

**VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL**

**VILLAGE OF DEERFIELD**

**TREE PRESERVATION**

**ADMINISTRATIVE MANUAL**

Approved by Ordinance No. \_\_\_\_\_

# VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

## PURPOSE

THIS MANUAL HAS BEEN PREPARED AT THE DIRECTON OF THE VILLAGE BOARD OF TRUSTEES AS PROVIDED IN ORDINANCE \_\_\_\_\_. THESE REQUIREMENTS AND PROCEDURES ESTABLISH A COMPREHENSIVE PROCESS FOR THE COMMUNITY DEVELOPMENT DEPARTMENT AND THE PUBLIC WORKS DEPARTMENT TO FOLLOW IN THE FULFILLMENT OF ITS ROLE IN THE ADMINISTRATION OF THE ORDINANCES OF THE VILLAGE OF DEERFIELD.

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## VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

### I. Tree Preservation Standards

#### A. Purpose

The protection and preservation of trees in the Village of Deerfield will only be successful if specific standards are implemented in order to guide the tree preservation process. The standards will provide applicants for tree removal permits with a clear understanding of the key elements of tree preservation. These key elements include identifying trees that are the best species, trees that are the healthiest, and trees that can truly be saved during the construction process. Species groups that are recognized as being suited to the Chicago region have been identified. Trees will be evaluated for their health and form. Specific criteria have been developed to help determine the survivability of trees in construction situations.

#### B. Species Groups

Appendix E contains a Species Rating Guide. The Species Rating Guide is based on the publication "Species Ratings and Appraisal Factors for Illinois" by the Illinois Arborist Association, 1994. The guide is divided into three groups: A, B, and C.

The species groups are defined as:

Species Group A – Trees rated as 70 or above on the IAA rating system. This includes trees such as bur oak, shagbark hickory, sugar maple, and hackberry.

Species Group B – Trees rated as 50 or 60 on the IAA rating system. This includes trees such as silver maple, black walnut, and Austrian pine.

Species Group C – Trees rated below 50 on the IAA rating system. This includes trees such as boxelder maple, slippery elm, and Scotch pine.

Species that are not specifically listed in the IAA rating system will be evaluated by the Village Forester and valued accordingly.

The Species Rating Guide is intended to provide applicants for a tree removal permit to gain an understanding of the general quality of the species of tree or trees that are to be removed. This is particularly important for applicants that are proposing lot redevelopment or that are applying for a lot improvement so that the effort can be made to preserve the best species of trees.

#### C. Inventory

All applicants for a tree removal permit, especially those proposing lot redevelopment or lot improvement, should make special effort to preserve trees that are protected under Ordinance No. . All applicants for a tree removal permit are required to provide information on the species, size, condition, form, observed problems, and location of the protected tree or trees to be removed. Appendix D includes a Tree Condition and Form Rating Guide to assist all applicants in determining the condition and form of the trees to be included in the inventory.

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For applicants who are proposing lot redevelopment or lot improvement, the inventory of public trees and protected trees on a site is a fundamental step in assessing the opportunities for development and tree preservation. All public trees adjacent to the subject site or that could be impacted by the proposed construction and all protected trees on the subject property and all protected trees on adjacent properties that are within 10’ of the subject property line or whose critical root zone extends into the subject property shall be included. All trees equal to or greater than eight inches (8”) in diameter at breast height (DBH), measured at four and one-half feet (4.5’) above ground line shall be included. Data collected shall include species, size (D.B.H.), condition, form and any observed problems and shall be listed in the Action Plan (see III below). The protected trees shall be numbered in the field and located on the Lot redevelopment Plan.

For applicants who are applying for an ad hoc tree removal permit and that are not proposing lot redevelopment or lot improvement the inventory shall include all public trees that are proposed for removal and all protected trees that are proposed for removal on their property. All protected trees equal to or greater than eight inches (8”) in diameter at breast height (DBH), measured at four and one-half feet (4.5’) above ground line shall be included. Data collected shall include species, size (D.B.H.), condition and form and shall be listed on the Permit Application Form (see Appendix A). The protected trees shall be numbered in the field and located on a sketch of the property that will be submitted with the application.

For applicants who are applying for a demolition permit, the inventory shall include all public trees adjacent to the subject site and all protected trees on the subject site. Data collected shall include species, size (D.B.H.), condition and form.

**D. Tree Survey**

A tree survey showing the location of all trees inventoried by tag number shall be submitted on the lot plan with all applications for lot redevelopment, lot improvement or demolition.

**E. Preservation Criteria**

These criteria pertain only to applicants for a tree removal permit that are proposing lot redevelopment or lot improvement. In order for a tree to be considered preserved, all of the following criteria must be met:

**Table 1: Preservation Criteria**

	Undisturbed		Undisturbed
	Critical Root Zone	<b>AND</b>	Critical Root Zone
	Area		Circumference
Species Group A	85%		75%
Species Group B	75%		60%
Species Group C	75%		60%

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The *critical root zone* (CRZ) is defined as a circle around a tree with one foot of radius for every one inch of tree diameter at breast height (DBH).

The *undisturbed critical root zone area* is equal to the percentage of the area of the critical root zone in which there is no alteration of the natural grade (including, but not limited to, filling, excavation, trenching.)

The *undisturbed circumference* is equal to the distance along the critical root zone circumference between the disturbed critical root zone areas (including, but not limited to filling, excavation, and trenching) which intersect the circumference. The distance shall exclude all of the disturbed area at the circumference.

In addition, to the undisturbed critical root zone area and circumference, in order to qualify as a preserved tree, the critical root zone must be free of any influences outside it that may affect the health of the tree (including, but not limited to, site drainage alteration). The developer must comply with any maintenance and preparation requirements (including, but not limited to, watering, mulching, root pruning, limb pruning, fertilizing, fencing, etc.) as determined by the Village at the time of any approvals. This may include additional requirements at the time of plan approval, if applicable. The Village shall have the right to request notification of upcoming maintenance, as well as records detailing performed maintenance, to confirm that maintenance is being performed properly.

Trees that meet the criteria of this section shall be considered preserved. Trees that do not meet the criteria of this Section shall not be considered preserved and shall be mitigated.

### (1) Criteria for Retention

The Village may consider a variety of criteria in determining the individual trees that are to be retained for preservation. Preserved trees must meet the standards listed above. In addition, the Village may consider the condition of individual trees, tree groupings, appearance, the overall diversity of tree species and sizes on the parcel, and the long term viability of the trees on the site in determining the specific trees to be retained. Final plans for tree retention shall be included in the lot redevelopment plan approvals as appropriate.

