

# Landscape & Lighting Design Guidelines

Hudson Heritage  
Town of Poughkeepsie  
Dutchess County, New York

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Engineers  
Land Surveyors  
Planners  
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Landscape Architects

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## INTRODUCTION

The purpose of the Landscape Design Guidelines is to incorporate advanced landscape planning at the project development stage as a means to ensuring a consistent quality of landscape aesthetic for The Hudson Heritage Project. The intent of the Guidelines are to provide the Town with a predictable review process and benchmark for quality for the initial and future phases of the project as they evolve. The Guidelines are also intended for use by the property owners and applicants during the design, approval and construction phases of the project(s) - as a supplement to guidance set forth by existing local land use codes.

The Landscape Design Guidelines outline minimum standards for the establishment of plant material and site lighting. The landscape sections below provide descriptions and guidance for the use of the following elements in creation of the public landscape realm:

- Plant Materials
- Site Lighting

## 1. DESIGN GUIDELINES

### A. Plant Materials

#### i. Plant Specifications

##### a.) Trees

The Guidelines distinguished trees in three (3) primary categories – Street, Ornamental, and Coniferous. Collectively they define outdoor space, form outdoor space around buildings, reinforce natural and man-made landforms, provide visual and wind screening, establish canopy cover and promote biodiversity.

Table 1 – Tree Categories

Plant Category	Mature Height	Spread	Growth Habit	Characteristics	Primary Use/Locations
Street Trees	> 30'	>30'	Medium to large trees; Single stem, varying forms	Deciduous; provide shade, interesting branching and color/texture	As street trees, for scale in open spaces, shading for vehicular and pedestrian areas, woodland restoration.
Ornamental Trees	15'-30'	15'-30'	Small trees; Single or multi stem, upright or narrow form	Deciduous; provide interesting color, texture and flower color	Pedestrian scale environments or as naturalizing understory plantings
Coniferous Trees	>30'+	>10'	Single stem, upright pyramidal form	Evergreen; provide screening and wind breaks, add to winter landscape interest	To frame views, shading, woodland restoration and edge plantings

- Specifications for all tree plantings shall be in accordance with the latest edition of ANSI-Z60.1 (The American Standard for Nursery Stock) as produced by the American Association of Nurserymen.

- Trees shall be installed to generally meet the following minimum size requirements:
  - Street Trees 2"-4" in caliper\*
  - Ornamental Trees 1 ½"-2" in caliper\*
  - Coniferous Trees 6'-8' in height
  - Tree Reforestation and Buffer 2"-2 ½" in caliper or 5'-8' in height

\* Caliper refers to the diameter of a tree measured at a point 6" above the ground line (for trees with measurement less than 4")

- The following abbreviated lists identify acceptable tree species (within USDA Hardiness Zone 6a) by category, however additional native species outside of this list may be proposed for consideration.

Tree List – Medium to Large Deciduous / Street Trees

<u>Botanical Name</u>	<u>Common Name</u>
Acer rubrum 'Autumn Blaze'	Autumn Blaze Maple
Acer saccharum 'Fall Fiesta'	Fall Fiesta Sugar Maple
Celtis occidentalis	Common Hackberry
Cladrastis kentukea	Yellowwood
Gleditsia triacanthos 'Skyline'	Skyline Honeylocust
Liquidambar styraciflua	American Sweetgum
Quercus palustris	Pin Oak
Quercus bicolor	Swamp White Oak
Tilia cordata	Little-Leaf Linden
Ulmus americana 'Valley Forge'	American Elm Valley Forge

Tree List – Small Deciduous / Ornamental Trees

<u>Botanical Name</u>	<u>Common Name</u>
Acer campestre	Hedge Maple
Amelanchier Canadensis	Serviceberry
Carpinus caroliniana	American Hornbeam
Cercis Canadensis	Eastern Redbud (Northern Seed Source)
Cornus mas	Cornelian Cherry Dogwood
Crataegus viridis	Green Hawthorn
Malus species	Crabapple

Tree List – Coniferous Trees

<u>Botanical Name</u>	<u>Common Name</u>
Picea abies	Norway Spruce
Picea glauca conica	Dwarf Alberta Spruce
Picea pungens glauca	Colorado Blue Spruce
Pinus nigra	Austrian Pine
Pseudotsuga menziesii	Douglas Fir

