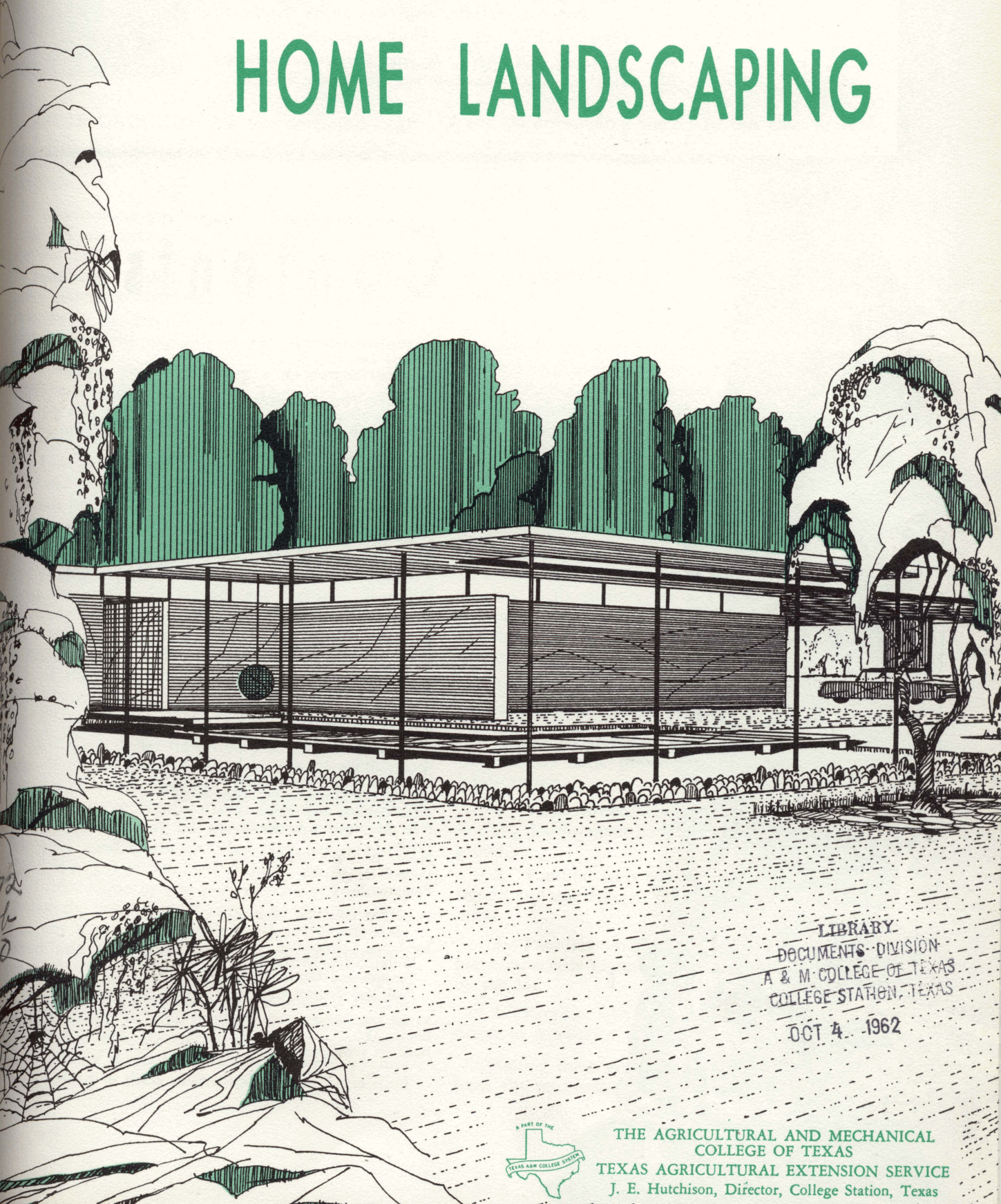


A Planning Guide for


HOME LANDSCAPING



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 J. E. Hutchison, Director, College Station, Texas



THIS IS NOT a "how to do it" presentation for landscaping the home grounds. It is intended as a study guide for the development of good landscaped areas.

For best results, read the entire publication thoroughly and then consider each of the requirements of good landscaping in the sequence that applies to your particular situation.

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A PLANNING GUIDE

for HOME LANDSCAPING

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HOME GROUNDS that are developed tastefully not only add comfort and convenience to daily living but increase the dollar value of the property.

Landscaping the home grounds presents problems. A complete living picture must be created for the entire development. This picture must be constructed with trees, shrubs, vines, grass and other materials. Still more important, this picture must be so constructed that it can be maintained with a minimum expenditure of time and money.

Planning and developing a garden involves three basic fields of endeavor. These are art, engineering and horticulture. The word "garden" in this publication refers to the entire property.

Four possible approaches to the proper, effective and economical development of the home grounds are:

1. You can seek the professional services of a landscape architect. You may find that few specialize in small home design, however. Sometimes the services of a landscape architect exceed the budgeted amount available for such services. An alternative, when the services of a landscape architect are obtained, is to pay him for the preparation of the landscape plans, advice and counsel, after which you can arrange to do the actual work yourself.

2. Many large nurseries and garden centers have developed competent landscape departments that can be of real service. When you seek assistance from these organizations, however, you also should expect to pay for the landscape plan. To prepare a good landscape plan takes considerable time. When it is obtained without charge it may be of little value or you may pay for it indirectly through the purchase of plants. The best procedure is to pay a predetermined price for the planning service and thus know what all expenditures are for.

3. A third possibility of assistance is from a growing group of semi-professional landscape designers who, through selected study and experience, are becoming specialists in home grounds development. Many of these individuals are well qualified

and do outstanding work. In this case, however, it may be difficult for you to determine the real capabilities of the designer with whom you are dealing. Unless the individual is well known, you should proceed carefully.

4. The remaining possibility is for you to plan and develop your own property. Today this is not a frightening task when time is available for these efforts.

By using the information in this bulletin and supplementing it with listed references, you should be able to plan the arrangement of your landscape development, and after careful study of your layout do as much or as little of the actual work required as you desire.

When you find that a particular situation presents unusual problems too involved for you to handle, consult a landscape architect who is skilled in solving such problems.

It matters little whether you obtain the services of a landscape architect to plan and execute the garden in its entirety, or whether you choose to do some or all of the work yourself; a knowledge of the problems and ways to solve them still is essential.

Property for each family presents a different situation. Certain basic principles apply, however.

In general, there are four main types of home owners and each presents a major problem in landscaping:

1. Homeowners who purchase subdivision or housing development homes. (These are the largest group.)

2. Families who buy new homes already designed and constructed, with no specific client in mind.

3. Families who purchase a lot, have their home especially planned and constructed for them on the lot.

4. Families who now live in older homes and desire to remodel or redesign their gardens.

Among these groups, gardening interests vary from the enthusiast who wishes to spend all his

spare time in his garden, and finds in it a keen hobby interest, to the person who wishes only to enjoy the finished product and is unwilling to spend little, if any, time on its upkeep.

All of these individuals believe, however, that some outdoor space is essential to modern living. Certainly all can have the type of garden best suited to their individual desires.

Gardens can no longer be entirely naturalistic because they do not fit into our mechanized way of living. In late years, however, walls, fences, paving and other architectural features often have been over-emphasized.

A good landscape development results only where plants and architectural materials are balanced.

The main problems of designing or arranging elements on the land lie in properly organizing and using the available space. Limited space does not prohibit good landscape development. Some of the most livable and useful gardens are those on small city or suburban lots.

Gardens should be designed for family living. In general, when there are children in the family, too little is done to make the garden enjoyable for them. Give them careful consideration in the planning so that they will find there is more fun at home than on the streets.

Texas embraces several "climates," ranging from extremely moist, humid areas to those with arid conditions. The major climatic areas of Texas require different types of garden arrangements and the use of varying kinds of plant materials. These areas and examples of plants for these areas are shown on pages 15-17. In planning a garden in any of these areas, the homeowner should strive to provide for the most days of comfortable outdoor living throughout the year.

SELECT YOUR SITE

When buying a new home, give special consideration to the landscape potential. Purchasers of homes too often ignore this aspect.

Whether you intend to live in a rural or urban area, you will want your property to have certain qualities.

An increasing number of home owners will buy housing development or subdivision homes. Rising construction costs have made it necessary for builders to construct houses for the average family and mass-produce them on an efficiency basis.

Whether you are building or buying a new home, consider carefully all types of plans, orientations and locations.

General Location

The general location of the homesite should be your first consideration. Most existing neighborhoods are pleasing and healthful but, for protection and future happiness, a study of the one chosen will help to assure satisfaction. Study the following points carefully.

Try to locate where land values are increasing, where the homes are surrounded with well-kept lawns, trees and shrubs and where the houses are not too close together.

If you locate on a residential street, you will avoid factories, business districts, railroads, airports, smoke, soot and dust and the noise and congestion of heavy traffic. Proper zoning will prevent subsequent intrusion of these undesirable residential conditions.

Check the facilities for water supply, sewage disposal, storm sewers, gas, electricity, telephone, mail delivery, garbage removal, street lighting, fire and police protection.

When streets and sidewalks are not in good condition, assessments for improving them soon may be required. If streets and sidewalks have not been paved or do not exist, part of the future costs no doubt will be borne by homeowners.

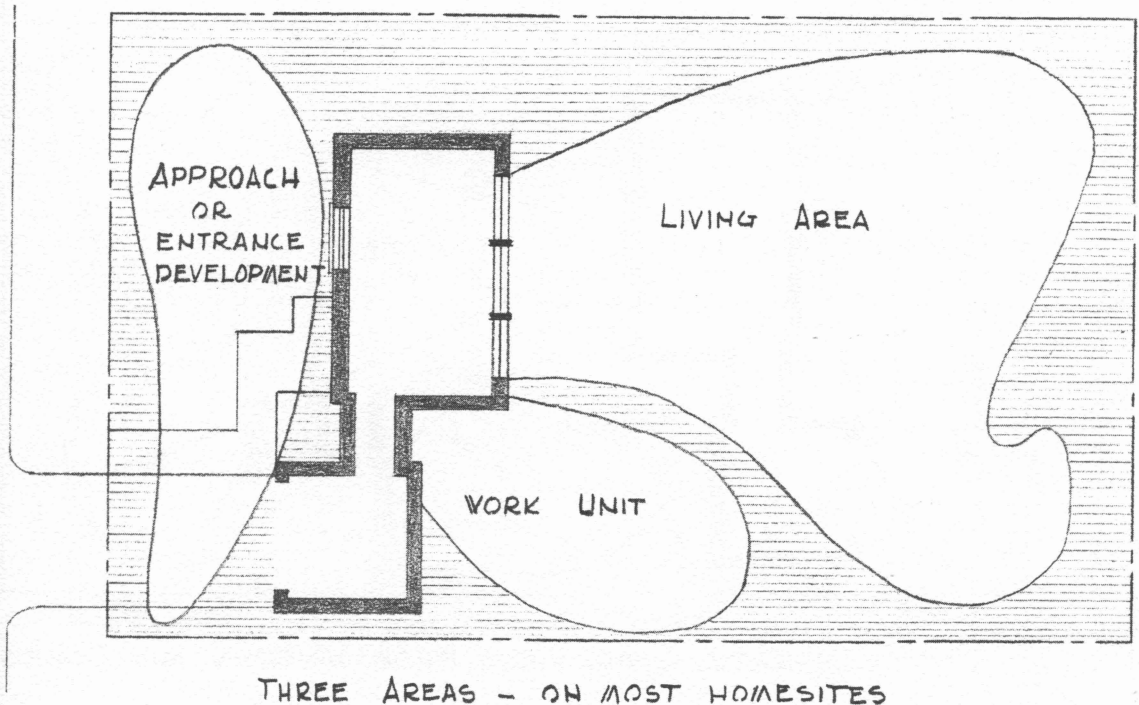
Find out what home loan organizations think about the general location. Make sure that if you invest in property in any location, sound lending organizations will make loans in the neighborhood.

Individual Property

How much can you afford? Most families cannot afford as much as one-third of their annual income to purchase a piece of property for their home.

How large a lot? The lot should be large enough to fulfill the needs of your family. Consider whether the needs are for a large or small house, a garage or carport, driveway and sufficient area for service and outdoor living. Large lots usually are expensive to buy and they require considerable expense to maintain — even when the area is well planned. Sufficient frontage along the street is necessary, especially for modern ranch-style homes. The minimum frontage required is about 75 feet, and 100 feet is preferable. A depth of 120 to 200 feet is desirable.

What shape is most desirable? Corner lots often are thought preferable but they make privacy difficult, even when the lot is large. They usually require the installation of additional utilities, walks and drives. The use of outdoor space is limited and usually there is considerably more noise from traffic.



Irregular lots: Such lots usually are available in attractive neighborhoods and can be developed in interesting ways.

Curved lots: Properties located on the inside of a curve usually are wedge-shaped and are not as desirable as lots on the outside of a curve.

Long, narrow lots: On long, narrow lots, you may find it best to locate the house so that one end rather than the front facade faces the street.

Rectangular lots: The rectangular lot is common and usually is found in neighborhoods where straight streets predominate.

A lot that is slightly above street level is most desirable. This provides drainage and offers a good setting.

A site that is too far above street level results in steep, awkward driveways and walks and presents difficult lawn care problems.

Well-spaced trees in good healthy condition, with pleasing form and of good landscape size are an important consideration in selecting a lot.

Good views from the property are a great asset.

The direction the lot faces is important. The outdoor living areas are best when they face south because you can control the sunlight from this

direction effectively. Eastern exposures are the next best.