### (2) Tree Preservation Plan

Tree retention and mitigation shall be considered as part of the development review process. A tree preservation plan shall be submitted at a scale consistent with the engineering plans. The plan shall include the location and tag number of all existing trees required to be inventoried, existing and proposed structures, grading, all utilities, and the location of the tree protection fence and silt fence. The plan shall also contain an action plan that indicates the percent of critical root zone saved, the trees to be removed, preserved, root pruned, crown pruned, fertilized, mulched, and any other

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proposed horticultural activities. The plan shall also include the location of all construction fencing, tree preservation fencing and silt fencing.

### II. Tree Preservation/Removal

A tree removal permit is required for the removal of ANY public tree or protected tree in the Village of Deerfield. A tree removal permit (Appendix B) will be issued only upon the completion and approval of a Tree Removal Permit Application Form (Appendix A).

**The following outline is a general description of the order in which the applicant should proceed:**

As a precondition to the issuance of a demolition or tree removal permit, an applicant is required to submit a demolition plan, a lot redevelopment plan, or a lot improvement plan as appropriate. The plan shall be as specified below:

#### **A. LOT REDEVELOPMENT AND LOT IMPROVEMENT PLANS**

##### **I. INVENTORY**

Complete the tree inventory and tree survey as noted above.

##### **II. PLAN FORMAT**

The tree inventory will be superimposed on the engineering plan done in accordance with Engineering Department Specifications.

##### **III. REQUIREMENTS OF THE PLANS FOR LOT REDEVELOPMENT AND LOT IMPROVEMENT**

**NOTE: All plans must include:**

- 1. General Plan Notes (Appendix C-3)**
- 2. Certification/Plan Approval/Pre-Construction Form (Appendix C-4)**
- 3. Action Plan (Appendix C-5)**
- 4. Plan Details (Appendix C-6)**

A. **Tree Preservation:** The following items must be on the plan that is submitted for staff review. The Village may provide that the tree survey exclude those portions of the site that it determines will not be affected by development activity.

1. For each tree eight inches (8") diameter breast height (DBH) or larger, the Plan shall show:
  - (a) location
  - (b) species

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- (c) trunk diameter DBH (diameter at 4.5' above ground level)
  - (d) condition
  - (e) critical root zone
2. The plan shall include an action plan (See Appendix C-5). If any trees are to be removed, then a tree removal permit application must be completed and submitted with the lot redevelopment or lot improvement plan (See Appendix A).
  3. Identify locations of the required tree protection/construction envelope and erosion control fencing on the plan.
    - (a) The tree protection/construction envelope fencing must run continuously along the frontage from property line to property line to completely separate the construction area and the vegetation that remains close to the construction site. Such fencing may be wood slat fencing at least four (4) feet in height and shall be secured to metal posts driven into the ground and spaced five (5) to seven (7) feet apart.
    - (b) Separate fencing may be required for protecting certain individual trees. This fencing must connect to the construction envelope fencing, a property line, or completely enclose the sensitive area.

NOTE: All fencing will remain in place until the time of finish grading and landscaping and can only be removed upon review and approval by the Village Forester.

4. Indicate specific pre-construction measures, including but not limited to auguring, root pruning, crown reduction and mulching that are to be taken to minimize construction impact on those trees remaining on the site.
5. Indicate areas for the storage of spoil or materials on the plan.

### B. Erosion Control Requirements

1. The plan must show conformance to all erosion and water management regulations.
2. The plan shall include provisions and a time schedule for restoring grass and lawns or for other erosion control measures.
3. A site visit by the Village Engineer and the Village Forester is required to inspect the following items in order to determine if appropriate measures have been taken to preserve the maximum number of trees.
  - (a) The following items must be staked out and marked with existing and proposed grades prior to the site visit:
    - (1) All corners of structures
    - (2) Center line of proposed utilities
    - (3) Proposed driveways and walkways
    - (4) Retaining walls

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- (b) Trees for removal must be clearly identified and tagged.

### NOTE:

- (1) Item 1 in Appendix C must be submitted with the Lot redevelopment Plan.
- (2) Items 3, 4 & 5 must be shown on the face of the plan.

## B. REQUIREMENTS OF THE DEMOLITION PLANS

- A. **Tree Preservation:** The following items must be on the plan that is submitted for staff review. The Village may provide that the tree survey exclude those portions of the site that it determines will not be affected by building activity.
  - 1. For each tree eight inches (8") diameter breast height (DBH) or larger, the Plan shall show:
    - (a) location
    - (b) species
    - (c) trunk diameter DBH (diameter at 4.5' above ground level)
    - (d) condition
    - (e) critical root zone
  - 2. The plan shall include an action plan (See Appendix C-5). If any trees are to be removed, then a tree removal permit application must be completed and submitted with the lot redevelopment or lot improvement plan (See Appendix A).
  - 3. Identify locations of the required tree protection and erosion control fencing on the plan.
    - (a) The tree protection fencing must run continuously along the frontage from property line to property line to completely separate the demolition access and work area and the vegetation that remains close to the demolition site or access. Such fencing may be wood slat at least four (4) feet in height and shall be secured to metal posts driven into the ground and spaced five (5) to seven (7) feet apart.
    - (b) Separate fencing may be required for protecting certain individual trees.  
NOTE: All fencing will remain in place until the time that demolition is complete and all debris is removed and can only be removed upon review and approval by the Village Forester.
  - 4. If the proposed demolition is part of a lot redevelopment or lot improvement plan for which a plan and building permit application has been submitted, then the demolition plan can be an integral part of those plan submittals.

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**SITE PREPARATION – PRECONSTRUCTION FOR LOT REDEVELOPMENT**  
**AND LOT IMPROVEMENT**

**I. TREE REMOVAL/PROTECTION**

- A. Obtain building permit approval and tree removal permit approval.
- B. Clear site of trees indicated for removal on the approved Lot redevelopment Plan and perform root pruning, crown reduction, auguring and all other measures as required on the approved plan.
- C. Erect tree protection, construction envelope and conservancy area fencing according to the following requirements:
  - (1) No attachments, fences or wires, other than approved materials for bracing, guying or wrapping, shall be attached to any vegetation during the construction period.
  - (2) All fencing must be secured to metal posts driven into the ground spaced no further than five (5) to eight (8) feet apart.
  - (3) All fencing must remain in place during the entire construction period.
  - (4) All fencing must run continuously from property line to property line, completely enclose an area, or adjoin other fencing in order to protect the vegetation that is to remain on the site.
  - (5) Erect erosion control measures per approved plan requirements.

**II. SITE VISIT**

A site visit and sign-off by the Village Forester is again required after the above items have been completed and before construction begins.

