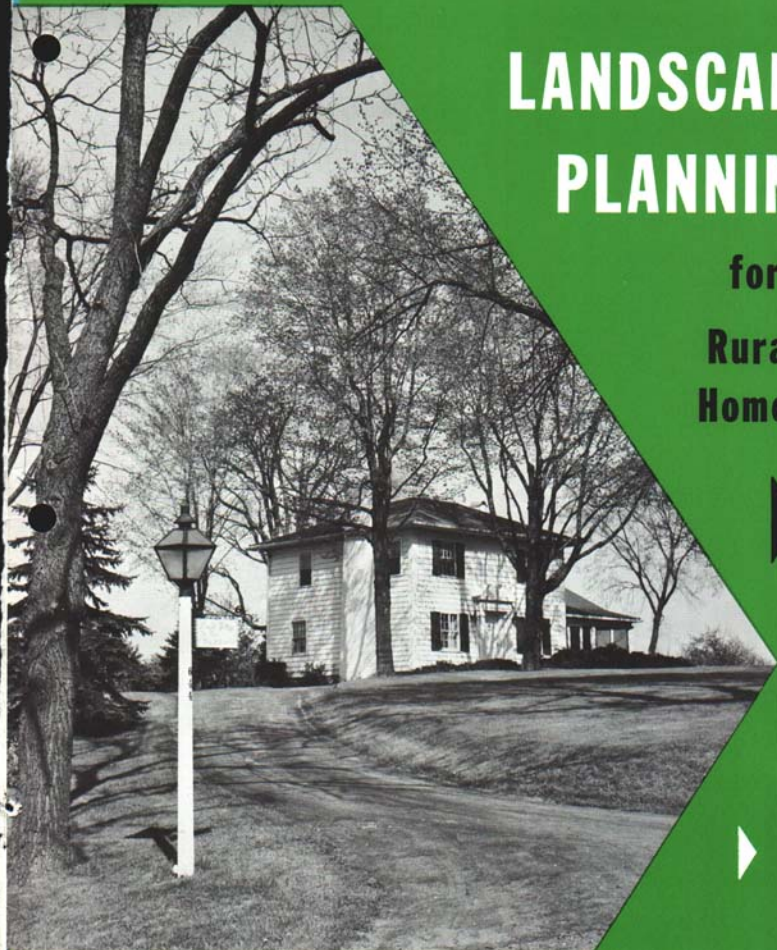


EXTENSION BULLETIN 491
HOME AND FAMILY SERIES
(FORMERLY MISC. SERIES CIRCULAR E-1)

LANDSCAPE PLANNING

for
Rural
Homes



MICHIGAN STATE UNIVERSITY

COOPERATIVE EXTENSION SERVICE
EAST LANSING



Fig. 1. Beauty, shade, and mature appearance are advantages the prospective homeowner can secure immediately if he chooses a site with existing trees.

LANDSCAPE PLANNING FOR RURAL HOMES

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Foreword . . .

If you agree with me that happiness about the home is one of the most important objectives of all human endeavor, then I believe this bulletin will be of value to you who are seeking to develop and improve your grounds. Frequently, so much emphasis is placed upon stabilizing or increasing rural incomes that other phases of human welfare tend to be overshadowed. Often people realize too late in life that home grounds should have been well planned years before. Not only would this planned development have led to more efficient use of land, but also there would have been increased pleasure and satisfaction derived from the improved landscape of the rural home.

Development of the home landscape should be a cooperative affair. If planned and organized properly, it can include all members of the family group. Only in this way can the family enjoy the pleasures and advantages of beauty and function in the landscape environment. Remember, however, that landscape improvement is not accomplished overnight. On the other hand, by completing small projects as time permits, permanent improvements will follow. These will add greatly to the value and usefulness of your property.

By using the information in this bulletin and supplementing it with listed references, it is our hope that you will be able to plan the arrangement of your landscape. After studying your individual layout, try to do as much of the actual work as you can by yourself.

If your grounds present unusual problems too involved for you to handle, then call upon the landscape architect who is skilled in solving such problems.

As a result of these efforts new avenues of enjoyment and accomplishment will be yours.

JOSEPH T. COX
*Extension Specialist in
Landscape Architecture*

SELECTING A NEW OR EXISTING HOMESITE

Are you a young person starting in the farm business? Are you a person who has experienced the benefits of rural living and want to return to them? Are you a person planning to remodel your farmstead? Are you a farmer desiring to relocate your farm house or are you a retired person planning to build in the country?

If you are in any of these positions and consequently are locating in a rural area, there are many positive factors you should consider in choosing a suitable site for a home in the open countryside.

Study the Proposed Homesite

Most existing neighborhoods are pleasing and healthful, but for your own protection and future happiness a study of the one chosen will help to assure satisfaction for many years. It would be unrealistic to develop a home where the surroundings were anything but the best or the neighborhood noted for its undesirabilities. The trend is toward an enlargement of urban areas along country highways. This often leads to undesirable uses of land adjacent to farm properties. Conflicting uses of land such as used auto-part yards, drive-ins, and billboards create problems for the surrounding neighborhood.

Fig. 2. Too many trees in the yard may make a desirable home grounds appear gloomy. Removal of some trees directly in front of the house and those that are misshapen from close planting will improve the appearance.



Zoning and land-use restrictions should be investigated to discover what protection is afforded in maintaining the high standards of the prospective community. These protective measures will prevent intrusion of undesirable land-uses and, consequently, avoid ruination of land value. You can feel encouraged if the site you are considering is protected by sound land-use guides which are administered by far-seeing local citizens.

Trees

Beauty, shade, and mature appearance are advantages the prospective homeowner can secure immediately if he chooses a homesite which supports existing trees. The trees must be worthy of any extra expense or inconvenience the buyer has to overcome to secure them. To be of value the trees must be usable. They should provide shade where wanted, add enframement for the proposed home, give shelter from winter winds, or have value as interesting specimens or tree groups. Too many trees in the yard may make a desirable home grounds appear gloomy. Removal of some trees directly in front of the home and those that are misshapen will improve the appearance. Many instances of dying trees bear out the risks involved in building a structure within three or four feet of tree trunks. Chances of killing existing trees are increased many times when basements are dug closer than 15 feet to the base of large trees. Damage is very likely to be evident in the crown of the tree on the side where root disturbance occurred.

Scraping soil away from tree roots or filling in over them more than 6 inches will cause great damage to existing trees. These activities are apt to cause a drastic change in the soil conditions or reduced water supply and possible root suffocation. If grade changes are necessary, precautions should be taken to protect existing vegetation from these hazards as well as from bulldozer damage. (Instructions for protecting trees from construction work are described in Farmers' Bulletin, Number 1967, U. S. Department of Agriculture.)

It is not uncommon or unreasonable to consider altering home plans to accommodate the presence of a worthy tree. In other instances, a slight shift of building location may mean the difference between having or not having a tree of considerable size.

Views

Best use of views seen from the homesite will include indoor and outdoor planning. Distant views can be some of the most pleasant features of a livable home and particularly if enframed by beautiful trees. Besides being enjoyable, far-off views give early notice of weather conditions and of activities taking place on the immediate farm lands of the vicinity. A good view may be like a tree, it may influence you to locate the new home where it can be enjoyed. Or a view may make a new window most appropriate when remodeling is to be done. You must know the view is protected for the future to be sure you are planning wisely. Do not plan on a view which you cannot control.

Soil Type and Handling

Homesite seekers should choose the better soils for their eventual lawn and gardens. Generally speaking, the loams of sand and clay are ideal for home landscape possibilities. This preference indicates that it is better to avoid light sand and extremely heavy clay. Organic substances such as leaf mold, well-rotted barnyard manure, or any decomposed plant parts in soils hold water. These materials also allow soil particles to loosen one from another. They are admirable in any soils and will make heavy,

compact earth more workable. Heavy clay soils are to be preferred over light sands since their improvement lies in loosening the minute particles. This can be done by incorporating organic matter into the soil bulk. Clay soils are good moisture holders but often crack and become extremely hard.

When it is necessary to make cuts or fills about the home grounds, great care should be exercised to save valuable topsoil. The bulldozer operator should be instructed to deposit all disturbed topsoil in a location so that it may be replaced over the rough grade. Topsoil is so important to the establishment of a good lawn that it is unwise to allow this to be wasted. Recommendations for lawn building may be found in Michigan Extension Bulletin E-224, *Growing Beautiful Lawns*.

Development of the landscape is somewhat more difficult when it is necessary to install drains to carry away excess water. Moisture laden clays tend to exert great force upon free standing walls or construction. Some walls may be broken if adequate supplementary support and good drainage to prevent heaving due to frost action is not provided. Thus, it is wise to avoid very light sand and extremely heavy clay for the homesite.

Water Supply

In your study of the chosen site, the water supply should receive major attention. To be sure it is satisfactory consult your local health authorities as soon as you can. Inquire of neighbors in the vicinity regarding depth and supply. Discuss the experiences of local well-drillers and inquire of the Michigan Geological survey for water prospects. The high site will usually result in more costly well-drilling operations because the source of water is apt to be deeper. On the other hand, it would be more logical to pump water in for family uses than to be concerned with the likelihood of removing excess ground water because of the closeness of a natural water supply. It is better from a sanitation standpoint if the well is located in a well-drained spot. It should be at least 100 feet from livestock barns and other sources of contamination. Water samples should be checked with the State Health Department.

