



TOWN OF CONCORD

TREE PRESERVATION BYLAW

RULES AND REGULATIONS

January 9, 2018

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1. Purpose

The Town of Concord Tree Preservation Bylaw, approved at the 2017 Town Meeting, encourages the preservation and protection of trees on residential lots during significant demolition and construction activity. It designates areas of a lot where trees must be protected, and requires property owners to compensate for any Protected Trees that are removed, either by planting new ones or by contributing to a fund that supports the Town's tree planting and maintenance efforts.

This document lays out the rules and regulations that Concord's Building Inspections Division and Reviewing Agent will use to administer the bylaw, including:

- The criteria that determine when a project is subject to the Bylaw
- How to measure Protected and replanted trees
- How and when to submit a Protected Tree Removal Permit
- Required elements of a Tree Protection and Mitigation Plan
- What to do if a property does not have any Protected Trees
- How to complete the mitigation process
- How to make changes when needed
- Enforcement procedures

If any requirement of these Rules and Regulations conflicts with a provision of the Concord Zoning Bylaw (ZBL), the latter shall govern.

2. When does the Tree Preservation Bylaw Apply?

A project is subject to the Tree Preservation Bylaw if **all** of the following statements are true:

1. The lot is located in a Residential Zoning District (AA, A, B, C)
2. The project involves any of the following:
 - Demolishing a structure with a footprint of 250 sq. ft. or greater¹
 - Constructing a building or structure on a vacant lot
 - Constructing a structure or an addition that increases the Gross Floor Area² by 50% or more
3. There is at least one Protected Tree on the lot (*see Section 3. Identifying Protected Trees*)

Protected Trees removed within the past 12 months prior to an application for any of the projects listed in #2 above are also subject to the requirements of the Tree Bylaw.

If no Protected Trees have existed on the site within the past 12 months, the property owner must sign an Affidavit attesting to such, and no protection or mitigation will be required (see Section 4.3: Absence of Protected Tree Affidavit).

3. Identifying Protected Trees

The Bylaw defines the Tree Yard to be equal to the minimum front, side, and rear yard setbacks as specified in Table III and sections 6.2.6, 6.2.7 and 6.2.8 of the Town of Concord Zoning Bylaw. Any tree with a Diameter at Breast Height (DBH) of 6" or greater within the Tree Yard is considered to be a Protected Tree, unless it is an invasive species (as defined in the Bylaw).

¹ Demolition and re-construction of a structure in the same footprint that does not require the removal of a protected tree shall not trigger this bylaw (e.g. re-constructing a deck)

² Gross Floor Area is defined by the Town of Concord Zoning Bylaw Section 1.3.12, excluding basements, open or screened porches and decks.

Use the following formula to determine the diameter:

Tree circumference at breast height $\div \pi$ = diameter

Example: Tree circumference at breast height = 32" $\div \pi$ (i.e., 3.1415932) = 10.18" DBH

How to measure Diameter at Breast Height (DBH):

Figure 1. Standard Tree

The standard measure of tree size for those trees existing on a site that are at least six (6) inches in diameter at a height of four and one-half (4.5) feet above the existing grade at the base of the tree. If located on a slope, measure on the uphill side of the tree.

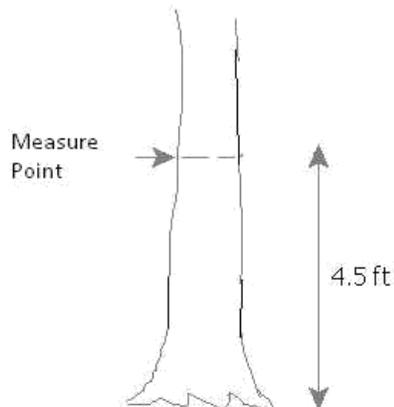


Figure 2. Tree has branches or swelling which interferes with DBH measurement at 4.5 ft

Measure DBH below the branch or swelling immediately below the point where swelling or branches cease to affect diameter of the stem. Record the height at which the diameter was measured.

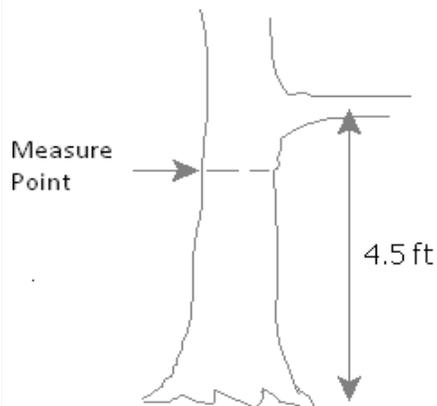
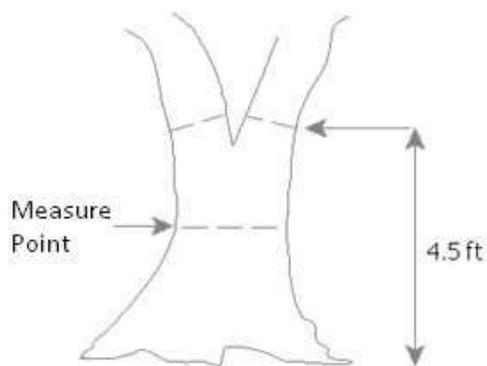


