

Eight Steps to Planning and Designing a Great Yard

A great yard begins with a great plan. When designing your landscape, take into account your own preferences and purposes. These considerations will include the look you want to achieve, the ways in which you will use your yard, the amount of time you want to spend taking care of your yard and, of course, your budget. The following steps will guide you through the design process.

STEP ONE

Make a Drawing of Your Site

Measure your lot, then draw a diagram of the site that includes the house and any existing features like a walkway, pool or patio. Make the drawing to scale by using grid paper or an enlargement of the plot plan provided by your builder. You may want to make



This space serves as an entertainment area and a play area. The convertible shade structure allows for sun during the cooler months and provides shade during the warmer times of year.

two separate drawings; one for the front yard and one for the back yard. Consider enlarging the diagram so you have plenty of room to make drawings and notes. Make several copies to use during various stages of the design process and keep at least one clean copy for future use.

STEP TWO

Make a Wish List

If you don't already know what you want from your landscape, now is the time to decide. Ask yourself these questions:

- What do I want my yard to look like?
- What functions do I want my yard to serve?
- Do I want color and shade in my yard?
- Do I want my landscape to help conserve energy?
- Do I want to create wildlife habitat in my yard?
- Do I want a play area?
- Do I want a quiet place to relax?
- Do I want an entertainment area?
- Where would be the best places for functional areas like a pool or spa, a play area, a relaxation area, a veg-

Opposite: Dense plantings of Prostrate Evening Primrose (foreground), Tiger Aloe (background/left) and Parry's Penstemon (background/right) provide fabulous color and great wildlife habitat in this front yard.

etable garden – close to the house?
away from the house? in plain view?
out of sight? – and how large should
they be?

- What do I want to see when I look
out my windows?

Start a wish list by writing down the
answers to these questions. After com-
pleting the list, put it away for a while.
Then look at it again to see if you have
changed your mind or forgotten any-
thing. Revise the list accordingly.

STEP THREE

Look at Your Site

Spend some time walking around
your lot. Take a good look at every fea-
ture. Consider how your lot is graded.
You may want to avoid putting a patio
in a drainage area, but the same area
might be a perfect rainwater catch-
ment for a vegetable garden or wild-
flower patch. Identify sunny areas and
shaded areas at certain times of day.
Find out where your utility lines are
located. Also, note views you want to
preserve and those you want to screen
out. If this is not a new landscape, note
the location of existing plants and irri-
gation system components you wish to
keep. Evaluate both the positive and
negative aspects of your site. Use one
copy of your site drawing to record
everything you noted during the evalu-
ation. A sample site drawing with
notations can be found on page 25.

STEP FOUR

Learn About Plants and Other Landscape Materials

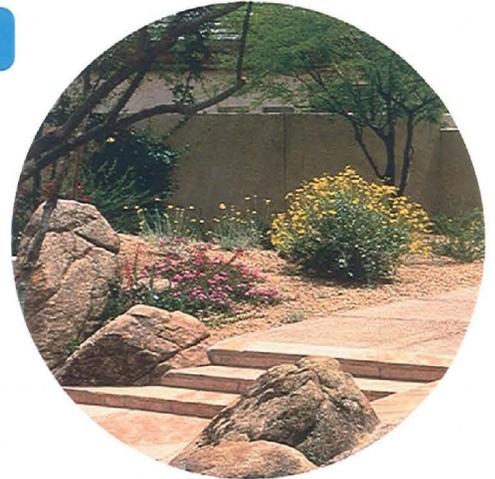
Plants that Make the Desert Bloom

An increase in the popularity of
Xeriscape over the past fifteen years
has led to widespread availability of
low water use plants in our area. If you
are new to the Sonoran Desert or if
you have not been shopping for plants
in a while, you are in for a treat. The
wide variety of low water use plants
available today offers many beautiful
choices. Deciduous low water use trees
can provide summer shade and let
winter sunshine into your home. Low
water use plants add texture, softness,
seasonal color and form to the land-
scape. Desert wildflowers can provide
extra color and interest during certain
times of the year.

Many low water use plant species are
native to our area, while others have
been imported from other parts of the
United States and from different conti-
nents around the world. Take some
time to learn about the abundance of
beautiful plants that are water thrifty
and adapted to our desert climate.

Here are some tips for selecting low
water use plants:

- Consider the mature size of the
plant. A plant that outgrows the
space available will require pruning



*Mixed hardscape and boulders provide structural
interest in this garden.*

and may crowd other plants located
nearby.

- Consider color and texture. Foliage
colors range from pale gray to dark
green. Some plants bloom almost all
year, while others display a great
show of color only once or twice
each year. You may want to choose
plants with a variety of foliage col-
ors that blend well together. For
year-round color, choose a mix of
plants that bloom during different
seasons.
- Include in your selection plants that
attract wildlife, such as butterflies,
hummingbirds and other beautiful
bird species.
- Keep poisonous plants and plants
with thorns away from walkways and
play areas.
- Keep plants that drop spent flowers,
leaves or seed pods away from a
pool area.

Adding Structural Interest to the Garden

Although plants are considered the mainstay of many landscapes, it is important to remember that other landscape materials are available that will add to the beauty and function of your yard. For example, you may want to incorporate hardscape or structures into your landscape plan. These include the following design elements:

- patios and ramadas
- walkways
- boulders
- a barbecue or fire pit
- built-in planters and seating areas
- a swimming pool, spa or fountain
- walls or fences to separate or screen an area

■ trellises that support vines and soften the look of fences and exterior walls

You can choose from a wide variety of materials and colors. Consider materials like flagstone, bricks, exposed aggregate and colored concrete in addition to more traditional hardscape materials like natural colored concrete and pool-decking. Also consider adding interest in the landscape by incorporating unusual shapes or a combination of hardscape materials into your landscape design.

Inorganic mulches, also known as “top dressing,” are commonly used in Xeriscapes to cover the soil and are considered part of a yard’s hardscape component. Top dressing not only

reduces water evaporation and weed growth, it also gives your planted areas a finished look.

Decomposed granite and crushed rock are the types of top dressing most commonly used in our area. Both are available in a variety of sizes and colors. Before selecting a top dressing, decide on the overall effect you want to achieve. Do you want your mulch to match the color of your house or would you like it to provide a bit of contrast? Do you like a very natural look or a more stylized look? Do you want your yard to blend with a common neighborhood landscape scheme or would you like something a little different from the neighborhood norm? Then consider your maintenance style. Some types of decomposed granite and crushed



Seat cushions and Mexican tile add color to this back yard Xeriscape.

Need Some Ideas for Your Wish List?

■ Walk, bike or drive around your neighborhood to get some design ideas. You may want to visit commercial developments and other residential developments as well.

■ Keep a camera handy and take photographs of everything you like, no matter where you find it; from fabulous model homes to the bank on the corner.

■ Keep a scrapbook. Put your photos there along with pictures you've clipped from magazines, newspapers and catalogs. Include pictures of outdoor furniture, pools and spas, patios, walkways, lighting, outdoor barbecue areas and other interesting and attractive landscape features.



