



VILLAGE OF NEW PALTZ

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Ulster County, New York

# Landscape Guidelines

LANDSCAPE GUIDELINES FOR THE  
**Village of New Paltz**

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Prepared for:  
Village of New Paltz Board of Trustees

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## 1. Introduction

**L**andscaping provides many unique services and values to a community. Vegetation recycles air and water, absorbs pollution, buffers noise, and provides shade, air-cooling and windbreak protection. It also helps control flooding and erosion of topsoil, and provides habitat for birds and other wildlife species in urban and suburban environments. Good landscaping buffers incompatible uses, enhances property values and beautifies the community.

The purpose of this publication is to provide landscape guidelines to assist property owners, developers, design professionals and the Planning and Zoning boards in the development and review of applications. However, this publication is not intended to be rigid in its requirements to the point of preventing innovative, aesthetically pleasing landscaping. The listed guidelines may be varied if, in the judgment of the Planning Board, the quality of plantings and site improvements proposed constitute a substantial improvement over the minimum standards listed herein.

The Landscape Guidelines apply to all Zoning districts in the Village and will be used by the Village in the review of Subdivisions, Site Plan and Special Use Permit approvals, as well as Historic Certificates of Appropriateness. Ideally, applicants and their consultants will read these Guidelines and incorporate its suggestions into their development projects. When applications conform to the Guidelines, it can be assumed that proposed landscaping will be generally acceptable to the reviewing board. Since the Guidelines provide numerous tips for creating effective, easily maintained landscaping, they are a good resource for all property owners in the Village.

### **Good Landscaping:**

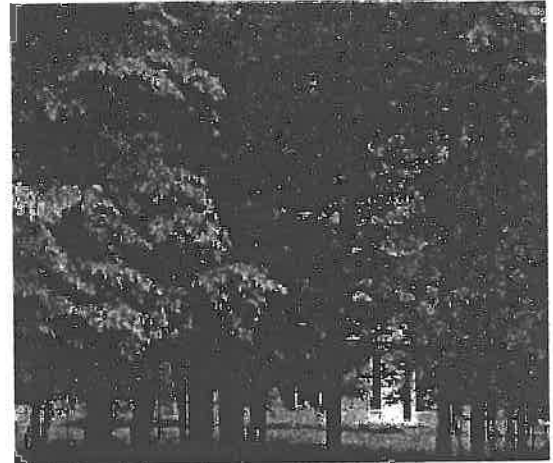
- softens the edges of buildings
- screens undesirable places
- breaks northern winds and provides shade
- makes large buildings appear smaller and more human scale
- creates places for social gathering
- buffers against noise pollution
- helps reduce soil erosion by stabilizing soil and reducing storm water runoff
- provides wildlife habitat
- maintains and increases property values

## 2. Landscape Guidelines

### A. EXISTING VEGETATION

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Existing vegetation should be preserved to the greatest extent possible by minimizing clearing and grading in new developments. Removal of existing vegetation alters the appearance of the landscape, which takes years to recreate through replacement plantings. Existing mature vegetation provides numerous environmental benefits such as providing shade, reducing soil erosion, absorbing stormwater runoff, and protecting wildlife habitats. Preserving existing vegetation also helps to screen



Preserving existing vegetation offers environmental and economic benefits and helps to screen new development.

new development. Mature trees in particular make an important contribution to the character of a site and the Village. Studies have shown that a parcel of land with trees is worth about 13 percent more to buyers than a similar lot that has no trees. These benefits are lost when existing vegetation is removed and merely replaced with small trees.

#### Guidelines

- ✓ Preserve mature plant species, hedgerows, woodlots, and other natural areas to the extent reasonable and feasible, and include them as a design element in the landscape plan.
- ✓ Preserve existing vegetation along the road frontage to the greatest extent feasible in primarily undeveloped areas. Limit clearing and grading along the road frontage to the minimum necessary for safety, access and sight distance.
- ✓ Make every effort to protect existing trees over four inches (4") in diameter at breast height. Note trees to be saved on the landscape plan, and outline appropriate measures to protect the tree stock from damage during construction, as recommended in publications such as the NY State Department of Environmental Conservation's (DEC) *Reducing the*