**C. Ad Hoc Tree Removal Not Related to Lot Redevelopment or Lot Improvement**

**The following outline is a general description of the order in which the applicant should proceed:**

- 1. Complete the Tree Removal Permit application and submit it to the Village along with the sketch showing the location and identification number of the tree or trees to be removed.
- 2. The Village Forester will visit the property to review the application and determine if mitigation is required. The Village Forester will also determine what fees, if any, other than the application fee, are applicable.
- 3. The Village Forester will complete the applicable portions of the Permit Application Form indicating any additional fees or mitigation requirements. Once the applicant signs the Permit Application Form indicating acceptance of the terms of the permit and provides any

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additional fees that are required, then the Tree Removal Permit will be issued.

**III. Tree Mitigation**

The removal of healthy public trees or protected trees will require mitigation as determined by the Village Forester.

**A. Calculations**

Protected trees must be mitigated by planting replacement trees on the subject site, as determined by The Village Forester, at the rate listed below by species group (See Species Rating Guide Appendix E) for each one inch of tree diameter (D.B.H.) of public trees or protected trees removed.

**Table 2: Per Inch Replacement Rate by Species Group**

Species Group	Replacement Rate	
	Diameter of Tree Removed	Rate
A	1"	1.0" caliper
B	1"	0.6" caliper
C	1"	0.3" caliper

Table 3 below provides mitigation factors based on tree condition ratings (See *'Tree Condition and Form Rating Guide'* Appendix D).

**Table 3: Per Inch Replacement Rate by Species Group**

Condition Rating	Mitigation Factor
1 & 2	1.0
3	0.5
4, 5 & 6	0.0

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Tree mitigation calculation example:

<b>Tree to be Mitigated</b>	<b>Species Group</b>	<b>Rate</b>	<b>Mitigation Inches (tree species x rate)</b>	<b>Mitigation Factor</b>	<b>Total Mitigation Required (mitigated inches x cond. rating)</b>
20" White Oak ; condition 1	A	1.0	20"	1.0	20"
25" Norway maple; condition 3	B	0.6	15"	0.5	8"

Applicants proposing lot redevelopment or applying for a lot improvement will also be required to mitigate public trees and protected trees on the site whose critical root zones are impacted to the point where the Preservation Criteria specified above are not met. When the Lot redevelopment Plan has been approved and/or the Lot improvement requirements have been met, then the Village Forester will complete the applicable portions of the Permit Application Form indicating any additional fees or mitigation requirements.

Once the applicant signs the Permit Application Form indicating acceptance of the terms of the permit and provides any additional fees that are required, Tree Removal Permit will be issued.

**B. Tree Replacement**

Required replacement trees shall be shown on a Tree Replacement Plan to be submitted by the owner to the Village. Under this plan, the owner becomes obligated to replace public trees or protected trees for which removal is sought. The plan shall be subject to the terms and conditions as provided under the Tree Preservation Ordinance and as agreed to on the Tree Removal Permit Application.

For lot redevelopment and lot improvement applicants, the plan shall be at the same scale and format as the approved lot redevelopment plan or the lot improvement plan. For applicants not proposing lot redevelopment or applying for a lot improvement, a sketch plan will be sufficient.

Replacement species shall be selected from Species Group A and will be approved by the Village Forester. The plan shall indicate the species, size and location of each plant to be planted. The plan shall contain a total plant list that includes common name, botanic name, tree caliper, the number of trees of each species, and any necessary descriptions such as balled and burlap, container, bare root, and form.

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The minimum size of replacement trees shall be not less than 2” caliper or eight feet (8’) in height when deciduous ornamental trees in clump form or evergreens are used, unless previously approved by the Village Forester.

### **C. Fees**

Fees will be as established in the annual Fee Ordinance. (See Appendix G)

A mitigation fee will be required for the replacement of healthy public trees and protected trees. This fee will be in the form of a cash deposit in an amount that is specified in the Annual Fee Ordinance for each one inch of healthy protected trees to be removed. The amount of this fee will be shown on the Tree Removal Permit Application form. The fee must be provided prior to the approval of a Tree Removal Permit. Upon the planting of the replacement trees and inspection by the Village Forester, the amount of the cash deposit equal to the number of caliper inches of replacement trees planted times the \$125.00 per caliper inch amount that is specified in the annual fee ordinance for each one (1) inch of healthy protected trees to be removed shall be returned to the applicant.

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## IV. Appendix

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**Appendix A. Tree Removal Permit Application and Instruction**

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### *RE: Tree Removal Permit Application*

Dear Resident:

Village Ordinance requires that all residents who want to remove **any** trees in the Village of Deerfield must complete a Tree Removal Permit Application.

The Applicant must completely fill in all shaded areas on the Tree Removal Information side of the Tree Removal Application Form – Sections **A** and **B** – and return the completed form to the Village Hall.

The Village Forester will review the application and the specified trees.

- If the trees are dead, dangerous, or diseased, then a permit for their removal will be issued by the Village. No permit fee will be paid by the Applicant.
- If the Applicant is removing trees that are not protected by Village Ordinance, then no permit fee will be paid by the Applicant.
- If the Applicant is removing live, healthy trees that are protected by Village Ordinance (Protected trees are **all** trees 8” in diameter and larger as measured 4.5 feet above the soil line), permit fee will be required and then a permit will be issued.

### *Mitigation Required*

**All** live, healthy protected trees that are removed **MUST** be mitigated as determined by the Village Forester. The Village Forester will determine the number of replacement trees to be planted on the property. The applicant is required to submit a tree replacement plan that shows the species, size (caliper) and location of the replacement trees as specified in **Ordinance**. If the plan is approved by the Village Forester, then the Village Forester will complete the mitigation portion of the tree removal permit application form. The calculation of the required replacement fee items a and b, including the listing of the replacement trees and items a and b of the approvals section will also be completed by the Village Forester.

Upon the completion of the plantings, the Village Forester will inspect the plantings and calculate the amount of refund, if any, due to the applicant, and authorize the refund by completing item c of the approvals section.

### *Permit Issued*

**Before** the permit is issued, the Applicant must agree to plant the specified trees and sign Section **C** of the Tree Removal Permit Application, attach the required fee, and return the completed application and fee to the Village Hall.

Sincerely,  
The Village of Deerfield

THIS IS NOT A PERMIT.

