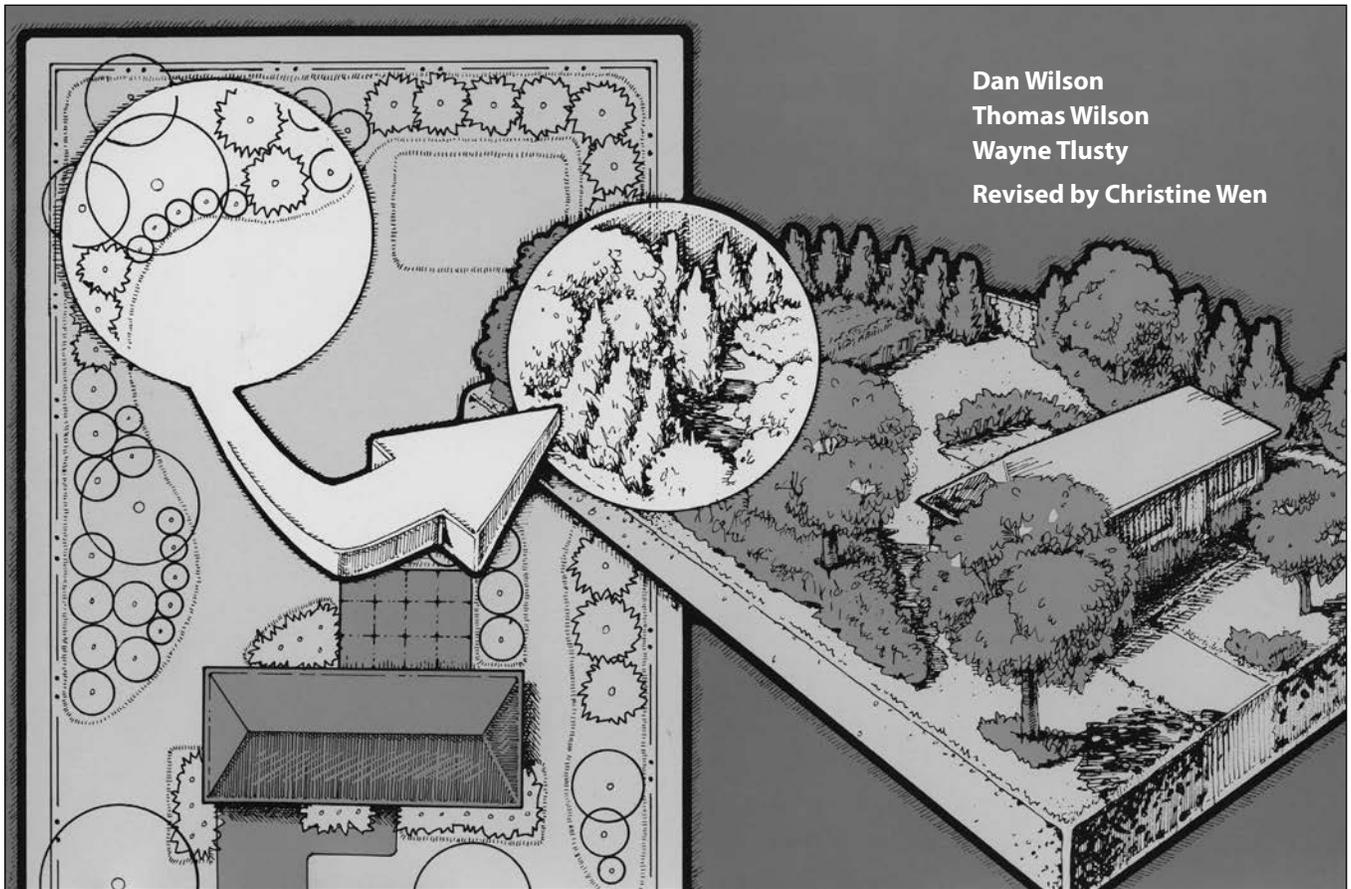


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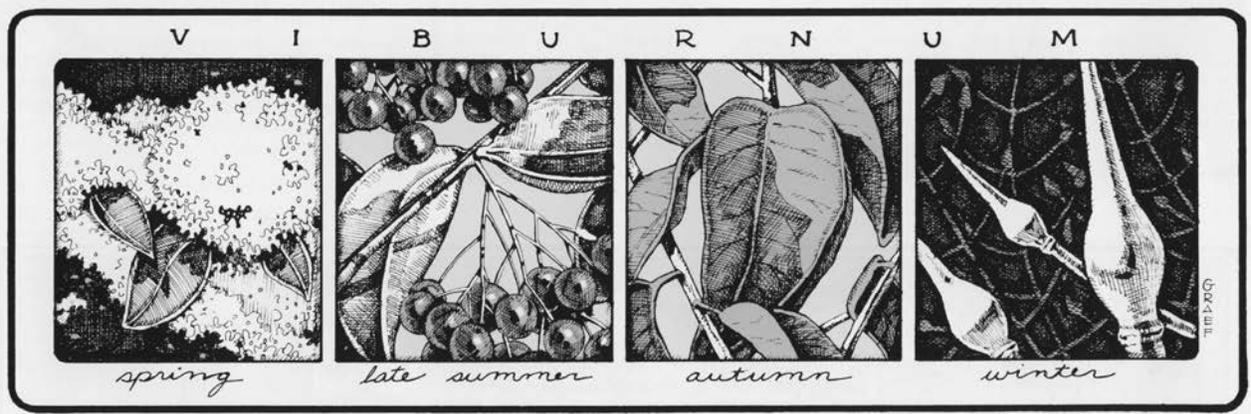
Planning and Designing Your Home Landscape



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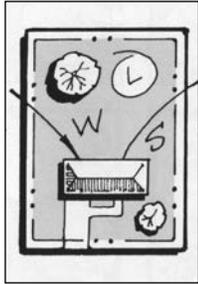
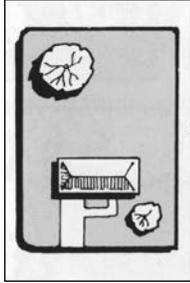
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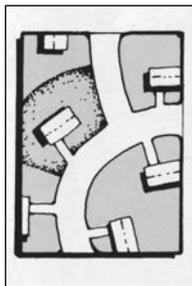
Introduction

The area around your home is an important part of your living environment. An attractive and functional landscape should be an extension of your home and can add to the enjoyment of your time outdoors. Landscaping can also increase property value, invite wildlife into your yard, and conserve energy.

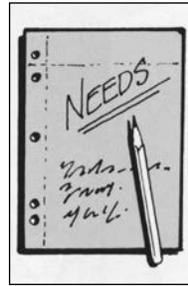


Successful landscaping does not just happen. It requires careful planning and some knowledge of landscape design. Consider your home's architectural features, your

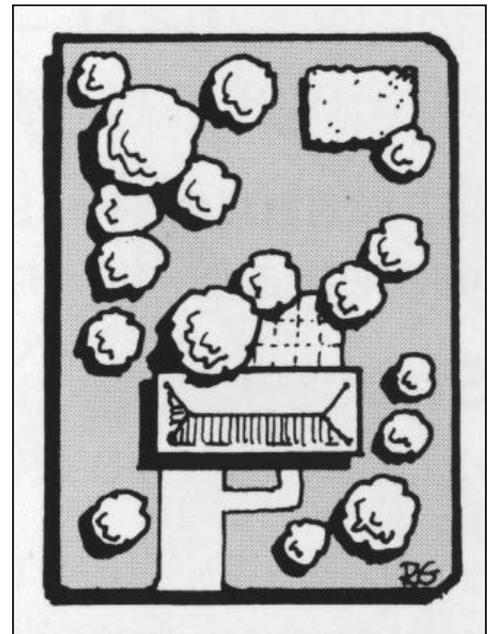
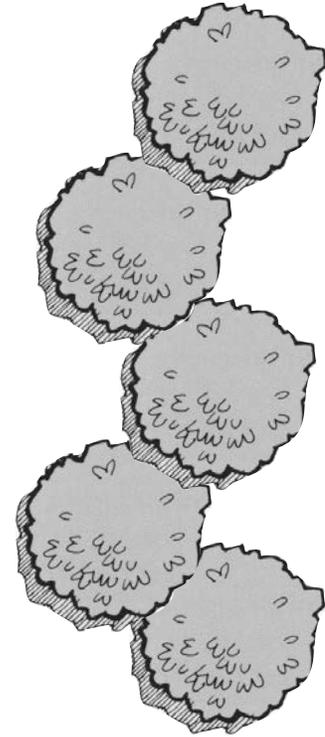
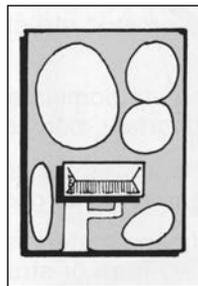
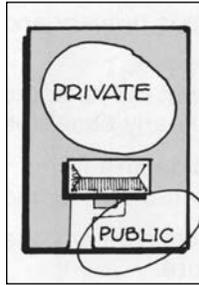
neighborhood landscape's character, the effects you want to create, and how you want to use your outdoor living space. It may take several years of planting and construction to achieve your goals, but the first step is planning and designing your end result.



Today, more people want their home landscape to meet functional and social needs. Partly as a result of the environmental movement, which fostered a greater appreciation for nature, we tend to be more interested in using a sustainable approach when designing landscapes.



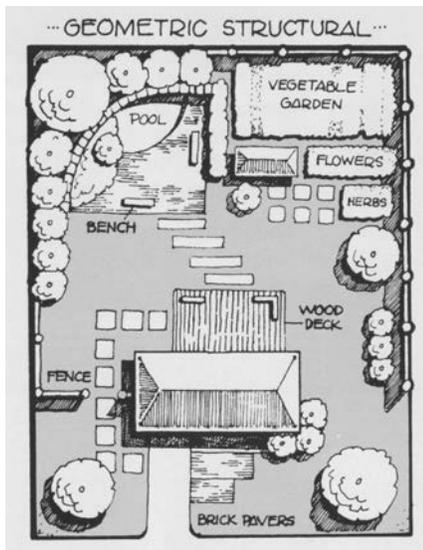
This publication will guide you step-by-step through planning and designing a landscape appropriate for you and your home. It was written with only slightly landscaped homes or those with no landscaping in mind. We emphasize "conventional" landscape design, which usually includes flowers, shrubs, trees, lawn areas, and structures arranged in various patterns.



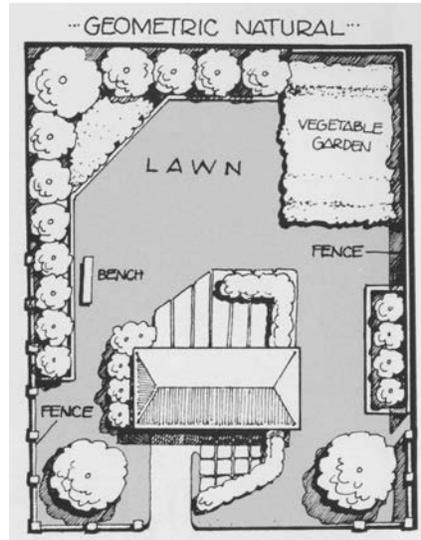
Landscape style options

The geometric forms of buildings and natural landscaped characteristics both suggest design patterns. As a result, a home landscape that blends geometric and naturalistic patterns is often successful. Today's landscape styles are divided into four categories in which varying proportions of geometric and naturalistic patterns are combined:

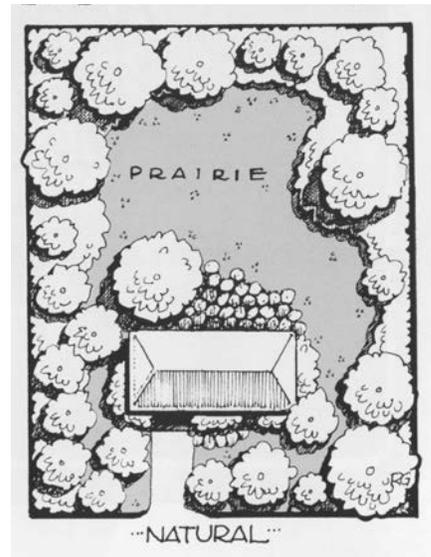
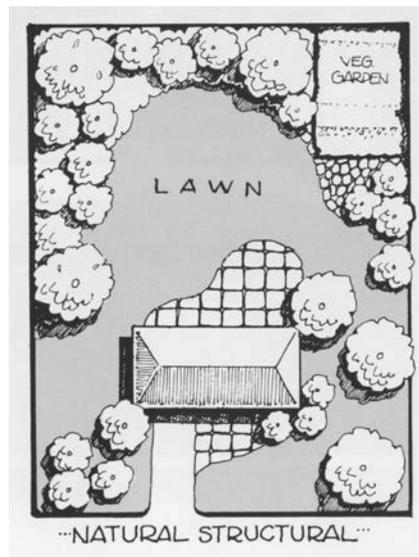
- **Geometric-Structural:** Geometric structure is primary and plants play a minor role. Straight lines of walks, driveways, and planting beds are typically used.



- **Geometric-Natural:** Structure dominates, but plants and other natural elements play an important—perhaps nearly equal—role. Straight lines and more formal curves often define landscape features.



