If field reconnaissance results in the recording of prehistoric archaeological sites that cannot be avoided and preserved, and the importance of the cultural deposits cannot be determined from surface evidence, then subsurface testing programs should take place. Testing procedures should be designed to specifically determine the boundaries of the sites, the depositional integrity and cultural importance of the resources, as per CEQA Appendix K criteria. These investigations should be conducted by qualified professionals knowledgeable in regional prehistory. The testing programs should be conducted within the context of appropriate research considerations and should result in a detailed technical report that defines the exact project impacts to important resources and present comprehensive mitigation programs for addressing those impacts as explained further below.

Development-related impacts to important prehistoric archaeological sites could be mitigated by the following alternatives:

1. Avoidance of archaeological sites through modification of development plans that would allow for the preservation of the resources. Incorporation of site locations into protected open space or parklands would serve this purpose.

2. Covering or "capping" sites with a protective layer of fill. This could be a very good way of mitigating potential impacts in situations where public access may be increased as a result of development. Archaeological monitoring during the filling process should be recommended.

3. In circumstances where archaeological deposits cannot be preserved through avoidance or capping, data recovery through excavation would be the recommended plan. This measure would consist of excavating those portions of the site that would be adversely impacted. The work should be accomplished within the context of a detailed research design and in accordance with current professional standards. The program should result in the extraction of sufficient volumes of archaeological data so that important regional research considerations can be addressed.

Any archaeological resources located within the Specific Plan area can potentially render research information important to reconstructing and understand the Willits area prehistory. In considering subsurface testing and excavations of prehistoric archaeological sites, consultation with the local Native American community is essential; all aspects of the programs, including the treatment of cultural materials and particularly the removal, study and reinternment of Native American burials should be addressed. All applicable State and local legal requirements concerning these issues should be strictly enforced.

Implementation

The potential for cultural resources should be considered at the time of development review. All relevant resource records should be checked for the presence of and the potential for prehistoric and historic sites as applicable to each new development project.

- Year: Ongoing.
- Implementing Agency/Entity: Brooktrails Township Architectural Review Commission and District Architect.

10. COMMUNITY DESIGN

INTRODUCTION

As Brooktrails Township continues to grow and develop as a community, the appearance and livability of the community has become of increasing concern to Township residents. As noted in the Township Vision Statement the *"...VISION affirms that the transition from the original concept of the Brooktrails vacation village to a community of predominately full-time residents shall continue and shall be the basis of [the] Specific Plan."*

Accordingly, this Plan places an emphasis on the definition of an overall community identity comprised of a number of different residential components linked to one another by a framework of Public Facilities open space. The visual relationships between architectural elements of developed properties and the natural and built landscape, currently are and will in the future be of increasing importance to the appearance of the Township as growth and development continues.

The intent of the *Community Design* chapter is to establish the policies necessary to create a well-ordered community environment that is sensitive to the intent of the Vision Statement with meaningful open spaces, thoughtful design of buildings and maintenance of the forest ecosystem. The emphasis, therefore, is not on dictating a particular architectural style, but rather on establishing some important ground rules within which the creativity of individual builders and designers can be expressed.

Implementation of the policies set forth in this chapter will occur through the review of development plans by the District Architect, ensuring that individual buildings contribute to the overall concept of a year-round residential community. The Design Guidelines (Section 10.1), provide the necessary criteria against which proposed plans for building elements and landscape development can be reviewed. The Guidelines themselves are not mandatory, but rather general

rules. Variations between these Specific Plan Guidelines and Site Development Standards (Section 10.2), is permissible if the intent of the Guidelines is met. Because the dominant land use in Brooktrails is single-family residential development, the emphasis is on providing adequate private space, minimizing the dominance of garages along the street, fitting structures to the site so as not to dominate the site, and preserving the natural setting to the extent feasible.

The Site Development Standards are more specific than the Design Guidelines provided below, and will replace the Draft Development Standards currently being used by the Community Services District to review development applications. The Site Development Standards address the treatment of development parcels, including building setbacks, building height limits, slope treatment and drainage, erosion control, site grading, retaining wall construction, on-site parking, landscape planting and other features of site construction. The Site Development Standards provide more specific direction for the implementation of the Design Guidelines.

The Design Guidelines and Site Development Standards are established for areas of concern to the community. These concerns include aesthetics as well as public safety. In particular, as residential densities increase, design considerations will become of greater significance to the overall character and quality of the community. The Design Guidelines and Site Development Standards will also ensure a consistency in the quality and character of the built environment within the Specific Plan area.

For clarification, definitions of the following terms are provided:

- Drainage swale - a sloped depression in the land, either natural or man-made, which conveys water runoff.
- Stream - a body of running water (as a river or brook), flowing on the earth.
- Habitable space - a space capable of being lived in such as a dwelling, residence or other building area for human occupancy.
- Story - one floor level of a building.
- Basement - the part of a building that is wholly or partly below ground level.

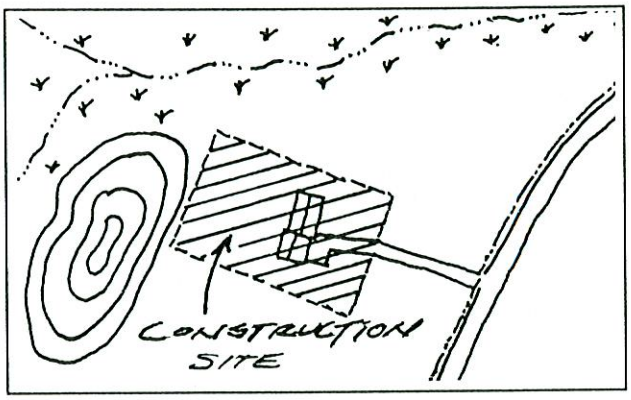
- Grade - a) an elevation; b) a datum or reference level, c) degree of inclination of a road or slope.

10.1 DESIGN GUIDELINES

1. Preserving Natural Features and Topography (Natural Form)

1.1 Earthwork/Topography

1.1.1 Preserve and enhance the beauty of the landscape by encouraging the maximum retention of natural topographic features such as drainage swales, streams, slopes, ridge lines, rock outcroppings, vistas, natural plant formations, and trees.



Minimize site disturbance in establishing the location of building sites.

1.1.2 Minimize impacts to the natural landforms in Brooktrails. Any new roads should follow contours to the greatest degree feasible. Design houses and other structures to respect the existing topography and other elements of the natural landscape. Owners and contractors must secure a County/District grading permit prior to grading any construction site.

1.2 Riparian Corridors and Other Drainages

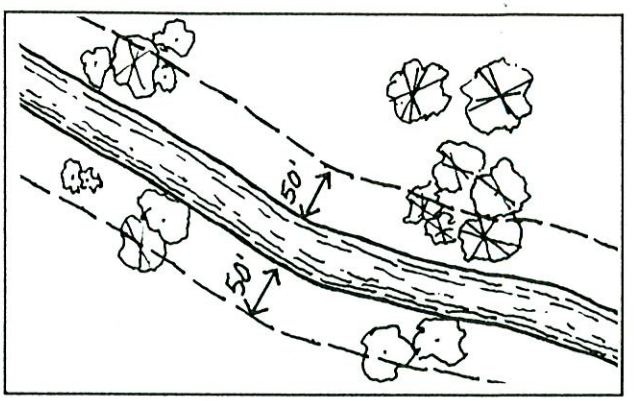
1.2.1 Preserve the location, character and extent of natural drainage courses and their associated riparian habitat. Maintain and protect hydraulic capacity and any subsurface flow patterns.

1.2.2 Depending on the extent of riparian vegetation, maintain buffers of 25-50 feet on both sides of streams. Avoid deposition of any material, including structures, and removal of any material within this buffer zone, except for the following:[1]

(1) Pipelines, utility lines and road and trail crossings when no less environmentally damaging alternative route is feasible.
(2) Removal of trees for disease control or hazard abatement.
(3) Improvements that have the primary function of restoring fish and/or wildlife habitat.

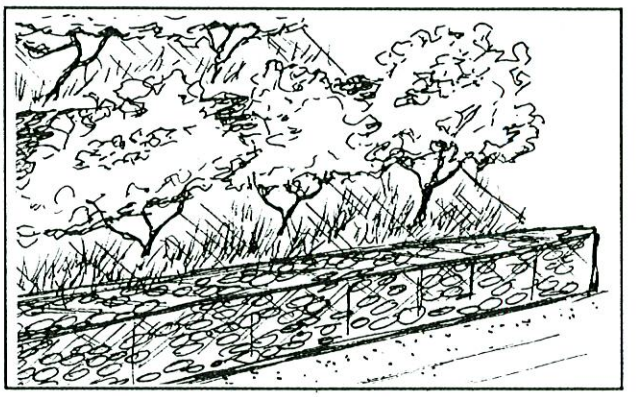
1.2.3 When the toe of a slope is 25 feet or less from the stream channel or the stream is within a steep ravine (40 percent slopes or greater), the riparian buffer zone should extend at least to the top of the steep slope.

1. With a minimum buffer in place, it is also advisable to expand the buffer in some areas to protect sensitive land areas that extend beyond this zone.



Riparian buffer zone.

1.2.4 Maintain existing natural drainage patterns. Stabilize and restore drainageways, where necessary, using bioengineering techniques to maintain the natural quality of the riparian corridor.[2]



Use bioengineering restoration solutions to minimize impact to the environment.

1.2.5 Avoid use of ornamental plantings and introduction of non-native species for stream-side restoration projects.

2. Bio-engineering techniques refer to maintenance and restoration solutions that combine use of vegetation with some construction materials such wood and stone terraces and wire rip-rap. Inadequate sunlight in some locations within Brooktrails may limit viability of vegetation solutions.

1.3 Wildlife Corridors

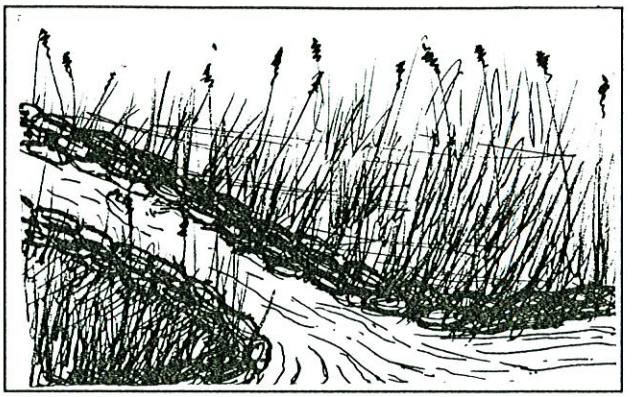
1.3.1 Maintain a buffer of 25-50 feet (depending on the extent of riparian vegetation) on both sides of streams to protect riparian vegetation and to enable streams to serve as wildlife corridors.

1.3.2 Where existing or new roads cross key wildlife corridors, post signs to encourage motorists to proceed slowly at these locations.

Warn motorists of wildlife corridor crossings.

1.4 Wetlands

1.4.1 Install cobblestones, rip-rap or other energy dissipators to slow the rate of water flow into wetland areas.



Line waterways with cobblestones or riprap
to reduce the rate of water flow

1.4.2 Maintain a buffer of 25-50 feet between development and wetland areas.

1.5 Lakes and Ponds

1.5.1 Maintain a minimum setback of 100 feet from lakes and ponds.

1.5.2 Avoid use of septic systems within 100 feet of lakes or ponds.

1.6 Specimen Trees

1.6.1 Design structures around existing specimen trees. Protect views of such trees from private and public vantage points. If it is not feasible to preserve a specimen tree, replant the same or similar type of tree.

1.7 Distinct Plant Communities

1.7.1 Site development so that existing healthy groves of redwood trees and other native vegetation on the site are preserved to the maximum extent feasible. Minimize surface grading within the root zone areas of established redwood trees. Ensure adequate protection of vegetation during construction. The Brooktrails Fire Department requires some clearing of vegetation for fire protection.

1.7.2 Site structures to minimize disturbance of distinct plant communities, where feasible. Brooktrails has a number of areas which contain attractive stands of redwood, fir, madrone, laurel, and oak trees, as well as clusters of manzanita bushes.[3] While these are not rare plant communities, site dwellings to respect existing, visually attractive vegetation, where feasible.

Clusters of manzanita bushes add visual interest to the landscape.