Village of Deerfield		Tree Removal Permit Application		Permit Number	Fee	Issue Date	
(Applicant please complete areas A and B. Area C to be completed after Forester's review.)							
<b>For Village Use Only</b>							
Address of Site:							
Owner's Name:							
Owner's Address:							
Contractor's Name, if Selected:							
Contractor's Address:							
Comments:							
<b>TREE REMOVAL INFORMATION (Filled Out by Applicant)</b>							
Tree No	Species (common name)	DBH	Reason For Removal	#Trees	Caliper	Species	Required Replacement Fee
							Total Inches of Protected Trees Removed: (a)
							X \$150/inch (=total fee due) (b)
This total fee is due with the submittal of this application: \$							
<b>Fee Refund as applicable</b>							
							Total Inches Planted (c)
							X \$150/inch (=refund) (d)
Amt. Refunded \$							
Completed Approvals by Village Forester:							
A. Permit Fee		BY: DATE:		B. Replacement Fee Required		BY: DATE:	
Required	Y/N	Y/N	Y/N	Due	Y/N	Y/N	Y/N
Paid	Y/N	Y/N	Y/N	Paid	Y/N	Y/N	Y/N
Applicant Acceptance:							
I agree to pay the replacement fee and plant the required trees or forfeit the balance of the replacement fee							
Applicant Signature: _____ Date: _____							
Applicant Printed Name: _____							

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**Appendix B. Tree Removal Permit**

## Village of Deerfield

# TREE REMOVAL PERMIT

Name \_\_\_\_\_

Address \_\_\_\_\_

Date Issued \_\_\_\_\_  
(permit valid for 90 days from date issued)

Description  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Permit No. \_\_\_\_\_

**TO BE DISPLAYED PROMINENTLY IN WINDOW VISIBLE  
FROM STREET.**

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**Appendix C. Lot redevelopment/Lot improvements**

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Approved  Approved with Conditions  Rejected

Before completing this form, be sure to read and understand all aspects of the Village Ordinances and Permit Application Instructions

## Village of Deerfield

## Plan Submittal Checklist

Contact \_\_\_\_\_ Phone & Fax No. ( ) \_\_\_\_\_

Owner \_\_\_\_\_ Phone & Fax No. ( ) \_\_\_\_\_

Address, Zip Code \_\_\_\_\_ Project Location \_\_\_\_\_

Submittal No. (circle one) 1 2 3 4 5 Date \_\_\_\_\_

Applications **will not** be considered for review unless applicable portions of the following checklist is completed in full and all required information (3 copies of the plans) is included.

1. What type of plan are you submitting (check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Site Plan - New House | <input type="checkbox"/> Deck                 |
| <input type="checkbox"/> Site Plan - Addition  | <input type="checkbox"/> Patio                |
| <input type="checkbox"/> Demolition            | <input type="checkbox"/> Other describe _____ |

2. Complete the section(s) below which correspond to the type of plan you are submitting. If any specific items are not applicable, note as N/A. (Your engineer, arborist or contractor may have to provide most of this information.)

<b>A. SPECIFIC TREE PRESERVATION PLAN DETAILS (Private Property Protected Trees)</b>	<b>Yes</b>	<b>N/A</b>
1. Are 3 copies of the plan (drawn to scale) showing all <b>Public and Protected</b> trees included with the submittal?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is preservation work according to the Administrative Manual?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the completed tree removal application form included?	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the Tree Survey and/or Plan show the following:		
a. location, condition, species, trunk diameter and critical root zones of all <b>Public and Protected Trees</b> (8" DBH or greater <i>and</i> Protected trees on adjacent properties with critical root zones on the subject property?	<input type="checkbox"/>	<input type="checkbox"/>
b. location of protective fencing and silt fencing to be placed on the lot?	<input type="checkbox"/>	<input type="checkbox"/>
c. completed action plan?	<input type="checkbox"/>	<input type="checkbox"/>
5. Does tree preservation plan show location, shape, and spatial arrangement of all <b>permanent driveways and parking areas and temporary material storage sites and access ways?</b>	<input type="checkbox"/>	<input type="checkbox"/>
6. Does Tree Preservation Plan show any new Utility services including water, sanitary sewer, storm sewer, gas, electric, telephone, and cable TV and any existing Utility services which will be Removed or modified?	<input type="checkbox"/>	<input type="checkbox"/>
7. Does Tree Preservation Plan show existing and proposed conditions as specified in the Administrative Manual?	<input type="checkbox"/>	<input type="checkbox"/>
8. Is tree replacement plan included?	<input type="checkbox"/>	<input type="checkbox"/>

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**Approved  Approved with Conditions  Rejected**

**Before completing this form, be sure to read and understand all aspects of the Village Ordinances and Permit Application Instructions**

<b>B. SPECIFIC TREE PRESERVATION PLAN DETAILS (On or Around Public Trees)</b>	<b>Yes</b>	<b>N/A</b>
1. Is work to be performed on or around public trees and if so are they shown on the plan and included in the action plan?	<input type="checkbox"/>	<input type="checkbox"/>
2. Does Tree Preservation Plan show any new or modification to existing utility services including water, sanitary sewer, storm sewer, gas, electric, telephone, and cable TV which will impact Public trees?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is any excavation part of this project which affects Public Trees adjacent to the site or elsewhere?  If so, have all attempts been made, such as tunneling to avoid the critical root zones of affected trees?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are any Public Trees proposed for removal due to access problems or because of construction issues?	<input type="checkbox"/>	<input type="checkbox"/>
5. If parkway trees are to be planted, are they shown on the tree replanting plan?	<input type="checkbox"/>	<input type="checkbox"/>
6. Are all Public Trees which may be impacted by work on private property properly addressed?	<input type="checkbox"/>	<input type="checkbox"/>

**3. Statement of Compliance**

**I have read and understand the above form and verify that it is completed in its entirety.**

**Owner's Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**Plan Preparer's Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

**Reviewed by Village of Deerfield:**

**By** \_\_\_\_\_ **Date** \_\_\_\_\_

**Comments:**

**Copies To:**

## Village of Deerfield

### Tree Preservation Plan Review Transmittal Letter

**TO: Contact** \_\_\_\_\_ **Date** \_\_\_\_\_

**Address** \_\_\_\_\_

**Project Location** \_\_\_\_\_

**Plan Type: (check all that apply)**

- |  |   |
|--|---|
| <input type="checkbox"/> Site Plan – New house | <input type="checkbox"/> Deck                 |
| <input type="checkbox"/> Site Plan – Addition  | <input type="checkbox"/> Patio                |
| <input type="checkbox"/> Demolition            | <input type="checkbox"/> Other describe _____ |

**Your Plan has been:**

- Approved**

- (1) After fencing has been installed per plan, call for inspection.
- (2) Make sure any necessary deposits are posted.
- (3) Permit will not be issued until items (1) and (2) are completed.

