

A circular wreath of various botanical illustrations surrounds a central white circle. The plants include green ferns, a red maple leaf, a green bell-shaped flower, a branch with small pink blossoms, a large green leaf, a red flower, and purple cornflowers.

Sustainable Landscape Design

Landscape Design

Basics



Landscape Design

Problem solving through use of

- horticultural science
- artful composition
- spatial organization

to create aesthetically pleasing and functional outdoor “rooms” for different uses.






Session Focus

- General considerations
- Elements of design
- Principles of design
- Practical applications





General considerations --

- **Efficiency and sustainability**
 - Reduce fire risk
 - Low maintenance – the level of maintenance that is appropriate for you
 - Conserve natural resources
 - Environmentally sound
 - Maintainable and cost effective
 - **Energy conservation**
 - Kinds of trees and where planted can help reduce energy costs all year long
 - **Xeriscaping**
 - Water-efficient landscaping appropriate to the natural environment
 - Provides an opportunity to create attractive, functional yards
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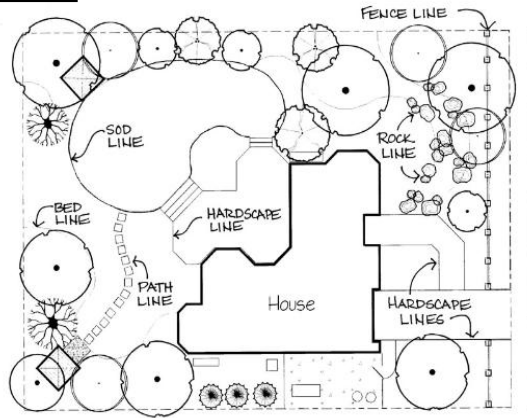


Elements of Design

- Visual qualities
 - Line
 - Form
 - Color
 - Texture
 - Scale



LINE



Common lines in the landscape



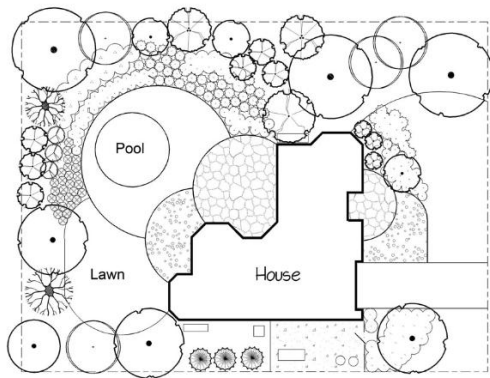
Connect and define the space, control movement, add interest --

- Draw you through a space
- Can be created with hardscape materials (pavers, natural stone ...) and vegetation
- Various shapes
 - Straight – create more formal space
 - Curved – fit well with informal design
 - Vertical – move the eye upward
 - Horizontal – move eye along ground plane
 - Diagonal