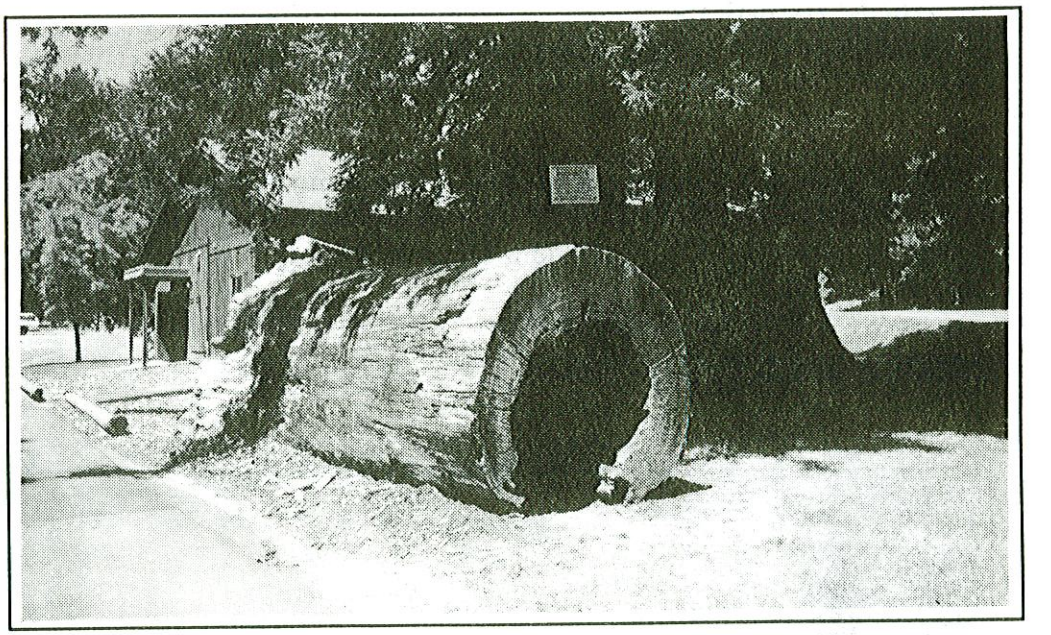
3. Manzanita bushes should be cleared in the vicinity of dwellings due to fire hazard.

Madrone forests add visual interest to the landscape.

1.8 Landscape Elements/Features

1.8.1 Rock Outcrops: Site structures to avoid rock outcrop areas, where feasible, to preserve elements of visual interest.

1.8.2 Preserve other elements of the natural landscape such as logs and tree stumps that exist in the vicinity of the community center and lodge. These features provide information and visual clues about the history of logging in the Township.



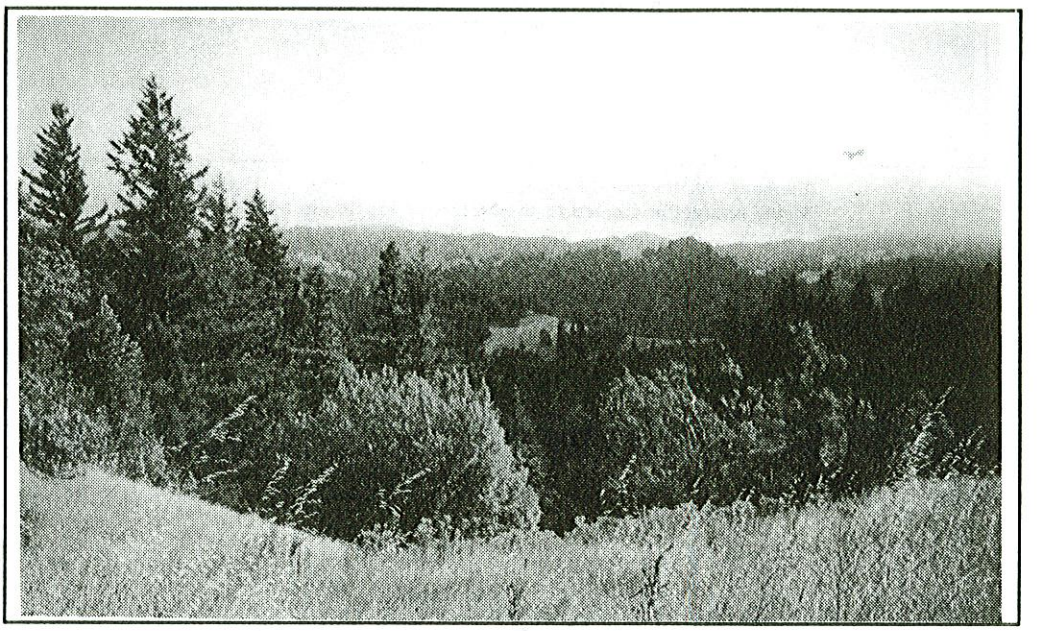
Elements of the natural environment such as this large log provide visual interest and clues to the history of logging in the Township.

1.8.3 Preserve clearings, meadows and wetlands which all add visual interest in an otherwise heavily wooded area.

1.9 Key Viewsheds/Aesthetics

Viewsheds

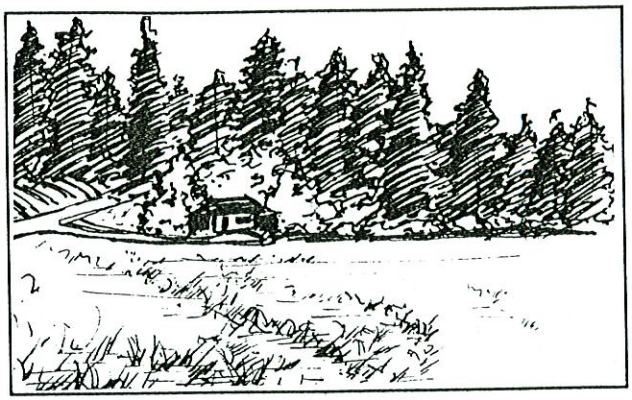
1.9.1 Avoid siting structures in visually prominent locations; site buildings and other structures to minimize obstruction of views. Protect views of the hills and from the hills. Vistas of the wooded hillsides help to provide a sense of the larger context within which the Township is located.



Site structures to avoid blocking important viewsheds.

Open Fields

1.9.2 Place structures at the edges of meadows and fields to maintain their integrity and to minimize visual impact, to the degree feasible. Encourage rezoning, lot merging, reconfiguration, and/or trading to preserve open fields such as the field between Madrone Drive and Madrone Way (which the Maacama Fault runs through).



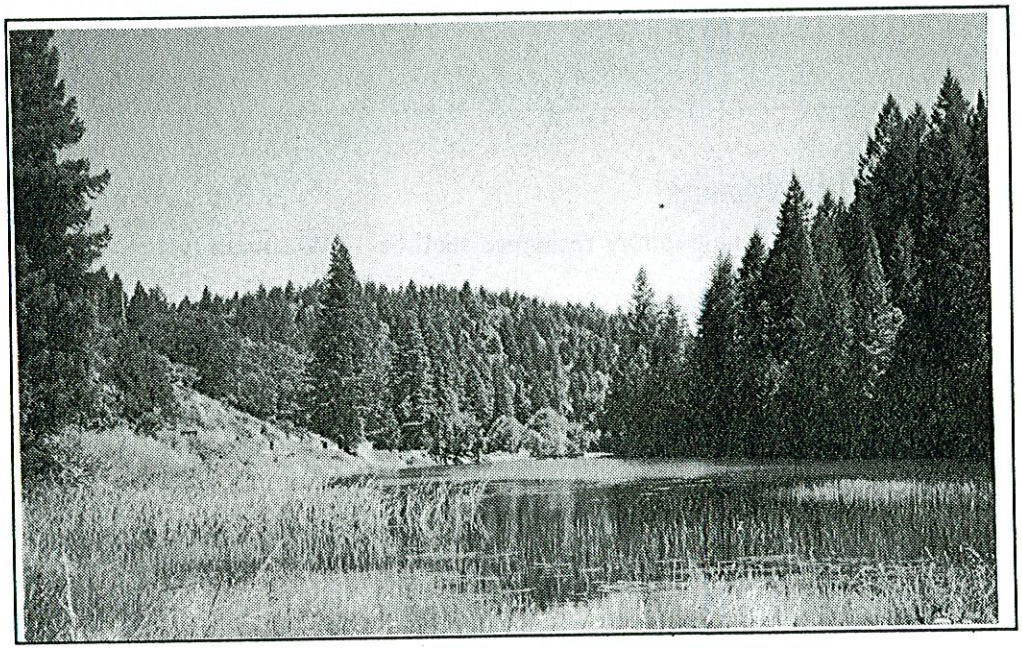
Site development at the edge rather than in the middle of open fields.

Ridge lines

1.9.3 Major ridgelines and crests of hills should remain free of development; if developed, structures should be sited such that trees still provide a natural backdrop and silhouette so that development remains inconspicuous and does not dwarf natural features.

Community Amenities

1.9.4 Preserve views of key amenities such as Summer Lake and Beeler Pond to highlight their importance to the community.

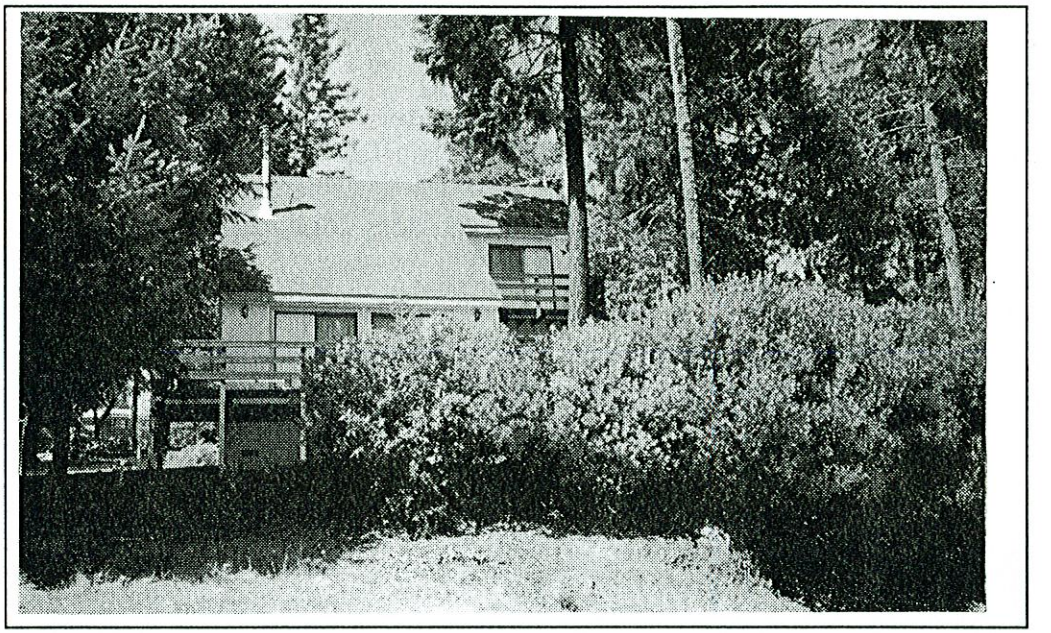


2. Preserving Rural Atmosphere Through Environmentally Sensitive Design

2.1 Building Design

Brooktrails is primarily a residential community. A variety of housing types and styles are appropriate for the community. No one style is recommended, but encourage site planning, site design and development that respects the natural environment and the surrounding residential and greenbelt areas.

"Brooktrails Eclectic" dwellings are also found in many parts of the Township. A fairly wide range of architectural styles (from chalet style to "round house") are basically compatible with the informal nature of the community, particularly when they incorporate natural materials and colors that blend in with the landscape and minimize a suburban appearance.



Single-Family Residential Development

2.1.1 The minimum size of a single-family residence shall be 1,000 square feet.

2.1.2 "Step" building forms to conform to site topography. Blend the form, mass, profile, and architectural features of structures with the natural terrain.

2.1.3 Develop roof forms which consist of compositions of smaller components to reflect the irregular forms of the hillside setting.

2.1.4 "Articulate" facades to produce shadows through wall setbacks, recessed openings, porches, verandas, overhangs, and projecting windows to reduce the appearance/massing of structures.

2.1.5 Incorporate architectural elements such as porches and pitched roofs to soften the appearance of residential and commercial structures. Use natural colors and materials.

2.1.6 Site and design structures to be unobtrusive and compatible with surrounding natural features.

Two-family dwellings

2.1.7 The minimum size of a two-family or multiple-family residence shall be 800 square feet for two bedroom units and 600 square feet for one bedroom or studio units. In addition, there shall be a minimum of 3,000 square feet of lot area per unit and not less than 1.5 parking spaces per unit.

2.1.8 Well-designed two-family homes can be a significant part of a community's affordable housing strategy; to blend two-family houses with single-family neighborhoods, design the two-family residences to look like large single residences.

Multi-Family Housing

2.1.9 For multi-family units, encourage use of pitched roofs, a variety of roof lines, and attached structures to give the units a rambling farmhouse character.