Tree List – Tree Reforestation and Buffers

<u>Botanical Name</u>	<u>Common Name</u>
Abies balsamea	Balsam Fir
Acer rubrum	Red Maple
Acer saccharum	Sugar Maple
Carpinus caroliniana	American Hornbeam
Juniperus virginiana	Eastern Red Cedar
Liquidambar styraciflua	American Sweetgum
Liriodendron tulipifera	Tulip Tree
Nyssa sylvatica	Black Tupelo
Picea mariana	Black Spruce
Quercus rubra	Northern Red Oak

b.) Shrubs

- Appropriate sizes and spacing for shrubs shall be determined based on proposed location, design intent and site conditions.
- Specifications for all shrub plantings shall be in accordance with the latest edition of ANSI-Z60.1 (The American Standard for Nursery Stock) as produced by the American Association of Nurserymen.
- The following abbreviated list identifies acceptable shrub species (within USDA Hardiness Zone 6a), however additional native species outside of this list may be proposed for consideration.

<u>Botanical Name</u>	<u>Common Name</u>
Aronia melanocarpa	Black Chokeberry
Buxus sempervirens variegata	Variiegated Common Boxwood
Cephalanthus occidentalis	Buttonbush
Clethra alnifolia	Sweet Pepperbush/Summersweet
Cornus sericea	Red Osier Dogwood
Ilex verticillata	Winterberry
Itea virginica	Virginia Sweetspire
Kalmia latifolia	Mountain Laurel
Lindera benzoin	Spicebush
Myrica pennsylvanica	Northern Bayberry
Aronia arbutifolia	Red Chokeberry
Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac
Rosa virginiana	Virginia Rose
Thuja occidentalis 'Emerald Smaragd'	Arborvitae Shrub
Viburnum dentatum	Arrowwood Viburnum
Viburnum trilobum	American Cranberrybush

c.) General notes

Plants used for landscaping, reforestation, or buffers shall not include any of those on the List of Prohibited and Regulated Invasive Species, which was issued by the New York

State Department of Environmental Conservation on September 10, 2014, under regulations at 6 NYCRR Part 575.

(The list is available at [http://www.dec.ny.gov/docs/lands\\_forests\\_pdf/islist.pdf](http://www.dec.ny.gov/docs/lands_forests_pdf/islist.pdf).)

ii. Plant Installation

a.) Trees

- Tree plantings shall be performed as illustrated in Figures 1-3.
- Planting soil mix shall contain the following by volume: 30 parts, 10 parts peat, 1 part bone meal.
- Planting soil mix shall be tested for pH and nutrients to determine if soil amendments are needed to meet project specifications.

