



Town of Hilton Head Island  
Planning Commission  
LMO Rewrite Committee Meeting

October 10, 2013

8:30 a.m.

Benjamin M. Racusin Council Chambers

## **AGENDA**

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As a Courtesy to Others Please Turn Off All Cell Phones and Pagers during the Meeting.

- 1. Call to Order**
- 2. Freedom of Information Act Compliance**  
Public notification of this meeting has been published, posted, and mailed in compliance with the Freedom of Information Act and the Town of Hilton Head Island requirements.
- 3. Approval of the Agenda**
- 4. Approval of the Minutes** – September 19, 2013 Meeting
- 5. Unfinished Business**
- 6. New Business**
  - a. Review of proposed changes to tree protection regulations
- 7. Adjournment**

Please note that a quorum of Town Council may result if four (4) or more of Town Council members attend this workshop.

TOWN OF HILTON HEAD ISLAND  
Planning Commission  
**LMO REWRITE COMMITTEE MEETING**

Draft

September 19, 2013 Minutes  
8:30a.m. – Benjamin M. Racusin Council Chambers

Committee Members Present: Chairman Tom Crews, Vice Chairman Gail Quick, David Ames, Chris Darnell, Jim Gant, Walter Nester, Kim Likins, *Ex-Officio* and Charles Cousins, *Ex-Officio*

Committee Members Absent: David Bachelder and Irv Campbell

Town Council Members Present: None

Town Staff Present: Teri Lewis, LMO Official  
Rocky Browder, Environmental Planner  
Jill Foster, Deputy Director Community Development  
Kathleen Carlin, Administrative Assistant

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- 1) **CALL TO ORDER**  
Chairman Crews called the meeting to order at 8:30a.m.
- 2) **FREEDOM OF INFORMATION ACT**  
Public notification of this meeting has been published, posted and mailed in compliance with the Freedom of Information Act and Town of Hilton Head Island requirements.
- 3) **APPROVAL OF THE AGENDA**  
The committee **approved** the agenda as presented by general consent.
- 4) **APPROVAL OF THE MINUTES**  
The committee **approved** the minutes of the September 12, 2013 meeting as presented by general consent.
- 5) **NEW BUSINESS**  
Direction related to proposed tree protection regulations  
Chairman Crews welcomed the public and requested that Ms. Teri Lewis make her presentation on behalf of staff.

Ms. Lewis began by providing an update on the committee's upcoming calendar. The September 26<sup>th</sup> committee meeting will be canceled. The committee will meet on Thursday, October 3<sup>rd</sup> to review the Coligny draft. The committee will meet on Thursday, October 10<sup>th</sup> to review Tree Regulations. Ms. Lewis stated that regular weekly meetings will most likely not be needed after that date. The adoption process will most likely begin in late November. The consultants will return for the LMO Rewrite presentation to the Planning Commission and to the Planning &

Development Standards Committee. The LMO Rewrite preliminary report (Executive Summary) is scheduled to be presented to the Planning Commission on Wednesday, October 2<sup>nd</sup>. The presentation will be made in sections: Chapters 1, 2, 8 & 9 will be presented together first, followed by a presentation of Chapters 3 & 4 as well as related definitions, zoning, and use table. This will be followed by Chapters 5, 6, and 7 including Natural Resources.

Following the presentations to the Planning Commission and Planning & Development Standards, the LMO Rewrite will be scheduled for a first reading by Town Council. The new LMO will go before Town Council for second reading all at one time.

Ms. Lewis and Mr. Nester presented statements regarding the process of repealing the old LMO and adopting the new LMO. The committee stated that there are no known issues with Chapters 1, 2, 8, & 9. If the committee is satisfied with these Chapters, follow up communication can be handled via e-mail. Issues should be minor at this point.

The committee and staff discussed the best way to present the new LMO in a way that is not too cumbersome. The committee stated that it would be best to explain what the committee has done and why it was done. They should hit the highlights and main points without going into a great deal of detail.

Mr. Gant stated that the committee's Executive Summary is about three pages long and includes information about the Charter from Town Council (presented at the committee's first meeting on April 8, 2011.) The Executive Summary contains the things that the committee has accomplished and the major changes that have been made to each chapter of the LMO.

The committee discussed the challenges of communicating such a large document. The committee stated that it should be communicated in layers otherwise the process will be too long and tedious. Vice Chairman Quick presented comments regarding the committee's presentation to the Planning Commission. At the completion of the discussion, the committee moved on to tree regulations

Ms. Lewis stated that on September 5<sup>th</sup> the committee met with the consultants to discuss tree regulations. The committee discussed the canopy approach with the consultants and decided that they were not sure that the canopy approach is best for Hilton Head Island. The committee decided that the existing LMO tree regulations are pretty good and perhaps just need to be clarified a bit.

Mr. Browder presented statements regarding the canopy approach and the ACI approach. Mr. Browder stated that the canopy approach is not the best solution for the island. Mr. Browder stated that the committee needs to provide input on ACI. The committee and the staff agreed that some of the consultant's proposed tree protection information is good because it's more specific than what we have now.

The staff needs additional direction from the committee regarding the philosophy of forest management vs. the single tree protection approach. The committee stated that we should keep what we have and follow Mr. Browder's direction (codifying the staff's direction into the existing LMO.) Ms. Lewis stated that the canopy approach does not work well for redeveloped sites. Mr. Darnell and the committee discussed the idea of giving credit to redevelopment sites so that trees can be pulled back off of buildings during a renovation.

