



III. LANDSCAPE

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INTRODUCTION

Landscaping should be an integral part of all site plan developments. Trees, shrubs, and other landscape elements can be used to accentuate buildings, create a sense of identity, reduce the amount of impervious surfaces, and provide human scale. Applicants should carefully evaluate the physical characteristics of each site and their own maintenance abilities when making the final selection to ensure that the plantings will survive and achieve maturity in their selected location.

LUDC Reference. These Guidelines are intended to supplement, illustrate, and amplify the Landscaping Standards of the Kittery Land Use & Development Code (LUDC). The provisions of the Code vary from district to district. Check the applicable section of the Code for specific requirements.

Landscaping Goals

- Incorporated appropriate plantings that are in scale with their surroundings.
- Separate roadways from commercial development by attractive landscape planter strips.
- Incorporate plantings in parking lots to add aesthetic value, reduce their scale, provide canopy shade, reduce radiant heat from the surface, reduce headlight glare, and add seasonal interest.
- Preserve mature trees and other significant landscape features which help define the character of the community.
- Provide screening for less attractive parts of a site or incompatible land uses.
- Help define areas where pedestrians are safely separated from the road.
- Reinforce wayfinding by emphasizing entrances and circulation patterns.
- Manage invasive species using ecologically sound practices.



Landscaping is an integral part of site development. With proper planning, trees, shrubs, and other plantings can provide shade, emphasize entrances, screen undesirable views, and add yearlong color and interest.

OBJECTIVES

Kittery should be characterized by a rich variety of landscape materials that enhance human scale, complement the architecture, reinforce circulation paths, highlight entrances, provide canopy shade, and add seasonal interest.

DESIGN GUIDELINES

Landscape Plans should be prepared by a landscape architect registered in Maine, or other qualified professional familiar with local growing conditions. The plan should be accompanied by a simple narrative that describes the design intent, the plantings and other landscape features, maintenance, tree protection, and other relevant features of the plan.



A well-coordinated low-maintenance landscape that provides an attractive commercial setting.

Coordination with Site Features. The landscape plan should show all utilities, signage, lighting, and other site features that may influence the selection or location of plantings. The plan should be designed to avoid conflicts (both at the time of planting and in the future) between plantings and other site elements.



Smaller shrubs should have been used in front of this bank to avoid conflicts with the driveway. The tree on the left side of the walk may eventually block the view of the sign..

Safety. The selection of plant materials should consider public health and safety. Plants to be avoided include those with poisonous fruits, large thorns, or invasive growth patterns. The ultimate form and height of plantings as they mature should be considered so they will not create unsafe conditions or block sight lines for pedestrians, bicyclists, or motorists.



A mature shrub next to a driveway could cause problems with visibility for cars exiting the driveway.

Rocks. Large rocks should be used very sparingly as landscape elements and only as accents in mass plantings. Rocks should not be used as substitutions for shrubs. Where used, they should be buried for at least half of their depth.



Rocks may not be used in lieu of plantings.

These rocks define the edge of the driveway and keep cars off the grass. While they have been buried properly, some plantings would soften their angular edges.



While rocks keep cars out of the planter strip they do not provide the visual interest or texture of well-designed plantings.

Variety. Plant materials should exhibit some seasonal color and interesting texture to create a distinctive, yet low maintenance environment. Landscape plans should strike a balance between monoculture (the use of a single species) and excessive variety. A list of approved plant materials is included on pages 13 and 14.

Minimum Plant Sizes. Plant materials should meet the following minimum sizes at planting:

Street Trees	2 1/2 inch caliper
Ornamental Trees	2 inch caliper
Evergreen Trees	5-7 foot height
Deciduous Shrubs	30 inch height
Evergreen Shrubs	18 inch ht./spread
Perennials	2 year clumps
Ornamental Grasses	2 year clumps
Ground Covers	3 inch pots

The measurement for deciduous trees (caliper) is taken at a point 4 inches above ground level.

Irrigation. Underground irrigation is encouraged in front setbacks, public spaces, and other highly visible areas. It should be designed to prevent overflow or flooding onto walkways or parking lots.



