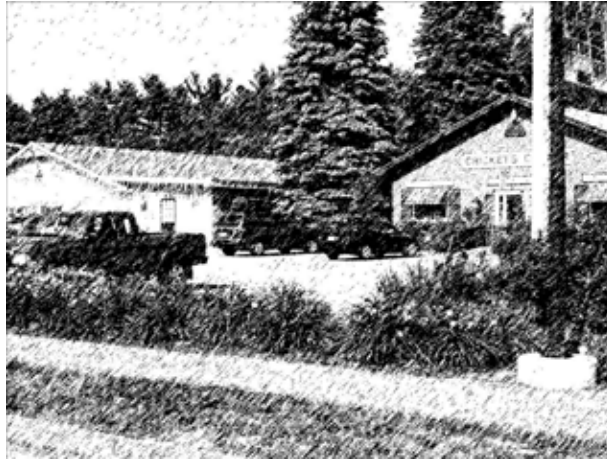

LANDSCAPING



INTRODUCTION

The most successful projects use landscaping to heighten the qualities of the site, accentuate the building, and enhance the site's identity and its human scale. The design guidelines encourage the use of a wide variety of plant material to add visual interest to the landscape throughout the year.

The physical characteristics of each site and each plant should be carefully evaluated when making the final selection to ensure that plantings will survive and thrive in the selected location.

As Raymond continues to grow, there will be increased emphasis on the quality of the landscape between the buildings and Route 302. With buildings sited closer to the highway, the town is looking for a much more village feel to the public landscape.

Landscape Goals

- Reinforce the identity of the Raymond commercial district through the use of plant materials that will provide visual interest throughout the year.
- Supplement the landscaping that has been installed as part of the Route 302 walkway.
- Enhance the aesthetic appeal and scale of commercial development through the use of colorful plant materials with interesting forms and massing.
- Help create attractive areas safely separated from the road where pedestrians feel comfortable.
- Maintain existing trees that separate commercial uses, buffer lakes and streams, and create a natural appearance to the corridor.
- Manage invasive species using ecologically sound practices.
- Assist in wayfinding by emphasizing entrances to buildings and major circulation patterns.
- Increase the attractiveness and comfort of parking lots by reducing their scale, providing shade, and adding seasonal interest, using sound environmental practices.
- Provide screening for less attractive parts of a site or separating incompatible land uses.
- Utilize landscape maintenance techniques with the least adverse environmental impact.

Contents

Background	III-2
Landscape Principles	III-3
Tree Protection	III-6
Parking Lot Landscaping	III-7
Tree Selection and Planting	III-9
Shrub and Ornamental Plantings	III-10
Site Maintenance	III-11
Raymond Plant Materials List	III-12



With proper planning, trees, shrubs, and other plantings can provide shade, emphasize entrances, screen undesirable views, and add color and interest throughout the year.

OBJECTIVES

The landscape plan should develop an environment that complements the architecture, reinforces circulation paths, highlights entrances, provides shade, adds seasonal interest, and is designed and maintained using sound environmental practices. The commercial district should be unified by a rich variety of street trees, flowering shrubs, and masses of color.

DESIGN GUIDELINES

Preparation. As part of the Site Plan application or building permit application process, a landscape plan should be prepared by a landscape architect or other qualified professional familiar with local growing conditions. The plan should be accompanied by a narrative that describes the design intent, plantings and other landscape features, maintenance requirements, tree protection, and other relevant features of the plan.

Coordination with Utilities and Site Features. The planting plan should illustrate how plantings will be integrated with underground and overhead utilities, site lighting, signage, and other site features that may influence the selection or location of plants. The plan should be designed to avoid conflicts (both at the time of planting and in the future) between plantings and other site elements.

Irrigation. The use of low-maintenance, drought tolerant species is strongly encouraged throughout the corridor. Where needed, underground irrigation is encouraged in front setbacks, public spaces, and other highly visible areas. Irrigation should be coordinated with other elements of the site plan so it does not cause overflow or flooding in walkways, sidewalks, parking lots, or similar pedestrian areas.