Get Help! Call the Arizona Blue Stake Center

Call 1-800-782-5348 (1-800-STAKE IT) for free assistance in locating underground power lines and other utilities. A free brochure is available.

rock are easier to rake than others. Some kinds minimize the appearance of plant litter. Finally, consider your long-term landscape plans. Top dressing is neither inexpensive nor easy to replace. Do some research and shop around before you buy.

Investigate your hardscape and structural options before planning your landscape. Purchase some landscape design books (there are several available in paperback) and house and garden magazines, or borrow some books from the library. While visiting neighborhoods and other public areas for plant possibilities, take time to observe how hardscape and structural features have been incorporated into landscape designs. You may want to visit some landscape materials suppliers as well to see what's available locally (look in the Yellow Pages under Landscape, Garden, and Lawn and Garden).

Other Ways to Add Pizzazz

Although hardscape, structures and plants will be the major components of your outdoor spaces, remember that there are dozens of ways to add color and interest to the landscape. Consider using garden artwork, fabric and paint to help complete your landscape design. People often overlook these materials when planning their landscapes, leaving plants to provide the only available color. Outdoor artwork can include ornamental doors and

metal work. Colorful fabrics on seat cushions, umbrellas and awnings can brighten up the yard all year long. Paint applied to walls, fences, trellises and yard furniture can be used to add personality to the landscape and draw attention to certain spots in the yard. Fabric and paint are relatively inexpensive ways to "remodel" your outdoor spaces so you can change them from time to time. These are low risk ways to experiment and have some fun.

Check the Rules

During the research process, don't forget to consider any guidelines or restrictions imposed by your city, builder or homeowners association. Now is the time to review these and plan for any necessary applications or approvals.

STEP FIVE

Draw Your Preliminary Landscape Design and Irrigation Plan

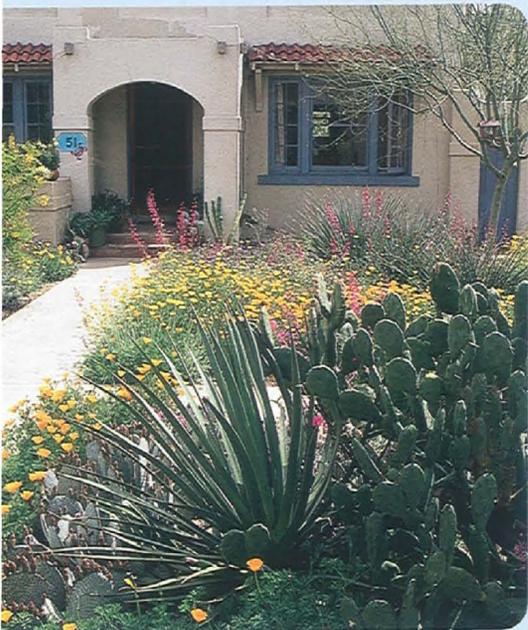
The best way to design a house is to develop a plan and make a drawing. The same is true for a landscape. It is easier to visualize your plan when it's put on paper. Drawings also serve as a reality check to make sure all of the landscape components are the right

Opposite: Strategic placement of a deciduous tree helps with energy efficiency by creating shade during the summer and allowing sunlight into the home during the winter. Bougainvillea (red) and Brittlebush (yellow) are a lively color combination.

Low Water Use Plants: They're Everywhere!

Here are some great places to learn about low water use plants:

- Regional botanical gardens
- Local Xeriscape demonstration gardens
- Booklets and brochures distributed by your city's water conservation office (Several cities also offer free or low cost landscape classes.)
- County Cooperative Extension offices
- Books on low water use plants written specifically for our area
- Local retail nurseries
- Local newspapers (some have regular articles on desert gardening and low water use plants)
- The Internet



size and in the proper location. Also, a drawing helps to make changes easier and will provide a permanent listing of all of the plant and hardscape materials used in your yard. When it comes time to repair and replace irrigation system components, your irrigation system design drawing will help to locate them easily. Without a drawing, you may spend hours digging in the yard to find and repair an irrigation problem.

Your Preliminary Landscape Design

■ *Before drawing the preliminary design, review your wish list.*

Then, look at the notes you made during *Step Three - Look at Your Site* to determine the best locations for each of the features you want to include in the landscape.

Placing tracing paper over the site drawing will allow you to experiment easily with different design alternatives before making decisions.

Computer software packages also are available to help you during the design process. A sample landscape design can be found on page 26.

■ *Start by drawing in any hardscape elements you want to include in the landscape.* If possible, draw them to scale.

■ *Mark areas where grading and contour changes are to be made.*

Grading may be used to add interest to a landscape and to direct drainage



Desert Marigold provides a dramatic contrast against this red garden wall.

away from hardscaped areas. When planning grading and contour changes, make sure that modifications are made in accordance with the rules established by your city for on-site water retention and proper placement of the backflow preventer. If you need clarification, contact your city's water conservation office (addresses and telephone numbers can be found in the resources section of this guide). Be a good neighbor. Don't change the grade in your yard so that it redirects water into your neighbor's yard. Also, avoid making changes that would direct water toward the foundation of your house.

At this point, you also may want to consider water harvesting opportunities. You can use existing contours to collect rainwater for use by landscape plants or you can regrade part of the lot to create catchment areas for rain-

water. Rooftop runoff can be directed through gutters and channels toward trees and plants.

■ **Now it's time to incorporate plants into the design.** When placing plants, consider their growth characteristics, as well as their water and sun/shade requirements:

- Plants that need full sun should not be placed under trees.
- Plants with similar water needs should be grouped together.
- To avoid a cluttered look and the need for extra pruning, choose appropriately sized plants and place them an appropriate distance apart. Several of the publications presented in the resources section of this guide provide extensive information on low water use plants.

It is not necessary to make a realistic drawing of each plant. In fact, most landscape architects and designers use symbols, usually circles, to represent plants on their landscape plans. For each plant, draw a circle in a size that represents the plant at maturity (when it is largest in size).

Trees and large cacti, like saguaros, comprise the “backbone” of the landscape since they are permanent and clearly visible year-round. Place trees first, locating them to maximize their shading benefits and aesthetic functions (such as “framing” the corners of the house). Avoid placing trees near overhead and underground utility lines and take care not to block an especially nice view. Then, place large cacti in areas where you want to

draw attention.

Next, draw in the shrubs. Shrubs can break up large spaces and visually anchor a home to the site. They also can be used to screen out undesirable views, soften the look of walls and fences and filter harsh reflective sunlight. Massing several shrubs of the same variety is usually more pleasing to the eye than mixing several different varieties together. A more formal look is achieved by using straight or geometric arrangements.

Groundcovers, vines and accent plants, such as small cacti and succulents, add color and texture to the landscape and provide continuity between major landscape components. In addition to adding color, groundcovers can be used temporarily to fill in



Parry's Agave teams beautifully with Purple Verbena.