- **Natural-Structural:** Plants, rocks, water, and earth forms dominate, but there is a clear sense of geometric arrangement. Naturally flowing, curvilinear lines are used to “soften” the transition from one area to another in the landscape.



- **Natural:** Natural elements and materials dominate, and there is no obvious human-determined form or structure. Elements in the landscape flow naturally into each other with few or no clearly defined lines.

As you plan and design, think about which design style you want to achieve.

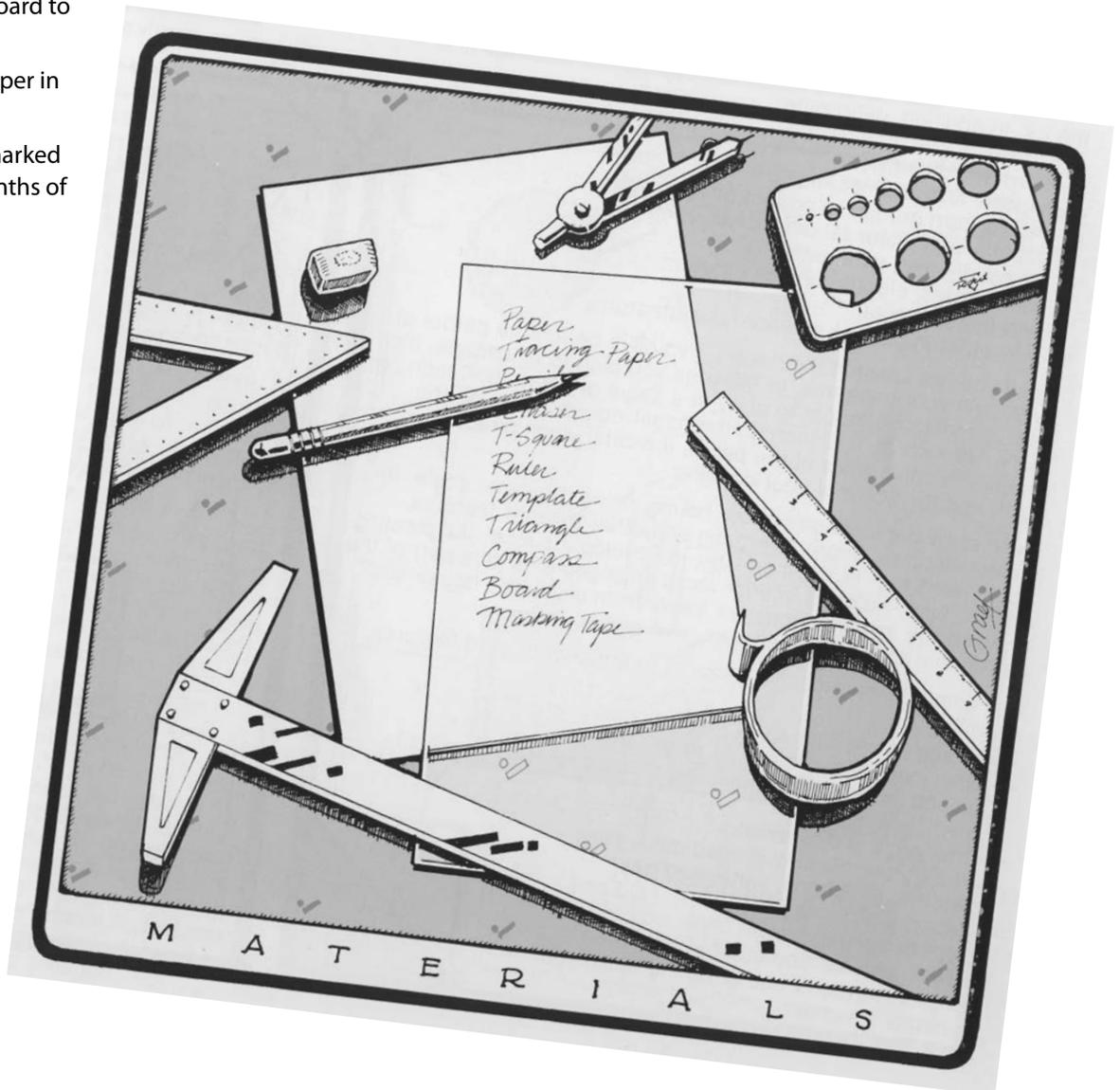
Landscape planning

Too often, homeowners plant before they plan. Careful planning will help you avoid wasting time and money. Planning also prevents errors in your landscape design, such as improper plant selection or placement. Since the initial date of this publication, many landscape design computer programs have been developed. Whether you design on the computer or on paper, the concepts illustrated in this publication will help you achieve a successful plan.

This section takes you through the required planning steps.

You will find these items helpful:

- Large white paper or $\frac{1}{16}$ - or $\frac{1}{8}$ -inch graph paper (graph paper is easier to use)
- Solid table or board to draw on
- Tape to hold paper in place
- Ruler or scale marked in eighths or tenths of an inch
- Lead pencil
- Eraser
- Lightweight, see-through tracing paper
- French curves
- T-square, triangle, circle template, and compass



STEP 1



Draw a base map

If you own a new home, you probably have a lot or plot plan that shows your home in relation to the property boundaries. If you do not have such a plan to work from, you'll need a tape measure to accurately determine where the house is located on the lot. In addition, determine:

- Outside house dimensions
- Overhang dimensions
- Window and door locations
- Height from ground to bottom of windows
- Locations of water faucets, dryer vent, air conditioner, window wells, downspouts, electric and gas meters, and fuel fill spout
- Any other important exterior house features

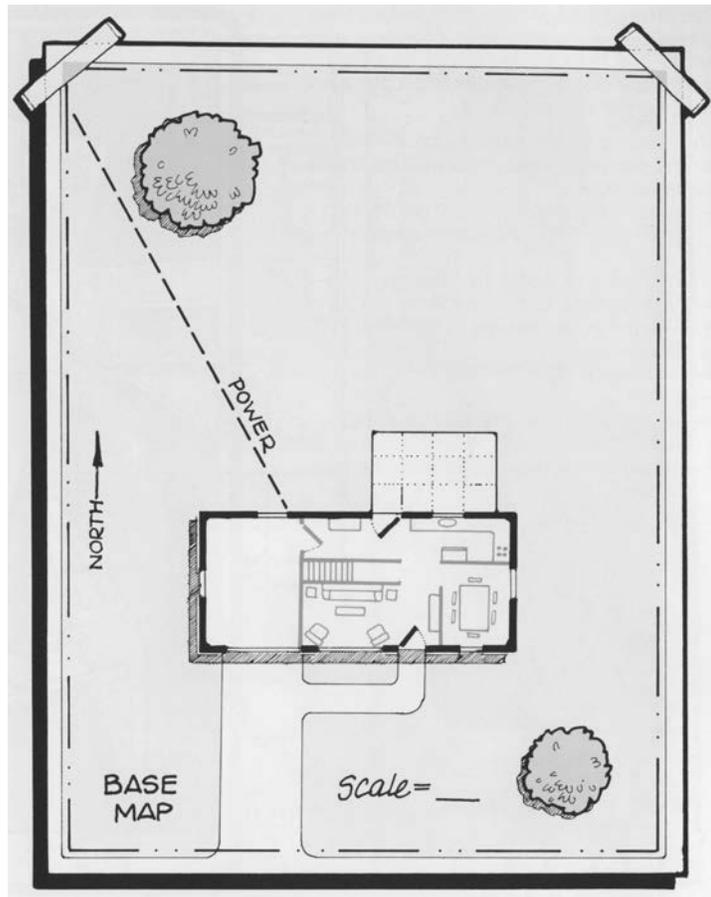
Draw your lot lines on the paper. If you live on a large parcel of land, limit your base map to the area you plan to landscape. It's usually most convenient to draw at a scale of $\frac{1}{8}$ or $\frac{1}{10}$ inch per foot— $\frac{1}{8}$ inch or $\frac{1}{10}$ inch on the paper equals one foot on the ground. In one corner of the paper, indicate which direction is north and the scale of your drawing.

Next, draw the location of your house, using the same scale. Indicate windows, doors, overhang, and other exterior features. You'll need this information later to develop a successful planting design. Also sketch in interior room arrangements; this part of the drawing will help you consider views from inside the house and patterns of movement between the yard and the house.

Still using the same scale, draw in existing lot or yard features that you are not willing to change, including:

- Garage, if unattached
- Other buildings in the area to be landscaped (such as a storage shed or outbuildings)
- Driveways and sidewalks
- Underground and overhead utility lines (e.g., electric, telephone, water, and gas)
- Septic tank (or drywell), drain field and vent, or sanitary sewer lines

- Trees, shrubs, and other plants to be preserved (don't bother noting those you plan to remove)
- Neighboring trees that have part of their canopy on your property
- Tip with drawing: Utilize the most space in your landscape beds by alternating the plants instead of putting them in rows.



STEP 2



Analyze your site

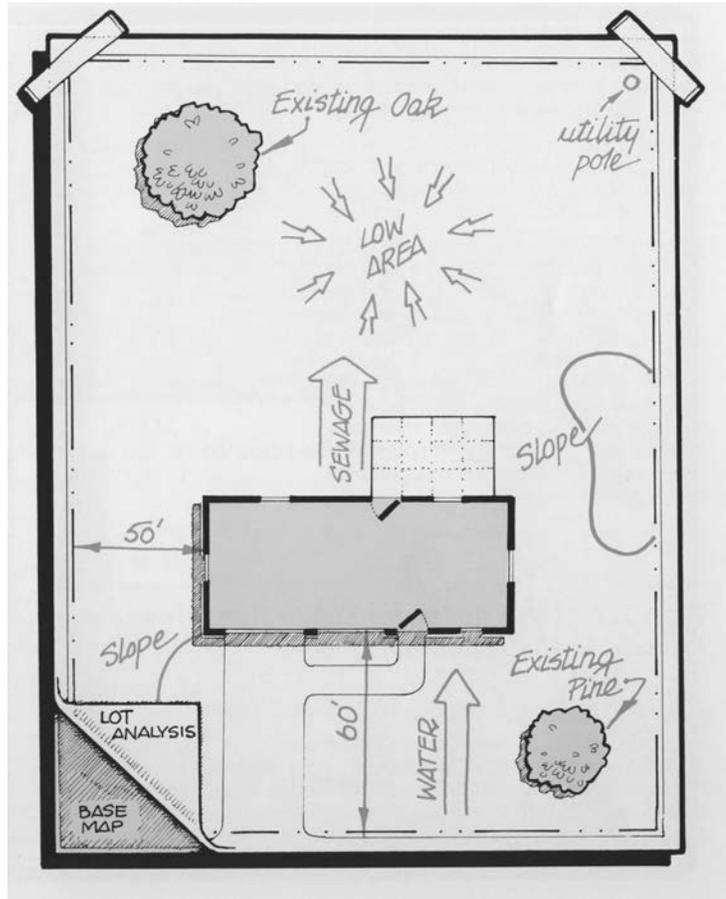
To develop the best design, you need a physical and visual analysis of your property that takes into account both natural and manmade features.

Inventory the following categories of natural features on your lot:

Vegetation. Your home site may already have trees, shrubs, or other plants. Before deciding to include them in your landscape design, you must know what kind of plants they are; some may be considered weeds, while others may be valuable. Consider also the general appearance or quality of the plants, if they interfere with the rest of your landscape design, and the shade and sun patterns they create.

Topography refers to the shape of the land's surface. Some lots are flat, while others have a variety of ground forms. It's important to decide whether the existing topography can be preserved or whether it must be modified to meet your outdoor needs.

The **drainage** patterns on your site may greatly influence your home landscape design. Note the direction of runoff and low spots where water may collect. Monitor drainage carefully to make sure that outdoor use areas will be suitably located, that water will move away from buildings, and that plants are matched to soil moisture conditions.



Your property's **soil** is important because it must support both plants and manmade structures. Soil tests, available through your county UW-Extension office, will tell you if your soil has the proper chemical makeup for good plant growth. Information available from your county Soil Conservation Service can determine if the physical properties of your soil are suitable for landscape structures.

Climate will influence your landscaping plans in several ways. Winter temperatures determine which plants are hardy enough to grow in your area. Spring and fall frost dates determine growing season length. Wisconsin receives on average about 30 inches of precipitation per year; try to choose plants that will grow in these conditions and don't require regular supplemental watering. Humidity is also something to be aware of since it affects the spread and severity of plant diseases. Having your plants spaced adequately will allow air circulation between plants and potentially decrease instances of disease. In Wisconsin, prevailing winter winds are from the northwest, and most summer breezes

come from the southwest. You will want to provide winter wind protection and to take advantage of the summer breezes. The National Oceanic and Atmospheric Administration's National Weather Service, county Soil Conservation Service, and UW-Extension offices can provide climate information for your specific location.

During your analysis, take into account manmade structures and natural landforms within view of your house and property. You may want to block things like highways, power lines, industrial centers, and junkyards, while keeping or enhancing good views. You may also want to filter noises from cars, trains, and other sources.