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



A less-than-effective roadside planting scheme.

Variety. The use of a variety of plant materials that exhibit seasonal color and interesting texture is strongly encouraged to create a distinctive, yet low maintenance environment. Planting plans should strike a balance between monoculture (the use of a single species) and too much variety. See Raymond Plant Materials List at the end of this section for recommendations.

Boulevard Effect. Large spreading deciduous trees should be planted in appropriate locations along Raymond's roads to define the edge of the travelway, provide shade for pedestrians, clean the air, and add scale to the commercial corridor. This requirement should not be imposed in a way that impacts the visibility of either signage or merchandise.

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

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 will be dealt with, using best management practices. The following species are among those considered invasive and should not be used:

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
Acre platenoides	Norway Maple

Vines and Perennials

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

Rocks. Large rocks should be used as landscape elements very sparingly and only as accents in mass plantings. When used, ornamental rocks should be partially buried.

Buffers & Screening. Plant materials and other landscape elements may be used to create suitable buffers between residential and commercial properties. The design of buffers should consider the appearance from both commercial and residential viewpoints. Evergreen plantings are particularly effective for year-round buffering.

Minimum Plant Sizes. Unless otherwise required by site conditions, plant materials shall meet the following size standards:

Canopy Trees	2 1/2" caliper
Flowering Trees	2" caliper
Evergreen Trees	5-7' height
Deciduous Shrubs	24" height
Evergreen Shrubs	18" ht./spread
Perennials	2 year clumps
Ornamental Grasses	2 year clumps
Ground Covers	3" pots

The use of bare root plant material should be avoided.

Simplicity. Planting design shall stress simplicity in form and limit the number of species. Shrubs, perennials, annuals, ornamental grasses, etc. used along the roadways should be planted in masses or 'drifts' that emphasize colors and textures, rather than used as single specimens.

Ground Cover. Extensive areas of bark mulch shall not be used as a substitute for live ground cover. Where mulch is used, it shall consist of dark, decomposed shredded bark, with pieces less than 1" in any one dimension.

Resources. Additional information:

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.

American Standard for Nursery Stock: ANSI Z60.1-1996. American Association of Nurserymen. 1997.



If large rocks are used in the landscape, they should be buried so at least 1/3 of their mass is below ground, and not simply placed on the surface.



The ultimate height and density of these plantings were not considered in the planting plan, resulting in a potentially dangerous blind spot for someone backing out of this parking space.



A boulevard effect is envisioned for Raymond's highways.



By preserving this specimen tree, the owner maintained visual interest, provided shade, and retained site character.



A simple planting plan that feature drifts of perennials and ornamental grasses to accentuate a small medical building.



A pedestrian use area has been effectively separated from the adjacent roadway by a backdrop of flowering shrubs, perennials, and trees.



An informal grouping of trees, shrubs, groundcovers, and trees emphasize the front entrance of this office building.



Ornamental trees can be an effective way to give scale to the street. Trees should be pruned to a minimum of 8' above the walk.



Upright forms of tree species were selected for this tight location next to a building wall.

OBJECTIVES

Mature trees along Raymond's commercial district are an important element of community character. They provide significant year-round visual interest, wildlife habitat, and comfort to pedestrians. Where practical, existing mature and specimen trees should be preserved during development.

DESIGN GUIDELINES

Planning for Tree Protection. Every effort should be made to preserve existing or unique trees or other plant material. Transplanting and reusing trees and other plant materials are strongly encouraged. The landscape plan should illustrate where individual trees or masses of significant vegetation will be preserved and what measures will be taken to protect the trunk and root system during construction. The Planning Board or Code Enforcement Officer (CEO) may require a survey and photographs of existing trees to be preserved.

Construction. As a general rule, no construction activity should be allowed within the drip line (outer edge of the tree canopy) during construction. This includes grading, compaction, utility installation, stockpiling of construction materials, or movement of vehicles.