Trees and shrubs should be at least the minimum size to be effective and withstand the rigors of a commercial site.



The entrance to this medical building is reinforced by properly sized plantings that provide seasonal interest.

Planting Design. Planting design should stress simplicity in form and limit the number of species. Plantings should be massed to soften edges, corners, and pavement areas, and to integrate the building into the landscape.



Effective landscape plans often incorporate hardy perennials as a groundcover to complement the architecture.

Invasive Plant Species. Plant species that are considered invasive or potentially invasive in Maine should not be used in the landscape. The Landscape Plan should indicate how existing invasive species present on the site will be dealt with, using Best Management Practices. The following species are among those considered invasive in Kittery:

Shrubs

Berberis thunbergii	Japanese Barberry
Elaeagnus angustifolia	Russian Olive
Elaeagnus umbellata	Autumn Olive
Euonymus alatus	Winged Euonymus
Ligustrum sp.	Privet
Lonicera japonica	Japanese Honeysuckle
Lonicera morrowii	Bush Honeysuckle
Lonicera tatarica	Tatarian Honeysuckle
Rhamnus cathartica	Common Buckthorn
Rhamnus frangula	Glossy Buckthorn
Rosa multiflora	Multiflora rose

Trees

Acer ginnala	Amur Maple
Acer platanoides	Norway Maple

Vines and Perennials

Celastrus orbiculata	Oriental Bittersweet
Fallopia japonica	Japanese Knotweed
Lythrum salicaria	Purple Loosestrife
Phragmites australis	Common Reed

Guarantee Period. All lawns and plant materials must be guaranteed by the landscape contractor for a period of not fewer than two years. The developer shall submit a copy of a guarantee and a contract with the landscape contractor, indicating the terms of the guarantee period, or may obtain a letter of credit.

Resources. The following sources are recommended for additional information on the planting and care of trees:

American Standard for Nursery Stock: ANSI
www.anla.org/applications/ Documents/Docs/
ANLStandard2004.pdf

Architectural Graphic Standards. Planting
Details, James Urban, ASLA. pp. 178-182. 1998.

Principles and Practice of Planting Trees and Shrubs. International Society of Arboriculture. 1997.

Trees in the Urban Landscape. Site Assessment, Design, and Installation. Peter J. Trowbridge and Nina L. Bassuk. John Wiley & Sons. 2004.



Plantings have been used to create outdoor use areas and increase the attractiveness of this commercial building.

OBJECTIVES

Mature trees along Kittery's roads are an important element of community character. They provide significant wildlife habitat, year-round visual interest, and comfort to pedestrians. Where practical, existing mature and specimen trees should be preserved during development. Preserving large existing trees within the planter strip will decrease the number of new trees required.

DESIGN GUIDELINES

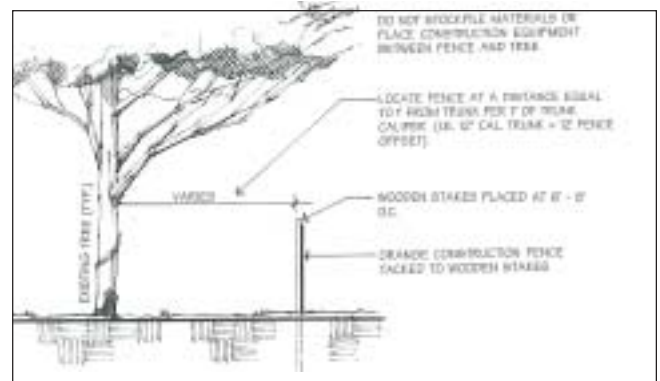
Existing Trees/Plants. The preservation of existing or unique trees or other significant plantings must be considered during the initial site inventory and development of the sketch plan. The landscape plan should illustrate which vegetation will be preserved and what protection measures will be taken during construction. Transplanting and reusing trees and other plantings is strongly encouraged. See the LUDC requirements for Streetside Trees and Open Space Standards.



These mature evergreens were carefully saved during the development of this shopping area. The trees add historic character, visual interest, and shade.