**Conditions:**

- Rejected**

- See attached copy of Plan Submittal Checklist
- See comments on Plan
- Revise Plan per Ordinance requirements and review comments
- Resubmit revised Plan Submittal Checklist
- Resubmit revised Plan

**Comments:**

**Village of Deerfield**

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**Reviewed By**

**Date**

# VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

## General Plan Notes

1. Prior to commencement of any construction work on this site, the protective fencing shall be installed and reviewed by the Village Forester.
2. All work must be performed according to the approved Lot Development/Tree Preservation plan.
3. An approved Lot redevelopment/Tree Preservation Plan must be available on the building site.
4. Stay within designated work access areas shown on the plan.
5. There shall be no grading or filling within the **protected critical root zones**.
6. All excess fill shall be either removed from the site or stored in a location approved by the Village Forester.
7. No equipment shall be driven over or material stored on the **protected critical root zones**.
8. Tree fence and silt fence for all protected trees must be properly maintained throughout the construction. Tree fence for protected trees should remain in place throughout construction.
9. All required tree protection fence and silt fencing shall remain in place until the time of finish grading and landscaping and can only be removed upon review and approval by the Village Forester.
10. Attachments (wires, etc.) other than those approved for guying, bracing or wrapping must not be attached to protected trees.
11. As noted in the Action Plan, all retained trees that are impacted by construction will be root pruned, crown pruned, mulched, etc. as required. For trees which are to be preserved but which could be negatively affected during the construction process, the crowns and roots of all such trees shall, unless otherwise determined by the Village Forester, be pruned by a qualified arborist, according to the tree pruning standards set by ANSI Z133.1 and A300. (See also note no. 13 below.)
12. Protective fencing shall be placed to maximize the protection of the critical root zone. Protective fencing shall be installed prior to any construction activities and shall be maintained until construction is complete. (See also note no. 13 below.)
13. In areas where cuts are to be made for the installation of utilities or retaining walls, the adjacent tagged trees will be root pruned. The location of the root pruning will be staked in the field and reviewed with the Village Forester. Once the root pruning is complete, the tree protection fencing will be installed in accordance with the tree protection plan. In some instances, it will be necessary to establish a work area that is between the edge of the cut and the tree protection fence. The roots in this work area will be protected during the construction with geotextile fabric placed on the existing ground and covered with 6" of wood chips. (See *Root Zone Protection* detail.); or other method as approved by the Village Forester.

14. Plan Legend:

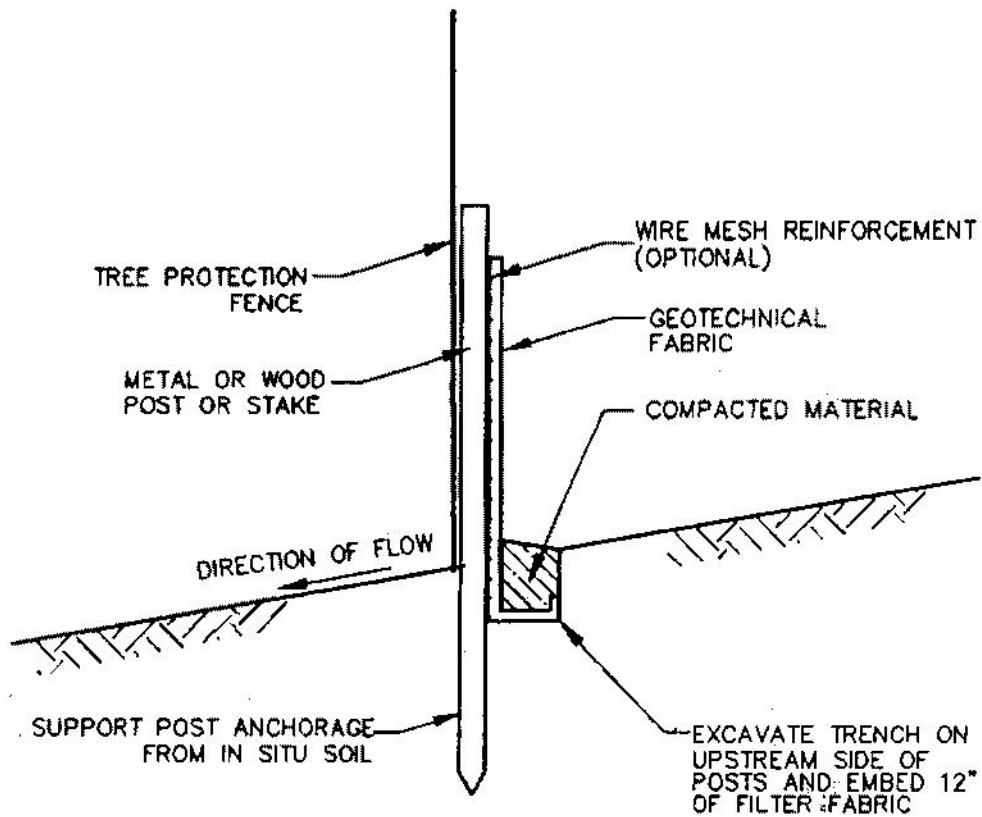
Construction/Tree Protection Fence	-- T- - - - T- - - -
Silt Fence A	- · SA · - · - · - · - · - ·
Silt Fence B	- · SB · - · - · - · - · - ·
Limits of Grading	_____
Root Protection Zone	.....





VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

Silt Fence Detail A



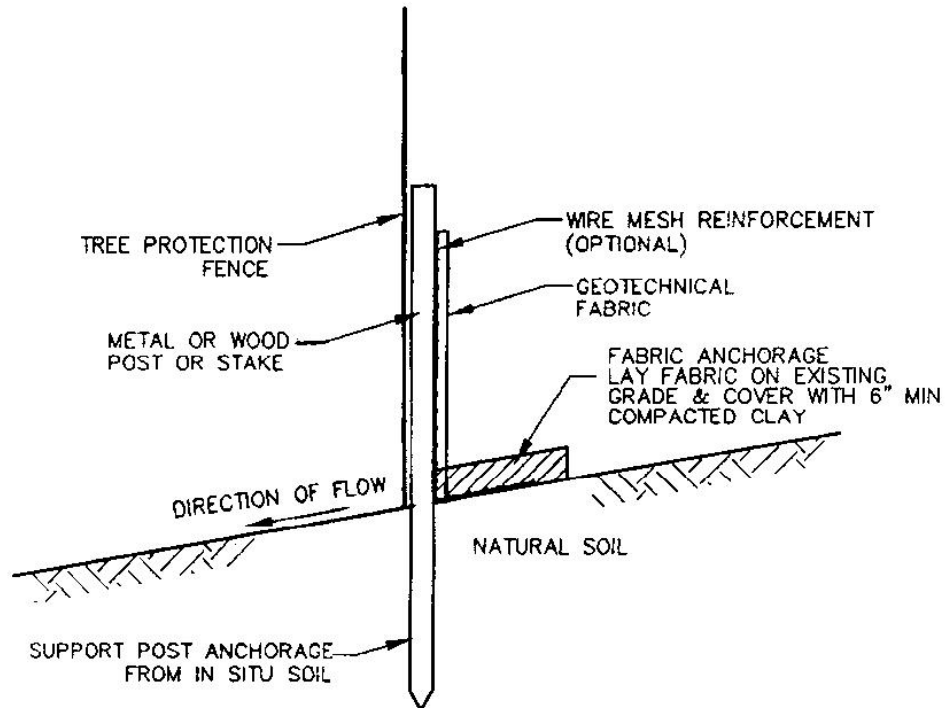
NOTE: DEPENDING UPON CONFIGURATION, ATTACH FABRIC TO WIRE MESH W/ HOG RINGS, STEEL POSTS W/ TIE WIRES, WOOD POSTS W/ NAILS.