Fig. 3. Although the shady side of the home is inferior for most uses, it can be adapted to backdoor activities.



Fig. 4. The part of the home used most during daylight hours should be located on the cheeriest and lightest side. This will usually include the kitchen, eating space, living space, and the adjacent units useful for outdoor pleasure during the warm periods of the year.



Drainage

Any ideal home location should be well-drained. The soil slope should be apparent at a glance and actually carry water away from the house foundation and roof drainage system. Then, it should appear unquestionably high and dry from the observer's point of view. Your homesite should be free from the possibility of collecting water from other run-off areas. Drainage from the first floor is only part of the consideration; the basement will also need an outlet. Occasionally, pumps will have to be used where natural drainage is not available. Parcels of land for home location are considered superior if they rise gently from the roadside. The other extreme, the sloping site, is often inferior; but if properly drained and skillfully handled, it can be made very usable and interesting.

Air Pollution

A possibility of industrial air pollution in most rural communities is remote. Nonetheless, it is well to investigate any chance that this might occur. It certainly would be wiser to avoid breathing contaminated air than to force yourself to tolerate it. In some cases air pollution has become a menace to vegetation as well as to animal life.

Neighborhood Influence

People of this period place much emphasis on the "needs of the day." They forget that a neighborhood chosen today may be the one in which their children will grow up, and they will grow old. Therefore, choosing a neighborhood is more than what meets the eye. It includes the existing people, the type of recreation they have chosen, the existing or needed school buildings, the churches, the county fa-

cilities, the market centers, and all other items comprising the community itself. If your decision in selecting a homesite sways between the community noted for its active participation in improvements for the area, or a community which believes in living only for today, you will want to decide which attitude is in accord with your best interests.

Space and Exposure for the Home

Ask yourself whether the available space for your house will allow proper exposures for the various rooms. It has been assumed, and rightly so, that the part of the home used most during the daylight hours should be located on the cheeriest and lightest side. This, in Michigan, would be the south, southeast, or southwest. Rooms so located would naturally be work and play centers. These would be kitchen and eating space, living space, and the adjacent units useful for outdoor pleasure during the warm periods of the year. Man can alter extremes of heat on the sunny side of a dwelling better than he can heat cold spaces on the shady side.

For these reasons, actively used areas of a home should be located on the south, and infrequently used areas oriented to the north. Your house plans and site choice should be considered as the two interrelated items which control the final livability of your home.

Although the shady or north side of the home is inferior for some uses, it is adapted to backdoor activities, including garage and basement entrance, storage, laundry and office. The disadvantages of cold winter winds and prolonged icy conditions on the north side of the home during winter will be somewhat equalized by the cooling effects of shade during summer. Orientation of the home to secure maximum convenience and livability should be the goal of all homeowners.

PLANNING THE CHOSEN SITE

Items to Consider in the Chosen Homesite

Whether you are developing a new home grounds or are replanning an established property, the same items must be considered for the rural landscape. Concentrate your efforts toward organizing the land about your home and farm buildings so that you will have a functional and attractive solution to your problem. Use this list as a guide. It will help you anticipate needs for the rural grounds.

1. Organize areas of the farmstead to fulfill the requirements of farm and home activities. Include in your plans areas for approach, private, and service uses.
2. Use present lay of land to advantage by adapting structures to existing slope and local conditions of wind, exposure, views, drainage and soil.
3. Promote a pleasing appearance of grounds and buildings to the public by emphasis of simplicity, neatness and good repairs.
4. Develop a generous space for a well-kept lawn between the highway and the home, the ideal distance being 100 feet or more.
5. Organize a safe, convenient and well-defined driveway (15 to 25 feet wide) with parking area adjacent to it (allowing a 10-by-22-foot area per car). Avoid crisscross drives. (See Figs. 6 and 7.)
6. Plan adequate walks to accommodate foot traffic. Entrance walks should accommodate two people abreast — this would be a minimum of 3½ feet wide; an ideal width is 4 feet for most homes. The service walks may be somewhat narrower but will function better if at least 2 feet wide. Walks for public buildings should be wider to be in scale with the building and will ordinarily not be less than 4 feet with additional width being added in multiples of 2 feet.
7. Use landscape materials to add the finishing touch to the grounds after the lay-

out has been determined. This includes surfacings, enclosure and screening materials, foundation treatments, specimen material and temperature conditioners, such as trees and shrubs.

Utility is Forerunner of Beauty

It has been a common understanding that landscape development is intended for a sole purpose — beautification. Now, our imagination is challenged. The art of pure beautification has run its course. New materials are offering different effects, and old materials are being used in new ways. The new concept is that practical landscape planning uses utility and functional requirements as the basis or forerunner of beauty. In approaching the landscape design for a rural property, this idea appeals to practical people. It is a scheme which can be proven by virtue of its worth. It is like replacing an "s" curved walk to the front door by a short, straight or slightly curving walk. In other words, there is more justification for landscape planning than just beauty alone.

It must be kept in mind that pure functionalism can become uninteresting. It must be spiced with some deviation for artistic appeal. For example, a practical person can be lured into walking around a circular walk to get to an entrance door, rather than cutting across a lawn.

Fig. 5. Keep a convenient farm court or farmyard for tools and equipment.



If his interest can be attracted to the better walking surface and if he does not feel it is too great an inconvenience or loss of time he will unconsciously use this walk because it offers no obstacles and is pleasantly useful.

On the other hand, if too much deviation from a logical route to the doorway is obvious and no significant point of interest is displayed, the observer is apt to overlook the walk surface. Most likely then, he will conclude that a straight line between two points is his quickest route — come what will.

Make Your Present Landscape Better

A careful inventory of the assets of the farm landscape will aid in eliminating the unpleasant features. This will help the rural family to concentrate efforts where they will do the most good. In many cases, simple maintenance jobs such as painting, rebuilding or removing sagging porches, fertilizing lawns, or cleaning up trash in yards will make such an improvement that the farm family will be astonished. Major jobs such as remodeling, reroofing, tree removal, driveway alignment, and reorganization of the drive and walks will be spurred on as the benefits of small tasks are realized.

After the preliminary steps have been taken to accomplish the most by practicing neatness and good housekeeping in the landscape, the major jobs will be uncovered. Here's where you need to make the most of your assets. If the house height or mass is disturbing, tone it down with large plants or extended roof lines. Soften the points of junction between the house and its additions with plant groupings. Attention will be focused upon the plants and you will overlook the "botched" or rough junctions. Don't overdo it, proceed cautiously. Remember that too many plants may call attention to weaknesses. Also, keep in mind that tall, narrow plants accentuate height whereas broad, spreading plants accentuate width and spaciousness.

In the same way, a low hill will look higher by planting spirally-topped trees on its crest, and a high hill will look lower by planting sprawling trees on its slopes. Bare-based spruces may be turned into interesting trees by adding cover-up plantings near their bases. Just as a doctor



Fig. 6. Lay out a well-defined driveway with parking spaces for several cars.

prescribes a cure for an ailment, so you will have to prescribe the treatment for the weak spots in your landscape.

Developing the Site

"Do it yourself; it saves you money," is the current saying. This is true in developing a site if all types of labor, materials, and the resulting landscapes are objectively inventoried as to value. However, the homeowner seldom figures in everything — he discounts his own labor cost. As an example, he figures the broken concrete was free, even though he hauled it many miles and did the loading and unloading by himself. Possibly he fails to take account of the time and cost of possible injuries in laying up the retaining wall, then finally ignores the expense of replacing the wall in case he did not allow it to slope into the bank enough to avoid damage from frost action.

All of these items and many more must be considered realistically when one is planning to select a site for a home and do the work himself. Does the site you have in mind require expensive treatment? Will entrance roads be difficult to build and maintain? Will exposure to severe prevailing winds increase your fuel bills? These are questions you will want to have answered.

Moderately level or gently rolling land is

far less expensive and less troublesome to develop. If spectacular and sound landscape effects in unusual terrain are desired, expert help will be needed. The services of an experienced and qualified landscape architect, architect, and builder should be obtained.

The Value of the Landscape Architect to You

Some rural citizens are interested in the numerous ways that a landscape architect can aid in increasing the value of property. He is a trained designer of land areas for human use, enjoyment and efficiency. He uses grading techniques to mold land surfaces for their intended purpose and appearance.

The landscape architect is trained to design building arrangements for logical use. He composes building materials, surfacings, trees, shrubs, and flowers into useful and pleasing combinations. His talents include the drawing of specific plans and specifications for roads, walls, walks, steps and other construction to improve the use of land for human endeavor.

The professional landscape architect ordinarily does not maintain a plant sales organization in connection with his business. He earns his livelihood from planning alone. The term, "landscape nurseryman," is used to denote those persons engaged in the business of growing nursery stock and who offer planning services in connection with their nursery sales. Some of these people are professionally trained — others are not. Very often their services are complete from the planning stage through to the completion of planting.

Planning Costs

You should consider costs of land planning as a protection for your investment in the buildings and grounds of a home and business property. These costs are actually very low if correctly understood. They should be spread over a period of years for true consideration. Design and perfection in a landscape remain effective indefinitely and the results of planning become more important as the landscape development responds to the test of time.