Tree Protection. The landscape plan should show how existing trees will be protected during construction. As a general rule, no construction activity should be allowed within the drip line (outer edge of tree canopy) during construction. This includes grading, compaction, utility installation, stockpiling of construction material, or movement of vehicles.

Temporary Measures. Barricades in the form of snow fencing or similar materials should be installed during construction to protect trees and their root zones. The radius of the protection fencing in feet should be at least the diameter of the tree in inches (i.e., a 12-inch diameter tree would require a fence with a radius of 12 feet.)



Professional Assistance. In the case of specimen or unusually large trees, the Planning Board may require a report from a Maine licensed arborist that describes the procedures that will be used to protect the tree during and following construction.

Tree Walls/Wells. Where grading is required near trees to be preserved, properly designed tree wells or walls may be used to ensure the long-term health of the tree. Such structural systems should be designed by a landscape architect or other qualified professional.

Grade Changes. Tree roots are at or near the surface. Grading within the drip line in excess of a few inches should be avoided since it may cause irreparable damage to the root system and cause the tree to die.



The retaining wall (l) was used to minimize grading that could have harmed the adjacent trees. The tree well (r) should have extended out to the drip line to protect the root system near the surface.

OBJECTIVES

Commercial development must be separated from the adjacent roads by landscaped planter strips. These areas must be designed to screen parking areas, separate land uses, and visually unify Kittery's commercial districts. See the LUDC for specific planter strip requirements.

DESIGN GUIDELINES

Ground Covers. Appropriate groundcovers include turf grass, ornamental grasses, perennials, low-growing evergreens and flowering shrubs. Planting other than turf grass must be spaced close enough to achieve full coverage within 3 years after installation. Stone, bark mulch, or other similar inert material must not be used as a substitute for vegetated ground-cover.



Bark mulch, stone, or other inert material should not be used as a groundcover in planter strips.



Planter strips should be fully vegetated with turf grass (above) or other living plant material.



Wildflowers can be an effective groundcover if properly installed and maintained.



Ornamental grasses used as an effective groundcover to emphasize their texture and color.

Mulch may be used directly under plantings to preserve soil moisture. However, it should not be used as the primary groundcover. Where used it should consist of dark, decomposed shredded bark, with no piece less than 4 inches in any dimension.

Plant Masses. Shrubs, perennials, annuals, and ornamental grasses used in planter strips should be installed in masses or 'drifts' that emphasize colors, forms, and textures. The use of excessive numbers of different species as well as individual specimens should be avoided.

Streetside Trees. The required trees within planter strips may be installed in a linear fashion or informal groupings. Linear plantings may be appropriate along roadways to create a boulevard effect, using large spreading deciduous trees to define the edge of the travelway, provide shade for pedestrians, and add scale to commercial corridors. Informal groupings may be appropriate in areas where existing vegetation has already established a particular rhythm and pattern to the streetscape.

Roadside Plantings. Trees must be planted a minimum of 5 feet from the edge of the roadway, driveways, and parking areas. Trees and other landscaping planted at intersections must preserve a clear area within a sight triangle as required in Chapter 16.32.540.

Parking Lots must be separated from the street by plantings, earth berms, walls, and/or other landscape elements to minimize headlight glare and the view of vehicles, while still allowing the public to see the building.



Combination of berm and plantings to effectively screen a parking lot.



Planter strips should contain streetside trees. Credit is given for preserving existing trees.



To be effective, vegetation in planter strips should be tall enough to screen parking lots.



Informal groupings of trees are more commonly seen in Kittery, relating well to existing trees adjacent to roadways.



Linear grouping of trees can be used to create a boulevard effect.

OBJECTIVES

Landscaping in parking lots can be used to improve its appearance, reduce the scale and amount of paved areas, define edges, provide shade, reduce headlight glare, and add seasonal interest.

DESIGN GUIDELINES

Trees in Parking Lots. Parking lots with 10 or more spaces must have at least one tree per eight spaces, planted in or within five feet of the lot. At least 10% of the interior area of any parking lot with 25 or more spaces must be landscaped (Chapter 16.32.560.C). Larger and more visible parking lots should have more intensive landscape treatments.