Every lot will have some disadvantages, but careful planning can overcome many problems.

SCHEDULE YOUR LANDSCAPE DEVELOPMENT

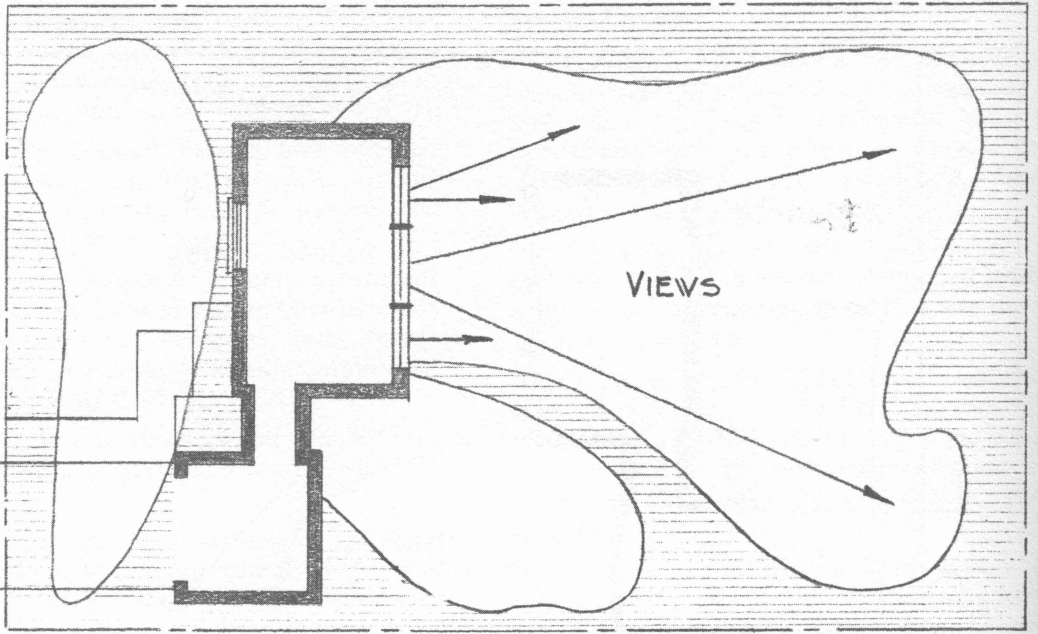
A successful development is essentially the result of good planning. Every home owner wants to complete his landscaping as soon as possible. A common mistake is to believe that you can do this as soon as your home is ready to be occupied.

Few gardens can be planned, constructed and planted in one year without considerable expenditures.

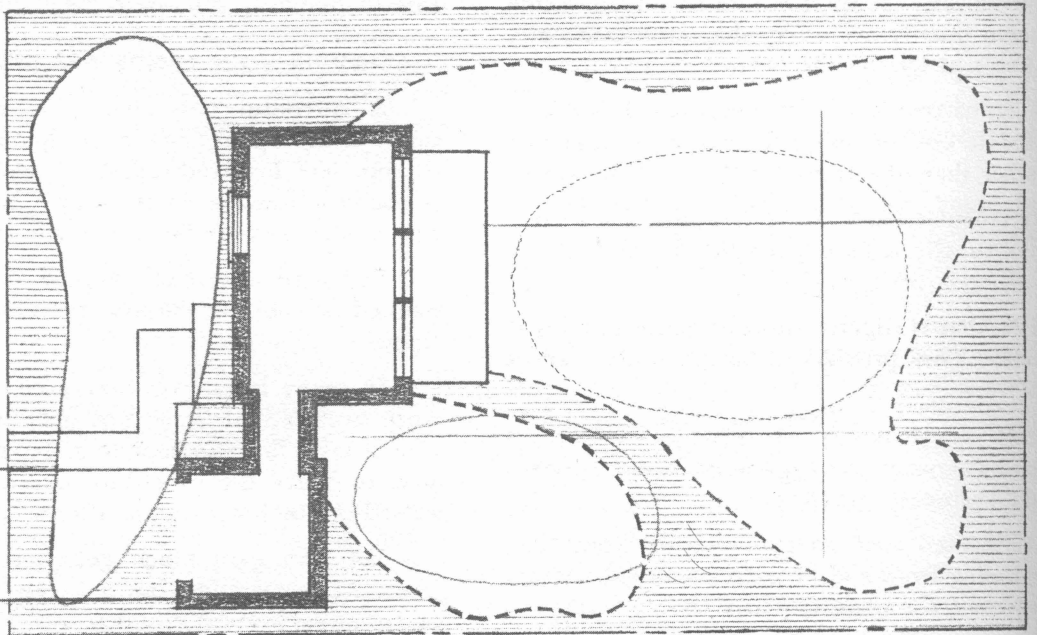
In many cases, you may need to extend the work over several years, not only because of the time it takes but also because of expenses. It never pays to hurry the procedure unless the costs involved can be justified and afforded.

You can gain much personal enjoyment in planning your garden, but it is easy to make costly and time-consuming mistakes, not to mention the hard work and wasted effort.

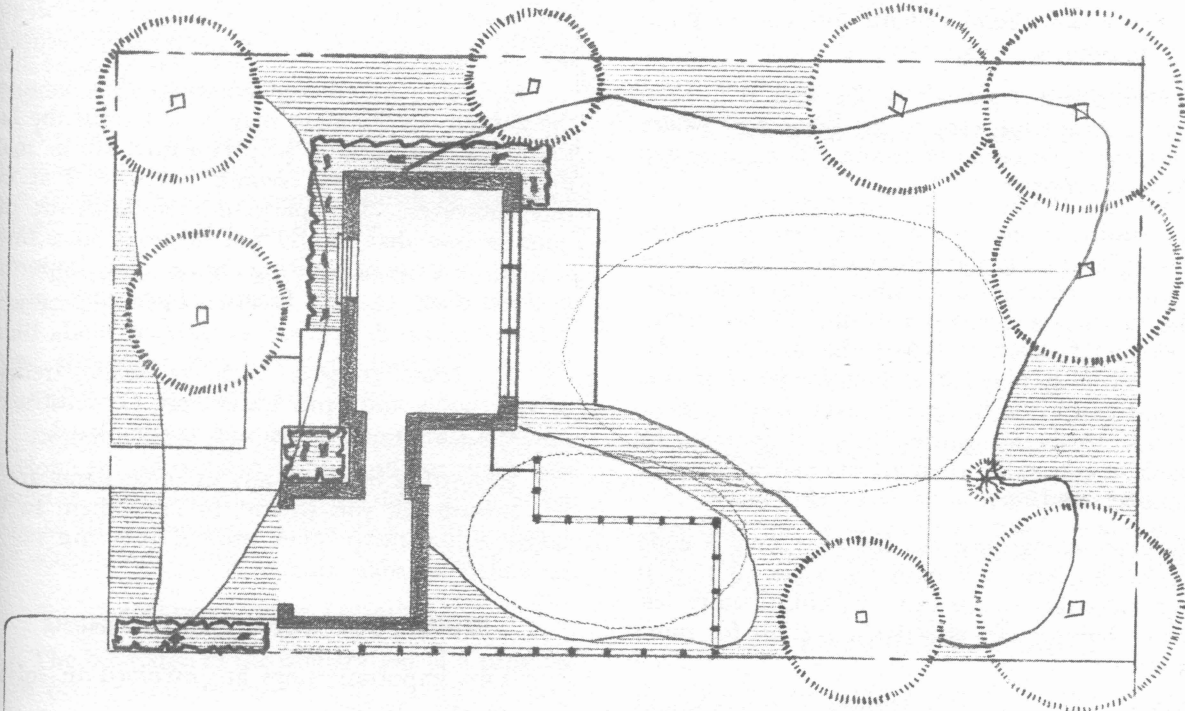
These mistakes often occur in the selection of plant materials, planting and construction phases of the garden. A good landscape plan is necessary,



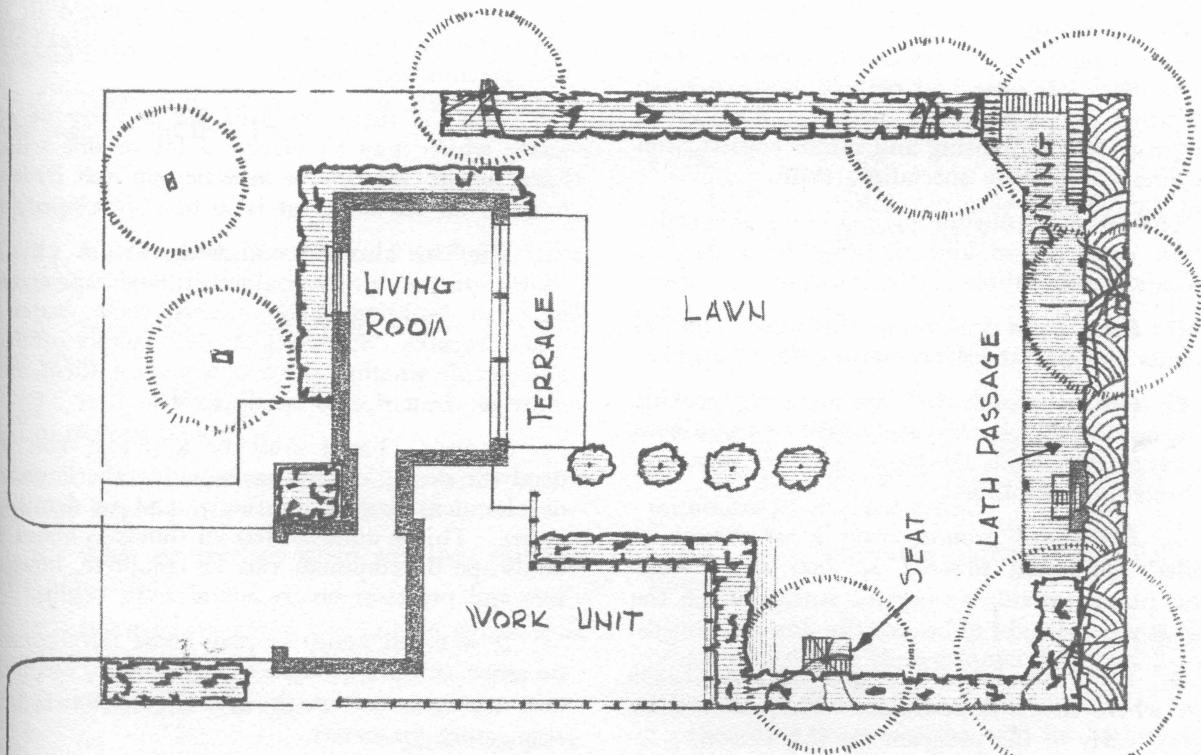
INDICATE GOOD VIEWS FROM WINDOWS AND DOORS



DEVELOPMENT OR MORE THAN ONE AXIS



SKELTON FRAMEWORK OR GARDEN



GARDENS ARE DEVELOPED STEP BY STEP

as are the various requirements for a good landscape development.

A well-planned garden is one that is livable, interesting, beautiful, easy to maintain and where relationships between outdoor and indoor areas are coordinated properly.

Determine your needs and desires before making a plan so that the garden can be constructed in an orderly and logical manner. The final plan for the landscape development should be within your financial means. When the garden is developed with the use of a long-range plan, the work and costs can be spread over several years, if desired. A better garden often is possible by this method especially when all the expense cannot be borne at one time.

In many cases, once you have achieved a good garden design, you can plan the work so that it may be relatively inexpensive by substituting less expensive but equally effective materials for more costly ones.

When you work out a landscape program and budget the time, costs and other factors, you can indicate the work that you will do and those phases that you want professional workers to do. This often depends on your ability and desires to handle materials and equipment, as well as the costs involved.

Heavy construction in garden developments, such as paving, walls, fences and terraces or patios, usually takes less time and may be less expensive if handled by experienced people. The home owner can do the planting and minor construction that does not require specialized skills.

The following outline suggests a possible order for the construction and planting of a garden. This can be adapted to suit the individual situation.

1. *Drives and walks* are the most essential elements and you should construct them first.

2. *Patios, terraces and other paving* provide usable outdoor living areas and might be considered as a second step, while the lawn and other plantings are becoming established.

3. *Lawn and ground cover areas* should be decided upon and planted as soon as possible. These plants provide an organic surface much the same as paving and hold down the dust and weeds.

4. *Trees* are important especially in Texas areas where shade is desirable. They should be planted early in the program for this reason.

5. *Hedges, screens, walls and fences* provide privacy and assist in temperature control around

the home. They are next in importance because privacy is desirable as soon as the house is occupied.

6. *Other plants and plantings* that complete the garden development may be left until the last. Plantings that perform a special function or make up a unit or an area should be planted at one time, however. This particular phase of the program is one that should not be done in a hurry since the results of planting are the most important consideration in the future appearance of the garden.

7. *Other features* such as seats, trellises, arbors, pools and sand boxes may be constructed one at a time until the garden is completed.

Regardless of when any of these items are to be constructed, you should indicate them in the original long-range plan even if they are not to be added for some time.

BEGIN YOUR LANDSCAPE PLANNING

Two important steps are involved in solving a landscape problem.

First: There must be a program for site and landscape development. The starting point for such a program usually depends on the particular problem involved.

The program is a written list of all the needs, desires, limitations and resources involved in the landscape development of a site, the physical points and psychological effects.

"Site" is the term used for a piece of real estate which may be merely a lot or one with a home on it. The home may be one that is newly built or an old one that is to be redeveloped.