Fig. 7. An aerial photograph is useful in replanning the home grounds. A bird's-eye view of the existing layout will help you to eliminate unnecessary crisscross drives within the property.

—Photo courtesy of Dalgleish and Bates, Aerial Photographers, Owasco, Michigan



DESIGNING THE "USE AREAS"

Work from the Known to the Unknown in Planning Parts of the Landscape

Just as the housewife plans her meals according to her family's size and needs, so you must design "use areas" to accommodate the family's business and home activities. The established movement of people on foot, cars, tractors and trucks must be considered. Closely related to this are the types of jobs done around the farm grounds and the use of the grounds for rural family living, work and play. Developing your property will be like solving a puzzle. You will look first for the boundaries of your problem in order to establish the limits of the landscape. Then you will locate the known pieces of the puzzle which are fixed or cannot be changed—buildings, trees, slopes, wells, and property lines. You will note the directions of the compass to acquaint yourself with areas affected by shade, sun, and wind. Through experimentation and trial-and-error paper planning, you may find several solutions to your puzzle. In addition to paper planning, it may prove wise to use visual methods of planning such as models or cut-outs to study various proposals. These methods of planning will help you to avoid costly mistakes.

How to make sketches in trial-and-error planning is shown in Figs. 8 A, B, C, and D on pages 10 and 11.

Step-by-Step Procedure

Follow the steps listed below to make a base map of existing conditions. This can be completed by applying information discussed later in this unit.

1. Obtain a good sized piece of ruled cross-section paper for your map. (This can be purchased at most stationery supply stores.)
2. Select an easy scale so that your map may be drawn on this one sheet of paper. A scale of 1 inch on paper representing 16

feet on the ground will be a very easy scale if using a common ruler. If using an engineer's scale or ruler, 1 inch on paper representing 20 feet on the ground will be a convenient proportion if the property is not too large.

3. Find outside size of area to be considered for your landscape. Plot this on your map paper.
4. Indicate points of the compass—North, South, East, and West.
5. Locate existing buildings by measurement from nearest boundaries, showing their outlines with door and window locations.
6. Locate trees and shrubs of permanent value by actual measurement.
7. Outline driveways and paths which are existing.
8. Mark lines of slopes.
9. Indicate wind directions, summer and winter.
10. Show any other important features which would influence the development of your landscape.

Use Your Base Map to Locate Important Areas

Organization planning does not require an artistic hand, but it does require practical minded thinking. Wise decisions made in locating the major "use areas" will benefit the homeowner for many years. Use the base map you have prepared to analyze the layout of the approach area, the outdoor family area, and the work-service area.

In order to keep the base map for future use, place a piece of tissue paper, onion skin, or other transparent paper over it. Do your rough sketching on this sheet so that you can try several arrangements to find the best solution. Sample sketches are shown on pages 12-15 (Figs. 9 A, B, C, and D).

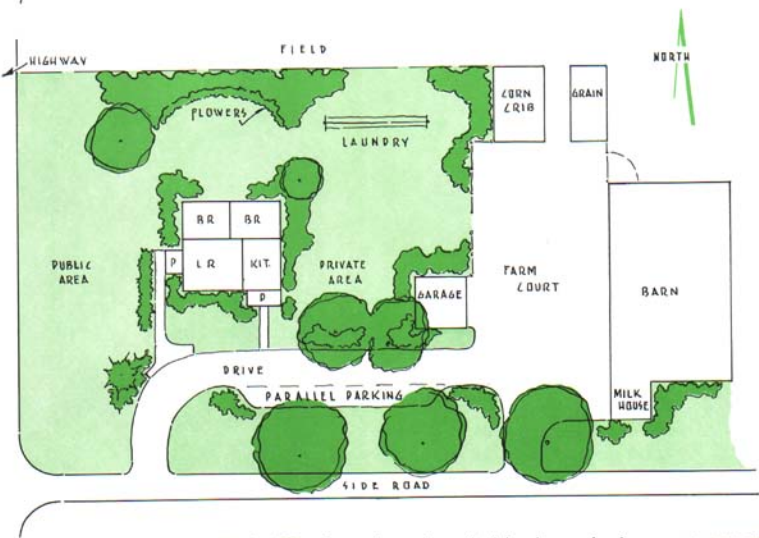
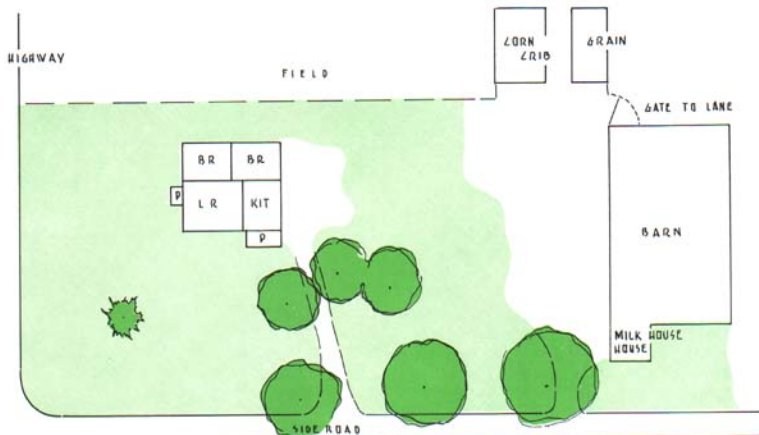
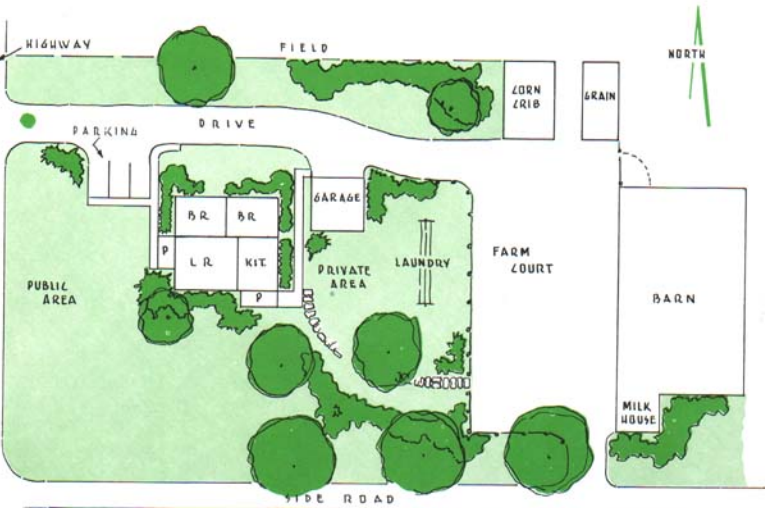
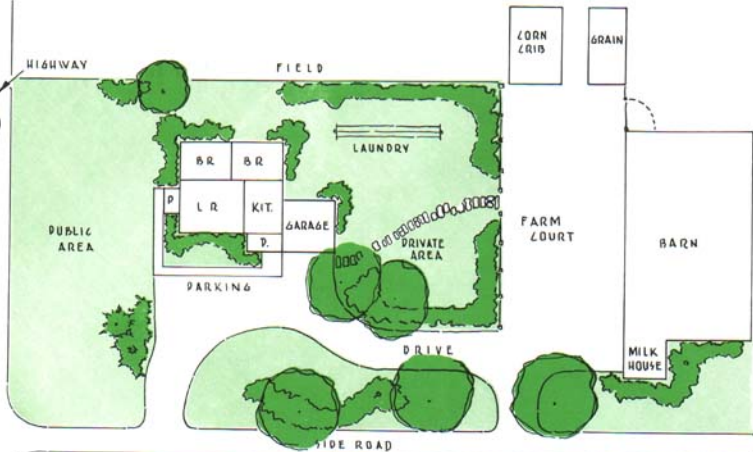


Fig. 8. Through experimentation and trial-and-error planning on paper, you may find several solutions to your arrangement problem. The upper left hand drawing



shows a base map such as you might draw of your property. The other three drawings show three possible solutions to the layout puzzle.

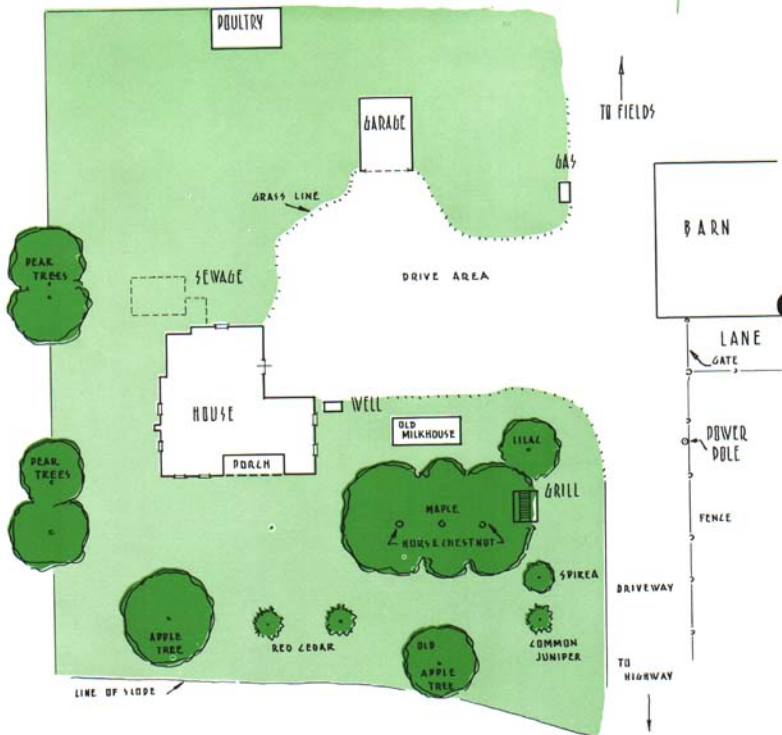


Fig. 9a. Making wise decisions in locating the major "use areas" will benefit the homeowner for many years. This shows the base map for paper planning.