Figure 3. Multi-Stemmed Trees

If a tree splits into multiple trunks below four and one-half (4.5) feet above the existing grade, the DBH shall be considered to be the measurement taken at the narrowest point beneath the split. The height of the DBH measurement and the fork should be noted (e.g., 3 ft diameter @ 2 ft [Forks @ 4 ft]).



4. Submission Requirements

If the Bylaw applies to your project, you will need to obtain a Protected Tree Impact and Removal Permit and submit a Tree Protection and Mitigation Plan to the Reviewing Agent.

4.1. Protected Tree Impact and Removal Permit

You must submit a Protected Tree Impact and Removal Permit (Tree Permit) application and pay the associated fee to the Building Inspections Division before you apply for a Demolition Permit or Building Permit. It is strongly recommended that you submit the Tree Permit application prior to requesting other permits. You may not file a Building Permit application without a sign-off from the Reviewing Agent on the Building Inspections Division Building Permit Sign-off Sheet.

4.1.1. REVIEW OF PERMIT APPLICATIONS: The Town's designated Reviewing Agent reviews Protected Tree Impact and Removal Permit applications in accordance with the provisions of the Bylaw. The Reviewing Agent shall record the filing date of each application and complete the review no later than thirty (30) business days after you submit a complete application. If the Reviewing Agent fails to act within 30 days, work may proceed as outlined, but in no case shall that relieve you from the requirements of the Bylaw.

4.1.2. PERMIT ISSUANCE: After the Reviewing Agent issues the Tree Permit, you must provide written notice to the Reviewing Agent confirming that the Tree Save Area has been installed and is consistent with the approved plans.

4.1.3. SITE INSPECTION: The Reviewing Agent will inspect the Tree Save Area fencing and other tree preservation measures included on the Approved Tree Protection and Mitigation Plan at any frequency that he or she deems necessary to assure compliance.

4.2. Tree Protection and Mitigation Plan

You must submit a Tree Protection and Mitigation Plan to the Reviewing Agent along with your Protected Tree Impact and Removal Permit application. This plan may be part of a landscape plan, or a separate document that shows the location and size of Protected Trees on the property.

Your Tree Protection and Mitigation Plan must be prepared by qualified professionals (a Registered Land Surveyor together with a Certified Arborist or a Registered Landscape Architect), and include the stamp (if applicable), professional certification number, date and signature of all professionals involved in its preparation.³

All plans must be drawn to a uniform scale (preferably 1" = 10', 1" = 20', or 1" = 30'). All plans shall be a minimum size of 11" x 17" (preferred) and a maximum size of 24" x 36", with 3/4" borders. Letter sizes on plans should be no smaller than 1/8."

Your plan needs to include the following elements:

4.2.1. BASELINE PROPERTY INFORMATION AND PROTECTED TREE INVENTORY

- 4.2.1.1. Boundaries of the property, including all property lines, easements, and public and private rights-of-way.
- 4.2.1.2. The property's Zoning District designation and the location of applicable zoning setbacks per ZBL Table III (or Section 6.2.7 of the Bylaw, when applicable).
- 4.2.1.3. The location of all existing buildings, driveways, retaining walls and other improvements, and the features to be retained, removed or demolished.

³ If your plan designates all Protected Trees for removal, an Arborist or Landscape Architect does not need to be involved.