Tips on Turf

- Since turf is relatively water thirsty, use it sparingly. If you like the green look that turf provides, you may be able to achieve a similar look with low water use groundcovers or a combination of turf and low water use plant material. There are many water thrifty plants that have a surprisingly lush look.
- Make turf areas functional, but use only as much as you really need.
- Install turf areas close to your house or in other areas where you want a cooling effect.
- Design your turf area so that it has a simple shape. Oddly shaped turf areas or narrow strips of turf are difficult to irrigate and mow.
- For ease of maintenance, locate turf away from sidewalks, fences and walls.
- Plant turf on level areas to avoid runoff and maximize irrigation efficiency. Most cities have an ordinance prohibiting excess irrigation water from entering the street.
- Irrigate turf efficiently. Design and manage your irrigation system properly.

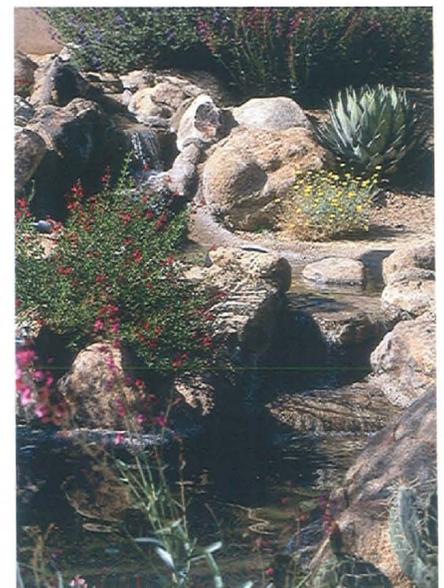
Don't Take Granite for Granted: A Tip for Choosing the Mulch That's Best For You

- Visit two or three rock suppliers and collect samples of decomposed granite or crushed rock in your favorite sizes and colors. Put the samples in plastic bags and take them with you for comparison purposes later on.
- Before making a final selection, find landscapes that are mulched with each of the samples you chose. Study each landscape to determine which mulch is your favorite when used in a real landscape situation.
- Top dressing is a lot like house paint. Colors and textures may look different when they cover a large surface area.

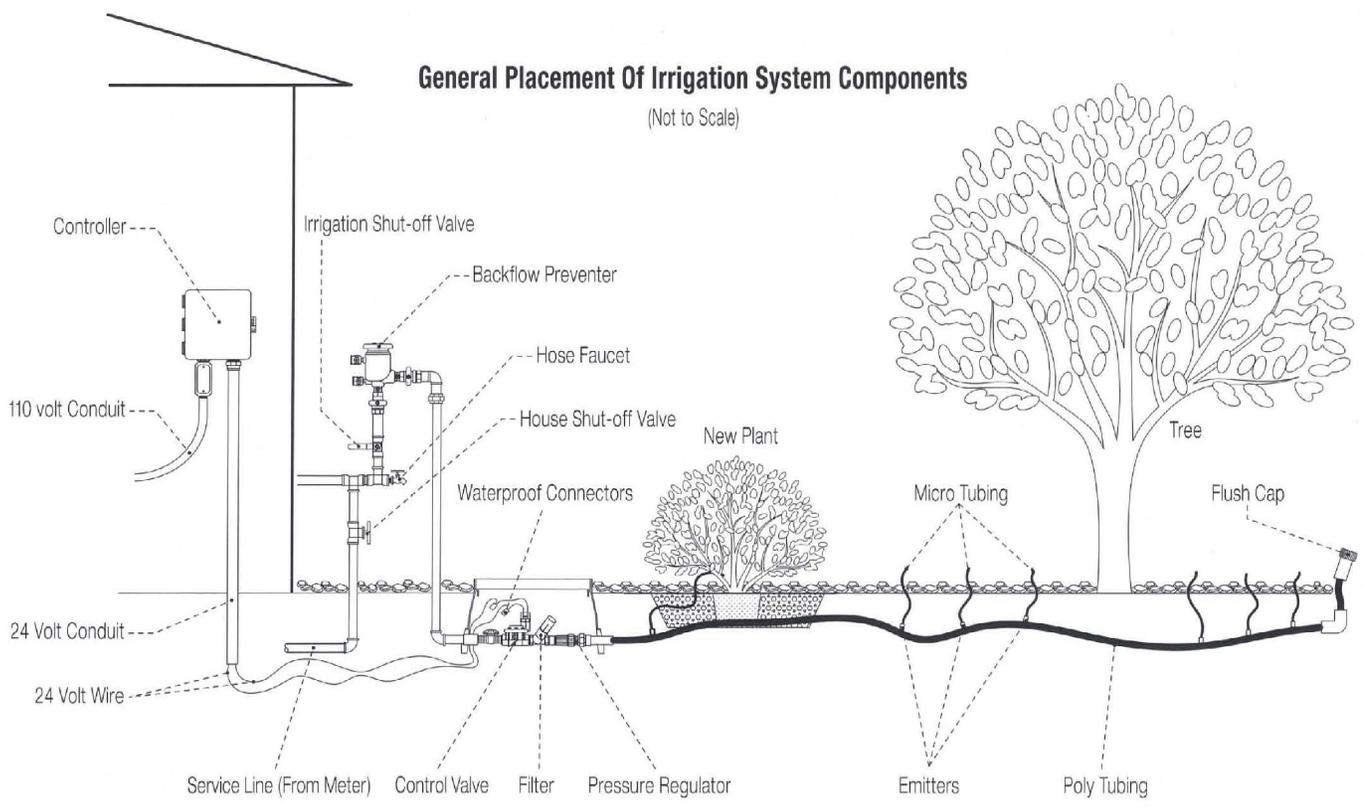
spaces in a new landscape. Use vines to soften the look of walls and fences and to create additional shade. Add accent plants to create interest and to achieve a unique look. The eye is naturally drawn to bold accents, color and unusual forms. Reserve these elements for those areas you want to emphasize, such as an entryway, a special tree, or a focal point in the landscape. After placing groundcovers, vines and accent plants, draw in any areas to be used for a vegetable garden or bedding plants. Make at least two copies of your plan.

Your Preliminary Irrigation Plan

Once the preliminary landscape plan is complete, you can plan an irrigation system that is appropriate for your Xeriscape design. In our area, turf is usually watered by a sprinkler system.



A small water feature surrounded by desert plants (Autumn Sage – red, Desert Marigold – yellow, and Parry's Agave – with compact gray rosette) creates an oasis for residents and wildlife.



Other ornamental plants, such as trees, shrubs, vines and groundcovers, are usually watered with a drip irrigation system. If you schedule watering times and maintain your drip system appropriately, this type of irrigation system can reduce evaporation and runoff, reduce weed growth and promote plant health by providing water to each plant's root zone, where it's needed most, without wetting leaves and soaking areas that don't need to be watered.

