

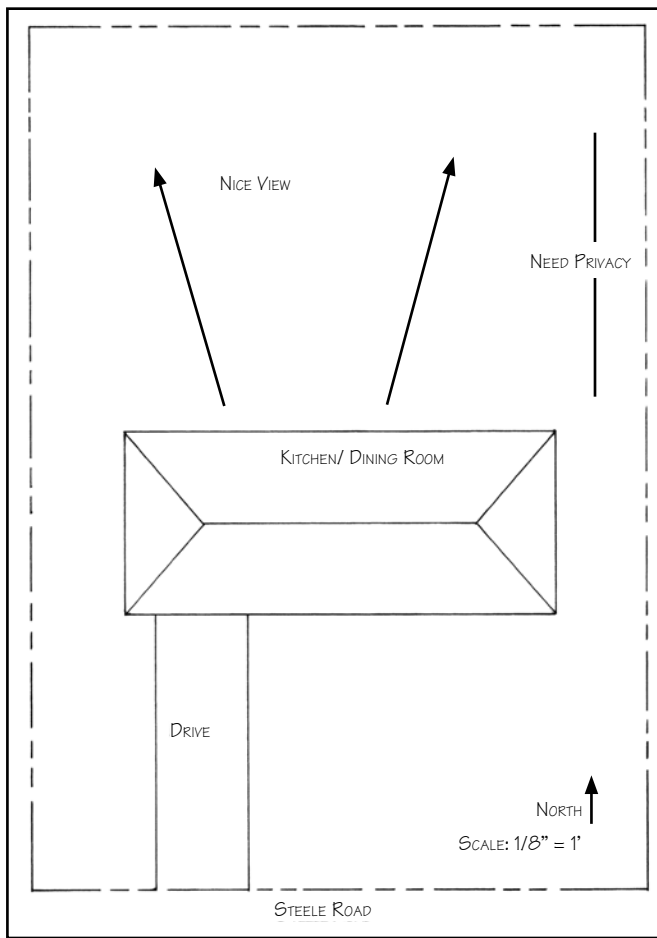
Home Landscape Planning Worksheet:

12 steps to a functional design

This worksheet will guide you through the process of designing a functional landscape plan. The process includes these steps:

- Gather information about the site and who will use it.
- Prioritize needs and wants.
- Consider maintenance requirements.
- Determine a budget.
- Organize the landscape space.
- Determine the shape of the spaces and how they relate to each other.
- Select the plants that will fill the landscape.

Base Map and Initial Site Analysis (not to scale)



Gather information

Step 1. Make a scale drawing

Landscape designs are generally drawn from a bird's-eye view in what designers call "plan view." To prepare a base map (scale drawing) of your property use graph paper and let one square equal a certain number of feet (e.g. 1 square = 2 feet), or draw it to scale using a ruler or scale (e.g. 1 inch = 8 feet).

The base map should include these features:

- Scale used
- North directional arrow
- Property lines

You may want to make several photocopies of this base map to use for the following steps in the design process.

Step 2. Site analysis

A thorough site analysis tells you what you have to work with on the property. Part 1 of the "Home Landscape Questionnaire" (see insert) includes questions that should be answered when completing a site analysis.

Lay a piece of tracing paper over the base map and draw the information gathered during the site analysis. This layer should include these features:

- Basic drainage patterns (use an arrow to show direction of surface water flow or poor drainage areas)
- Location of existing landscape features: house, garage, other buildings, trees, walks, and driveways
- Doors, windows, porches, and different rooms of the house
- Septic tank, sewer lines, or underground power lines
- Views (point arrows in the direction of each good view; also indicate views that need screening)
- Undesirable features of the property or of adjoining property

Step 3. Prioritize landscape needs and wants

Once you know the physical attributes of your site you can start to determine and prioritize your landscape needs and wants using part 2 of the “Home Landscape Questionnaire.” Thinking about your current and future needs and wants will help you maximize the landscape’s usefulness over several years.