2.1.10 Design groups of buildings with visible differences. This may be achieved through materials, forms, and facade variation.

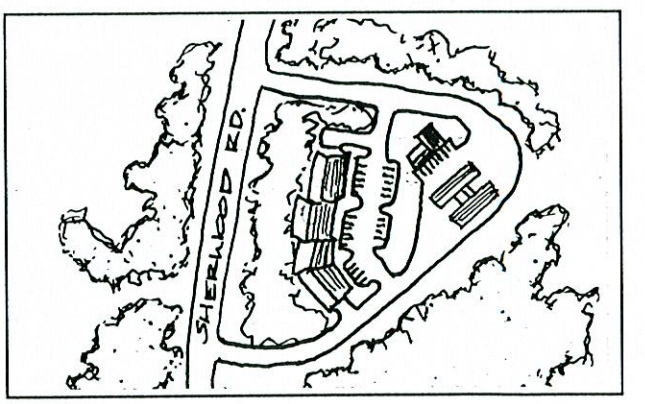
2.1.11 Avoid a series of first story garages and long, continuous building masses that create a "wall" effect and inhibit views.

2.1.12 Due to their scale, multi-family dwellings harmonize best when located in areas where existing homes are of a large scale and above average bulk.

2.1.13 Ensure that all multi-family housing contains 1.5 off-street parking spaces per unit, storage space, and outdoor landscaping.

Commercial Development--Siting/Architecture

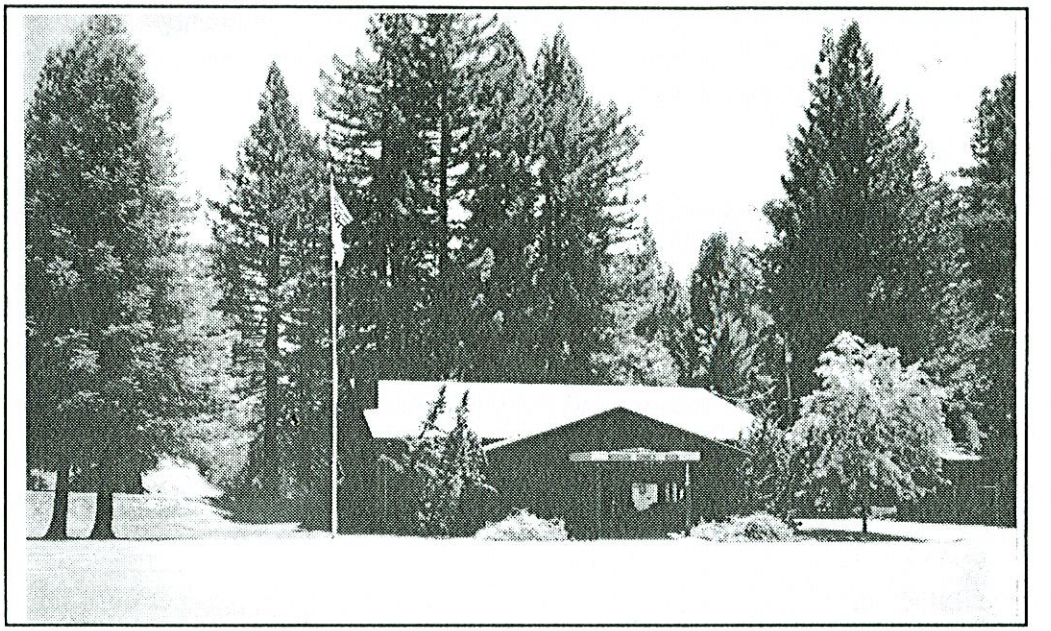
2.1.14 Identify one or two areas (i.e., sites 7, 8 and 12 as explained in Table 4-3 of Chapter 4, *Land Use and Planning*), that would be suitable for off-street commercial nodes adjacent to major arteries. Avoid commercial strip development.



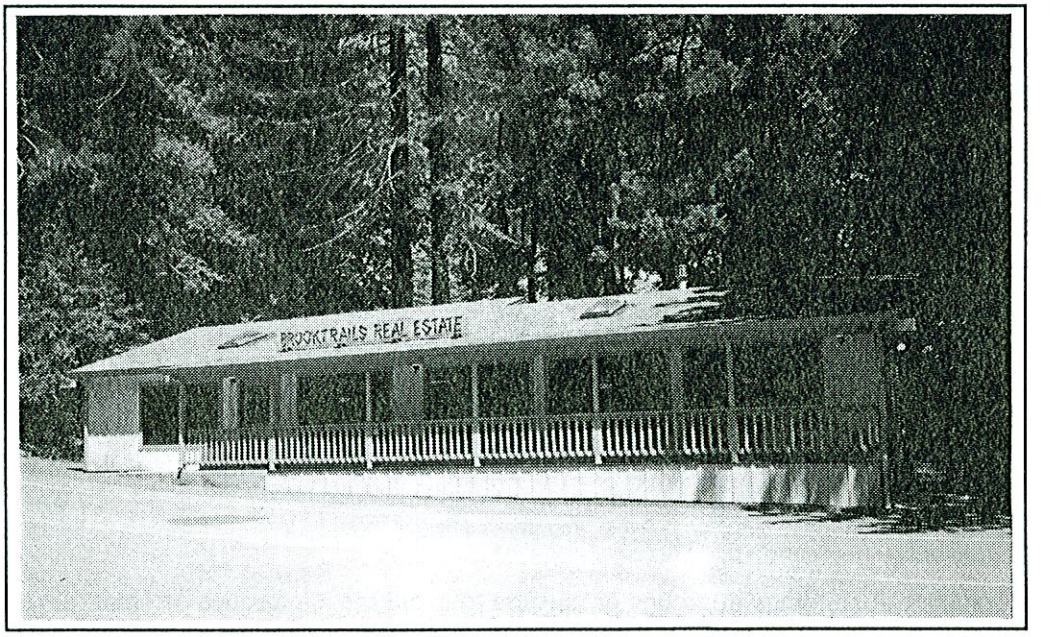
Design commercial areas as off-street nodes. Avoid strip development.

2.1.15 Site commercial buildings in groups or clusters to avoid the appearance of "strip development". Vary the setbacks and include well-landscaped areas between the structures and roadway. Develop multi-tenant buildings, centers or complexes with a unified design theme, including the consistent use of architectural elements, materials, colors and textures.

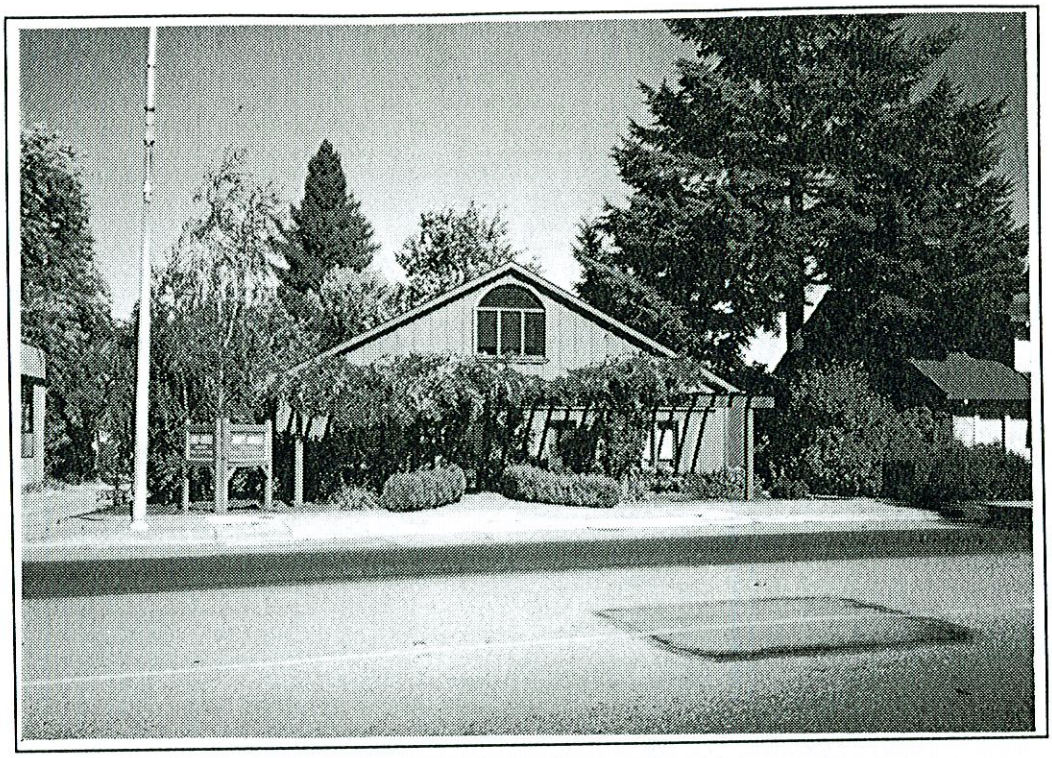
2.1.16 Integrate commercial development with traditionally styled buildings by encouraging architectural styles that harmonize with traditional facades and other features. Adhere to minimum requirements for the exterior appearance of any new or altered buildings--i.e. use of pitched roofs, and window size and spacing that conforms to the general window proportions and rhythms characteristics of traditional buildings in the area. While no one architectural style is desired, encourage architectural elements that are characteristic of rural buildings.

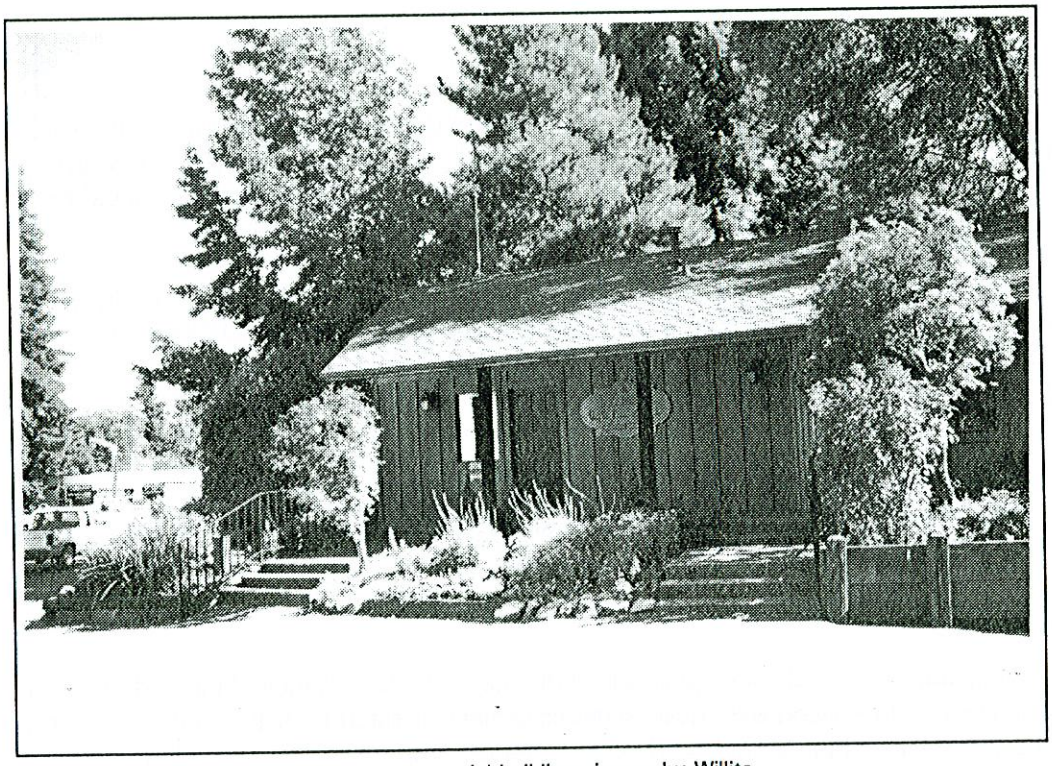


The Brooktrails Community Center with its wood frame and pitched roof is compatible with the rural character of the Township.