Mr. Browder discussed tree protection, tree approval applications, and the mitigation of trees. Mr. Browder and the committee discussed codifying the existing LMO. Mr. Browder stated that he does not believe the ACI approach has ever been a problem for the new development of sites.

The committee recommended that staff tell the consultants to keep more of what currently exists in the LMO; some of the language needs to be tightened up. The committee discussed a hybrid approach (canopy approach & ACI). Mr. Browder stated that the canopy approach is already being used on the island; it should be codified. The language should be developed and brought back to the committee for review.

Mr. Cousins presented statements regarding codifying the language. Mr. Ames and the committee discussed mitigation and a Tree Fund. Mr. Gant presented statements regarding merging the canopy percentage with mitigation requirements (codify the techniques that we are using right now.)

Mr. Darnell stated we should make sure that there is credit available in some form for a developer that has trees on site that are not affected. The committee stated that open areas are also important – give credit for trees that are on site. Mitigation should not only be based on trees that are being removed. Credit should be given to the trees that are already on the site.

Mr. Gant clarified the recommended language - as an alternative to the required mitigation, if the developer can prove maintaining the 900 caliper inches on the property, mitigation will not be required.

Chairman Crews presented statements regarding forest management and canopy approach. The health of the whole forest should be considered. Mr. Nester recommended getting rid of trees that are hazardous; encourage planting better quality trees (other than engineered pines.) We should create a method to encourage someone to take out the engineered pines and replace them with better trees. Mr. Browder presented statements in support of diversity; an upgrade in categories is already offered in the existing LMO. The language needs to be clarified. Mr. Ames presented statements in concern of the visual impact to separation - there needs to be a compromise.

Mrs. Fran White presented comments regarding non-native vegetation that is invasive on trees. Mr. Cousins stated that staff is aware of the non-native vegetation and is looking into ways to deal with the problem.

At the completion of the discussion on tree regulations, the committee requested that Mr. Browder consider the comments and recommendations made by the committee today and formulate draft language for the ordinance for additional review by the committee.

## 7) **ADJOURNMENT**

The meeting was adjourned at 9:50a.m.

Submitted by:

Approved by:

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Kathleen Carlin  
Administrative Assistant

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Tom Crews  
Chairman



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## TOWN OF HILTON HEAD ISLAND

### *Community Development Department*

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**TO:** LMO Rewrite Committee  
**FROM:** Teri Lewis, *LMO Official*  
**DATE:** October 4, 2013  
**SUBJECT:** Proposed Tree Protection Regulations

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The Committee has had several discussions regarding the tree protection regulations. At the meeting on September 19<sup>th</sup> the Committee directed staff to take the best parts of the LMO and the Clarion draft and incorporate the activities of the Environmental Planner into the merged document. Two documents follow this memo:

1. A list of proposed changes or additions
2. A very rough draft of the proposed merged regulations.

The draft is in a very rough format so that you can see what is proposed to be deleted from the Clarion draft (indicated by strikethrough) and what is proposed to be added (new language is highlighted in yellow). There are formatting issues and reference issues that will be corrected by Clarion once we send the document to them. Please review these documents to the best of your ability prior to the meeting on October 10<sup>th</sup>. Rocky Browder and I will go over the proposed changes or additions in detail at that meeting.

## Proposed Changes/Additions to Tree Protection Standards

- Pine trees will be protected at 12" DBH rather than 8" DBH
- The removal of invasive species will be allowed as an exception (will not require a permit and will not require mitigation)
- A reference to Fire Code Section 503.2.1 [***Dimensions.** Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved security gates in accordance with [Section 503.6](#), and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).*] will be added.
- Language will be added to allow applicants to upgrade in Category (i.e. from a Category III tree to a Category I or II tree) or Minimum Tree Size (i.e. planting 5 2-inch trees rather than 10 1-inch trees). Need to decide whether we want to establish a percentage that one can upgrade to in an effort to protect species diversity.
- Take pruning out of the exceptions (since currently a permit is required for pruning/trimming) and have a specific section on pruning. State that mitigation may be required if a tree is trimmed more than 30%.
- Add to the definition of topping that pruning back to live tissue is not considered topping.
- Add a section for trees that have an arboricultural deficiency (i.e. a canker) but are not an imminent danger. They require a permit to be removed but mitigation will not be required.
- Make the portion about golf course tree planting its own section
- Create a canopy approach section: if the canopy of the area where a tree is being removed is covered by at least 2/3 canopy of either upper or lower canopy trees, mitigation will not be required.
- Add 'orange' as another flagging color – this will be for trees that are hazardous and proposed to be removed – these trees will not have to count towards the overall tree replacement

## Sec. 16-1-101. Tree Protection

### A. Purpose and Intent<sup>1</sup>

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The purpose and intent of the standards in this section is to preserve and protect the tree canopy and specimen trees that contribute so much to the ambience, economy, and quality of life on Hilton Head Island. Specifically, the standards are intended to:

1. Lessen air pollution and promote clean air quality by increasing dust filtration;
2. Prevent soil erosion;
3. Improve surface drainage and minimize flooding, and minimize the cost of constructing and maintaining drainage systems necessitated by the increased flow and diversion of surface waters;
4. Conserve energy by reducing heating and cooling costs
5. Ensure that noise, glare, and other distractions of movement in one area do not adversely affect activity within other adjacent areas;
6. Reduce noise, heat, dust, and glare, and their potential impacts on adjacent areas;
7. Provide a visual buffer between adjacent developments and ensure that distractions of movement and other aspects of development do not adversely impact activity in adjacent developments and areas;
8. Beautify and enhance improved and undeveloped land and views from the Town's entryways and streets;
9. Maintain the ambience of the Town and enhance property values; and
10. Treat all sites equitably for the purpose of protecting and replanting trees and maintaining existing tree canopy.