Step 4. Consider maintenance requirements

All landscapes require maintenance. Knowing how much time and money you are willing to spend on maintenance will influence your major design decisions. Thoughtful design combined with low maintenance plants and hardscapes (patios, walkways, etc.) can greatly reduce time spent on maintenance; try these suggestions, for example:

- Avoid lawn areas with angles of 90° or less—they are difficult to mow
- Include more trees and shrubs than annual and perennial flowers—they require less care
- Apply a 3- to 4-inch layer of mulch in planting beds—it helps prevent weed growth

Step 5. Determine a budget

The cost of a landscaping project is a combination of time and money. For large, expensive projects you may want to spread the work and cost over 3 to 5 years. Developing an overall plan for the landscape helps you focus on completing parts of the project over that period.

Organize and define the space

Step 6. Identify home landscape use areas

Just as in a home, a landscape is composed of areas that are used for different purposes. Most home landscapes have public, private, and service areas. Each should be designed to meet your needs and to create an attractive overall landscape.

Public area

This is most often the front yard and is the area the public sees from the street. The main purpose is to frame the house and create a visually appealing and inviting landscape. An attractive entryway or walkway to the house is a primary feature and is often surrounded by an uncluttered area of grass or another type of groundcover.

Private or family area

The private area is often the back yard and sometimes side yards. There should be easy access from the house to the outdoor space and features such as outdoor

furniture and lighting should be considered. Privacy from neighbors also may need to be considered.

Service and work areas

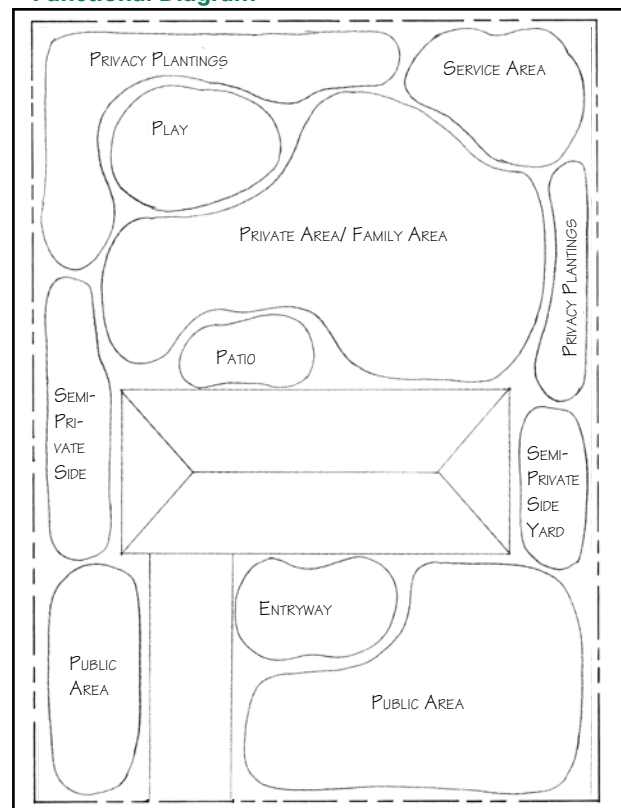
How you plan to use the landscape will affect how large of a work area you need and where it might be located in the landscape. Screens—such as a dense planting of shrubs, a vine on a trellis, or a fence—can make the service area less noticeable when viewed from other parts of the landscape.

Step 7. Sketch functional diagrams

Functional diagrams are a first attempt at organizing the landscape space in a way similar to a home’s floor plan. The “use areas” described earlier are considered along with the information from part 2 of the questionnaire. To create functional diagrams, lay a piece of tracing paper over your base map and draw bubble shapes to represent the previously identified “use areas.”

As you think about different ways to organize the space, also consider how people will move from one area to another, and how people will move between the house, garage, and landscape. As you think about circulation within the landscape, consider utility locations, drainage patterns, and plant material locations. These elements may affect possible design ideas.