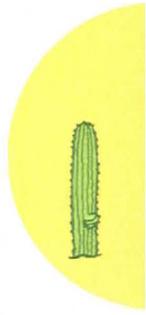
Before drawing the irrigation system design, learn as much about irrigation as possible. Find out the latest in water efficient irrigation mate-

rials by visiting local irrigation supply stores and by reading up on the subject. Reading materials are available from local libraries, bookstores, home and hardware stores and irrigation supply stores. There have been many advances in irrigation technology in recent years, so check the publication dates for the most current information.

When visiting irrigation supply stores, look closely at the irrigation system components and ask questions of the staff. If time is available, the sales staff should be able to review your plan for mistakes and offer advice on construction. In general, top quality materials will cost more to purchase but will be more reliable and

will require less maintenance in the long run.

Here are some drip irrigation fundamentals to help get you started. The drawing above illustrates the placement of each of the irrigation system components. Page 16 contains a list of basic irrigation system components and the function each serves. A list of irrigation tips can be found on page 23 and a sample irrigation system plan can be found on page 27. If designing and installing an irrigation system seems like an overwhelming task, consider hiring a landscape professional to do this landscape component.



Mary, Mary Quite Contrary, How Does Your Drainage Flow?

It is a good idea to assess current drainage patterns before making any grading changes. Here are a few simple ways to identify drainage patterns:

- Put a piece of straight, flat lumber, such as a two-by-four, on a spot in your yard. Place a level on top of the board. This will tell you the direction of the slope. Repeat this procedure at various spots in your yard.
- Inspect your yard after a rain to identify spots that accumulate water. You can accomplish the same effect by running a lawn sprinkler over the yard until the ground is moistened and water begins to collect.
- Put a garden hose at the highest point in your yard. Run the water long enough to determine the direction of the flow and to identify where ponding occurs.
- To maximize water harvesting potential, identify the locations where rain water falls from the roof. Observe the direction of the flow after runoff from the roof reaches the ground.

■ *It's time to draw the line.*

Review your landscape plan before beginning the irrigation system design. Although it is possible to use a blank copy of your site plan, many people find it easier to draw the irrigation system design on a copy of their landscape plan.

1. Mark on your plan the point where you plan to tie in to the water line that goes to your house. This is usually done near the front yard hose bibb. Many new homes have a stub-out (a protrusion with an end cap) on the riser pipe connected to the hose bibb for this purpose. This is where the backflow preventer should be placed.
2. Mark the location of each emitter. Drip systems should be designed to accommodate the watering needs of mature plants. If you are not sure of the number and flow rate of emitters needed by each plant, the chart on page 21 may be useful.
3. Using colored pencils, shade emitters that will be supplied by the same valve with the same color (for example: blue for trees, pink for shrubs, vines and groundcovers, yellow for planting beds, etc.).
4. Mark the location of the irrigation valves. They are usually placed next to the backflow preventer.

Shade each valve to correspond with the colors you chose in Item 3.

5. Mark in the irrigation controller. Typically, it is installed next to an electrical outlet in the garage or by the breaker box outside.
6. Add the irrigation lines (PVC pipe/poly tubing), connecting them from the valves to the emitters. Make them the same color as the emitters they will serve. Use straight lines whenever possible to optimize the water flow. It might be necessary to use tees and elbows to direct irrigation lines to all of the planting areas. If you plan to use sleeves for running irrigation lines beneath hardscape or structures, mark their locations with a dashed line.
7. Then finish up by adding flush caps, which should be placed at the end of each pipe/poly tubing run.

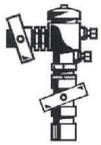
This guide does not include instructions for designing and installing sprinkler systems generally used for lawns. If you are planning a lawn, learn as much as you can about sprinkler irrigation before adding this component to your irrigation system plan. Staff at local irrigation supply stores can be very helpful. Often, they can direct you to good reading materials, answer questions and offer advice.

The Basic Components of a Drip Irrigation System



Controller/Timer:

This controls the watering cycle by automatically activating the control valves on the days and times you pre-select, thereby directing when, how long, and how often the irrigation system operates.



Backflow preventer:

This device prevents irrigation system water from being siphoned back into the pipe that carries drinking water into your home. All cities have ordinances that require installation of a backflow preventer. Contact your city for permit and installation requirements.



Control valves:

Manually or automatically operated control valves are used to turn the water on and off. Automatic control valves are wired to a controller.



Filter:

All drip systems need some type of filter to keep dirt and debris from clogging the emitters.



Pressure regulator:

Most drip systems operate at low pressure, between 20 and 30 PSI (pounds per square inch). Pressure regulators reduce incoming water pressure to the ideal pressure for the drip system.



Pipe/Poly tubing:

This is the main water conduit in a drip irrigation system. It is also called an irrigation line or lateral. Polyethylene tubing and hard PVC pipe are the two most commonly used types of pipe.



Micro tubing:

This delivers water from the emitters or poly tubing to the plants.



Emitters:

These connect to the poly tubing or micro tubing and deliver water at a slow, consistent rate, usually 1/2, 1 or 2 gallons per hour (gph).



Goof plugs:

Goof plugs correct mistakes by plugging extra or misplaced holes in the poly tubing.



Flush cap:

A flush cap is attached to the end of each irrigation line so that dirt and debris can be flushed out of the irrigation system.



STEP SIX

Pre-Shop Till You Drop *Pre-Shopping Pays*

Getting an accurate cost estimate before you make a final decision on your landscape plan will help to avoid costly surprises and can help you decide whether to install your landscape all at once, install it in stages, or revise your landscape plan to include more or fewer features. It is advisable to get a cost estimate for materials and services from more than one supplier. To ensure consistent cost estimates, ask for the same product or service from each supplier.

When pre-shopping for contractor services, ask for a written estimate that specifically identifies costs for all materials and labor and includes a time frame for completion. Remember, less is not necessarily best. While pre-shopping, consider product quality and durability, guarantees, warranties, product availability and customer service. Here's how to get started:

■ **First, make a list of all of the materials included in your landscape plan.** Begin with the hardscape elements such as concrete walkways, benches, patios, walls and decomposed granite. Then list the plants you want to include in your landscape. Make sure to list the quantity and size of each plant.

■ **Next, choose the irrigation system components.** With your preliminary landscape design in hand, make a list of all of the items needed to complete the irrigation system. Also note the quantity of each part needed.

■ **Identify any additional items that must be purchased or rented.** Pre-shop for any tools and supplies needed to complete the installation of your landscape. Identifying everything you will need prior to the installation



Verdins love desert trees!

process will help save time during installation and also will help you stay within your budget. Note those items that must be purchased, as well as equipment that is available to rent. Renting equipment can be a cost-effective way to save time and reduce the physical labor required to install your

landscape. While pre-shopping, nursery professionals, irrigation suppliers and other materials suppliers should be able to advise you on the tools and supplies needed to do the job right.

■ **Investigate professional services.** If you are not a full-fledged do-it-yourselfer, you may want to consider hiring someone to help you do all or part of the work. If obtaining professional landscape services is a possibility, give yourself plenty of time to find capable people to help you. Professional services can be incorporated into any aspect of the landscape process from design through installation and regular maintenance.

