



# Residential Landscape Design Part 1: Inventory & Analysis

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# Hello!

▶ A little bit about myself...





# Today's goal



Chanticleer Gardens, PA

- ▶ Learn about **sustainable** residential landscape design
  - ▶ Preparation
    - ▶ Getting to know the site (property)
  - ▶ Designing
    - ▶ Basic design guidelines

# Two-part presentation

## Part 1: Site inventory & analysis

- ▶ Importance
- ▶ Elements to note:
  - ▶ Environmental conditions
  - ▶ The built environment
  - ▶ Other assessments
- ▶ How to record

## Part 2: The design process

- ▶ General considerations
  - ▶ Siting on the land
  - ▶ Seasons of interest
- ▶ Complementing the house
  - ▶ Creating a setting with design principles
  - ▶ Using the architecture as a basis
- ▶ Landscape design guidance
  - ▶ Putting it all together!

# Part 1: Inventory & analysis

UNDERSTANDING YOUR SITE

# Why inventory & analysis?

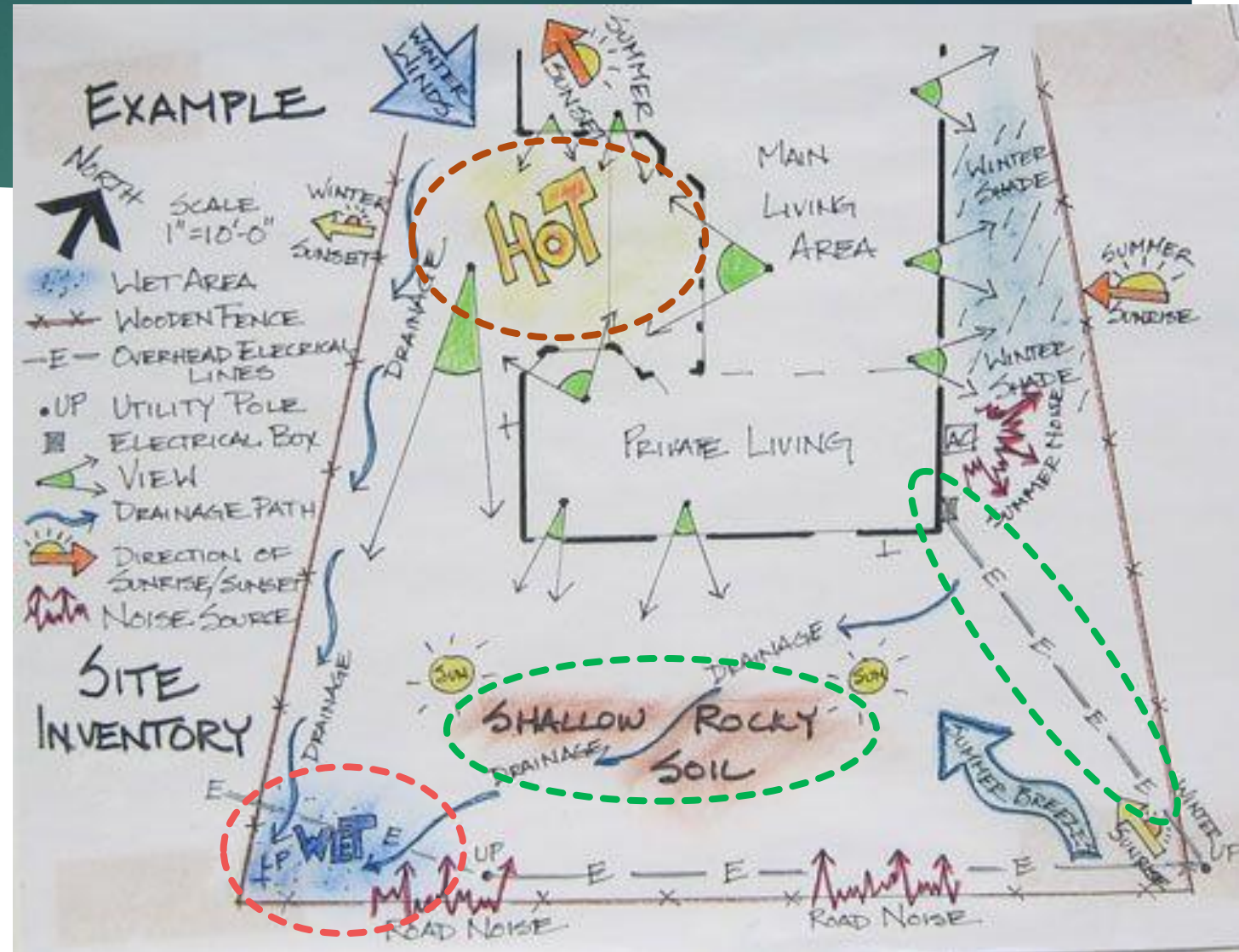
- ▶ DETERMINE A SITES POTENTIAL **and/or** CONSTRAINTS
  - ▶ Improved function of the proposed land use
    - ▶ Convenience, safety & ease of maintenance
    - ▶ Enhanced aesthetics
  - ▶ **Fewer negative environmental impacts**
  - ▶ **Reduced construction, operation and maintenance costs**





# Inventory and analysis

- ▶ Inventory
  - ▶ Environmental conditions
  - ▶ Physical or man-made attributes
- ▶ Analysis
  - ▶ Quality
  - ▶ Opportunities/constraints



# Environmental Conditions

IMPORTANT IN PROPER  
SELECTION OF MATERIALS,  
ESPECIALLY PLANTS



# Site environmental conditions

- ▶ Solar orientation
- ▶ Prevailing winds
- ▶ Soils
- ▶ Slopes / topography
- ▶ Climate
- ▶ Existing plants
- ▶ Water features



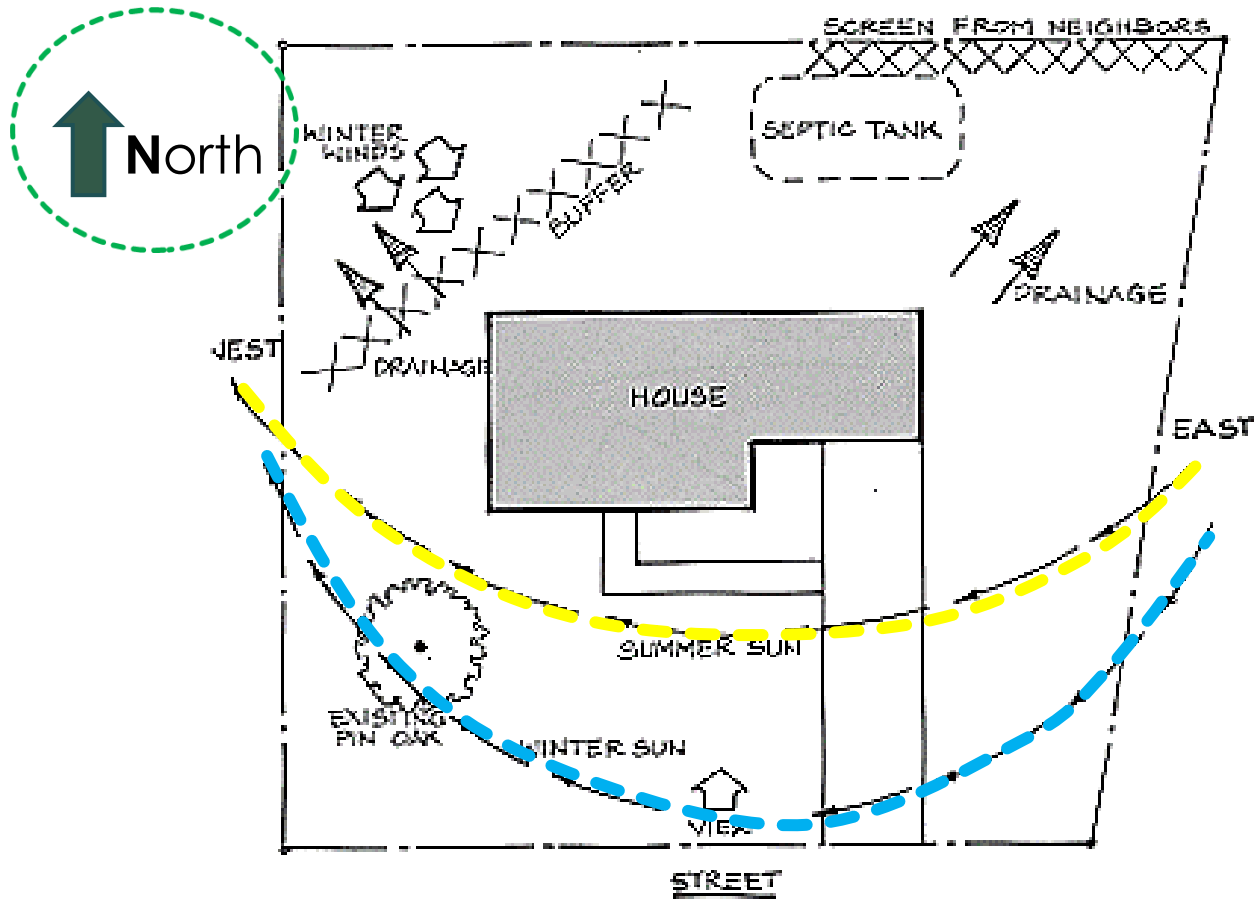
# Basis for plant selection:

- ▶ Healthier plants
  - ▶ Fewer pests
  - ▶ Greater productivity
- ▶ Lower inputs
  - ▶ Less pesticides
  - ▶ Less labor

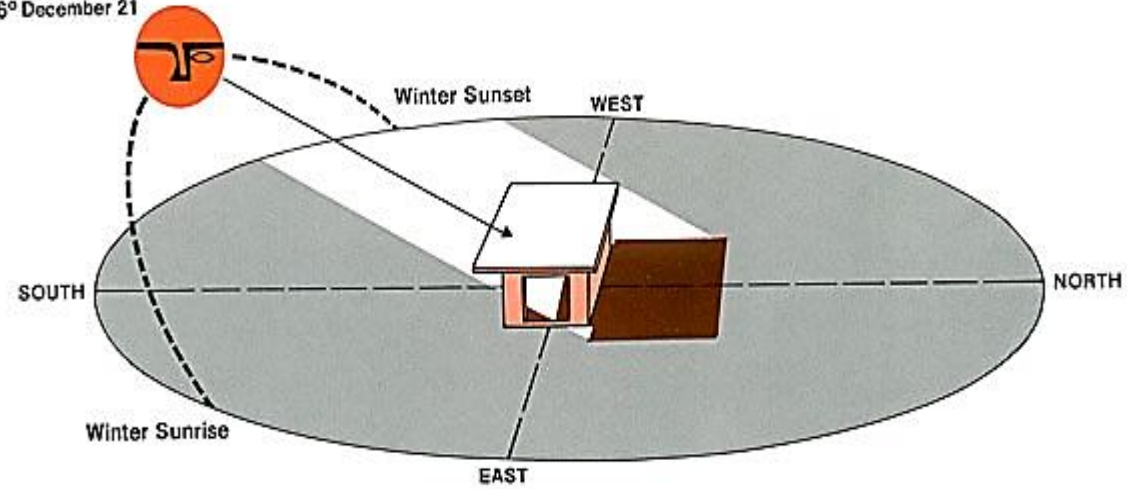


*Sustainable  
Practices*

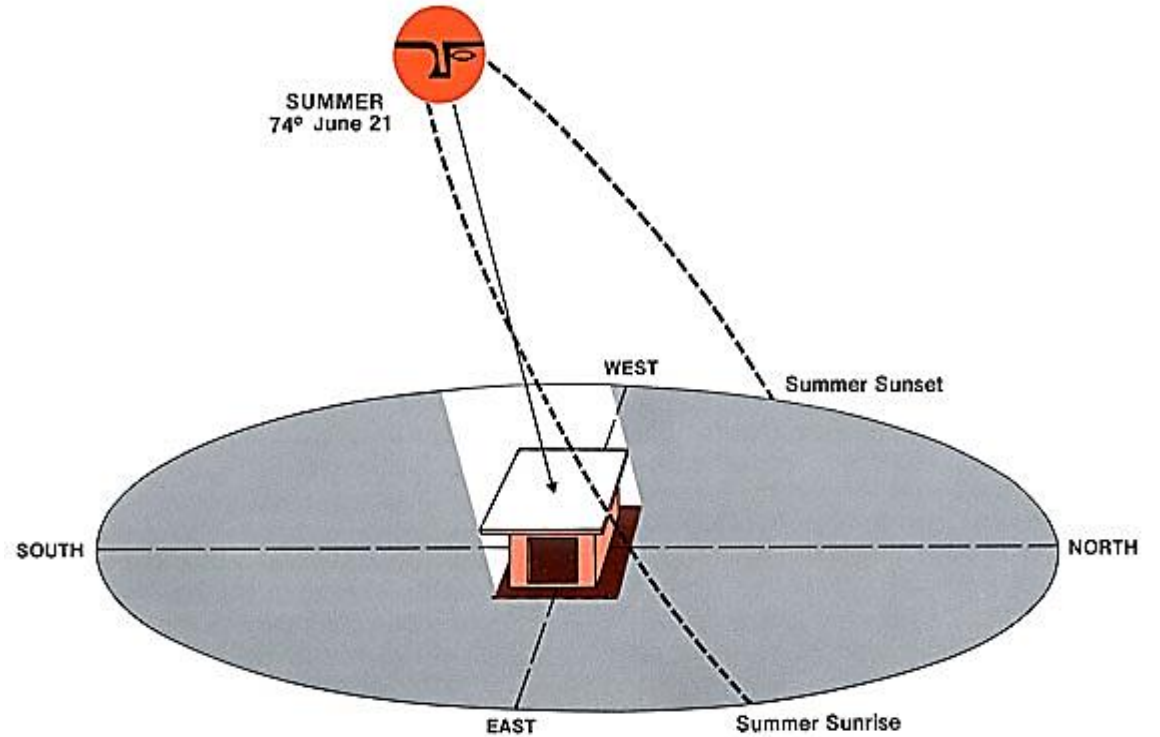
# Solar Orientation



WINTER  
26° December 21

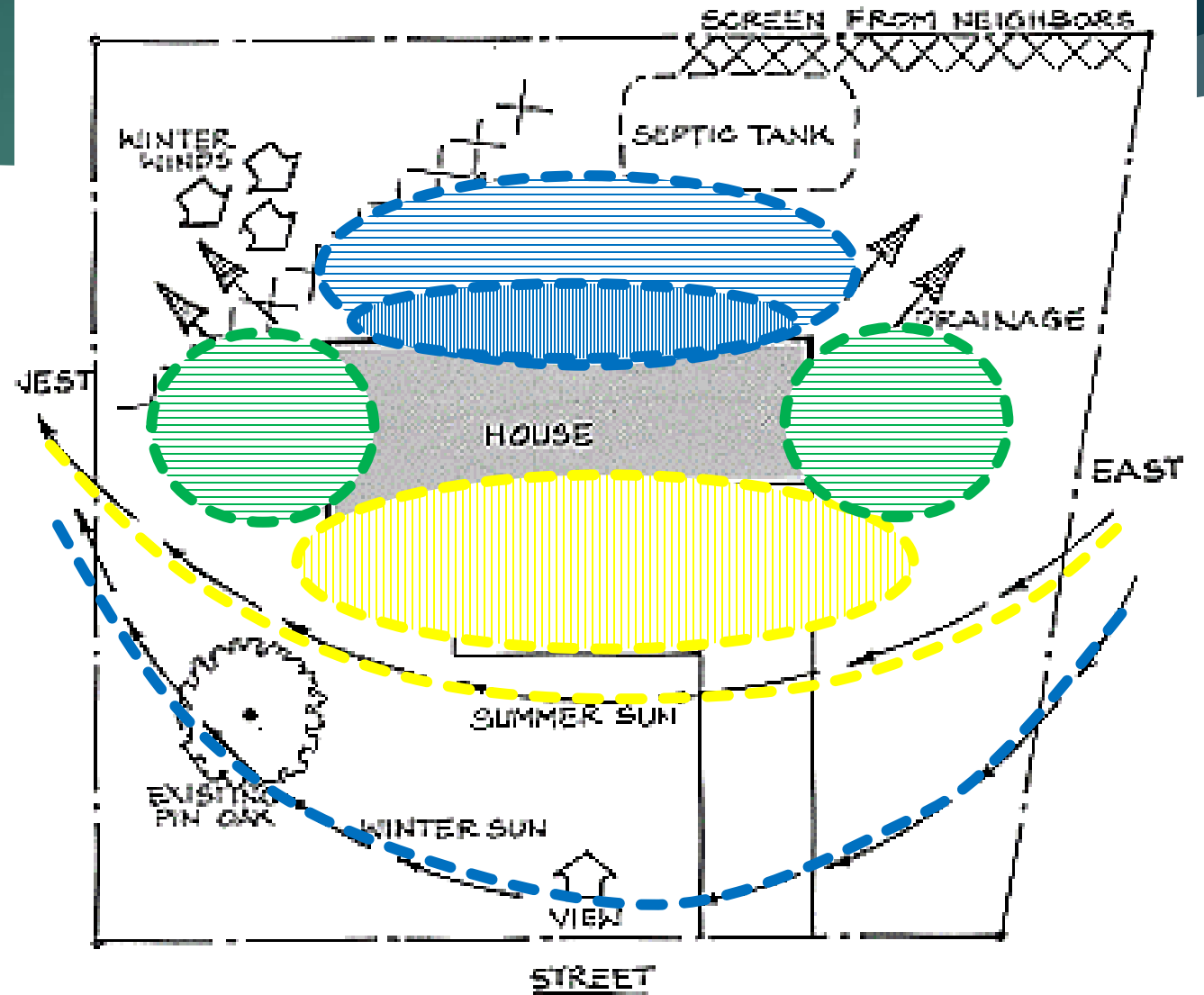


SUMMER  
74° June 21



# Plant light requirements: seasonal changes

- ▶ Sun
- ▶ Part sun
  - ▶ Morning vs. afternoon
- ▶ Shade
  - ▶ Full vs. dappled