In Wisconsin, we spend a lot of time in our homes, especially in winter. Therefore, you should consider the outside views from your home's interior and the views other people have into your home from the outside. Your inside-out analysis may shift how you see your landscape, and you may see views that you want to privatize or screen. Here are a few things to consider:

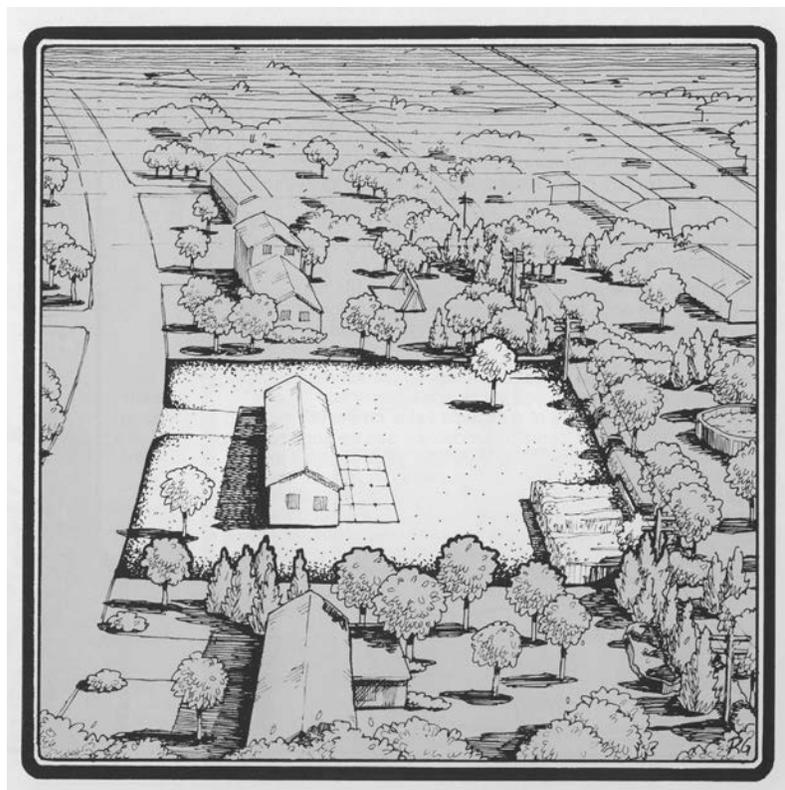
- Are there views of neighboring homes, such as windows or decks, that I want to screen?
- Can I see into my bathroom and/or bedroom windows from the public areas of my yard?
- Could neighbors see into bathroom and/or bedroom windows from their points of view?

It may help to take pictures of your property. Often we see only what the mind wants to see, rather than what really exists. Photographs help you see the site as a visitor would. They also serve as reminders of what the house and site look like while you are working on your design.

Photos should include views of the house from all sides. Photos of off-lot views, from both inside and outside the house, will help you identify those you want to keep or enhance and those that should be screened for beauty or privacy.

Record important features by sketching them on tracing paper placed over your base map. On the tracing paper, indicate with arrows or other symbols:

- Major differences in land surface elevation, including hills, depressions, and rock outcroppings
- Topography and drainage patterns
- Prevailing summer and winter winds
- Good views to be kept or enhanced
- Poor views and annoying sounds to be screened
- Other features that seem significant



STEP 3



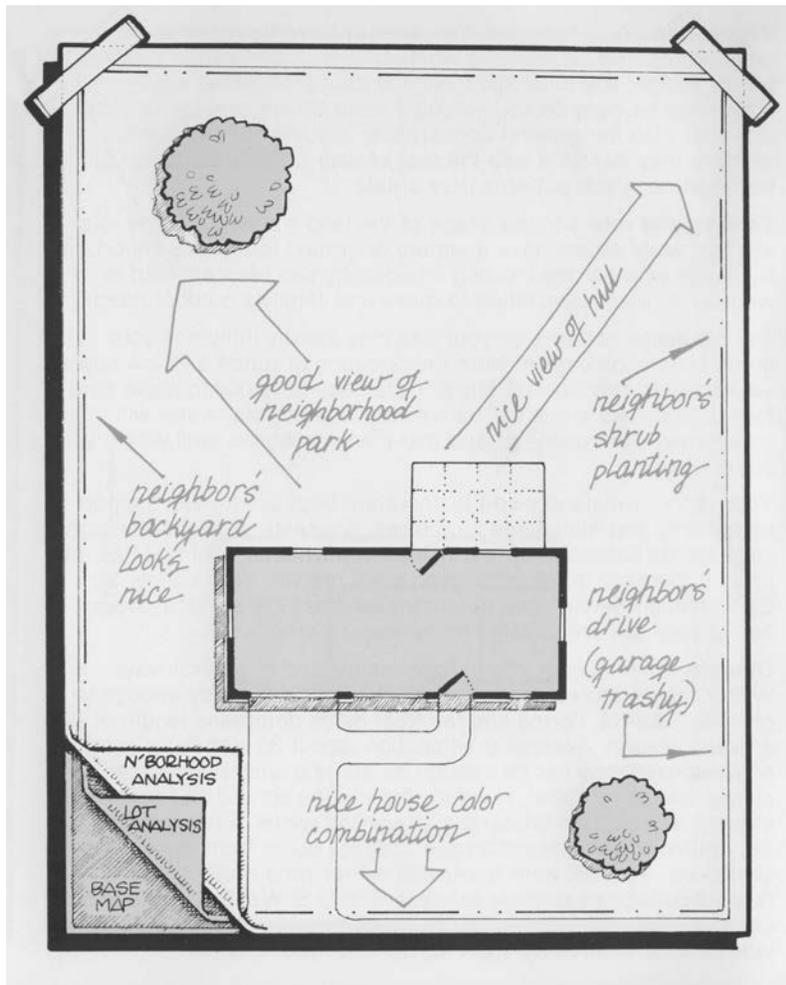
Analyze how your property relates to the neighborhood

A survey of your neighborhood will suggest landscape possibilities and help you avoid a design that is out of place.

Don't be limited by neighborhood examples, but if you do decide to use a very different kind of design, do it unobtrusively; for example, you may want to restrict its full impact to the backyard. You may also want to share your plans with neighbors to gain their understanding and to get their suggestions.

What building materials, colors, plants, and types of screening have others used? Which landscapes in the neighborhood do you like or dislike? Earth tone home colors, dark roofing materials, organic mulches, and uniformly green foliage usually create a visually pleasing neighborhood.

Some communities have zoning, building setback, and fencing and planting restrictions you should know about before making landscaping plans. Check with your town, village, or city clerk or zoning administrator. You should also check deed and subdivision restrictions for other possible landscaping constraints.



STEP 4



Analyze your needs

Now is the time to stop and think about how you want to use the space you plan to landscape. Take time to determine your family's likes and dislikes.

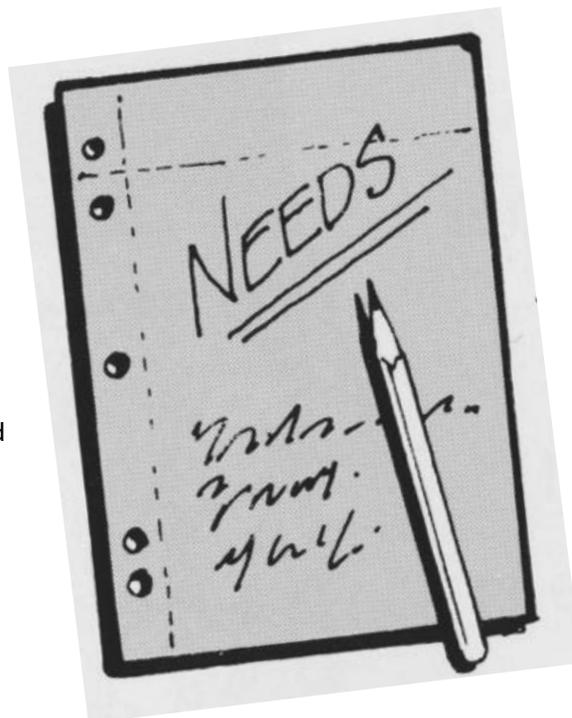
Here are some factors to consider:

- What are the ages of people using the landscape?
- Do users have specific hobbies or interests?
- Are pets involved? Is a kennel needed?
- Do you want to attract birds and other wildlife? If so, plan to use lots of trees and shrubs, including fruiting ones, in your landscape design.
- Are there plants you really like?
- Favorite colors?
- Sports area?
- Do you want a vegetable garden or a fruit garden?
- Is an outdoor living space needed? How will it be used (i.e., entertaining, eating, cooking, sunbathing)? A patio, deck, or grassy area would be appropriate for these and other uses.

- What mood do you want to create in the landscape?
- Do you want a water feature?
- Is a children's play area needed? (Helpful tip: For safety reasons, locate this where it can be seen from multiple views, including the room in your house in which you spend the most time, such as the kitchen.)

After you have completed your needs analysis, make a list of all your activities and space requirements, so that you are sure to provide them as you complete your landscape design.

If you plan any substantial landscape changes in the future (e.g., adding a swimming pool, tennis court, or greenhouse), reserve space now so you won't have to move plants or structures later.



STEP 5



Budget and time

Landscaping can be a considerable investment and often can increase the overall value of your home. Take time to consider how much you can afford to spend on home landscaping. Once you've completed your plan, planting and construction can be spread over many years. To reduce costs, you can buy small plants and get do-it-yourself construction plans for patios, walks, decks, and other structures. Your budget may also include purchase or rental of tools, hardscape materials, or the cost to hire a professional for installation of all or a portion of the landscape. Even though your budget may limit your landscaping activities now, consider everything you eventually want to accomplish in your present landscape planning.

It is best to be honest with yourself regarding the amount of time you have to spend on creating and maintaining your landscape. Keep in mind that your landscape can be installed in small divided sections to fit your budget and your time. If you will be installing your own landscape, the time commitment will be much higher than if you hire a professional; however, it may be more budget friendly.

STEP 6



Plan outdoor use areas

The location and design of outdoor use areas depends on family needs and preferences. The particular uses planned and amount of space available will determine use area size.

Consider relationships between indoor and outdoor activities. You'll want to keep areas near bedrooms quiet, while locating noisy outside areas near the kitchen or perhaps away from the house if space permits.

Two general areas should be part of any home landscape design—public and private areas. The **public** area usually includes the front yard, driveway, sidewalks, and entrance to the house. On a corner lot, the public area may also extend into the side or backyard areas.

The entrance and front yard are the most public parts of most peoples' yards. You can design the entire front yard for public viewing or—because of small lot size or a need for privacy—enclose parts of it with plants, fencing, or both. Remember that your entrance and front yard contribute to overall neighborhood appearance. Trees, shrubs, flowers, lawns, fences, and other landscape structures should fit in with the neighborhood's character.

Driveways and sidewalks link your home to neighborhood streets. Consider safety, topography, and lot character when locating them. Keep grades as gentle as possible and make as few road cuts as possible. Remember the need for snow removal and landscape maintenance. Keep in mind how you want visitors to move from your parking area to the main entrance.

The **private** area of your yard or lot consists of living, service, recreation, and multiple-use areas, depending on the needs you identified earlier.

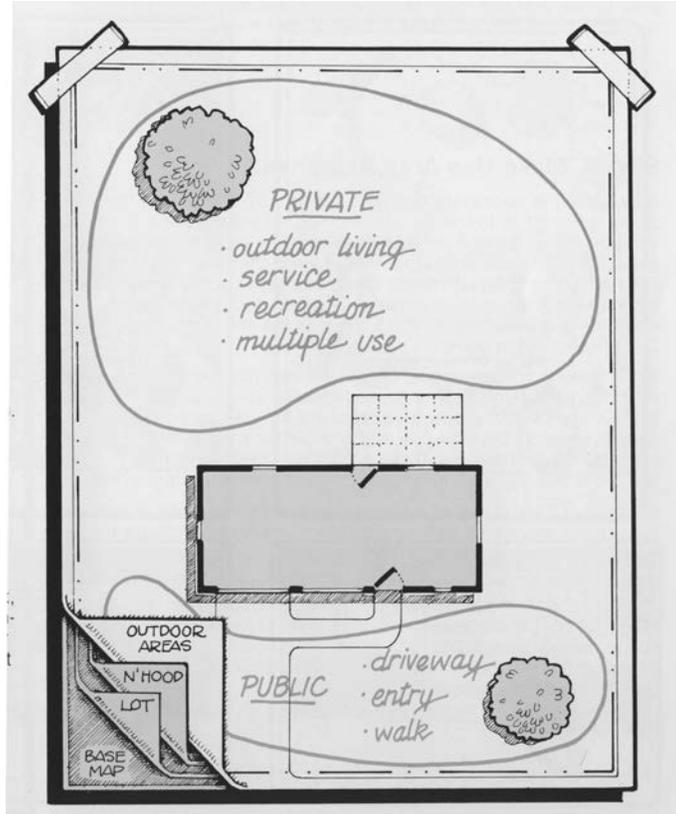
An outdoor living area may include such features as terraces, decks, patios, screened porches, and grassed areas for outdoor cooking, entertaining, and just relaxing. Try to estimate the number of people who might use the area at one time, so you can design it accordingly.

Many homeowners like to have a service area for such things as gardens, wood storage, and garbage storage. Choose these areas carefully.

Vegetable gardens and many flowers need full sunlight, suitable soil, and should be accessible to a water source. Wood and garbage storage areas should be accessible, but out of view.

You may want outdoor recreation areas for lawn games, a swimming pool, a tennis court, a greenhouse, or other purposes. Lot size, family needs, and finances will determine how much space you can devote to outdoor recreation.