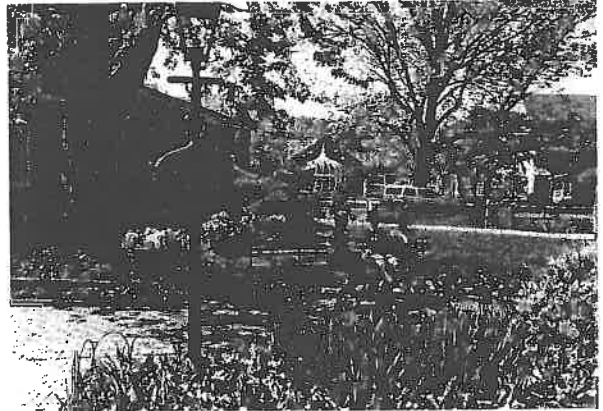
## LANDSCAPE GUIDELINES

*Impacts of Stormwater Runoff from New Development.* Flag trees to be protected prior to construction and define a tree's drip line to avoid any disturbance near the tree's root system. The Village's Tree Regulations, found in § 7.21 through 7.28 of the Village Code, must be consulted before removal of any trees.

### B. SITE LANDSCAPING

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New development should be landscaped to provide visual interest in all four seasons by including deciduous trees, conifers, perennials and bulbs. Landscape plans that are limited to deciduous trees and shrubs leave a barren winter landscape that fails to screen the development from the roadway and from neighboring properties. The landscaping of a site should blend in with the prevailing scale, appearance and neighboring uses, or should effectively screen the development from its neighbors, as appropriate. Landscaping should complement and enhance the buildings, rather than screen unappealing architecture.



Landscaping should provide visual interest in all four seasons and should complement the buildings. This site also promotes social interaction by providing a bench where visitors can sit and enjoy the garden.

#### Guidelines

- ✓ Devote a minimum of 50 percent of the required open space of the site to landscaping, unless a portion of that area is devoted to open space or public spaces, as described below.
- ✓ Include appropriate plants in the landscaping plan to provide an attractive visual landscape throughout the year.
- ✓ Use a variety of tree species to provide visual interest and to protect against same species die-out or disease.
- ✓ Plant new landscaping in clusters using varied plant material to create a natural appearance.
- ✓ The use of native plant materials is strongly recommended as a means to reduce maintenance. Native species are tolerant of Southeastern New

## LANDSCAPE GUIDELINES

York's climate, are generally disease resistant, do not create unusual maintenance problems, and are readily available from local nurseries.

- ✓ The use of non-native invasive species should generally be avoided. Consult Appendix A for a list of invasive plants to be avoided.
- ✓ Carefully consider site conditions when selecting species. Trees and vegetation that are not sited properly will inevitably be short-lived.
- ✓ Design landscaping to maximize energy conservation. Plant deciduous trees to shade southern and southwestern exposures during the summer, and plant evergreens on northerly and northwesterly exposures to help break cold, northerly winds in the winter.
- ✓ Berms, if used, should emulate natural landforms of local terrain, and should be as wide as the mature branch spread of the tree species planted on them.
- ✓ Deciduous trees should have a minimum caliper of two and one-half inches (2½) with three inches (3") preferred. Evergreens should have a minimum height of six feet (6') at time of planting with eight feet (8') preferred.
- ✓ Small flowering trees should have a minimum caliper of one inch (1") at time of planting.

### C. OPEN SPACE AND PUBLIC SPACES

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Open space can provide a social and leisurely setting for shopping activities, which can help to bring in more customers. To achieve this benefit, on-site open space should be arranged so that it works as part of an open space network rather than only as a percentage of lot size. Where appropriate, natural open space can be linked to the on-site landscaping plan by using native species and low maintenance plants as much as possible.