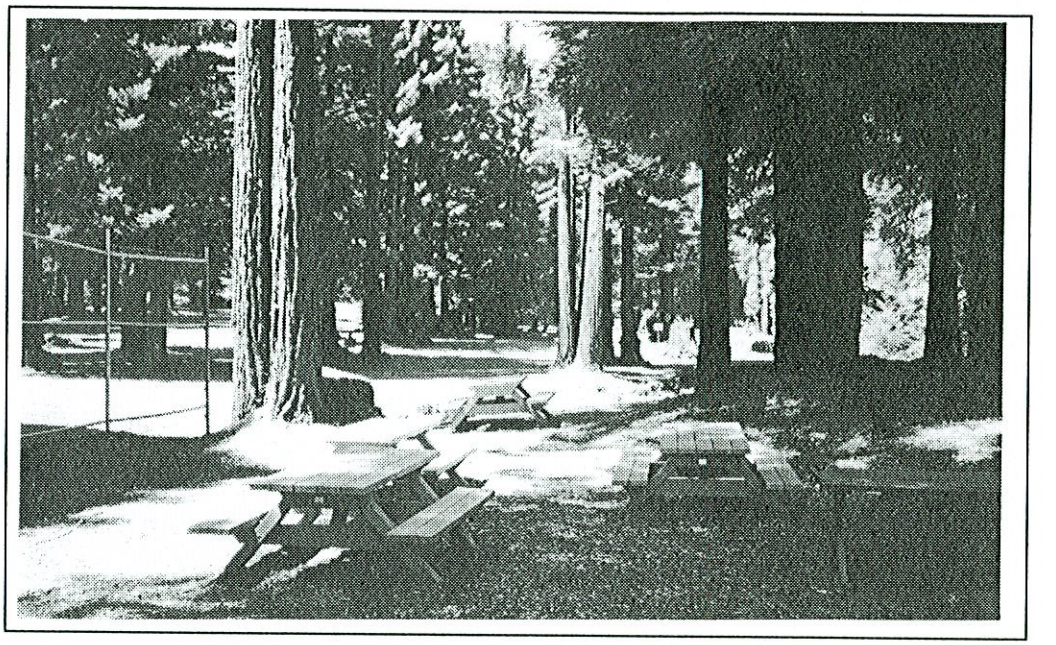
Features such as pitched roofs and porches are common unifying architectural elements in Brooktrails.





Some commercial buildings in nearby Willits reinforce the rural character of the region.

2.1.17 Include site furnishings such as picnic tables, benches, drinking fountains, and refuse containers to make public areas more inviting.



Picnic tables support recreational use of the Township and help to create an informal and inviting setting.

2.2 Building Footprints

2.2.1 Design structures to integrate well with the natural topography and features of the site. Preserve and incorporate significant topography, streams, views, mature trees and tree groupings, and significant vegetation masses into the development process. Such features should be considered as strong site design determinants.

2.2.2 Develop structures outside of buffer zones designated for environmentally sensitive habitat areas or other resources, unless there is no other feasible site available on the parcel.

2.2.3 Maximize energy efficiency through appropriate siting/placement of structures.

2.3 Building Heights

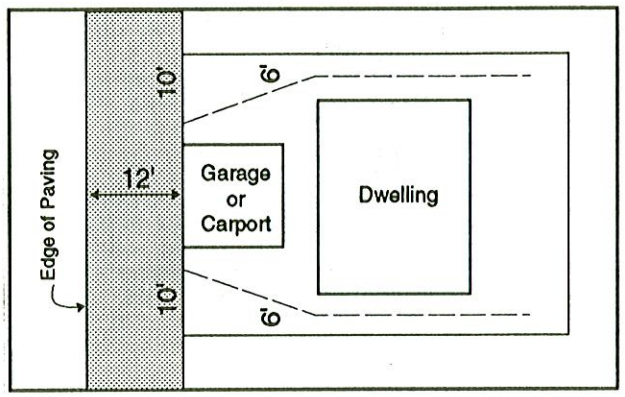
2.3.1 Building heights shall be limited to 35 feet for all structures consistent with the provisions of the Site Development Standards.

2.4 Setbacks

2.4.1 Maintain minimum setbacks consistent with the Site Development Standards to minimize the visual impact of development. Also, avoid placement of satellite dishes and other fixtures within setback areas to minimize unattractive appearances from roadways and adjoining properties.

2.5 Hillside Zoning

2.5.1 For steep hillside locations applicable to R-1 development only on properties demonstrated inaccessible using driveways of maximum permissible slope (see Site Development Standards Relating to Fire Safety), permit development of garages and other parking structures at the front property line at a minimum distance of 12 feet from the edge of road paving. Require side lots of 10 feet on both sides of garages/carports developed using this configuration. The size of the side lot would taper back to 6 feet as indicated below:

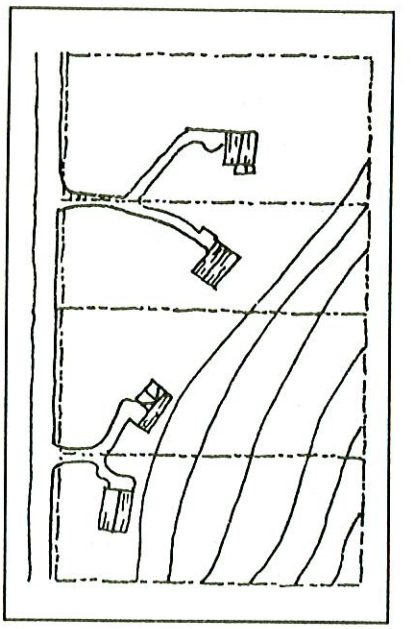


Allowable lot configuration for hillside zoning districts.

2.6 Earthwork and Driveways (See also Section 3.4)

2.6.1 Driveways: Avoid sensitive habitat areas.

- Use common driveways, hillside zoning and off-site parking bays to minimize earthmoving and paving; this will reduce environmental impacts as well as site development costs.



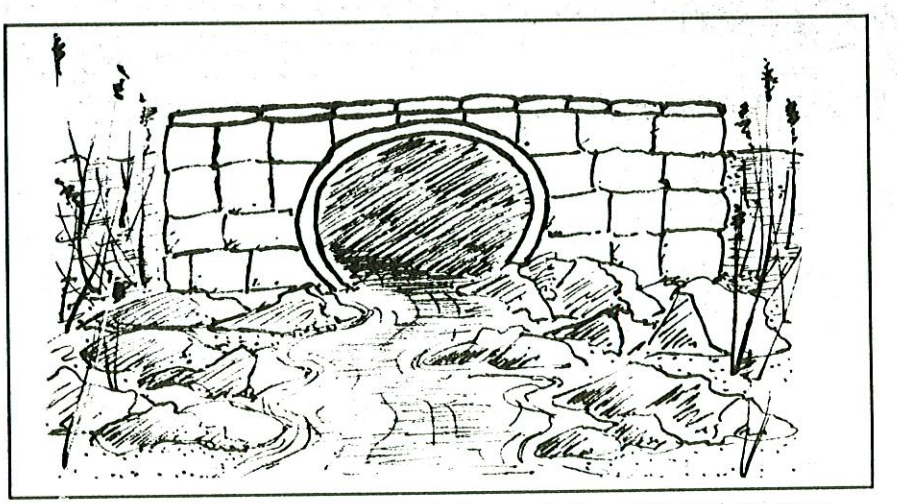
Development of common driveways reduces site disturbance.

Minimize visual focus on cars and garages, if feasible.

2.6.2 Curbing: Curbing shall be used only where necessary to provide for stormwater management (generally on steep slopes with grades of 8 percent or more). However, it is still preferable to line drainage ditches with 4-6 inch diameter stone to prevent erosion and sedimentation. Where curbing is required, use natural rock/block or an equivalent material.

- Waive requirements for curbs and sidewalks where feasible to minimize construction costs, and visual impacts.

2.6.3 Engineered Structures: Minimize the visual impact of curbing, culverts, walls, and outlet structures through the use of textured concrete as well as other natural materials.



Encourage use of natural materials for bridges and other engineered structures.

2.6.4 Guardrails: Use wood or other natural materials for construction of guardrails, where feasible.

2.6.5 Paving: Gravel may be used for fairly level driveway surfaces that are not prone to erosion (driveway grades of less than 10 percent); the County DPW, however, requires use of concrete where driveways join roads within the County right-of-way.

2.7 Roadways

2.7.1 Roads/Roadsides: Maintain the rural character of roadways through use of rustic elements such as split-rail fences and vegetation along property lines, and wood, terraced retaining walls (limited to a height of three feet) and parking bays along driveways. Minimize use of solid fencing to avoid blockage of views.

Maintain the rural quality of roadways in Brooktrails.

2.7.2 Design any new road linkages to fit topography/contours to the degree feasible to minimize landscape disturbance.

Use of narrow road shoulders (3-4 feet) and asphalt curbs provides a fairly rural roadside treatment, but parking bays are needed to reduce hazards associated with parking on narrow roads with limited shoulder areas (See Guideline 2.16.1).

2.7.3 Avoid use of solid fencing to avoid blockage of views; minimize use of concrete sidewalks, curbs and gutters to avoid creating a standard suburban character.

2.8 Natural Building Materials

2.8.1 Design and site structures to blend in with the natural topography and landscape. Encourage use of materials such as rock, stone, wood; and colors such as grays browns and other earth tones, for structures in Brooktrails.

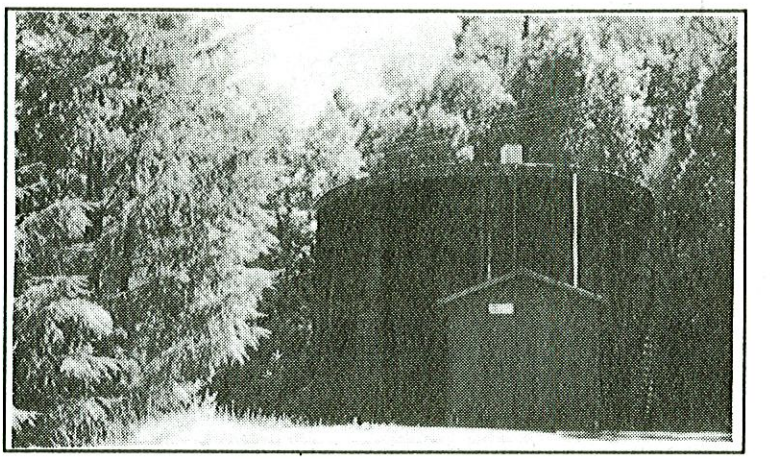
2.8.2 Consider design of visual elements such as street lighting, fences, pathways an other street furniture to enable maximum identity and uniqueness of character to be built into each development.

2.8.3 Encourage use of wood to create landscaped terraces on steep slopes adjacent to driveways. Similarly, use low, wood retaining walls to define edges of driveways and roadsides, and to define parking bays. This is encouraged, where feasible, throughout Brooktrails.

2.9 Natural Silhouettes

2.9.1 Limit the height and size of structures placed on ridgelines, unless placed within trees that provide a natural backdrop.

2.9.2 Limit the height of water towers to an elevation below the crown line of mature on-site trees.



Place water towers and other structures at locations containing a backdrop of vegetation to minimize visual impact.

2.10 Landscaping

2.10.1 Encourage the development of yards and gardens in a manner that complements the natural environment.

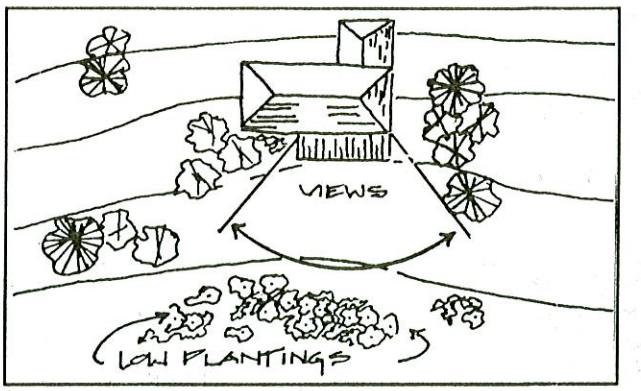
2.10.2 Encourage use of native vegetation, particularly species that minimize fire hazard. Discourage use of non-native species.

2.10.3 Use landscaping to visually soften fencelines. Permit open, wood, and wire fencing only.

2.10.4 Keep rooflines of structures below the height of the existing tree canopy.

2.10.5 Minimize tree removal on hilltops to maintain the natural silhouette of the hillside.

2.10.6 Consider water conservation and view protection when selecting landscaping materials. Limit the size of lawn areas to conserve water.



Protect and enhance views from dwellings, unless principal aim of landscaping is to create greater privacy.

2.10.7 Avoid planting and watering within the drip line of native Oak trees.

2.10.8 *Tree Removal:* Consider the following factors prior to removing trees that exceed 6 inches in diameter at the base of their trunks:

(a) The condition of the trees with respect to disease, danger of falling, proximity to existing or proposed structures, and interference with neighboring property owners views.

(b) Necessity to remove trees to construct proposed improvements to allow enjoyment of substantial property rights.

(c) Topography of the land and the effect of tree removal on erosion, soil retention, and the diversion or increased flow of surface waters.