In many yards, space is limited. You may need to use the same area for several activities. Multiple-use areas may serve as living, recreation, and service areas at appropriate times.



STEP 7



Make use area sketches

Now, after the necessary analyses (steps 1–4), it's back to the drawing board! With tracing paper on top of your base and lot analysis maps, make a number of alternative general use sketches, fitting the use areas together in ways that take into account site features and family needs. Use circles, ovals, and rectangles to locate specific spaces within your public and private areas. Keep the sketches that seem to suit your lot and family needs. Discard those that do not.

While making your sketches, consider these questions: Does the existing vegetation that you wanted to keep still fit into your plans? Is the slope of your property appropriate for your proposed outdoor use areas? Do your use areas make the most effective use of sunlight? After answering these questions, you may want to discard some use area arrangements and consider alternatives.

Grassed or hard-surfaced travel routes must be planned to provide convenient movement between different use areas. Indicate these routes with arrows on your plans.

So far, you have been collecting and combining information about your home site and your needs. To give specific shape to the general use areas and to complete your landscape design (step 8), you will need some understanding of design and composition principles. The next two sections give an overview of these principles.

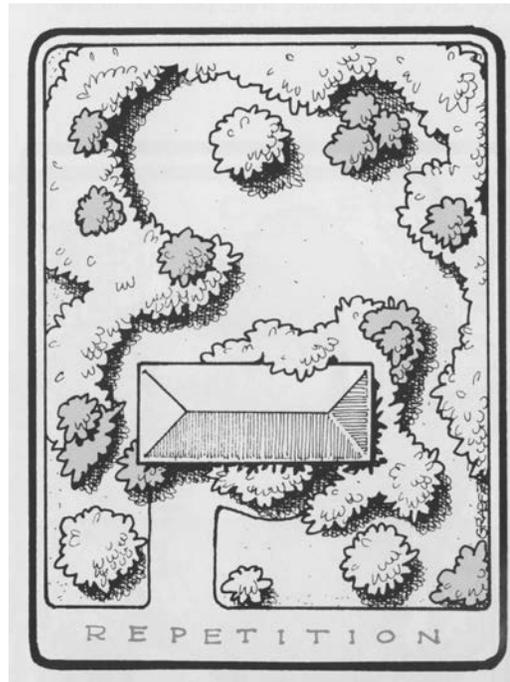
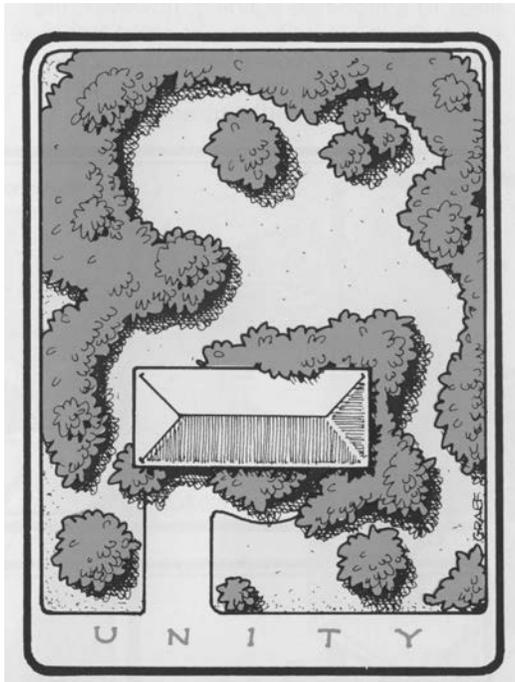
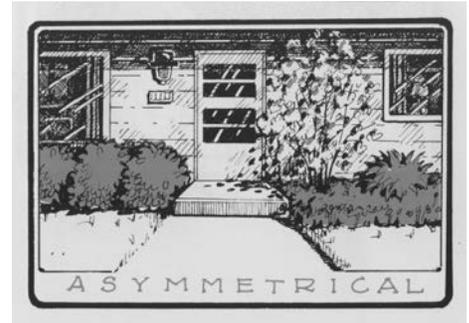
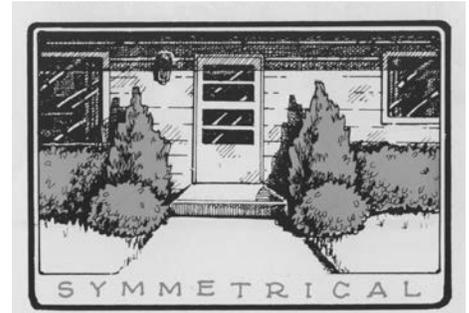


Landscape design principles

Home landscape designs vary according to family needs and preferences, but successful designs have certain underlying principles in common, including unity, balance, emphasis, scale, space, and lines.

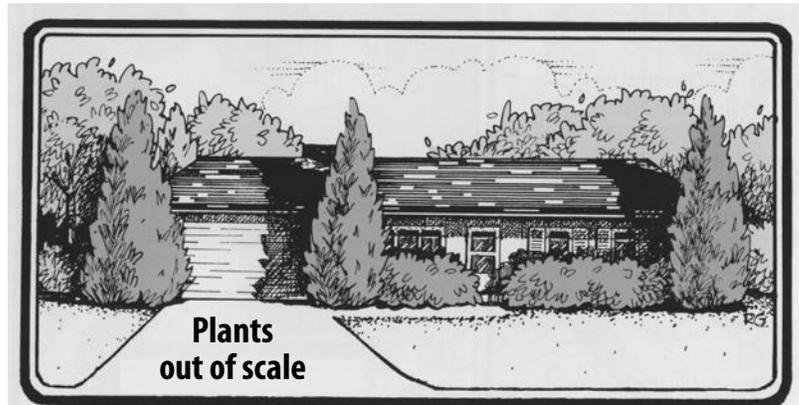
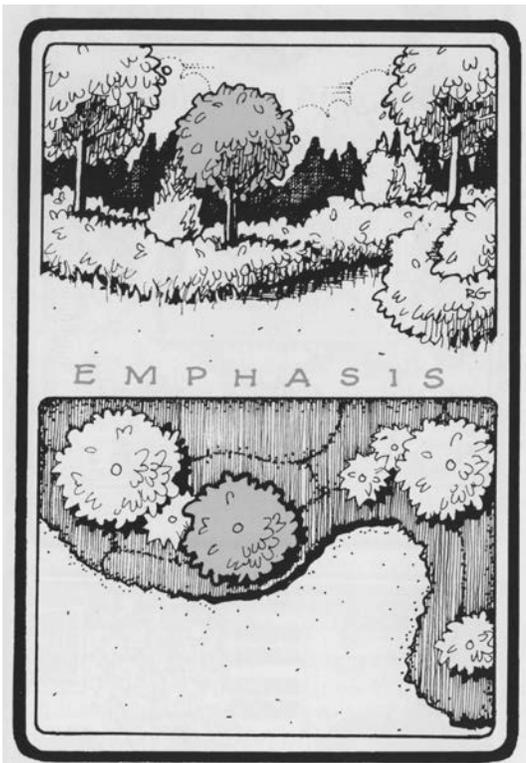
A landscape has **unity** when its predominant features have some visual characteristics in common. For example, plants with similar forms, colors, and textures can create unity, both on your lot and in your neighborhood. This is also true of lawns and paving materials. Repeating a design pattern, color, or texture in several different locations helps create unity. Planting beds and turf areas are very important to tie the landscape together and create a sense of unity.

Plants and landscape structures of similar visual importance help create **balance** in a landscape design. With color, form, texture, size, and other features, you can direct attention to several areas of the yard. Balance may be **symmetrical** (formal), in which each side of the yard is similar in pattern, or **asymmetrical** (informal), in which each side attracts the same attention, even though objects and spacing are not repeated.



Accent areas or focal points to which attention is drawn create **emphasis** and keep a design's unity and balance from becoming monotonous. A single contrast in color, texture, form, or height—such as that provided by a bench, tree, pool, or flowerbed—can provide emphasis.

Scale refers to the size relationships among plants, structures, and open spaces. A four-foot-high shrub with a four-foot spread may be too large—and therefore out of scale—in front of low windows. However, next to a high-rise building, the same shrub would be out of scale because it is too small. In some home landscape situations, group plantings will compensate for plants with too little spread.

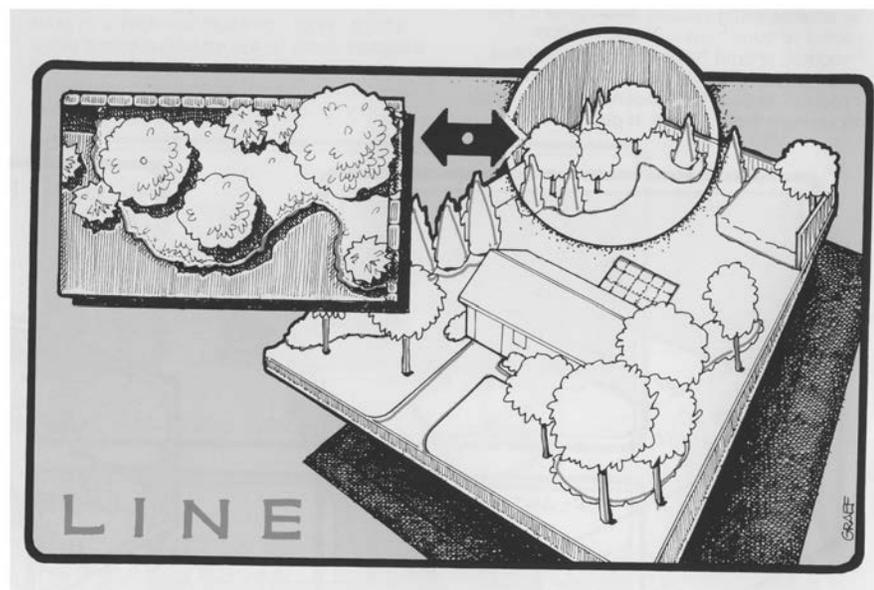
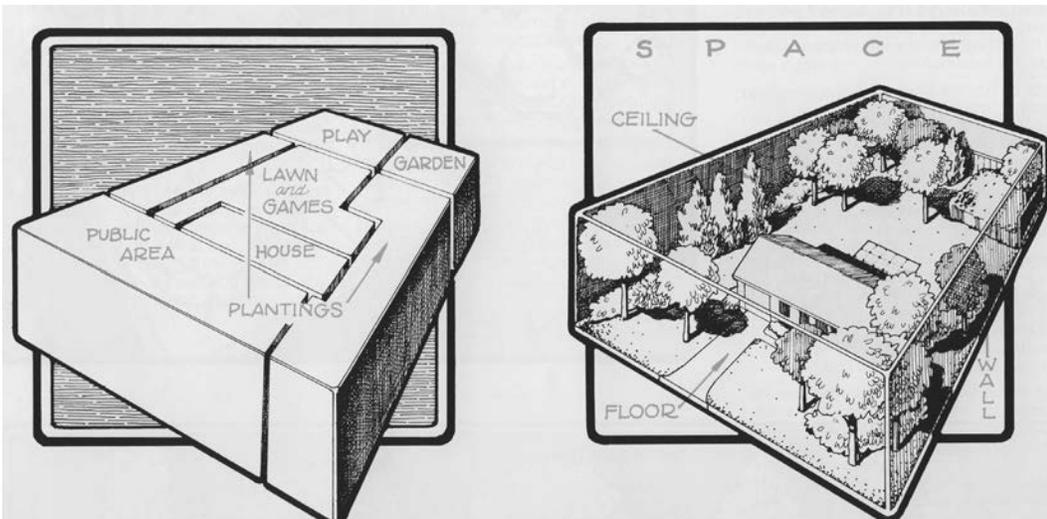


Space. Your entire lot can be considered a block of space with dimensions of length, width, and height. Plants, fences, and buildings are used to divide the lot into smaller living spaces analogous to the rooms of your house. These outdoor “rooms” should have separate identities and should meet your use area needs. The rooms should have openings that direct movement from one to another.

Lines may be straight or curved. Landscape designers frequently lay out patios, decks, and planting beds using straight lines that extend—or parallel—house and lot lines. Straight lines tend to create a more formal look for your landscape. Equally successful—and more naturalistic—designs can be created with curved lines. Loosely curved lines are easy to mow around and also provide a good flow through your landscape.

These design principles will help you shape the areas you identified in your general-use sketches. But you can’t design a landscape based only on the placement and size of plants and structures. The appropriate plants and construction materials must also be selected.

Both plants and building materials can be selected for their form, texture, and color. Keep these elements of landscape composition in mind as you proceed toward your final landscape design.





Selecting landscape plants

Three things to consider in selecting plants are, in the order you should consider them: plant hardiness, site conditions, and visual and functional suitability for your landscape design.

Wisconsin is divided into hardiness zones based on lowest winter temperatures. Many plants cannot survive Wisconsin winters.

All plants require specific growing conditions. The site conditions will determine what plants will grow well there. These include soils, sunlight, wind, topography, and pollution.

Soils vary greatly in acidity, drainage, and fertility. Sandy soils are usually well-drained, while clay soils may become water-logged. Few plants do well in both situations. Use the soil information from your soil test results and site analysis in selecting plants. It's better to select plants for your soil than to try to change the soil.

Plants vary in their **sunlight** requirements. For example, the Japanese yew does well in shade, but junipers need full sunlight to grow well and look their best. As you evaluate alternative landscape designs, consider shade patterns created by buildings and neighboring plants.