Temporary Measures. Barricades (snow fencing or similar materials) should be installed prior to construction to prevent compaction of tree roots and damage to bark. 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 should have a fence with a radius of 12 feet).

Professional Assistance. In the case of unusually significant 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 retaining 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. Many 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.

Replacements. Where trees noted to be saved are damaged or lost during construction, the Planning Board or CEO may engage the services of a licensed arborist to determine the value of the trees and to develop a mechanism for their replacement.



This line of maple trees were identified early in the planning process as a feature to be preserved. The driveway design was adjusted to minimize damage to the root systems.

OBJECTIVES

Landscaping is necessary in parking lots to improve the visual appearance, reduce the scale of paved areas, define edges, provide shade, and add seasonal interest. Trees, shrubs, and ornamentals should be planted in large groups, or drifts, appropriate to the scale of the space. It is more important to define the edges of the parking lot than to plant trees and shrubs within the lot.

DESIGN GUIDELINES

Landscaping in Parking Lots. Parking lots with 10 or more spaces should have at least one tree per eight spaces, planted in or within five feet of the edge of the lot. At least 10% of the interior area of any parking lot with 25 or more spaces should be landscaped with a living ground cover other than grass. Larger or more intense parking lots should have more intense landscape treatments.

Plant Material Variety. All parking lot landscaping should be able to tolerate dry growing conditions. The use of a variety of groundcovers, perennials, flowering shrubs and ornamental grasses is encouraged in parking areas. See Plant Materials List at the end of this chapter.

Undesirable Plant Materials. Trees that may damage automobiles (dripping sap, messy fruit, or hard seeds such as acorns) 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 they may be concentrated in certain areas. Trees should be planted a minimum of five feet from the end of parking lot islands.

Safety. Where trees abut pedestrian walkways or places where people will be walking in parking lots, their lower branches should be pruned to at least eight feet above the paved surface to avoid becoming an obstacle. Shrubs used in parking lot islands should not exceed three feet in height to avoid blocking visibility.

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 buried under snow.



Trees can be planted throughout parking lots as long as they are given enough room for proper root development and protection from cars and snowplows.



Trees in this parking lot have been given an adequate amount of room for their root systems to grow. The lower branches have been pruned above eye height.



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



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



Parking lot islands should be large enough for trees to achieve full maturity and to prevent damage from car doors and snowplows.



This island of hardy black-eyed susans adds texture and a spot of color to the parking lot.

OBJECTIVES

Trees should be used at building entrances, in parking lots, and amidst open space. They should be allowed to achieve full maturity and display their natural form. In particular, planting plans should include large shade trees within or near the right of way to create a more unified, pedestrian-friendly streetscape.

DESIGN GUIDELINES

Suitability. Trees should be resistant to insect infestation, drought, disease, roadside salt, and auto emissions. All plant material should be suitable to Raymond's growing conditions. A list of possible varieties of street trees is included at the end of this chapter.

Coordination. Trees should be carefully selected and located to complement building elevations without blocking storefronts, signs, or lighting. Trees should be planted in locations where their root development and branching patterns will not interfere with underground or overhead utilities, streets, and sidewalks.

Plantings near Roadways. Trees near public or private roads should be planted a minimum of 5' (where possible) from the edge of the paved or gravel shoulder. Trees along numbered routes should meet the setback requirements of MDOT. Prior to planting, property owners should consult with MDOT officials as to the location of the right of way. Landscaping planted at intersections should preserve an adequate sight triangle as determined by a traffic engineer. Trees should not be planted in the strip between the roadway and the pathway paralleling Route 302.

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



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



Trees effectively help separate pedestrians from vehicular traffic. Branches should be pruned to minimize interference at eye level.

OBJECTIVES

A wide variety of shrubs and ornamental plantings should be used throughout Raymond 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 listing of plantings that may be suitable for the corridor is provided at the end of this chapter.

Selection. The selection of plantings should consider ultimate height and spread, maintenance, pest and disease tolerance, and their nuisance potential (e.g., leaf litter, thorns, and insect attraction).