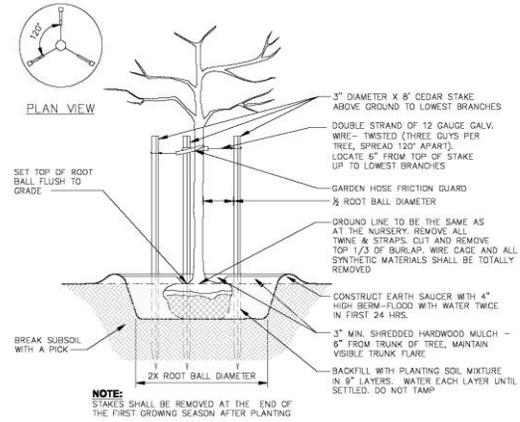


Figure 1 – Deciduous Tree Planting Detail

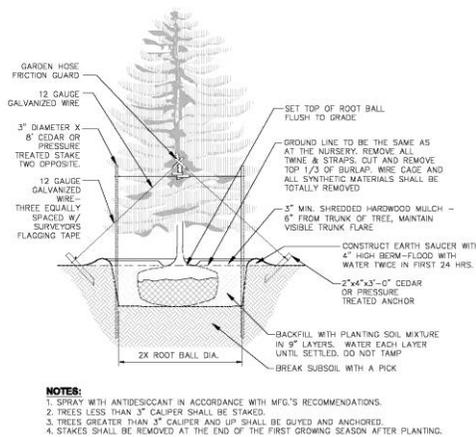


Figure 2 – Evergreen Tree Planting Detail

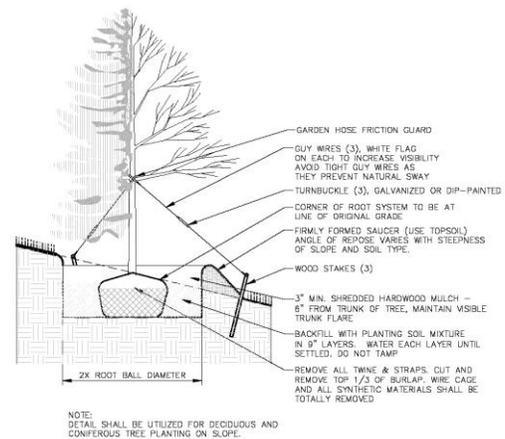


Figure 3 – Tree Planting on Slope Detail

b.) Shrubs

- Shrub plantings shall be performed as illustrated in Figures 4-5.
- Planting soil mix shall contain the following by volume: 30 parts, 10 parts peat, 1 part bone meal.
- Planting soil mix shall be tested for pH and nutrients to determine if soil amendments are needed to meet project specifications.

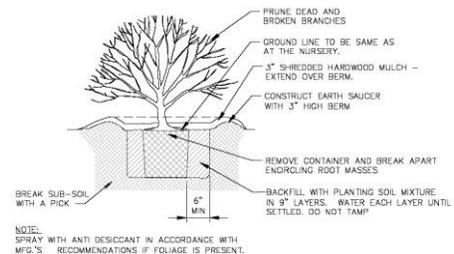


Figure 4 – Container Shrub Planting Detail

c.) Perennials, Groundcovers and Ornamental Grasses

- Plantings shall be performed as illustrated in Figures 6-7.

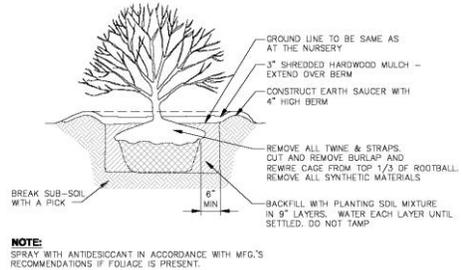


Figure 5 – B&B Shrub Planting Detail

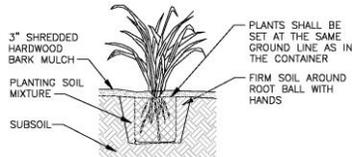


Figure 6 – Perennial Planting Detail

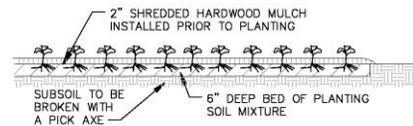


Figure 7 – Groundcover Planting Detail

iii. Plantings for Parking Areas

a.) Landscape Islands

- Plant material within islands shall be set back a minimum of 2' from back of nearest curb to prevent damage from vehicles or snow plowing.

b.) Landscape areas within parking lots may be used for stormwater management and planted with applicable native plant material for bioretention.

c.) Peripheral Landscaping

- In areas where parking lots are adjacent to residential units or public right-of-ways peripheral landscaping shall be installed to buffer the visual impact of the parking lot.
- Peripheral landscape zones shall be a minimum of 6' wide and should contain both tree and shrub plantings.

iv. Tree Protection

- Vegetative protection zones shall be shown on the site development drawings and include a list of species on site to be preserved.
- The protection zones shall identify the measures incorporated for preservation and/or protection of existing trees, including fencing and erosion control.
- The protection zones shall be within or correspond to the construction limit line.

**B. Site Lighting**

Two primary types of lighting occur within the development – Commercial Area and Residential Area. All lighting types shall be full cut-off, or semi cut-off as determined by the Planning Board to reduce glare and prevent light trespass to neighboring properties.

i. Commercial/Mixed-Use Areas

- Single or double mounted luminaire on a decorative pole.
- The standard height to the luminaire shall not exceed 20' in height. If the fixture is located within 50' of the residential area, the freestanding light fixtures shall be no higher than 15' above grade and shall be full cut-off.
- Fixtures shall be fitted with movable shields to allow for the redirection of light to avoid glare and the splaying of light to off-site locations.
- Recommended spacing shall be 70' – 100' on center.
- Footcandle illumination level objectives: 0.5 ft/c for commercial roadways and pedestrian walks. Illumination at the property line shall not exceed 0.2 footcandle.