Some evergreen trees and shrubs will not tolerate the drying effect of winter **winds**. On the other hand, most hardy deciduous plants (those that drop their leaves in fall) will tolerate full exposure.

Topography. Some plants have adapted to cooler northern slopes, while others do better with hot, dry, south-facing exposure.

Be aware of possible air and soil **pollution** when selecting plants. De-icing salt damages many plants, either as a soil contaminant or as a spray created by traffic or snow plowing. Pollutants such as sulfur dioxide, ozone, and fluoride from industries and cars also damage plants.

Select plants that will grow well under your conditions or you'll have trouble keeping them healthy from the outset.

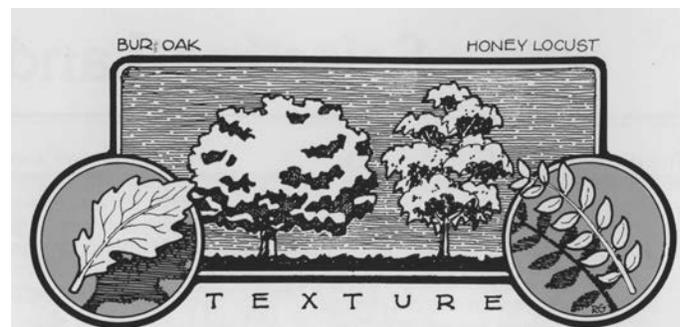
The UW-Extension publications *Choosing the Right Landscape Plants: Factors to Consider* (A3864) and *Winter Salt Injury and Salt-Tolerant Landscape Plants* (A3877) contain more information on these subjects.

Design considerations

Plants have different **forms**, or growth habits. Basic forms and their common uses are:

- **Vertical**—usually used sparingly as accents or to provide height
- **Horizontal**—the spreading habit of the plant
- **Weeping**—usually used only as accents (tend to create a calm feeling)
- **Pyramidal**—sometimes used as accents or combined with rounded and horizontal plants
- **Rounded**—often used to create large masses, borders, or enclosures

The size of a plant's leaves, twigs, and branches determines its **texture**. Fine-textured plants have small leaves and twigs, coarse-textured ones have large, and medium-textured ones are in between. Blending plants of all three textures will create interest and variety. Often, the size of a landscape space will determine what texture is appropriate; for example, a small space will seem larger with fine-textured plants rather than coarse-textured plants.



The dominance of one **color** provides harmony in a home landscape and throughout an entire neighborhood. For most people, green foliage creates a restful landscape. Foliage of other colors, such as burgundy, yellow, or variegated, should be used as accents or focal points. Pockets of the same colored annuals also add splashes of color and unity in the landscape. You may want to select plants with particular fruit, bark, and leaf colors to serve as accents as the seasons change. The UW-Extension publication *Selecting Woody Landscape Plants for Fall Color: An Illustrated Guide (A3837)* provides an extensive list of commercially available woody plants that offer spectacular fall color.

You may want to consider using some native plants in your design. Plants native to Wisconsin can be just as beautiful as non-native ones and are often better adapted to our growing conditions. There are many stunning native plants that do well in formal and informal landscapes. Don't be afraid to combine native plants with non-native ornamental plants.

Trees

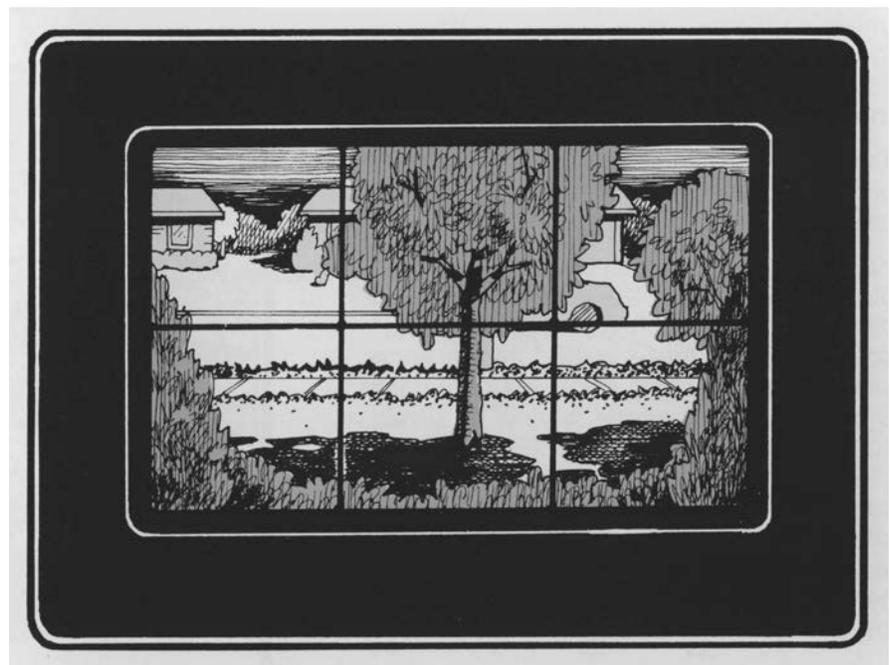
Trees—both deciduous and evergreen—put a house and its surrounding into proper scale. They should be planted where they will enhance the overall appearance of your home's setting and provide shade in summer and wind protection in winter. Large canopy trees, such as oaks and maples, can provide a "ceiling," making your outdoor space feel more like an outdoor room. Frequently, trees are used to frame a good view or to screen a poor one.

A variety of small to medium trees may be used as accent plants. You can base your choice on a combination of visual characteristics, including foliage and flower color, fruit, bark, fragrance, and texture. Berries and bark can also add winter interest to your landscape and provide a food source for wildlife. Fruit trees may be used as accent plants, but they can be messy and require regular management for insect and disease control.

Consider planting several types of trees to minimize the risks of insects and diseases. But don't overdo it; too many types of trees may deprive your landscape of unity. Finding a good balance would be planting multiples of several different tree species, depending on their expected mature size.

Or, for a more natural, forest-like landscape, vary tree spacing from 5 to 50 feet. Irregular tree placement creates an informal setting. To obtain the best shade patterns and to avoid foundation, siding, and roof damage, plant trees 15–25 feet from the house.

In urban areas, check with municipal officials before planting trees in the space between streets and sidewalks.



Shrubs

Deciduous and evergreen shrubs are an important part of most home landscapes. Planted in groups, they create screens and barriers and serve as foundation plantings or understory plants beneath trees. Although most shrubs work best in groups, they may also be used as accents; for example, accent shrubs can help lead visitors to your entrance.

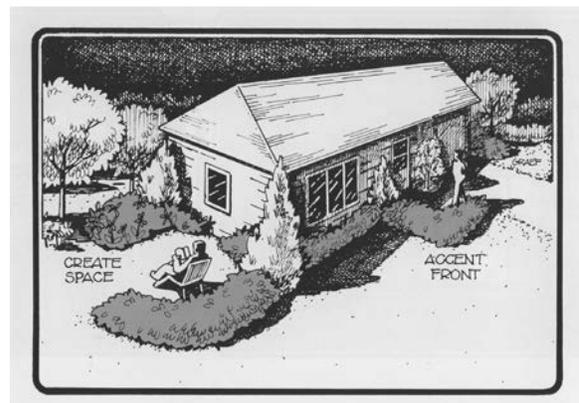
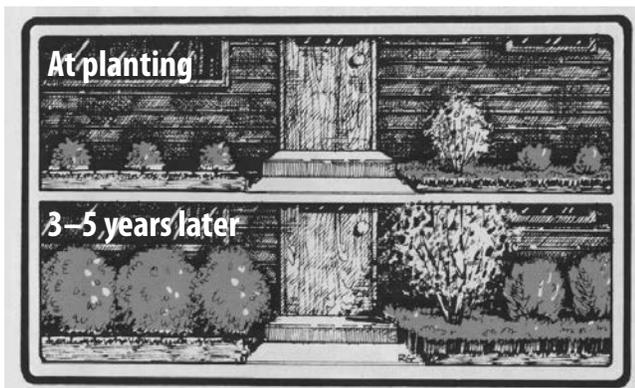
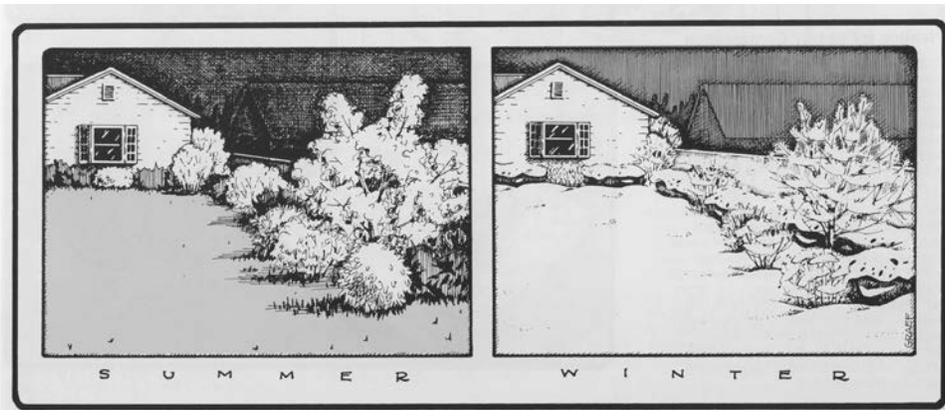
Masses of shrubs effectively delineate different use areas in the yard, much as walls delineate the rooms of a house. A heavy planting of shrubs at house corners softens the transition between vertical walls and horizontal ground lines.

Foundation plantings should enhance your overall landscape design, and not just be a row of plants surrounding the house. Unless specifically needed to screen windows, select foundation plants that at mature size will not block windows or doors, spill over the edge of planting beds, shade out grass, interfere with mowing, or block pathways. Again, use a variety of plant types to achieve this.

Understory plants can be small to medium, shade-tolerant trees or shrubs that, at mature height, do not interfere with the branches of the taller trees above them.

You can create seasonal variety with combination plantings of evergreen and deciduous shrubs. Remember that landscapes have a more attractive appearance when green-foliage plants dominate and shrubs with colorful flowers, interesting fruit, bark, and leaf color are incorporated as accents or focal points. Unify your landscape by planting the same type of accent plant in several different locations.

Avoid planting shrubs too close together—size at maturity should determine spacing. Don't give in to the desire to achieve the mass effect of a group planting too rapidly. A mature landscape cannot be created in one growing season. It will require at least three years—and perhaps five—before a group planting achieves its intended effect. Space shrubs according to their mature size and spread, so that once they mature, they will just barely touch. Place shrubs slightly more than one-half their ultimate spread away from the foundation, so they can attain their natural forms.



Ground covers, vines, flowers, and grasses

Ground covers, vines, flowers, and ornamental grasses complement most home landscape designs.

Ground covers help unify tree and shrub plantings and provide a contrast between lawn and planting beds. Mass plantings of perennial ground covers can reduce landscape maintenance. Plants planted in odd number groupings and in a staggered or irregular pattern tend to be more aesthetically appealing. For example, a grouping of three or five clumps of daylilies planted in a triangular pattern will look better than a group of four planted in a box pattern.

Vines soften the texture of brick and stone and shade house walls. They will cover chain link fences and help provide screening where space for trees and shrubs is limited.

Flowers add color to your yard. They can be planted in beds and borders, in front of shrub masses, and to fill in open areas while shrubs are growing. Flowers look best against a simple background, such as taller green foliage, ornamental grasses, or a fence or shrub planting, so they're not recommended for the middle of a lawn. Both perennial and annual flowers can require relatively high maintenance.

Ornamental grasses are commonly used in landscapes to provide structure, screening, or a background for other plants. They require little maintenance and add winter interest to the landscape. Planted with flowers, shrubs, and trees, they complement many garden situations.



Lawns

Lawns can serve an extremely important role in your outdoor space and can be high-maintenance. A central open lawn area can be a gathering space for entertaining, an area for various recreational activities, or a travel route through the yard. Well-shaped lawns create interest and eye movement in the landscape. A lawn adds unity to a landscape design by linking together the various rooms of a landscape. Lawn areas should be functional and designed for ease of maintenance.

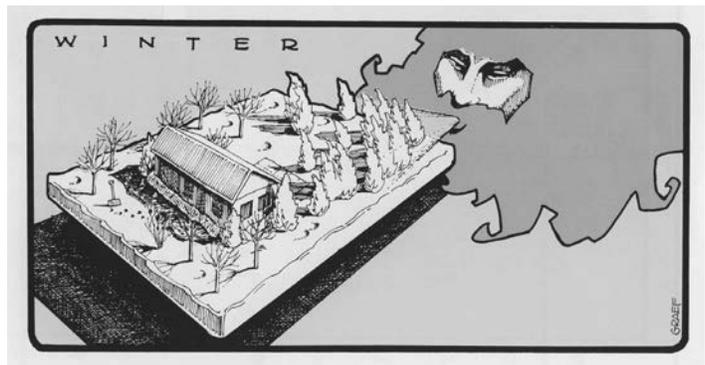
Avoid small pockets of lawn that serve little function but require regular mowing or string trimming. The mower should be able to easily maneuver through the area and around garden beds. Be sure to allow enough space for mower access.

Publications on planting and maintaining lawns are available through UW-Extension county offices or Cooperative Extension Publishing at learningstore.uwex.edu.