### B. Applicability<sup>2</sup>

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#### 1. General

- a. Except as exempted in subsection 2 below, no person shall cut, destroy, cause to be destroyed, move or remove, transplant, prune, or limb any protected tree in the Town without first receiving approval of a Tree Removal Permit in accordance with the procedures and standards of **Error! Reference source not found.**, **Error! Reference source not found.**, and the standards in this section.
- b. Consistent with the purposes of this section, all persons are encouraged to make all reasonable efforts to preserve and retain any existing stands of trees, individual trees, and other self-supporting plants, whether or not such plants are protected under this section, as well as such other flora that make up part of the understory, shrub layer, or herb layer.<sup>3</sup>

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<sup>1</sup> This carries forward the purpose statement in Sec. 16-6-401 of the current LMO, reorganized to use an easier-to-read list of related benefits.

<sup>2</sup> This carries forward applicability provisions in Sec. 16-6-402.A and B of the current LMO.

<sup>3</sup> Modified to encourage the general preservation of vegetation and incorporate a similar provision in Sec. 16-3-405.B of the current LMO.

- c. Failure to comply with the standards of this section shall be a violation of this Ordinance and subject to the remedies and penalties specified in **Error! Reference source not found. Error! Reference source not found.**

## 2. Exemptions<sup>4</sup>

- a. The following activities are exempt from the standards in this section and the requirement for a Tree Removal Permit:
  - i. Damage or removal of protected trees during an emergency such as a hurricane, tornado, ice or wind storm, flood, wildfire or any other such act of nature;
  - ii. Removal of a dead or naturally fallen tree, or a diseased tree posing a threat to adjacent trees, or a tree that constitutes an imminent danger to the environment, property, public health, safety, or welfare due to the hazardous or dangerous condition of such tree, provided such removal is reported to the Official within 5 days after removal;
  - iii. The selective and limited removal of trees or vegetation within sight triangles (see **Error! Reference source not found., Error! Reference source not found.**) as necessary to obtain clear visibility at street and driveway intersections;
  - iv. Necessary tree removal by a utility company consistent with plans submitted periodically to the Official for approval in accordance with **Error! Reference source not found., Error! Reference source not found.**, provided such plans include appropriate provision for removal of any felled trees;
  - v. Topping of trees on land of the Hilton Head Island Airport for the maintenance of the slope approaches to the airport as referenced in Sec. 16-3-106.E, Airport Overlay (A-O) District;
  - vi. Pre-development underbrushing in accordance with Sec. Sec. 16-1-101.C, Pre-Development Underbrushing; and
  - vii. Tree removal associated with forestry activities shielded from local development regulation in accordance with S.C. Code Ann. § 48-23-205, subject to the limitations on subsequent development in Sec. 16-1-101.D, Limitations on Development Applications Subsequent to Exempt Forestry Activity.
- b. No Tree Removal Permit is required where the proposed tree removal or alteration is reviewed and authorized in accordance with an approved Subdivision Plan (see **Error! Reference source not found.**), Development Plan (Minor or Major) (see **Error! Reference source not found.**), Small Residential Development (see **Error! Reference source not found.**) or Public Project (see

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<sup>4</sup> This modifies the current list of activities exempted from a Tree Removal Permit to add selective removal of vegetation in sight triangles, pre-development underbrushing, and tree removal associated with forestry activities. This last exemption is consistent with the State's Right to Practice Forestry Act (S.C. Code Ann. § 48-23-205) as interpreted by the S.C. Attorney General. That Act, however, does allow local governments to enforce regulations requiring deferred consideration of development applications submitted soon after forestry activities. The addition of underbrushing is intended to clarify the current LMO's apparent authorization of underbrushing prior to development without a Tree Removal Permit.

**Error! Reference source not found.**)—though compliance with the standards in this section is required.<sup>5</sup>

### **C. Pre-Development Underbrushing<sup>6</sup>**

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No underbrushing of property other than single-family lots and public utility easements shall occur before final development approval unless approved by the Official as in compliance with this section.

1. Applicants for final development approval shall schedule an on-site inspection with the Official to explain the extent and purpose of the underbrushing activity. Purposes that will be considered justification for pre-development underbrushing activity include showing property for sale and facilitating surveying work in very densely vegetated areas.
2. In all cases, applicants shall be required to maintain all vegetation in required buffers except for a six-foot-wide path providing access to the interior of the property. Such buffer areas shall be clearly marked and protected prior to the commencement of the underbrushing activity.
3. The intent of this provision is to retain suitable species of native understory (see Administrative Manual) that can be incorporated into landscape plans and development plan approvals so as to conserve water, preserve indigenous plant species and dependent wildlife species, and save the applicant landscaping and irrigation costs.
4. Following the receipt of final development approval, the applicant shall work with the Official to preserve understory in the front and side buffers.
5. Any property owner who fails to abide by this restriction shall be required to restore the affected property to a condition as close to its original condition as practicable.

### **D. Limitations on Development Applications Subsequent to Exempt Forestry Activity<sup>7</sup>**

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Clearing of a site to circumvent the requirements of this section is prohibited. If the forestry exemption in **Error! Reference source not found.**, **Error! Reference source not found.**, is used to remove all or substantially all of the trees that would have been protected by this section pursuant to a development application, no such application shall be accepted for a period of one year after completion of the timber harvest, or for a period of five years after completion of the timber harvest if the tree removal constituted a willful violation of this section.