The site also has soil with certain physical characteristics: air space above it; landscape around it; other buildings, trees, plants, rocks, water or other features. Study all of these factors carefully and decide whether there is a use for them, or if some of them should be discarded.

Second: There must be a plan. You will need the design or arrangement for the landscape development drawn accurately, and in detail, on paper. This is done so that all thoughts about the landscape development can be complete, imaginative and practical before actual work begins.

It is much easier to plan these developments on paper in advance than to try to figure out forms and arrangements on the site as the actual landscape work progresses.

The preparation of a good plan also makes it possible to foresee most of the complications

which may arise and to decide the best methods of procedure before work begins. A well drawn plan requires skill and practice, such as that required for any type of drawing or painting.

A professional should be more adept at making and reading scale drawings and semi-scale sketches than nonprofessional persons because he has been trained and uses these skills daily.

Anyone without such complete training and experience is an amateur. He may know nothing at all about making or reading drawings, he may know almost as much as a professional, or may fall anywhere between these limits.

Design, which includes planning, requires the development of certain skills and attitudes and combines imagination and practical application. Most of all, it requires an objective, unprejudiced, and open-minded approach to the problem.

ANALYZE YOUR PROBLEM

The basic step in the preparation of a program is to decide and analyze specific problems of a chosen site. On most sites, they can be determined by answering the following questions:

1. What kind of houses surround the site?
2. Are there other types of buildings or land uses in the neighborhood such as manufacturing, commercial, recreational, institutional or agricultural? How do they affect living conditions in the neighborhood?
3. How many neighbors are there and how close together do they live?
4. Are all portions of the site easy to reach and use?
5. How far is the floor level of the house from the ground level outdoors?
6. How many rooms in the house have outside doors?
7. Is it easy to get in and out of the house and to see out windows?
8. Do the larger portions of the yard connect with the larger portions of the house?
9. What do you see when you look out the main windows?
10. What do the main doors of the house lead to and from?
11. What are your gardening desires?
 - (a) Are you interested in gardening as a hobby?
 - (b) Do you enjoy it?

12. How do you feel about outdoor living?
 - (a) Do you like it?
 - (b) Do you want to do more of it?
13. How do you feel about your outdoor surroundings?
 - (a) Do you prefer them to be beautiful and pleasant?
 - (b) Do you want them to make you feel comfortable?
 - (c) Do you care whether they fit together well and serve their purpose successfully?
14. What other needs, desires or limitations must be included?

When you have answered these questions to the satisfaction of all concerned, you will have organized the landscape program and the planning phases can begin.

DETERMINE YOUR NEEDS

Four basic considerations should be included in successful landscape development. These are *suitability, function, economy and beauty.*

Suitability

The first step is to determine the family needs. The requirements will vary with individual situations. The following questions may help to determine the needs in various situations.

1. Is a play area for children desired?
2. What can this area be used for in later years?
3. Is the family washing to be hung out or will a clothes dryer be used?
4. Is the family horticulturally minded?
5. Do you have enough experience to evaluate landscape maintenance problems?
6. Will outside help be available to assist in landscape maintenance?
7. Do you prefer easy maintenance and a minimum of planted areas?
8. Is a vegetable garden desirable? Cut-flowers?
9. Is the climate suitable for outdoor living or will the garden be developed primarily for viewing from the home?
10. Will the garden be used for barbecues and picnics?
11. Will you entertain large groups?

12. What special garden structures or features are desirable? (Terrace, patio, bath-house, green-house, seats, benches, gateways, tool storage, pergolas, etc.)

13. How much money will be available for garden construction?

14. Does any member of the family have an interest in one particular plant genus? (Roses, azaleas, camellias, iris, day lilies or special subjects such as potted plants, etc.)

15. Can you crowd all your requirements into the space available?

Get your family requirements down on paper. Keep in mind that you are planning not only for the present but for the years to come.

Function

The second step in planning is to take the requirements and adapt them to a usable development. Consider the house and grounds as a unit. Both the grounds and the house have work areas, as well as areas devoted to the enjoyment of living. For practical reasons, the relationship of the house and grounds must be close.

The living areas of the house should open onto the livable areas of the grounds. The work areas of the grounds should be readily accessible to the work areas of the house.

Economy

The economy of space, time and money is of great interest and importance when planning home grounds. Economy in any form eventually will result in saving money. Since this is a factor in the development of almost every homesite, there are three main economies to keep in mind, *economy of space, garden development and maintenance.*

Space

Every square foot of ground on a small homesite is valuable. All the available space should be saved for the development of livable and usable areas whenever possible.

Garden Development

Any garden development requires an outlay of funds. Planning insures that such expenditures can be made wisely.

Funds spent for landscape developments are well invested. In fact, landscape development is one of the few investments where many items such as trees increase the value of the homesite throughout the years. Good landscape development always results in an increase of property values.

Planning how to carry out the development of the garden and how to maintain it is as important as drawing up the general design.

When the general design is decided upon, make immediate decisions as to how the landscape development is to be conducted.

There are two schools of thought as to the best method of constructing a landscape development.

One method is to spread the work required over a period of years. The other is to do all the work at once. Both methods have advantages and disadvantages. When the work is extended over a period of years, the use of some of the features must be postponed.

When the process of developing the entire garden at one time is followed, the question of whether finances are available for this type of procedure usually arises. Present-day financing plans are available for this work just as they are for home construction. The cost to the homeowner is about the same as it would be if he budgeted his garden development over a period of years. The enjoyment of doing the work yourself also must be considered.

Maintenance

In many cases, the homeowner finds that a minimum of outside help will be available to keep the garden in proper condition.

Make every effort to simplify the whole development so that you can keep the maintenance work to a minimum and use more of your time for enjoyment of the garden.

The proper organization of garden areas and planting will tend to make the maintenance work lighter. Nothing is more difficult to keep looking well than a disorganized, scattered collection of plants and other features.

Beauty

Beauty is largely a question of individual taste and past environment. To appreciate or create beauty, one must possess a real desire for the beautiful. When the desire exists for a beautiful garden, the planner will create one, despite all obstacles. When the principal desire is for a spot to show off to others while the planner himself possesses no appreciation of it, the garden may be a failure.

A garden is composed of many living elements, many more than the average person appreciates. The soil in the garden, while not in itself a beautiful picture, nevertheless is alive. Other features,

many of which are alive, must be placed in or on it.

Landscape planning must create a harmonious picture upon the soil. Various objects, plants and other features must be so arranged that they look well together. Each object in a landscape development will have a certain effect upon the others. From an artistic standpoint, everything varies in *mass, color* and *texture*.

These three variables determine the character of the objects that will be used and how each will fit in with neighboring objects. In normal situations, components that are similar in general character will harmonize. To take materials that vary considerably and compose an attractive picture requires study and knowledge.

Five considerations that seem to bear most on a scheme of planning harmonious garden pictures follow:

1. Center of interest
2. Development of interest
3. Balancing interests
4. Relationship of parts
5. Simplicity

Center of Interest

There must be some object or group of objects of sufficient interest to dominate a picture. The eye of the observer should travel automatically to this point.

When there are conflicting objects of equal importance the eye will keep jumping back and forth from one object to the other, resulting in a feeling of restlessness. In garden planning, this means that garden features should be located so that they do not conflict with each other and the plantings should not conflict with the center of attraction.

For these reasons, the professional garden planner usually avoids plants with colored foliage. They are showy in themselves but can easily create a spotty appearance in the garden.

The center of interest in a garden does not need to be a man-made feature. It may be composed of plants or views, but the creation of such effects on small properties usually are much more difficult to develop.

Development of Interest

When the eye automatically travels to the center of interest, it does not happen by accident. A path for the eye to travel is created and all distracting elements are eliminated.

Open lawn areas, paths and like developments lead the eye to the principal feature without distraction.

Plantings must be so placed that they frame the center of interest and lead the eye to it easily.

This is the area in which the average homeowner often is trapped in his preparations for planning. Often he becomes so interested or involved in individual plants at this point that he fails to complete a good garden picture.

Balancing Interests

A balanced arrangement of the interesting individual things that go into developing a good picture or a good garden is essential.

When a property is undeveloped it lacks this balance. In developing a garden, the same problem arises that usually exists in furnishing a room or in painting a picture. This is largely because the entire development is made up of many pictures. The composite picture of the house and ground, which is never seen all at once, is the most important consideration because it fixes the total effect in the observer's mind. This overall effect will never be quite pleasing in the mind's eye unless an even distribution of interest throughout the house and grounds exists. The same balance of interest must exist in all the individual pictures which make up the total garden.

When you look at a home with a heavy planting on one side and no planting on the other, your attention is attracted immediately to the mass of foliage. The balance could be restored easily in this case, by placing a proper mass of foliage on the other side. In each case, the various items used in a landscape development must be balanced to retain a center of interest and to give pleasing composition.

Relationship of Parts

The satisfactory pictorial effect of a landscape can be obtained only when all the elements that make up the design are in good proportion to each other and to the arrangement as a whole.

When you see an old house around which the plants have become overgrown, you will notice that the house is overpowered by the large masses of foliage. A crowded, unpleasant picture of the house and grounds exists. On the other hand, newly planted houses in many subdivisions appear bare and ungainly. Here the foliage masses of the trees and shrubs are not large or dense enough to be in proper proportion to the house and the open lawn areas.

Proper placement of objects in relation to one another can result in many varied effects. A large tree will make a house nearby appear smaller. A small tree placed in the same location would make the house appear larger. You must determine the effects desired when you plan.

The final decision regarding the size of objects used in landscape development depends largely on previous experience of the planner. If the planner remains alert to the possible relationships and studies good pictures and designs, he will develop a feeling for proper proportions among objects.

Simplicity

Invariably the average person feels that a simple landscape would be easier to accomplish than a complicated one. This rarely proves to be true.

The average homeowner who begins to plan his own landscape development is so filled with enthusiasm that he usually tends to prepare a complicated composition. The professional in most instances strives for simplicity in his planning. This is a difficult goal to achieve, even by the best.

Simplicity is the keynote of beauty. In most cases simplicity in design is a truthful, straightforward development, planned to fulfill a definite function instead of being showy or elaborate. Never try to make anything "more beautiful" or "prettier" by various tricks or additions to the plans unless they are related definitely to the basic scheme.

DEVELOP YOUR LANDSCAPE PLAN

Planning is the means of accomplishing an objective through an arrangement of steps. In planning a home landscape, you can reach this goal by considering four basic steps.

For best results, begin planning your home and garden before purchasing the property. This is true whether a landscape architect does the planning or the homeowner himself. Buildings, trees and other conditions on sites adjacent to the property may have a considerable effect on the planning arrangement.

Begin With a Survey

All landscape plans begin with a survey of existing conditions. Such surveys are easy to make on cross-section paper. Select a definite scale at which to work. For small properties, a scale of 1 inch equals 8 feet or 1 inch equals 10 feet may be most desirable. Small squares on the cross-

section paper can be made to represent 1 foot measurements on the ground.

Before you do much planning, you will need this accurate and complete description of the area involved. The information you will need on your survey will include the location of existing conditions such as property lines, all types of buildings with the windows and entrances indicated, walks, driveways, fences, trees and shrubs, septic tank and disposal field, telephone poles, slope of the land, views from the property and the location of buildings on lots adjacent to the property.

On large lots or properties where complications exist, the survey should be made by a registered surveyor. On small properties, the homeowner can obtain the data himself.

Analyze Requirements

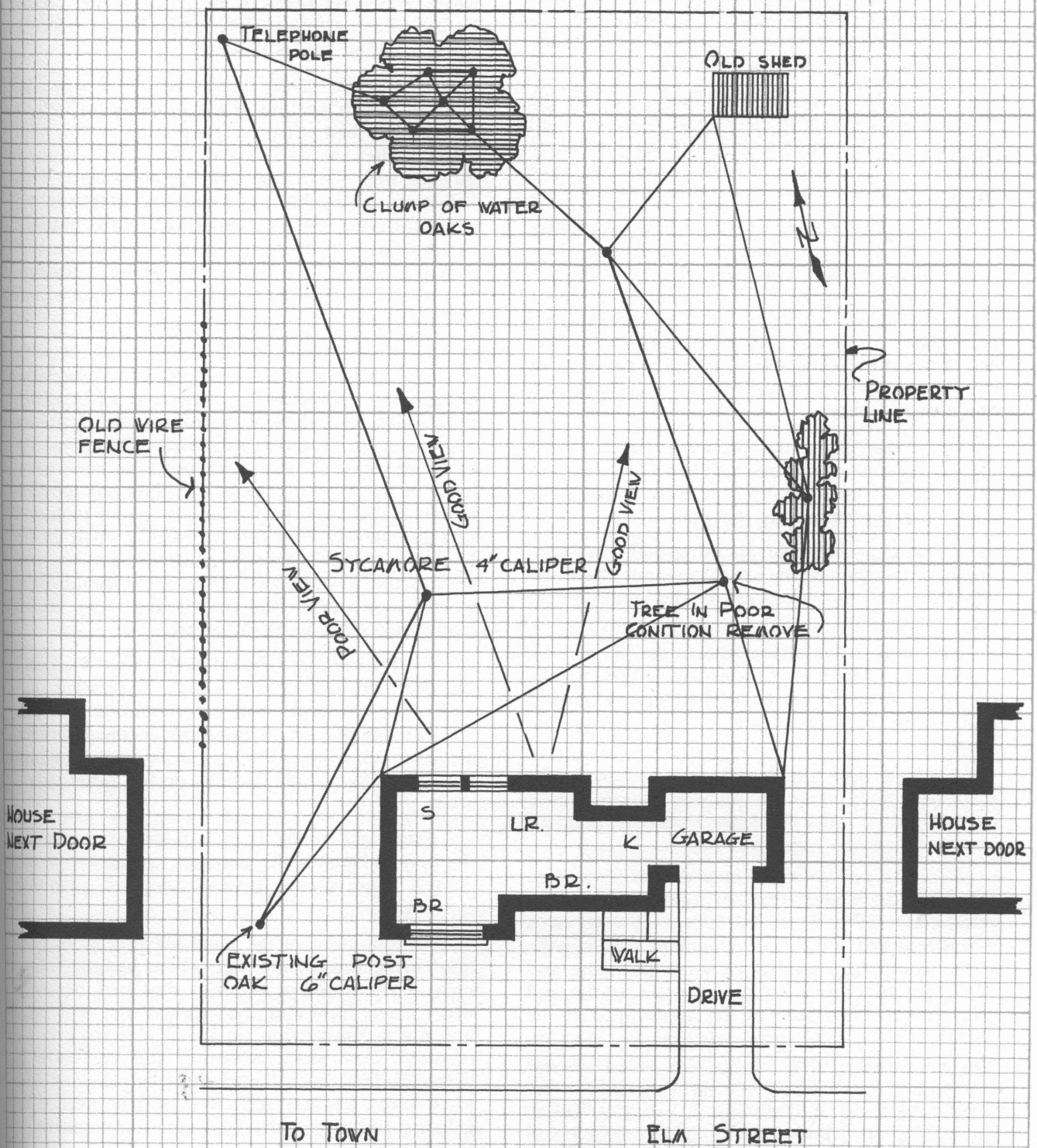
Analyze carefully what you will want on the property after you have completed the survey and before you begin to make your plan. The following might be a general check list:

- An attractive home — throughout the entire property as well as from the street.
- The car near the house.
- Privacy in the outdoor living areas.
- A play yard with appropriate equipment for children.
- An outdoor area for airing or drying clothes.
- Convenient delivery for fuel and other materials.
- An outdoor hobby of gardening — or other outdoor exercise.
- Shade during summer days.
- Attractive views from the windows.
- Protection from insects at night.
- Facilities for outdoor entertaining.
- Shade trees, flowering shrubs, fruit trees, lawn.
- Some flowers — a vegetable garden.
- Storage for hobby, sports and gardening equipment.
- Garden structures — garden shelters, pools, walls, fences, patio, terraces, greenhouse.
- An efficient plan that provides convenience and does not waste space.
- Grounds that are easy to maintain and within the limits of your planned maintenance program.

Draw the Plan

The actual arrangement or design of a garden is not a one-step operation. It is a gradual build-

BEGIN BY TAKING A MEASUREMENT SUCH AS THE APPROXIMATE CENTER OF THE CLUMP OF WATER OAKS AND THEN TAKE OFFSETS FROM THAT FIXED POINT TO OTHER POINTS ON THE PROPERTY.



TO TOWN

ELM STREET

SKETCH SURVEY

ONE INCH = 10 FT.

up and refinement of many details. The planner should make several tracing paper overlays on the survey, ultimately arriving at final plan.

Begin the preliminary planning and sketching by establishing some rough size and shape for each item that is needed or desired. Then make diagrams to show the proper relationships between the landscape elements and the house.

The problems of the individual property, the exactness of the requirements and how well you can visualize the needs and desires and put these thoughts on the paper will determine the time required to develop a satisfactory landscape layout.

The average home owner may have some difficulty at first in visualizing his needs and their relationship to each other, and then putting this information on paper. Should this difficulty arise, the use of stakes and strings on the property itself to visualize the layout may be of great help. Try laying out the various elements and areas on your lot with stakes and strings and then go back and put them on paper.

Scale models of the property can be made during the planning stages. Then the plan can be studied at true eye level as well as from the aerial view presented on the plan.

General problems of planning both rural and urban properties are similar throughout the country. The only variations are in the conditions of the surroundings.

All homesites and farmsites must provide for four main functions. These are access to the property or an entrance development, a general living area, work space and a place for private living.

Each of these developments will function at their best when they are planned as continuous outdoor-indoor units. Whenever possible, plan the house and garden together.

1. *The public access area* or the front yard should be planned so that the house will be separated comfortably from the street. A large area is not required for this development, but enough space should be provided between the house and the street to act as a buffer for noise, traffic and dust, and to contribute to the appearance of the neighborhood. The space provided for these requirements should not be so large that it creates problems of maintenance and installation that will become a burden to the owner, or that will deprive the private and livable portions of the property of needed space.

The walks which connect the front door to the street or entrance drive should be so planned that

they are convenient to cars when they are driven in and out. This includes the direction of daily traffic; how steep a slope the car can climb; space needed to turn the car conveniently; how close a turn can be made both forward and backward; whether existing traffic is such that a car can be backed into the street safely; and whether parking space for guest cars is desirable.

2. *General living areas* should occupy the main or largest portion of the property, as well as present the best view and exposure to sun and shade. They should be developed so they connect directly with the living area of the house. This will make it possible to connect the indoor living areas with the terrace, patio and other outdoor living areas and to have them overlook the best garden picture. This is most important in developments where outdoor living is not a major consideration.

3. *Garden work space* should connect with the workrooms of the house and should be large enough for clothes drying, trash and garbage disposal, outdoor work hobbies or other such activities which require messy operations. Other garden activities which should be included are fruit, vegetable or cut flower gardens, (at times not too presentable), children's play areas, storage for tools and toys and garden work centers, such as small greenhouses, potting benches, fertilizer, compost, soil storage and flower pots. These areas should have screens to separate them from living areas, yet be readily accessible to all other areas.

4. *Private areas* should be developed around the bedroom area of the house. A pleasant outlook or view from the windows should be provided and outdoor porches, terraces and enclosed gardens may be planned so that they can be used for sleeping out-of-doors, sun bathing or for quiet relaxation.

When the rough planning has proceeded to the point where all the areas are outlined and the desired requirements included, detailed planning can begin.

At this point in the planning procedure, you must make final decisions. These include things such as the kinds of material that will be used, what precise form and arrangement they will take, how much construction work and planting will be required, how much screening and enclosure is necessary, how much shelter must be provided and what forms, textures and colors will be needed to enhance and enrich the landscape development.

The practical requirements of drainage, irrigation, circulation, lighting and other factors also must be determined.

These multiple decisions must be made together because each has some bearing on the others.

The arrangement, form and material must fit together. The more construction that is planned with inanimate materials, the less planting will be required. The more initial outlay planned, the less continuous maintenance will be involved.

In the design of landscaped areas, the enclosure and shelter required are the primary elements that give form to garden space, and give the landscape development its principal character and quality.

Drainage and necessary utilities also must be established at the very beginning. Only after these principal considerations have been provided should thought be given to the elements that provide enrichment and beauty to the solution of the landscape problem.

An important fact to remember, however, is that these decisions must be made in developing the overall landscape through careful planning, study and preparations. Otherwise, they are apt to result in a landscape development that usually is a confused collection of plants, and all the desirable functions and potential qualities of the available space are lost.

Today you live in a "do-it-yourself" age. The real secret in developing a good solution to the problem of landscaping home grounds is to know "why" as well as "how" to do it.

Most home owners are practical. Once they know what to do, they can carry out the physical requirements of placing both plants and construction.

In years past, there were two simple and infallible rules or systems of garden design. No one bothered to ask "why" these things were done.

The formal development was based on a mechanical, rigid system of geometric patterns while the informal approach was based on a respect for natural conditions which almost always resulted in a disorganized grouping and scattering of plants and wiggling curves.

Regardless of these so called "rules," many gardens throughout the country are based on formal and informal design principles, and no one familiar with good landscape design and development would want to destroy or revise them in any way without some very good reason.

The main concern of present-day landscape planning must be one of understanding new concepts and developments based on the desirable changes which have taken place in the world.

When these changes and the new developments in modern living are considered carefully, we find that new ways of visualizing the physical world around us produce new concepts of garden forms and arrangements.

This constant change was recognized about 25 years ago and a search for new and better garden forms and arrangements began. We now can determine whether gardens are good or bad solutions to a landscape problem regardless of whether they follow traditional design "rules" or whether they are based on the needs and functions of modern living.

A plan on paper is drawn in an effort to control the development of the physical forms and actual arrangement of these forms on the ground.

The connection between these plans on paper and the eventual physical result on the land itself is the most difficult thing for the amateur gardener to understand. Every line drawn on the plan must refer to some real physical element on the ground. As long as this principle is maintained when the plans are drawn, the patterns created by the lines on the paper will have real meaning. When this principle is not followed, the plan will be merely a drawing.

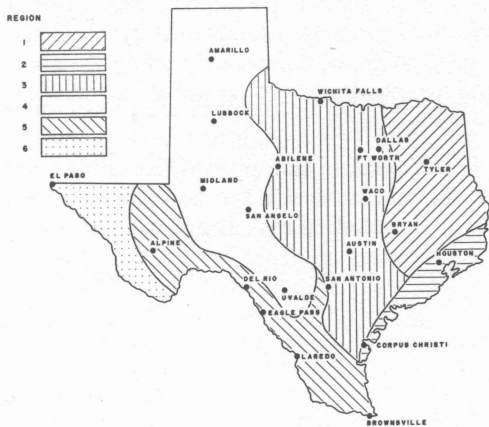
Landscape design is an art concerned with forms or things that are seen. A landscape plan is drawn to express these forms since it is difficult to express them in words.

Climate, living conditions and other requirements change with location and time and the character of a design also must change.

For example, the old design form vocabulary of formal and informal was too dry, restrictive and mechanical. It did not allow for the creation of forms that were versatile enough to solve the variety of problems encountered and to use the many new materials that were available.

Anyone concerned with preparing a landscape plan should strive to indicate the main elements on a plan with landscape design forms that refer directly to actual materials that will be used on the ground.

The principal sources of forms in a landscape development are the house, the lot and the materials to be used. When the planner adheres closely to the forms which arise naturally from existing conditions such as the house, usually rectangular; the lot which may be rectangular, odd formed and often irregular in topography; the trees, shrubs, rocks and other materials which have natural form; an excellent collection of forms can be compiled from which to start working. These forms should be included in the plan.



CLIMATIC REGIONS OF TEXAS

Region 1 – East Texas

Includes most of cotton country in East Texas. Normally abundant rainfall (40 to 60 inches) except toward end of rather warm summer, when a long drought frequently occurs.

This region is normally favorable to the growth of woody plants.

Examples of More Desirable Trees

DECIDUOUS TREES

- | | |
|--|---|
| <i>Quercus phellos</i> —Willow Oak | <i>Quercus laurifolia</i> —Laurel Oak |
| <i>Quercus falcata</i> —Southern Red Oak | <i>Quercus macrocarpa</i> —Mossycup Oak |
| <i>Quercus lyrata</i> —Overcup Oak | <i>Liquidambar styraciflua</i> —Sweet Gum |
| <i>Liriodendron tulipifera</i> —Tulip Tree | <i>Carya illinoensis</i> —Pecan |
| <i>Platanus occidentalis</i> —American Planetree | <i>Fraxinus americana</i> —White Ash |
| <i>Nyssa sylvatica</i> —Tupelo | <i>Acer rubrum</i> —Red Maple |
| <i>Ginkgo biloba</i> —Ginkgo | <i>Ulmus americana</i> —American Elm |
| <i>Ulmus alata</i> —Winged Elm | |

EVERGREEN TREES

- | | |
|---------------------------------------|--|
| <i>Quercus virginiana</i> —Live Oak | <i>Magnolia grandiflora</i> —Southern Magnolia |
| <i>Ilex opaca</i> —American Holly | <i>Pinus palustris</i> —Longleaf Pine |
| <i>Pinus echinata</i> —Shortleaf Pine | <i>Pinus taeda</i> —Loblolly Pine |
| <i>Cedrus deodara</i> —Deodar Cedar | <i>Juniperus virginiana</i> —Eastern Redcedar |

Region 2 – Coastal Plain along Gulf of Mexico

Moderate summer temperatures with hot sunshine, short winters. Annual rainfall of about 30 to 40 inches. Borders on subtropical. Portions with swampy soils. High water table.

Examples of More Desirable Trees

DECIDUOUS TREES

- | | |
|--|--|
| <i>Quercus laurifolia</i> —Laurel Oak | <i>Quercus phellos</i> —Willow Oak |
| <i>Quercus falcata</i> —Southern Red Oak | <i>Platanus acerifolia</i> —London Planetree |

- Platanus occidentalis*—American Planetree
Carya illinoensis—Pecan
Celtis laevigata—Sugar Hackberry
Ulmus americana—American Elm

- Liquidambar styraciflua*—Sweetgum
Acer rubrum—Red Maple
Ginkgo Biloba—Ginkgo
Taxodium distichum—Baldcypress

EVERGREEN TREES

- Quercus virginiana*—Live Oak
Ilex opaca—American Holly
Magnolia grandiflora—Southern Magnolia
Pinus palustris—Longleaf Pine

PALMS

- Sabal palmetto*—Cabbage Palmetto
Phoenix canariensis—Canary Datepalm
Washingtonia robusta—Mexican Washington Palm
Livistona chinensis—Chinese Fan Palm

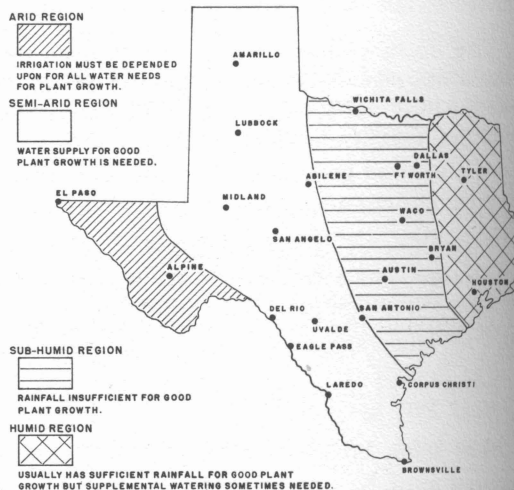
Region 3 – Central Texas

Subhumid or transition region of Central Texas with black and chocolate colored soils. Moisture conditions intermediate between humid climate of East Texas and dry regions in Western Texas.