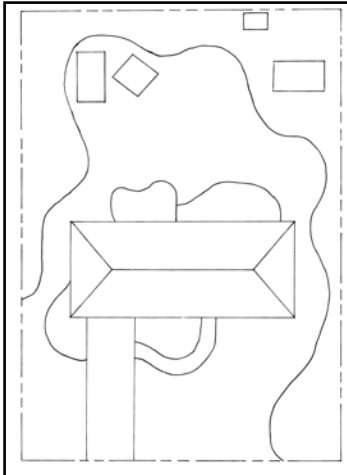
Functional Diagram



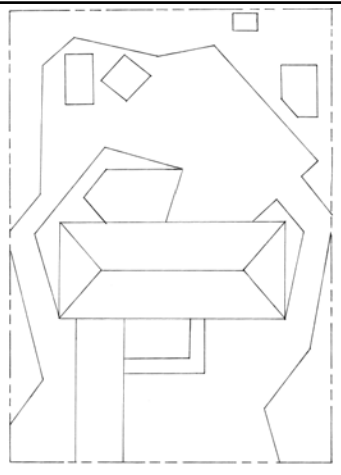
Step 8. Sketch form compositions

A form composition is created when the different bubbles from the functional diagrams are given specific shapes. For example, the bubble that represented the lawn area could be drawn as a rectangle if a rectilinear style is used, or as a kidney bean shape if a more informal curvilinear style is selected. Using a similar form throughout the design helps create unity and structure within the design.

Curvilinear Style



Rectilinear Style



Step 9. Consider spatial compositions

Spatial composition focuses on the three-dimensional outdoor space. How do the trees, shrubs, low-growing plants, and hardscapes combine to make the ceilings, walls, and floors of outdoor rooms? The choices of plants and materials influence how the landscape looks and “feels.” For example, trees with a tall, loose canopy create a sense of openness, while a tree with a dense and relatively low branching canopy creates a sense of enclosure.