- 4.2.1.4. The location of all planned buildings, driveways, retaining walls and other improvements.
- 4.2.1.5. Proposed changes in grade.
- 4.2.1.6. An inventory of all Protected Trees and all Protected Trees that were removed within twelve (12) months prior to application. Your plan must note tree locations graphically on the plan, and provide a key to the species of individual trees and any prior or planned removals. In addition, you must provide a table (see the example in Appendix A) that indicates:
 - 4.2.1.6.1. The location, DBH, and species of all existing Protected Trees within 50 feet of the limit of work, as well as any other trees (both Protected Trees and any invasive species) on the lot that are to be removed. The limit of work and the 50 foot exclusion zone shall both be shown on the plan.
 - 4.2.1.6.2. The disposition of each Protected Tree (whether the tree will be removed or retained and protected)
 - 4.2.1.6.3. Any Protected Tree that should be considered exempt from mitigation requirements because it interferes with existing structures, utilities, streets, sidewalks or other existing improvements, and whose interference, in the arborist's professional opinion, can only be corrected by removal. (Photos and a description from a Certified Arborist must be provided in this case.)
 - 4.2.1.6.4. Any Protected Tree that may be exempt from mitigation requirements because it is dead, imminently hazardous, or infested with a disease or pest of a permanent nature. (A Certified Arborist's written confirmation must be provided in this case.)
- 4.2.2. ADDITIONAL MATERIALS: The Reviewing Agent may request that the applicant submit additional materials or explanation for consideration before issuing a permit.
- 4.2.3. REVISIONS TO THE PLAN DURING CONSTRUCTION: If it becomes necessary during the course of construction to remove Protected Trees marked for Retention and Protection on the approved plan, you may submit a revised Tree Protection & Mitigation Plan to the Reviewing Agent. The revised plan shall clearly indicate any additional removals, and associated additional mitigation measures proposed.
 - 4.2.3.1. If you want to propose additional new planting in lieu of approved contributions to the Tree Fund, you may submit a revised Plan showing additional new planting and indicating the corresponding reduction in total contribution due to the Tree Fund (see section 5.3 below).

4.3. Absence of Protected Trees Affidavit

If you propose any demolition or construction activity covered by the Bylaw, and there are not any trees meeting the provisions of Section 3, nor have any such trees been removed on your lot within the past 12 months, the property owner must sign an affidavit attesting to this fact prior to the issue of Demolition or Building Permits. In this case, no application fee shall apply and you will not be required to submit a Protected Tree Impact and Removal Permit or a Tree Protection and Mitigation Plan.

5. Tree Preservation and Mitigation Alternatives

5.1. Tree Retention and Protection

If you propose to retain and protect one or more Protected Trees, you must specify the

measures (following accepted industry practices and standards) that will be taken to maintain the Protected Trees in good health for at least twenty-four (24) months from the date of Tree Permit Final Inspection. In this case, you must indicate the following additional items on your plan and in the table.

- 5.1.1. **TREE SAVE AREA:** Indicate the proposed Tree Save Area for all Protected Trees to be retained. The Tree Save Area shall be based upon the minimum Critical Root Zone of each Protected Tree to be retained based on the following formula:

**Every 1 inch of Diameter at Breast Height (DBH) =
1 foot radius of Tree Save Area)**

For example: For a Protected Tree with a DBH of 15 inches, the Tree Save Area would extend a minimum of 15 feet out from the trunk in all directions. The Tree Save Area should encompass the entire Critical Root Zone if possible.

- 5.1.2. **TREE PROTECTION MEASURES:** Provide a description of the tree protection measures to be installed. At a minimum, Tree Save Area fencing shall be 4' welded wire fence securely attached to metal stakes a maximum of 10' apart. Each fenced area shall include signs reading, "TREE SAVE AREA – KEEP OUT"/"AREA DE AHORRO DE ARBOLES – ENTRADA PROHIBIDA", in both English and Spanish.
- 5.1.3. **PROHIBITED ACTIVITIES WITHIN THE TREE SAVE AREA:** Within Tree Save Areas, the following activities are prohibited: passage and parking of vehicles; materials laydown or storage; burning; washout from paint, concrete, or other substances; filling, excavation, grading or trenching.
- 5.1.4. **UTILITY TRENCHING:** If utility trenching is required through the Tree Save Area, you must note any special provisions for the completion of this work in the table and indicate the location of trenching on the plan. Your plan must limit access within the Tree Save Area to the minimum working area for the necessary machinery, and maintain that Tree Save Area prior to and immediately following completion of this work. All excavations within the Tree Save Area shall be backfilled within 24 hours.
- 5.1.5. **ALTERNATE TREE PROTECTION MEASURES:** Where it is not possible to include the entire Critical Root Zone within the Tree Save Area, you must specify alternative protection, preservation, and maintenance measures in the table for each affected tree.

5.2. Tree Removal and Mitigation via Replanting

You must include the following plan elements and submittal requirements for any trees that you propose to plant to mitigate the removal of any Protected Trees, in addition to the requirements listed above. In this case, the Tree Table (see Appendix A) must include all new planting proposed as mitigation.