FORM

- 3D mass of a shape
- Most dominant feature of a plant



Circular forms in hardscape
and lawn panels



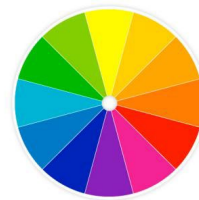
Tree forms



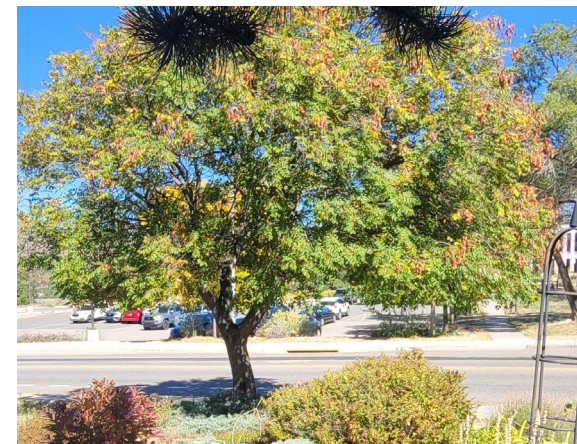
Shrub forms



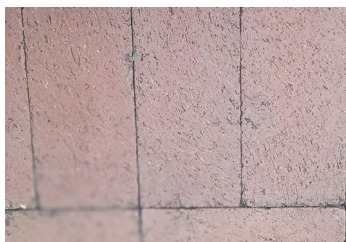
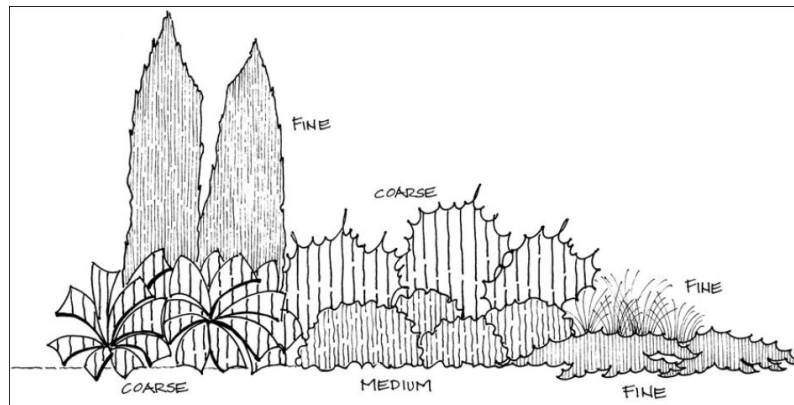
COLOR



- Use of color wheel helps create color schemes
- Found in hardscape and plant materials
- Adds interest and variety; used to capture attention
- Different colors attract different pollinators
 - Butterflies generally prefer flowers that are white, pink, purple, red, yellow and orange; least favorite –blue and green
 - Bees most attracted to blue, purple, violet, white and yellow flowers
- Relatively temporary element, changes by season and what is in bloom



TEXTURE

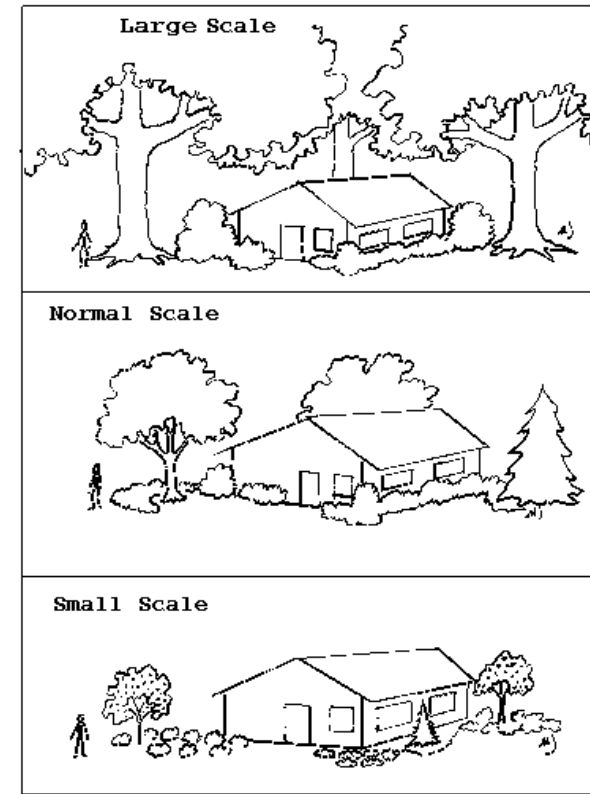


- Applies to both plant material and hardscape
 - Hard/soft
 - Fine/coarse
 - Heavy/light
 - Rough/smooth
 - Etc.
- Mix of plant and hardscape textures create contrast and emphasis and adds a layer of dimension to design



SCALE

- Relationship of an item to a fixed object or constant
 - Scale of hardscape and plant materials must complement and fit with the size of your home, yard and existing landscape features
 - Keep mature size and shape of trees and shrubs in mind so they don't overwhelm your house as they mature





Principles of Design

- Fundamental concepts of composition; how elements are combined
 - Unity/Harmony
 - Balance
 - Proportion
 - Variety