Public open spaces, such as pedestrian plazas and landscaped courtyards, provide additional points of interest within a pedestrian scaled environment. When equipped with street furniture, they also offer an opportunity to rest and relax. Examples of public spaces can include parks, plazas, arcades and



## LANDSCAPE GUIDELINES

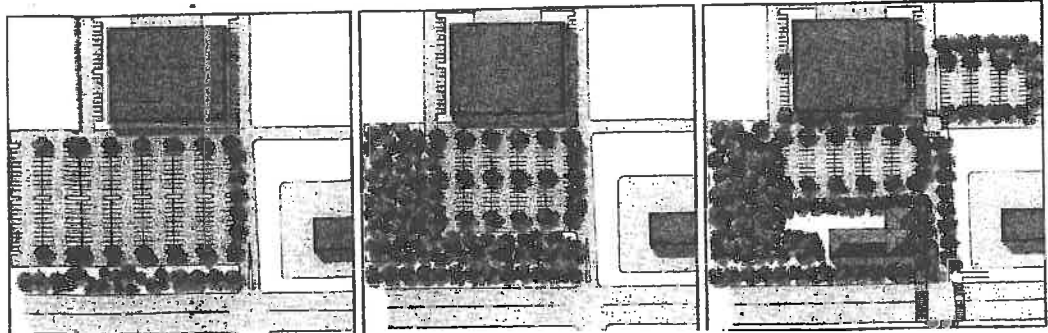
porches. Pedestrian amenities, such as lighting, special paving, plantings, flower gardens, artwork and special recreational features, can also enhance public spaces.

### Guidelines

- ✓ Establish open space on the site so it is connected to surrounding natural areas or existing landscaping patterns on adjacent properties. The open space system might include the potential for future greenways and trails and for protection of important natural areas.
- ✓ Establish public open spaces with pedestrian amenities to encourage social interaction, as part of the landscape plan.

### D. LANDSCAPING PARKING LOTS

Parking lots should be landscaped to facilitate movement of traffic, break up large areas of impervious surfaces, provide shade, buffer and screen adjacent properties, and promote a safe environment with a pleasant appearance. Using trees and landscaping materials to clearly delineate and buffer off-street vehicular use areas will promote vehicular and pedestrian safety. The following requirements apply to all off-street parking areas containing three or more parking spaces.



This proposal provides more parking spaces than are required and, without landscaping the interior, creates the effect of a "sea of asphalt."

Reducing the amount of parking and providing additional landscaping around the perimeter and within the lot creates a safer and more attractive environment.

Breaking up the parking into two "groves" further mitigates the visual impact of the lot.

### Guidelines

- ✓ Reduce visual impacts by breaking up large parking lots into smaller parking groves or courts, with a significant number of shade trees surrounded by low hedges, stonewalls, or attractive fencing. Avoid more than 15 parking spaces in a continuous row and more than 60 spaces in any single parking area defined by landscaping.



## LANDSCAPE GUIDELINES

- ✓ To reduce the visual impact of the parking lot, provide an eight-foot (8') wide landscape strip around the perimeter of the lot, planted with shade trees and low shrubs. Provide a minimum of one shade tree every 40 feet of lot perimeter but not necessarily at 40 feet on-center. In the judgment of the Planning Board, additional shade trees may be necessary to effectively shade/screen the parking lot.
- ✓ Use existing woodlands, if located on the site, by preserving as much as possible along the perimeter of the lot. Provide additional evergreen shrubs if needed.
- ✓ For parking lots with 8 to 20 spaces, landscape and maintain at least five (5) percent of the surface area with trees, shrubs and other plant materials, as determined by the Planning Board. For parking lots over 20 spaces, landscape and maintain at least fifteen (15) percent of the surface area. Do not include perimeter planting provided for beautification and/or screening requirements in the calculations. Existing natural landscaping can count as part of the requirement.
- ✓ In all parking lots providing eight or more off-street parking spaces, plant a minimum of one canopy tree having a caliper of at least two and one-half inches (2½) with three inches (3") preferred and ten shrubs for each eight (8) parking spaces and any additional portion thereof. Plant these trees in median dividers, landscape islands or such other locations as may be determined by the Planning Board to relieve the monotonous expanse of asphalt and provide shade for parked vehicles. Plant grass or ground cover on all portions of these landscaped areas not occupied by other landscape material. Protect trees and shrubs with raised curbs, and do not pave within 12.5 feet of the center of the tree.
- ✓ When a parking lot is located adjacent to a public right-of-way, provide a landscape strip between the parking lot and the right-of-way. The landscape strip should be at least eight feet (8') in width, and should not include any paved area except a five-foot (5') wide pedestrian sidewalk or trail that crosses the landscape strip. Use one of the following



Diamond shaped tree islands, such as those used at Woodbury Commons, provide additional shade trees without losing a single parking space.