#### **Sec. 16-3-404. - Tree Protection Approval Application**

##### **A.**

A tree protection approval application **for new development** shall include the following items:

- 1.

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<sup>5</sup> This recognizes that review for compliance with tree protection regulations is incorporated into the review of these general development applications.

<sup>6</sup> This carries forward provisions in Sec. 16-6-402.C of the current LMO, which apparently authorizes certain tree and vegetation removal without a Tree Removal Permit.

<sup>7</sup> This is a new provision authorized by S.C. Code Ann. § 48-23-205(C)(1) to deter abuse of the statutory exemption of forestry activities from local tree protection regulations.

- An application form as published by the Administrator and appropriate fee as required by [Sec. 16-3-105](#)
2. A complete tree survey, as described in [Sec. 16-3-405](#)
  3. A brief written narrative of proposed plans for tree protection and replacement;
  4. A complete tree tally sheet listing trees by category (See [Sec. 16-6-407](#)).
  5. A complete site development plan showing utility lines, grading activities, and building elevations in relation to existing trees and denoting trees to be removed with an "X";
  6. Replacement or supplemental tree planting schedule, if required.

B.

Persons applying for **redevelopment** or alteration to existing development may submit a sketch of the trees on the site and the proposed building in lieu of numbers 2, 4, 5, and 6 above. Tree planting requirements for this activity shall be based **on either:**

1. **the size and species of trees removed with the ability for the Official to apply the canopy growth approach (ref section #XX, canopy growth approach) or**

2. **the 900 ACI .**

C.

Public projects shall submit items 1, 2, 3, 5, and 6. A count of the number of trees removed in each Category that are 12 inches in DBH or greater shall be submitted in lieu of item 4. Tree planting requirements will be based on this count at the replacement rate of one tree for every ten inches in DBH removed by category or **using the canopy growth approach as described in Sec #xx canopy growth approach. Size of trees shall be as required in [Sec. 16-6-406.E.](#) and the applicant will be able to upgrade in inches or category as described in Section XX.**

**Sec. 16-3-405. - Tree Survey**

A. Road rights-of-way, single family subdivisions, athletic fields, airport runways and golf courses shall be exempt from the minimum standard of tree coverage, as described in Sec. 16-6-406. The applicant shall, however, make all reasonable efforts to save significant trees and stands of trees. In these cases, at the discretion of the Administrator, a centerline field inspection may relieve the applicant of the tree survey requirement. Reasonable tree replanting may be required by the Administrator for these uses.

B. The tree survey shall be in the form of a map or a site plan prepared and sealed by a registered land surveyor within 2 years of the date of application. The survey shall be at the same scale as the required site development plan and shall include the following information:

1.

The location of all **Category I, II and IV** trees 6 inches DBH or greater **and Category III trees 12 inches DBH or greater** within the areas to be modified and 25 feet beyond in each direction or to the property line, whichever is less;

2.

Any trees less than 6 inches DBH which the applicant wishes to count toward the minimum standard of tree coverage on the site; and

3.

The species and DBH of all trees.

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## E. Specimen Tree Preservation<sup>8</sup>

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### 1. Specimen Tree Defined<sup>9</sup>

For purposes of this section, a specimen tree is any tree of a species designated by the State or federal government as an endangered, threatened, or rare species, or any tree of a type and with a DBH exceeding that indicated in Table 16-6-104.F.1, Specimen Trees, for the tree type.

**TABLE 16-6-104.F.1: SPECIMEN TREES**

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<sup>8</sup> This carries forward the standards in Sec. 16-6-608 and Sec. 16-6-41o of the current LMO, clarifying that specimen trees are generally required to be preserved.

<sup>9</sup> This carries forward the list from Sec. 16-6-408 of the current LMO.

TREE TYPE		DBH (INCHES)
Live oak	Single trunk	35
	Multiple trunks	60 (sum of all trunks)
Laurel oak		35
Water oak		30
Red oak		25
White oak		20
All hickories		20
American elm		15
Loblolly and slash pines		25
Longleaf and pond pines		15
Red bay		20
Southern magnolia		30
Bald cypress and pond cypress		15
Black gum and sweet gum		30
Red maple		30
Spruce pine		Any size
Red cedar		20
Sycamore		30
Black cherry		25
Sassafras		12

## 2. General Requirements

- a. No specimen tree may be removed except in accordance with paragraph b below. In addition, all specimen trees shall have the following protections, whether located on public or private land:
  - i. Any activities performed within the drip line of a specimen tree shall have the prior approval of the Official.
  - ii. Specimen trees shall not be cut, removed, pushed over, killed, or otherwise harmed.
  - iii. The area within the drip line of any specimen tree shall not be subject to paving or soil compaction greater than ten percent of the total area within the drip line, or within 12 feet of the tree trunk. (See Figure 16-6-104.F.4: Limits of Paving or Compaction near Specimen Trees.)

- b. If preservation of a specimen tree causes unnecessary hardship, the applicant may apply for a variance from this subsection (see **Error! Reference source not found.**, **Error! Reference source not found.**) once any required State or federal government agency approval to remove the tree is received in writing.