UNITY/HARMONY

- Elements and features are linked to create a consistent character in the composition
- Organizes view into orderly groups with emphasis
- Unified whole, rather than random groupings and scatterings of features
- Repeating plants within a mass and repeating masses with similar plants ties the garden together



BALANCE

- Use of mass, color, or form to create equal visual weight – but necessarily the same look -- on either side of a center of interest



Symmetrical



Asymmetrical



PROPORTION

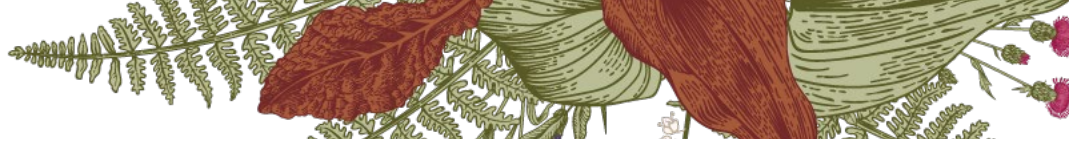
- Size of an object in relation to surrounding objects, to one another, or to the entire design
- How an object fits in with the garden's space
- Related to scale



VARIETY

- Provided through contrasting shapes, colors, textures in both hardscape and plant materials
- Landscape feels cohesive and also provides enough diversity to keep things interesting
- Add interest by using different hardscape materials, boulders, benches, chairs, garden décor (whimsy!) ...






Function of Plants in Landscape Design

- Aesthetic
 - Create visually pleasing environment
- Structural
 - Plants organize and define spaces
- Utilitarian
 - Transform environment for comfort of user
 - Act as physical/implied visual barriers
 - Provides food for homeowner and wildlife
 - Prevent erosion and soil loss
 - Control noise and odor