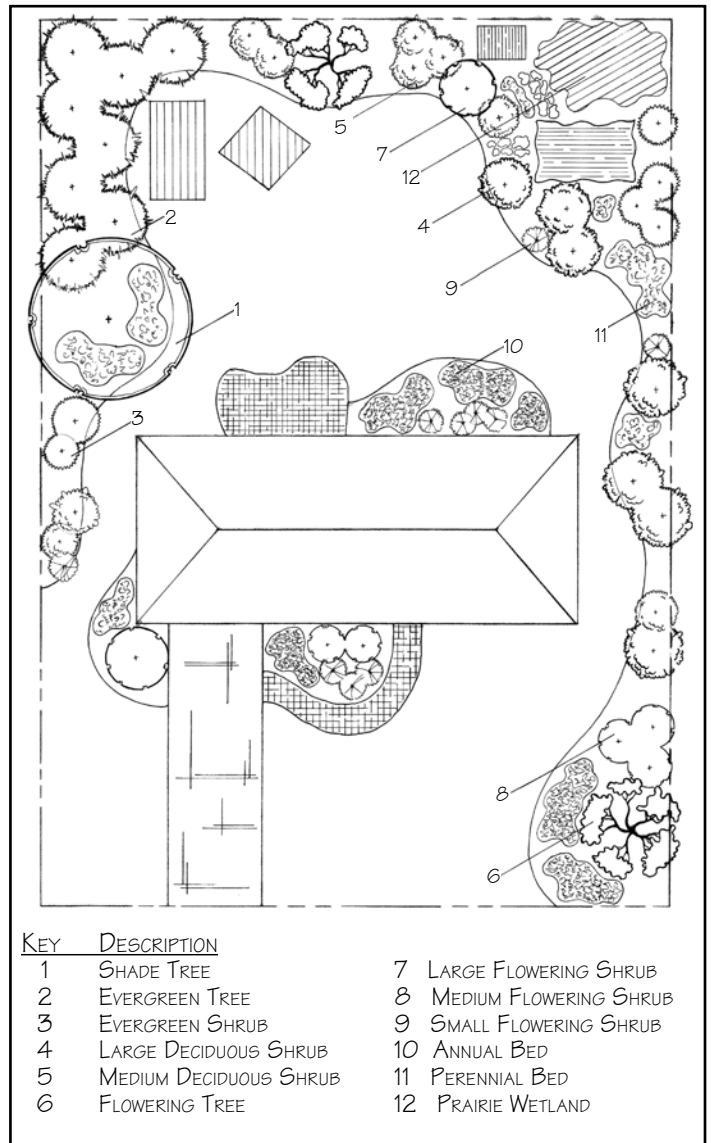
Step 10. Create a preliminary design

This step allows you to convert the loose, freehand bubble diagrams and form compositions into a more refined, but still preliminary, design. The space is clearly organized, the outdoor rooms become obvious, and masses of plants are illustrated and characterized.

Refine the preliminary design

As you move into the final step of the design process, begin drawing landscape symbols on the tracing paper to represent specific landscape elements. Don't worry about selecting individual plants, a label of “deciduous tree” or a mass representing “perennials” is sufficient. Specific plants are decided in the final step.

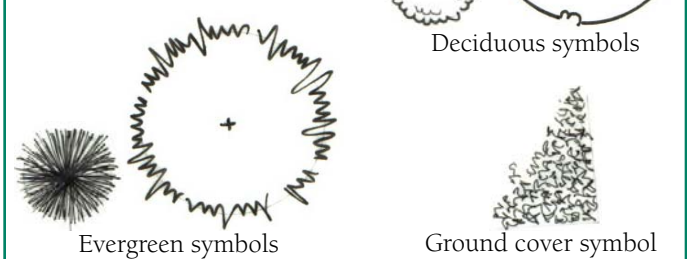
Preliminary Design



After you have developed a final draft, take time to refer back to your earlier notes, site analysis, and landscape questionnaire. Think carefully about the design and how it will meet your needs.

Plant Symbols

Use these to indicate general plant types in the preliminary design and specific plants in the final plan.

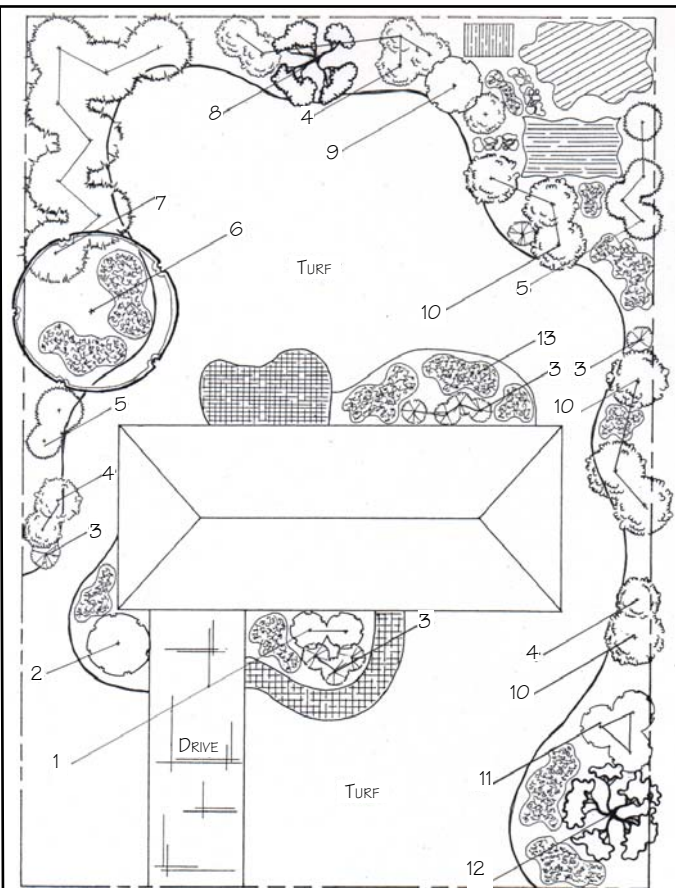


Step 11. Select plants

Now is the time to select specific plants and use landscape symbols to represent them. These symbols need to be drawn to scale and should represent the mature spread of the plant. For example, if you are using a scale of 1 inch = 8 feet, then a maple tree with a spread of 16 feet would be represented by a 2-inch diameter circle.

