

Section 103. Landscaping Requirements

(Adopted 12/8/98)

Part A. Purpose and Intent.

The purpose of this section is to regulate and provide guidelines for landscaping of certain types of development in the City of Jacksonville. The Jacksonville City Council finds that the lack of adequate landscaping results in:

1. Increased storm water run-off from parking lots with little or no plant cover;
2. Deteriorating community appearance and property values;
3. Discouraging pedestrian traffic due to emphasis on vehicle accommodation areas with unsafe pedestrian access to the buildings on the lot;
4. Increases air pollution, particularly carbon dioxide;
5. A lack of street definition which in turn exposes citizens to long uninterrupted views of signs, utilities, lights, and parking;

The Jacksonville City Council also finds that:

1. Plantings are proven producers of oxygen, a necessary element for human survival;
2. Plantings transpire considerable amounts of water each day and thereby purify the air;
3. Plantings have an important role in neutralizing waste water passing through the ground from the surface to ground water tables and lower aquifers;
4. Plantings, through their root systems, stabilize the ground water tables, and play an important and effective part in soil conservation, erosion control, and flood control;
5. Plantings are an invaluable physical, aesthetic, and psychological counterpoint to the urban setting, making urban life more comfortable by providing shade and cooling the air and land, reducing noise levels and glare, and breaking the monotony of urban developments on the land, particularly parking areas; and
6. For the reasons stated above, landscaping has an important impact on the desirability of land and therefore has a significant impact on property values.

Part B. Vehicle Accommodation Area (VAA) Landscaping Required.

Based upon the findings set forth in Part A above Council declares that it is not only desirable but essential to the health, safety, and welfare of all persons living and working within the city's planning jurisdiction to provide for adequate landscaping as specified by this section for certain types of development projects.

Part C. Applicability.

1. **Exemptions:** Landscaping requirements shall not apply to:
 - a. Single-family and multi-family residences (not more than four dwelling units per lot) on their own lots;
 - b. Lots in the Downtown Business (DB) Zone that do not provide off-street parking; and
 - c. Automobile sales lot areas are exempt from the requirements for trees only.
 - d. Temporary uses (Fairgrounds or farmers markets which cater to various temporary uses throughout the calendar year are not exempt)
 - e. Landscaping requirements of this section shall be applied equally to all similarly situated properties. Modifications to these standards may be granted in writing by the Administrator if the Administrator finds any of the following circumstances exist on the proposed building site, or surrounding properties:
 - i. Natural land characteristics such as topography or existing vegetation on the proposed building site would achieve the same intent of this section.
 - ii. Innovative landscaping or architectural design is employed on the building site which would achieve an equivalent shading, aesthetic, and buffering effects.
 - iii. The required landscaping would be ineffective at maturity due to the proposed topography of the site, and/or the location of the improvements on the site.
 - iv. No landscaping shall be required in areas where the Technical Review Committee finds that it would interfere with traffic safety.

Section 103. Landscaping Requirements

2. **Application:** Landscaping requirements shall apply to any new principal building(s) or open uses of land constructed, reconstructed, or established after the effective date of this section. The amount of landscaping required for expansions of existing buildings/remodeling are outlined in Section 96. Nonconformities.

Part D. Impervious Surface Intensity (ISI).

Vehicular accommodation areas and impervious surface areas shall be categorized according to their impervious surface ratios as specified in Table D.1:

Table D.1
Impervious Surface Intensity Classification

Impervious Surface Ratio (ISR)	Impervious Surface Intensity (ISI)
0.86 - 1.0	High
0.70 - 0.85	Moderately High
0.41 - 0.69	Moderate
0.40 and below	Low

Part E. Vehicular Accommodation Area Landscaping.