Energy conservation

Proper plant selection and placement can reduce home energy consumption. Deciduous trees planted 15–25 feet away from the house on the east, south, and west sides shade the roof and walls in summer, reducing surface temperatures. After the trees have dropped their leaves in fall, winter sunlight can reach the house to provide passive solar heating.

Windbreaks, mainly evergreen plantings, located 4–6 times their ultimate height away from the house on the north and west sides can reduce winds and winter fuel consumption. Foundation plantings also reduce winter heat loss. Vines can shade and cool house walls during summer. Maximum energy savings will not occur until your plants reach maturity.



Low-maintenance landscapes

All plants and structures require some maintenance, but you can choose the level of maintenance your landscape will require. Many homeowners enjoy lawn and garden work and knowingly choose plants and structures that require a lot of maintenance. Others want an attractive and functional landscape, but would rather not spend evenings and weekends weeding, mowing, watering, edging, and pruning. If you are in the latter category, work toward a low-maintenance landscape.

Turf often requires the highest maintenance in a landscape. Low-maintenance landscapes usually have small lawns. If you have a lawn, mow regularly using a mulching mower to avoid raking leaf clippings. A mulching mower reduces fertilizer needs by returning plant nutrients to the soil.

A perennial ground cover under trees and shrubs can also reduce maintenance. Most ground covers grow well in organic mulch and, if planted at the right density, can even be used in place of mulch.

Edging around planting beds reduces maintenance time by separating the beds from the lawn. An edge can be created with a straight-edged shovel (repeated about every other year) or by selecting edging material that blends into the landscape (i.e., has texture and color that complements the house and other landscape structures). Stone, wood, brick, steel, and plastic are all available.

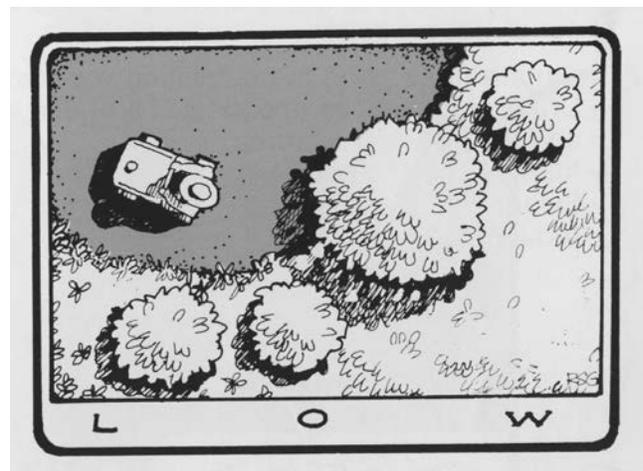
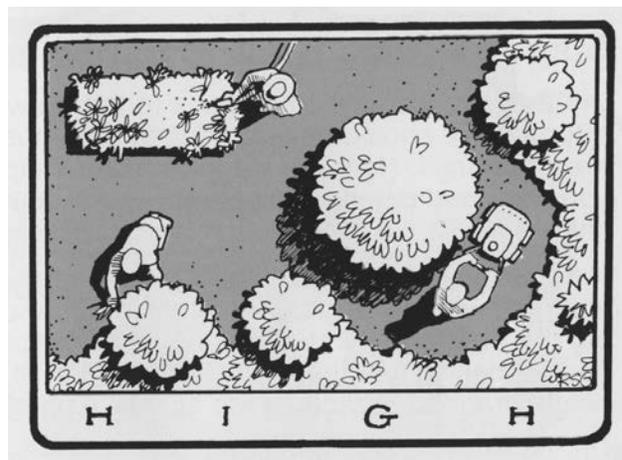
Use well-adapted plants in their natural form that require minimal maintenance. Though attractive, it takes a lot of time to maintain unnatural plant forms like topiaries, espaliers, and pollards. A natural landscape usually requires less maintenance than most conventional ones.

Space plants properly during the initial planting. For the first few years, a landscape with plants properly placed will look a little bare; however, once the plants begin to mature, they will be much healthier. Patience is key! Overplanted landscapes mean extra time spent pruning, trimming, and thinning. Plants planted too close also compete for nutrients and sunlight and limited air flow, which may lead to unwanted pest problems. If you underplant, your landscape will lack the aesthetic value, and more plants may need to be added. A proper amount of plants will create a full canopy that will shade out weeds.

Tip: Planting annual flowers in containers and small planting beds makes planting and removal easier.

Tip: Don't forget about snow removal in winter. For example, allow for areas to pile snow, especially if a plow is used, and avoid tall shrubs along walks that are shoveled by hand.

Mulched planting beds usually require less maintenance than the same area of properly maintained lawn. Two to four inches of shredded bark, wood chips, pine needles, or similar organic materials control weeds, retain soil moisture, and moderate soil temperatures, while blending into the landscape. To prevent most weeds, add a



fresh layer of mulch every year or two to maintain a 2–4" layer and freshen up the landscape.

Avoid placing plastic sheeting or landscape fabric around plants and under organic mulches. It is best to allow the organic mulches to decompose and become part of the soil. As organic mulches decompose on top of plastic or landscape fabric, it creates rich compost that is the perfect environment for weed seeds to germinate. As plants mature the plastic can also become too tight around the plant, stressing or killing the plant. Plastic also disrupts the exchange of moisture and oxygen between soil and air.

If using some type of rock as decorative mulch, landscape fabric can be used to prevent weeds. However, rock mulch is not recommended for most ornamental plantings or around trees. It can reduce aeration of heavy or poorly drained soils (while providing only limited moisture retention), and it can absorb and reflect heat, which may damage plants. Some crushed stone, marble chips, and brightly colored wood mulch can introduce colors that violate basic design principles and detract from plants and other design elements.

Landscape structures

Most libraries, bookstores, and garden centers offer a variety of publications that contain detailed construction plans and material suggestions for landscape structures. We discuss only the more common structures in this publication.

Grading

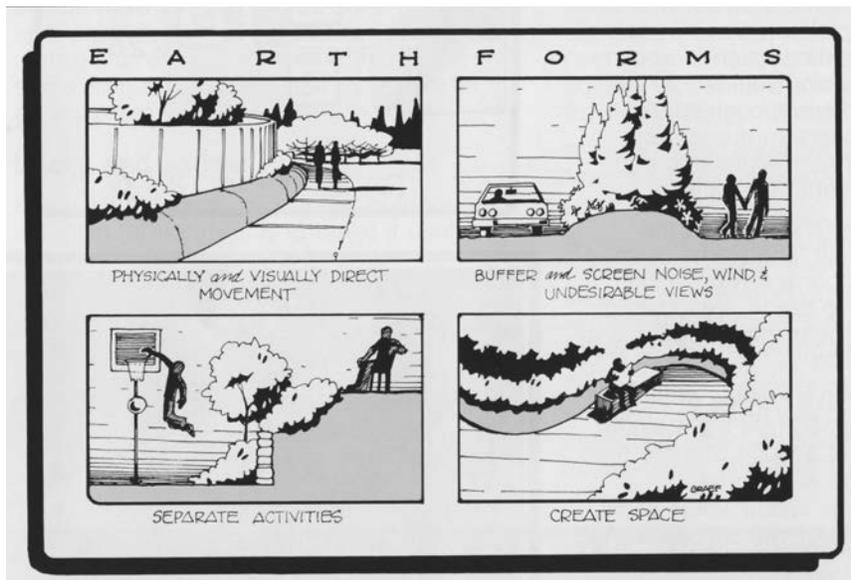
If your home site is already graded and even partially landscaped, you probably won't want to change its contours. But if the final grading has not been done, you may be able to create the topography most appropriate for your landscape design.

Actually, the best time to think about changing a home site's topography is before building begins. This is also the best time to decide whether shade trees and other plants already there should be saved. Mature trees and shrubs add thousands of dollars of value to residential properties.

If you want to keep existing plants in your landscape design, they should be protected before construction begins. Construction equipment can damage and kill trees by compacting soil in their root zones. A simple fence erected just beyond the branch spread of a tree will protect both roots and trunk from damage.

If you change the grade around an established tree, you must avoid changing the amount of air, water, and soil nutrients reaching it. See the UW-Extension publication *Preserving Trees During Construction* (A3072) for details on how to accomplish this.

During rough grading, the topsoil should be stockpiled away from the immediate construction site. To protect this valuable soil from erosion for a short time, spread weed-free straw over it or cover it with plastic tarp. If the topsoil is to be stockpiled for more than one season, seed the pile with annual rye grass, oats, or another annual plant. When construction is completed, the compacted soil should be aerated first, then have at least 4–6 inches of topsoil spread evenly over the lot.



Mounds, berms, and changes in ground contour great enough to require steps or retaining walls help create an interesting landscape. But they should perform a specific function, such as outlining specific use areas or other lawn spaces, buffering noise, or screening unwanted views. Mounds should blend into the surrounding topography and look natural.

Your ground elevation must match your neighbors' at lot lines. You can accomplish this with gradual grading or retaining walls.

Hardscapes

Hardscapes include structures in the landscape that tend to be permanent or semi-permanent features, including driveways, walkways, steps, decks and patios, retaining walls, fences, and lighting. They can be built out of several different materials and can add to the artistic value of your property. Materials such as brick, flagstone, permeable pavers, crushed stone, and cement are commonly used in hardscapes. It is best to use similar building products throughout the landscape rather than mixing many different types of materials. You may need to check local ordinances or obtain a building permit prior to construction.

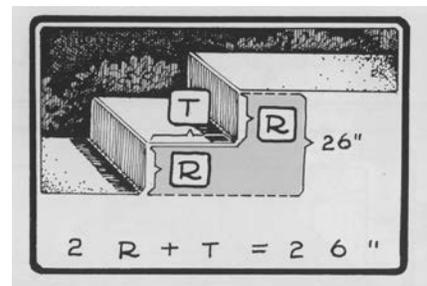
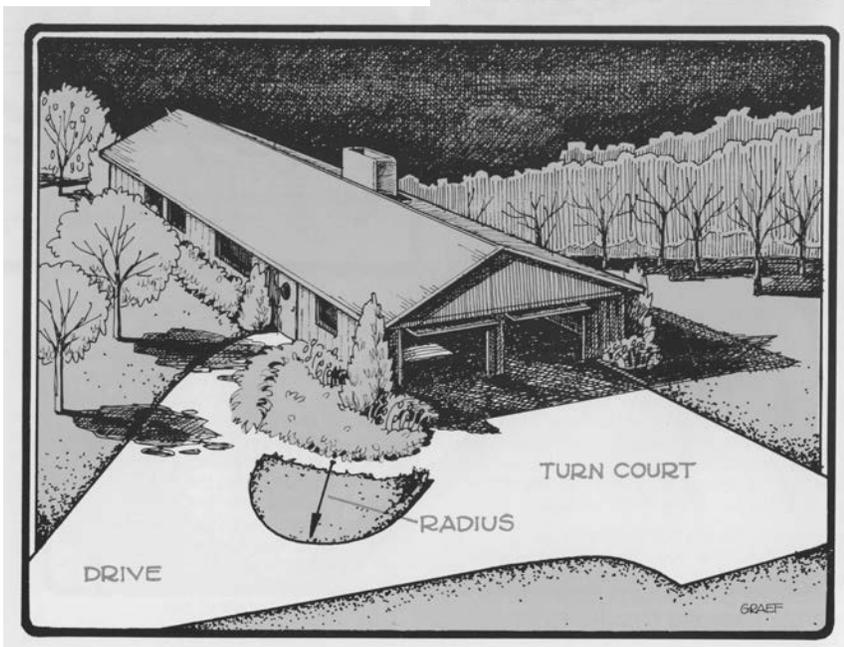
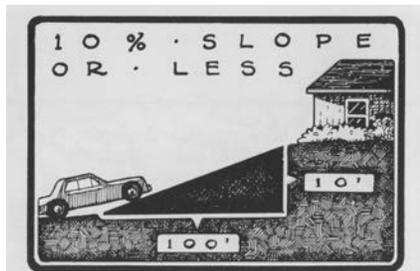
Driveways

The driveway is an integral part of a home's public area, providing access for both vehicles and pedestrians. At most homes, it is where visitors arrive, mail is delivered, trash is picked up, and children play. It should be wide enough to accommodate pedestrians and vehicles at the same time. If you have enough space, consider constructing a turn court and parking area to permit the unhampered and safe movement of vehicles.

For safety, the drive should meet the street at a right angle, and plants or structures must not hamper a driver's vision. If the drive has a steep grade, try to design a nearly level area near the garage and at the street intersection.

Driveways should have a slope of at least 1% (1 foot rise per 100 feet traveled) for proper drainage. But a slope of more than 10% will be hazardous in winter. Remember to provide space where snow can be placed in winter without damaging plants or structures.

We recommend that homeowners seek professional help to make sure that unusually long driveways or those on steep grades fit harmoniously into the landscape.



Walks

Most people find walks already in place when they move into a home. A curved walkway has much more curb appeal than a straight walkway. Typically, an entrance walk meets the driveway at a right angle and parallels the house's front door. Unfortunately, in many cases the walk is too narrow for comfortable pedestrian use and too close to the house for proper plant growth.