(d) Good forestry practices: i.e., the number of healthy trees that a given parcel will support.

(e) The tree in question is of landmark/or specimen tree importance, and its retention as such will not unreasonably interfere with the use of the property upon which it is located.

2.11 Landscape Screening

2.11.1 Use landscape materials to screen storage sheds, trash receptacles, satellite dishes and other visually obtrusive elements.

2.11.2 Where it is not feasible to develop at the edges rather than in middle of open fields, use landscaping to screen structures.

2.12 Fencing/Sound Barriers

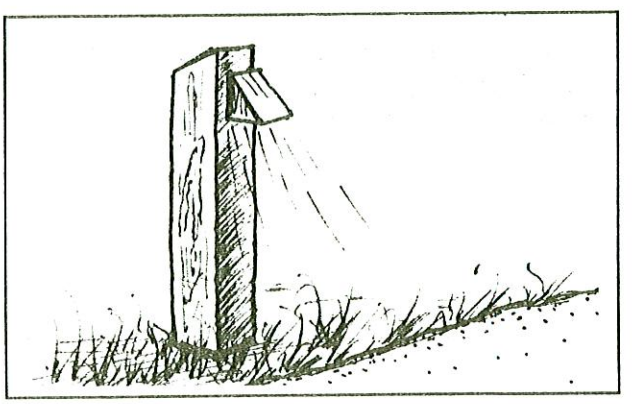
2.12.1 Encourage use of wood, split rail fences to delineate property lines, gardens, driveways and other boundaries.

Wood, split rail fences help to create a rustic, rural atmosphere and allow visibility of the landscape beyond the fence.

2.12.2 Develop natural sound barriers such as landscaped setbacks and berms along major roadway corridors to minimize noise impacts. Avoid the use of sound walls and solid fencing.

2.13 Lighting

2.13.1 Provide lighting only where site-specific safety conditions warrant. Both path and street lighting should be shielded downward. Control both the height and intensity of lighting to maintain rural character.



Downward shielded path lighting.

2.13.2 Install all residential lighting below the eave line of structures. All lighting fixtures should be shielded to prevent light shining beyond the lot lines onto neighboring properties or public ways.

2.13.3 At commercial parking areas, light standards should not exceed 20 feet in height.

2.14 Storage

2.14.1 Provide storage space for all residential structures. Screen storage areas with landscaping, where feasible, subject to fire hazard clearance requirements.

2.15 Parking

2.15.1 Develop parking bays where feasible throughout the Township to address the existing shortage of on-street parking and to avoid blockage of narrow streets.

2.15.2 Residential Areas: Permit parking bays adjacent to streets where topography allows. In areas with steep slopes, develop parking bays, where feasible, to avoid the need to construct driveways on steep slopes.

2.15.3 Space permitting, de-emphasize parking areas for single family dwellings so that cars and garage doors are not the dominant visual component of residences as viewed from public roads.

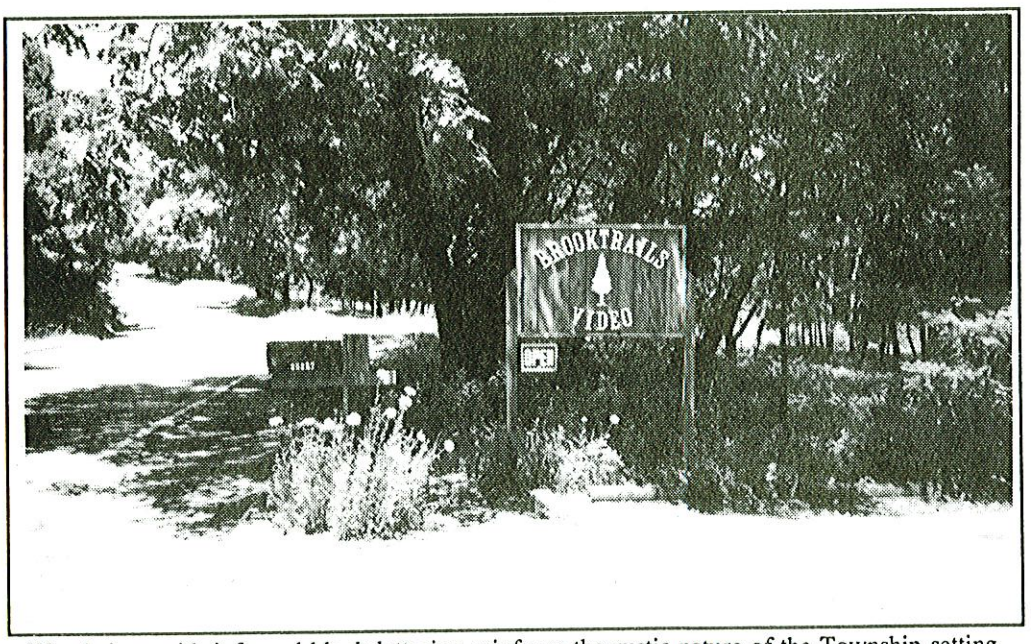
2.15.4 Commercial Areas: Provide parking at the side or rear of commercial lots. Avoid large expanses of parking lot. Plant shade trees within central portions of parking areas to break up expanses of asphalt. Plant trees at a rate of approximately one tree for every twelve parking spaces.

2.16 Signage

Signage for Commercial Areas

2.16.1 Avoid excessive size and number of competing signs.

2.16.2 Encourage use of visible, but relatively small signs to minimize visual clutter. Prohibit signs which are unsightly or obnoxious in appearance, which are not properly related to the site or use, or which are not harmonious with adjacent uses. Use natural materials, where feasible.



Wood signs with informal block lettering reinforce the rustic nature of the Township setting.

3. Life and Fire Safety, Protection of Public Health

Avoid or minimize development in high constraint areas to reduce risks to public health and safety and to minimize environmental impacts.

3.1 Emergency Access/Emergency & Essential Services

3.1.1 Maintain an updated Brooktrails Evacuation Plan which identifies emergency access routes. Check accessibility of routes after major storms, and, at minimum, on an annual basis.

3.1.2 Work with Neighborhood Watch Association to conduct yearly information meetings and drills.

3.1.3 Encourage development of services that would be required in the event of a major earthquake or other natural disaster. Essential services would include, but not be limited to, a medical clinic and pharmacy, grocery store, gas station, and post-office.

3.2 Fire Hazard Reduction

All of Brooktrails is located in a high or very high fire hazard area.

3.2.1 Thin selected vegetation on within 30 feet of dwellings to reduce fuel load and all other structures or out-buildings.

3.2.2 Within the transition zone beyond 30 feet, remove all dead leaves and branches. Thin native plants to reduce their fuel load.

3.3 Steep Slopes, Slides, and Unstable Hillside Areas

3.3.1 When siting structures and driveways, avoid altering or interfering with existing hillside drainage patterns.

3.3.2 Encourage imaginative and innovative building techniques to create buildings suited to natural hillside surroundings.

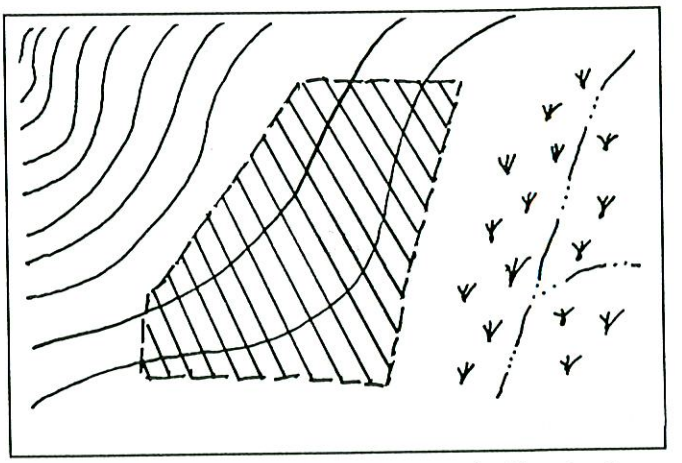
3.3.3 Design retaining walls as terraces or "broken"/ "segmented" elements.

3.3.4 Site structures to avoid areas with slopes exceeding 40 percent. In general, minimize impervious surfaces.

3.3.5 In developing a site plan, strive for the maximum retention of morphological features and qualities of the site. Seek to enhance natural features, to the greatest extent feasible.

3.3.6 Orient development such that grading, cut and fill operations, and other site preparation is kept to an absolute minimum, to retain the natural character of the hill areas.

3.3.7 Protect significant natural drainage courses during grading activities. Provide debris basins, rip-rap, and energy dissipation devices, where necessary, to reduce erosion. For sites requiring a drainage crossing, encourage use of a natural crossing and bank protection over steel and concrete systems.



Avoid steep slopes and other sensitive areas in siting structures and other facilities.

3.3.8 Schedule development to allow for reseeding of graded areas before the rainy season; accomplish all paving as rapidly as possible after grading. Use interim mulching to prevent erosion, as necessary.

3.4 Erosion Control

3.4.1 Minimize erosion of soil and sedimentation of watercourses and water bodies by employing the following "best management" practices:

(a) accomplish stripping of vegetation, soil removal and regrading or other development in such a way as to minimize erosion;

(b) minimize the duration of exposure of the disturbed area;

(c) use temporary vegetation and/or mulching to protect exposed critical areas during development;

(d) install permanent (final) vegetation and mechanical erosion control measures as soon as practicable after construction ends;

(e) until a disturbed area is stabilized, trap sediment in runoff water through the use of debris basins, sediment basins, silt traps, or other acceptable methods. Provide drainageways to accommodate increased runoff resulting from modified soil and surface conditions, during and after development or disturbance.

(f) during grading operations, employ methods of dust control wherever practicable.

3.5 Fault Zones

3.5.1 Except for single-family dwellings, site all uses for human occupancy at least 50 feet away from existing fault traces unless a geologic report prepared under Section 2623 of the Alquist-Priolo Earthquake Fault Zoning Act indicates otherwise.

3.5.2 Site multi-family dwellings outside of the Maacama Fault Zone, where feasible.

3.6 Dam Inundation Areas

3.6.1 Site multi-family housing, schools and other structures accommodating large numbers of people outside the dam inundation area, where feasible.

3.6.2 Provide opportunities for lot trades for property owners with single-family lots within the dam inundation zone.

4. Maintaining a Rural Lifestyle

Brooktrails is not merely a semi-rural subdivision, but also a community within a forest setting. The Brooktrails Township attracts residents that give high priority to a semi-rural lifestyle which affords civic, entertainment and recreational opportunities. Planning for the community should reflect these priorities and encourage development and operation of the following services and amenities (See also Guideline 3.1.3). These services would reduce automobile trips on Sherwood Road and other future access roads. They would also help to sustain the Brooktrails Community if access on Sherwood Road is cut-off in the event of an earthquake, fire, or other natural disaster.

4.1 Essential Local Services

4.1.1 Basic Commercial and Health Services: Encourage development and operation of a small medical clinic and pharmacy, or the equivalent of a "doc-in-the-box". Such a facility would be developed privately, possibly in connection with a senior life center/condominium complex.

4.1.2 Repair and Maintenance Services: Encourage development and operation of a gas station and repair and maintenance service so that vehicles are not totally reliant on these services in Willits.

4.2 Civic Center/Activities

4.2.1 The community center and vicinity is the main civic gathering place in Brooktrails. Any development in this area should support use for civic services, meetings and community gatherings. Encourage use of this area for a wide range of community activities.

4.3 Entertainment

4.3.1 Encourage development of a restaurant and cafe in Brooktrails, either as part of the lodge area or within any of the commercial areas.

4.4 Recreation

4.4.1 Footpaths and Trails: Encourage yearly workdays for clearing and maintaining trails. Develop unobtrusive guideposts, signs and symbols throughout the trails network to orient users.

4.4.2 Picnic Areas and Play Areas: Maintain and refurbish picnic and play areas, as needed, so that they are inviting to residents and visitors.

4.4.3 Swimming Pond: Provide public access to key swimming areas such as Summer Lake.

4.4.4 Golf Course: Maintain the golf course so that it remains a key amenity of the community.

5. Regulating Nuisances

5.1 Dust, Fumes, Vapors, Gases and Odors

5.1.1 Emission of dust, dirt, flyash, fumes, vapors or gases which could be injurious to human health, animals, or vegetation; detrimental to the enjoyment of adjoining or nearby properties; or which could soil or stain persons or property, at any point beyond the lot line of the commercial establishment creating that emission, shall be prohibited. In addition, no land use or establishment shall be permitted to produce harmful, offensive or bothersome odors, perceptible beyond their lot lines, at ground or habitable elevation. (Particularly applicable for any home occupations involving preparation of food products). The location and vertical height of all exhaust fans, vents, chimneys, or any other sources discharging or emitting smoke, fumes, gases, vapors, odors, scents or aromas shall be shown on any required plans.