Undesirable Plant Materials. High-maintenance trees that may damage automobiles with dripping sap, messy fruit, or hard seeds should not be used in or around parking lots.

Location of Trees. Trees in parking lots should be planted in informal groups, straight rows, or irregular groupings as space permits, or concentrated in certain areas. Trees should be planted a minimum of five feet from the end of parking lot islands.

Safety. Trees in parking lots or those that abut walkways should be pruned to at least eight feet above the paved surface to avoid becoming an obstacle. Shrubs and ornamental plantings in parking lot islands should not exceed 3 feet in height to avoid blocking visibility.

Parking Stall Separation. Landscaped areas that separate rows of parking stalls should be a minimum of nine feet in width.

Snow Storage. Landscape materials surrounding parking lots and in islands should be able to tolerate large quantities of snow stored during winter months. Delicate plant material should not be used in areas where they are likely to be damaged by snow.



Trees in these parking lots have been given an adequate amount of room for their root systems to grow. The lower branches have been pruned above eye height. Planting trees in groups provides more effective shade than individual plantings.



Grass or other living groundcover is preferred in parking lot islands to counteract the heat island effect.



Tall shrubs in parking lots can block visibility and present a safety hazard. Their location also interferes with snow removal.



Ornamental trees lead the eye to the entrance of this outlet mall. Shrub masses and/or berms should have been used in addition to screen the parking lot.



Perennials can be an effective way to add color and visual interest to parking lots.



This island adds visual interest to the parking lot and can withstand harsh winter conditions.



Parking lot islands provide an opportunity to use a variety of plant species to break up the mass of pavement and introduce interesting textures.

OBJECTIVES

Trees are used throughout Kittery – planted within the right of way, near buildings, and in parking lots. Trees should be sited to achieve full maturity and display their natural form. Planting plans should emphasize large shade trees within or near the right-of-ways in order to create a more unified streetscape.

DESIGN GUIDELINES

Suitability. Trees should be resistant to insect infestation, drought, disease, roadside salt, and auto emissions. All plant material must be suitable to Kittery's growing conditions. A list of street trees for Kittery is included in the **Approved Plant Materials List**, pp. 13 and 14.

Coordination with Architecture. Trees should be carefully selected and located to complement the building elevation without blocking storefronts, signs, or lighting.



White birches add contrast to the building and cast a light shadow on this outdoor use area.



Trees should be planted at least five feet from curblines to protect them from plow damage. More perennials should have been used to achieve a mass effect.

Planting Locations. Trees should be planted in locations where their root development and branching patterns will not interfere with window displays, signage, underground or overhead utilities, streets, and sidewalks.

Pedestrian Movement. The lower branches of trees planted near pathways and sidewalks should be at least eight feet above the pavement to minimize interference with pedestrian movement throughout the year.



These trees have been pruned to 8 feet above the parking lot walkway to minimize interference at eye level for both drivers and pedestrians.

OBJECTIVES

A variety of shrubs and ornamental plantings should be used throughout the community to add seasonal color, provide visual interest, help define spaces, screen undesirable elements, and emphasize circulation routes.

DESIGN GUIDELINES

Variety in Plantings. The use of flowering shrubs, evergreen shrubs, perennials, annuals, vines, ornamental grasses, and other plant material is highly recommended, in addition to street trees, evergreen trees, and ornamental trees. A list of plantings suitable for Kittery is provided at the end of this chapter. See **Approved Plant Materials List**, pp. 13 and 14.

Selection. The selection of plantings should consider ultimate height and spread, maintenance, pest and disease tolerance and their nuisance potential (severe thorns, excessive leaf litter, etc.).

Foundation & Wall Plantings. Planting beds are recommended along exposed building edges, foundations and uninterrupted walls. Plantings should be installed a minimum of 18 inches from the wall to allow proper root zone development. Plantings should provide either a formal pattern or a naturalistic blend of heights, colors, and textures for visual relief.



A simple bed of flowering shrubs makes an effective, low-maintenance foundation planting.

Accent Plantings. The installation of special planting beds is encouraged in appropriate areas for visual accents in the landscape. These may include daylily beds, butterfly gardens, bog gardens, fragrant gardens, shade gardens, yellow foliage gardens, early blooming gardens, texture gardens, etc.