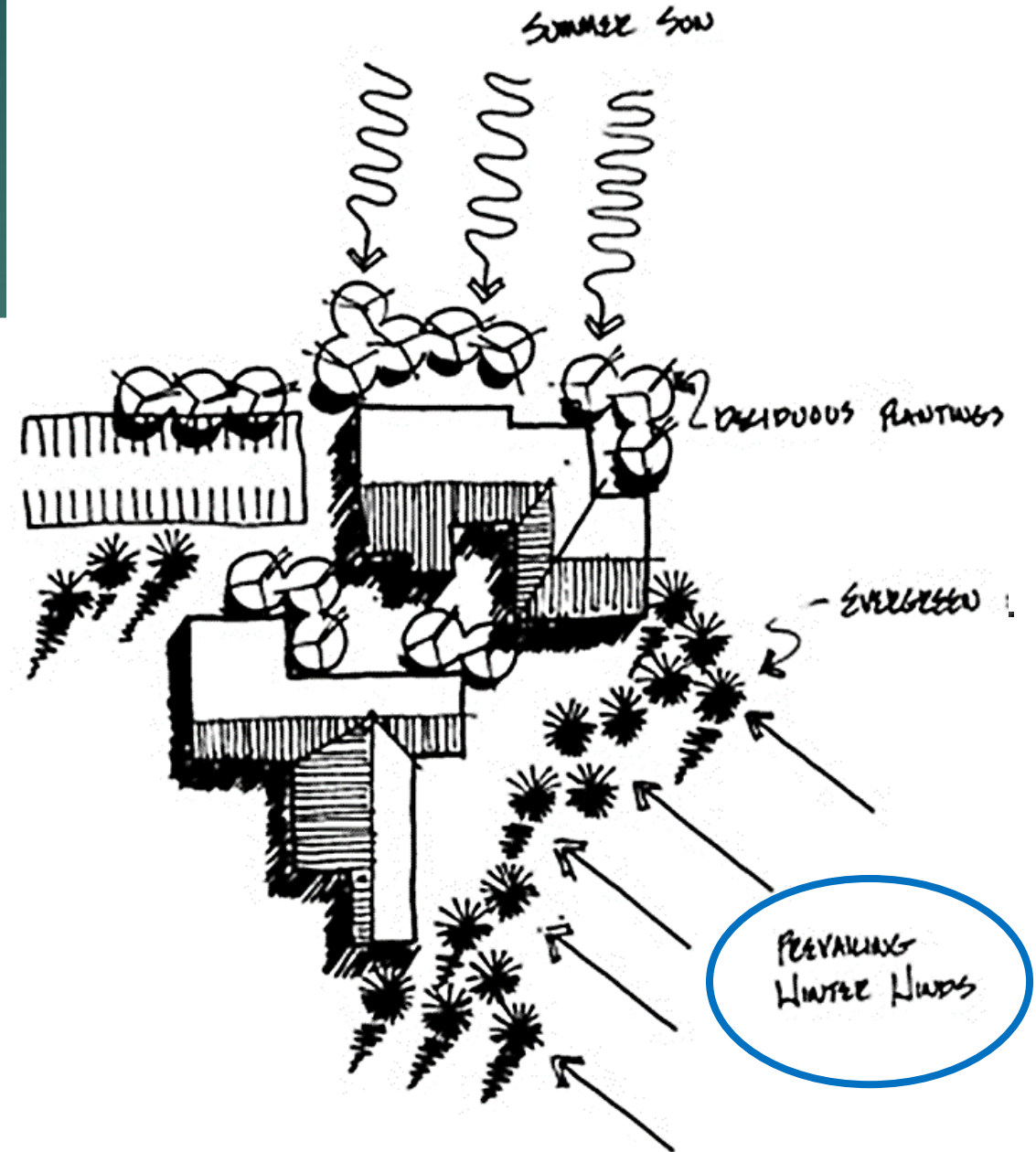


# Prevailing wind patterns

▶ Summer breezes

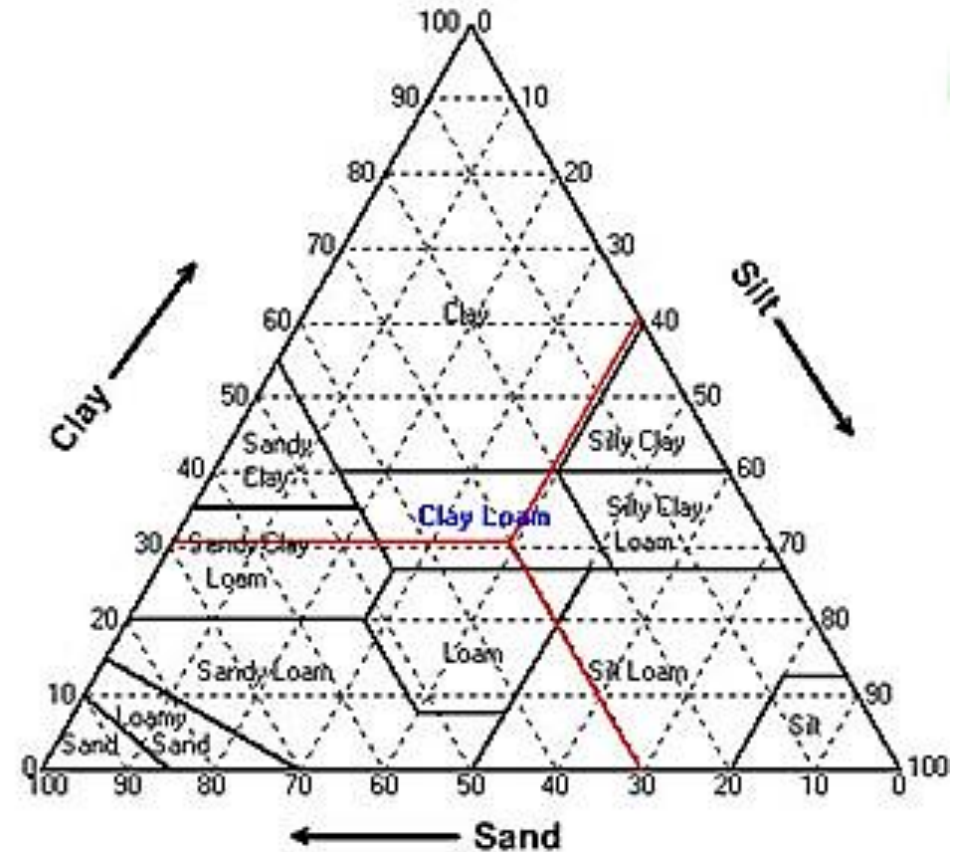
OR

▶ Winter winds

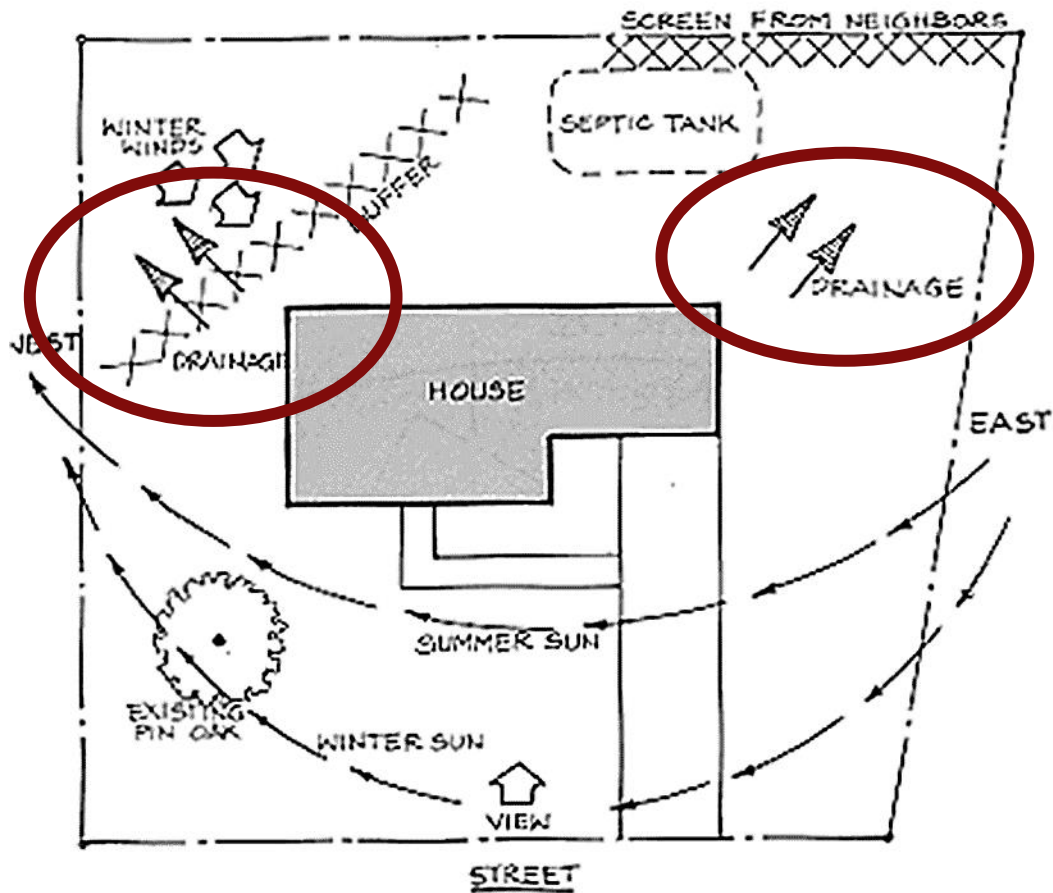


# Soil

- ▶ Soil types
  - ▶ Structure & drainage
  - ▶ pH



# Slopes/topography



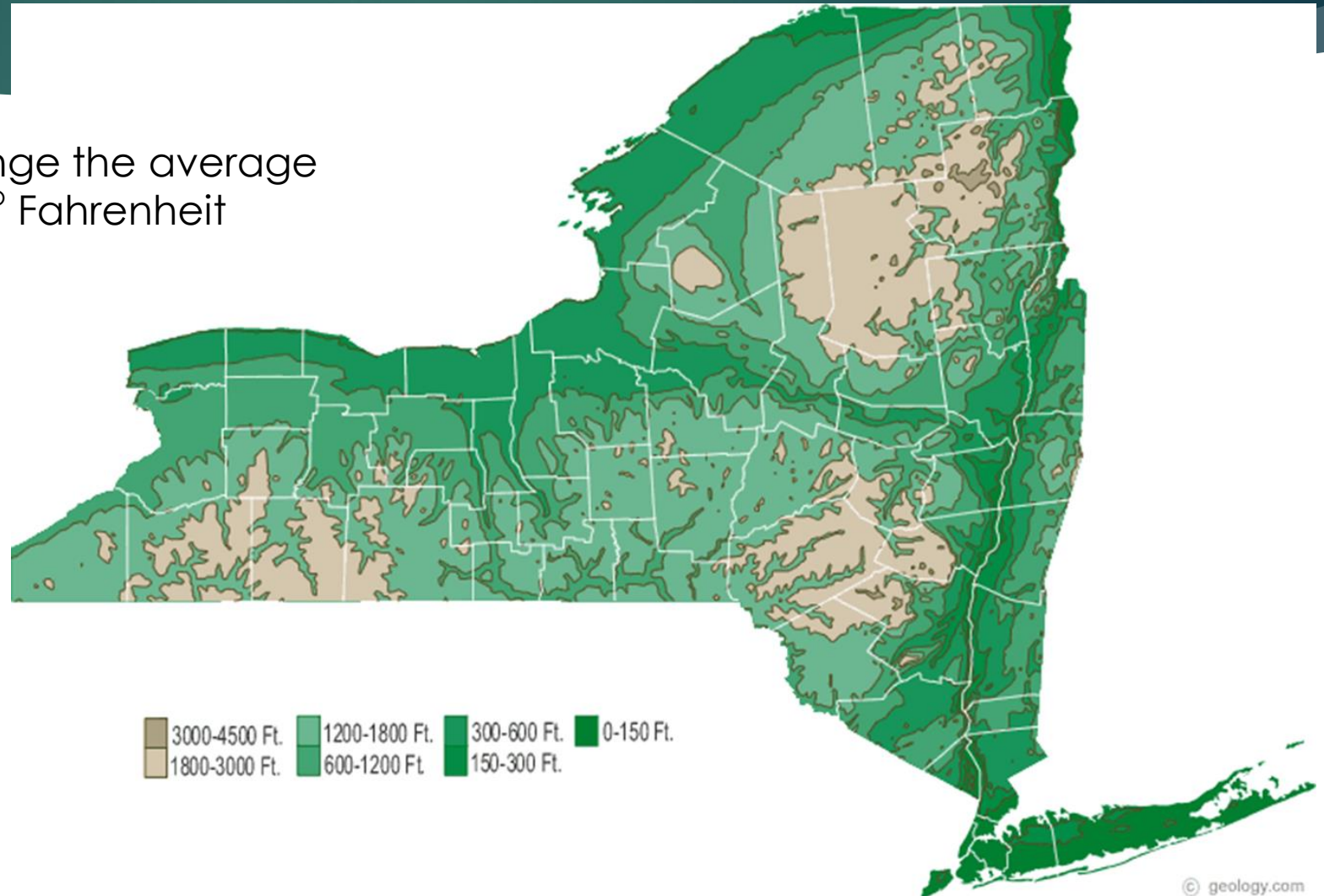
## Effects of slopes:

- ▶ Standing water / poor drainage
  - ▶ 1% or less slope on vegetated land
- ▶ 2% to 6%
- ▶ Excess of 10%
- ▶ Greater than 25%



# Topography / Elevation

For every 300' elevation change the average Temperature decreases by 1° Fahrenheit

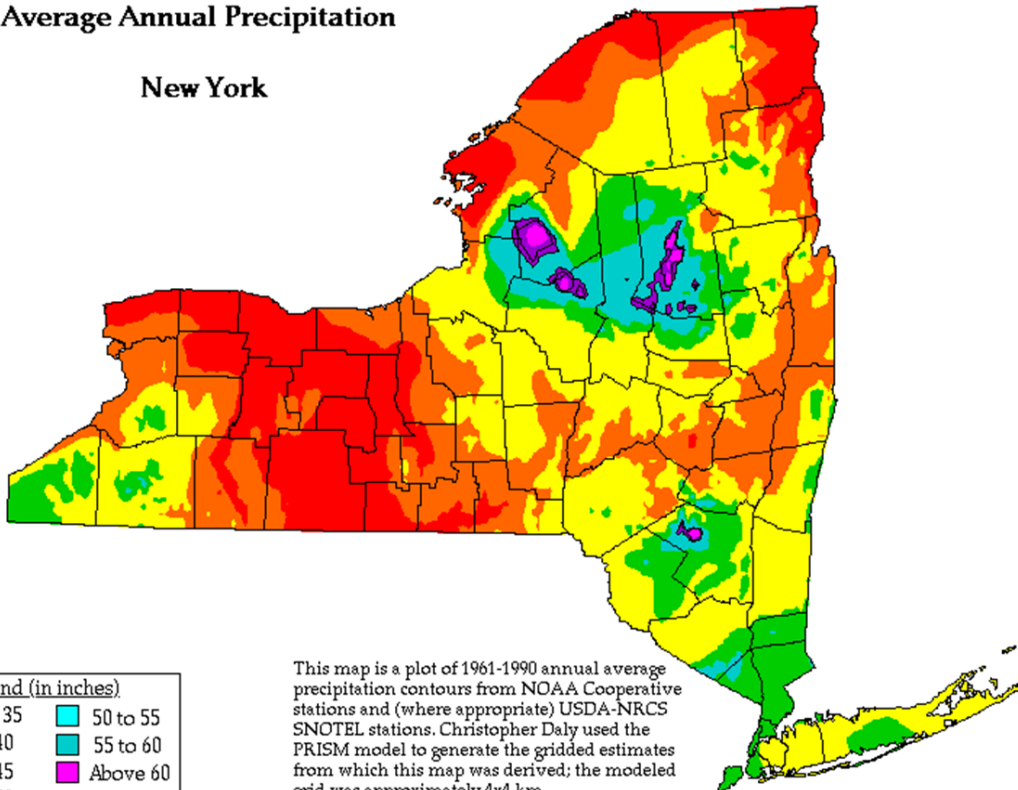




# Climate

## Average Annual Precipitation

### New York



Legend (in inches)

Under 35	50 to 55
35 to 40	55 to 60
40 to 45	Above 60
45 to 50	

Period: 1961-1990

This map is a plot of 1961-1990 annual average precipitation contours from NOAA Cooperative stations and (where appropriate) USDA-NRCS SNOTEL stations. Christopher Daly used the PRISM model to generate the gridded estimates from which this map was derived; the modeled grid was approximately 4x4 km latitude/longitude, and was resampled to 2x2 km using a Gaussian filter. Mapping was performed by Jenny Weisburg. Funding was provided by USDA-NRCS National Water and Climate Center.