5.2 Light/Glare

5.2.1 No land use or establishment shall be permitted to produce a strong, dazzling light or reflection of that light beyond its lot lines onto neighboring properties, so as to impair the vision of the driver of any vehicle in the subdivision.

5.3 Noise

5.3.1 Develop natural sound barriers such as landscaped setbacks and berms along major roadway corridors to minimize noise impacts. Avoid the use of sound walls.

5.3.2 Excessive noise at unreasonable hours shall be required to be muffled so as not be objectionable due to intermittence, beat, frequency, shrillness or volume.

5.3.3 The maximum permissible sound pressure level of any continuous, regular or frequent source of sound produced by any activity shall be established by the time period and type of land use district listed below.

Sound from any source shall not exceed the following limits at the property line of said source:

Sound Pressure Level Limits Measured in dB(A)'s:

	7 a.m.- 10 p.m.	10 p.m. - 7 a.m.
Commercial Districts	65	55
Residential Districts	55	45

1. Where the emitting and receiving premises are in different zones, the limits governing the stricter zone shall apply to any regulated noise entering that zone.

2. The levels specified may be exceeded by 10 dB(A) for a single period, no longer than 15 minutes in any one day.

5.4 Refuse Disposal

5.4.1 Non-hazardous refuse: Property owners and tenants shall dispose or provide for the disposal of all solid and liquid wastes on a timely basis and in an environmentally safe manner.

5.4.2 Hazardous: Locate all outdoor storage facilities for fuel, chemicals, or industrial wastes and potentially harmful raw materials, on impervious pavement, and enclose completely by an impervious dike high enough to contain the total volume of liquid kept in the storage area, plus the accumulated rainfall of a 50-year storm.

Storage tanks for "home heating oil" and diesel fuel, not exceeding 275 gallons in size, may be exempted from this requirement provided that there is no seasonal high water table within 4 feet of the surface, and that rapidly permeable sandy soils are not involved.

10.2 SITE DEVELOPMENT STANDARDS

These Site Development Standards are set in consonance with the Zoning Ordinance of Mendocino County, for the purposes of:

a. Preservation of the natural appearance of the Township.
b. Protection of the physical environment.
c. Provision of erosion control practices.
d. Protection of private property.
e. Provision of public safety.
f. Mitigation of traffic hazards.

These standards are set forth with the understanding that Brooktrails Township is a community encompassing a number of differing environments and containing many parcels with unique conditions that require unique and creative design solutions. Therefore, the standards that follow are not to be interpreted as all-inclusive.

A. SITE DEVELOPMENT STANDARDS

Note: Unique site conditions on a parcel may be cause for a variance from standards 1 through 5, if adhering to those standards would create undue environmental damage and/or create unreasonable costs

and constraints on an otherwise appropriate construction project.

1) Front setback for all residential zones shall be not less than 20' deep from street frontage property lines, unless specifically permitted by the Township and by County Variance. Setbacks greater than 20' may be required to mitigate environmental or visual impact of a specific project.

   Construction front setback on lots with a slope of greater than 19 percent uphill or downhill from the street may be reduced to 15' of more clear of street paving, with the required sideyard increasing 6" for every foot of encroachment into the 20' front setback.

2) Corner lots shall have not less than 20' setbacks on both street frontage and a "back yard" outdoor area of not less than 1,000 square feet, not less than 15' deep from property line. Corner lot back yards shall be adjacent to key lot back yards.

3) Irregularly shaped lots shall have a rear yard opposite the street frontage not less than 20' deep nor less than 1,000 square feet in area.

4) No recreational vehicles or boats shall be stored within front setbacks.

5) No structures above grade other than wood decks less than 3' above grade and fences no more than 6' high, shall be built within 5' of any property line.

6) Height limits as required by County zoning are measured vertically from natural or excavated finish grade to the high point of the structure directly above.

   Height of structures on ridges shall not exceed the height of adjacent land or vegetation unless appropriate landscape screens area included with construction.

7) All residential buildings are limited to 35 five feet in height. This is interpreted to mean habitable space. Garages and storage space only may be located under a two-story home as long as height limits are not violated.

8) Each single-family and duplex residential dwelling unit shall have an enclosed general storage area other than wardrobes and closets, of not less than 40 square feet with a headroom of not less than 5'-6".

9) Exterior wall and roof materials and colors shall be selected to be harmonious with the local environment.

10) Roof surfaces facing the street or downhill slopes shall be broken into more than one plane.

11) All roofs shall be class 'A' fire-resistive assemblies.

12.1) Single-family dwellings shall contain not less than 1,000 square feet of living area.

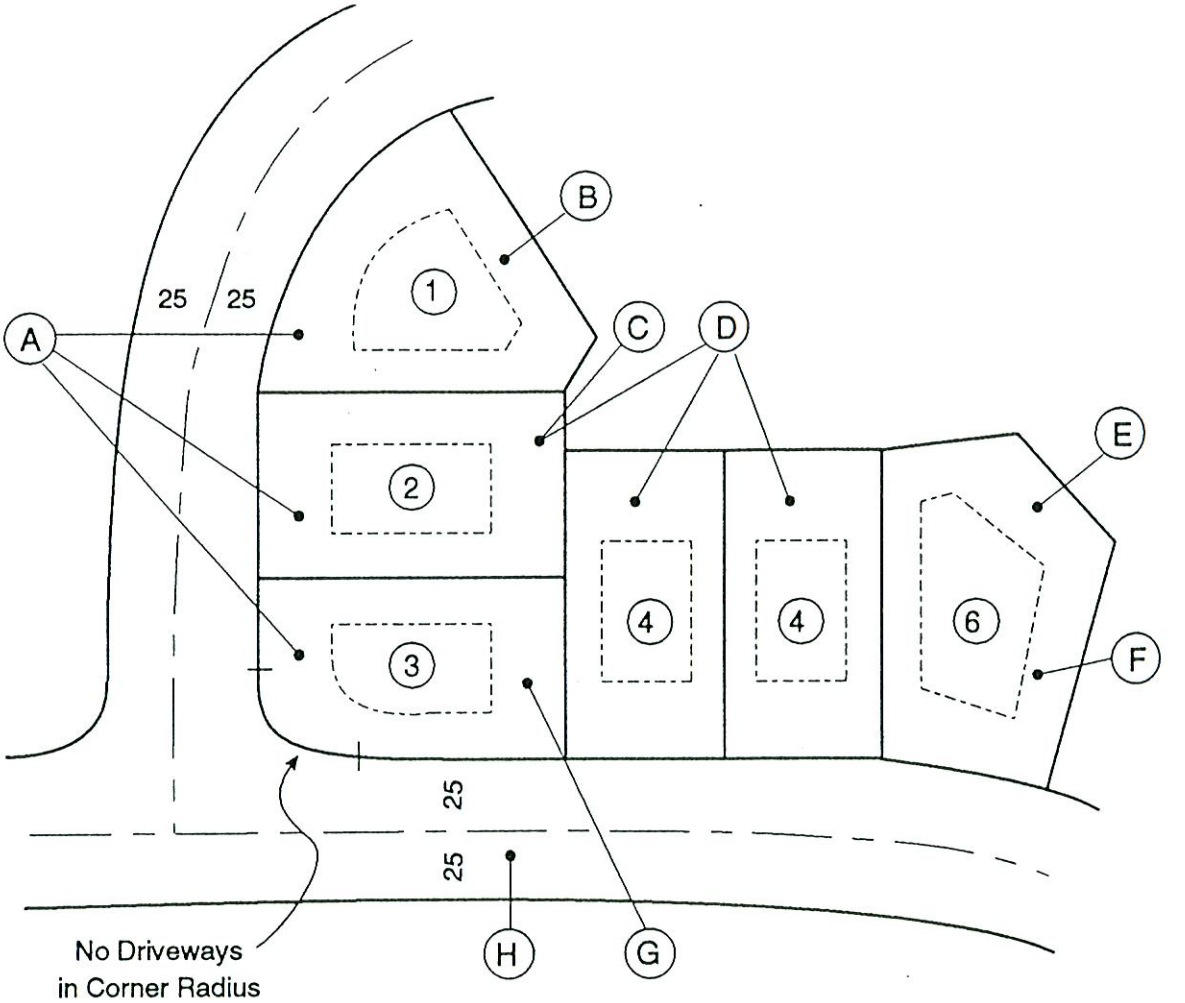
12.2) Two bedroom dwelling units shall contain not less than 800 square feet of living area.

12.3) One bedroom and studio dwelling units shall contain not less than 600 square feet of living area.

13) On no lot shall any substantial development be permitted unless it includes a primary habitable structure of not less than 1,000 square feet."

B. PARKING STANDARDS

1) All driveways and parking spaces, except for single-family dwellings with driveway slopes 10% or less, are required to be paved with approved asphaltic or portland cement concrete surfacing over not less than 4" of compacted aggregate base. Parking spaces shall have a slope of not more than 5 percent (1:20).



SETBACK STANDARDS

NOTE: Many lot configurations in Brooktrails are not illustrated here. Ask for assistance in resolving unusual conditions before starting project design

(A) All yards fronting streets have 20' setbacks.

(B) "Pie Shaped" lots shall have 1,000 square feet minimum rear yards & not less than 20' minimum

(C) Key lot adjacent to corner lot has 20' rear setback.

(D) Standard rear setback is 20' minimum.

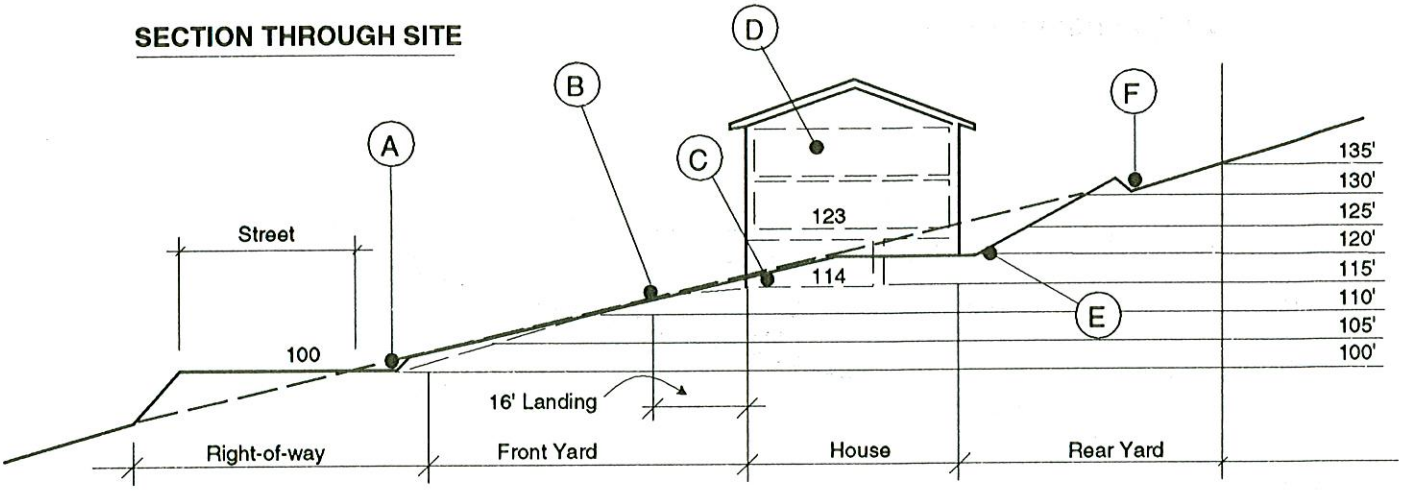
(E) Irregular lots need have only one rear yard if adjacent to green belt.

(F) All side yards must have 6' minimum setback.