Small areas of accent plantings can add color, texture, and visual interest to the landscape.



Ornamental grasses and low shrubs can provide a cost-effective, low-maintenance way to add year-round texture.

OBJECTIVES

Landscape plans should anticipate 3-8 years for shrubs to achieve maturity, and 15-20+ years for trees. Proper maintenance must be provided to assure that the landscaping achieves its proper form and full height. Maintenance of all landscape elements should be considered in the development of the Site Plan.

DESIGN GUIDELINES



Maintenance Plan.

A written maintenance plan should be provided as a supplement to the Landscape Plan for all landscape elements installed on the property. The maintenance plan

should include (but not be limited to) initial installation, guarantee period, replacement policy, periodic and seasonal maintenance, use of pesticides and fertilizers, irrigation, seasonal displays, and special considerations.

Natural Forms. All plant material should be allowed to achieve their natural forms without excessive pruning. Shaping shrubs into tight geometrical forms should be avoided.



Parking lots can present particular problems for maintenance, with plantings exposed to salt, snow plows, piles of snow, and errant vehicles.

Low Maintenance Materials. The use of plant materials and landscape elements that require a low degree of maintenance is strongly encouraged. Planting characteristics to be considered include: drought resistance (except where irrigated), tolerance to auto emissions, disease and insect resistance, lack of thorns that could trap debris, and relatively light leaf litter for ease of fall cleanups.

Replacement Planting. If plant materials specified do not survive or are damaged, they must be replaced in accordance with the two-year performance guarantee to maintain conformance with the approved planting plan and to provide the necessary landscape effect.



Dead, dying, or diseased plantings should be removed and replaced within the growing season to maintain a unified, attractive appearance throughout the landscape.



Tight planting pockets and installation too close to buildings may put stress on trees and present a problem when removing dead materials..

OBJECTIVES

The plants on this list have been derived from a number of sources to inspire a greater landscape variety in Kittery. The final selection of materials must consider the specific growing requirements and characteristics of each plant and the conditions present within the site.

Plants that are tolerant to road salt are italicized.

STREET TREES

<i>Aesculus hippocastanum</i>	<i>Baumanii</i>	Horsechestnut
Acer x. freemanii		Autumn Blaze Maple
Acer rubrum		Red Maple
Acer saccharum		Sugar Maple
Betula nigra		River Birch
Cercidiphyllum japon.		Katsura Tree
Cladrastis lutea		Yellowwood
Fagus grandifolia		American Beech
<i>Fraxinus americana</i>		<i>White Ash: 'Aut. Purp'</i> <i>'Aut. Applause'</i>
Fraxinus pennsylvanica		Green Ash
<i>Ginkgo biloba</i>		<i>Maidenhair Tree (m)</i>
<i>Gleditsia triacanthos</i>		<i>Thornless Honey Locust</i>
Prunus maackii		Amur Chokecherry
Pyrus calleryana		Callery Pear
Quercus alba		White Oak
Quercus bicolor		Swamp White Oak
Quercus coccinea		Scarlet Oak
Quercus palustris		Pin Oak
Quercus robur		Upright English Oak
<i>Quercus rubra</i>		<i>Red Oak</i>
Quercus shumardi		Shumard Red Oak
Sophora japonica		Regent Scholartree
Tilia americana		American Linden
Tilia cordata		Littleleaf Linden
Tilia tomentosa		Silver Linden
Ulmus americana		Princeton American Elm; Frontier Elm
Zelkova serrata		Greenvase Zelkova

ORNAMENTAL TREES

Aesculus carnea	Red Horsechestnut
Amelanchier canadensis	Serviceberry
Carpinus betulus	European Hornbeam
Carpinus caroliniana	American Hornbeam
Celtis occidentalis	Hackberry
Cornus kousa	Kousa Dogwood
Cornus mas	Cornelian Cherry

Crataegus crusgalli inermis 'cruzam'	Cockspur Hawthorne
Crataegus viridis	Winter King Hawthorn
Magnolia loebneri	Loebner Magnolia
Magnolia stellata	Star Magnolia
Malus species	Crabapple
Nyssa sylvatica	Tupelo
Ostrya virginiana	Ironwood
Phellodendron arboreum	Amur Corktree
Prunus sargentii	Sargent Cherry
Sorbus alnifolia	Korean Mountain Ash
Sorbus americana	American Mt. Ash
<i>Syringa reticulata</i>	<i>Japanese Tree Lilac</i>



Trees, shrubs, and perennial groundcover used to create a highly unified, inviting streetscape.