Select plants for your home landscape based on environmental requirements (hardiness level, heat zone tolerance, light, moisture, and soil requirements) and aesthetic qualities (form, texture, seasonal foliage color, flowers, fruit, bark, and mature size).

Final Plan



KEY	COMMON NAME	SCIENTIFIC NAME	QTY.
1	TAUNTON SPREADING YEW	<i>TAXUS X MEDIA 'TAUNTONI'</i>	2
2	DIABOLO NINEBARK	<i>PHYSOCARPUS OPULIFOLIUS 'MONLO'</i>	1
3	BLUE MIST FOTHERGILLA	<i>FOTHERGILLA GARDENIA 'BLUE MIST'</i>	10
4	CORAL SUNSET PEONY	<i>PAEONIA 'CORAL SUNSET'</i>	9
5	RHEINGOLD ARBORVITAE	<i>THUJA OCCIDENTALS 'RHEINGOLD'</i>	6
6	BOWHALL MAPLE	<i>ACER RUBRUM 'BOWHALL'</i>	1
7	TECHNY ARBORVITAE	<i>THUJA OCCIDENTALS 'TECHNY'</i>	8
8	PAPERBARK MAPLE	<i>ACER GRISEUM</i>	1
9	CENTER GLOW NINEBARK	<i>PHYSOCARPUS OPULIFOLIUS 'CENTER GLOW'</i>	1
10	OAKLEAF HYDRANGEA	<i>HYDRANGEA QUERCIFOLIA</i>	7
11	TINKERBELLE LILAC	<i>SYRINGA 'BAILBELLE'</i>	3
12	SERVICEBERRY	<i>AMELANCHIER X GRANDIFLORA</i>	1
13	PERIWINKLE	<i>VINCA MINOR</i>	50

Step 12. Draw the final landscape plan

After plants are selected it is time to refine the preliminary design further into the final plan. In addition to the landscape design, the final plan also includes a planting key. This becomes your shopping list and includes both botanical and common plant names, a number or letter abbreviation that corresponds to the plan, and quantity.

You also may want to include a column indicating the reasons for selecting each plant (white flowers, red fall fruit, fragrant blossoms, etc.). This is helpful in case a particular plant isn't available at the nursery because it will remind you what characteristics to look for in the substituted plant.

Resources

Check these Web sites for publications and additional information:

ISU Extension Distribution Center
www.extension.iastate.edu/store

ISU Horticulture –
www.yardandgarden.extension.iastate.edu

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Layout by Jamie Quarnstrom, ISU graphic design student.

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Home Landscape Questionnaire, part 1

(Adapted from Home Landscape: Understanding the basics of landscape design, PM 2004. Copies available from www.extension.iastate.edu/store)

Analyze the site

A thorough site analysis helps you evaluate the existing landscape so you develop a plan to enhance or maintain your property's beauty and sustainability. A comprehensive understanding of your site identifies existing light, moisture, and soil conditions. This information helps create a landscape that is easier to sustain.

Soil, slope, drainage

Describe the soil type:

Does soil type vary in different areas of the property?

Describe any elevation differences:

Are retaining walls needed? Where?

Describe any soggy areas:

Where does water drain?

Sun

Describe sun exposure in public areas:

Describe sun exposure in private areas:

Is summer shading needed? Where?

Wind

What is the prevailing wind direction in summer?

What is the prevailing wind direction in winter?

Are windscreens needed? Where?

House

Describe location:

Describe the color:

Describe the architectural style:

Describe any unique features:

Describe the most desirable views:

Describe any undesirable views:

Describe location of utilities:

Other existing structures

Describe location and condition of garage and/or other buildings:

Describe location and condition of patio, deck, play structure, fences, water features, and/or other structures. Are existing structures in the best location?