If you are not familiar with the types of landscape services available, the list of professional titles and certifications that starts on page 19 may be useful.

For additional information, consult the listing of landscape professional associations located in the resources section of this guide.

■ **Now go shopping.** Visit local nurseries, garden centers and other landscape materials suppliers. Write to manufacturers, consult the Internet, send away for catalogs and, if appropriate, request written cost estimates. List all suppliers and costs on a separate sheet of paper along with any

Opposite top: A lovely little visitor comes to this Agave in flower.

Opposite bottom: Seasonal wildflowers create a natural look along this flagstone walkway.

Tips for Choosing Professional Services

ASK:

- What jobs have you done recently? May I visit them?
- May I have a list of references?
- Do you have professional certification or training?
- What kind of training do your employees have?
- Who will be supervising the work?
- Will you provide a written cost estimate?
- How long have you been in business?
- Are you licensed, bonded, insured?
- Do you guarantee your work?

DO:

- Meet with landscape professionals face to face, preferably at your home so you can show them what needs to be done.
- Check references. Before calling references, make a list of questions to ask them. If you think of other questions later, call them back.
- Ask for proof of professional certification, licensing and insurance. If you are not sure what their educational background is or what their professional certifications mean, ask for clarification or call a related landscape professional organization.

- Ask for an anticipated completion date. If it is important for you to have a job completed by a certain date, ask if the landscape professional will guarantee that completion date. Consider arranging for final payment when the job is complete.
- Call the Registrar of Contractors (1-888-271-9286). Staff in this office can tell you if someone is a state-licensed contractor and can help to explain the potential benefits of using a state-licensed contractor. You also can find out if this office has received complaints about a specific contractor. Call the State Board of Technical Registration (602- 255-4053) for questions regarding landscape architects. Staff can confirm whether an individual is registered as a landscape architect. You also can inquire if any complaints have been received about a specific landscape architect.

DON'T:

- Don't choose a particular landscape professional unless you feel comfortable with that person and his/her way of doing business.
- Don't hesitate to keep looking until you find someone you will enjoy working with.

notes you care to make. If you have questions, follow up with telephone calls or make additional visits. If possible, make some preliminary decisions on plant materials (especially tree sizes) and hardscape choices.

Know Your Pro

Arizona Certified Landscape Professional (ACLP)

An ACLP certified landscaper has attended courses and passed an examination sponsored by the Arizona Landscape Contractors Association.

Arizona Certified Nursery Professional (ACNP)

An ACNP certified nursery professional has attended courses and passed an examination sponsored by the Arizona Nursery Association.

Certified Arborist

A certified arborist is a tree specialist who has been tested and certified by the International Society of Arboriculture.

Certified Tree Worker

A certified tree worker is trained to prune and care for trees. Certification comes from the International Society of Arboriculture.

Desert Landscaper Certification

This certification is sponsored by the Desert Botanical Garden. It is awarded to people who have completed a series of workshops and have passed examinations covering the workshop material.



Bright yellow garden chairs and potted annuals add color to this great front yard Xeriscape.

Horticulturist

A horticulturist has had formal training, such as a two-year, four-year or advanced degree in horticulture.

Irrigation Association Certification

The Irrigation Association provides instruction, testing and certification as an irrigation designer, contractor or auditor.

Landscape Architect

A landscape architect usually holds a college degree, has served as an apprentice to a licensed landscape architect and has passed a national exam. Landscape architects are licensed by the Arizona State Board of Technical Registration.

Landscape Consultant

This term is sometimes used by landscape professionals who offer landscape advice. A degree, license or certification is not required.

Landscape Contractor

Landscape contractors install some or all components of the landscape. Some offer design services. Some install irrigation systems. Some landscape contractors also provide landscape maintenance services. They are tested and certified by the Arizona Registrar of Contractors, which requires them to be bonded.

Landscape Designer

As their title indicates, landscape designers offer landscape design services. Although a degree, license or cer-

tification is not required, landscape professionals who use this title often possess knowledge, education, training and/or experience in landscape design. A person who is currently serving an apprenticeship under a licensed landscape architect may use this title.

Landscape Designer

A landscaper offers a variety of landscape services, typically in the areas of installation and maintenance. Licensing and certification are not required.

Master Gardener

Master Gardeners are volunteers who have received specialized training in horticulture from the University of Arizona Cooperative Extension.



Suggested Quantities of Drip Emitters for Mature Plants

Plant Type	Canopy Diameter (Feet)	Number of Emitters	Emitter Flow Rate (Gallons per Hour)
Small Shrubs/Groundcovers	1-3	1	1
Large Shrubs	4-6	2	2
Small Trees	7-10	3	2
Large Trees	11-14	4-6	2-4
	15-20	6-12	2-4
	21+	12+	4

Note: Sizes given for shrubs and trees indicate their full size at maturity. As plants mature and require more water, lengthen the watering time. It also may be necessary to add more emitters or replace existing emitters with those having a higher flow rate.

Granite - 3, Black Plastic - 0

■ If you are in a quandary about how much crushed rock or decomposed granite (top dressing) to purchase and whether or not to put black plastic under it, just remember the score: 3 - 0.

■ As a general rule, your layer of top dressing should be 2-3 inches thick. This will help to inhibit evaporation and weed growth and provide consistent coverage with less chance of developing bare spots in the future.

■ Measure the total area of your yard to be covered with top dressing. Call or visit suppliers who can help you determine the amount of top dressing needed to cover the area. Typically, one ton of granite or rock covers about 120 square feet.

■ It is NOT advisable to put a layer of black plastic beneath your top dressing. Over time, the edges will dry out and curl up and may become unsightly. In addition, black plastic prevents air and water from reaching plant roots.

Smartscape Certified

A person who holds Smartscape certification has completed a series of workshops which focus on landscaping practices that are appropriate for the Sonoran Desert. The Smartscape program is sponsored by the Arizona Municipal Water Users Association, the University of Arizona Cooperative Extension, the Arizona Nursery Association, the Arizona Landscape Contractors Association and Tucson Water.

STEP SEVEN

Prepare A Cost Estimate

Pre-shopping activities should provide the information needed to estimate the total cost of the landscape. Use the worksheet provided at the end of this guide (page 68) to generate the cost estimate. Make several copies of this worksheet in case you need additional space or want to revise your list of materials and services. It might save some time to list similar items on one line. For example, if you plan to purchase five fifteen gallon trees and they happen to be the same price, list all of the trees on one line, note the unit cost, then multiply that cost by five.

Once you have prepared a cost estimate, compare it with the amount you

have budgeted for the landscape. If your cost estimate is within range of your budget, proceed to *Step Eight – Draw Your Working Design*. If not, reevaluate your preliminary design or make the decision to install your landscape in phases.

Reevaluating Your Preliminary Design

If you have the good fortune of developing a plan that falls below your budget, consider the following options:

- Spend the surplus on upgraded irrigation system components.
- Spend the surplus on upgraded hardscape materials.
- Add a feature you did not include in

the preliminary plan because you thought it would be too expensive.