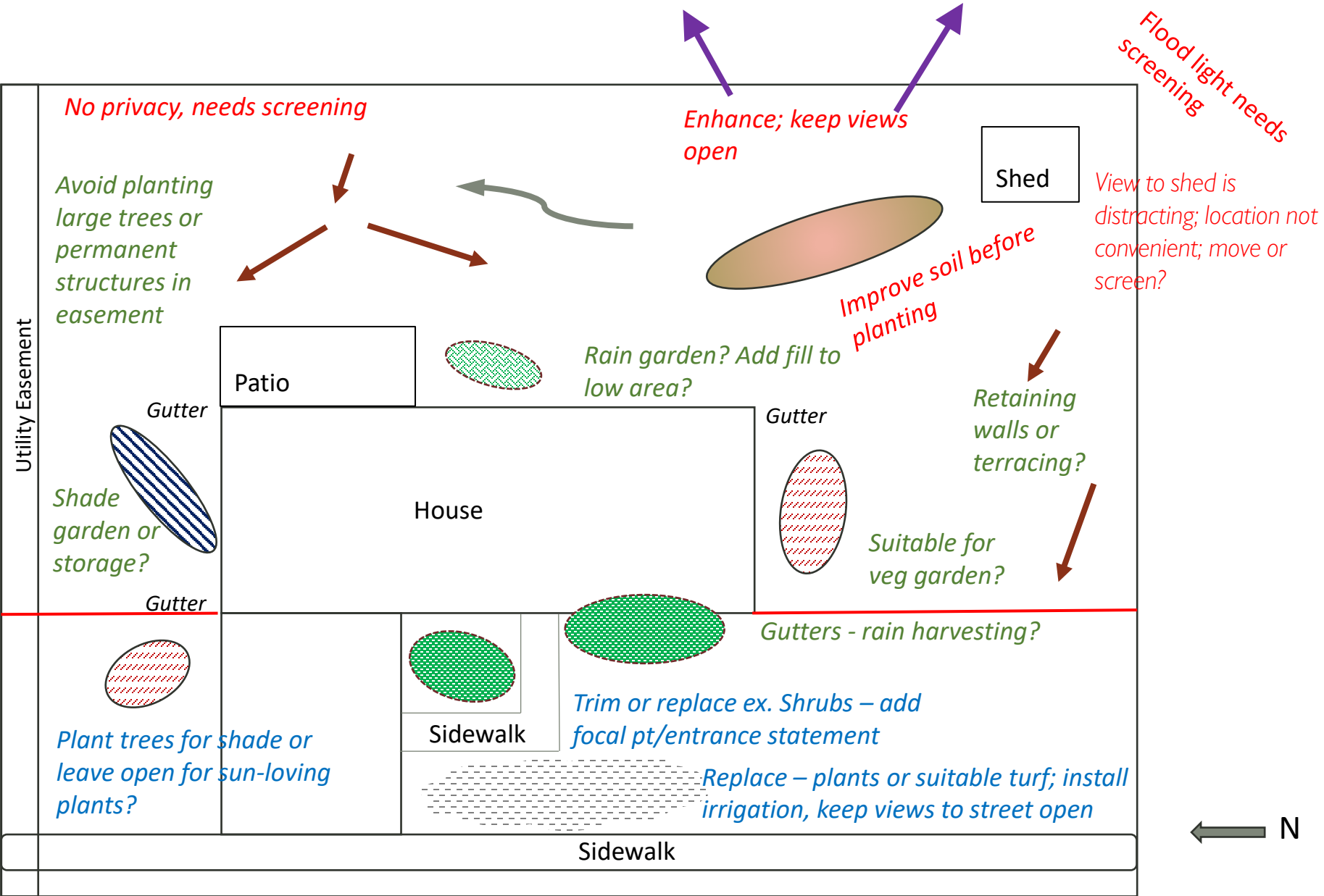
Practical Application

- Give your plants room – planting beds should be at least 2' -3' wide -- or wider, depending on plants -- so they have room to reach mature size without crowding
 - Color and texture affect distance; can change perceived size of space
 - Warm colors + coarse texture = space seems smaller
 - Cool colors + fine texture = space seems larger
 - To fully appreciate a garden, consider all senses – sight, sound, taste, touch, smell
 - Lay down rope, clothesline, flexible hoses on the ground to help you plan shapes and lines
 - Experiment, have fun and learn from successes/mistakes!
- 



Steps 2 and 3:
Inventory and
Assessment

- Actions needed to address inventory findings
- Opportunities/ Constraints
- What to save, change, or remove