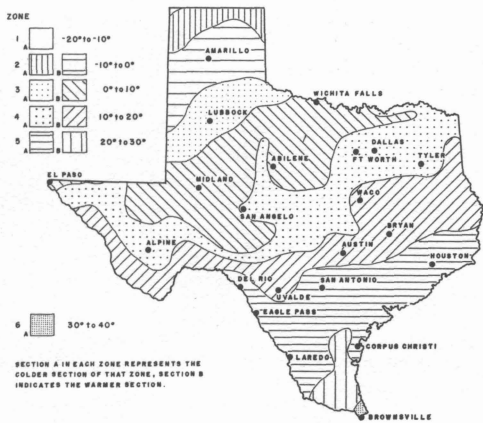
Examples of More Desirable Trees

DECIDUOUS TREES

- | | |
|---|---|
| <i>Carya illinoensis</i> —Pecan | <i>Celtis laevigata</i> —Sugar Hackberry |
| <i>Ulmus parvifolia</i> —Chinese Elm | <i>Ulmus crassifolia</i> —Cedar Elm |
| <i>Quercus macrocarpa</i> —Mossycup Oak | <i>Koeleruteria paniculata</i> —Goldenrain Tree |
| <i>Platanus acerifolia</i> —London Planetree | <i>Platanus occidentalis</i> —American Planetree |
| <i>Quercus phellos</i> —Willow Oak | <i>Quercus falcata</i> —Southern Red Oak |
| <i>Quercus shumardi</i> —Shumard Oak | <i>Quercus stellata</i> —Post Oak |
| <i>Quercus muhlenbergi</i> —Chinquapin | <i>Fraxinus pennsylvanica lanceolata</i> —Green Ash (Southern portion only) |
| <i>Brachychiton acerifolium</i> —Flame Bottletree | |



Moisture conditions in Texas areas.



Approximate range of average annual minimum temperatures.

EVERGREEN TREES

- | | |
|---|---|
| <i>Quercus virginiana</i> —Live Oak | <i>Cedrus deodara</i> —Deodar Cedar |
| <i>Juniperus virginiana</i> —Eastern Redcedar | <i>Cupressus arizonica</i> —Arizona Cypress |
| <i>Quercus nigra</i> —Water Oak | |

Region 4 — Texas Plains

Rainfall varies from 12 to 22 inches. Warmer and drier than central regions.

Satisfactory Trees for All Parts

- | | |
|---|---|
| <i>Celtis occidentalis</i> —Hackberry | <i>Robinia pseudoacacia</i> —Black Locust |
| <i>Ulmus parvifolia</i> —Chinese Elm | <i>Fraxinus pennsylvanica lanceolata</i> —Green Ash |
| <i>Populus deltoides missouriensis</i> —Southern Poplar | |

Trees Likely to Succeed Over Most of Region

- | | |
|--|---|
| <i>Platanus occidentalis</i> —American Planetree | <i>Populus alba silver</i> —Silver Poplar |
| <i>Fraxinus pennsylvanica</i> —Red Ash | |

Less Desirable Trees That May Be Useful Under Especially Difficult Conditions in This Region

- | | |
|--|---|
| <i>Acer negundo</i> —Box Elder | <i>Maclura pomifera</i> —Osage Orange |
| <i>Elaeagnus angustifolia</i> —Russian Olive | <i>Morus alba tartarica</i> —Russian Mulberry |

For Warmer Portions of the Region

- | | |
|--|---|
| <i>Melia azedarach</i> —Chinaberry | <i>Melia azedarach umbraculiformis</i> —Texas Umbrella Tree |
| <i>Broussonetia papyrifera</i> —Paper Mulberry | <i>Cedrus deodara</i> —Deodar Cedar |
| <i>Juniperus virginiana</i> —Eastern Redcedar | |

Cupressus arizonica—Arizona Cypress

Pinus banksiana—Jack Pine
Pinus ponderosa—Western Yellow Pine

Region 5 — Southwest Texas

Hot, dry climatic conditions. 12 to 22 inches of rainfall but excessive evaporation.

Most Promising Trees

- | | |
|--|--|
| <i>Parkinsonia aculeata</i> —Jerusalem Thorn | <i>Ulmus parvifolia</i> —Chinese Elm |
| <i>Phoenix canariensis</i> —Canary Datepalm | <i>Washingtonia robusta</i> —Mexican Washington Palm |
| <i>Tamarix aphylla</i> —Athel Tamarix | <i>Melia azedarach</i> —Chinaberry |
| <i>Populus deltoides</i> —Eastern Poplar | <i>Sabal texensis</i> —Texas Palmetto |
| <i>Sabal palmetto</i> —Cabbage Palmetto | |

Suitable Trees for Most Parts of Region

- | | |
|---|--|
| <i>Gleditsia triacanthos</i> —Honey Locust | <i>Robinia pseudoacacia</i> —Black Locust |
| <i>Fraxinus pennsylvanica lanceolata</i> —Green Ash | <i>Populus alba Silver</i> —Silver Poplar |
| <i>Morus alba</i> —White Mulberry | <i>Broussonetia papyrifera</i> —Paper Mulberry |

For Difficult Areas

- | | |
|---------------------------------------|--|
| <i>Maclura pomifera</i> —Osage Orange | <i>Acer negundo</i> —Box Elder |
| <i>Salix nigra</i> —Black Willow | <i>Elaeagnus angustifolia</i> —Russian Olive |

Note: Native Mesquite is one of the most valuable roadside trees for this region but collected plants are difficult to transplant. When they can be saved near the road this certainly should be done.

Region 6 — Western Texas

Arid plateau conditions. Hot days in summer with occasional frosty nights. Cold winters and about 10 inches of rainfall annually.

Most Promising Deciduous Trees

- | | |
|---|---|
| <i>Gleditsia triacanthos</i> —Honey Locust | <i>Robinia pseudoacacia</i> —Black Locust |
| <i>Fraxinus pennsylvanica lanceolata</i> —Green Ash | <i>Chilopsis linearis</i> —Desert Willow |
| <i>Populus deltoides</i> —Eastern Poplar | <i>Celtis occidentalis</i> —Hackberry |
| <i>Juglans notha</i> —Notho Walnut | |

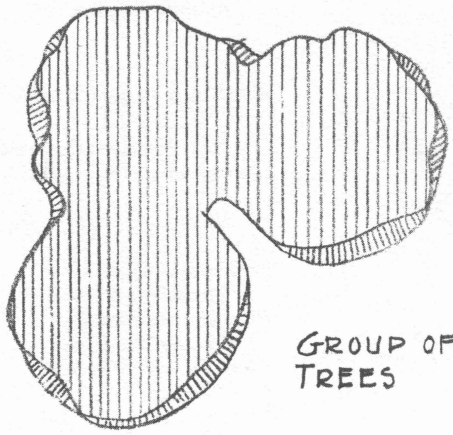
Less Desirable but Satisfactory Trees

- | | |
|--------------------------------|------------------------------------|
| <i>Acer negundo</i> —Box Elder | <i>Melia azedarach</i> —Chinaberry |
|--------------------------------|------------------------------------|

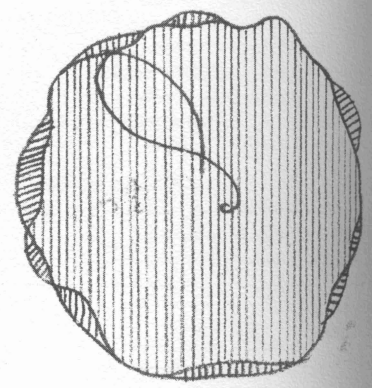
Trees Suitable Under Irrigation or Along Irrigation Ditches

- | | |
|--|---------------------------------------|
| <i>Ulmus parvifolia</i> —Chinese Elm | <i>Sabal texensis</i> —Texas Palmetto |
| <i>Parkinsonia aculeata</i> —Jerusalem Thorn | Eucalyptus species |