**Sec. 16-6-406. - Requirement for Minimum Standard of Tree Coverage**

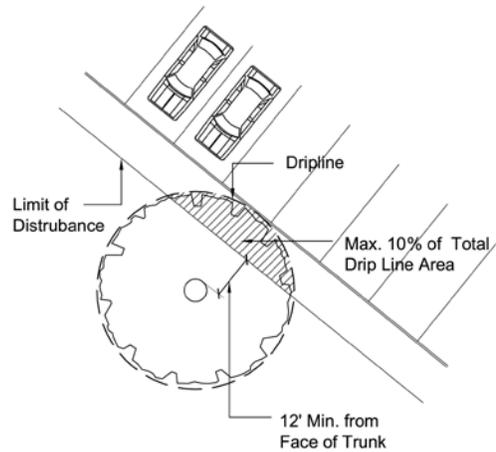
A.

All **new development** sites except for public projects shall have a minimum standard of tree coverage at maturity of 900 Adjusted Caliper Inches (ACI) of trees per acre of pervious surface area. This minimum standard, shall be based upon the total site acreage less the maximum impervious surface required for the respective land use. **Redevelopment sites have the option to either meet the minimum standard stated above or meet replacement numbers based on what is being removed by category.**

EXAMPLE: A 2-acre site in a PR, Parks and Recreation District, is permitted a maximum impervious surface coverage of 45 percent or 0.9 acres. This leaves 1.1 acres of pervious surface. Multiplied by 900 adjusted standard of 990 adjusted caliper inches which mu

B.

To arrive at the ACI of trees on the site, the following Tree Value Factors shall be multiplied by the respective DBH in inches in each category as listed in the Tree Equivalency Table, [Sec. 16-6-407](#) and then totaled:



EXAMPLE: Site has 200 inches of Category I trees; 550 inches of Category III; 100 inches of Category IV for a total pre-development tree value ACI of 1,147.5 for this site.

Figure 16-6-104.F.4: Limits of Paving or Compaction near Specimen Trees

Category	Tree Value Factors	
Category I (highest)	Broad-leaved Evergreen Overstory Hardwoods and Endangered Species	1.00
Category II	Deciduous Overstory Hardwoods and Broad-leaved Evergreen Understory	0.75
Category III	Cone-Bearing Evergreens	0.50
Category IV	Ornamentals and Palms	0.25

C.

Supplemental planting shall be at 15 percent of the difference between the minimum standard ACI less the pre-development ACI on the site.

**EXAMPLE:** The site has 1,147.5 ACI pre-development (which is greater than the site requirement of 990 ACI, so no supplemental planting is required). If, however, the site had 800 ACI pre-development, it would be 190 inches below the site requirement. Multiplying  $190 \times .15 = 28.5$  inches of trees to be planted to raise the site to the minimum standard.

D.

Replacement planting shall be at 30 percent of the difference between minimum standard ACI and the ACI of trees remaining after construction.

**EXAMPLE:** If the site has 500 ACI after development:  $990 - 500 = 490 \times .30 = 147$  inches must be replaced.

E.

All supplemental and replacement trees shall be at least 10 feet tall and have a trunk diameter of not less than 2 inches when planted for Categories I and II and a least 6 feet tall and have a trunk diameter not less than 1 inch when planted for Categories III and IV. Wax myrtles must be a minimum of 4 feet tall and have the largest stem not less than 1 inch in diameter. Planting, staking, mulching and care of all supplemental and replacement trees shall be according to the guidelines of the International Society of Arboriculture, as published in the Arborist Certification Guide.

F.

Since it is desirable that planting of trees be compatible with the site and with neighboring sites, and that native trees are preferred to naturalized, planting shall be in the same Category as those removed or higher.

G.

All buffers required in [Chapter 5](#) shall have a minimum of 900 ACI per acre; no more than 80 percent of a site's required ACI can be met in the buffer areas.

H.

Within 120 days following the issuance of a Temporary Certificate of Compliance, supplemental and replacement trees shall be planted consistent with the requirements of the tree approval, or a Final Certificate of Compliance shall not be issued.

I.

After development is complete, the Administrator shall continue to make random inspections to insure that all existing trees of protected size as well as replacement and/or supplemental trees are maintained. Tree planting shall be required should any of these trees die, be removed, or be destroyed at any time after completion

of development. This regulation applies to all projects regardless of the date the development permit or development approval was issued.

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The minimum protection size for Categories I and II is 6 inches in Diameter at Breast Height (DBH), for Category III is 12 inches in DBH and for Category IV is 2 inches in DBH.

1.

**Sec. 16-6-403. - Tree Marking**

A.

Prior to any tree removal or commencement of construction on a site, the following uniform colored ribbon system shall be used:

1.

Blue for trees to be saved

2.

Red for trees to be removed

3. Orange for hazard trees that will not be counted in the survey.

B.

In heavily wooded areas, the Administrator may give permission to mark large groups of trees to be removed or saved with appropriately colored ribbon along the perimeter of the area.

**Sec. 16-6-407. - Tree Equivalency Table**

The purpose of the following Tree Equivalency Table is to illustrate the relative value of broad groups of trees, as well as individual trees; provide guidance in choosing trees; and provide guidance in selecting trees to supplement inadequate buffers.