Describe location and condition of existing walks. Are walkways in the right places?

Describe location and condition of driveway or parking strip:

Existing Plants

Describe location and condition of existing trees and shrubs:

Describe location and condition of flower and/or vegetable gardens:

Other considerations

Describe your preferred level of maintenance:

Are sound buffers needed? Where?

Describe other conditions that affect use of yard area:

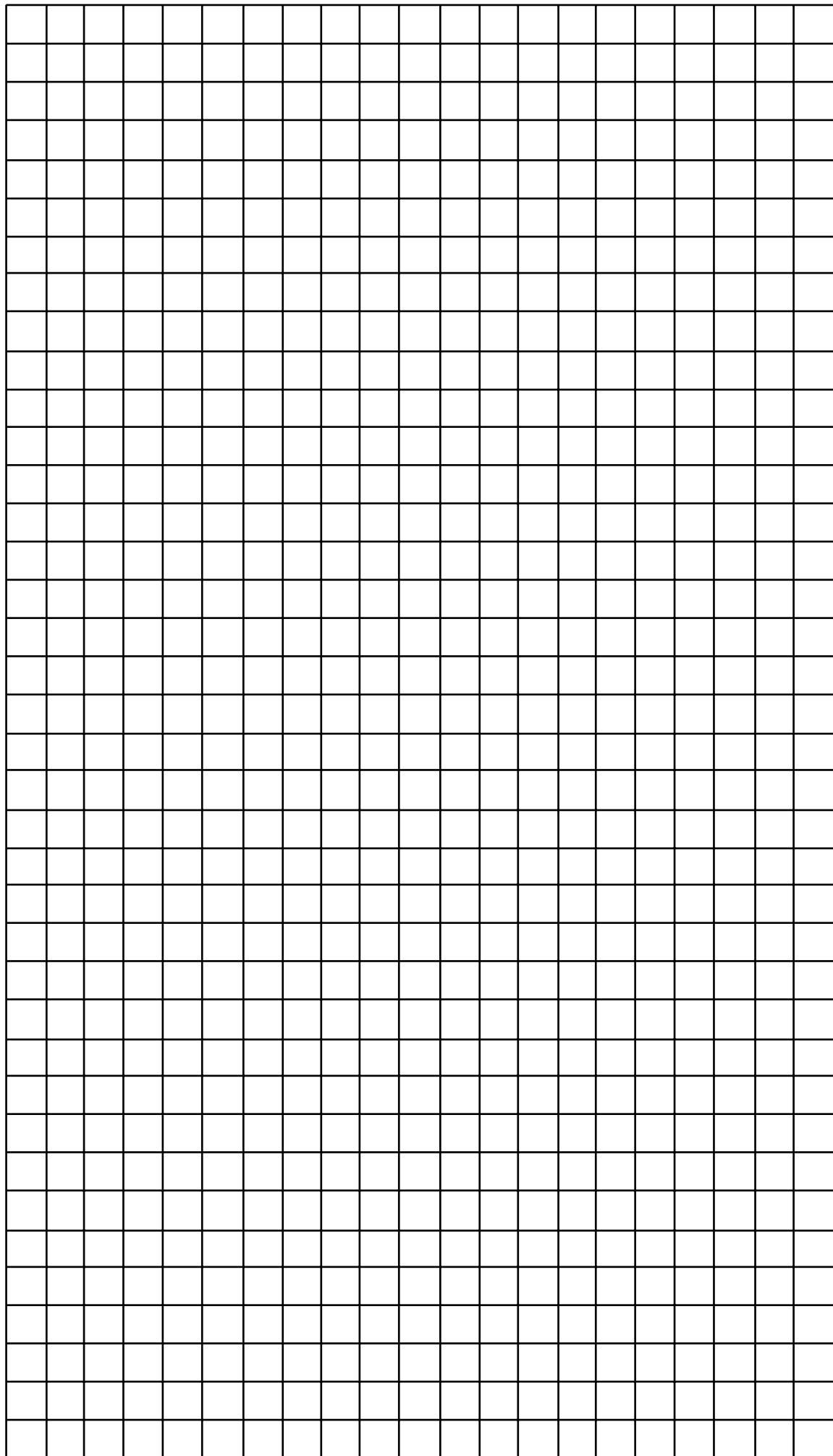
**This CHECKLIST
will help you
note important
information during
your site analysis.**