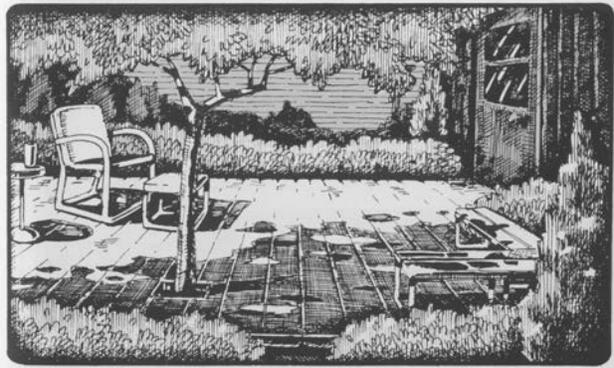
An entrance walk should be at least four feet wide. A large house may require a five-foot walk for proper scale. If you have the opportunity to plan your entrance walkway, leave at least four feet between it and the house. The more space the better to provide enough room for an entrance planting to accent the front door.

Plan the entrance walk for easy access and winter snow removal. A slope of 1–4% is ideal. For safety, the slope should be no more than 6%.

Steps

Where the ground slopes more than 6%, you will need to install steps to permit people to move from one level to another. No matter what the steps are constructed of, they should meet a long-established standard for safe and convenient outdoor steps: two risers (the riser is the vertical part of a step) plus one tread (the horizontal part) should have a combined measurement of 26 inches. The most common step dimensions are 5½-inch risers with 15-inch treads and 6-inch risers with 14-inch treads.

A pedestrian may not notice only one or two steps, so as a rule a set of steps should have at least three risers. If this isn't possible, use an eye-catching surface material or outdoor lighting to make the steps visible. Handrails make steps safer, especially in winter.



Decks and patios

If you want a deck or patio for outdoor living, plan for it carefully to make it useful in as many ways as possible. Decks and patios should be an extension of your home and easily accessible from both your yard and from inside the home.

Location is one important consideration. A patio or deck should be convenient to the appropriate areas of your house. If you plan to eat or entertain there, place it near the kitchen or family room. Of course, door locations may limit your placement alternatives. Other factors to consider are exposure to sunlight, summer winds, good views, and privacy.

Patio size will depend on what you want to use the patio for, yard space available, and family size. About 64 square feet of hard-surfaced patio space for every family member is recommended.

A patio should have a 1–2% slope away from the house so water will drain away from the house.

A deck can provide a level outdoor area over steep ground. It should appear to be an extension of the house. Its color and texture should harmonize with the house and surrounding landscape.

The architectural lines of your home, choice of construction materials, and other aspects of your landscape design will all influence the shape of a patio or deck.



Retaining walls

Retaining walls are used to make abrupt changes in elevation, provide privacy, and delineate outdoor space. Stone, brick, wood ties, timbers, and concrete are the most commonly used materials.

For steep grade changes, a series of low terraced walls is usually better than one high one. The higher the wall, the more it must be reinforced to withstand the pressures created by soil and moisture freezing and thawing in winter.

For both dry and mortared walls, careful planning and construction are essential. Consult detailed design books or seek professional assistance if you plan to build a retaining wall more than four feet high.

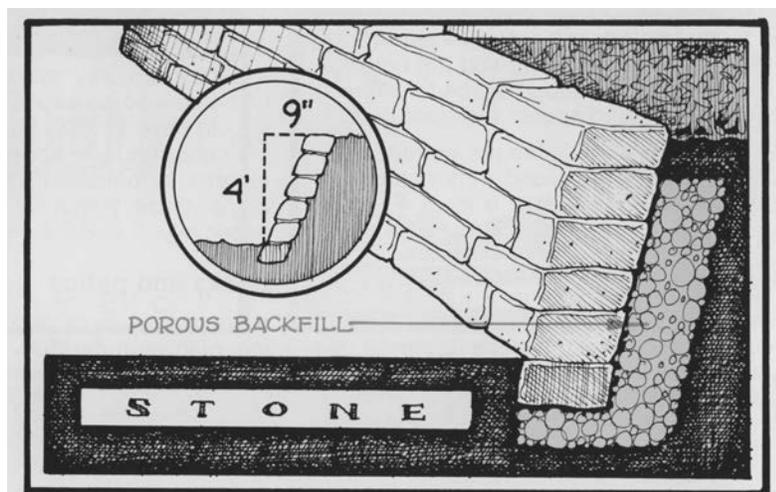
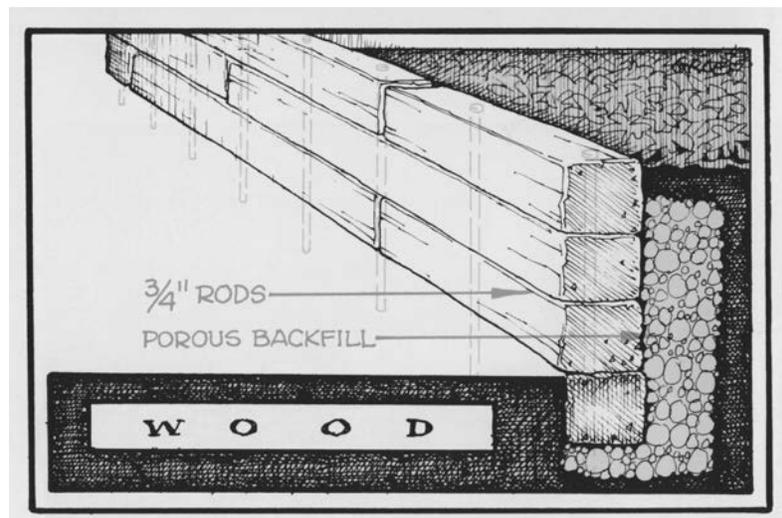
Fences

Fences, alone or in combination with plantings, provide privacy and enclosure in the home landscape. They also serve as windscreens, screens for poor views, accents, space dividers, sources of shade, and backdrops for plants.

Fences may be constructed in a variety of styles and from many different materials. If you decide to build a fence, choose a style that complements your overall landscape design. Chain-link fences, with or without plastic strips, rarely beautify a yard. Fences made of dark or neutral-colored natural materials usually do.

Lighting

Outdoor lighting can be included in your landscape design. Lighting walks, entrances, and steps makes them safer, especially during dark and slippery winter months. Soft, down-facing overhead lighting extends the useful hours of patios and decks. With lights, you can highlight particular plants or structures. Low landscape lighting—no more than three feet from the ground—can enhance your entire landscape ambiance in the evening.



Finishing your landscape design

STEP 8



Putting it all together

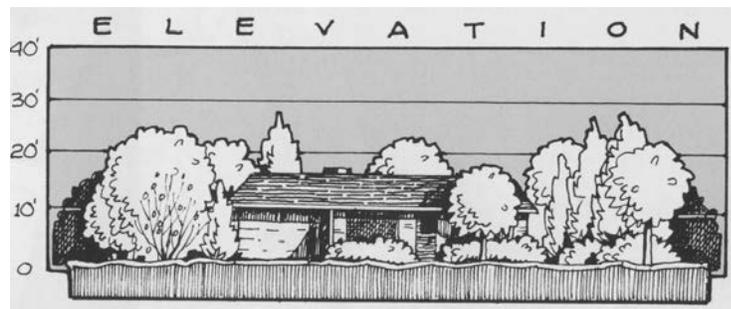
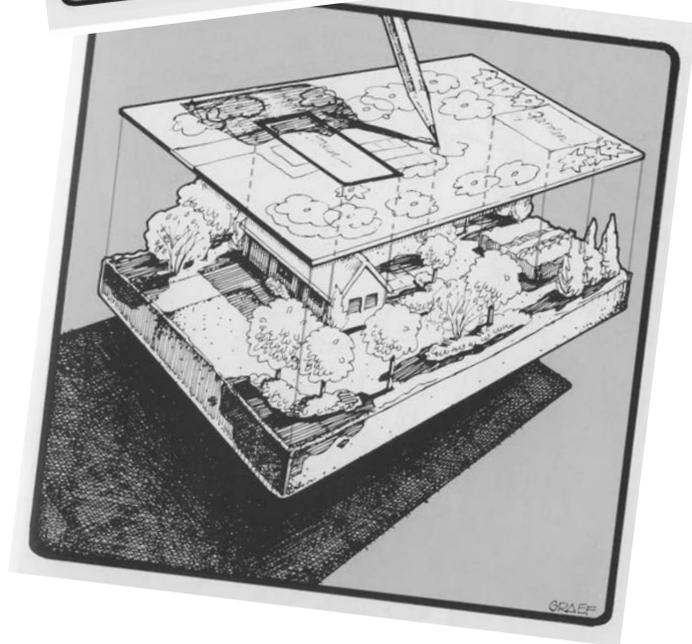
Once again, it's time to go back to the drawing board. You should have produced a number of alternative use sketches. Now you will give exact shapes to the use areas you want and decide what plants and structures will create a pleasing overall landscape design.

If it has been some time since you made the general use sketches, you may want to retrace the steps that led up to them by reviewing the first three sections of this publication. To complete a successful design, you need to have a grasp of lot, house, and neighborhood characteristics and general design principles.

On the drawing board, place the best use area sketch over your base map and lot analysis drawing. On top of this, place a clean sheet of tracing paper.

There are three parts to completing your landscape design:

- Draw exact shapes and locations of use areas, planting beds, and landscape structures.
- Identify specific planting sites.
- Select plants and construction materials that meet your design requirements.



First, draw in planting beds and landscape structures that give shape to your outdoor space. Unless a very formal garden is desired, use a few loose and bold curves to create planting bedlines and turf areas. This style will help your eye move through the landscape and make mowing easier. As you draw, consider both function (e.g., energy conservation, screening poor views, enhancing good ones) and aesthetics, based on general design principles. You may want to review the relevant sections as you zero in on the most successful design.

Draw planting beds and landscape structures accurately to scale. You'll need some idea of the types of plants that will go into planting beds—deciduous versus evergreen trees versus shrubs—to make the beds the proper size. Bed size should have enough depth to match the scale of the house and yard, and provide enough space for plants to mature and be intertwined in groups and masses rather than in straight rows.

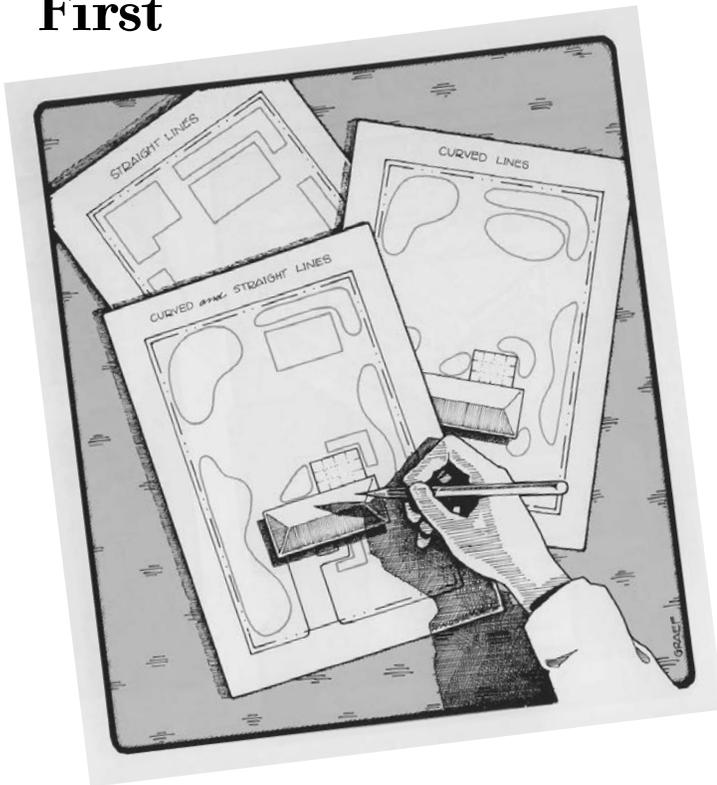
Be prepared to draw several alternative designs. Professional designers usually draw several designs, try to improve them, and then select the one that is the best.

Second, identify exactly where plants should go, using appropriately sized circles on your drawing. Except for very large trees, which are usually drawn about two-thirds their maximum size, draw circles representing approximate mature plant spread. You may want to differentiate deciduous and evergreen plants with different symbols.

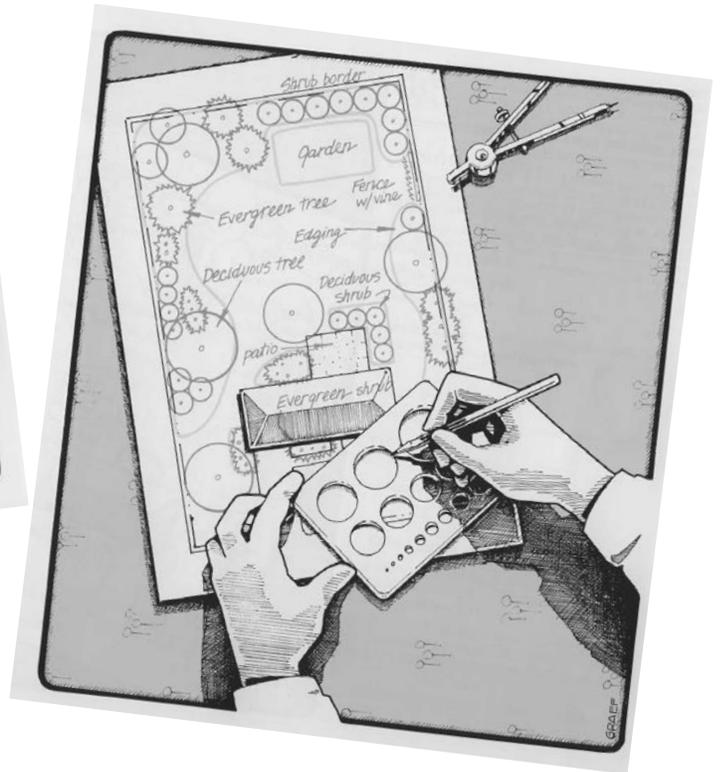
Tip: Check plant tags for plant mature height and spread. If it's not listed, a good rule of thumb is the spread is usually about two-thirds the specified height.