## LANDSCAPE GUIDELINES

treatments on the landscape strip to screen the parking lot from the public right-of-way:

- 1) A masonry wall, solid fence, berm or hedge maintained at least three feet (3') in height above grade. The Planning Board may require that walls or fences be softened with plant materials such as vines and shrubs.
- 2) At least one tree for each 25 linear feet of landscape strip, interplanted with a hedge maintained at least three feet (3') in height above grade.

In the Limited Business (B-1), Core Business (B-2) and Gateway (G) Zoning districts, buffer any off-street parking space or parking lot that abuts a sidewalk with a landscaped area no less than four feet wide in which is located a continuous row of shrubs no less than 3 feet (3') high, or a wall or fence no less than four feet (4') high and no more than 6 feet (6') high, in addition to the required shade trees.

- ✓ Buffer all off-street parking areas containing three or more parking spaces from adjacent residential districts or uses with a ten foot (10') wide planting strip generously planted with evergreens of sufficient height and width to effectively screen the parking area from the adjacent use during all seasons.
- ✓ Use landscaping to delineate vehicular and pedestrian patterns. Clear and legible signs, different color and texture paving materials, raised or inverted areas, and other techniques should be used to further direct the flow of both vehicular and pedestrian traffic within the lot.

### E. BUFFERING

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Landscaping can be used to create boundaries and transitions between neighborhoods and areas of differing development intensities as well as to separate areas of incompatible land use. Certain land uses require more parking, storage of raw materials, traffic or are visually incompatible with other land uses. Well designed landscape treatments lessen the adverse visual impacts between different types of land uses, reduce noise levels, mitigate effects from fumes, and increase privacy levels. Landscape buffers can take a variety of forms, including open space separation, buffer plantings of various heights and widths, berms and fences. When residential uses are adjacent to commercial uses, they should be separated by a buffer that protects residential activities while providing pleasant visual experiences when viewed from the public right-of-way.

## LANDSCAPE GUIDELINES

### Guidelines

- ✓ Provide at least a thirty-foot (30') wide landscape buffer between an industrial use and any residential use or district.\*
- ✓ Provide a twenty foot (20') wide landscape buffer between a commercial use in the B-3 District and any residential use or district, and between a multi-family residential development and a single-family residential use or district.\*
- ✓ Provide a ten foot (10') wide landscape buffer between a commercial use in the B-1, B-2, and Gateway Districts and any residential use or district, and between an office use and any residential use or district.\*
- ✓ Buffers should be opaque, consisting of any one or a combination of the following to a minimum height of six feet (6'):
  - Berm
  - Fence
  - Masonry wall
  - Vegetation screen
- ✓ Include a variety of local species that have low maintenance requirements. Their appearance should be natural, and clustering is preferred over planting in rows.

### F. SCREENING

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Screening eliminates or reduces the visual impacts of outdoor storage and loading areas, refuse facilities and mechanical equipment. The following are the screening guidelines.

### Guidelines

- ✓ Screen all outdoor storage and loading areas from residential districts or uses and from view of any public right-of-way with a berm, wall, fence and/or plant materials as follows:
  - Screening should be a minimum of six feet (6') high.
  - Walls or fences should be solid or visually impervious and made of natural materials such as masonry or wood. The Planning Board should avoid approval of any chain link and razor wire fences unless absolutely necessary due to unusual security needs.

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\* The Planning Board may require a wider landscape buffer on a case-by-case basis.

## LANDSCAPE GUIDELINES

- Plant materials, if used alone, should be evergreen and should be at least three feet (3') wide.
- The Planning Board may require that walls or fences be softened with plant materials such as vines and shrubs.
- Screening should be of a length to screen the maximum size trailer that can be accommodated on site.
- ✓ Screen all refuse facilities and mechanical equipment from all adjoining uses and from view of any public right-of-way with a solid wall or fence and/or plant materials as follows:
  - Screening should be no less than the height of the facilities or equipment.
  - Plant materials, if used alone, should be evergreen.
  - Roof-mounted mechanical equipment should be set back from the building façade so as not to be seen from any public right-of-way, or should be completely screened by building parapets.

## G. STREET TREES

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Trees planted along the Village's main streets are perhaps the single most effective physical addition to make sidewalks more welcoming and more walkable. Street trees provide shade, and they have the added benefit of helping to slow traffic by narrowing the field of vision. Street trees should be placed close to the road and to each other to create a park-like canopy. They should be located between the sidewalk and curb to form a protective row that makes pedestrians feel safely separated from traffic.