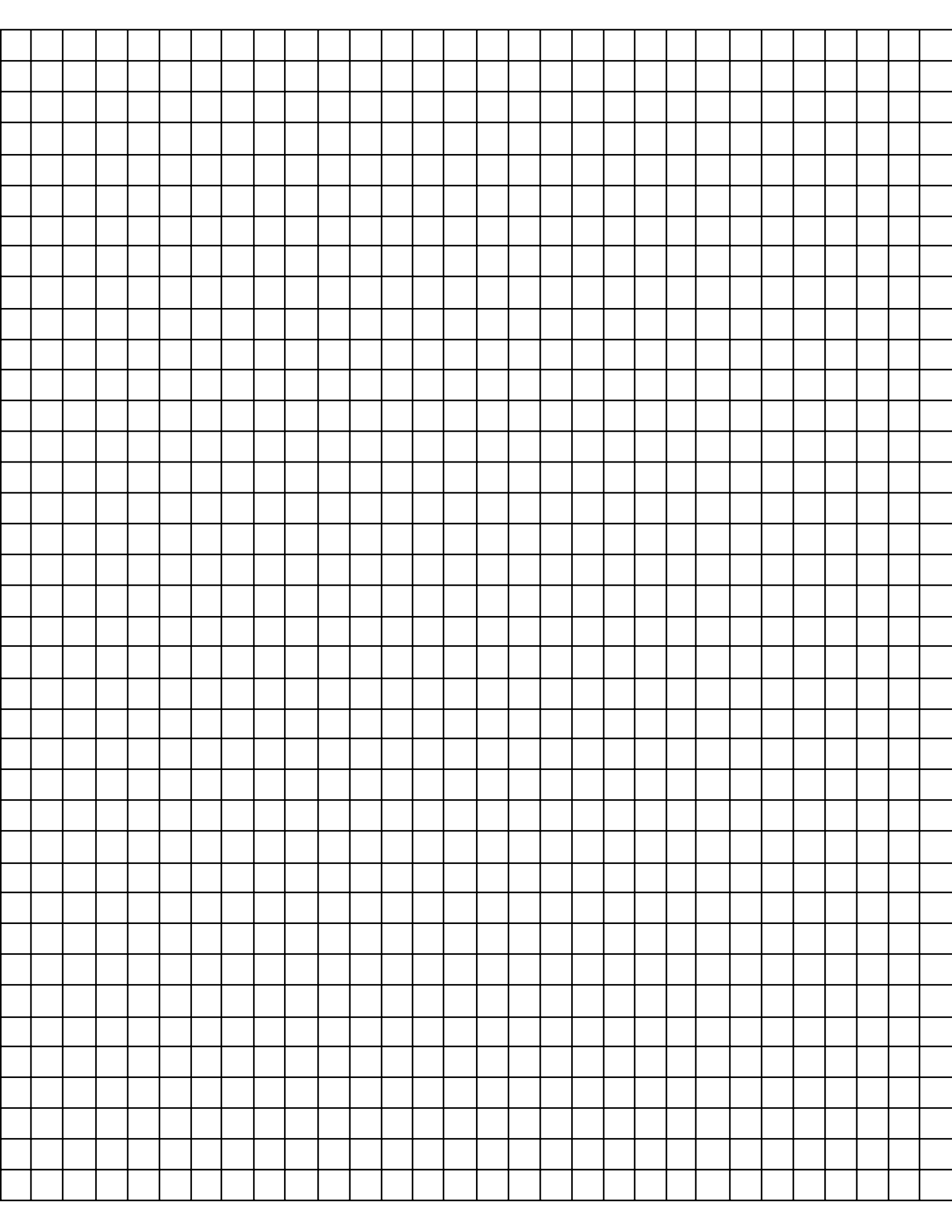
- ___ Scale selected
- ___ Wells, cisterns
- ___ North arrow
- ___ Other buildings
- ___ House drawn in
- ___ Doors, windows
- ___ Good views
- ___ Bad views
- ___ Roads, drives
- ___ Existing trees
- ___ Walks
- ___ Existing shrubs
- ___ Sewer lines
- ___ Banks, slopes
- ___ Septic tank
- ___ Drainage
- ___ Water lines
- ___ Winter winds
- ___ Power lines
- ___ Summer winds
- ___ Phone line