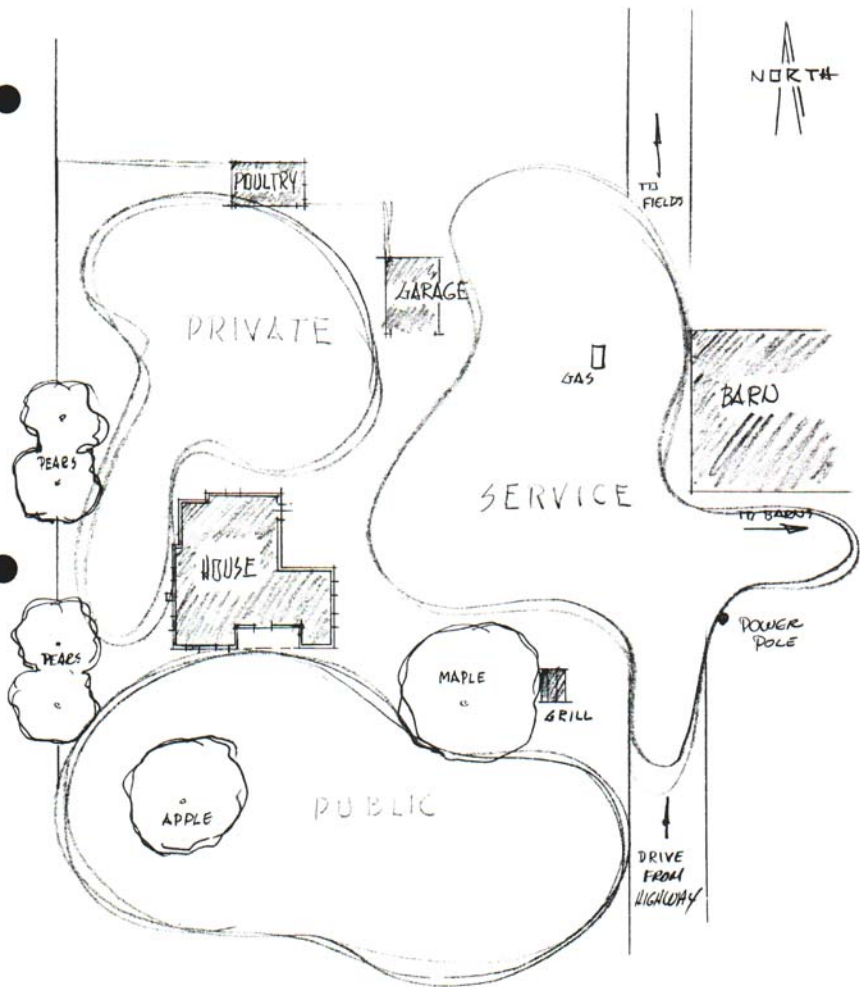


Fig. 9b. A use study helps to spot the major "use areas".

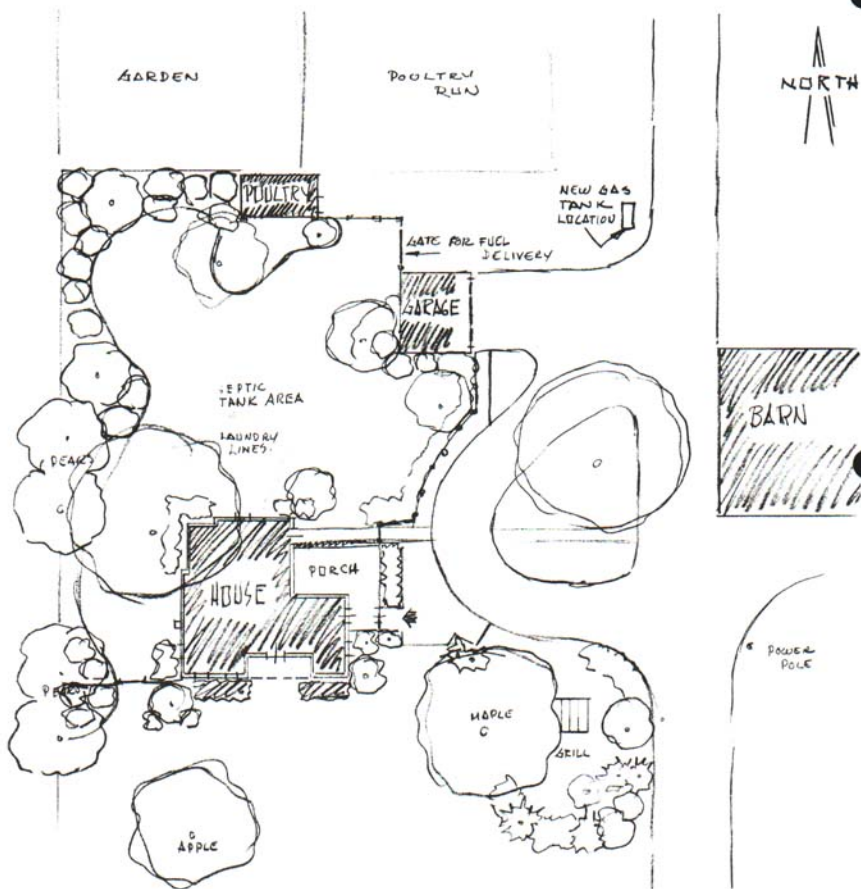


Fig. 9c. Next make a development plan.

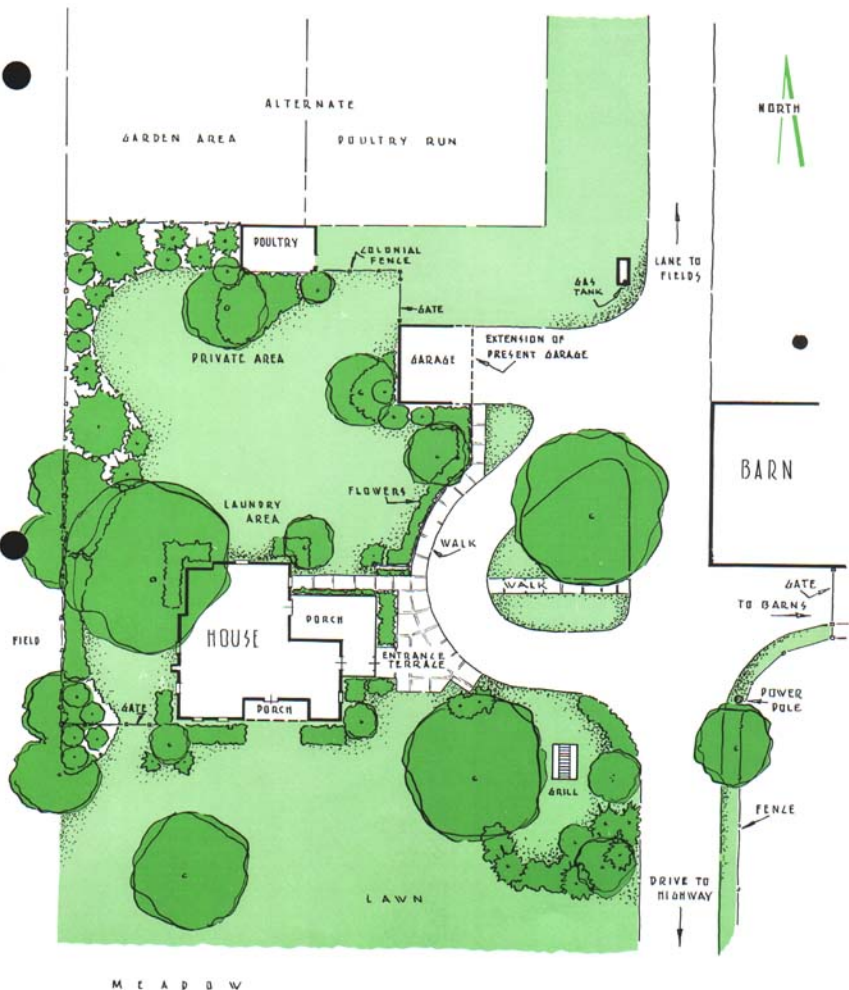


Fig. 9d. The final plan shows location of all parts.

Fig. 10a. Parallel parking is one convenient arrangement of guest parking areas.

Fig. 10b. Angle parking is another possibility to consider in analyzing the approach area.

Fig. 10c. A third parking design to consider is modified circle-drive parking.