### Street trees:

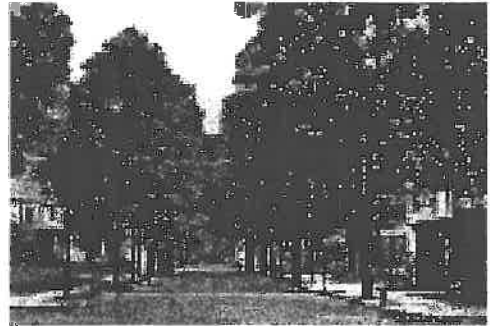
- provide shade to lower summer temperatures
- give a sense of protection from traffic for walkers along the sidewalk or road
- visually unify varied architecture, parking lots and setbacks along streets
- help slow down traffic by narrowing the field of vision
- increase adjacent residential property values by an average of 5 to 10 percent

### Guidelines

- ✓ Street trees should be planted for all developments that are subject to subdivision or site plan review.

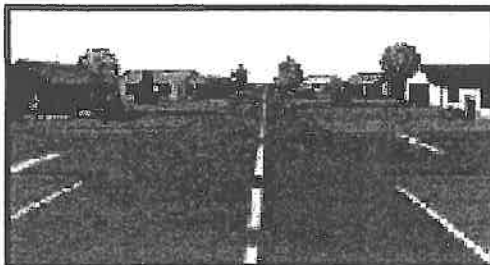
## LANDSCAPE GUIDELINES

- ✓ Provide street trees along each side of all streets, public or private, existing or proposed, but not including alleys. In locations where healthy and mature shade trees currently exist, the requirements for new trees may be waived or modified.



Plant street trees in planting strips between the street curb and the sidewalk to protect pedestrians from traffic.

- ✓ Plant street trees in planting strips located between the street curb and the sidewalk, or in sidewalk tree wells located between the street curb and the sidewalk on streets without planting strips.



Residential streets with large setbacks and no street trees look so wide that they induce higher speeds.



Narrower residential streets lined with trees provide a pedestrian scale and sense of enclosure to help slow traffic.

- ✓ Street trees should be species with broad canopies, should have a minimum caliper of two and one-half (2½") inches and preferably three inches (3") measured at chest height at time of planting, and should be spaced a maximum of twenty-five to thirty feet (25-30') on center, with exact spacing to be evaluated on a site-specific basis.
- ✓ No more than 40 percent of the street trees should be of one species. The particular species of trees should be determined upon specific locational requirements. Species should be selected to cast moderate to dense shade in summer, survive more than 60 years, have a mature height of at least 50 feet, be tolerant of pollution, heat, and salt, require little maintenance by being mechanically strong (not brittle), and be insect and disease resistant. Care should be taken to avoid species that suffer limb drop and splitting, heavy fruit or nut crops, invasive root systems, or allergen production. In the Limited Business (B-1), Core Business (B-2), Highway Business (B-3), and Gateway (G) Districts, the street treescape should consist of deciduous species that branch above eight feet (8') to facilitate viewing of storefronts and signage.

## LANDSCAPE GUIDELINES

Good choices that are known to be suitable in Southeastern New York State include:

- |  |  |
|--|--|
| <input type="checkbox"/> Acer Truncatum        | <input type="checkbox"/> Red Oak                   |
| <input type="checkbox"/> Gingko (males only)   | <input type="checkbox"/> Regent Scholartree        |
| <input type="checkbox"/> Green Ash             | <input type="checkbox"/> Scarlet Oak               |
| <input type="checkbox"/> Hackberry             | <input type="checkbox"/> Sweetgum                  |
| <input type="checkbox"/> Hawthorne (thornless) | <input type="checkbox"/> Thornless Honey<br>Locust |
| <input type="checkbox"/> Hedge Maple           | <input type="checkbox"/> Trident Maple             |
| <input type="checkbox"/> Hickory               | <input type="checkbox"/> Tuliptree                 |
| <input type="checkbox"/> Little-leaf Linden    | <input type="checkbox"/> Village Green Zelkova     |
| <input type="checkbox"/> London Plane Tree     |  |
| <input type="checkbox"/> Pin Oak               |  |

- ✓ Street trees should be grown to at least American Nursery Association Standards, should be balled and burlap or crated nursery stock, and should be irrigated and fertilized for a minimum of two years after installation. Any tree that dies within two years of planting, or any tree that is removed should be replaced with the same species and size.