Landscaping areas shall be provided in vehicular accommodation areas and impervious surfaces so as to provide visual and climatic relief from broad expanses of pavement and to channelize and define logical areas for pedestrian and vehicular circulation. All vehicular accommodation areas shall be landscaped such that the following requirements are met:

1. **Street yard lawn required.** When any parking spaces are to be placed within fifty (50) feet of a public or private right-of-way, a minimum width of eight (8) feet lawn is required parallel to the street right-of-way on the applicant's property. This section applies to all the public and private streets that the property fronts upon. This area shall not be used for parking, sidewalks, or trails, but shall be maintained as a planting strip for grass, trees, and/or shrubs.
2. **Vehicular accommodation area landscaping required.** Vehicular accommodation areas shall be designed so that a minimum of twelve (12) percent of the impervious surface area (excluding building areas only) is dedicated to vegetative landscaping. However, vegetative fences and berms that screen the vehicle accommodation areas from adjacent properties and all adjacent street rights-of-way may be applied to meet the requirements of this section. A

Section 103. Landscaping Requirements

minimum of fifty (50) percent of the required vegetative landscaping area shall be located in the interior of the vehicle accommodation area as landscaping islands at the end of parking bays, inside medians, or between parking spaces.

3. **Landscaping standards in vehicular accommodation areas.** Vehicle accommodation areas shall be shaded by large deciduous trees (either retained or planted by the developer) that have or will have when fully mature, a trunk of at least twelve (12) inches in diameter. When large trees are planted by the developer to satisfy the requirements of this subsection, the developer shall follow guidelines set forth in Appendix C. In providing landscaping to satisfy the requirements of this section, Table E.3.1 shall provide the amount of landscaping required. When determination of the number of trees and shrubs required by this table results in a requirement of fractional tree or shrub, any fraction of one-half or less may be disregarded, while a fraction in excess of one-half shall be counted as one tree/shrub.

Table E.3.1
Required Trees and Shrubs.

Impervious Surface Intensity (ISI)	Large Deciduous Trees Required per every 1000 sq.ft. VAA	Large Shrubs Required per every 1000 sq.ft. VAA	Small Shrubs Required per every 1000 sq.ft. VAA
High	0.33	1.2	1.8
Moderately-high	0.25	0.8	1.2
Moderate	0.2	0.4	0.6
Low	0.16	0.2	0.3

- a. All plantings shall be evenly distributed throughout the vehicular accommodation area such that at least forty (40) percent of the required trees and shrubs shall be provided in the interior of the vehicular accommodation areas as landscaping islands at the end of parking bays, inside medians, or between parking spaces.
 - b. Those trees and shrubs that are planted in required buffer yards that are not immediately adjacent to the vehicle accommodation areas may be applied to meet the requirements of this section. However, the vegetated buffer areas shall not account for more than fifty (50) percent of the required trees and shrubs.
4. **Limited exceptions:**
 - a. In vehicular accommodation areas that provide more parking spaces than

Section 103. Landscaping Requirements

required by Section 102. Off-Street Parking Requirements., the required landscaping shall be increased by ten (10) percent.

- b. The required landscaping shall be reduced by five (5) percent in vehicular accommodation areas that:
 - i. provide at least thirty (30) percent of the required parking spaces along the side or the rear of the principal structure on the lot; or
 - ii. are designed in such a manner that the vehicular accommodation areas are distinctly divided into smaller units (each less than 25,000 sq.ft) by structures, substantial landscaping islands or berms; or
 - iii. incorporate the required storm water detention area into a unified landscaping design together with trees, shrubs, berms, lawns, walkways, and other water features; or
 - iv. provide shared parking as per Section 102. Off-Street Parking Requirements.; or
 - v. incorporate alternative paving such as paving grids which allow grass to grow of a minimum of twenty (20) percent of the total vehicular accommodation area (peak hour parking spaces).

- c. The required landscaping shall be reduced by ten (10) percent if:
 - i. at least one (1) large deciduous tree is proposed or retained for every thirty (30) feet of street frontage along the right-of-way of all public and private streets fronting the lot. The tree proposed or retained shall have a trunk of at least 12 inches in diameter when fully mature. Trees provided or retained to satisfy this section of the ordinance may either be placed evenly or in clusters so as not to hinder views of signs and buildings.
 - ii. small evergreen shrubs are planted as a screen along the all the vehicle accommodation areas that are visible from any street right-of-way or adjacent property.
 - iii. adequate provision is made for pedestrian and bicycle traffic by installing walkways, bikeways, bicycle parking, and similar facilities within vehicle accommodation areas.