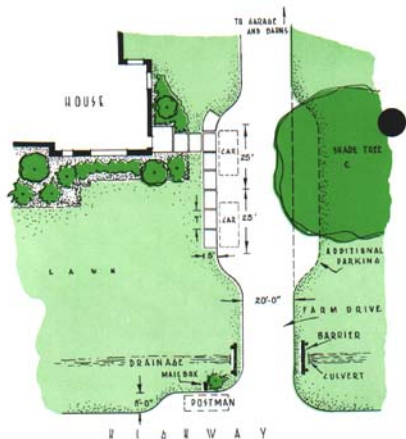


Fig. 10a.

Analyzing the Approach Area

The items to keep in mind for the approach area are as follows:

1. Driveway layout based on existing conditions to allow a safe, easy entrance and exit to the grounds for home, business, and guest use.
2. Walks that will accommodate foot traffic to doors of house for convenience and owner preference (Fig. 11).
3. Possible co-design of walks and drive for simplicity and convenience (Fig. 12).
4. Conveniently arranged guest parking areas in the form of:
 - (a) Parallel parking.
 - (b) Angle parking.
 - (c) Modified circle-drive parking.
 - (d) Other parking methods for special needs.
5. Spacious front lawn area to separate dwelling from road.
6. Use of trees, shrubs, etc. for enframement, directing traffic, architectural tone-down, and adornment.
7. Design approach area for its purposes. Then add originality by playup of existing local features. Avoid the over-used curve, the circular flower bed, white washed stones, and the ribbon width walk.

Analyzing the Outdoor Family Area

Houses on farms and in rural areas often need only slight remodeling to make them adaptable

Fig. 11. Build walks that will best direct foot traffic to doors of house for convenience and owner preference.



Fig. 12. If possible, co-design walks and drives for simplicity and convenience, as shown by this scale model.



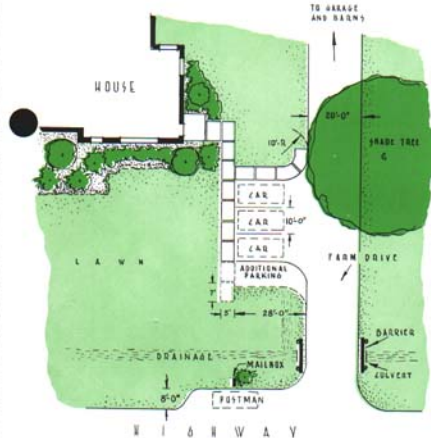


Fig. 10b.

to modern living. A part of the modern trend includes enjoyment of outdoor relaxation, cooking, eating, and nature appreciation. Until a person has enjoyed the experience of these forms of pleasant living, he is not often sympathetic toward their value. Rural families have so many more factors in their favor for outdoor living and enjoyment than do city families that they should take full advantage of them. Outdoor space for the private family area will have to be located in accordance with the existing house plan. If at all possible it should be located for comfort on the protected side of the house or where cooling shade from existing trees will be possible. Ideally, the outdoor private area should be separated from work areas, screened from highways, open to distant views, and easily view-

Fig. 13. Provide comfort on the protected side of the house or where cooling shade from trees is possible.

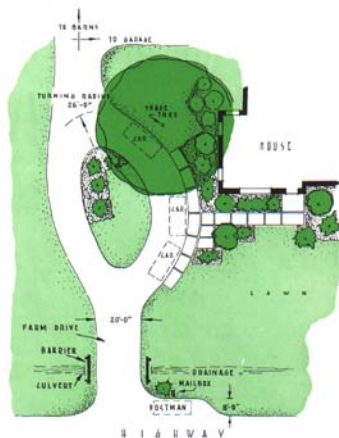


Fig. 10c.

ed from indoors. Rural homes can be adapted to these modern living trends easily since outdoor space is readily available.

Check the following list to determine the location of your outdoor family area.

1. Continuous or easy viewing from the house.
2. Privacy to prevent intrusion from public.
3. Comfort should be afforded on the protected side of the house or where cooling shade from existing trees will be possible. (See Fig. 13.)
4. Easy access to the living portion of the home.
5. Separation from work areas for complete relaxation (Fig. 14).
6. Provision for distant views (Fig. 15).

Fig. 14. Locate family area apart from work areas to permit complete relaxation.





Fig. 15. Locate the outdoor family area for enjoyment of desirable distant views.

Layout or design of family areas will be determined by the following points:

1. Extend living portion of home outdoors. (See Fig. 16.)
2. Join house logically to avoid producing a tacked-on appearance.
3. Enclose or screen from public view if necessary for privacy and to control the climate.
4. Plan for hard surfacing if area is to be used in all types of weather.
5. Use plants for enframement, beauty of specimen forms, and cover for bird life.
6. Use an existing tree, a distant view, or

some other item of interest to the family as a focal point in the design of the private area.

7. Outdoor living area of necessity may be only an open lawn space.
8. Lawn furniture will make the family area more usable.
9. A picnic table may be included in the outdoor living space.
10. Locate the barbecue in a convenient location. It should be easily reached from the kitchen and not necessarily in the farthest corner of the yard. Portable cooking equipment is very useful. It can be moved from place to place and does not require a special area in the yard.

Analyzing the Work-Service Area

Less favorable locations on the home property may be used as the work-service area. However, a space having such an important and practical use should above all be functional and be suited to the type of farming enterprise.

General Farms

On farms where several types of livestock are handled, fences are necessary to protect the cultivated part of the grounds. It is often most practical to enclose the rear yard with a stockproof fence even though the stock lots are fenced. This will be a secondary protection against destructive animals. (See Fig. 17.)

The rear of the house and nearby buildings may form a part of the farm court enclosure. This eliminates the need for opening and closing gates to get to the house or other buildings. The enclosure should include the vegetable and flower garden, private area, and clothes drying yard.

Livestock Farms

Poultry, hogs, cattle, sheep, and even pets may be very damaging to ornamental plants and are sometimes very destructive to lawn areas. These types of animals should be kept in a fenced enclosure. It is often unnecessary to enclose the more open, park-like approach to the home property unless deteriorating influences from livestock are noticed. If this is noticeable, then inspect and repair fences enclosing barnyards and livestock lots.

Fig. 19. The work-service area should accommodate the needs of the business enterprise, farm court, machinery, storage, and maypole for utility wires.



Fig. 16. Extend the living portion of your home outdoors.



Fig. 17. It is often most practical to enclose the rear yard with a stockproof fence even though the stock lots are fenced.



Fig. 18. The stock lots can best be located at the rear of the barn.



Fig. 20. The service area should be easily seen from the kitchen-dining area of the home.

Field Crop and Fruit Farms

Fencing on highly specialized crop farms is usually unnecessary except as protection from animals which occasionally stray untended. It is often worth the peace of mind which results from a fence of harmonious type protecting a well-developed back yard. So much destruction can be done in a few short minutes by loose animals that such a fence would be entirely in order. Then, it must be agreed that fences in themselves can be highly desirable as an attractive landscape accessory.

Some of the important requirements to be worked into the service area regardless of type of farming enterprise are:

1. The work-service area must be roomy enough to allow easy manipulation of machinery, access to adjacent fields, a safe distance between buildings for fire protection, a central location for the maypole supporting utility wires, and stock lots at the rear of the barns. (See Figs. 18 and 19.)
2. Convenience in reaching the work-service area from the back door of the house, garage storage and parking space should be considered. The arrangement should



Fig. 21. Surfacing for the work-service area may be grass, gravel, crushed rock, or other durable material.

- allow the owner to come and go regardless of other activities.
3. Laundry yard, play space for children, kitchen and cut flower garden space should be located adjacent to the work-service yard or in a convenient corner of it.
4. The area must accommodate deliveries of feed products, fuel, and equipment. It must also provide space for turning of vehicles which transport farm products to market.
5. For best use and appearance, the work-service area should be partially screened from public view yet easily seen from the rear of the house. Year around use of the area necessitates good drainage and a durable surface of gravel, crushed rock, or concrete. (See Figs. 20 and 21.)

Influences governing the development of the service area will be many. Even though the ideal service area will be removed from the public part of the property, there may still be times when it may be separated into several parts. The garage or other service buildings may be placed outside the service area if their function dictates. In northern snow belt areas of Michigan some garages are placed adjacent to the highway. This has been necessary because of deep snow remaining for long periods of time. In many instances this detracts from the appearance of the rural property. There is no need for this unattractiveness. If the garage or service building can be located several rods to the side of the farm drive it will appear less prominent.



Fig. 22. In northern snow belt areas of Michigan, some garages are placed adjacent to the highway.



Fig. 23. Locate the garage or service building several rods from the house so it will appear less prominent.

Above all, it is important to avoid placing the roadside building immediately in front of the farm house. (See Figs. 22 and 23.)

Space enough should be allocated around the roadside structure for some plantings to blend it into the surroundings. Shrub placement will have to be confined to locations without a troublesome snowdrift potential.

Children's Play Area as a Part of the Work-Service Area

Logical placement for the young child's play space necessitates its proximity to the areas where the parents do most of their work. It is vital from the standpoint of child welfare and parent patience to locate this segment of the home grounds in an easily viewed position from both the house and barn. The play space for the young child may be temporarily located between the service and private areas or in a convenient corner of either. Later this space can be returned to general use. Equipment for children's play spaces often include sand boxes, swings, tunnels, jungle gyms, and other occupying sorts of apparatus. Many of these pieces of equipment can be made in the home or farm workshop.