- Set aside the surplus amount for future additions or modifications to your landscape.

If your ultimate landscape design has exceeded your budget, consider these options:

- Scale back the original plan by excluding one or more features you can live without.
- Reduce the cost by purchasing smaller trees.
- Purchase fewer services and do more of the work yourself.
- Retain your complete plan and install it in phases.

Installing Your Landscape in Phases

Phasing in a landscape means installing it in stages rather than all at once. There are several advantages to retaining the landscape plan as you conceived it originally. First, you can install each phase of your landscape with the knowledge that, eventually, you will have exactly what you want. You also will be able to concentrate on installing high quality plants and materials during each phase. You won't have to cut corners or settle for something you don't really like. Phasing in your landscape also gives you some extra time – to install the components of each phase carefully and properly, to



Hummingbirds are frequent visitors to desert gardens with red flowering plants like Autumn Sage.



Tips for the Irrigation Novice

■ If at all possible, put trees on a different valve from low water use shrubs, vines and groundcovers. Use a separate valve for vegetable gardens, areas dedicated to bedding plants, plants in pots, and areas to be planted with other water thirsty plant material. Accommodating different water needs by using multiple valves will allow you to apply water more wisely and efficiently.

■ If your landscape plan includes a turf area, use separate valves for the sprinkler system. This is necessary because sprinkler systems and drip irrigation systems apply water at substantially different rates.

■ Measure and measure again. If your landscape plan is drawn to scale, calculate the amount of irrigation line needed by measuring distances on your landscape plan. Then, to verify the calculation, go outside and measure the actual distances. If the plan is not drawn to scale, measure the actual distances twice to avoid overestimating or underestimating the amount of irrigation line you will need. The same goes for sprinkler system lines.

■ Add it up, then buy a little extra. Save time and frustration by buying a few extra irrigation system components prior to installing the irrigation system. If you break or lose parts during the installation process, you won't have to make extra trips back to the irrigation supply store. Also, having extras on hand will provide

you with some spare parts for future repairs.

■ Install protective sleeves for those lengths of poly tubing that will be located beneath hardscape areas and structures. A sleeve is a PVC pipe 1½-2 times the diameter of the irrigation line that allows for insertion of the irrigation line beneath hardscaped areas.

■ If you decide not to use self-piercing emitters, you will need to punch holes in the poly tubing to add adapters that connect to each length of micro tubing. Ask your salesperson for assistance in selecting an emitter punch that is the proper size for your project. Don't cut corners by using a nail or other sharp object that can make the hole too large or pierce the bottom side of the tubing.

■ Do not exceed 200 feet of poly tubing from the valve to the flush cap.

■ Do not exceed a total flow of 200 gallons per hour (gph) per valve.

■ Micro tubing that exceeds six feet in length is NOT recommended.

■ Several types of controllers/timers are available from irrigation suppliers. Features such as multiple program capability, the capability to program watering intervals of at least fourteen days, and the capability to program run times of at least two hours add to the versatility of an automatic controller/timer.

continue pre-shopping for items to be installed during the next phases, to learn to maintain the existing components of your landscape and, of course, to save up for the supplies and materials needed for future phases.

Don't Let Phasing In Faze You

If you're wondering how to go about installing your landscape in phases, the following tips can help you get started:

■ *Analyze and Prioritize*

Review your landscape plan.

Identify the essential elements on your plan and label them with a 1 to designate first priority. Repeat this process for second, third and fourth priority items. During the process of prioritizing landscape elements, consider those elements that will be the easiest to add or move and those that will be the most difficult. Ask yourself questions like, "Will I be **willing and able** to move this play structure or add this planter later?" Identifying and prioritizing these elements accordingly will help to ease installation of items earmarked for future phases.

■ *Put Irrigation and Grading First*

It is easiest and most cost effective to complete all grading activities at once, before installing the landscape. As a general rule, it is easier to install all of the major components of the irrigation system, such

as the poly tubing or PVC pipe, at the same time. Therefore, they should be included in the first phase of your installation.

■ **Maintain Access**

Try not to block gates or build fences or walls that will hinder installation of landscape elements planned for later phases. Put sleeves under sidewalks or block outs (also called stub outs) in walls to make way for features, such as wiring for lighting, to be added in future phases.