Note: The developer shall be eligible for cumulative reduction in landscaping requirements if more than one of the exceptions is applied to the proposed

Section 103. Landscaping Requirements

development.

5. **General standards for landscaping.**
 - a. Barriers, such as curbs or wheel stops shall be provided between vehicular accommodation areas and landscaped areas so as to protect all plantings.
 - b. Each interior planting island shall contain a minimum of two hundred (200) square feet in area and shall be a minimum of eight (8) feet in width.
 - c. Each large tree at the time of planting shall be a minimum of two (2) inches in caliber and eight (8) feet in height. When mature, a large deciduous tree should be at least forty (40) feet high and have a minimum crown width of thirty (30) feet. Every large deciduous tree that is required by Table E.3.1 may be substituted by two (2) understory trees. However, no more than fifty (50) percent of the required large deciduous trees may be substituted.
 - d. When large and small shrubs are planted by the developer to satisfy the requirements of this subsection, the developer shall follow guidelines set forth in Appendix C. A minimum of forty (40) percent of all the required shrubs shall be evergreen shrubs.
6. **Location.** Required landscaping, including the eight (8) foot lawn space shall be located outside existing and proposed street rights-of-way as identified by the City of Jacksonville Thoroughfare Plan as amended. The proposed landscaping plan shall comply with any planning documents adopted and amended by City Council. Required trees and shrubs may be located in utility easements by approval of the Technical Review Committee. No trees or shrubs greater than twelve inches (12") shall be planted in sight triangle(s) of driveways and streets without approval from the reviewing authority. On State maintained roads, both NCDOT and City standards shall apply.
7. **Maintenance.** The property owner shall be responsible for maintaining all vegetation required by this section in a healthy condition. The Landscaping Superintendent for the City shall inspect property for any dead, unhealthy, or missing vegetation and report it to the Zoning Administrator. The required vegetation shall be replaced upon written notice of noncompliance by the Zoning Administrator. Replacement shall occur at the earliest suitable planting season as determined by the Landscaping Superintendent.

Part F. Standards for Retention/Detention Ponds/Stormwater Wetlands (Amended 8/99)

Purpose. These provisions are intended to encourage stormwater retention or detention ponds to be located and configured as an open space amenity or as a constructed

Section 103. Landscaping Requirements

stormwater wetland within a development site, as opposed to configuration as a utility facility. The standards do not prohibit configuration of the pond as a utility feature (instead of an amenity or wetlands), but when configured as a utility, a stormwater retention or detention pond should be strategically located and screened from off-site views. The landscaping required by this Part shall not be counted towards the total landscaping required by Part E of this section.

2. **Configured as a Site Amenity.** Stormwater retention or detention ponds configured as a site amenity (instead of a utility feature) shall comply with the following requirements:
 - a. In general stormwater retention or detention ponds are considered as a site amenity when they are not surrounded by a fence, maintain gentle slopes of 3:1 or less above the 10:1 vegetated shelf and also contain at least three (3) of the following design features:
 - i. Integrated with the design and location of the other site features (instead of being located in a peripheral location);
 - ii. Include comparable shrubs and other vegetative material as are used in other areas of the site;
 - iii. Provide pedestrian access to and around the facility;
 - iv. The visibility of rip-rap or stone weirs have been minimized to the greatest extent practicable;
 - v. Incorporate some form of fountain or other visible water circulation device, in accordance with state guidelines;
 - vi. Incorporate some form of lighting in and around the facility;
 - vii. Incorporate seating or other use areas;
 - viii. Have a natural appearance (round, oval, kidney in shape with irregular edge); and/or
 - ix. Any innovative design deemed appropriate by the Development Services Director.
 - b. Stormwater wetlands are also considered as a site amenity when they are not surrounded by a fence, maintain gentle slopes of 3:1 or less above the permanent pool elevation. The design shall be prepared in accordance with the City of Jacksonville's Stormwater Ordinance.