Foundation & Wall Plantings. Planting beds are recommended along exposed building edges, foundations and uninterrupted walls. Plantings should provide either a formal pattern or a naturalistic blend of heights, colors, and textures for visual relief. In general, plantings should not be installed within 18" of the face of the wall.

Accent Plantings. The installation of special planting beds is encouraged to complement the plantings along the pedestrian path and add year-round visual interest. These could include daylily beds, butterfly gardens, bog gardens, fragrant gardens, shade gardens, yellow foliage gardens, early blooming gardens, texture gardens, etc.



Masses of daylilies make a bright, colorful statement in front of this bank. Additional drifts of similar plantings in the commercial area would create a memorable effect.

Mass Plantings. Shrubs and perennials should generally be planted in large masses or 'drifts,' rather than as individual specimens, to provide a pleasing effect for both motorists and pedestrians.

Safety. Plant material should be selected with due consideration to public health and safety. Avoid plants with poisonous or messy fruits or leaves, large thorns, or overly aggressive growth patterns. Large shrubs which could provide hiding places along pathways or block the view of moving vehicles should be avoided.



Trees, evergreens, shrubs, and perennials should be able to withstand severe growing conditions and weather. This informal grouping provides an attractive accent for a highly visible corner.



Ornamental grasses can provide a simple, cost-effective, low-maintenance way to add texture throughout the year.

OBJECTIVES

Planting plans should anticipate a 3-8 year growing cycle to achieve maturity for shrubs, and 15-20 years for trees. Proper maintenance should be assured so the site continues to improve as the landscaping achieves maturity. The Site Plan should be designed and plantings selected with due consideration for maintenance requirements.

DESIGN GUIDELINES

Selection. The use of plant materials and landscape elements that require a low degree of maintenance is strongly encouraged. All plants should be resistant to insect infestation, drought, disease, roadside salt, and auto emissions, and hardy to Maine winters.

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 small leaves for ease of fall cleanups.

Approach. The use of integrated pest management, organic lawn care, and other environmentally sustainable practices is strongly encouraged.



This round rock mulch may be an effective ground cover, but it can present a safety hazard when loose rocks end up in the walkway.



Natural forms are preferable to overpruned plants. Plant material should be selected with consideration for ultimate size to avoid unnecessary pruning.



This full-grown euonymus blocks the view of motorists leaving this service station. A smaller shrubs, requiring less maintenance, would have been more appropriate.

OBJECTIVES

Plant Materials List has been developed to encourage property owners to look at many options in both form and species. The list should be considered a starting point in selecting plants. These recommended plants have been derived from a number of sources to inspire a greater landscape variety in . The final selection of materials should consider the specific growing requirements and characteristics of each plant and the conditions present within the site.

STREET TREES

Aesculus hippocastanum	Baumanii Horsechestnut
Acer campestre	Hedge Maple
Acer ginnala	Amur Maple
Acer x. freemanii	Armstrong Maple
Acer x. freemanii	Autumn Blaze Maple
Acer rubrum	Red Maple
Acer saccharum	Sugar Maple
Acer tataricum	Tartarian Maple
Acer triflorum	Three-flower Maple
Amelanchier	Shadblow
Betula nigra	River Birch
Carpinus betula fastig.	Upright Hornbeam
Carpinus caroliniana	American Hornbeam
Cercidiphyllum japon.	Katsura Tree
Cladrastis lutea	Yellowwood
Corylus columna	Turkish Filbert
Crataegus crusgalli	Cockspur Hawthorn
Fraxinus americana	White Ash: 'Aut. Purp'
	'Aut. Applause'
Ginkgo biloba	Maidenhair Tree (m)
Gleditsia triacanthos	Thornless Honey Locust
Gymnocladus dioica	Kentucky Coffee Tree
Liriodendron tulipifera	Tulip Poplar tree
Magnolia acuminata	Cucumber tree
Prunus accolade	Accolade Cherry
Prunus maackii	Amur Chokecherry
Pyrus calleryana	Cleveland Pear
Quercus alba	White Oak
Quercus bicolor	Swamp White Oak
Quercus coccinea	Scarlet Oak
Quercus imbricaria	Shingle Oak
Quercus palustris	Pin Oak
Quercus robur	Upright English Oak
Quercus rubra	Red Oak
Quercus shumardi	Shumard Red Oak
Sophora japonica	Regent Scholartree
Tilia cordata	Littleleaf Linden
Ulmus parvifolia	Lacebark Elm
Ulmus americana	Princeton American
	Elm; Frontier Elm
Zelkova serrata	Greenvase Zelkova