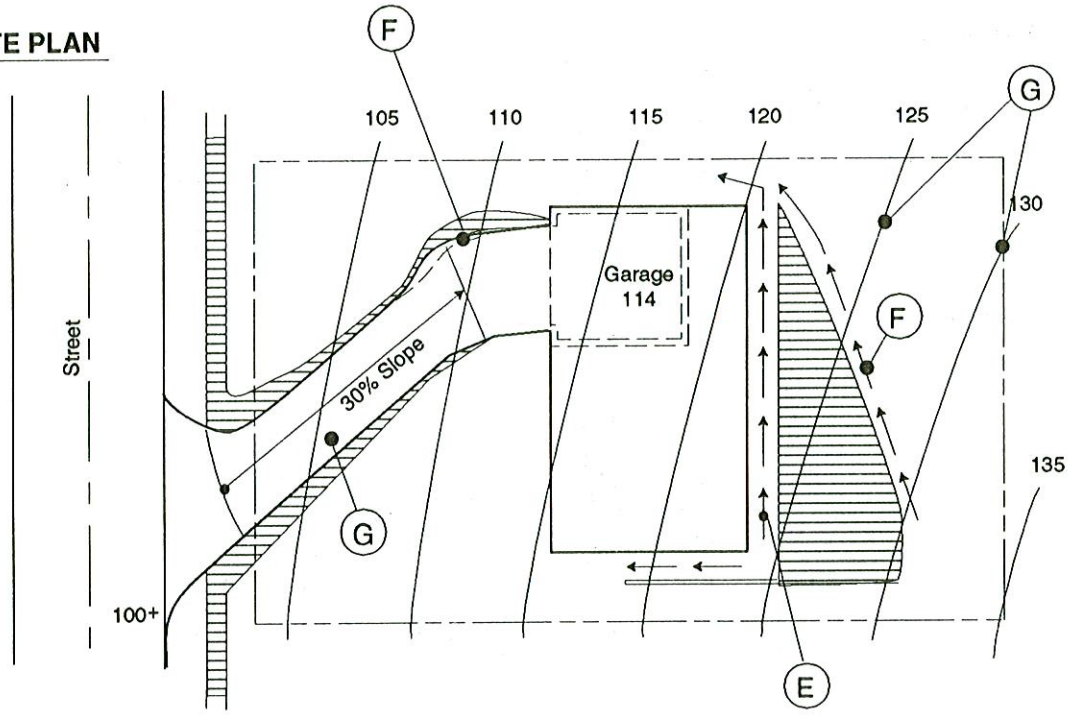
(G) Corner lots shall have 15' minimum rear setbacks aligned with key lot rear yards.

(H) In Brooktrails, cul-de-sacs have 40', streets 50', and collectors, 60' wide rights-of-way. (R.O.W.)

SECTION THROUGH SITE



SITE PLAN



(A) Bottom transition if slope exceeds 15% (1.5:10).

(B) Top transition if slope exceeds 15% (1.5:10)

(C) At 20% (2:10) slope, garage (parking) may have to be in a cut to avoid excessive driveway slope.

(D) 2-story houses with smaller "footprints" for a given size, tend to minimize earthwork and EPM's required.

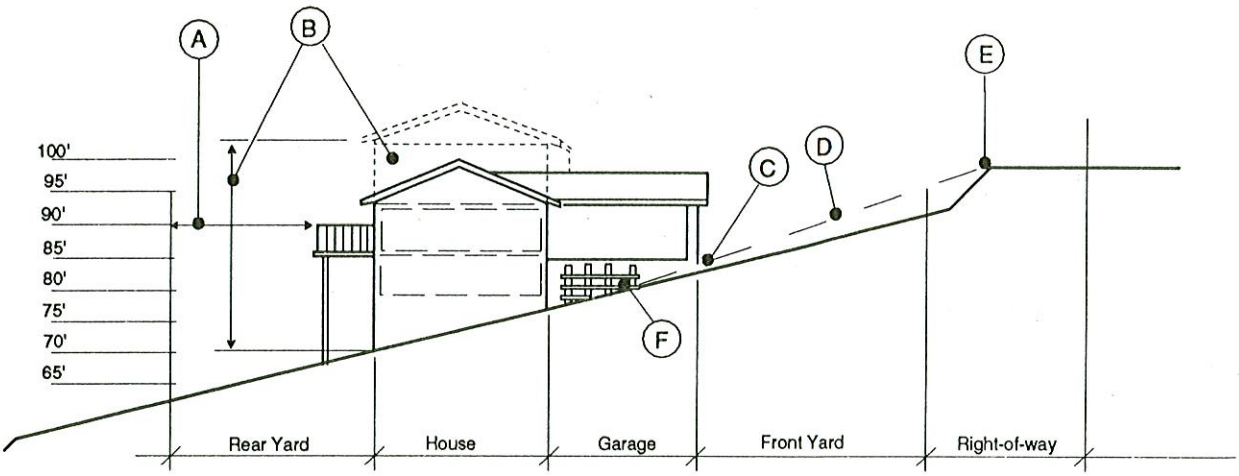
(E) Provide drainage by surface run-off, French drain or pipe from behind building.

(F) Berm & swale required at top of banks with positive run-off.

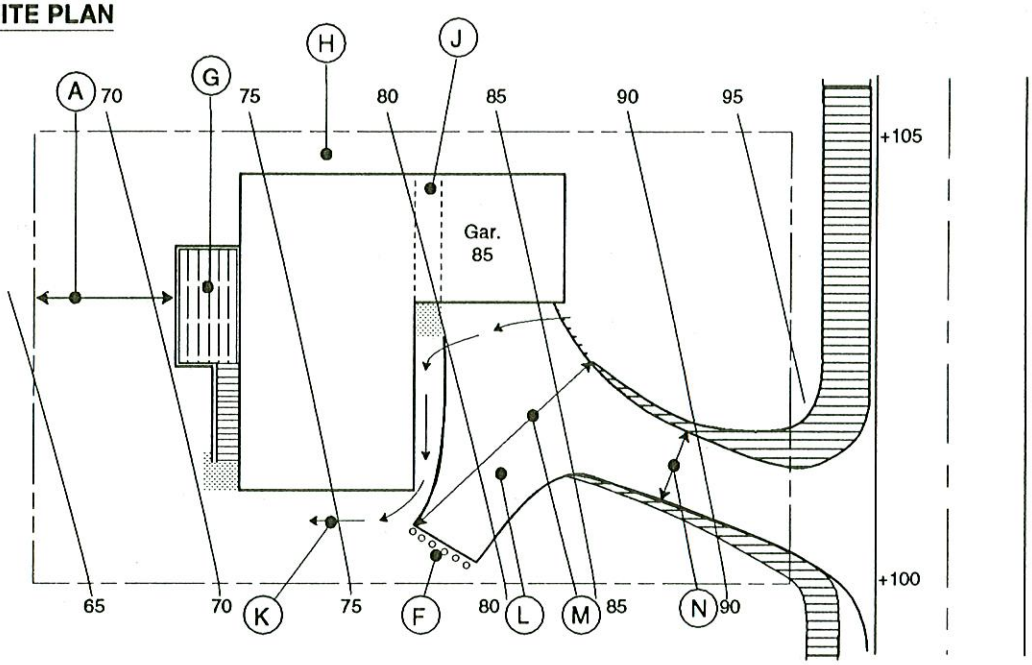
(G) Driveway parallel with contours, 12' minimum wide.

(H) 5' interval contours drawn (site has 25% slope).

SECTION THROUGH SITE



SITE PLAN



(A) 20' setback for decks 3'+ above grade.

(B) 2 stories over parking or storage is very difficult on down-slopes.

(C) Bottom transition.

(D) 30% maximum slope.

(E) Top Transition.

(F) Retaining wall with visible posts, behind turn-around

(G) Show decks, porches, fences, patios etc. on Site. Plan.

(H) 6' minimum side yard.

(J) Space in garage used for general storage.

(K) Show drainage pattern when diverted.

(L) Steep down-slope lot driveway often will require turn-around (limited visibility at street)

(M) 40' minimum turn-around.

(N) 12' minimum width.

Parking on lots of greater than 19 percent slope up or down from the street may be within the front setback, but not less than 15' from street paving.

2) Single-family residences shall have not fewer than two off-street parking spaces, with at least one space covered, located outside of the front setback, unless specifically permitted otherwise by the Township.

3) Duplexes shall have not fewer than four paved off-street parking spaces, two of which may be located in the front setback if placed parallel to the street.

4) Multiple family dwellings shall have not fewer than 1½ paved off-street parking spaces per dwelling unit, four of which may be located in the front setback if placed parallel to the street and not less than 5' behind the front property line.

5) Parking area dimensions shall be:
Open & Carport Parking:
10' wide by 18' deep (one car).
9' wide by 18' deep (more than one car).
Garage Parking:
12' wide by 20' deep (one car).
10' wide by 20' deep (more than one car).

6) Only one driveway entrance per lot, not more than 24' wide, is allowed unless specifically permitted by the Township. Single family driveways shall be not less than 12', nor more than 18' wide. On merged lots, a maximum of two driveway cuts are allowed.

7) Driveway entrances shall not be located within the radius of street intersections.

8) Driveways opening onto Sherwood Road and collector streets must allow for turnarounds to permit both entering and exiting front first, except that if 200' visibility can be demonstrated both ways, backing out is permissible except on Sherwood Road. The following streets are designated collectors for the purpose of these Standards:
a. Primrose Drive from Sherwood Drive to Tulip Drive
b. Poppy Drive from Daphne Way to Primrose Drive
c. Daphne Way
d. Goose Road
e. Birch Street
f. Brooktrails Drive

9) Driveways with a 16 percent slope (1.6:10) shall have a 16' deep level parking landing (5 percent maximum slope) in front of garages with doors and shall be wet weather surfaced.

10) Driveways with a slope of 16 percent (1:6:10) shall have an engineered profile drawn to scale showing grades, transitions and elevations at critical points, and shall have a turnaround to permit entrance <u>and</u> exit, front first.

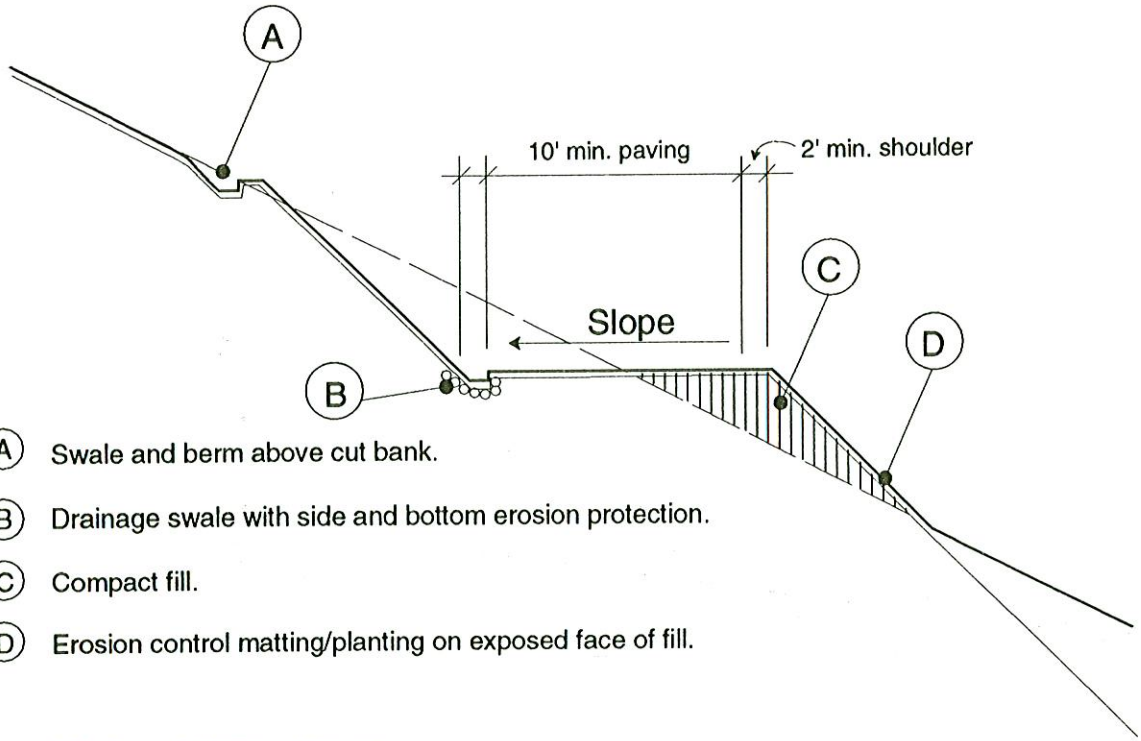
11) Driveways with any slope that exceeds 16 percent (1:6:10) are not permitted.

12) Driveway fills must be compacted to 90% relative density.