NOTE: INSTALL ON UPHILL SIDE OF TREE PROTECTION FENCE

SILT FENCE (OUTSIDE CRITICAL ROOT ZONES)  
TYPE A

VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

Silt Fence Detail B



NOTE: DEPENDING UPON CONFIGURATION, ATTACH FABRIC TO WIRE MESH W/ HOG RINGS, STEEL POSTS W/ TIE WIRES, WOOD POSTS W/ NAILS.

NOTE: INSTALL ON UPHILL SIDE OF TREE PROTECTION FENCE

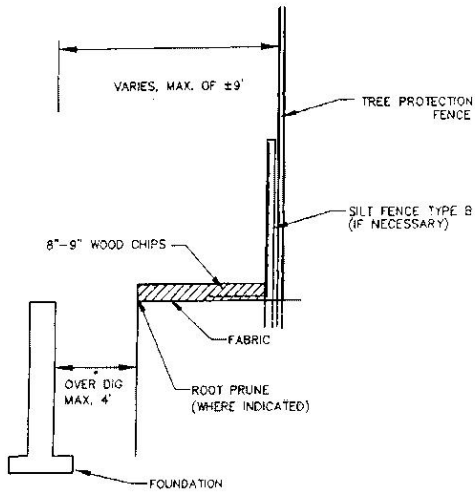
NOTE: TO BE USED IN AREAS THAT ARE ADJACENT TO TREE PROTECTION ZONES

SILT FENCE (CRITICAL ROOT ZONES)

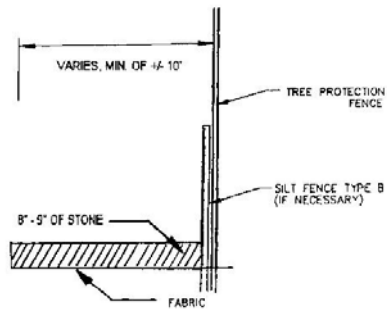
TYPE B

VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

Root Zone Protection Detail



Typical Foundation Root Zone Protection Detail



Typical Root Zone Protection Detail For Access

VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

**Diameter at Breast Height (DBH) to Critical Root Zone Area ( $\pi r^2$ ) Conversion Table**

DBH (in.)	CRZ Area in ft. <sup>2</sup>	DBH (in.)	CRZ Area in ft. <sup>2</sup>	DBH (in.)	CRZ Area in ft. <sup>2</sup>
2	12.57	31	3019.07	61	11689.87
3	28.27	32	3216.99	62	12076.28
4	50.27	33	3421.19	63	12468.98
5	78.54	34	3631.68	64	12867.96
6	113.10	35	3848.45	65	13273.23
7	153.94	36	4071.50	66	13684.78
8	201.06	37	4300.84	67	14102.61
9	254.47	38	4536.46	68	14526.72
10	314.16	39	4778.36	69	14957.12
11	380.13	40	5026.55	70	15393.80
12	452.39	41	5281.02	71	15836.77
13	530.93	42	5541.77	72	16286.02
14	615.75	43	5808.80	73	16741.55
15	706.86	44	6082.12	74	17203.36
16	804.25	45	6361.73	75	17671.46
17	907.92	46	6647.61	76	18145.84
18	1017.88	47	6939.78	77	18626.50
19	1134.11	48	7238.23	78	19113.45
20	1256.64	49	7542.96	79	19606.68
21	1385.44	50	7853.98	80	20106.19
22	1520.53	51	8171.28	81	20611.99
23	1661.90	52	8494.87	82	21124.07
24	1809.56	53	8824.73	83	21642.43
25	1963.50	54	9160.88	84	22167.08
26	2123.72	55	9503.32	85	22698.01
27	2290.22	56	9852.03	86	23235.22
28	2463.01	57	10207.03	87	23778.71
29	2642.08	58	10568.32	88	24328.49
30	2827.43	59	10935.88	89	24884.56
		60	11309.73	90	25446.90

VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

To Calculate Percent of Impacted Critical Root Zone:

Example:

$\% = \% \text{ impacted}$
$C = \text{circumference} = \pi d$
$A^\circ = \text{angle}$
$A = \text{area of circle} = \pi r^2$
$\text{Arc} = (\pi r A^\circ)/180$
$\Phi = A^\circ (\pi/180)$
$\text{Pi} = \Pi = 3.14$

27" Red Oak 3/3 where  $A^\circ = 97^\circ$

1. Calculate  $A_1$  (area of entire circle):

$$A_1 = \pi r^2$$
$$A_1 = \pi 27^2$$
$$A_1 = 2290.22$$

2. Calculate  $A_2$  (area of slice):

$$A_2 = \frac{1}{2}r^2 \times (\Phi - \sin \Phi)$$
$$A_2 = \frac{1}{2}27^2 \times (1.69 - \sin 1.69)$$
$$A_2 = 254.09$$

3. Calculate percent of impacted area:

$$\% = A_2 / A_1$$
$$\% = 254.09 / 2290.22$$
$$\% = 11\% \text{ impacted area. (89\% undisturbed)}$$

**VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL**

**Appendix D. Tree Condition and Form Rating Guide**

**VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL**

**Condition and Form Rating Guide**

*Condition Rating* - The condition of the trees shall be based on a six (6) point scale and one (1) being the best and six (6) being the worst.

<u>Rating</u>	<u>Description</u>	<u>General Criteria</u>
1	Excellent	The tree is typical of the species, has less than 10% deadwood in the crown that is attributable to normal causes, has no other observed problems, and required no remedial action.
2	Good to Fair	The tree is typical of the species and/or has less than 20% deadwood in the crown, only one or two minor problems that are easily corrected with normal care.
3	Fair	The tree is typical of the species and/or has less than 30% deadwood in the crown, one or two minor problems that are not eminently lethal to the tree, and no significant decay or structural problems, but the tree must have remedial care above normal care in order to minimize the impact of future stress and to insure continued health.
4	Fair to Poor	The tree is not typical of the species and/or has significant problems such as 30-50% deadwood in the crown, serious decay or structural defect, insects, disease or other problems that can be eminently lethal to the tree or create a hazardous tree if not corrected in a short period of time or if the tree is subjected to additional stress.
5	Poor	The tree is not typical of the species and/or has over 50% deadwood in the crown, major decay or structural problems, is hazardous or is severely involved with insects, disease, or other problems that even if aggressively corrected would not result in the long term survival of the tree.
6	Dead	Less than 10% of the tree shows signs of life.