12/8/97

- ▶ Plant hardiness zone
- ▶ Precipitation amounts
- ▶ Microclimates



# Existing plants

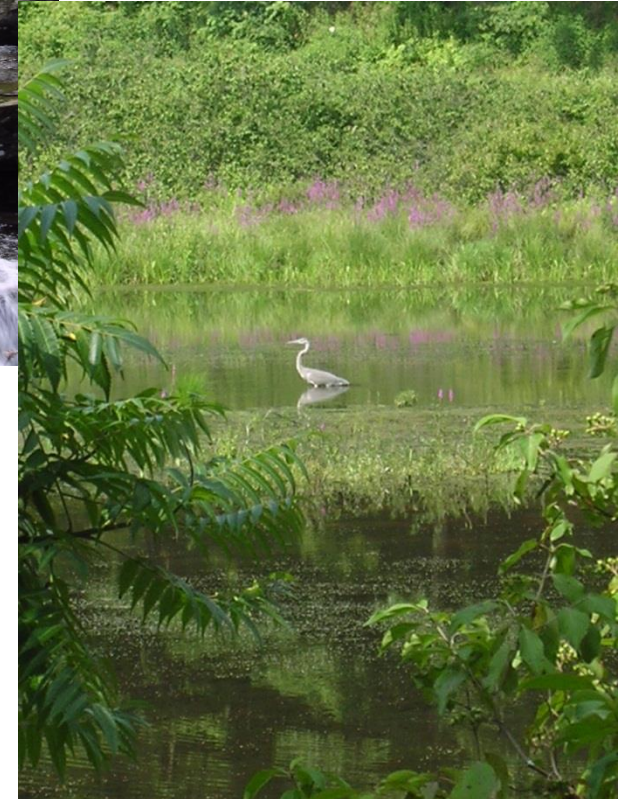


- ▶ State of health
- ▶ Size
- ▶ Varieties
- ▶ What can plants tell us?



# Water features

- ▶ Bodies of water
- ▶ Water runoff / drainage
- ▶ Other...



# The built environment

PHYSICAL ATTRIBUTES

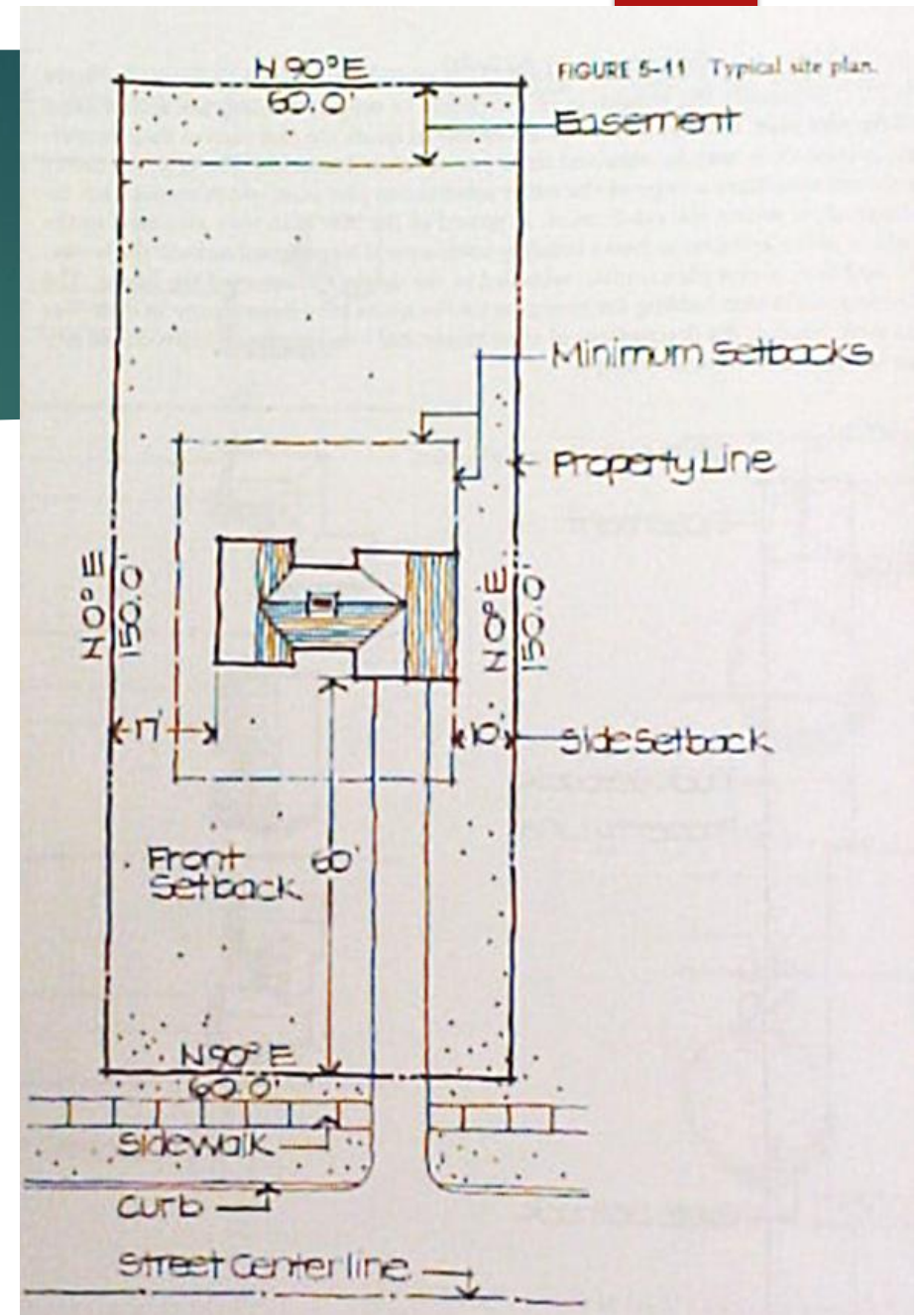


# The built environment: visual conditions

- ▶ Architectural style of house and neighborhood
  - ▶ Existing building style
  - ▶ Context within the existing neighborhood
  - ▶ Local landscape styles



# The built environment: legal boundaries





# Existing conditions

- ▶ Utilities

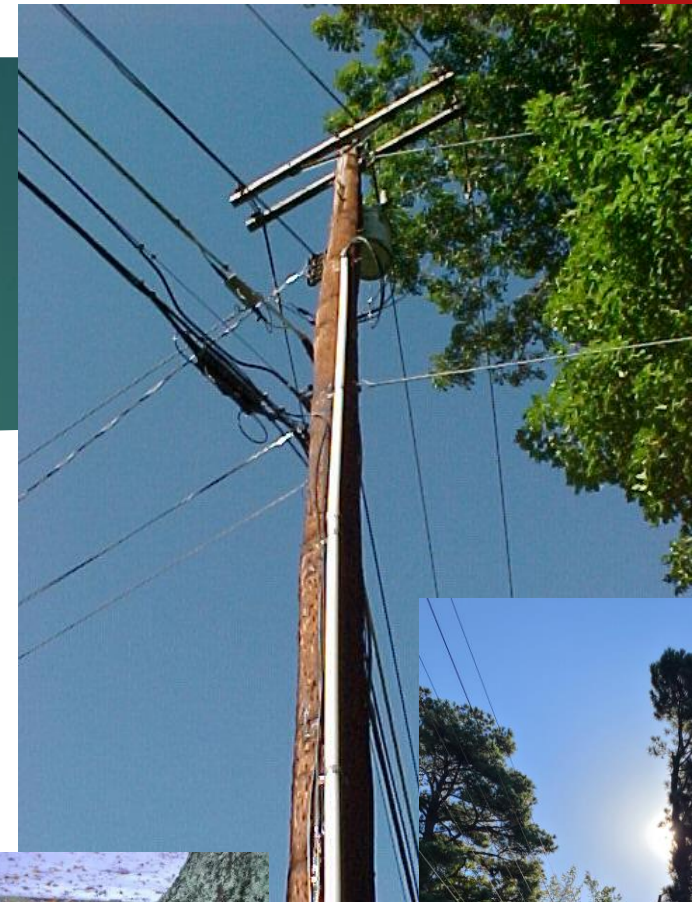
- ▶ Overhead

- ▶ Underground

- ▶ Pavements

- ▶ Types

- ▶ Condition





# Other items to inventory:

- ▶ Important views *on and off* property
- ▶ Specialty gardens
  - ▶ Water gardens
  - ▶ Vegetable garden
- ▶ Maintenance Issues