Section 103. Landscaping Requirements

- c. Trash racks and other debris control structures should be sized to prevent entry by children.
 - d. Landscaping
 - i. Shrubs Required: Shrubs shall be provided around the perimeter of the pond at a rate of 20 shrubs per 100 linear feet. These shrubs shall be planted above the sloped embankment surrounding the pond. The particular variety of shrub(s) to be used to satisfy this requirement should come from Table F.1 or should otherwise be approved by the City. In those instances that there are circumstances outside of the developer's control that make it impractical to fully meet this requirement, it may be modified by the City.
 - ii. Understory Trees Required: Trees shall be provided around the perimeter of the pond at a rate of one (1) per twenty five (25) linear feet. These trees shall be planted above the sloped embankment surrounding the pond. The particular variety of understory tree(s) to be used to satisfy this requirement should come from Table F.2 or should otherwise be approved by The City. In those instances that there are circumstances outside of the developer's control that make it impractical to fully meet this requirement, it may be modified by The City.
3. **Configured as a Utility.** Stormwater retention or detention ponds configured as a utility feature (instead of a site amenity) shall comply with the following requirements:
- a. Location of stormwater retention or detention ponds shall be behind the front wall of the principal building and at least 100 feet away from all public or private street rights-of-ways.
 - b. Fencing
 - i. When configured as a utility, the pond shall be surrounded by a green or black vinyl-coated steel or aluminum chain-link fence or other alternative that is a durable and contextually appropriate material as approved by the Development Services Director with a minimum height of four feet. All fences should provide securable entrances to allow access for maintenance personnel and equipment, and to provide for the safety of citizens.
 - ii. Fences around stormwater ponds shall not be required when the site containing the pond is entirely surrounded by a fence of six feet in height or higher.

Section 103. Landscaping Requirements

c. Landscaping

- i. **Shrubs Required.** Except for fence entrances, shrubs shall be provided around the outside perimeter of the required fence five (5) foot on center. Guard rails shall also be screened by the shrubs. The particular variety of shrub(s) to be used to satisfy this requirement should come from Table E.1 or should otherwise be approved by The City. In those instances that there are circumstances outside of the developer's control that make it impractical to fully meet this requirement, it may be modified by the City.
- ii. **Understory Trees Required.** Understory trees shall be placed outside the required fencing at a rate of one (1) per twenty five (25) linear feet of fencing provided around the pond. Guard rails shall also be screened by the trees. The particular variety of understory tree(s) to be used to satisfy this requirement should come from Table E.2 or should otherwise be approved by The City. In those instances that there are circumstances outside of the developer's control that make it impractical to fully meet this requirement, it may be modified by The City.

Section 103. Landscaping Requirements

Table F.1
Shrubs Recommended to be Used Around Retention/Detention Ponds

Common Name	Botanical Name	At Maturity	
		Height	Spread
Glossy Abelia	<i>Abelia grandiflora</i>	3'-6'	3'-6'
Elaeagnus	<i>Elaeagnus puygehs</i>	5'-8'	8'-10'
Fatsia	<i>Fatsia japonica</i>	5'-7'	4'-6'
Chinese Holly	<i>Ilex cornuta cultivars</i>	Varies	Varies
Mugo Pine	<i>Pinus mugo</i>	5'-7'	8'-10'
Yaupon Holly	<i>Ilex vomitoria</i>	Varies	Varies
Winged Euonymus	<i>Euonymus alata compacta</i>	5'-7'	8'-12'
Pittosporum	<i>Pittosporum tobira</i>	6'-8'	12'-20'
Juniper	<i>Juniperus cultivars</i>	Varies	Varies
Holly Grape	<i>Mahonia aquifolium</i>	3'-6'	6'-8'
Viburnum	<i>Viburnum tinus</i>	4'-6'	2'-3'
Japanese Barberry	<i>Berberis thurthun</i>	5'-8'	4'-6'
Flowering Quince	<i>Chaenomeles speciosa</i>	4'-8'	4'-6'
Privet	<i>Ligustrum vulgare</i>	6'-8'	Varies
Indian Hawthorn	<i>Raphiolepis indica</i>	5'-7'	4'-6'
Japanese Yew	<i>Taxus species</i>	Varies	Varies
Burfordi Holly	<i>Ilex crenata</i>	Varies	Varies'