SYMBOLS
FOR
LANDSCAPE
PLANS



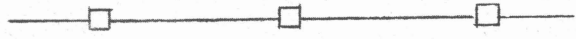
GROUP OF
TREES



TREE



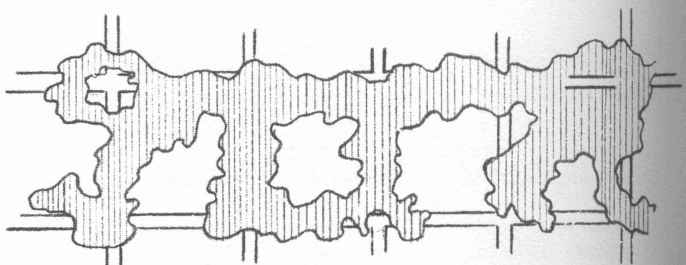
SHRUB



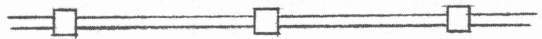
FENCE



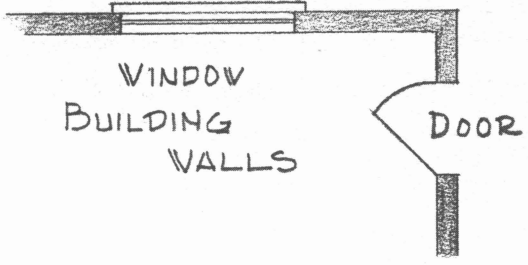
VINES ON FENCE



VINES ON ARBOR OR PERGOLA

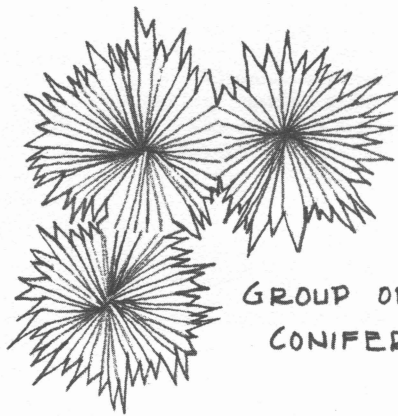


GARDEN WALL

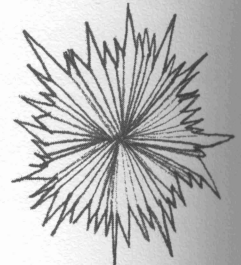


WINDOW
BUILDING
WALLS

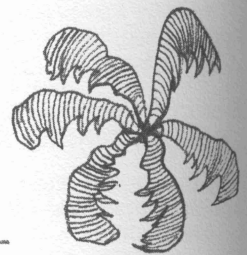
DOOR



GROUP OF
CONIFERS



CONIFER



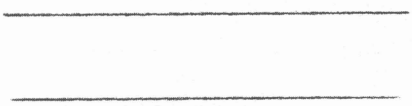
PALM



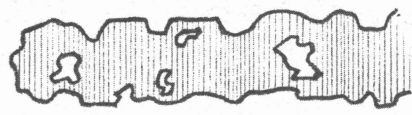
FLAGSTONE WALK



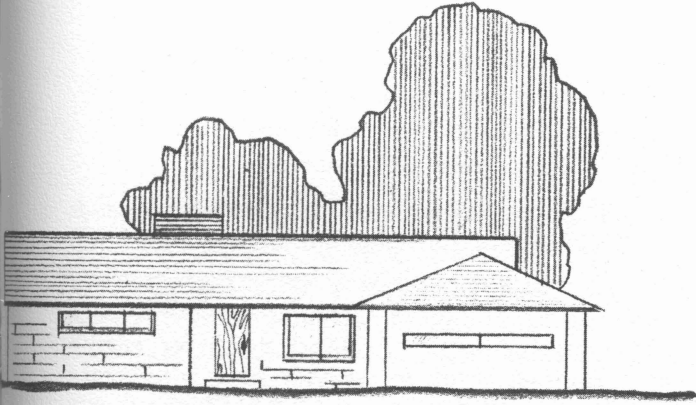
SHEARED HEDGE



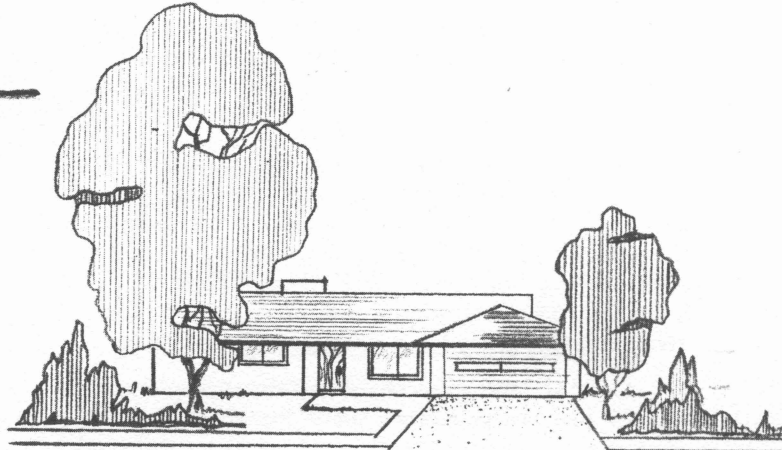
CONCRETE WALK



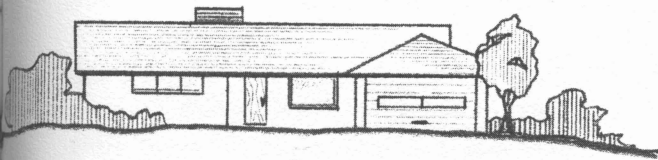
NATURAL HEDGE



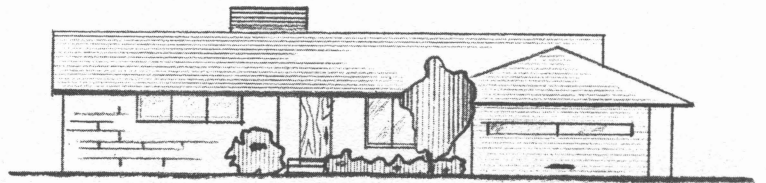
PLAN A PROPER BACKGROUND



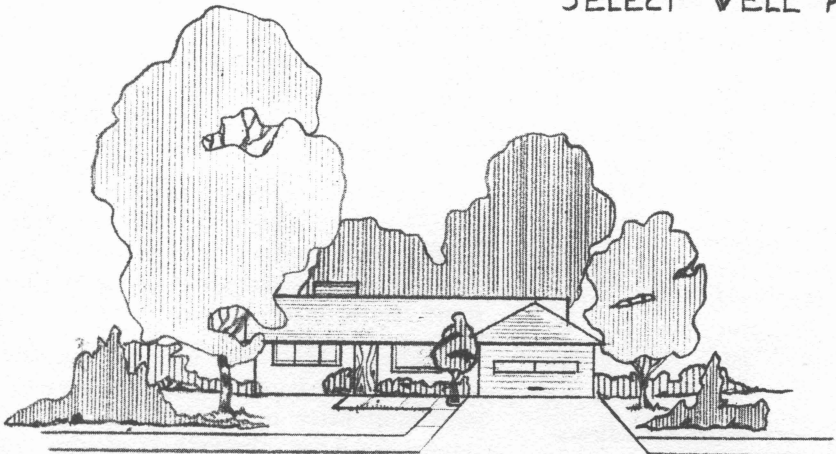
AN ATTRACTIVE FOREGROUND



GOOD FRAMING



SELECT WELL PLACED ACCENTS



TO PRODUCE ATTRACTIVE AND LIVABLE
LANDSCAPE SELECT THE PROPER PLANTS

SELECT YOUR PLANTS

When functional requirements of the landscape have been determined, next comes the planning and selection of the plants to be used to develop the garden. The completed plantings are the final mark of distinction in any garden. These are the elements that provide beauty and enrichment to the solution of the landscape problem.

Most people who become interested in landscape development are attracted to it by their fondness or interest in plants. This can lead easily to a complicated garden unless it is held in check carefully.

In modern livable gardens, the planner must keep the design and maintenance in mind so that the plants do not dominate the entire scheme. This does not mean that the plants and their proper selection are not equally important. However, on a small property, a botanical garden and an attractive picture cannot be created at the same time.

Careful and successful landscape planning should provide sufficient space for all the plants that are desired and still create a beautiful and functional garden development.

Plants are living materials and they grow and change constantly. For this reason, they tend to make garden planning difficult, but they are essential elements in any garden.

The basic structure and forms of plants have been well identified. With a little study you can visualize them easily and predict how any tree or shrub will look when it reaches maturity, provided it is given adequate care.

Do not attempt to select plants until you have worked out the general landscape plan. Then base your selection on choosing each plant for a certain place, to serve a specific function, with minimum care.

Plants perform four definite functions in the garden: to enclose or define space; to provide overhead shelter; to cover a surface; and to add beauty to the garden with their form, color, texture, pattern and structure.

Landscape plants can be divided into seven different size groups, depending on the eye level at which they are to be seen. For the average person standing in the garden, this level is 5 to 6 feet. From a sitting position on a terrace the eye level is 3 to 4 feet.

These plant size groups are listed as follows:

Climbing vines

Ground covers (1 to 12")

Dwarf shrubs (18 to 36")

Small shrubs (4 to 5')

Medium shrubs (6 to 8')

Large shrubs or small trees (12 to 25')

Large trees (50' and over)

The first requirement in selecting plants is to determine the form and size needed.

For example, should it be a low plant for surfacing the ground or a ground cover, or a large shrub for enclosure? A dwarf shrub for edging or a medium shrub for privacy or a windbreak? A large tree for shelter or a small flowering tree for beauty alone?

The importance of selecting plants according to their requirements lies in their relationship to the scale of an individual and whether they will grow above or below eye level.

Uses of plants in the seven size groups can be outlined as follows:

1. *Vines* are plants whose stems normally will not support them in an upright position. They will climb on supports by one of the following methods:

Twining stems which twine about a support (wistaria and honeysuckle)

Root-like hold fasts along the stems (English ivy and trumpet creeper)

Tendrils (clematis and catsclaw)

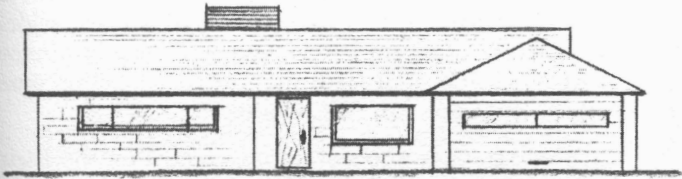
Tendrils with adhesive discs (Virginia creeper and Boston creeper)

Drooping, weaving or rambling over or through a support such as a trellis or arbor (climbing roses and Carolina jessamine)

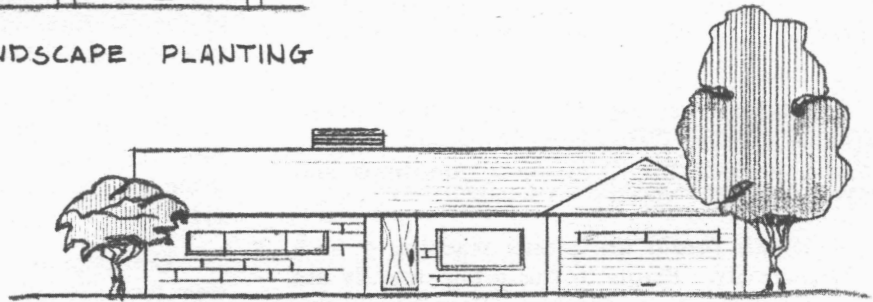
Vines may be used to enrich architectural features such as walls, fences and structural screens; to screen unsightly areas; to provide privacy; to shade porches and terraces; to reduce heat absorption or reduce glare on paved areas; for their foliage texture, flowers or fruit; or for their interesting growth habit and shadow patterns.

2. *Ground covers* are plants that do not grow more than 12 inches tall. When selecting plants in this group, investigate carefully the growth habit; soil and moisture requirements and ability to withstand traffic in the garden.

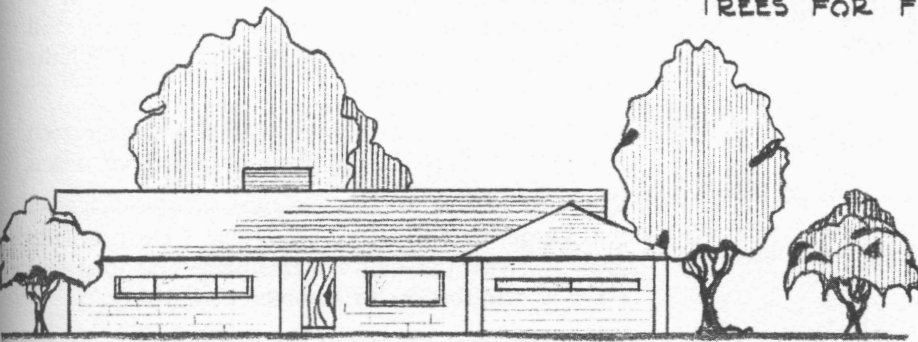
These plants are used for garden surfacing below the eye level of a sitting person. They are used most often to reduce landscape maintenance, lessen the heat absorption of the soil, provide texture and pattern variations on the garden surface; and to prevent soil erosion.



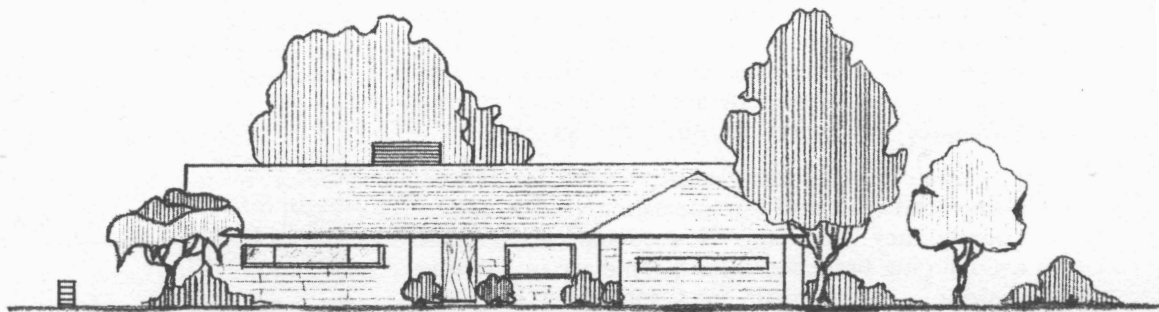
A HOME NEEDS LANDSCAPE PLANTING



TREES FOR FRAMING



BACKGROUND & BORDER PLANTING



GROUND LINE & BORDER PLANTS

Consider carefully the resistance of these plants to insects and disease attacks, their adaptation to sunny or shady situations and their ability to choke out weeds and other undesirable growth. Some of the most successful ground covers for Texas conditions are purpleleaf honeysuckle, starjasmine, bigleaf periwinkle and English ivy.

3. *Dwarf shrubs* are low plants (1½ to 3 feet). The greatest value in landscape planting of this group is their growth habit which keeps them small even when they reach maturity. This eliminates constant pruning to keep them within bounds or to prevent them from reducing light or hiding a view.

Examples of several outstanding dwarf plants adaptable to most Texas areas are dwarf yaupon, tamarisk juniper, dwarf Japanese euonymus and dwarf gardenias.

4. *Small shrubs* are plants reaching 4 to 5 feet at maturity. Plants in this group usually are used for low screen or barriers. Even plants this small may be too large for plantings next to a house of modern architectural design.

Plants in this group that are suitable examples for Texas gardens include pfitzer juniper, Indian hawthorn, intermediate gardenia and abelia.

5. *Medium shrubs* attain a height of 6 to 8 feet at maturity. Plants in this group are used to screen objects or areas from public view and to enclose various garden areas.

Some common examples of good plants in this group for Texas gardens are nandina, pittosporum, pyracantha and silver cotoneaster.

6. *Large shrubs or small trees* are 12 to 25 feet tall when fully grown. They are used widely for enclosing garden areas for privacy, for windbreaks and for high-sheared hedges. These plants are most valuable for enclosing individual garden spaces. Good examples of large shrubs in this group for Texas gardens are laurelcherry, thorny elaeagnus, wax privet, photinia and yaupon.

Small trees in this group are used for flower, foliage and fruit and for interesting growth habits. Usually they block the view somewhat by their overhanging branches unless people are in a sitting position. These small trees sometimes are used for partial screening, but usually are selected for their structural interest and form. Most trees in this group are not suitable for providing shade.

Several interesting examples of small trees for Texas gardens are: golden raintree, Jerusalem thorn, flowering crabapples, redbud, acacias and loquat.

7. *Large trees* are those that are 50 feet or more tall at maturity and provide overhead branching. Most trees in this group normally are tall enough to permit an unobstructed view even when people are standing.

When selecting large trees, learn the type of root systems they produce. Trees with deep, wide-spreading roots may clog sewers and drainage systems, while those with shallow roots may become uprooted easily during windstorms.

Large trees also should be selected on the basis of the hardness of the wood and their resistance to insect and disease attack.

Trees with broad spreading branches should be selected to provide shade from the overhead sun. The type, density and extent of foliage will determine the amount of shelter each species provides.

Contrary to popular opinion, large deciduous trees have distinct advantages over evergreens. The foliage provides cooling shade for the garden in the summer but is not retained during the fall and winter when the house and garden need the full benefit of sunlight.

For the same reasons, broad-leaved evergreen trees are desirable in the warmer regions of Texas for year-round shade.

Large, narrow-leaved evergreen trees normally grow upright and help control noise and dust and serve as windbreaks in summer and winter.

Large trees are readily divided into two general groups — deciduous and evergreen. The evergreens have both narrow and broad-leaved forms, while most of the deciduous trees have broad leaves. Examples of both groups are:

EVERGREEN TREES

Broad-leaved
Camphor tree
Eucalyptus
Live oak
Southern magnolia
Narrow-leaved
Arizona cypress
Deodar cedar
Loblolly pine
Eastern redcedar

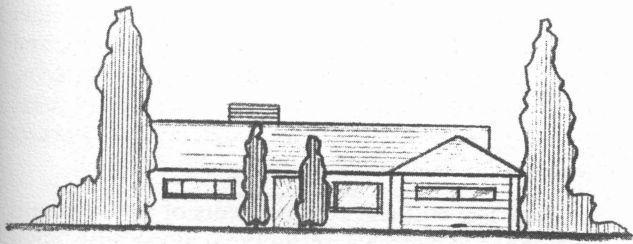
DECIDUOUS TREES

Chinese pistache
Maidenhair tree
Planetree
Thornless honeylocust
Soapberry
Sweetgum
Tulip tree
Water oak

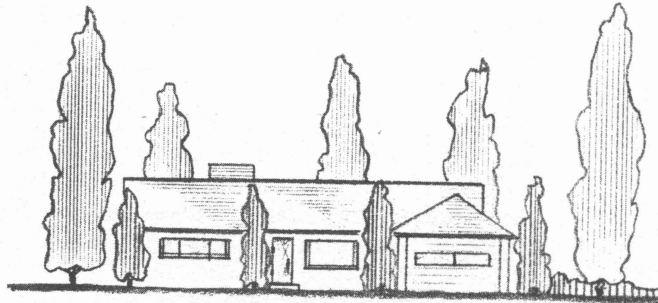
Plant Size and Growth Rate

You need to know the rate of growth of each plant and the size it will attain at maturity so that you can determine the landscape functions it may perform.