## H. DRAINAGE AND EROSION CONTROL

The design of drainage features, such as catch basins, swales and collection ponds, should be treated as elements of the site's landscape plan and modeled upon the characteristics of naturally occurring ponds and streams found in the Village. Too often, the size and shape of drainage basins create the look of a large hole that bears no resemblance to the environment around them and effectively scars the landscape. Drainage features should be designed to look natural, with extensive landscaping and/or fencing placed around them.



A stormwater management pond is hidden behind dwellings and landscaped to appear as if it is part of the natural setting.

### Guidelines

- ✓ Treat drainage features as an element of the site's landscape plan and model them on the characteristics of naturally occurring ponds and streams.

## PLAN SUBMISSION

- ✓ Ensure that drainage features have extensive landscaping and/or fencing around them.
- ✓ Use native plant materials suited to pond and stream bank environments to control erosion and create a natural appearance.

### I. FENCES AND WALLS

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Fences and walls can be an attractive way to provide privacy and aesthetics and to promote security.

#### Guidelines

- ✓ Fences and walls should be no higher than six feet (6') in height, as measured from the lowest grade at the base of the fence or wall, except that retaining walls and terraced walls may exceed six feet when permitted as part of a site plan review, or as necessary to construct streets and sidewalks.
- ✓ Fences and walls within a front yard setback should not exceed four feet (4') (except decorative arbors, gates, etc.), as measured from the grade closest to the street right-of-way.
- ✓ Fences and walls should be made of natural materials such as masonry or wood. Chain link and razor wire fences are inappropriate under nearly all circumstances.

### J. MAINTENANCE

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Maintenance of landscape plantings should be ongoing throughout the life of the development. The selection of native plantings and the consideration of siting conditions will greatly reduce maintenance requirements.

#### Guidelines

- ✓ Maintain all plant material in a healthy, growing condition at all times. The property owner is responsible for regular weeding, watering, fertilizing, pruning, mowing, and other maintenance of all plantings as needed.
- ✓ Appropriately treat plant materials that exhibit evidence of insect pests, disease, and/or damage. Whenever necessary, remove dead or diseased plant materials and replace them with living plant materials to ensure continued compliance with applicable landscaping, buffering and screening requirements.

## PLAN SUBMISSION

- ✓ Permanently maintain all required fences and walls in good condition and, whenever necessary, repair or replace them.
- ✓ The property owner of land abutting a constructed public right-of-way is responsible for landscaping and maintenance of any right-of-way area between his or her property line and the curb line, with the exception of trees, which must be maintained by the Village.
- ✓ Keep all landscaped areas free of refuse, debris and weeds.
- ✓ All plantings should be subject to periodic inspections by local agents and maintenance may be subject to a performance bond by the Planning Board as a condition of approval.



### 3. Plan Submission

#### A. SUBMISSION STANDARDS

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A landscape plan should be prepared for all development proposals that require Subdivision, Site Plan, or Special Use Permit approval. The plan should be drawn to a scale that clearly and accurately shows all existing and proposed plant material, and should contain the following information:

1. The location, species and size of all existing trees over four inches (4") in diameter at breast height.
2. All existing vegetation to be removed, retained or relocated.
3. The location and quantities of all new stock, with a table, keyed to plant locations on the plan, including names (common and botanical), container or caliper sizes, heights, and spacing at installation. The planting size of deciduous trees should be indicated in minimum inches of caliper measured at breast height. The planting size of evergreen trees should be indicated in minimum feet of height above ground. The planting size for shrubs, vines and groundcovers should be indicated in the minimum container size in inches or gallons, as appropriate. The manner in which any lawn areas are to be established (e.g., by sodding or seeding) should be indicated.
4. The location and description of other landscape improvements, such as earth berms, walls, fences, screens, sculptures, fountains, street furniture, lights, and courts or paved areas. The heights and materials of walls and fences should be specified. Berms should be delineated by one-foot contours.
5. A description of how existing healthy trees, proposed to be retained, will be protected from damage during construction.
6. For a development or project that is greater than two acres in size, the signature and seal of the architect or landscape architect responsible for preparing the plan.