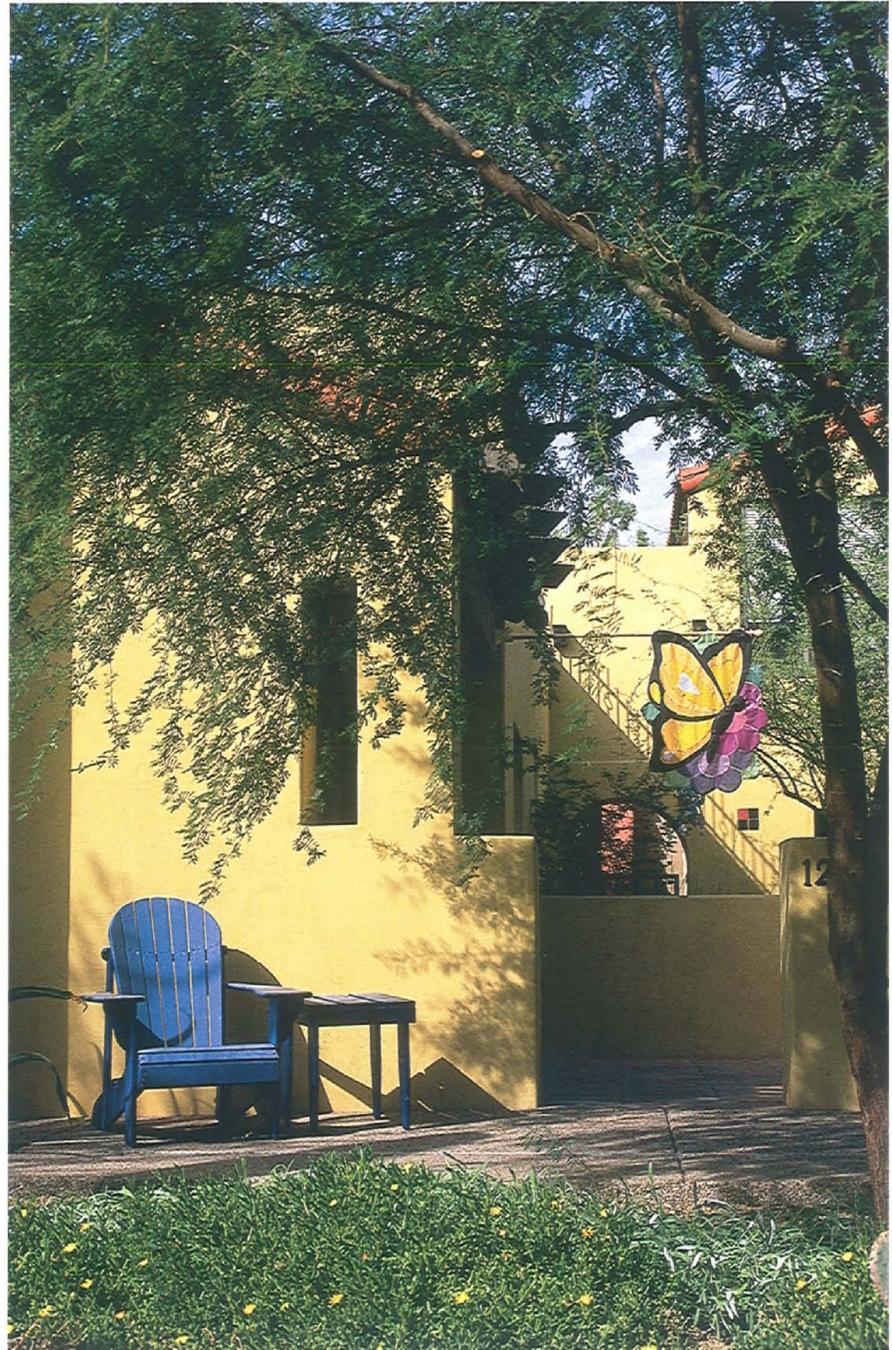
■ **Consider Temporary Solutions**

If your plan to phase in the landscape leaves you with some temporary bare spots, consider covering them with a layer of top dressing or sowing those areas with wildflower seeds until you are able to finish the installation. This will help with dust control and also will provide you with something nice to look at while you are waiting to finish up.

STEP EIGHT

Draw Your Working Design

At this point, you should have gathered all of the information needed to finalize the landscape design and irrigation plan. If you have decided not to make any modifications to the preliminary drawings, then it's time to

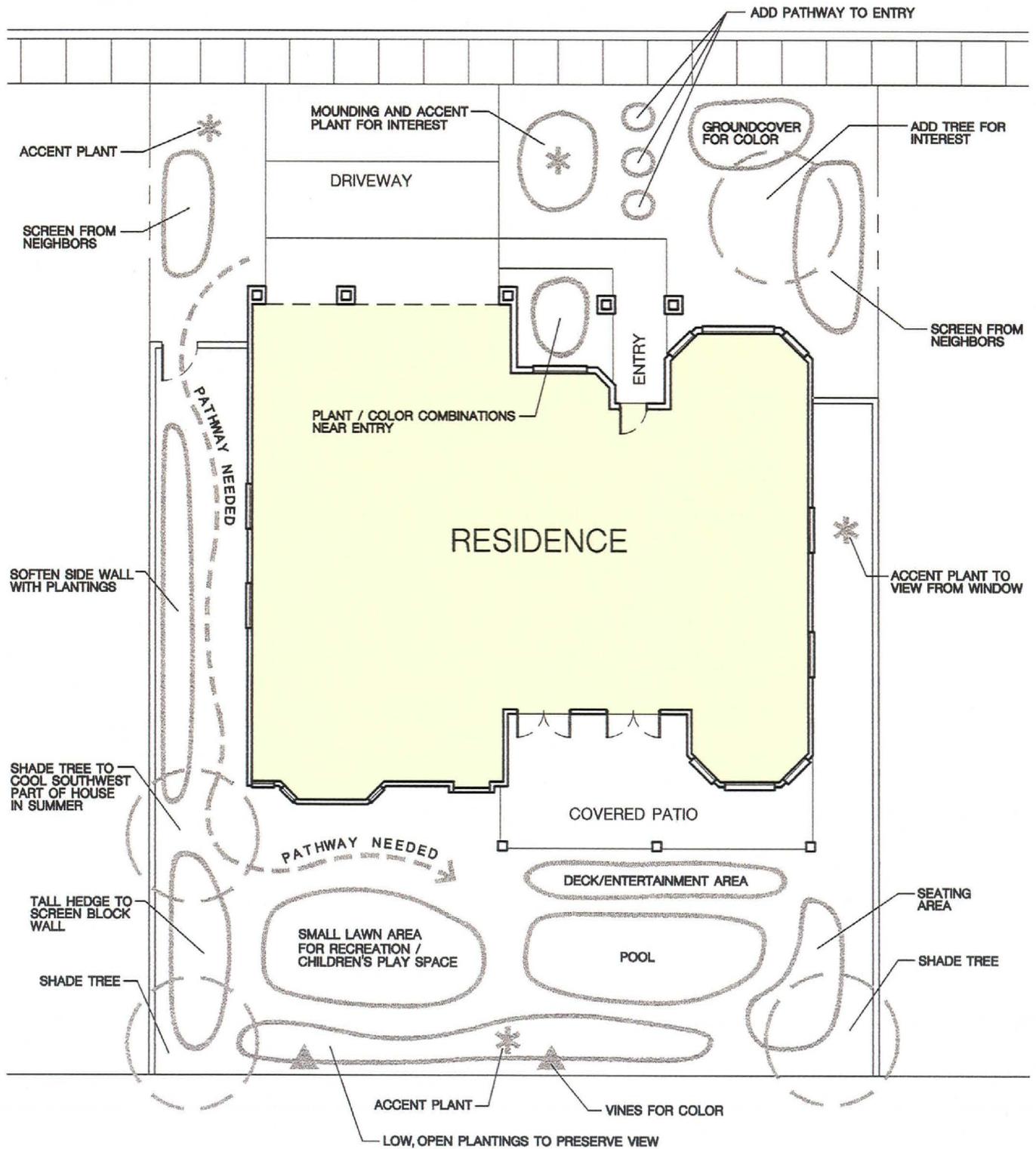


A colorful, comfortable relaxation area at this beautiful downtown Phoenix home

start planning your installation. If you have made more than a few minor changes, you probably will want to redraw the preliminary plan. If you have decided to phase in portions of the landscape, note your priorities on the working design. Make some

copies of the completed working design. It's easy to lose or damage landscape plans, so keep a few extras on hand for future reference.

