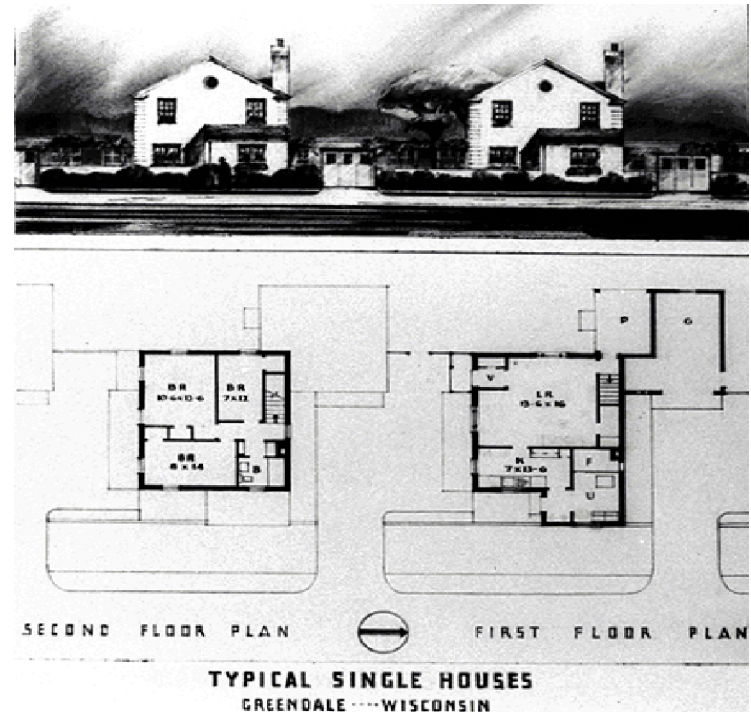
## Density:

a measure of the number of people, families that occupy a specified area.



# Zoning Resolution of 1961

**Dwelling unit:**  
an independent living area  
which includes its own private  
cooking and bathing facilities



# Zoning Resolution of 1961

## Incentives

to build arcades, plazas and other open spaces

## Air rights

the rights to the use or control of space above a property.



# Zoning Resolution of 1961 Modifications

- Landmarks Preservation Commission 1965
- Midtown Zoning Regulation of 1982:  
increase light and air; decrease  
density running East to West



Photo by TTS



# Demolition of NYC Penn Station



Penn Demolition



*led to the creation  
of NYC  
Landmarks  
Preservation  
Commission  
in 1965*

# Zoning Resolution of 1961 Modifications

- **Quality Housing and Contextual Zoning Regulations 1988-1990:**

promoted the construction of housing in keeping with city's older neighborhoods



[nyc.gov](http://nyc.gov)

# Zoning Resolution of 1961 Modifications

- **Variance:**

special permission is granted to the land owner to waive certain restrictions when the enforcement would impose an unusual or unreasonable hardship



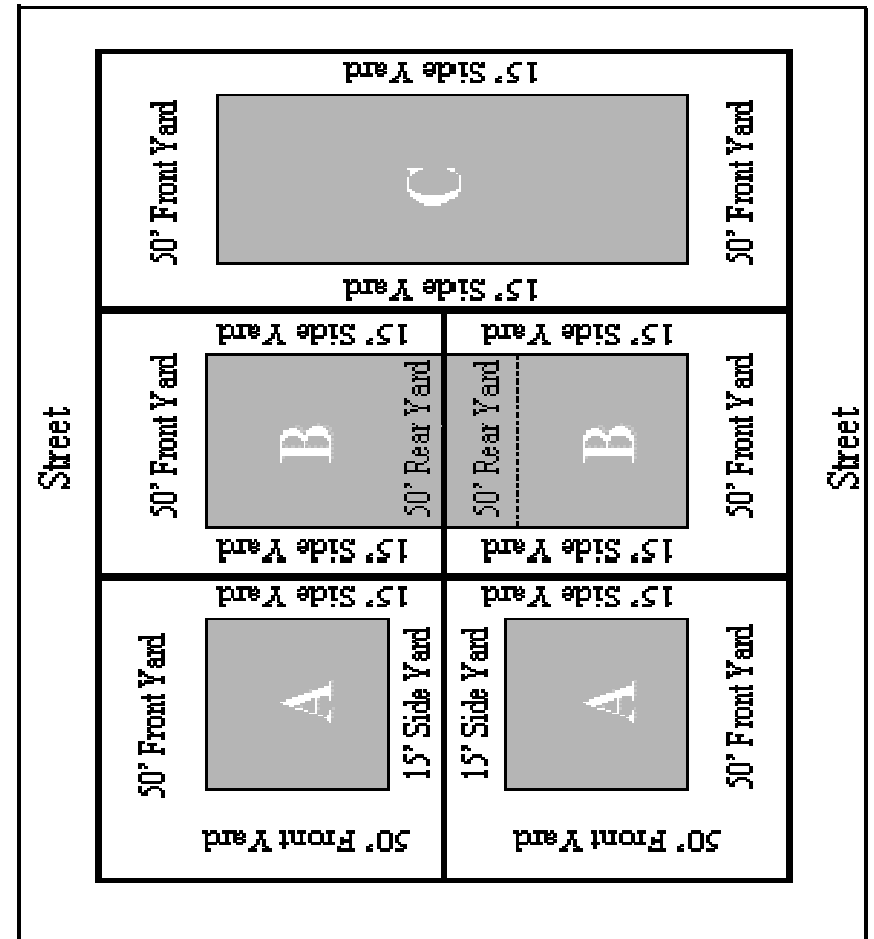
*Must be approved on a case by case basis by the  
Board of Standards and Appeals*