Tree Equivalency Table	
CATEGORY I: Broad-leaved Evergreen Overstory Hardwoods and Endangered Species	
American Holly	<i>Ilex opaca</i>
Bald Cypress	<i>Taxodium distichum</i>
Laurel Oak	<i>Quercus laurifolia</i>
Live Oak	<i>Quercus virginiana</i>
Loblolly Bay	<i>Gordonia lasianthus</i>
Pond Cypress	<i>Taxodium ascendens</i>

Spruce Pine	<i>Pinus glabra</i>
Southern Magnolia	<i>Magnolia grandiflora</i>
<b>Tree Equivalency Table</b>	
CATEGORY II: Deciduous Overstory Hardwoods and Broad-leaved Evergreen Understory	
American Beech	<i>Fagus grandifolia</i>
American Elm	<i>Ulmus americana</i>
American Hornbeam	<i>Carpinus caroliniana</i>
American Sycamore	<i>Platanus occidentalis</i>
Bitternut Hickory	<i>Carya cordiformis</i>
Black Cherry	<i>Prunus serotina</i>
Black Gum	<i>Nyssa sylvatica</i>
Black Willow	<i>Salix nigra</i>
Boxelder	<i>Acer negundo</i>
Buckthorn Bumelia	<i>Bumelia lycioides</i>
Carolina Ash	<i>Fraxinus caroliniana</i>
Carolina Basswood	<i>Tilia caroliniana</i>
Carolina Buckthorn	<i>Rhamnus caroliniana</i>
Carolina Silverbell	<i>Halesia carolina</i>
Carolina Willow	<i>Salix caroliniana</i>
Common Persimmon	<i>Diospyros virginiana</i>
Dahoon Holly	<i>Ilex cassine</i>
Devilwood	<i>Osmanthus americanus</i>
Eastern Cottonwood	<i>Populus deltoides</i>
Eastern Hophornbeam	<i>Ostrya virginiana</i>
Florida Basswood	<i>Tilia floridana</i>
Florida Maple	<i>Acer barbatum</i>
Hercules Club	<i>Zanthoxylum clava-herculis</i>
Honeylocust	<i>Gleditsia triancanthos</i>
Mockernut Hickory	<i>Carya tomentosa</i>
Overcup Oak	<i>Quercus lyrata</i>
Pecan	<i>Carya illinoensis</i>
Pignut Hickory	<i>Carya glabra</i>
Post Oak	<i>Quercus stellata</i>
Red Buckeye	<i>Aesculus pavia</i>
Red Maple	<i>Acer rubrum</i>
Red Mulberry	<i>Morus rubra</i>

Redbay	<i>Persea borbonia</i>
River Birch	<i>Betula nigra</i>
Sand Hickory	<i>Carya pallida</i>
Sassafras	<i>Sassafras albidum</i>
Scrub Hickory	<i>Carya floridana</i>
Southern Bayberry	<i>Myrica cerifera</i>
Southern Red Oak	<i>Quercus falcata</i>
Sugarberry	<i>Celtis laevigata</i>
Swamp Chestnut Oak	<i>Quercus michauxii</i>
Swamp Cottonwood	<i>Populus heterophylla</i>
Sweet Gum	<i>Liquidamber styraciflua</i>
Sweetbay	<i>Magnolia virginiana</i>
Tough Bumelia	<i>Bumelia tenax</i>
Tupelo	<i>Nyssa biflora</i>
Turkey Oak	<i>Quercus laevis</i>
Water Hickory	<i>Carya aquatica</i>
Water Oak	<i>Quercus nigra</i>
Water Tupelo	<i>Nyssa aquatica</i>
Waterlocust	<i>Gleditsia aquatica</i>
White Oak	<i>Quercus alba</i>
Yaupon Holly	<i>Ilex vomitoria</i>

**Tree Equivalency Table**

**CATEGORY III: Cone-Bearing Evergreens**

Eastern Red Cedar	<i>Juniperus virginiana</i>
Loblolly Pine	<i>Pinus taeda</i>
Long Leaf Pine	<i>Pinus palustris</i>
Pond Pine	<i>Pinus serotina</i>
Slash Pine	<i>Pinus elliotii</i>
Shortleaf Pine	<i>Pinus echinata</i>
Southern Red Cedar	<i>Juniperis silicicola</i>

**Tree Equivalency Table**

**CATEGORY IV: Ornamentals, Palms, and Small Understory Trees**

American Plum	<i>Prunus americana</i>
Cabbage Palmetto	<i>Sabal palmetto</i>
Carolina Laurelcherry	<i>Prunus caroliniana</i>
Chickasaw Plum	<i>Prunus angustifolia</i>

Common Sweetleaf	<i>Symplocos tinctoria</i>
Crepe Myrtle	<i>Lagerstroemia indica</i>
Dahoon Holly	<i>Ilex cassine</i>
Eastern Coralbean	<i>Erythrina herbacea</i>
Eastern Redbud	<i>Cercis canadensis</i>
Flatwoods Plum	<i>Prunus umbellata</i>
Florida Chinkapin	<i>Castanea floridana</i>
Flowering Dogwood	<i>Cornus florida</i>
Fringetree	<i>Chionanthus virginicus</i>
Littlehip Hawthorn	<i>Crataegus spathulata</i>
Parsley Hawthorn	<i>Crataegus marshallii</i>
Possumhaw Holly	<i>Ilex decidua</i>
Southern Crab Apple	<i>Malus angustifolia</i>
Sparkleberry	<i>Vaccinium arboreum</i>
Swamp Dogwood	<i>Cornus stricta</i>
Witch Hazel	<i>Hamamelis virginiana</i>

## F. Tree Protection Zones

1. Tree protection zones shall generally include the areas of a development site that is within the drip lines of the all individual trees and stands of trees proposed to be retained and protected in accordance with Sec. 16-1-101.A.1, , and O, , as well as areas for any planted, relocated, or replacement trees proposed to be provided in accordance with Sec. 16-1-101.A, , or Sec. 16-1-101.H, Tree Damage During Development.
2. The Official may modify tree protection zone boundaries to locate them within the drip lines of protected trees near development areas where the development application proposes special protective measures to prevent damage to the protected tree's canopy and root system during development activity and to mitigate potential adverse impacts of nearby development on the health and survival of the protected tree. Such measures may include, but are not limited to: extended use of the tree protection measures listed in Sec. 16-1-101.G.3, Tree Protection Zone Encroachments, outside the tree protection zone; constructing tree wells; installing aeration and drainage systems; using hand labor to remove soil around root systems and prune roots; tunneling or boring utility lines under root systems; designing adjacent structures and rooflines to accommodate and incorporate tree trunk and canopy growth; using pervious pavement; and incorporating pre- and post-construction programs for fertilization, watering, and canopy and root maintenance.
3. Tree protection zones shall be depicted on all development plans.
4. Within tree protection zones, specimen trees and trees making up existing tree canopy may be removed only if they are certified by an arborist or other qualified

professional as severely diseased, high risk, or dying, or in accordance with Sec. 16-1-101.A, .