ORNAMENTAL TREES

Acer campestre	Hedge Maple
Acer ginnala	Amur Maple
Aesculus carnea	Red Horsechestnut
Amelanchier canadensis	Serviceberry
Carpinus betulus	European Hornbeam
Carpinus carolinianum	American Hornbeam
Celtis occidentalis	Hackberry
Cornus kousa	Kousa Dogwood
Cornus mas	Cornealiancherry
	Dogwood
Cotinus obovatus	American Smoketree
Crataegus crus-galli	Cockspur Hawthorne
inermis 'cruzam	
Crataegus viridis	Winter King Hawthorn
Halesia carolina	Carolina Silverbell
Maacki amurensis	Maackia
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
Prunus subhirtell	Higan Cherry
'Autumnalis'	
Pyrus calleryana	Bradford Pear
Sorbus alnifolia	Korean MountainAsh
Syringa reticulata	Tree Lilac 'Ivory Silk'



EVERGREEN TREES

Abies concolor	White Fir
Abies fraseri	Fraser Fir
Picea abies	Norway Spruce
Picea glauca	White Spruce
Picea omorika	Serbian Spruce
Picea pungens	Colorado Spruce
Pinus resinosa	Red/Norway Pine
Pinus strobus	Eastern White Pine
Thuja occidentalis	American Arborvitae
Tsuga canadensis	Canadian Hemlock
Tsuga caroliniana	Carolina Hemlock



PERENNIALS

Achillea millefolium	Yarrow
Aster x frikartii	New England Aster
Astilbe varieteis	Astilbe
Coreopsis verticillata	Moonbeam Coreopsis
Echinacea purpurea	Purple coneflower
Hemerocallis species	Daylilies
Liatris spicata	Gayfeather
Malva alcea 'Fastigiata'	Hollyhock Mallow
Perovskia atriplicifolia	Russian Sage
Rudbeckia 'Goldsturm'	Black-Eyed Susan
Sedum telephium	Autumn Joy Sedum

ORNAMENTAL GRASSES

Deschampsia caespitosa	Tufted Hair Grass
Festuca ovina 'glauca'	
Miscanthus sinensis	Purple Silver Grass

FLOWERING & ORNAMENTAL SHRUBS

Aesculus parviflora	Bottlebrush Buckeye
Aronia arbutifolia	Red Chokeberry
Berberis thunbergii	Barberry 'Crimson Pygmy'
Cotinus coggygria	Common Smoketree
Cotoneaster adpressa	Creeping cotoneaster
Cotoneaster divaricatus	Spreading cotoneaster
Cotoneaster horizontalis	Rockspray Cotoneaster
Deutzia gracilis	Slender Deutzia
Enkianthus campanulat.	Redveined Enkianthus
Eunymus alatus comp.	Dwarf Burning Bush
Forsythia 'Sunrise'	Sunrise Forsythia
Hydrangea paniculata	Panicle Hydrangea
Ilex verticillata	Winterberry
Myrica pensylvanica	Bayberry
Potentilla fruticosa	Bush Cinquefoil
Prunus maritima	Beach Plum
Rhododendron species	Rhododendron species
Rosa rugosa	Beach Rose
Viburnum prunifolium	Blackhaw Viburnum
Viburnum sargentii	Sargent Viburnum
Viburnum trilobum	Amer. Cranberrybush
Xanthorhiza simplicissima	Yellowroot