Figure 8 - Commercial Area Light Fixture

ii. Residential Areas

- Single or double luminaire on a decorative pole.
- The style of the luminaire is to be complimentary to the style in commercial and/or mixed-use areas.
- The standard height to the luminaire shall not exceed 15' in height.
- Recommended spacing shall be 70' – 100' on center.
- Footcandle illumination level objectives: 1.0 ft/c in parking lots, near entries or at pedestrian gathering areas; 0.5 ft/c for roadways and pedestrian walks.
- Illumination at the property line shall not exceed 0.1 footcandle.

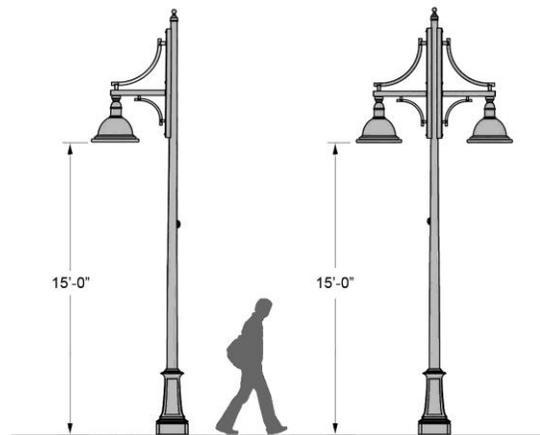


Figure 9 - Residential Area Light Fixture

iii. General regulations per the Town's Zoning Ordinance set forth in § 210-81

- No artificial lighting shall shine directly upon any neighboring residential property located in a residential district or be so established that it shall shine directly upon any residential property or shall shine directly on or into any room or rooms, porches or patios of any residential property, nor shall any artificial lighting be maintained or operated from any structure or land in such a manner so as to be a nuisance or an annoyance to neighboring residential properties or so as to interfere with the physical comfort of the occupants of residential properties.
- Flashing sources of illumination are prohibited.

- Lighting that moves or has moving parts is prohibited.
  - Strip lighting outlining commercial structures and used to attract attention to the nonresidential use, and strings of light bulbs used in any connection with a nonresidential use premises, is prohibited unless fully shielded.
  - Vegetation screens should not be employed to serve as the primary means for controlling glare. Rather, glare control shall be achieved through the use of such means as cut-off fixtures, shields and baffles, and appropriate application of fixture mounting height, wattage, aiming angle and fixture placement.
  - Exterior lighting shall enhance the building design and the adjoining landscape. Lighting standards and building fixtures shall be of a design and size compatible with the building and adjacent areas, as determined by the Planning Board.
  - Security lighting should use the lowest possible illumination to effectively allow surveillance.
  - Undercanopy lighting for such uses as gasoline service stations shall be recessed so that the lens cover is fully recessed, or flush, with the bottom surface (ceiling) of the canopy or shielded by the fixture or the edge of the canopy so that light is restrained to 85° or less from vertical.
  - Luminaries used for playing fields and outdoor recreational uses shall be exempt from the height restriction, provided all other provisions of this section are met and such lighting is used only while the field is in use.
  - Awnings and canopies used for building accents over doors, windows, walkways, and the like shall not be internally illuminated (i.e., not lit from underneath or behind).
  - Fixtures and lighting systems used for safety and security shall be in good working order and shall be maintained in a manner that serves the original design intent of the system.
- iv. General guidelines per the Town's Zoning Ordinance set forth in § 210-81
- Where practical, exterior lighting installations should include timers, dimmers, sensors, or photocell controllers that turn the lights off during daylight hours or hours when lighting is not needed, to reduce overall energy consumption and eliminate unneeded lighting.
  - Exterior lighting installations should be designed to avoid harsh contrasts in lighting levels.
  - Vegetation and landscaping shall be maintained in a manner that does not obstruct security lighting.
  - Site lighting shall minimize light spill into the dark night sky.