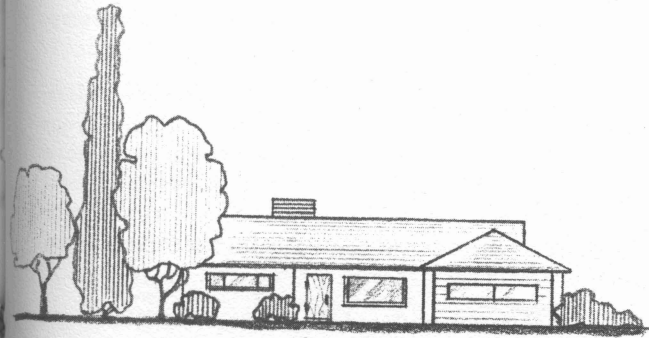
When you know how large a plant will be when it is fully grown, you can allow adequate



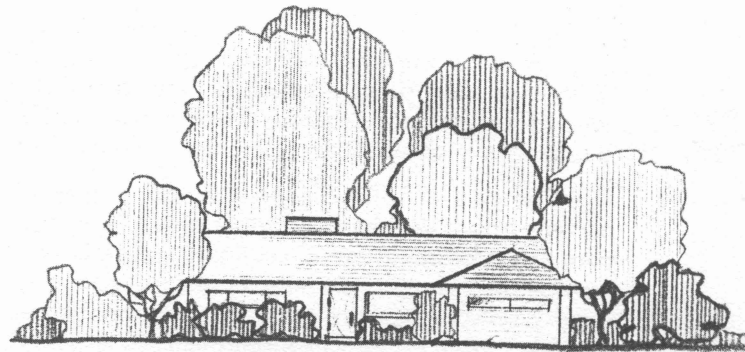
SQUEEZED



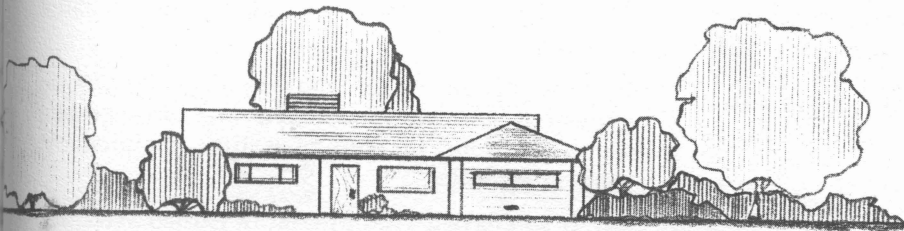
RESTLESS



UNBALANCED



OVER POWERING



BROADENING

UNBALANCED PLANTINGS ARE QUITE OBVIOUS

space for this growth at planting time. This avoids future complications and problems with oversized trees or misshapen shrubs.

A knowledge of the rate of growth of each plant is important. In many cases, slower-growing plants are more permanent and sturdy in character. Those which grow most rapidly often are weak and soft-wooded or may have other serious structural weaknesses, as well as being short lived.

The amount of garden space available will aid in selecting the plant materials to be used in it, especially in reference to their size at maturity. When a small garden is planted with larger shrubs and trees, they are not in scale with the size of the garden; they cramp the existing space; and crowd or conceal other landscape features.

Plant Forms, Structure and Texture

Plants have a wide range of growth habits and forms. Most plants develop a distinct form and structural pattern, such as a dense or open-headed tree; a prostrate or upright shrub; or a twining vine. The amount of coverage provided and the type of foliage also determine how a plant may be used.

Study the way plants grow naturally before selecting them for landscape use. You can do this by visiting local parks, gardens or nurseries which contain collections of plants in the various size groups.

The type of foliage produced and whether it is evergreen or deciduous is important. Evergreens normally produce a damp, cool area beneath them during the winter. Deciduous shrubs and trees usually flower more profusely than the evergreens. For this reason, evergreens should be used sparingly on eastern or southern exposures except in hot, dry areas.

Deciduous and evergreen plants should be used in combination. Any garden development might be dull and drab in the winter when only deciduous plants are used, while it would lack color and changing interest from season to season if only evergreens were used.

Plant Cultural Requirements

An important consideration in the selection of landscape plants is the cultural requirements necessary for maintaining them in a healthy condition. These include pruning, spraying, dusting, watering and other maintenance practices, the hardiness of the plant and its tolerance to shade, sun and moisture.

Texas gardens may include native plants whenever practical to do so. However, in many

cases landscape developments, most of the plants used are from northern or eastern portions of the United States or are foreign introductions from areas where climatic conditions are different.

Texas has many native trees, shrubs and vines with interesting growth habits, flowers, fruits and foliage. Most native plants require little watering or other care when they become established after transplanting. Many species native to arid sections cannot tolerate watering during the summer.

The few cultural requirements of native plants often make it difficult to use them along with other landscape plants in the same planting. You should know the moisture requirements of any native plant when using it in landscape plantings. Many of these plants suffer when placed in shady situations or in areas having poor soil drainage. Few nurseries specialize in native plants, although you can buy the more common ones from local nurseries.

Many foreign plants have characteristics similar to those of native Texas plants. Plants from the Mediterranean regions and Australia often have similar cultural and moisture requirements and can be combined with them. Study the native habitats of introduced plants before selecting them for use in Texas gardens.

Plant Maintenance Requirements

Consider carefully the requirements for good garden maintenance when you select plants. This is of equal importance to planning the design of the garden.

In many cases, most of the hard work in garden planning and plant selection is wasted effort unless the garden receives proper care after it is completed.

The time to determine if a garden design is practical is during the planning stages. This also is the time to develop a workable maintenance solution.

For a homeowner who has little interest in gardening, the plant selection and arrangement should be done to require as little maintenance work as possible.

If you have a keen interest in garden activities, plan and select plants carefully so that your maintenance chores will not become burdensome in later years, and even as time passes you can reduce the maintenance without spoiling the garden plan. List items and plants that require the *least* as well as the *greatest* maintenance during the planning stages.

Three major items need careful consideration during the plant selection stages of the planning

PLANT FORMS

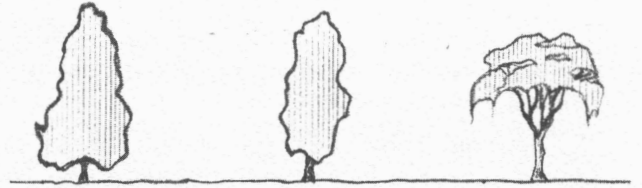


OVAL

WEeping

ROUND

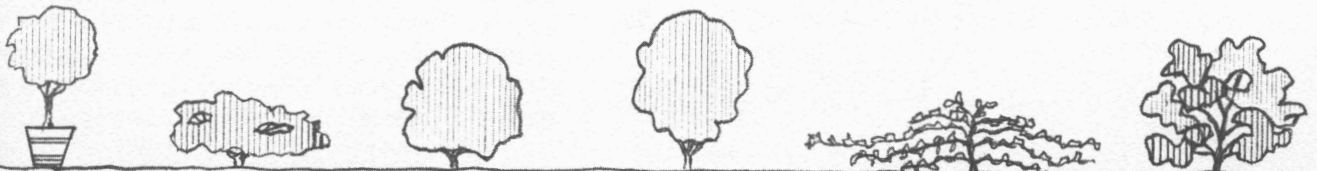
TREES



PYRAMIDAL

ERECT

VASE-SHAPE



STANDARD

SPREADING

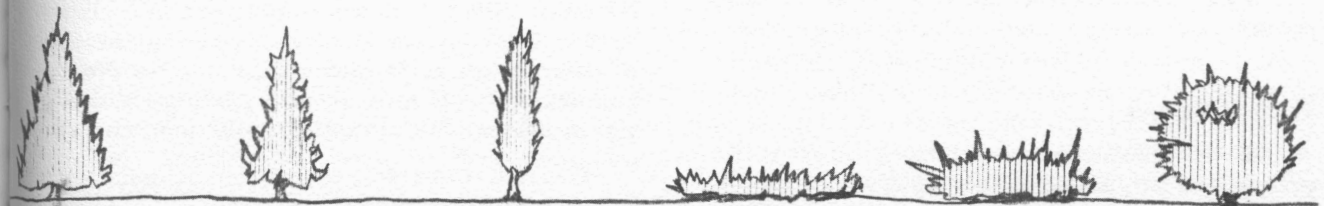
ROUND

UPRIGHT

RECURVING

OPEN

SHRUBS



BROAD
PYRAMIDAL

NARROW
PYRAMIDAL

COLUMNAR

CREeping

SPREADING

ROUND

EVERGREENS

STUDY PLANT FORMS. CHOOSE THOSE THAT LOOK WELL TOGETHER. AVOID VIOLENT CONTRASTS. USE VERTICAL FORMS SPARINGLY SINCE THEY ARE ACCENTS. ROUNDED FORMS ARE RESTFUL.

because they require the most maintenance. These are lawn areas, flower beds and borders and sheared hedges.

Lawns

Open, unbroken lawn areas that are relatively level and have straight sides are easier to maintain than lawn areas that slope or are not smooth; cut up with many trees and shrubs; or are curved or irregularly shaped. Small lawn areas usually are more costly to maintain than large ones.

Lawn maintenance includes watering, mowing, edging, clipping, weeding, fertilizing and controlling diseases and insects.

The old belief that you should devote the greatest area of a landscape to unbroken lawn has long been outmoded. Actually, only a moderate amount of the garden needs a surface that can be walked on, and in most cases this is planted to turf grasses.

Many other materials can be used for surfacing these areas or portions of them. Consider ground cover plants and various paving materials for this purpose since they can be used to reduce the time spent in mowing and the maintaining lawn areas, especially in small restricted ones or on sloping ground.

Flower Beds and Borders

Annual and perennial flowering plants are not as permanent as woody plant materials and usually do not provide as good covering for garden areas. In addition, they require starting new plants from seed or division at short periods, planting, staking, tying, dusting or spraying, watering and weeding.

When you plan gardens especially for cut flowers or for specialized plant groups such as roses, place them in areas where they can be cared for separately and plan for additional maintenance to keep them in good condition at all times.

Sheared Hedges

Many plants used for hedges, such as the privets and arborvitae, grow rapidly and require frequent clipping and maintenance to keep them within the desired form. You might consider plants for this purpose that require less clipping and shearing. Some are yaupon, laurelcherry or other plants that make excellent hedges, but are slower growing.

Pruning

Landscape plants selected properly should be allowed to develop their natural forms and growth

habits. When this practice is followed, you will need to do little pruning.

Pruning should be done to preserve the natural form of the plant and remove dead or broken branches or old flowers and fruit. Some trimming is required to maintain the desired form of hedges or espaliered plants. Young shade trees sometimes develop secondary leaders and suckers that will have to be removed.

Whenever additional pruning other than for the reasons outlined is required, usually unwise plant selections have been made. Some examples of poor selection are when trees and shrubs must be pruned to remove wide spreading branches to permit a view of the garden from inside the house; to let sunshine into the house; or when they block movement along a walk or drive.

The best plan is to remove the overgrown plants and replace them with dwarf shrubs or ones that will stay within the given garden area.

Pruning can be destructive when an unskilled person attempts it. When "trimming" and "shearing" is done without proper knowledge and skill, it often prevents shrubs from producing desirable flowers and fruits and destroys the natural form and structure of the plants.

PLAN FOR GRADING AND DRAINAGE AND LANDSCAPE STRUCTURES

Every homesite, including the ones that are level, will require some grading to provide satisfactory drainage. In most cases, only a gentle slope that need not be visible to the eye is necessary to insure that surface water will flow away from the house. Direct this flow where it will not cause damage to the land or to adjacent properties.

A site with nearly level land presents fewer grading and drainage problems than a site on irregular, hilly or steeply sloping ground. Level land is less costly to landscape, more usable and is easier to develop. Some hillside sites present complex, difficult and expensive grading and drainage problems which require professional help.

Ground covers and other plant material may be used to help prevent soil erosion by surface water. Where slopes or banks prevail, study the situation carefully and select plant material suitable for holding these banks and steep slopes to reduce future maintenance costs.

Water from downspouts on the house that carry off drainage water from the roof may cause damage and wash away soil. In areas where storm sewers exist, this water should be drained into the storm sewer. When this is not possible, such

drainage water should be tiled into an underground sump. Do not pipe drainage water of this type into a septic tank or into a sanitary sewer system. In some cases "splash blocks" are installed at the outlet of the downspouts. While this method is least desirable, it lessens the force of the water and is inexpensive.

Moving soil is expensive and when the form and contours of existing grades are changed radically merely to provide level areas, the beauty of the land is not improved. In many cases, it may be more desirable or economical, to extend a porch, terrace or deck over a slope on poles and posts rather than to build retaining walls and use fill to change the grade. For smaller areas or lesser slopes the use of retaining walls may be simpler and more practical.