Section 103. Landscaping Requirements

Table F.2
Understory Trees Recommended to be Used Around Retention/Detention Ponds

Common Name	Botanical Name	At Maturity	
		Height	Spread
Amur Maple	<i>Acer ginnala</i>	15'-20'	15'-20'
Japanese Maple	<i>Acer palmatum</i>	15'-25'	15'-25'
Redbud	<i>Cercis canadensis</i>	20'-30'	25'-35'
Flowering Dogwood	<i>Cornus florida</i>	20'-30'	20'-30'
Kousa Dogwood	<i>Cornus kousa</i>	20'-30'	20'-30'
Washington Hawthorn	<i>Crataegus phaenopyrum</i>	25'-30'	20'-25'
Carolina Silverbell	<i>Halesia carolina</i>	30'-40'	20'-35'
American Holly	<i>Ilex opaca</i>	20'-40'	18'-40'
Holly (large types)	<i>Ilex x cultivar</i>	15'-25'	15'-25'
Golden Raintree	<i>Koelreuteria bipinnata</i>	25'-40'	30'-40'
Crape Myrtle	<i>Lagerstroemia indica (x faurei)</i>	18'+	varies
Saucer Magnolia	<i>Magnolia x soulangeana</i>	20'-30'	15'-25'
Sweetbay Magnolia	<i>Magnolia virginiana</i>	20'-30'	25'-35'
Flowering Crabapple	<i>Malus hybrid</i>	varies w/	varies w/
Chinese Pistache	<i>Pistachia chinensis</i>	30'-35'	25'-35'
Flowering Cherry	<i>Prunus species</i>	varies w/	varies w/
Japanese Snowbell	<i>Styrax japonica</i>	20'-30'	20'-30'
'Emerald' Arborvitae	<i>Thuja occidentallis 'Emerald'</i>	15'-25'	5'-10'
American Hornbeam	<i>Corpinus caroliniana</i>	25'-35'	20'-25'

Part G. Landscaping Plan Required.

All proposed developments and expansions of existing development that result in a *high or moderately-high* impervious surface ratio intensity shall submit a landscaping plan for review containing the following information:

1. General location, type, and quantity of plant materials
2. Existing plant materials and areas to be left in the natural state
3. Approved erosion control plan, if required
4. Locations, size and labels for all proposed plants
5. Plant lists with common name, quantity, and spacing and size of all proposed landscaping material at the time of planting
6. Location and description of other landscape improvements, such as islands, earth berms, walls, fences, buffer yards, sculptures, fountains, street furniture, lights, courtyards, or paved areas
7. Planting and installation details
8. Location of proposed buildings
9. Location of vehicular accommodation areas and internal traffic patterns
10. Location of overhead and underground utilities
11. Location of signage
12. Connection of existing streets
13. Zoning and land use of the subject and adjacent properties
14. The landscaping plan shall be drawn to scale and include a North arrow and necessary legends.
15. The location and description of any barriers to be erected to protect any vegetation from damage both during and after construction.

Part H. Time for Installation of Required Landscaping.

1. ***Time limit.*** All landscaping, including mulching and seeding shall be completed in accordance with the approved site plan prior to the issuance of a certificate of occupancy or a certificate of compliance for the site and shall follow the guidelines set forth in Appendix C.
2. ***Extensions and Exceptions.*** The Administrator may grant exceptions and extensions to the above time limit in the following circumstances:
 - a. Extensions may be granted due to unusual environmental conditions such as drought, hurricanes, over-saturated soil, or inappropriate planting season for the plant species, provided the developer or property owner provides the City with a cash bond ensuring the installation of the remaining landscaping. In such cases, the Buildings and Inspections Department may issue a temporary certificate of occupancy for a period of 30 to 180 days, depending on the

Section 103. Landscaping Requirements

Landscaping Superintendent's recommendation for the next earliest planting season. The bond shall be accompanied by documentation of the estimated cost of the remaining landscaping to be completed. The amount of cash bond shall be one and one half (1-1/2) times the cost of the plant material yet to be installed, based on the highest estimate received.

Section 104. Reserved