**PLAN SUBMISSION**

**C. ASSURANCES**

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1. A Certificate of Occupancy will not be issued until the Village Building Department has determined that the landscaping has been installed according to the approved Site Plan. When, because of adverse weather conditions, compliance with all or part of the approved Plan would be impractical, the Building Inspector may issue a temporary Certificate of Occupancy, not to exceed 180 days, to allow compliance with the Plan.
2. The Village may require the developer to provide a performance and maintenance bond in an amount determined by the Village Engineer to ensure the planting of landscape materials and care during the first two years after planting.

## Appendix A ❖

### Invasive Exotics of the Eastern Forest

- Trees**
- Acer ginnala - Amur maple
  - Acer japonicum - Japanese red maple
  - Acer platanoides - Sycamore maple
  - Acer pseudoplatanus - Norway maple
  - Ailanthus altissima - Tree-of-Heaven
  - Alnus glutinosa - black alder
  - Broussonetia papyrifera - paper mulberry
  - Koeleria paniculata - golden rain tree
  - Melia azedarach - chinaberry
  - Morus alba - white mulberry
  - Paulownia tomentosa - princess paulownia
  - Phellodendron amurense - Amur cork tree
  - Quercus acutissima - sawtooth oak
  - Populus alba - white poplar
  - Ulmus pumila - Siberian elm
  - Sapium sebiferum - Chinese tallow tree
- Shrubs or smaller trees**
- Albizia julibrissin - mimosa
  - Berberis japonica - Japanese barberry
  - Berberis thunbergii - Japanese barberry
  - Berberis vulgaris - common barberry
  - Cytisus scoparius - Scotch broom
  - Eleagnus angustifolia - Russian olive
  - Eleagnus pungens - thorny eleagnus
  - Eleagnus umbellata - autumn olive
  - Euonymus alatus - winged wahoo
  - Hibiscus syriacus - shrub althea
  - Ligustrum obrusifolium - blunt leaved privet
  - Ligustrum sinense - Chinese privet
  - Lonicera maackii - Amur honeysuckle
  - Lonicera morrowi - Morrow honeysuckle
  - Lonicera morrowi x tatarica - Bell's honeysuckle
- Vines and ground covers**
- Akebia quinata - fiveleaf akebia
  - Ampelopsis brevipedunculata - porcelain berry
  - Celastrus orbiculatus - oriental bittersweet
  - Hedera helix - English ivy
  - Humulus japonica - hops
  - Euonymus fortunei - winter creeper
  - Lonicera japonica - Japanese honeysuckle
  - Polygonum aubertii - silver fleece vine
  - Pueraria lobata - kudzu
  - Solanum dulcamara - bittersweet nightshade
  - Vinca minor - periwinkle
  - Wisteria floribunda - wisteria
  - Wisteria sinensis - Chinese wisteria
- Annuals**
- Amaranthus hybridus - pigweed
  - Arthraxon hispidus - jointed grass
  - Bidens polylepis - beggar tick
  - Cardiospermum halicababum - balloon vine
  - Carduus acanthoides - curled thistle
  - Chenopodium album - lamb's quarters
  - Commelina communis - common day flower
  - Digitaria sanguinalis - crab grass
  - Fagopyrum sagittatum - buckwheat
  - Ipomoea coccinea - red morning glory
- Biennials**
- Alliaria petiolata - garlic mustard
  - Arctium minus - burdock
  - Arctium nemorosum - woodland burdock
  - Carduus nutans - nodding thistle
  - Centraurea maculosa - spotted knapweed
  - Cirsium vulgare - bull thistle
  - Conium maculatum - water hemlock
  - Daucus carota - Queen Anne's Lace
  - Dipsacus laciniatus - cut-leaf teasel
  - Dipsacus sylvestris - common teasel
  - Mellilotus alba - white sweet clover
  - Mellilotus officinalis - yellow sweet clover
  - Pastinaca sativa - wild Parsnip
  - Verbascum thapsus - flannel leaved mullein
- Perennial herbs**
- Ipoxeia hederacea - ivy leaved morning glory
  - Ipomoea purpurea - common morning glory
  - Lactuca scariola - prickly lettuce
  - Lapsana communis - nipplewort
  - Lepidium campestre - field cress
  - Lepidium virginicum - pepper grass
  - Microstegium vineum - stilt grass
  - Perilla frutescens - beefsteak plant
  - Polygonum caespitosum - smartweed
  - Polygonum perfoliatum - mile a minute
  - Polygonum persicaria - lady's thumb
  - Raphanus raphanistrum - jointed charlock
  - Senna obtusifolia - sicklepod
  - Setaria faberi - giant nodding foxtail
  - Setaria pumila - yellow foxtail
  - Stellaria media - chickweed
  - Sonchus arvensis - sow thistle
  - Xanthium strumarium - cocklebur