## **G. Tree Protection During Development Activity<sup>10</sup>**

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### **1. Responsibility**

During any development activity (including demolition activity), the property owner or developer shall be responsible for protecting existing or replacement trees within a tree protection area.

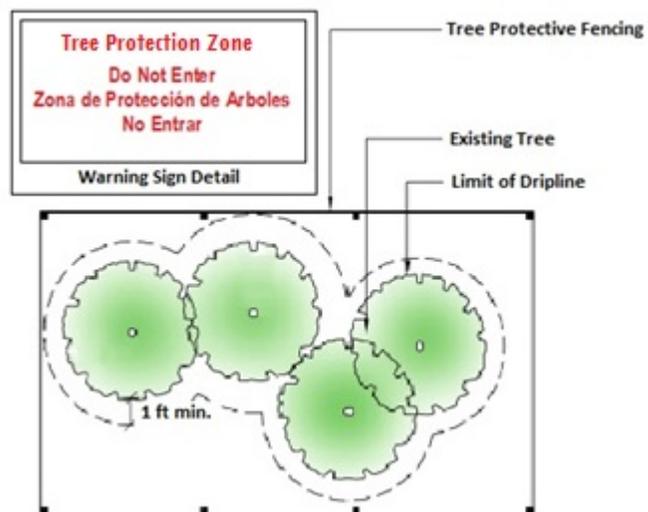
### **2. Protective Fencing, Marking, and Signage**

#### **a. Protective Fencing**

- i. Continuous tree protective fencing shall be provided along the boundaries of tree protection zones. The Planning Director shall consider existing site conditions and the species and size of the trees to be protected in determining the exact location of tree protective fencing, and may require the fencing to be extended to include the critical root zones of trees.
- ii. Protective fencing shall consist of a bright orange plastic mesh or more durable material that is at least four feet high.

#### **b. Warning Signage**

Warning signs shall be installed along any required tree protective fencing at points no more than 150 feet apart. The signs shall be clearly visible from all sides of the outside of the fenced-in area. The size of each sign must be a minimum of two feet by two feet. The sign message shall identify the fenced or marked area as a tree protection zone and direct construction workers not to encroach into the area (e.g., "Tree Protection Zone: Do Not Enter").



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<sup>10</sup> This substantially expands the tree protection requirements in Sec. 16-4-603-4 of the current LMO.

Figure 16-6-104.J.2: Tree Protective Fencing and Signage.

**c. Duration of Protective Fencing or Signage**

Required protective fencing and signage shall be erected before any grading or other development activity begins and shall be maintained until issuance of a Certificate of Compliance following completion of all development in the immediate area of the fencing or signage.

(See Figure 16-6-104.J.2: Tree Protection Fencing and Signage.)

**3. Tree Protection Zone Encroachments and Protective Measures**

Encroachments into tree protection zones may occur only when no other alternative exists, and shall comply with landscaping best management practices and the following limitations and requirements:

**a. Construction Activity, Equipment, or Materials Storage**

No development or demolition activity—including grading, the operation or parking of heavy equipment, or the storage of material—shall be allowed within the tree protection zone.

**b. Soil Compaction**

Where compaction might occur due to construction traffic or materials delivery through a tree protection zone, the area must first be mulched with a minimum four-inch layer of wood chips. Equipment or materials storage shall not be allowed within a tree protection zone.

**c. Fill, Retaining Walls, and Drywells**

No fill shall be placed within a tree protection zone unless retaining walls and drywells are used to protect trees to be preserved from severe grade changes and venting adequate to allow air and water to reach tree roots is provided through any fill.

**d. Chemical Contamination**

Trees located within a tree protection zone shall be protected from chemical contamination from liquids or other materials, including but not limited to paint, chemical solvents, gasoline, oil, diesel fuel, hydraulic fluid, concrete spoils, or rinse water from vehicle cleaning, including rinsing of concrete truck tanks and chutes.

**e. Impervious Surface**

No impervious surface is allowed within a tree protection zone.

**f. Trenching Prior to Clearing**

The removal of trees adjacent to tree protection zones can cause inadvertent damage to the protected trees. Prior to clearing activities, trenches with a minimum width of one-and-one-half inches and a minimum depth of 12 inches shall be cut along the limits of land disturbance, so as to cut, rather than tear tree roots.

**4. Inspections**

- a.** All tree protection measures shall be inspected by the Official before start of any land disturbing activities and during the development process. The Official may continue to conduct random inspections to ensure that retained trees, supplemental trees, and replacement trees are maintained in a healthy state.
- b.** If any tree protected by this section is removed, dies, or is destroyed at any time during development activities or after completion of the development, it shall be replaced in accordance with Sec. 16-1-101.I, Standards for Supplemental and Replacement Trees.