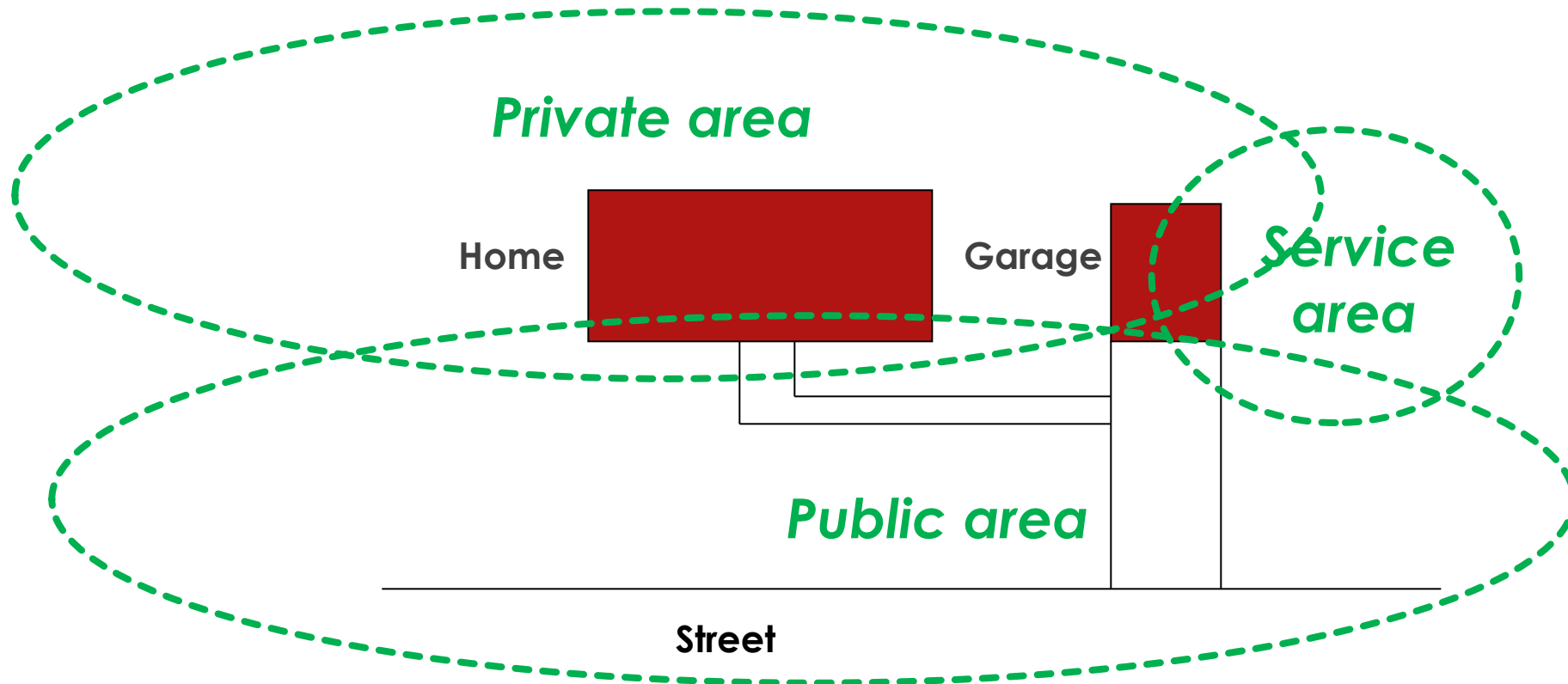
# Client needs / preferences:

- ▶ Foundation plantings
- ▶ Screen plantings
- ▶ Season(s) of visual interest
- ▶ Color preferences or dislikes
- ▶ Plant preferences or dislikes
- ▶ Specialty gardens: vegetable, cutting, butterfly, historic, etc.



# Relating the home to the setting:

- ▶ Identify general areas and uses of the property
  - ▶ Based on orientation to road and neighborhood
- ▶ Identify interior spaces of house, i.e. family room or dining room, etc.