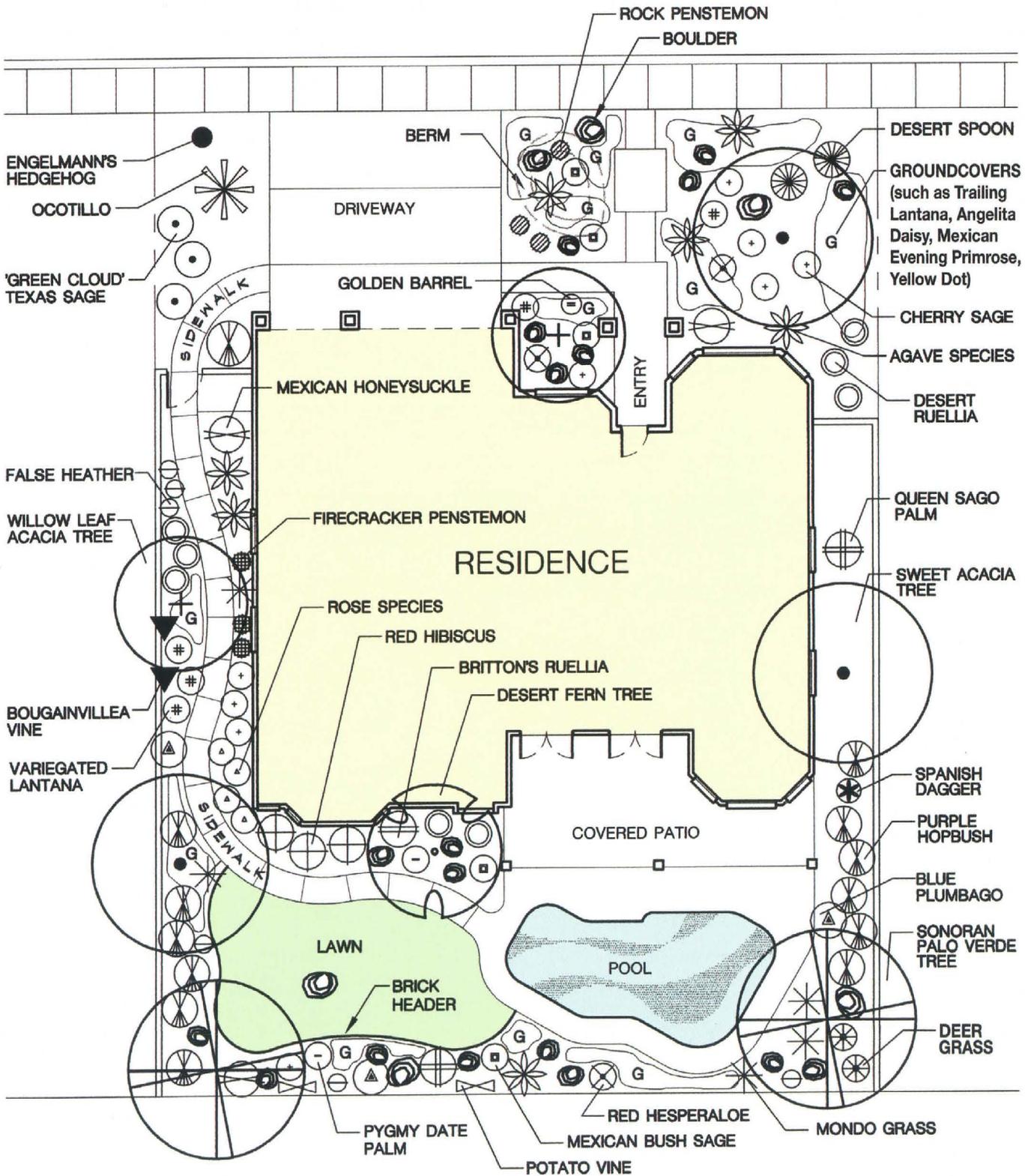




SITE DRAWING

SCALE: 1/16" = 1'-0"

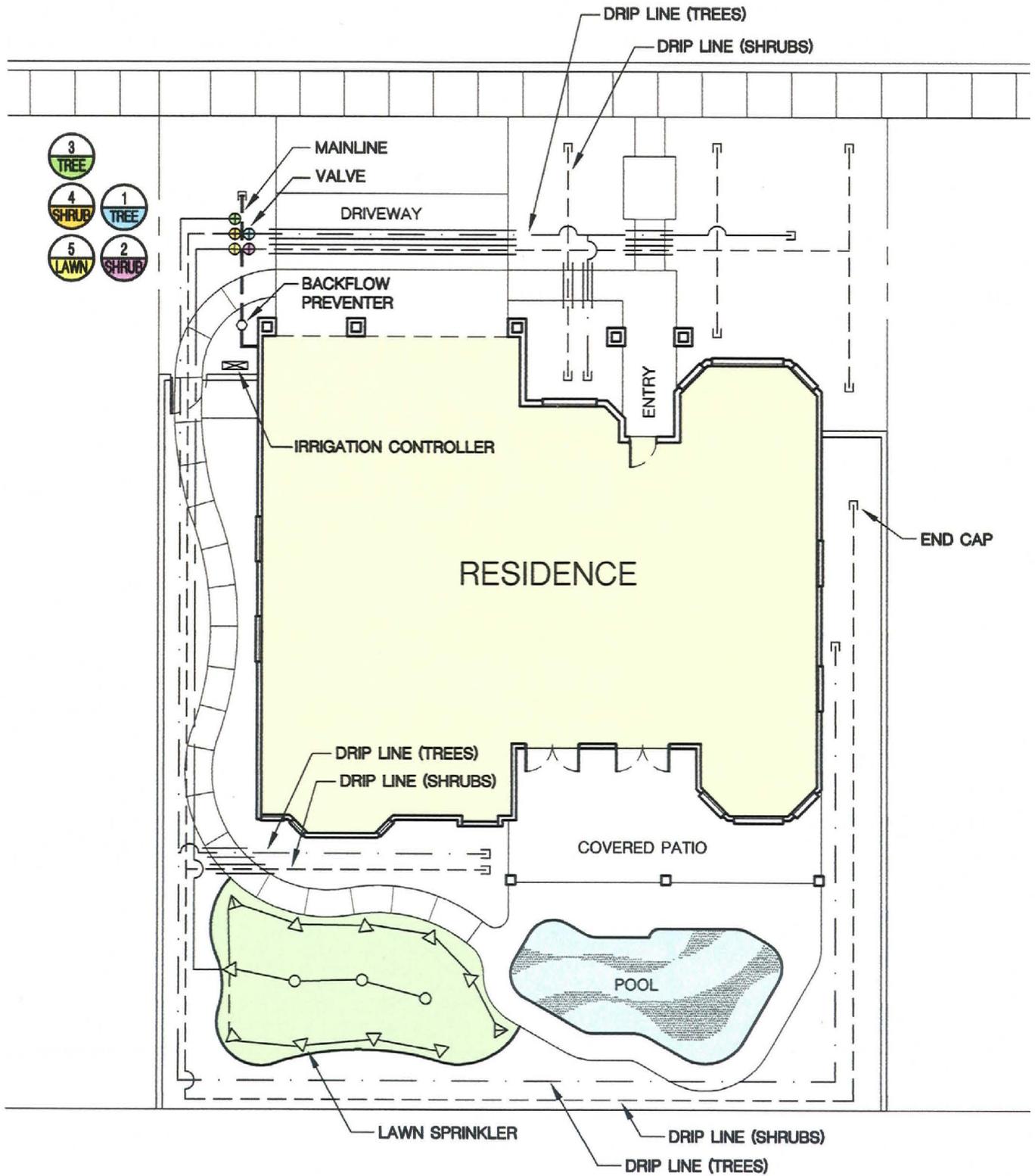




LANDSCAPE PLAN

SCALE: 1/16" = 1'-0"





IRRIGATION PLAN

SCALE: 1/16" = 1'-0"