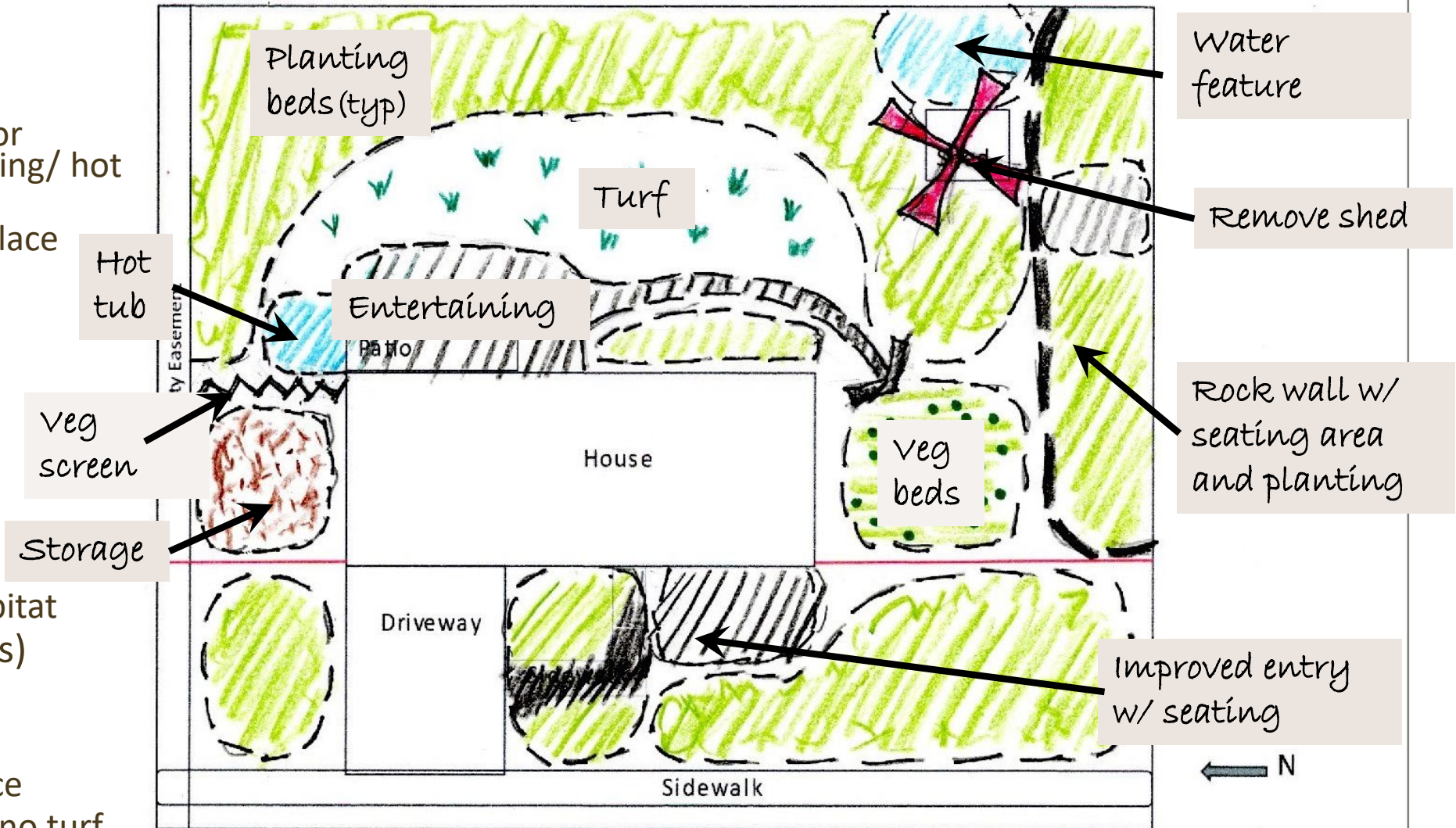
CONCEPT PLAN

■ Backyard

- Grassy area
- Space for outdoor entertaining/dining/ hot tub
- Remove and replace shed
- Retain slope
- Veg garden
- Storage
- Planting beds
 - Pollinators
 - Screening
 - Shade
 - Wildlife habitat
- Water feature(s)