Sewage Disposal

The septic tank and drainfield will necessarily have to be located on a side of the house where some slope is available. The septic tank is usually placed about 20 feet from the house and connects closely to the filter bed. This area for sewage disposal is commonly located between the private and service area. It is important to

avoid an area penetrated by tree roots, particularly those of poplar, willow and elm.

Arrangement of Windbreaks for Use Areas

Windbreak plantings can be used for protection and enclosure in the well-developed rural landscape. The windbreak planting of pines and spruces arranged in an "L" shape has proved to be practical. However, its design is not limited to standardization in every case.

To add attractiveness as well as utility to the rural windbreak, imagination is needed. Curving groups of windbreak material may be arranged to give protection as well as background for the farm buildings. Several openings in the windbreak will allow enjoyment of distant views and will relieve a monotonous straight planting. If skillfully arranged, a windbreak may reduce the severity of winter winds and at the same time funnel in the cooling winds from a different direction for summer comfort. Windbreaks are most practical when it is possible to locate them between the farmstead and the direction of prevailing winds. They must be kept far enough from the circulation system of drives and walks to prevent snowdrifts. A distance of 75 to 150 feet will usually be enough to prevent serious snow deposits as a direct result of the windbreak. When drifting does occur over drives, walks, and heavily used areas as a result of a windbreak, the cause should be analyzed rather than the windbreak being cut immediately. An unusual occurrence of this type can be brought about by freak storms, nearby fences, or adjacent plant groups.

CHOOSING MATERIALS FOR THE LANDSCAPE

Selection and arrangement of materials for a landscape are so closely related that both must be considered at the same time when a landscape is being developed. For purposes of explanation, however, choice of materials and their arrangements are being discussed separately in this publication.

Choose Materials for Final Effect

Once the organization of the over-all design has been completed the specific choices of materials can be made. The only valid way to choose landscape materials—all those things which we see outside the house—will be on the basis of fulfilling future needs. That is, will this construction material or that plant do the job that is intended when the landscape is mature? To choose and place such things as plants, stone, brick, concrete, logs or earth forms for the immediate effect and not allowing for the future would be absurd and shortsighted. Plants cannot be expected to look mature immediately unless purchased in large size. If the grounds have been well-studied and flexibly planned, revisions will be simple. Minor changes will keep the landscape up to date. This can be accomplished best by studying the physical characteristics of materials before they are used. One has only to

Fig. 24. Rural landscapes should include shorter plants with slower, more compact growth, and should be tailored to the situation. Try to avoid the type pictured below.



have experienced cutting out a man-made wilderness landscape to be thoroughly convinced of the importance of choosing materials for their ultimate effect. It is recommended especially that plants of less mature height, more compact growth, slower growth rate, and those tailored to the particular needs of the situation be used.

Developing a Sense of Good Choice in Landscape Materials

Close observation of a well-designed and planted rural home grounds will aid you in your development. Observe how the raw materials have been used to create a functional and artistically arranged landscape for the present and future. Notice the logical grouping of landscape materials, the attention focusing devices and the planned route for observing eyes. These are all things which could be assimilated in your search for know-how. This know-how will aid you greatly in improving the "space-scapes" around your home. You can develop keen observation abilities by practice. This practice will improve your knowledge of choice landscape materials as well as aiding you in analyzing the "goods" and "bads" of nearby grounds. Recommendations as a result of these observations should

Fig. 25. Use of broad, spreading evergreens such as Pfitzer's Chinese juniper or spreading Japanese yew gives a simple, dignified appearance to the foundation planting.



Fig. 26. Combinations of evergreen and deciduous plants (which lose their leaves in the fall) make an interesting planting both in winter and summer. Background trees add much to the setting for the home.

consist of design changes, types of materials and the grouping you would suggest for improvement.

Functional Materials to Choose for the Landscape

When it comes to choosing materials to solve a particular problem, one should have a good understanding of the site where the materials are to be used. Therefore, the following list, although not complete, is a guide to several possibilities. Additions to this list should not be overlooked. Detailed information about plants listed can be obtained from other publications in this series or from the reference list on the last pages of this bulletin. Materials listed here should be thought of only as typical examples of those which could be chosen for your property.

The landscape materials are grouped into classes depending upon the purpose for which they may be used.

Surfacings for the Ground

GRASSES:

Blue grasses, fescues and other cultivated lawn grasses

GROUND COVER PLANTS:*

Periwinkle (*Vinca minor*)
Japanese Spurge (*Pachysandra terminalis*)
Creeping Phlox (*Phlox subulata*)
Baltic Ivy (*Hedera helix baltica*)
Creeping Juniper (*Juniperus horizontalis*)
Wintercreeper Euonymus (*Euonymus fortunei radicans*)
Carpet Bugle (*Ajuga reptans*)
Others . . .

*Confine these plants to areas where their spreading habits will not cause trouble.

Fig. 28. A rural planting of this type could be improved greatly by adding a small flowering tree at the high corner of the house. Avoid the over-use of conical shaped plants since they tend to accentuate height.



Fig. 27. Observe the practices of a landscape designer to get ideas for your home grounds development.





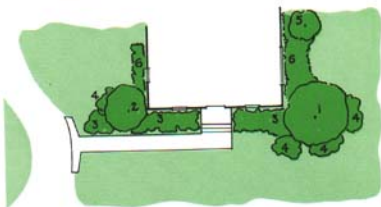
Fig. 29a. This diagram shows a basic square house with an analysis of critical points to consider in landscape planning. The arrows point to locations where landscape materials will help improve the appearance of the home.



Fig. 29b. This is one of many possible planting layouts. Plantings at critical points have made the most significant contribution. The foreground tree helps obscure the roof line, and the background plants tie the whole scene together.

Fig. 29c. Key to the plan view solution:

1. Hopa crabapple (*Malus hopa*)
2. Winged Euonymus (*Euonymus alatus*)
3. Dwarf Japanese yew (*Taxus cuspidata nana*)
4. Spreading Japanese yew (*Taxus cuspidata*)
5. Chinese lilac (*Syringa chinensis*)
6. Japanese spurge (*pachysandra terminalis*)



OTHER MATERIALS:

Concrete Washed pebbles Others . . .
Black top Crushed stone

Enclosure and Screening Materials

(Fig. 30 shows proper use of enclosure and screening materials to separate the home and the "use areas" of the farm.)

EVERGREENS:

Eastern Arborvitae or White Cedar (*Thuja occidentalis*)
Japanese Upright Yew (*Taxus cuspidata capitata*)
Norway Spruce (*Picea abies*)
Colorado Spruce (*Picea pungens*)
Canadian Hemlock (*Tsuga canadensis*)
White Pine (*Pinus strobus*)
Others . . .

BROADLEAF EVERGREENS:

Laland Firethorn (*Pyracantha coccinea landi*)
Common Wintercreeper Euonymus (*Euonymus fortunei radicans*)
Wintergreen Barberry (*Berberis julianae*)

DECIDUOUS SHRUBS (shrubs losing leaves in fall):

Winged Euonymus (*Euonymus alatus*)
Chinese Lilac (*Syringa chinensis*)
Tatarian Honeysuckle (*Lonicera tatarica*)
Sweet Mockorange (*Philadelphus coronarius*)
Early Forsythia (*Forsythia ovata*)
Ibota Privet (*Ligustrum ibota*)
Van Houtte Spirea (*Spirea vanhouttei*)
Others . . .

HEDGES:

Ibodium Privet (*Ligustrum ibodium*)
Eastern Arborvitae or White Cedar (*Thuja occidentalis*)
Canadian Hemlock (*Tsuga canadensis*)
Japanese Barberry (*Berberis thunbergii*)
Others . . .

VINES:

Hall's Japanese Honeysuckle (*Lonicera japonica halliana*)
Virginia Creeper (*Parthenocissus quinquefolia*)
Chinese Wistaria (*Wistaria sinensis*)

Fig. 30. Enclosure and screening materials separate "use areas" of the rural property from the house.



- Common Trumpet Creeper (*Campsis radicans*)
- Bigleaf Wintercreeper *Euonymus* (*Euonymus fortunei* vegetus)
- Others . . .

SUPPORTS FOR VINES:

- trellises
- architectural attachments
- louvers
- baffles
- mesh wire
- others . . .

PERMANENT ENCLOSURES:

- fences
- walls
- buildings located to provide enclosure
- others . . .

Foundation Plantings or Treatments

(Fig. 29 on page 24 and Fig. 31 on pages 26 and 27 give possible foundation plantings for different types of homes.)

DECIDUOUS SHRUBS:

- Japanese Floweringquince (*Chaenomeles japonica*)
- Koreanspice Viburnum (*Viburnum carlesii*)
- Dwarf Winged Euonymus (*Euonymus alatus compacta*)
- Chinese Lilac (*Syringa chinensis*)
- Lemoine Deutzia (*Deutzia lemoinei*)

- Snowhill Hydrangea (*Hydrangea arborescens grandiflora*)
- Black Jetbead (*Rhodotypos scandens*)
- Others . . .

SPREADING EVERGREENS:

- Dwarf Japanese Yew (*Taxus cuspidata nana*)
- Spreading Japanese Yew (*Taxus cuspidata*)
- Pfitzers Chinese Juniper (*Juniperus chinensis pfitzeriana*)
- Compact Pfitzers Chinese Juniper (*Juniperus chinensis pfitzeriana compacta*)
- (*Pinus mugo mughus*) Mugo Pine
- Andorra Creeping Juniper (*Juniperus horizontalis plumosa*)
- Others . . .