*Form Rating* – Subjective evaluation comparing tree with specimen tree of the same species. Form classes are the same as those listed above under condition, with the exception of number 6, which translates to ‘very poor form’. Typical form defects might include multiple leaders, no leader, lean, one sided crown, trunk crook, etc.

Mitigate conditions 1, 2, & 3 trees, but not conditions 4, 5 & 6 trees. The assignment of the condition and form ratings to specific trees are subject to the Village Forester’s review.

**VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL**

**Appendix E. Species Rating Guide**

## VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

### Species Rating Guide

#### Species Category A 70+

Scientific Name	Common Name	Rating
<i>Acer campestre</i>	Hedge Maple	70
<i>Acer ginnala</i>	Amur Maple	70
<i>Acer nigrum</i>	Black Maple	80
<i>Acer platanoides</i>	Norway Maple (improved cultivars)	70
<i>Acer rubrum</i>	Red Maple (improved cultivars)	70
<i>Acer saccharum</i>	Sugar Maple (species)	80
	(improved cultivars)	90
<i>Aesculus Glabra</i>	Ohio Buckeye	70
<i>Amelanchier</i>	Serviceberry	70
<i>Betula nigra</i>	River Birch	70
<i>Cara ovata</i>	Shagbark Hickory	70
<i>Carpinus caroliniana</i>	American Hornbeam (blue beech)	70
<i>Celtis occidentalis</i>	Common Hackberry	80
<i>Cercis canadensis</i>	Redbud	70
<i>Cornus alternifolia</i>	Pagoda Dogwood	70
<i>Corylus colurna</i>	Turkish Filbert	80
<i>Crataegus crus-galli</i>	Cockspur Hawthorn	80
<i>Crataegus phaenopyrum</i>	Washington Hawthorn	70
<i>Fagus sylvatica</i>	European Beech	70
<i>Fraxinus americana</i>	White Ash (improved cultivars)	70
<i>Fraxinus pennsylvanica</i>	Green Ash (species)	70
	(improved cultivars)	80
<i>Fraxinus quadrangulata</i>	Blue Ash	70
<i>Ginkgo biloba</i>	Ginkgo (improved cultivars)	70
<i>Gleditsia triacanthos f. inermis</i>	Thornless Honeylocust	80
<i>Gymnocladus dioicus</i>	Kentucky Coffeetree (male)	80
<i>Juniperus virginiana</i>	Eastern Red Cedar	70
<i>Malus spp.</i>	Crabapple (superior cultivars)	80
<i>Picea abies</i>	Norway Spruce	70
<i>Picea glauca</i>	White Spruce	70
<i>Picea pungens</i>	Colorado Blue Spruce	70
<i>Pinus strobus</i>	Eastern White Pine	70
<i>Pseudotsuga menziesii</i>	Douglas Fir	80
<i>Pyrus calleryana</i>	Callery Pear (superior cultivars)	80
<i>Quercus alba</i>	White Oak	90
<i>Quercus bicolor</i>	Swamp White Oak	80
<i>Quercus ellipsoidalis</i>	Hill's Oak	70
<i>Quercus macrocarpa</i>	Bur Oak	90
<i>Quercus muehlenbergii</i>	Chinquapin Oak	80
<i>Quercus palustris</i>	Pin Oak	70
<i>Quercus prinus</i>	Chestnut Oak	70
<i>Quercus rubra</i>	Red Oak	70
<i>Syringa pekinensis</i>	Peking Lilac	70
<i>Syringa reticulata</i>	Japanese Tree Lilac	70
<i>Taxodium distichum</i>	Baldcypress	80
<i>Thuja occidentalis</i>	White Cedar Arborviate	80
<i>Tilia americana</i>	American (basswood) Linden	70
<i>Tilia cordata</i>	Littleleaf Linden	70
<i>Tilia x euclora 'Redmond'</i>	Redmond Linden	80
<i>Ulmus</i>	Hybrid Elm	70

**VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL**  
**Species Rating Guide (cont'd.)**

**Species Category B 50 - 60**

<b>Scientific Name</b>	<b>Common Name</b>	<b>Rating</b>
<i>Acer platanoides</i>	Norway Maple (species)	60
<i>Acer rubrum</i>	Red Maple (species)	60
<i>Acer saccharinum</i>	Silver Maple (species)	50
	(improved cultivars)	50
<i>Aesculus hippocastanum</i>	Common Horsechestnut	60
<i>Crataegus mollis</i>	Downy Hawthorn	50
<i>Fagus grandifolia</i>	American Beech	60
<i>Fraxinus americana</i>	White Ash (species)	60
<i>Fraxinus excelsior</i>	European Ash	60
<i>Ginkgo biloba</i>	Ginkgo (species)	60
<i>Gymnocladus dioica</i>	Kentucky Coffeetree (female)	60
<i>Juglans nigra</i>	Black Walnut	50
<i>Liquidambar styraciflua</i>	Sweetgum	50
<i>Liriodendron tulipifera</i>	Tuliptree	60
<i>Magnolia x soulangiana</i>	Saucer magnolia	60
<i>Malus spp.</i>	Crabapple (inferior cultivars)	60
<i>Metasequoia glyptostroboides</i>	Dawn Redwood	50
<i>Morus alba</i>	White Mulberry (male)	50
<i>Morus rubra</i>	White Mulberry (male)	50
<i>Pinus nigra</i>	Austrian Pine	50
<i>Pinus resinosa</i>	Red Pine	50
<i>Platanus x acerifolia</i>	London Planetree	60
<i>Platanus occidentalis</i>	Sycamore	50
<i>Populus deltoides</i>	Cottonwood (male)	50
<i>Prunus maackii</i>	Amur Choke Cherry	60
<i>Prunus serotina</i>	Black Cherry	50
<i>Pyrus calleryana</i>	Callery Pear (inferior cultivars)	60
<i>Quercus robur</i>	English Oak	60
<i>Ulmus parvifolia</i>	Chinese Elm	60

## VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

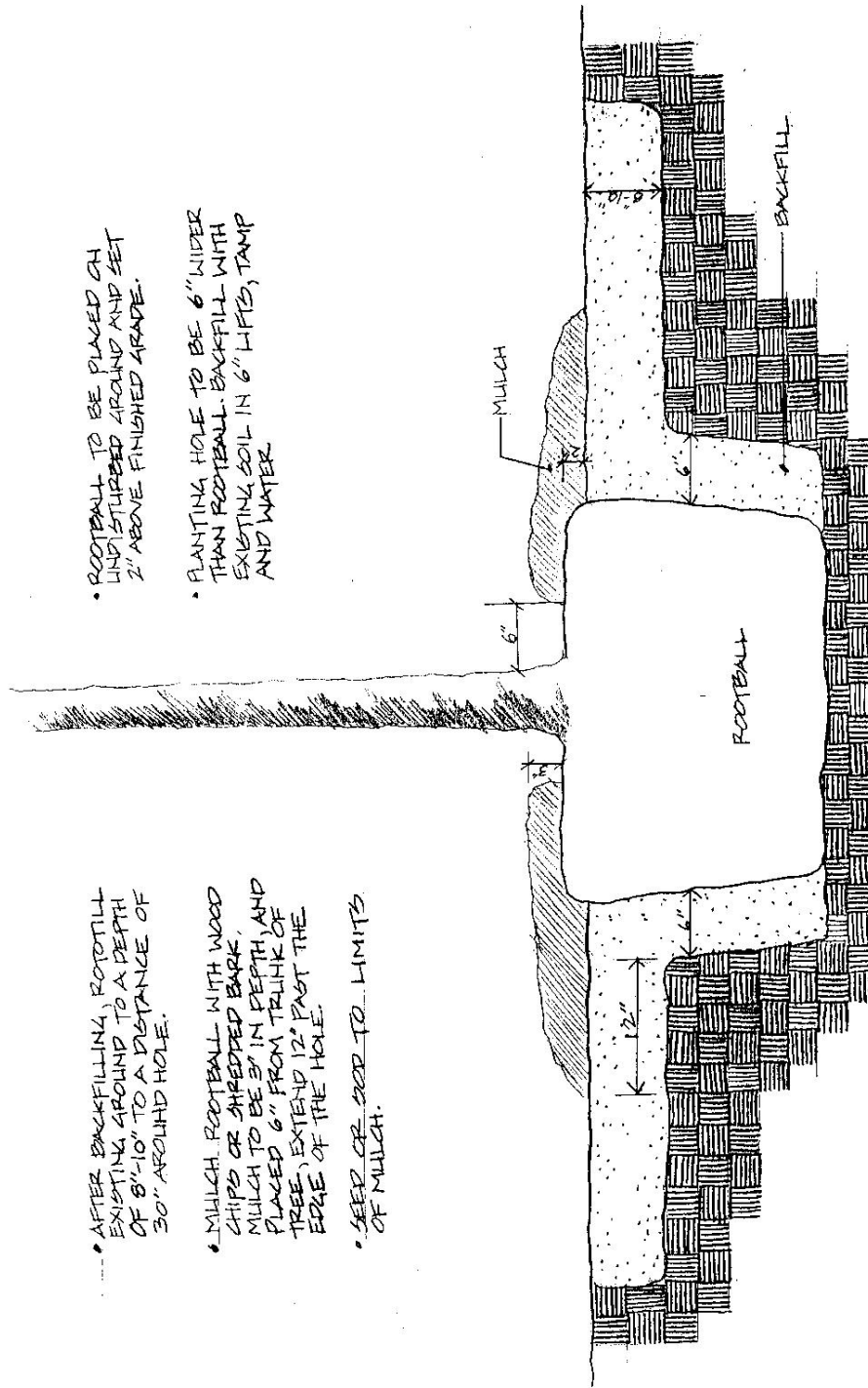
### Species Rating Guide (cont'd.)

#### Species Category C 40↓

Scientific Name	Common Name	Rating	
<i>Acer negundo</i>	Boxelder Maple	(male)	40
		(female)	20
<i>Ailanthus altissima</i>	Tree of Heaven	(male)	40
		(female)	20
<i>Betula papyrifera</i>	Paper Birch		40
<i>Catalpa</i>	Catalpa speciosa		40
<i>Crataegus laevigata</i>	English Hawthorn		40
<i>Elaeagnus angustifolia</i>	Russian-olive		40
<i>Gleditsia triacanthos</i>	Honeylocust		30
<i>Morus alba</i>	White Mulberry	(female)	30
<i>Morus rubra</i>	White Mulberry	(female)	30
<i>Pinus sylvestris</i>	Scotch Pine		40
<i>Populus alba</i>	White Poplar		30
<i>Populus deltoids</i>	Cottonwood	(female)	30
<i>Populus nigra 'Italica'</i>	Lombardy Poplar		20
<i>Prunus serrulata</i>	Japanese Flowering Cherry		30
<i>Robinia pseudoacacia</i>	Black Locust		40
<i>Salix alba</i>	Weeping Willow		40
<i>Salix matsudana 'Tortuosa'</i>	Corkscrew Willow		30
<i>Sorbus americana</i>	American Mountainash		40
<i>Ulmus americana</i>	American Elm		20
<i>Ulmus pumila</i>	Siberian Elm		40
<i>Ulmus rubra</i>	Silppery or Red Elm		20
<i>Ulmus thomasii</i>	Rock Elm		30
<i>Zelkova serrata</i>	Zelkova		40

**VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL**

**Appendix F. Tree Planting Detail**



- ROOTBALL TO BE PLACED ON UNDISTURBED GROUND AND SET 2" ABOVE FINISHED GRADE.
- PLANTING HOLE TO BE 6" WIDER THAN ROOTBALL. BACKFILL WITH EXISTING SOIL IN 6" LIFTS, TAMP AND WATER.

- AFTER BACKFILLING, ROOTBALL EXISTING GROUND TO A DEPTH OF 8"-10" TO A DISTANCE OF 30" AROUND HOLE.
- MULCH. ROOTBALL WITH WOOD CHIPS OR SHREDDED BARK. MULCH TO BE 3" IN DEPTH, AND PLACED 6" FROM TRUNK OF TREE, EXTEND 12" PAST THE EDGE OF THE HOLE.
- SEED OR SOOT TO LIMITS OF MULCH.

**TREE PLANTING DETAIL SECTION**

**VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL**

**Appendix G. Annual Fee Ordinance**

## VILLAGE OF DEERFIELD ADMINISTRATIVE MANUAL

Item:	Fee:
Cash Tree Replacement Fee/Mitigation Fee	\$125 per caliper inch
Tree Preservation Plan Review:	
Lot Redevelopment	
Without demolition	\$450
With demolition	\$525
Demolition with no building permit	\$275
Lot Improvement	
Room additions	\$275
Driveways	\$150
Pools and tennis courts	\$195
Fences, sheds, etc.	\$125
Decks and patios	\$140
Irrigation systems	\$125
Ad Hoc Tree Removal	
Permit Application	\$ 75
Permit	\$125
Permit for dead, hazardous and nuisance trees	\$ 0