### Herbaceous Perennials

*Achillea millefolium* - yarrow  
*Aegopodium podagraria* - goutweed  
*Agrostis capillaris* - Rhode Island bent grass  
*Agrostis gigantea* - red top  
*Ajuga reptans* - bugleweed  
*Allium vineale* - wild onion  
*Arrhenatherum elatius* - oatgrass  
***Artemisia vulgaris* - mugwort**  
*Arundonax* - giant reed  
*Bromus inermis* - smooth brome  
*Carex kobomugi* - asiatic sand sedge  
*Centaurea jacea* - brown knap weed  
*Centaurea nigrescens* - knapweed  
*Cichorium intybus* - chicory  
*Cirsium arvense* - Canada thistle  
*Convolvulus arvensis* - field bindweed  
*Coreopsis lanceolata* - tickseed  
*Coronilla varia* - Crown vetch  
*Cynodon dactylon* - Bermuda grass  
*Dactylis glomerata* - orchard grass  
*Dioscorea batatas* - Chinese yam  
*Elytigia repens* - quackgrass  
*Epllobium hirsutum* - hairy willow herb  
*Eragrostis curvula* - weeping lovegrass  
*Euphorbia cyparissias* - Cypress spurge  
*Euphorbia esula* - leafy spurge  
*Festuca arundinacea* - tall fescue  
*Festuca elatior* - fescue  
*Festuca ovina* - sheep fescue  
*Foeniculum vulgare* - fennel  
*Galium mollugo* - field madder  
*Glechoma hederacea* - ground ivy  
*Holcus lanatus* - velvet grass  
*Humulus japonica* - hops  
*Hypericum perforatum* - St. John's wort  
*Imperata cylindrica* - cogon grass  
*Iris pseudacorus* - yellow iris  
*Lespedeza cuneata* - Chinese Lespedeza  
*Linaria vulgaris* - butter and eggs  
*Lotus corniculatus* - birdsfoot trefoil

*Lysimachia nummularia* - moneywort  
*Lythrum salicaria* - purple loosestrife  
*Lythrum virgatum* - purple loosestrife  
*Miscanthus sinensis* - miscanthus  
*Phalaris arundinacea* - reed canary grass  
*Phleum pratense* - timothy  
*Plantago lanceolata* - narrow leave plantain  
*Plantago major* - broad-leaved plantain  
*Poa compressa* - Canada bluegrass  
***Poa trivialis* - rough bluegrass**  
*Ranunculus ficaria* - lesser celandine  
*Reynoutria japonica* - Japanese knotweed  
*Rumex acetosella* - sheep sorrel  
*Rumex crispus* - curly dock  
*Rumex obtusifolia* - broad leaved dock  
*Sorghum halepense* - Johnson grass  
*Urtica dioica* - stinging nettle  
*Vinca minor* - Periwinkle

### Aquatics

*Alternanthera philoxeroides* - alligator weed  
*Butomus umbellatus* - flowering rush  
*Cabomba caroliniana* - fanwort  
*Eichhornia crassipes* - water hyacinth  
*Egeria densa* - Brazilian water weed  
*Hydrilla verticillata* - hydrilla  
*Hydrocharis morus-ranae* - european frogbit  
*Myriophyllum aquaticum* - parrot's feather  
*Myriophyllum spicatum* - european water milfoil  
*Nasturtium officinale* - watercress  
*Trapa natans* - water chestnut

❖ The list of "Invasive Exotics of the Eastern Forest" is taken from Appendix E of the Hunterdon County [NJ] Planning Board's publication entitled *Preserving Community Character in Hunterdon County: A Community Design Handbook*. The list was compiled by