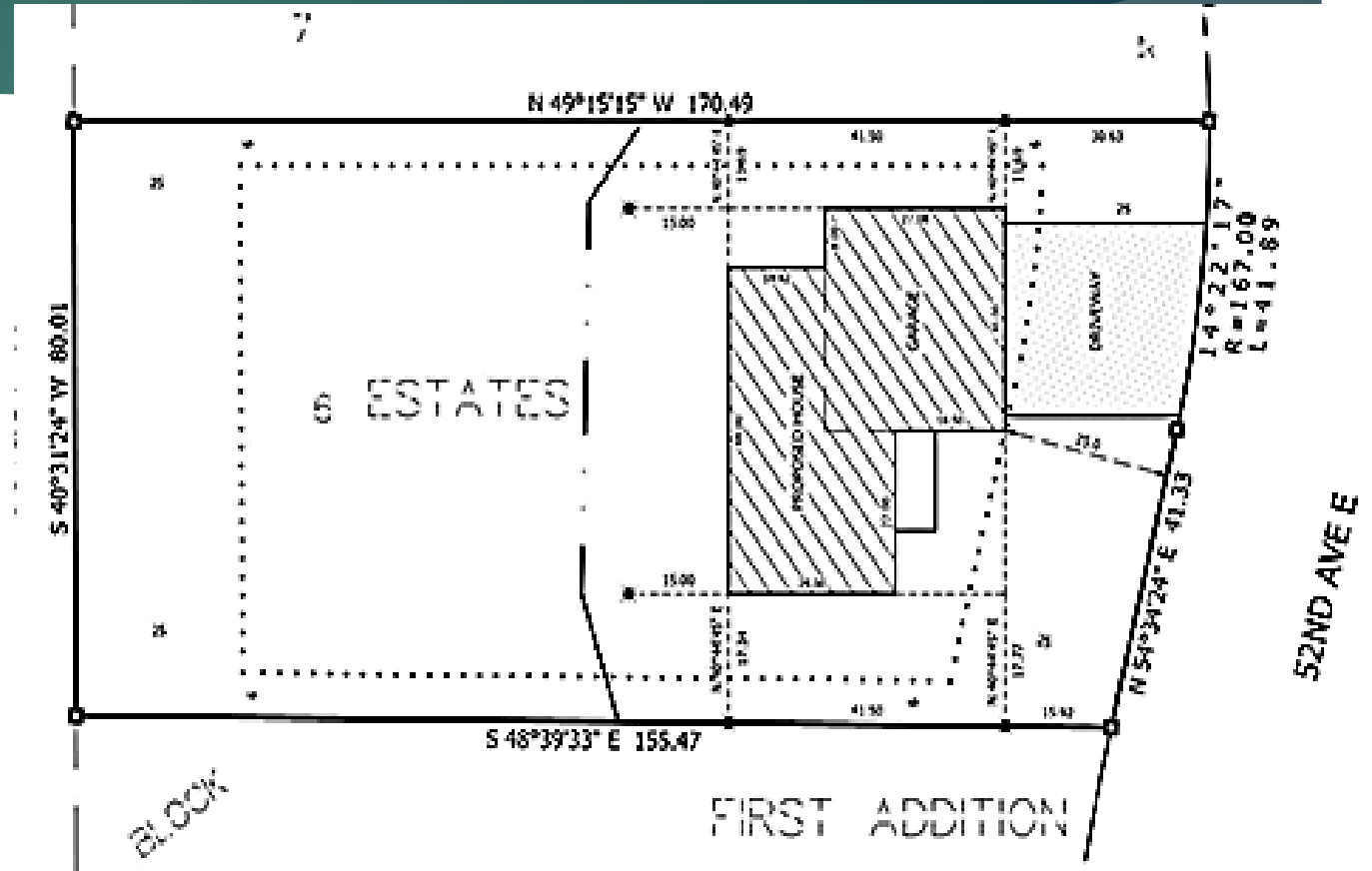


# Inventory & Analysis Plan

A WAY IN WHICH TO  
VISUALLY RECORD  
INFORMATION

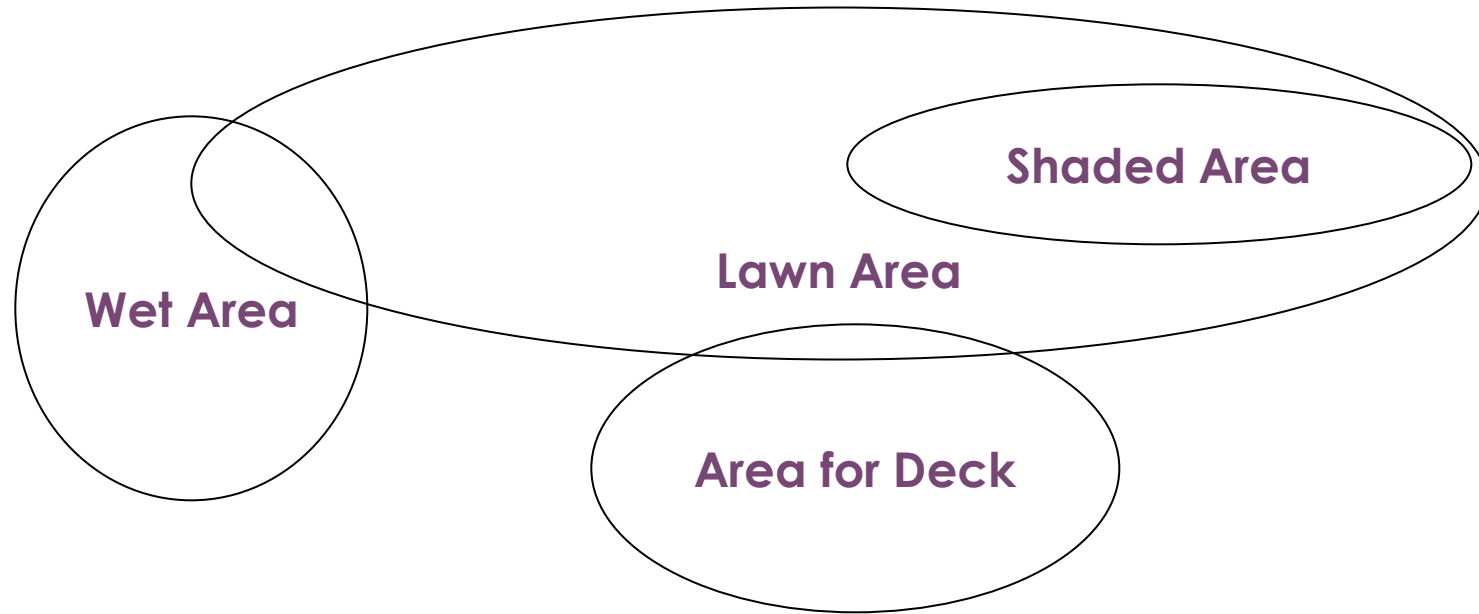
# Preparation of a Site Inventory Plan

- ▶ On a copy of a survey
- ▶ On lined paper with notes
- ▶ Over black & white photocopies of property photographs
- ▶ Use of simple graphics!



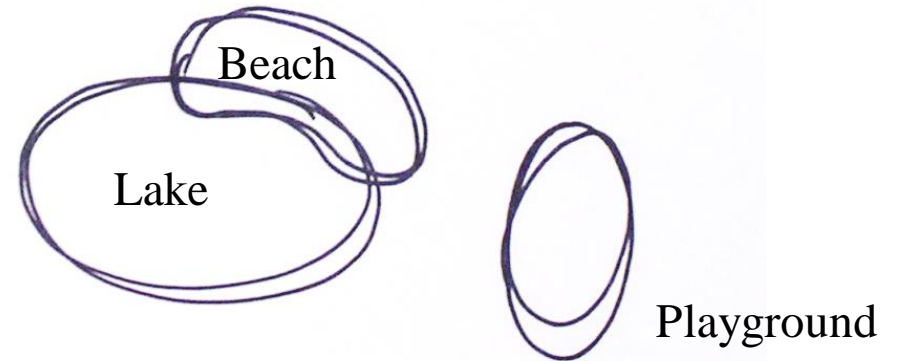
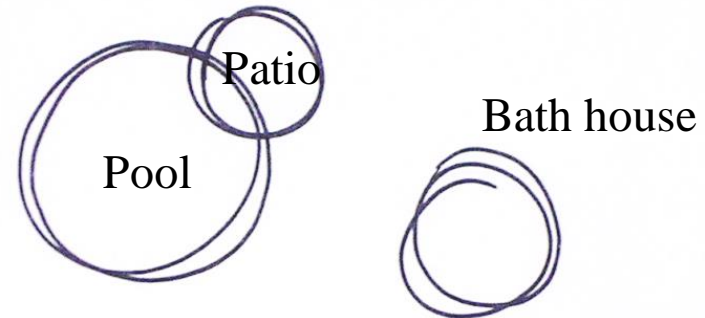
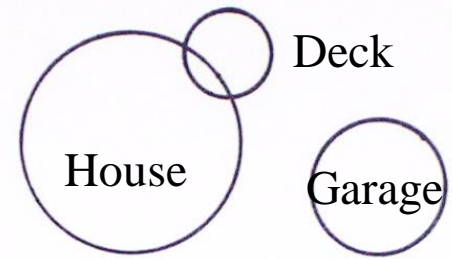


# Bubbles = Areas



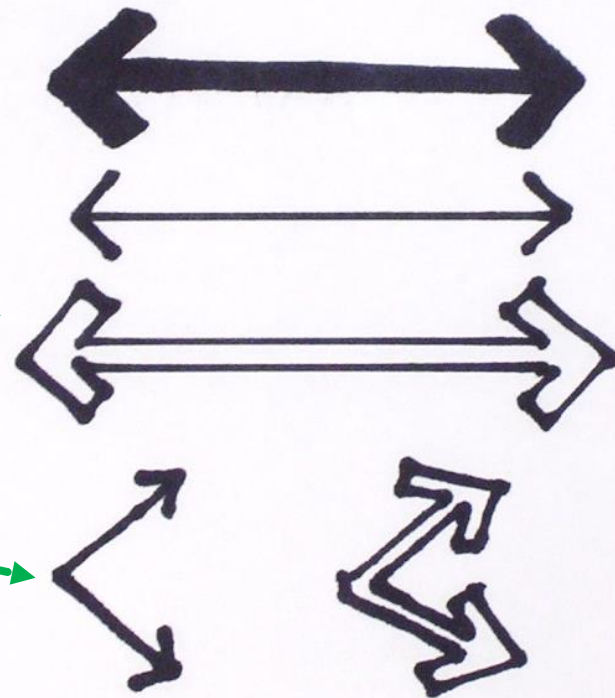
# More on bubbles...