**H. Tree Damage During Development<sup>11</sup>**

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- 1.** If a specimen tree or other existing tree to be preserved under the tree protection plan is damaged during development of the development site, an arborist or other qualified professional shall, at the expense of the applicant, assess the damage and provide a written report to the Official that documents the following:
  - a.** Severity of the tree damage;
  - b.** Determination on whether corrective measures can be taken to save the tree or whether the tree has been damaged beyond repair; and
  - c.** Any corrective measures recommended to ensure the tree's survival (e.g., pruning damage to tree canopy, root pruning, fertilization, soil enhancements for damage to tree roots, and application of irrigation to compensate for root loss).
- 2.** If the assessment concludes that the tree can survive with corrective measures, the applicant shall promptly have recommended corrective actions undertaken by an arborist or other qualified professional. Such corrective measures shall be completed before issuance of a Certificate of Compliance for the development.
- 3.** If the assessment concludes that a tree has been damaged beyond repair, the tree shall be replaced with one or more trees that shall comply with the standards in Sec. 16-1-101.I, Standards for Supplemental and Replacement Trees.

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<sup>11</sup> This is a new subsection intended to hold an applicant accountable for damage done to protected trees during development.

## I. Standards for Replacement Trees<sup>12</sup>

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Trees required by this section to replace removed protected trees shall comply with the following standards.

### 1. Location

Replacement trees shall be planted within the tree protection zone or, where the tree protection zone does not contain sufficient area, within any other part of the development site. If the site is within a PUD, the Official may allow replacement trees to be planted on adjoining open space or other open space within the same PUD.

### 2. Native Species Required

Replacement trees shall be species native to Hilton Head Island (see the list of acceptable native plant species in the Administrative Manual).

### 3. Replacement Rate, Tree Category, Planting Size<sup>13</sup>

- a. Trees that are removed shall be replaced **at the rate of one tree for every ten inches removed per category**. Supplemental and replacement trees shall be within the same or lower-numbered tree category (see Sec. 16-1-101.A.1, ) as the trees being replaced.
- b. At the time of planting, supplemental and replacement trees shall have the minimum height and trunk diameter shown in Table 16-6-104.L.3 for the category of the tree.

TABLE 16-6-104.L.3: MINIMUM PLANTING SIZE FOR SUPPLEMENTAL AND REPLACEMENT TREES		
TREE CATEGORY	MINIMUM HEIGHT (FEET)	MINIMUM TRUNK DIAMETER (INCHES)
Category I	10	2
Category II	10	2
Category III	6	1
Category IV	6	1

### 4. Planting Standards

Planting, staking, mulching, and care of all supplemental and replacement trees shall be in accordance with the guidelines of the International Society of Arboriculture, as published in the latest edition of the Arborist Certification Study Guide.

### 5. Timing

Replacement trees for trees removed pursuant to Sec. 16-1-101.A, , shall be planted before issuance of a final Certificate of Compliance. All other replacement trees shall

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<sup>12</sup> This carries forward, consolidates, and expands various provisions regarding replacement tree in Art. IV of Chapter 6 of the current LMO. It adds requirements that replacement trees be of native species and of the same or higher category as the tree being replaced.

<sup>13</sup> This carries forward planting standards for supplemental and replacement trees in Sec. 16-6-406.D-F of the current LMO. As incentive to preserve rather than replace existing trees where possible, it adds requirements that removed trees be replaced at greater than a 1:1 ratio.

be planted within 120 days after removal of the tree being replaced. The Official may extend this time period into accommodate the planting season (October 1 through June 1).

## **J. Tree Mitigation Fee<sup>14</sup>**

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### **1. General**

The tree mitigation fee is established to allow the future planting of replacement trees removed for development in limited cases where this section's requirements for retention of existing tree canopy or preservation of specimen trees cannot be reasonably achieved (see Sec. 16-1-101.A, ), and to allow the future planting of trees following a disaster.

### **2. Airport**

On Hilton Head Island Airport property, The Official may allow a tree mitigation fee payment to be paid in lieu of the removal of trees beneath the side and approach slopes to the airport runway on determining that adequate buffers are being established in addition to those required in **Error! Reference source not found.**, **Error! Reference source not found.**, and **Error! Reference source not found.**, **Error! Reference source not found.**

### **3. Amount of Fee**

The tree mitigation fee shall be calculated by the Official based on the cost of the required replacement trees, the cost of planting them, and the cost of maintaining them for one year. Such costs shall be determined based on the average of three cost estimates received from local landscaping firms or through pricing information available through a project completed no more than one year earlier.

### **4. Timing of Fee Payment**

All required tree mitigation fees shall be paid prior to Development Plan approval.

### **5. Tree Replacement Fund**

- a.** The Town shall establish and maintain a separate accounting fund for the deposit of tree mitigation fees paid in lieu of providing required replacement trees. Such funds need not be segregated from other Town monies for banking purposes. Any yield on such accounting fund shall accrue to that fund and shall be used for the purposes specified for the fund.
- b.** The Town shall maintain and keep financial records for such accounting fund showing the revenues to such fund and the disbursements from such fund, in accordance with normal Town accounting practices. The records of such fund shall be open to public inspection in the same manner as other financial records of the Town.
- c.** Monies from the tree replacement fund shall only be spent on planting of trees on publicly owned and maintained property. Qualifying debits include the cost

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<sup>14</sup> This carries forward Sec. 16-6-409 of the current LMO, modified to refer to allowed use of the tree mitigation fee where standards in this section are waived and tree replacement is not practicable.

of the trees, cost of installation of the trees, and cost of one year of maintenance for the trees.