EVERGREEN TREES

Abies balsamea	Balsam Fir
Abies concolor	White Fir
Abies fraseri	Fraser Fir
Chamaecyparis thyoides	Atlantic White Cedar
Juniperus virginiana	Eastern Red Cedar
Larix dedicua	European Larch
Larix laricina	American Larch
Picea abies	Norway Spruce
Picea glauca	White Spruce
Picea omorika	Serbian Spruce
Picea pungens	Colorado Spruce
<i>Pinus nigra</i>	<i>Austrian Pine</i>
Pinus resinosa	Red/Norway Pine
Pinus strobus	Eastern White Pine
Thuja occidentalis	American Arborvitae
Tsuga canadensis	Canadian Hemlock
Tsuga caroliniana	Carolina Hemlock

FLOWERING SHRUBS

Arctostaphylos uva-ursi	Bearberry
Aronia arbutifolia	Red Chokeberry
Aronia melanocarpa	Black Chokeberry
Azalea species	Azalea species
Clethra alnifolia	Sweetpepper Bush
Cotinus coggygria	Common Smoketree
Cotoneaster adpressa	Creeping Cotoneaster
Cotoneaster divaricatus	Spreading Cotoneaster
Cotoneaster horizontalis	Rockspray Cotoneaster
Enkianthus campanulat.	Redveined Enkianthus
Forsythia 'Sunrise'	Sunrise Forsythia
Fothergilla species	Fothergilla species
Hamamelis virginiana	Witchhazel
Hydrangea paniculata	Panicle Hydrangea
Ilex glabra	Inkberry
Ilex verticillata	Winterberry
Kalmia latifolia	Mountain Laurel
Lindera benzoin	Spicebush
Myrica pennsylvanica	Bayberry
Potentilla fruticosa	Bush Cinquefoil
Prunus maritima	Beach Plum
Rhododendron species	Rhododendron species
Rosa rugosa	Beach Rose
Rhus aromatica	Fragrant Sumac
Rhus typhina	Staghorn Sumac
Spirea species	Spirea species
Vaccinium corymbosum	Highbush Blueberry
Viburnum prunifolium	Blackhaw Viburnum
Viburnum sargentii	Sargent Viburnum
Viburnum trilobum	Amer. Cranberrybush
Xanthorhiza simplicissima	Yellowroot



Flowering shrubs and perennials are an attractive way to edge a parking lot and soften the building.

PERENNIALS

Asclepias purpurescens	Purple Milkweed
Achillea millefolium	Yarrow
Aquilegia spp.	Columbine
Aster novae-angliae	New England Aster
Astilbe species	Astilbe
Cimicifuga racemosa	Bugbane
Coreopsis verticillata	Moonbeam Coreopsis
Echinacea purpurea	Purple Coneflower
Geranium manculatum	Cranesbill Geranium
Hemerocallis species	Daylilies
Hosta species	Plaintain Lily
Liatris spicata	Gayfeather
Lobelia cardinalis	Cardinal Flower
Malva alcea 'Fastigiata'	Hollyhock Mallow
Monarda spp.	Beebalm
Perovskia atriplicifolia	Russian Sage
Physostegia virginiana	Obedient Plant
Rudbeckia fulgida	Black-Eyed Susan
Sedum telephium	Autumn Joy Sedum



A simple planting plan that features drifts of perennials and ornamental grasses to accentuate the front of a medical office building.

ORNAMENTAL GRASSES

Calamagrostis acutiflora	Reed Grass
Deschampsia caespitosa	Tufted Hair Grass
Festuca ovina 'glaucua'	Blue Fescue
Panicum virgatum	Switch Grass