SMALL TREES:

- Amur Maple (*Acer ginnala*)
- Washington Hawthorn (*Crataegus phaenopyrum*)
- Hopa Crabapple (*Malus "Hopa"*)
- Flowering Dogwood (*Cornus florida*)
- Shadblow or Juneberry (*Amelanchier canadensis*)
- Others . . .

DRY WALLS OR WALL EXTENSIONS:

Repeat materials used in chimneys, terraces or retaining wall to build supporting sides for planter pockets. This will often enhance the foundation planting and reduce the apparent height of the home. (See Fig. 32.)

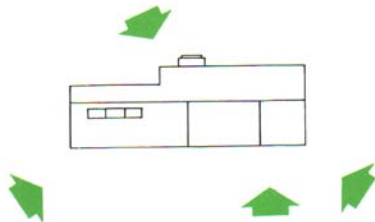


Fig. 31a. This diagram shows a ranch style home with an analysis of critical points to consider in landscape planning. The arrows point to bare corners of the house, junctions of walls, and to the change in roof lines.

Specimen Materials

UNUSUAL OR STRIKING PLANTS:

- Saucer Magnolia (*Magnolia soulangeana*)
- Flowering Dogwood (*Cornus florida*)
- Eastern Redbud (*Cercis canadensis*)
- Manchu Cherry (*Prunus tomentosa*)
- Paul's Scarlet Hawthorn (*Crataegus oxyacantha pauli*)
- Paper Birch (*Betula papyrifera*)
- European Mountain Ash (*Sorbus aucuparia*)
- Japanese Flowering Crab Apple (*Malus floribunda*)
- Colorado Spruce (*Picea pungens*)
- Garden accessories such as bird feeding stations, flower borders of harmonious design and lawn furniture
- Others . . .

Temperature Conditioning Materials

SHADE TREES:

- Sugar Maple (*Acer saccharum*)
- Norway Maple (*Acer platanoides*)
- Little Leaf Linden (*Tilia cordata*)
- American Elm (*Ulmus americana*)
- Pin Oak (*Quercus palustris*)
- Thornless Honey Locust (*Gleditsia triacanthos inermis*)
- Others . . .

WINDBREAKS OR WIND FUNNELS:

- Norway Spruce (*Picea abies*)
- White Spruce (*Picea glauca*)
- White Pine (*Pinus strobus*)
- Red Pine (*Pinus resinosa*)

- Jack pine (*Pinus banksiana*)
- Scotch Pine (*Pinus sylvestris*)
- Others . . .

BAFFLES OR LOUVERS:

Windbreak materials can be used to simulate these arrangements or they may be created from building materials such as lumber. Materials of this type may be arranged in a zig-zag or saw-toothed pattern to provide climatic protection but not interfere with circulation of air, traffic, or desirable views.

AWNINGS AND CANOPIES:

These items are useful for indoor and outdoor comfort especially during hot summer periods. They provide supplementary relief from summer heat.



Fig. 31b. This example shows one way to arrange materials around a ranch style home. Plants chosen to tone down critical points depend on the conditions at the site.

WATER FEATURES:

Natural streams, ponds or artificial pools have a cooling effect upon people even though this may only be a mental attitude. Water and its movements of various forms are quieting. It produces a pleasant association with comfort and relaxation.

Plant Materials Having Pleasant Associations

COOL ASSOCIATION:

- (Used as backgrounds)
- Russianolive (*Elaeagnus angustifolia*)
- Silver Red Cedar (*Juniperus virginiana glauca*)
- Blueleaf Honeysuckle (*Lonicera korolkowi*)
- Colorado Spruce (*Picea pungens*)

Wisconsin Weeping Willow (*Salix Blanda*)
White Fir (*Abies concolor*)
Others . . .

WARM ASSOCIATION:

(Winter association is warm, summer association with shade gives cool impression.)
Pines (*Pinus* in varieties)
Eastern Arborvitae or White Cedar (*Thuja occidentalis*)
Yews (*Taxus* in varieties)
Others . . .

Items to Consider in Selecting Materials for Harmony

No hard and fast rules or formulas can be set up to guide a person in selecting harmonious materials to combine for attractive landscape arrangements. However, very suitable and appropriate results may be obtained by using materials composed of contrasting or complementary colors. For instance, a home with generously wide siding painted pure white would be very striking with a simple planting of contrasting dark evergreen Japanese yew. As an example of the use of complementary colors, consider the home with a grey exterior trimmed with light grey for window and eave detail with plantings

Fig. 31c. Choices for plantings of this type may be varied a great deal. This is just a sample plant list.

1. Littleleaf linden (*Tilia cordata*)
2. Wafaringtree Viburnum (*Viburnum lantana*)
3. Dwarf Japanese yew (*Taxus cuspidata nana*)
4. Periwinkle (*Vinca minor*)
5. Spreading Japanese yew (*Taxus cuspidata*)
6. Juneberry (*Amelanchier canadensis*)

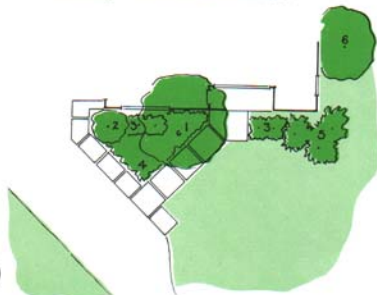


Fig. 32. Walls offset disturbing height and may be constructed without mortar if allowed to slope toward higher ground. Plants could be used to reduce the bareness of this back porch.

selected from the grey-green range of silver-red cedars, grey-leaved Russianolive, and the icy green of the white fir. Naturally, either of these types of harmony in color would be pleasing to the eye. The complimentary color scheme should not be flat nor lack contrast enough to distinguish easily the materials used in the landscape scene. This possibility would be quite remote since enough neutralizing materials such as grass, trees, and ground features would help to avoid monotony and a loss of contrast.

Repetition of line, form, and similar construction materials composing the house and allied structures are important. They give the feeling of unity, harmony, and a relationship of belonging together. The eye can then be more efficient in its appreciation of details, of restful composition, of interest, and of attraction.

The repetition of materials is important in buildings and also in such accessories as fences, gates, surfacings, walks, terraces, exposed foundation walls, and steps. In other words, if cut stone is used as an exterior surfacing material, it would make a very appropriate re-appearance as a retaining wall material for holding a bank or providing a surface for the back yard terrace.

There is no harm in introducing new and different materials, but do not carry it to the extreme. Remember that too many varying materials can lead to disinterest as well as disunity and a confused effect.

ARRANGING LANDSCAPE MATERIALS

Placing landscape material together for usefulness and beauty can be accomplished best by considering the over-all design of the homesite as well as owner preference of materials. These considerations will suggest what spaces are available and the best arrangement for the final addition of material. A narrowing-down process to consider space, exposure, and architectural needs will help the homeowner to put specific materials together to solve his problem. There are many different solutions to any arrangement problem, but any one chosen for the final effect should be imaginative and give a simple dignified effect.

Even though most people understand the benefits of engaging specialized help for their landscapes, many laymen have the yen for tackling a challenging activity. To many, it would offer complete diversion from their chosen field. The possibility of saving money also adds to an inborn drive to, "do it yourself and save." These energetic people should be encouraged. The person who desires to be self-sufficient and have a well-designed landscape from his own toil should devote considerable time to background study in order to do a commendable job. As you plan you will be aided by the application of the following principles. These planning principles include such basic ideas as unity, harmony, balance, repetition, variety and sequence.

Unity in arrangement of landscape materials produces a feeling of simplicity and oneness. It subordinates each individual item to the overall attractive appearance of the grounds.

Harmony is characterized in a landscape when colors of various objects blend together rather than clash. This is particularly true of roof colors, exterior finishes and plant color combinations.

Balance may best be achieved in the landscape by equalizing mass rather than form. For example, if a large tree exists on one side of the house, this mass may be counterbalanced by several smaller trees arranged in a group or by one medium sized tree and an adjacent group of shrubs.

Repetition simply indicates the need for a re-appearance of attractive materials in several locations in the landscape. In repeating the roof colors, similar exterior finishes, similar plants and other materials in several locations throughout the landscape, good repetition is obtained. Of course, if this were carried to the extreme, a feeling of monotony would occur.

Variety must be considered closely allied to repetition. It should be used as a governor over repetition to avoid a monotonous effect as a result of the over-use of a single material. Noticeable variation in plants and other landscape materials gives spice and interest to outdoor areas around the home.

Sequence indicates a logical placement of all those objects used in the landscape. It would promote the arrangement of low objects in the foreground, intermediate objects in the far foreground and tall objects in the background. It hints that weeping willows would look more at home near streams or the edge of water than they do on high land. In other words, sequence suggests an orderly, natural combination of landscape materials.

These fundamental principles can be applied to the varied conditions in our landscapes where plants and other materials are needed.

Arrangement of Plants

Arranging plants in groups should be a final step in producing the finished appearance in a farm home landscape. The land and its various adjustments must be accomplished first. It is then that plants are considered practical and of genuine value to the people they are to serve. Most people think that plants are the most important part of a landscape. This thought is prevalent because plants have generally been over-used. They have overshadowed much of the land design. Their use has included little regard for mature growth. Consequently, plants have become overpowering and predominating in many rural landscapes.