# Zoning Resolution Today

- **Buildable area**

*the net lot area which can be covered by a building after all required setbacks and other zoning limitations are taken into account*

*Always based on the most restrictive interpretation*



# Zoning Resolution Today

- ***Conditional use***

*a use not strictly allowed in the zoning ordinance, but permitted if specified conditions are met and if approval has been granted by the local governing body.*



# Zoning Resolution Today

## ***Environmental Impact Statement (EIS)***

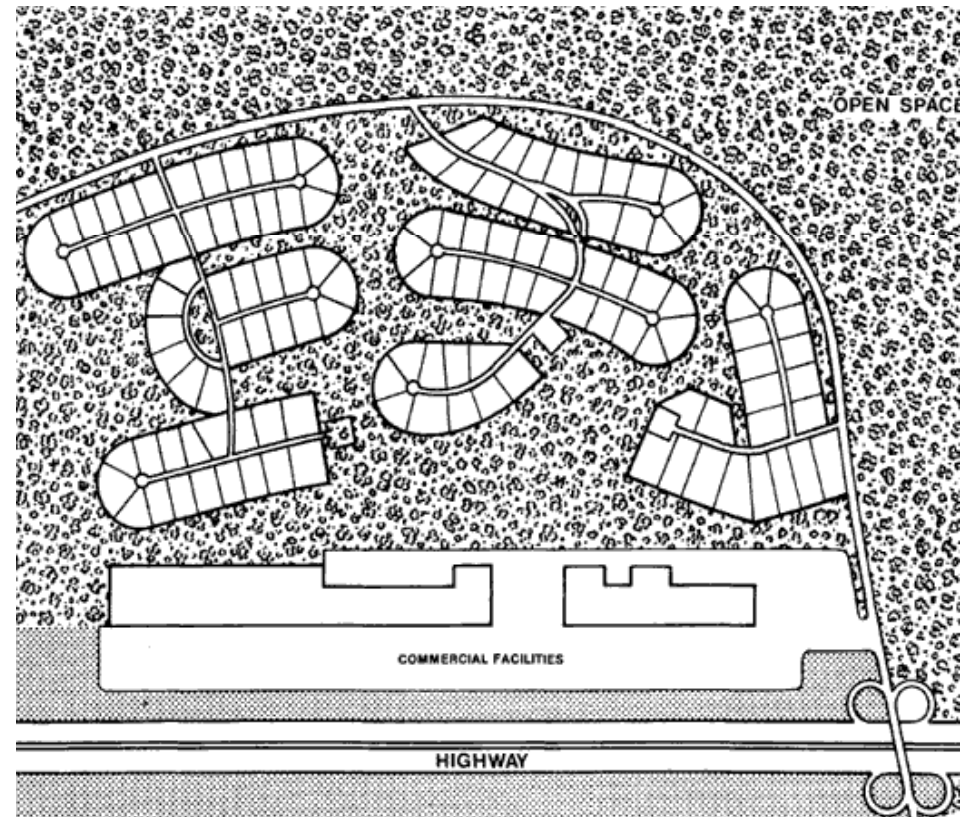
*a report, often required by a governmental agency, which assesses the effect on the environment of a proposed development.*

- *Shadow Studies*
- *Hudson River Impact*



# Zoning Resolution Today - PUD

- **PUD**  
*a planned unit development, is similar to cluster development but larger in scale and may include housing, commercial and industrial developments.*





Site Planning  
ARCH 1250  
Prof. Paul King

# Zoning for the Future?