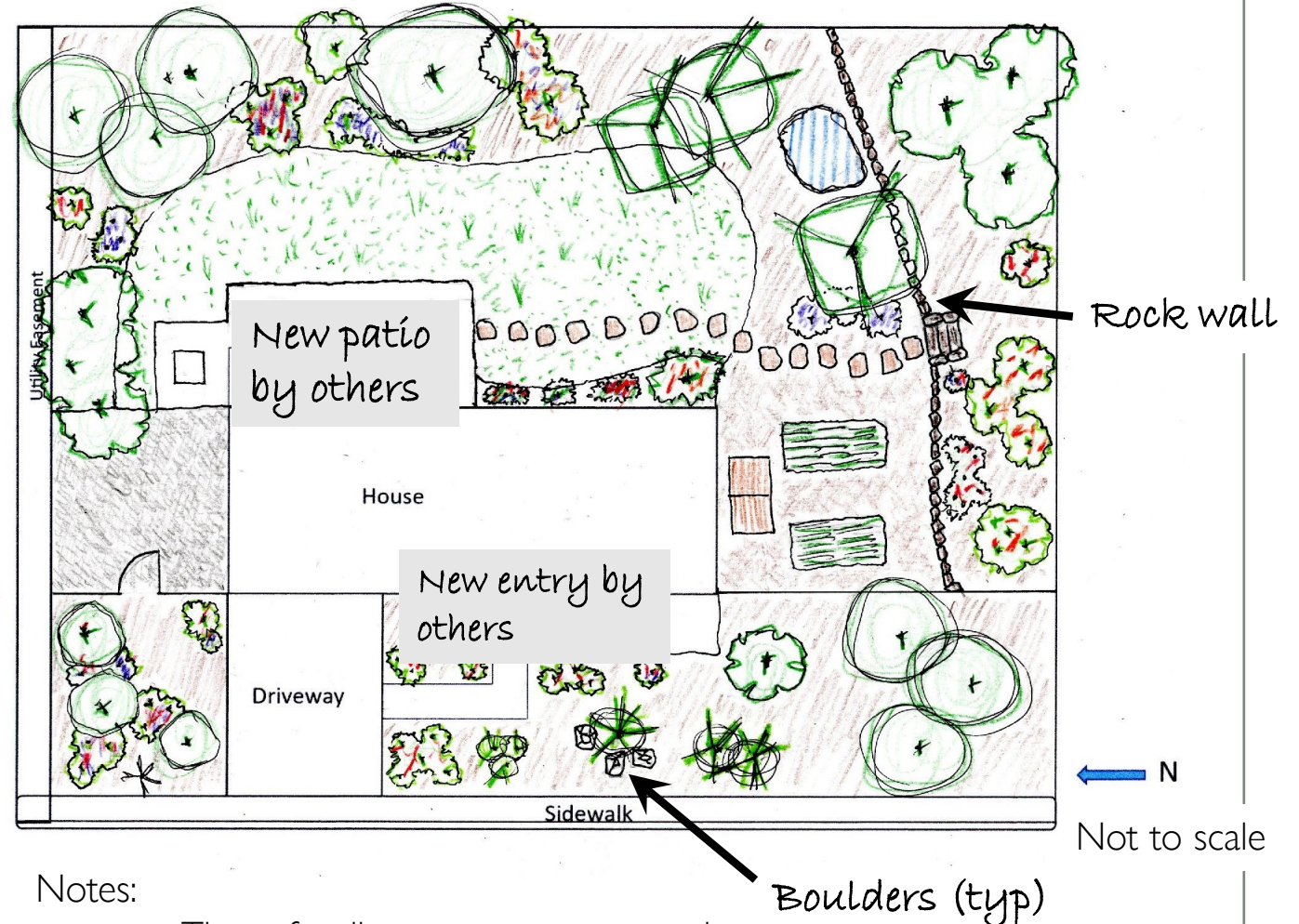
■ Front yard

- Enhance entrance
- Native planting, no turf



LANDSCAPE PLAN

- Translates concepts into actual design
 - Bird's eye view of your landscape
 - Helps visualize the end result
 - Drawn to scale
 - Calls out details
- Ensures that size, scale, and layout have been thought through before you put shovel to ground
- Enables you to prioritize work and resources
 - Timing – short-term/long-term
 - Sequencing -- order for scheduling work
 - Who will do the work
- Provides clarity for what you want to do; helpful for you if you don't do the work right away, and invaluable if you are planning on getting quotes from multiple contractors



Notes:

- This is for illustration purposes only
- Your landscape plan should be drawn to scale!



Design Features

Fences and green
screens



Visual interest

Paths



Design Feature – Raised beds

- Add visual interest
- May have fewer weeds, still need to weed
- Better water retention in sandy soil and drainage in clay soil
- Less soil erosion
- No soil compaction from human feet
- Soil warms up faster and stays warmer longer
- Added construction costs
- Quality of soil under bed isn't changed
- Garden layout isn't easily changed



Mesa Public Library



PEEC



Demo Garden



Design Feature – Sources of Water

- Great for people and wildlife
- Huge benefits –
 - Personalizes your space
 - Provides relaxing sanctuary
 - Soothes the soul
 - Adds sound and motion
- Can be as simple or as elaborate as you want