Try incorporating trees (new and existing) inside planting beds. They will be much healthier in the mulched bed where they don't have to compete with turfgrass, and you won't have to mow around them.

First



Second



Finally, decide what plants and building materials will fulfill your design requirements. The goal is to select plants that will grow well in your planting sites while providing form, texture, and color that complement your design.

Also choose building materials with textures and colors to complement your design. Structures should blend in with the house and the plants. If you have a wood-surfaced house, for example, you'll probably want a wooden fence, and its color should be the same as or complement your house color.

STEP 1



Getting ready for installation

If your budget does not accommodate installing the entire landscape at once, decide which area you want to focus on first. Hardscapes are best installed first because they tend to be messy during construction.

Once hardscapes are in place, begin to lay out the landscape beds. This can be done by spray painting or using rope or hose to outline the area. Once you have the outline, you may have to remove existing grass. Doing so can be done several different ways, including physical removal, smothering, or using an herbicide. Once the grass is removed or killed, organic matter can be added to the area before planting. In many situations it is not necessary to rototill the ground or remove the dead grass.

Next, determine where the largest plants will be located and plant them properly, followed up with a good watering. (See UW-Extension publications noted at the end of this publication for planting details.) Once the largest trees and shrubs have been planted, edge the perimeter of the bed. Then set out the smaller plants in their containers. Rearrange them as necessary to determine the best location before removing the containers and planting them. After all the plants have been planted, the garden is ready to be mulched and watered.

Congratulations, the landscape is now ready to be enjoyed and, of course, maintained!

Finally



Resources

UW-Extension publications

Many publications related to home landscaping are available through UW-Extension county offices or from Cooperative Extension Publishing at learningstore.uwex.edu or call toll-free 877-WIS-PUBS (947-7827).

Plant selection

A Guide to Selecting Landscape Plants for Wisconsin (A2865)

Choosing the Right Landscape Plants: Factors to Consider (A3864)

Container Gardening (A3382)

Landscape Plants That Attract Birds (G1609)

Lawn Establishment and Renovation (A3434)

Lilacs for Cold Climates (A3825)

Prairie Primer (G2736)

Selecting Woody Landscape Plants for Fall Color: An Illustrated Guide (A3837)

Plant care

Caring for Deciduous Shrubs (A1771)

Caring for Your Established Shade Trees (A1817)

Do-It-Yourself Alternative Lawn Care (A3964)

Growing Grass in Shade (A3700)

Lawn Weed Prevention and Control (A1990)

Mulches for Home Gardens and Plantings (A3383)

Organic and Reduced-Risk Lawn Care (A3958)

Organic Soil Conditioners (A2305)

Sampling Garden Soils and Turf Areas for Testing (A2166)

Selecting, Planting, and Caring for Your Shade Trees (A3067)

Tree and Shrub Fertilization (A2308)

Watering Your Lawn (A3950)

Yard Care and the Environment series:

Lawn and Garden Fertilizers (GWQ002)

Lawn and Garden Pesticides (GWQ011)

Lawn Watering (GWQ012)

Lawn Weed Control (GWQ013)

Managing Leaves and Yard Trimmings (GWQ022)

Rethinking Yard Care (GWQ009)

Shoreline Plants and Landscaping (GWQ014)

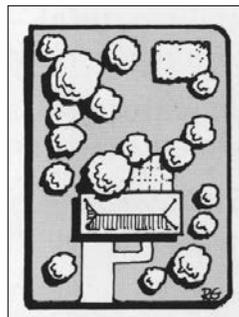
Other publications

Landscaping for Wildlife, available from the Minnesota Department of Natural Resources:

www.comm.media.state.mn.us/bookstore/mnbookstore.asp. A landowner's guide to developing a beautiful yard that attracts wildlife.

Livable Landscape Design (1411B-211), available from Cornell University: www.gardening.cornell.edu/landscape. Provides a fairly detailed reference on the process and principles of livable residential landscape design.

Basic books on home landscape design are also available at libraries, bookstores, and garden centers.



Landscaping assistance

Homeowners who need assistance developing and carrying out a landscape plan can turn to several sources of professional and technical services.

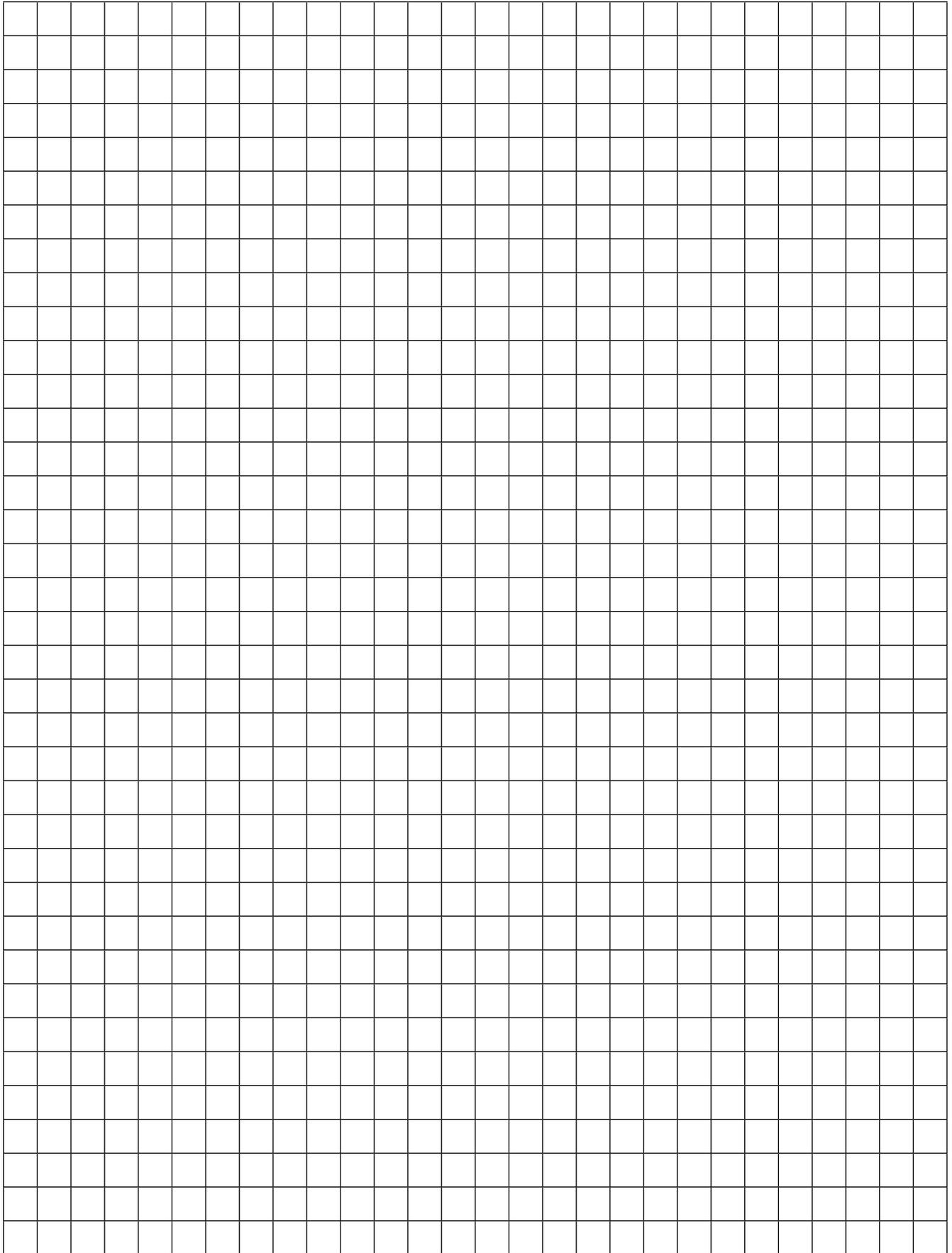
Landscape designers and landscape architects are professional consultants who plan and design the arrangement of outdoor areas. These professionals can offer assistance with site selection and planning, preparing alternative plans, and selecting a final plan that includes plants, hard surface materials, and working drawings. Many landscape companies also offer installation services.

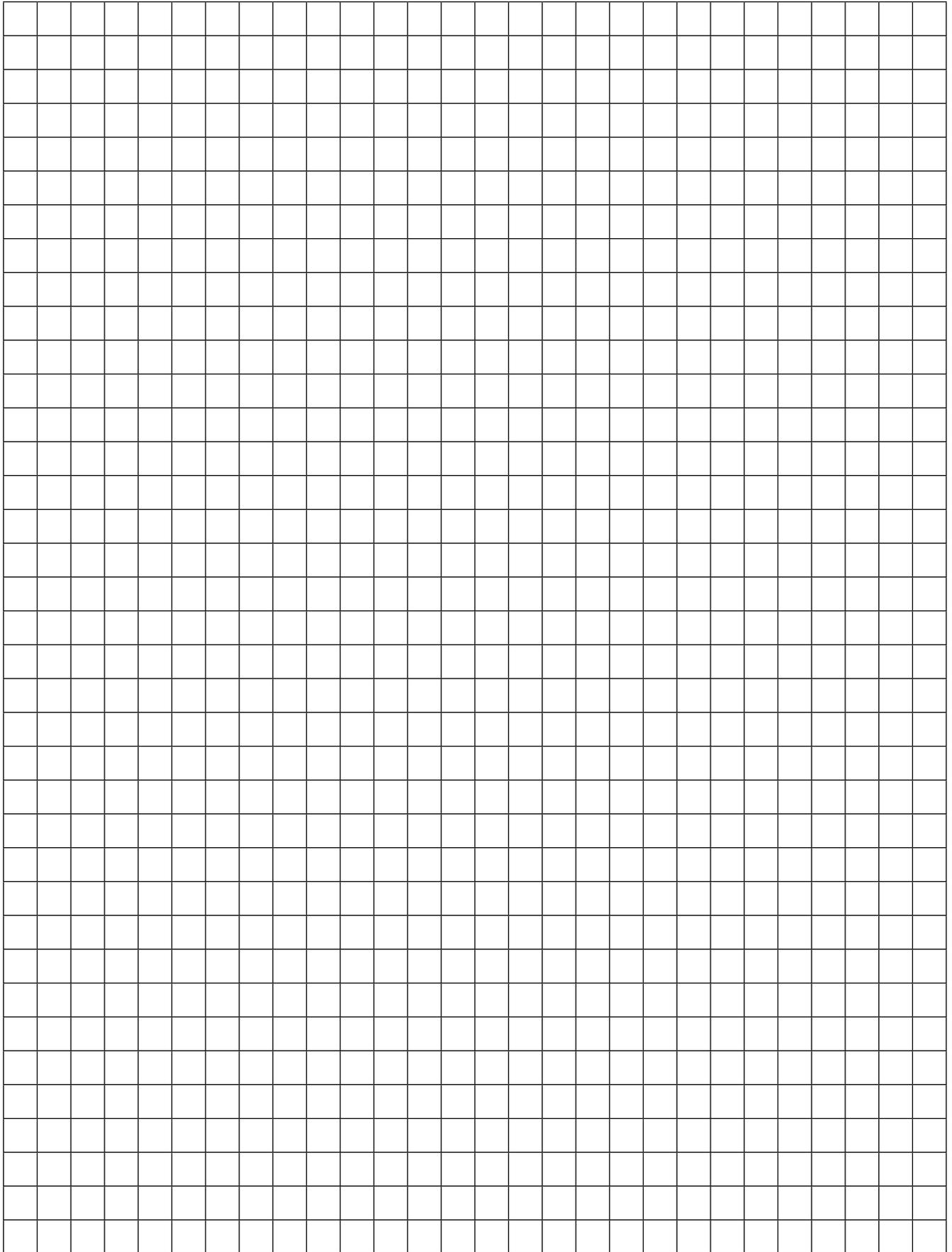
Plant nurseries grow plants for wholesale or retail sale. Some may offer landscape design assistance, particularly with plant selection and placement. Some may do the planting. Some nurseries operate garden centers.

Landscape contractors specialize in landscape construction. They do rough and finish grading, seeding and sodding, and concrete work for drives, walks, and low retaining walls. They place landscape plants and supply topsoil, asphalt, and other construction materials. Some install fences, decks, patios, sprinkler systems, and pools. Landscape contractors may also provide design assistance or be associated with a garden center.

Garden centers sell seeds, fertilizer, and plants that they may or may not have grown themselves. Most sell a wide variety of materials, including bedding plants, pottery, and patio and lawn furniture. Some may provide delivery service, landscape design, and installation services.

Idea worksheet







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