Methods of creating level areas without excavating or filling soil should be considered during the planning stages. Keep these general grading considerations in mind also when choosing a home-site. Hillside sites may look attractive, but those with fewer grading problems may be less expensive in the long run.

Sometimes, you may find it desirable to produce level areas by raising or lowering the grade around large and valuable trees. In many instances, home owner fail to take proper precautions when this type of grading is done and difficulties result.

Most ornamental trees will not suffer greatly if an inch or less of good top soil is applied over the grade, although serious injury will result from the improper use of soil fill around trees. Noticeable symptoms of such injury are small yellow leaves; dying twigs and branches and sucker growth arising around the base of the trunk and on the branches.

The severity and extent of such injury depends on the depth and type of fill; available drainage, and the species, type, age and condition of the tree. The deeper the fill, the more serious the injury. When nonporous clay is used to provide the fill, the damage will be greater. The types of trees most severely injured are oaks and coniferous evergreens. Poplars, planetrees, willows and locust often can survive.

When trees are not large or old, an inch or two of gravelly soil similar to that in which the trees are growing can be applied with little harm since additional roots will be produced in this area in time.

When you have to grade around trees, try to determine the best solution to this problem. The high cost of leveling and grading may make it more practical to replace a young tree.

Before grading, consider the following: Old trees in weakened condition often are not worth saving. When trees lack vigor and already are injured seriously, their life has been shortened; or when the species in question are short lived or susceptible to serious disease attacks, the cost of grading required to save them may not be justified.

Lowering the grade around existing trees does not disturb their normal functioning nearly so much as does filling. The major disturbance in this case is in changing the available water supply. Many large trees have deep root systems; lowering the grade around them will not greatly impair their growth and development.

When roots are exposed by lowering the grade, some injury may result from sunscald and some may die. Damaged and exposed roots resulting from this type grading should be treated and kept from drying out by covering them with a light mulch of peat moss or other organic material to increase the water intake.

When you need to save a valuable tree, the method that will disturb the tree the least is to build a wall, terrace to box around it, leaving the grade unchanged in the immediate area. Be sure to provide drains or "weep holes" in these walls and boxes.

Landscape Construction

Walks, Steps and Drives

The construction of walks, steps and drives is necessary in any landscape development but it also is expensive. Therefore, the use and extent of such features should be justified fully.

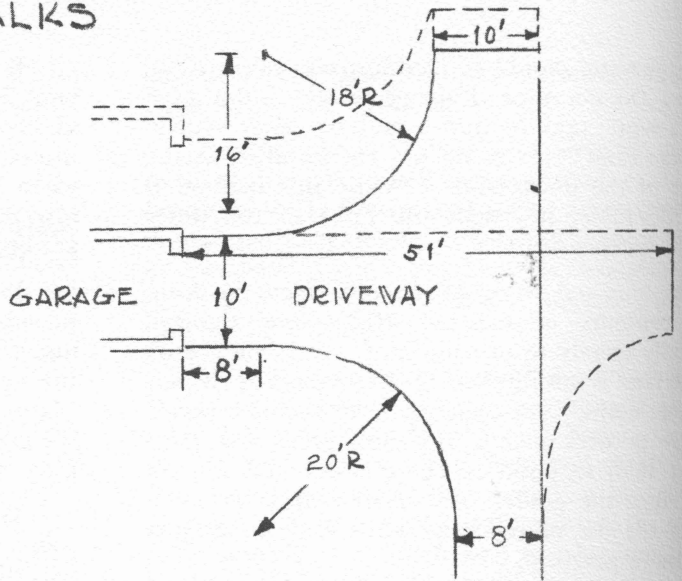
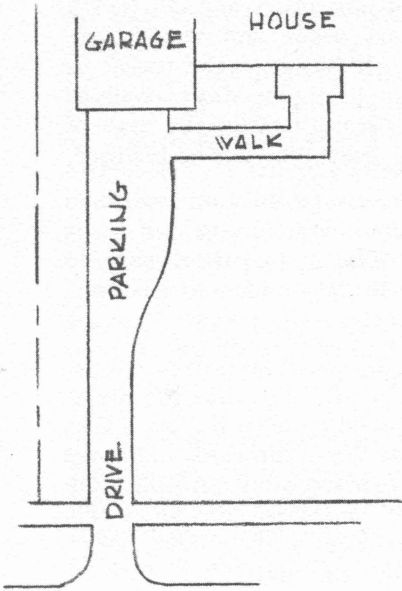
Most home sites require paved walks only where excessive daily traffic is heavy enough to wear away turf. All areas of the property should be accessible by walks, steps or ramps.

In general, walks should be as direct as possible; but if this means dividing a lawn area into two or more unrelated divisions and spoiling the landscape scheme, use a less direct route. However, the route should never be so indirect that the user would be tempted to take a short cut across other garden areas.

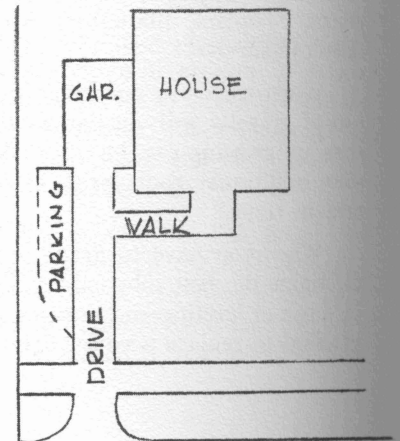
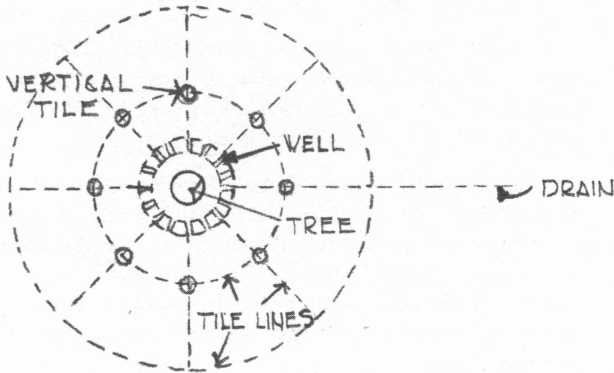
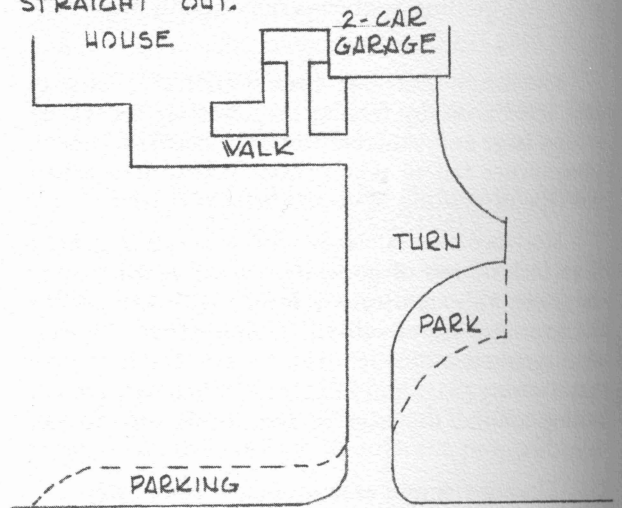
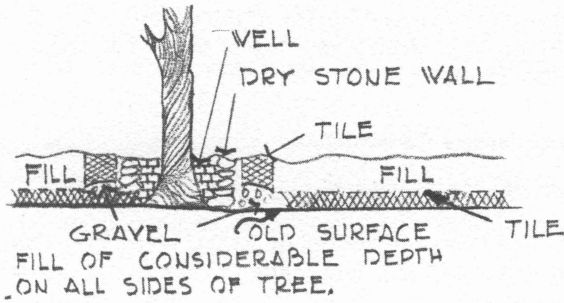
Landscape planners with a minimum of design experience should avoid curved walks. Curved walks are difficult to lay out and construct. They are awkward unless they actually curve around some object.

Walks that have straight sides and curve with an angle are easier to plan. Such walks need not be monotonous nor always have parallel sides.

DRIVEWAYS AND SIDEWALKS



DIMENSIONS FOR A DRIVEWAY TURNING AREA
 DOTTED LINES SHOW THE ADDITIONAL SPACE
 NEEDED FOR A 2-CAR GARAGE AND AN
 ALTERNATE ARRANGEMENT FOR BACKING
 STRAIGHT OUT.



They may be wider in areas where people congregate, such as entrances, at the street juncture or at parking areas or drives.

When walks are widened, only straight or angular sides should be used. Flaring curves usually appear awkward and tend to spoil the appearance of the whole area.

The most common mistake is making walks too narrow. Each walk should be wide enough for the purpose intended.

Walks leading to a front entrance of a house should be a minimum of 4 feet wide so that two people can walk side by side.

Secondary walks for service and other purposes should be at least 30 to 36 inches wide.

Stepping stones and walks constructed with irregular patterns rather than in continuous strips require considerable time for edging and trimming. Such walks must be laid carefully and solidly to be safe. When they protrude above the existing grade, they cause nicks in lawn mowers and other tools.

Careful planning is required for the driveway and turning spaces required. These areas should be placed between the house and the street when possible to reduce paving costs and to reserve the most desirable parts of the property for other uses.

1. Make your drive straight and short as possible. Never let it be shorter than the length of the garage. A straight level area at least the length of the car should be constructed in front of the garage.

2. Eliminate steep slopes in the driveway if possible.

3. Avoid building the driveway on a new fill.

4. Plan your drive and turning space so that cars will not have to back into a busy street.

5. Arrange the drive so that passengers can unload near the front entrance to the house.

6. Your drive should be strong enough for trucks and wide enough for backing a car. When you must curve your driveway, make it wider on the curves.

7. Allow space for parking additional cars when possible, so they will not block the driveway.

8. Do not place shade trees, such as oak or nut trees or ones that attract aphids, over the parking area. The fruit from such trees and the "honeydew" produced by aphids may be more of a nuisance than the lack of shade.

9. Curbs on the driveway protect the lawn or other plantings. When curbs are used, the top of the curb should be level with the lawn grade. When retaining walls are placed along the driveway, plan a curb and walk between the driveway and the wall to allow space for passengers to enter or leave the car and to prevent fenders from scraping on the wall.

10. Provide a good surface on the driveway which drains away from the house. Use a dark surface that has rough texture to reduce glare and light reflection.

11. Avoid high plantings or gateways at the intersection of the driveway and the street. These features hide the view of children at play or of pedestrians.

To maneuver a car, you will need a straight area of about 15 to 20 feet in front of the garage before beginning a turn. The inside radius of the turn must be a minimum of 18 to 20 feet. A driveway on which no cars pass must have a minimum width of 8 feet and as the drive turns it should be at least 2 feet wider.

When the topography of the site is not fairly level, you may need steps and ramps. These features should be planned carefully and constructed soundly so that they will not be hazardous to use.

Garden steps should have lower risers and wider treads than steps inside buildings. In most cases more space is available outdoors and this type of step insures greater safety. When flights of steps are long, break them up with wide landings.

When the change in grade in the garden is gradual, ramps may be used instead of steps. They are easier to climb and reduce maintenance chores because wheelbarrows, mowers and other garden equipment can be moved readily from one level to another.

The construction of steps and ramps require considerable experience. When this type of construction is extensive, obtain skilled help to construct them properly.

Terraces and Garden Structures

The increased interest in outdoor living in recent years has made the development of terraces and garden structures important in landscape planning.

These features should be near the indoor living areas for greater enjoyment and should be completed early in the construction stages so that the garden can be used while landscaping is being installed.

Garden shelters, porches and terraces are integral parts of the home and should be adjacent to it. Terraces and patios placed at the rear of the garden area are not convenient for outdoor living unless they are equipped with kitchen facilities. This is not only undesirable but costly.

When terraces or porches face the street, they lack privacy and convenience. In most Texas areas, terraces should be on the south or east side of the house for year-round use. In hot, dry areas, a northeast location may be more desirable.

In general, however, the position of the terrace should depend on local views, direction of prevailing winds and the overall landscape plan.

Protection from the sun, wind and rain, as well as the privacy required, may be achieved through the use of structural materials or vines, shrubs and trees.

Paved terraces usually are more usable. They provide a fine surface for games and children's play in all kind of weather. If properly constructed, they drain readily and dry quickly.

When terraces are planned as a major feature of the landscape development, they should be large enough for entertaining and wide and long enough to accommodate more people than the immediate family.

Terraces and other paved surfaces in the garden should be so planned that large areas are left open

for plantings of shade trees, shrubs, ground covers and flowers.

Pools and Fountains

In present-day gardens, the dryer the region and climate, the more important water becomes. In dry, arid regions, a pool or fountain in the garden provides a psychological feeling of coolness and comfort. In coastal areas, this feature is much less important.

When water is used in a garden arrangement confine it in a pool or fountain. It should be located properly and not be a dominant element, but part of the whole garden development.

Water features should not block a route or path through the garden, nor be in the center of a small garden where they divide the usable areas so that no space is left for the activities of the whole family.

While the shape and kind of pool or fountain should conform to the overall design of the garden, the ones with straight sides are the least expensive and least difficult to construct.

Small pools can add greatly to garden enjoyment by careful selection and planting of water plants. Do not overplant small pools with aquatic plants, however, since this usually produces a covering of plants over the entire surface and the water feature becomes lost.

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Cooperative Extension Work in Agriculture and Home Economics, The Texas A&M College System and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8, 1914, as amended, and June 30, 1914.

50M-8-61