Plants may be used near your environs in many ways with excellent results. You will

find these suggestions for the use of plants interesting and useful:

1. Select the plant fitted for the situation. Choose it on the basis of mature height, ultimate spread, foliage qualities, season of interest, hardiness, soil preference, and tolerance of exposure for the location you have in mind. Then use it singly or in a large enough quantity to allow it to show up as a meaningful group.
2. Allow taller plants to add to the over-all beauty of the planting as background. Exceptions must be made when the need arises, such as enframing of a home from the road or plantings used to screen views or provide silhouette effects.
3. Surprise the eye with combinations of low plants with an occasional upright, branched small tree or large shrub to add variety. (See Fig. 33.)
4. Focus attention on plants with an interesting branching habit by using them near bare wall spaces, near a board fence, or as a foreground member of a group.
5. Groupings of plants in either the odd or even numbers can be successful if some thought is given to the space relationships of each. Angular or free flowing designs will accommodate many variations of plant groups.
6. Combinations of plant forms are unlimited. It is the new and different way of

Fig. 33. Surprise the eye with combinations of low plants with an occasional upright, branched small tree or large shrub to add variety.



handling plant groups which usually receives wide interest. This does not mean, however, that proven groupings or usual methods are undesirable.

7. Placement of plants within a group is very flexible. Some of the useful patterns include the staggered line, the flowing line, check row, equilateral triangle or a very informal, unplanned distribution such as would be obtained by scattering or drifting. These patterns would need to be adapted to the intended appearance of the particular planting.

Placement of Other Landscape Materials

It is recommended that other materials as well as plants be used in the landscape where practical. The only other principles of their arrangement will be that they perform a useful purpose and that their appearance be harmonious with nearby objects in color, line, form, and texture.

Fencing will be useful in separating private areas from public view. It can be varied in its arrangement to produce a broad, sweeping curve, a series of corners or other innovations. Materials for fence building can be chosen to fit the design and may vary from wood in its many forms to the new translucent corrugated plastics.

Walls are most commonly used to stabilize slopes, and, therefore, are usually located parallel to the soil contour. Curving or angular designs can be used to compliment nearby structures for a logical appearance. Often it is possible to extend a building wall to create continuity between a home and its surrounding landscape. Walls may be built to elevate a foundation planting adjacent to a bare corner of a tall house. Arrangements of these walls to repeat existing lines and corners are best.

Materials for surfacing terraces, patios, and porches will be confined largely to masonry. However, the appearance will be greatly improved if the area is closely related to the adjoining structure in shape and color. Materials are available to color concrete even after it has been in use. Surfacing is not always confined to the area immediately adjacent to the house.

They can be placed near a summer house, arbor, or a pleasant shady spot near a large tree. If the location warrants, surfacings may be devised from local rock strata, crushed stone, tan bark, pine needles, and other suitable materials.

Grill work including railings, trellises, wire mesh and shade frames can be placed to intercept the sun's rays or to provide separation and screening.

Outdoor furniture arrangements require the personal touch of each homeowner. This can be

done by arranging individual pieces as though they were carrying on a conversation. Color schemes will be governed by the usual rules of house and home decoration.

Plant containers such as movable planter boxes, plant tubs, and flower pots can be placed where bareness is pronounced. They may be used singly, as a series, or as a permanent fixture where a toned-down effect is needed. Protection for stair wells, out-swinging windows and porch edges can be obtained by using these accessories.

REFERENCE LIST

Landscape Design Principles . . .

Morris, Norman A., *Your Book of Garden Plans*

Murray and Gee, Inc., 3630 Eastham Drive, Culver City, California

A paper-bound book with many graphic illustrations from the first step on through to the completion of the grounds planning. This book is suitable for the beginner and average homeowner.

Bottomley, M. E., *New Designs of Small Properties*, revised

The Macmillan Company, New York, New York

Mr. Bottomley presents a thoroughly analyzed solution to the problems of the small property owner. Illustrations depict organization of the various uses of the property as well as the placement of plants to improve the appearance of the home.

Sunset Series: Lane Publishing Company, Menlo Park, California

Sunset Ideas for Landscaping Your Home
How to Build Fences and Gates
How to Build Walls, Walks, and Patio Floors

Sunset Patio Book

Barbecue Book

Ideas for Building Plant Shelters and Garden Work Centers

The Portable Garden (Planter Boxes, Tubs, etc.)

Flower Garden Book

Flower Arrangement Book

Vegetable Garden Book

Visual Garden Manual (Vegetables and Flowers)

Sunset Pruning Handbook

Cabins and Beach Houses

How to Build Outdoor Furniture

Plant Materials for the Landscape . . .

Bush-Brown, *America's Garden Book*

Charles Scribner's Sons, New York, New York

Truly an encyclopedia of plants for landscape developments. It is desirable either for the beginner or experienced gardener since it lists plants by their uses as well as habits of growth. Plant culture as well as descriptions are given.

Hottes, Alfred C., *Climbers and Ground Covers*

The Book of Annuals

The Book of Perennials

The Book of Shrubs

The Book of Trees

A. T. De La Mare Company, Inc., New York, New York

Favoring the details and descriptions of plant materials for landscape use, this series of books by Mr. Hottes covers the ornamental plant field very completely. It is useful to amateur gardeners and professional landscape architects. Both common and scientific names are included for each plant discussed.

Wyman, D. *Shrubs and Vines for American Gardens*

Trees for American Gardens

The Macmillan Company, New York, New York

Written by the horticulturist of the Arnold Arboretum at Harvard University, these books represent Mr. Wyman's experiences with plants at this world famous institution. Arranged in outline form, the descriptions and cultural requirements of plants described are most easily found.

Robinson, F. B., *Planting Design*
Palette of Plants

The Garrard Press, Publishers, Champaign, Illinois

These books reflect the thorough analysis of planting problems Miss Robinson has encountered in her many years of work at the University of Illinois. She has been a professor of landscape architecture but is now retired.

Billington, Cecil, *Shrubs of Michigan*

Cranbrook Institute of Science, Bloomfield Hills, Michigan

Written about native Michigan plants and their characteristics, this book is truly a handbook for the nature lover. Detailed sketches of leaves, flowers and fruits make plants easy to identify. Natural habitats of plants are shown by counties on the maps of Michigan included with each plant.

Landscape Construction . . .

Aul, Henry B., *How to Build Garden Structures*

Sheridan House, Inc., 257 Fourth Avenue, New York 10, New York

Simplified methods of building structures for use in the landscape. Useful for the beginner who wants to work with construction materials.

Hawkins-Abbe, *The Home Mechanics Outdoor Handbook*

D. Van Nostrand Company, Inc., New York, New York

Complete descriptions of construction methods for a wide variety of landscape features, including pools, seats, bridges, steps, fireplaces, walks, etc. It is suitable for the amateur or professional gardener.

Magazines Featuring Landscape Articles . . .

House and Garden Magazine

American House and Garden, 420 Lexington Avenue, New York, New York

Better Homes and Gardens

Des Moines 3, Iowa

House Beautiful

Hearst Magazines, Inc., 572 Madison Avenue, New York 22, New York

The American Home

The American Home Magazine Corporation, 444 Madison Avenue, New York 22, New York

Government Publications . . .

United States Department of Agriculture

Popular Publications for the Farmer and Homemaker

Write for complete U. S. D. A. list, Superintendent of Documents, Washington 25, D. C.

Michigan State University

Available Bulletins of the Cooperative Extension Service and Agricultural Experiment Station

Write for current list of publications available, Michigan State University, Department of Information Services, Bulletin Office, East Lansing, Michigan

Small Homes Council, Mumford House, University of Illinois, Urbana, Illinois

This list includes only a few of the worthwhile publications. Many more are available to homeowners at libraries, through publishers, or at newsstands.

In Review . . .

To review what this circular has said about planning the landscaping for a rural home, check these steps you should take to be sure you develop home surroundings that are both beautiful and useful.

FIRST, select a desirable new or existing homesite.

- Study the proposed site.
- Check for trees and protect them while building.
- Watch for pleasant views.
- Know about the soil type and how to handle it.
- Study the water supply.
- Find out if the site is well drained.
- Beware of air pollution.
- Move into the kind of neighborhood you want.
- Be sure the space and exposure are right for the home.

SECOND, plan the chosen site.

- Consider all the important items in planning your landscape.
- Base its beauty on usefulness.
- Improve the present landscape.
- Figure all the costs if you plan to do your own work.
- Make use of a skilled landscape architect.

THIRD, design the "use areas."

- Work from the known to the unknown in planning parts of the landscape.
- Follow a step-by-step procedure.
- Use a base map to locate important use areas.
- Analyze the approach area.
- Analyze the outdoor family area.
- Analyze the work-service area.
- Build stockproof enclosures on livestock farms.
- Consider fencing on field crop and fruit farms.
- Include a play area for the children.
- Plan proper sewage disposal.
- Design windbreak plantings for use areas.

FOURTH, choose materials for the landscape.

- Choose materials for final effect.
- Develop a sense of good choice in landscape materials.
- Choose functional materials for the various types of plantings.
- Choose harmony in selecting materials.

FIFTH, arrange landscape materials.

- Arrange plants cleverly.
- Place other landscape materials in strategic spots.

SIXTH, if you want more help, study available books and articles about landscape planning.