- ▶ Circle template
- ▶ Freehand
- ▶ Organic shapes



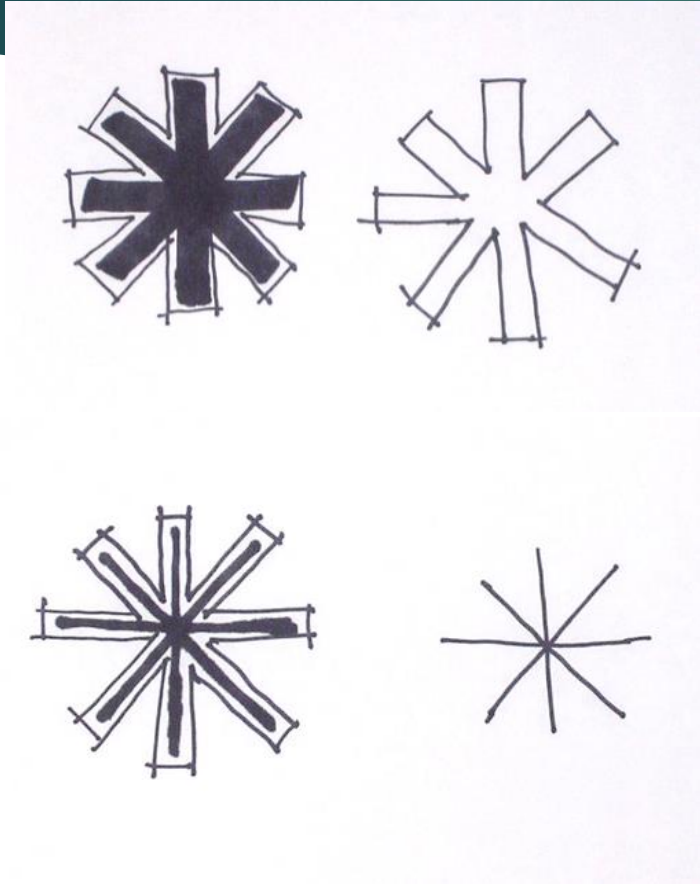
# Arrows = Movement

- ▶ Bold or light line weights
  - ▶ One way
  - ▶ Two way
  - ▶ Views



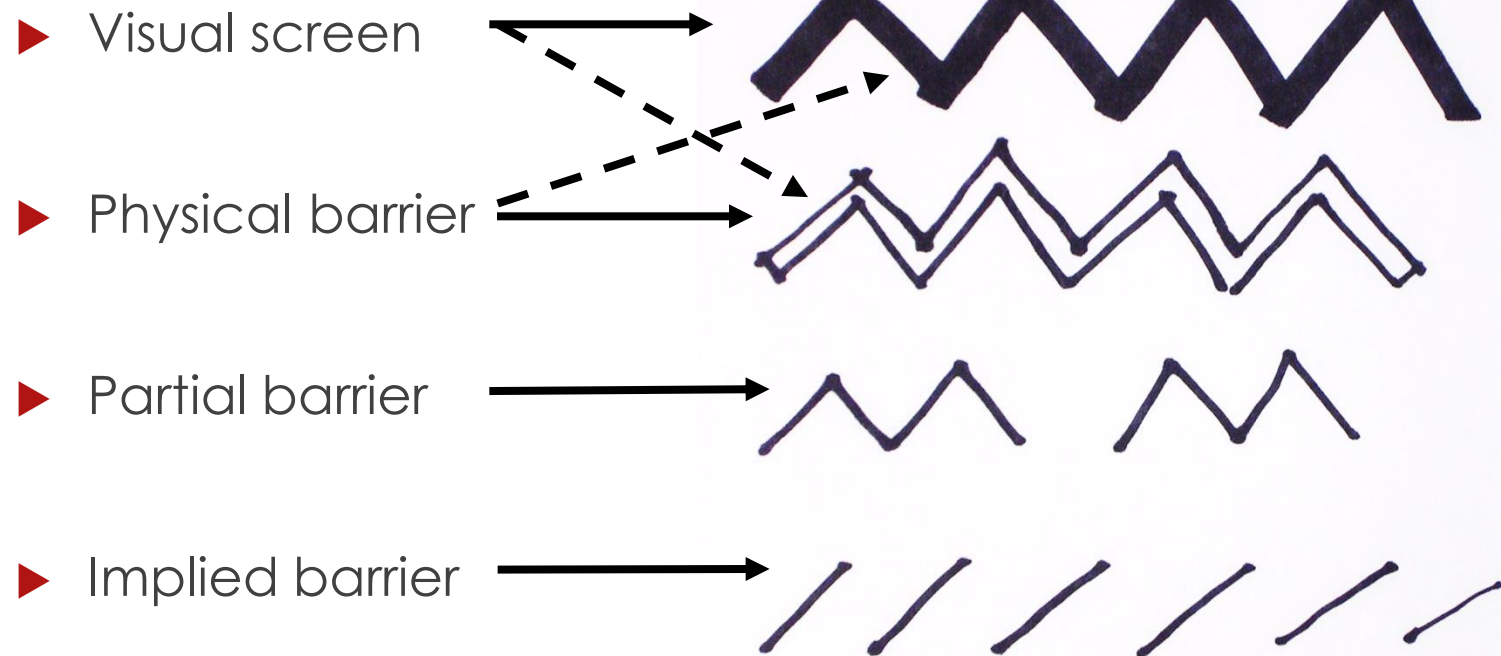


# Star/asterisk = Important point / location

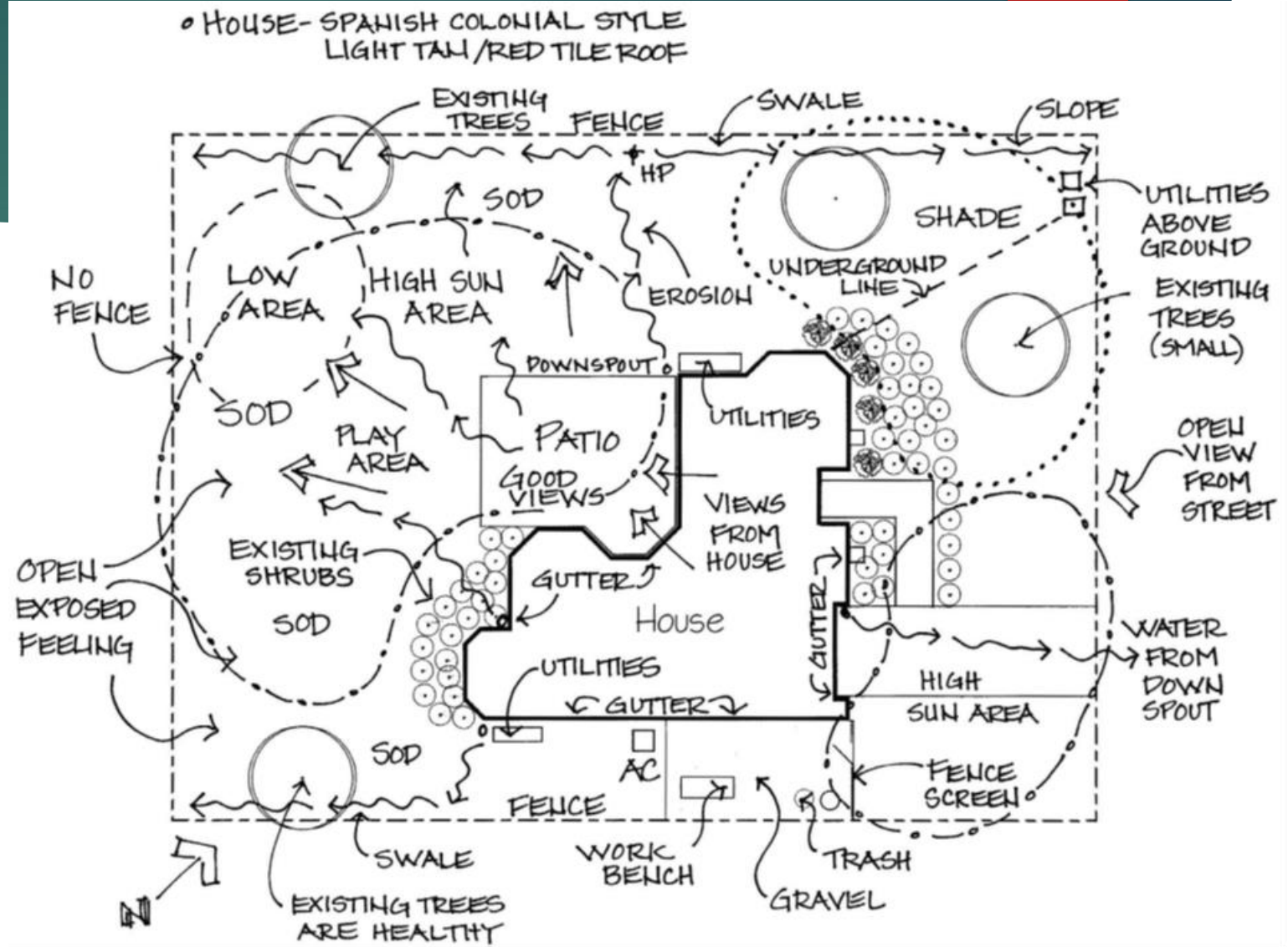
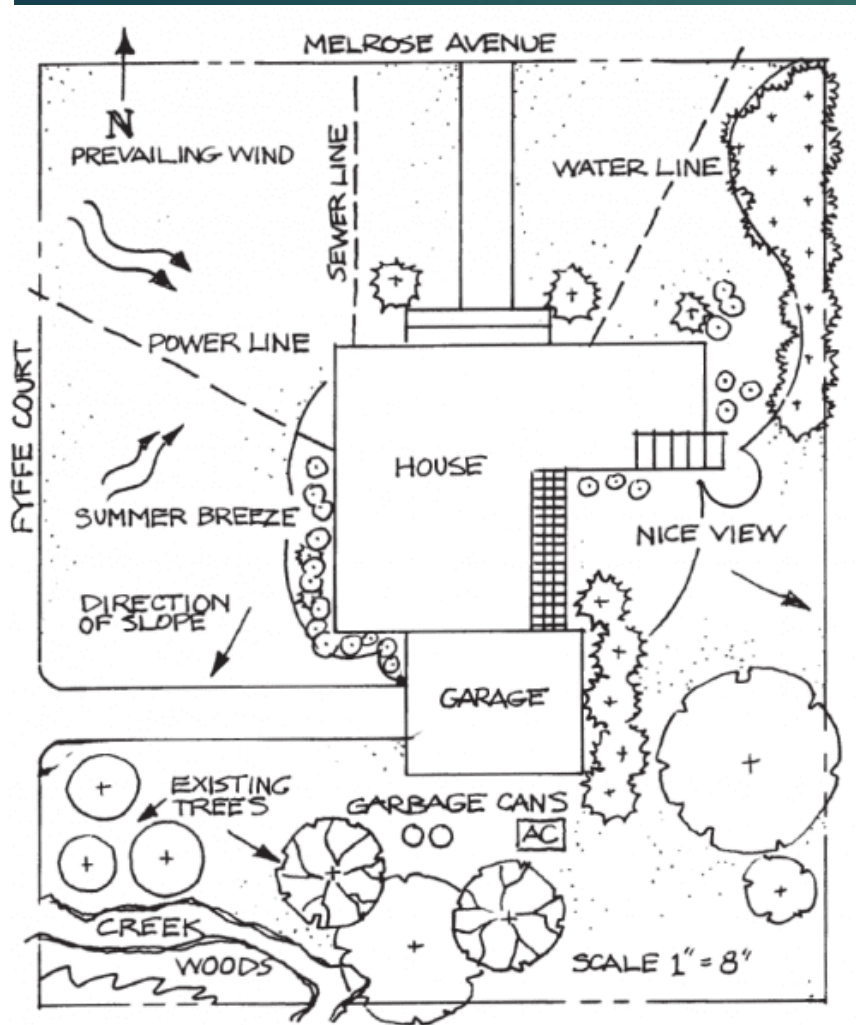


- ▶ Specific item or area of interest
- ▶ Item to direct attention
- ▶ A point which is the hub or “front door” of the project area

# Zig Zags = Barriers or visual screening



# Examples:





# Other means of recording site information:

- ▶ Photographs
  - ▶ Digital
  - ▶ Panoramic views
- ▶ Google Earth
- ▶ Video
  - ▶ Records sounds
  - ▶ Records movement through landscape



End of Part 1:  
Questions?

BREAK TIME TOO!