DIY



PEEC

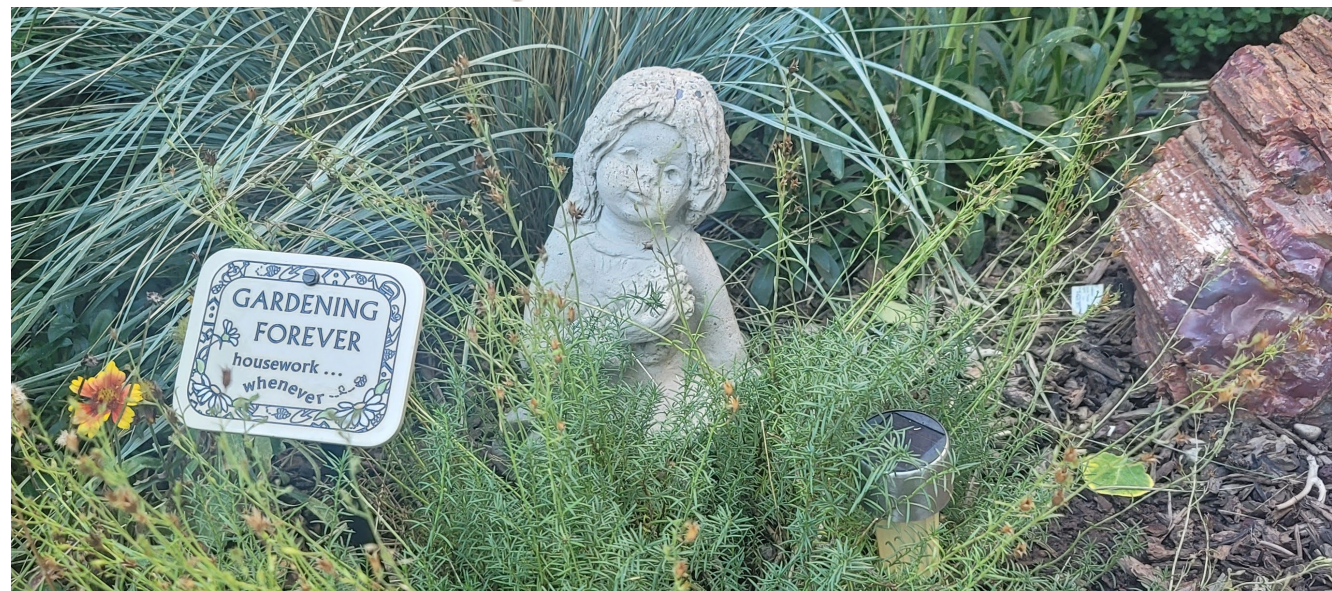


PEEC



Sensory Fountain at Demo Garden







#2: Site Inventory and Assessment
Sept 28 • 6p
Mesa Public Library



#3: Landscape Design Basics
Oct 12 • 6p
Mesa Public Library



#4: Soil Preparation
Oct 19 • 6p
Mesa Public Library



#5: Plant Selection
Oct 26 • 6p
White Rock Branch Library



#6: Irrigation
Nov 2 • 6p
White Rock Branch Library



#7: Maintenance
Nov 9 • 6p
White Rock Branch Library



What's Next





Resources

<https://pubs.nmsu.edu/h/H707/index.html>

<https://edis.ifas.ufl.edu/publication/MG086>

[NM Enchanted Xeriscape Guide.pdf](#)

[7 Principles of \(colostate.edu\)](#)

[Water-Smart Landscapes Start With WaterSense \(epa.gov\)](#)

[Principles of landscape design - MSU Extension](#)

[Basic Design Concepts for Sustainable Landscapes, EC1533 \(Oregon State University Extension Service\)](#)

- [What Are the Best Flower Colors to Attract Pollinators? \(illinois.edu\)](#)
- [Certify \(nwf.org\)](#)

[How to attract butterflies? - Belightful Design](#)

[ENH1112/EP375: Landscape Design: Ten Important Things to Consider \(ufl.edu\)](#)

LANDSCAPE DESIGN BASICS



Thank you

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