Attach this sheet of graph paper to a clipboard to make it easier to take notes on site.

Using a tape measure, locate all features on your site.

This graph paper has $\frac{1}{4}$ inch squares. A convenient scale would be $\frac{1}{4}$ inch = 1 foot or $\frac{1}{2}$ inch = 2 feet.





Home Landscape Questionnaire, part 2

(Adapted from *Home Landscape: Understanding the basics of landscape design*, PM 2004. Copies available from www.extension.iastate.edu/store)

Analyze needs and wants

Answering these questions help determine how outdoor spaces are used. Identifying facts/wants/needs increases the likelihood that the resulting landscape is a success.

Yard Use

Who will use the yard?

- Adults
- Children (ages)
- Elderly
- Pets (describe)

When is the yard used?

- Spring
- Summer
- Fall
- Winter

Are you satisfied with the front door/public entry space? If not, how could it be improved?

Are you satisfied with the back door/family entry space? If not, how could it be improved?

Are you satisfied with the transition between indoor and outdoor living areas? If not, how could it be improved?

Are you satisfied with the way existing walkways connect parts of the yard? If not, how could it be improved?

Are you satisfied with the current amount and type of outdoor lighting? If not, how could it be improved?

What outdoor structures/ features would you like to add?

- Patio or deck
 - 2 to 4 people
 - 4 to 8 people
 - 8 to 12 people
 - 12+ people
- Shade cover for patio/deck
- Children's play area
- Cooking/grilling area
- Fenced vegetable garden
- Raised planters
- Dog pen/run
- Storage shed
- Gazebo
 - 2 to 4 people
 - 4 to 8 people
 - 8 to 12 people
 - 12+ people
- Clothesline
- Fence(s)
- Swimming pool
- Spa/hot tub
- Sculpture
- Fire pit
- Boulders
- Dry creek
- Mounds/berms
- Pond
- Bench
- Fountain
- Waterfall/stream
- Greenhouse
- Putting green
- Rain barrel
- Off-street parking
 - for guests
 - for RVs
 - for boats
- Irrigation system
- Other

What items need storage space?

- Garden equipment
- Garbage cans
- Bicycles
- Outdoor toys
- Sports equipment
- Lawn furniture/cushions
- Other

Maintenance considerations

How much time do family members have for yard care?

Is hiring outside help an option?

Design considerations

What is your preferred design style?

- Formal
- Semiformal
- Informal

What themes/styles do you want reflected in your outdoor space?

- European
- Asian
- Natural
- Other

What is your preferred shape (for lawns, walkways, decks)?

- Rectangles
- 45° angles
- Circles
- Curving/free-form
- Combination
- Don't care

List your favorite colors:

List your least favorite colors:

Describe any special considerations (wheelchair access, etc):

Plant choices

What types of plants do you prefer?

- Evergreens trees/shrubs
- Deciduous trees/shrubs
- Flowering trees/shrubs
- Fruit trees/shrubs
- Vines
- Annual flowers
- Perennial flowers
- Vegetables
- Herbs
- Fragrant plants
- Wildlife/native
- Other

Do any family members have specific plan allergies? (List plants)

Is damage from wildlife a problem?

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