C. ENVIRONMENT PROTECTION STANDARDS

Site Planning Criteria: The moving of earth, removal of natural vegetation, alteration of drainage patterns, and construction of roads, buildings, driveways and parking areas are all potential sources of

DRIVEWAY CROSS-SECTION



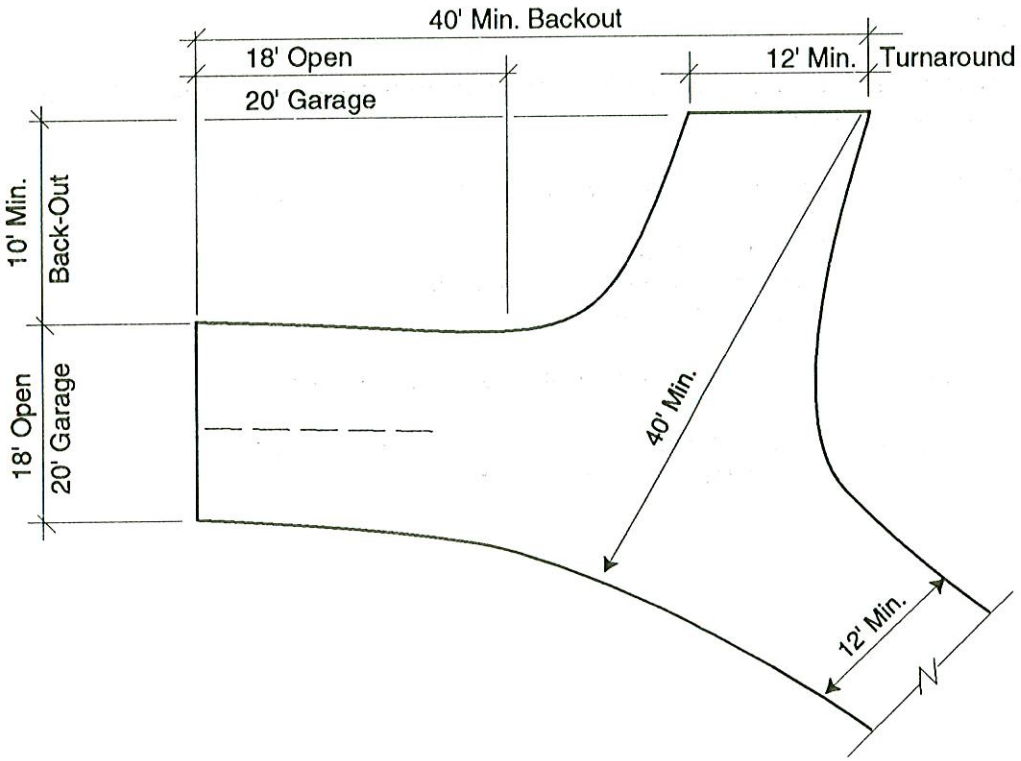
(A) Swale and berm above cut bank.

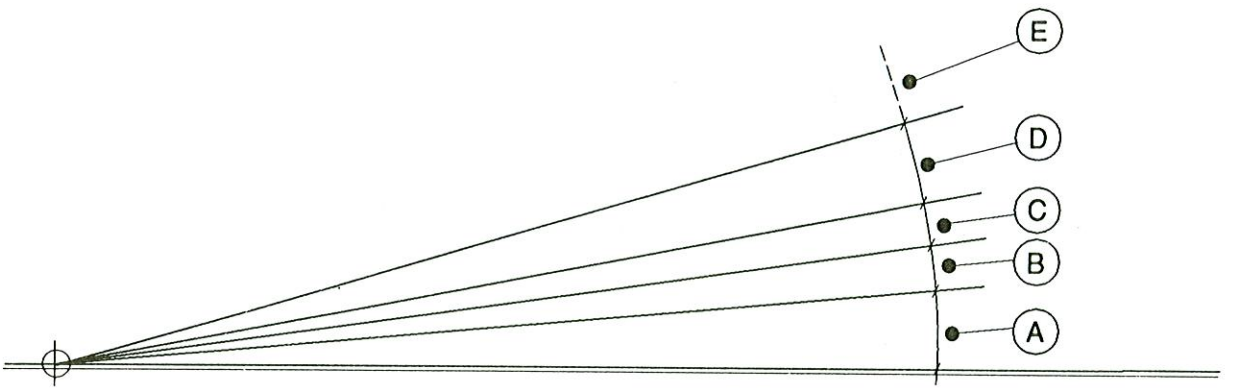
(B) Drainage swale with side and bottom erosion protection.

(C) Compact fill.

(D) Erosion control matting/planting on exposed face of fill.

CAR PARKING/TURNAROUND



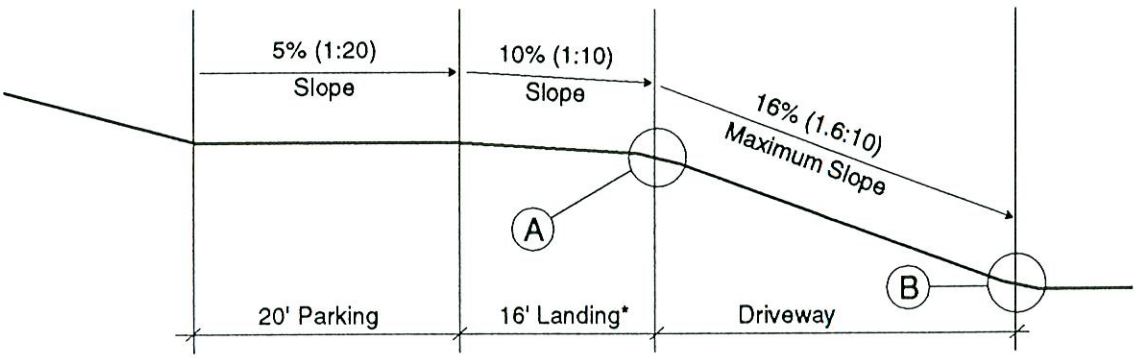


NOTES:

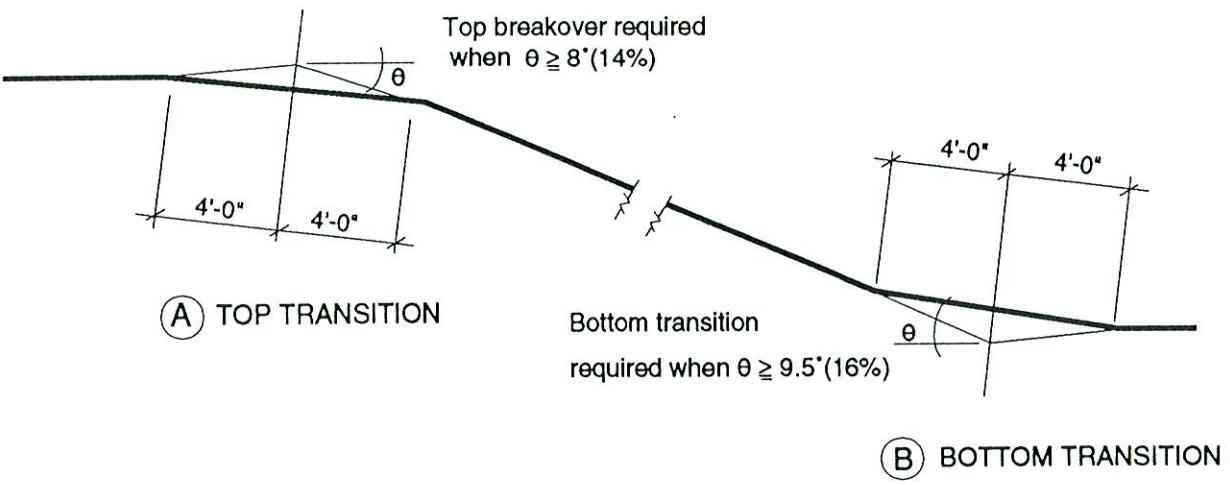
Slope is measured along center line of driveway (or center line of critical path of travel at two-lane driveways).

(A)	0 - 10% :	Paving required except for single-family dwellings.
(B)	0 - 15%:	Pave all driveways. Landing required in front of garage. Drainage design required.
(C)	15 - 20%:	Transitions required at street and parking area.
(D)	20- 25%:	Engineer's design of driveway and drainage required. Driveway turn-around required.
(E)	25%+:	Slope is not permitted.

DRIVEWAY SECTION (PROFILE)



*16' Landing is only required in front of enclosed garages.



damage to the environment that must be addressed and resolved during the planning process for a construction project in Brooktrails Township. In order to minimize environmental damage from a given project, the site planning process must 1) locate and identify salient physical features of the site, 2) design and locate project elements to fit the site, and 3) incorporate environment protection measures where necessary to protect the soil and vegetation and to minimize erosion.

All of the above elements must be incorporated on the project site plan, accompanied by structural details and a description of construction materials where necessary. The following list is a guide for specifics to be included on the site plan.

Site Plan Elements:

1. Physical Site Features
   a. For all lots with a slope of 1:10 (10 percent) or greater, show 2' interval contours. For slopes greater than 2:10 (20 percent), use 5' interval contours.
   b. Show property lines, paved roads, power poles and existing drainage collection devices and conduits on and adjacent to the site.
   c. Show all trees with greater than 6" diameter, indicate size and type and identify all trees to be removed.
   d. Show rock outcroppings and existing cut or fill areas on site.

2. Proposed Construction
   a. Locate and dimension all structures, showing distances to property lines and finish elevation of the lowest floor (see Part A.).
   b. Locate and dimension driveways, parking areas and turnarounds, including finish surface materials and slopes (see Part B.).
   c. Show excavation, grading, cut and fill required by 2a and 2b, including:
      1) Finish grades of building/park areas.
      2) Height and slope of cut and fill banks (2:1 slope maximum unless otherwise designed by a professional engineer).
      3) Alterations to drainage patterns necessitated by 1) and 2) above.
   d. Locate and describe proposed fences, decks, patios, fuel tanks, antennas, flagpoles, etc., including heights and finish material.

3. Environment Protection Measures (EPMs):
   a. Fit the project to the site in order to minimize reshaping of the land and disturbance of the environment. After the physical features of the site have been identified, locate the proposed development in order to minimize land disturbance.
      1) Minimize earth movement. Fit development to the terrain. Minimize cuts and fills. "Balance" cut and fill wherever possible.
      2) Minimize impervious coverage. Make paved areas, such as, driveways and parking pads, as small as possible, consistent with other design requirements.
      3) Avoid steep slopes. Confine construction activities to the least critical parts of the site. Once these are disturbed by construction, the resulting erosion may be very difficult to stop. In addition, any construction activities on steep slopes will require the installation of costly EPMs.
      4) Align roads and driveways along slope contours. Locate driveways parallel to slope contours rather than up and down slope. Runoff down long or steep driveways tends to channelize flows and can cut deep gullies along the driveway.
      5) Retain the natural drainage system. Avoid confining any natural drainage system by placing it in a buried culvert or forcing it to a new location on site.

Accommodate all drainages entering the site, whether natural or established by man.

b. Locate and describe, on the site plan, EPMs required by construction:
   1) Prepare (rock) driveway immediately after grading and use as sole access to site during construction.
   2) Protect trees to be saved from damage during earth-moving and construction. Allow no cut or fill dirt within 5' of trunk.
   3) Provide run-off barriers and drainage devices to protect cut and fill banks.
   4) Provide erosion/sediment control systems for drainageways along driveways and around cut and fill banks. Driveway cut slopes exceeding five feet in depth that are steeper than 2 horizontal to 1 vertical shall be hydromulched for erosion control or otherwise stabilized and protected per item 5) below to the satisfaction of the district Architect.
   5) Provide soil stabilization (mulch, ground cover) for exposed earth.
   6) Provide earth retaining devices where needed to retain cut or fill, or to save trees.
   7) Where drainage patterns have been altered, show method of redirecting drainage to streets or natural swales.

ENVIRONMENT PROTECTION MEASURES (EPMs)

The following is a compilation of EPMs that may be used to meet the environment protection standards listed above. They are divided into three sections:

1. Retaining structures.
2. Drainage systems.
3. Erosion protection.

EPMs proposed on-site plans may be referred to without further details, except that structural sections and details must be provided for retaining structures.

1. Retaining Structures

   Retaining structures are walls, etc., built to prevent mass movement of earth at overly steep slopes and erosion of drainage-way banks. Their use can permit grading of level areas on sloping land with the least disturbance to surroundings; and by eliminating exposed banks, can reduce the need for diversion of natural drainage and construction of expensive erosion control measures.

   There are many types of retaining structures, including:
   a. Cantilever (reinforced concrete or masonry) walls.
   b. Crib walls.
   c. Gravity walls.
   d. Wood walls.
   e. Gabions.

   Cantilever walls, designed by an engineer, can be effective applications, but are expensive and monolithic in appearance. Their use in Brooktrails is not encouraged except as a part of building structures or where conditions dictate.

   Crib walls are usually made of pressure-treated wood or (more expensive) pre-cast concrete. They are three dimensional frameworks that are most effective when retaining fill.

   Gravity walls are stone or rip-rap structures constructed without reinforcing that retain