- 5.2.1. **DESCRIPTION:** Indicate the location, caliper, and species of new trees to be planted to mitigate the removal of Protected Trees. One-half (0.5) inches of caliper of new trees is needed to mitigate 1 DBH inch of Protected Trees removed.
- 5.2.2. **MINIMUM SIZE:** Each new tree must have a minimum caliper of 2 inches.
- 5.2.3. **EVERGREENS:** Evergreen Trees (measured in feet of height; i.e., 8 ft. high or tall) must be a minimum of 8 feet to count towards mitigation. Hedges DO NOT COUNT towards mitigation totals. The height of evergreen trees in feet shall be multiplied by 0.25 to calculate the corresponding contribution value in caliper inches. For example, a 10-foot Spruce would count as a 2.5-inch caliper tree for mitigation purposes.
- 5.2.4. **MULTI-STEMMED TREES:** Multi-stemmed trees (measured in feet of height; i.e., 10 ft. high or tall) must be a minimum of 8 feet to count towards mitigation. The height of

multi-stemmed trees in feet shall be multiplied by 0.25 to calculate the corresponding contribution value in caliper inches. For example, a 12-foot multi-stemmed River Birch would count as a 3-inch caliper tree for mitigation purposes.

5.2.5. **USE OF ABUTTING PROPERTY:** You may plant on land abutting your land, with the express written approval of the abutting property owner. Approximate locations on the adjacent property shall be shown on the Tree Protection & Mitigation Plan. You must provide a signed acknowledgement by the abutting property owner of approval for such planting at the time of application.

5.2.6. **INVASIVE SPECIES:** Invasive tree species identified in the Tree Preservation Bylaw shall not be replanted as mitigation for the removal of a Protected Tree.

5.2.7. **OPTIONAL ADDITIONAL PLANTINGS:** If additional new planting is proposed beyond that required to mitigate for Protected Trees removed, the plan shall indicate required new trees versus those included as optional additional planting.

5.2.8. **TIMING:** You must complete replanting prior to Tree Permit Final Inspection or provide a Performance Guarantee for mitigation. (See Section 6.2 below.)

5.2.9. **MAINTENANCE REQUIREMENTS:** All new trees planted to satisfy mitigation requirements must be maintained in good health for a period of no less than twenty-four (24) months from the date of Tree Permit Final Inspection. Periods of unusual weather (including drought) shall not relieve this obligation.

5.3. Tree Removal and Mitigation via Contribution to the Tree Fund

If you choose to contribute to the Town of Concord Tree Preservation Fund to mitigate the removal of any Protected Trees, your Tree Table must indicate the aggregate DBH of Protected Trees removed and not otherwise mitigated, with the associated contribution based upon the most recent Contribution Rate Schedule.

5.4. Combination of Options

You can use any combination of Tree Retention and Protection, Tree Replanting, or Tree Removal with Contribution to the Tree Fund. You must clearly identify mitigation for those Protected Trees removed on the submitted Tree Protection & Mitigation Plan and in the table accounting for each DBH inch of Protected Trees removed and the mitigation proposed. This is not required for Tree Retention and Protection.

6. Administration and Penalties

6.1. Tree Permit Final Inspection

You must complete all required tree plantings prior to the Reviewing Agent's final inspection and within 90 days of the issuance of a certificate of occupancy. If your Tree Protection & Mitigation Plan included any alternate tree preservation and maintenance measures required under Section 5.1.2, you must also submit a letter from the Certified Arborist verifying that they have been performed. Provided that you have completed the required mitigation, the Reviewing Agent's sign-off on the Tree Permit Final Inspection will serve as verification that you have met the requirements of the Tree Preservation Bylaw.

6.2. Performance Guarantee Provisions

If weather conditions prevent the installation of replacement trees with 90 days of issuance of a Certificate of Occupancy, you may contact the Building Inspections Division at least 30 days prior to the Tree Permit Final Inspection to post a performance guarantee in an amount equal to mitigation via contribution to the Tree Fund. The Town will hold the performance guarantee for no longer than 12 months. After 12 months, if you have not installed the specified replacement trees, the performance guarantee shall be released to the Tree Fund as

mitigation for the Protected Tree removal(s).

6.2.1. EXTENSION: The Building Inspections Division may extend the performance guarantee for no more than 6 months from the original 12 month period at their discretion.

6.2.2. COMPLETION: Once the planting is complete, you may request a Tree Permit Final Inspection by the Reviewing Agent. Upon approval of all conditions, the performance guarantee will be returned to you within 30 days.

6.3. Reimbursement of Tree Preservation Funds

In some cases, you may decide to contribute to the Tree Fund pursuant to Section 5.3 at the start of your project, but find at the end of construction, the planting of additional trees is preferable.

6.3.1. PROCEDURE: Prior to the issuance of a Tree Permit Final Inspection for a project subject to the Tree Preservation Bylaw, you may propose a revised Tree Protection & Mitigation Plan that shows a corresponding number of additional new plantings, and request that contributions made to the Tree Fund pursuant to Section 5.3 be reimbursed.

6.3.2. LIMITATIONS: Once a Tree Permit Final Inspection has been completed for a triggering project, no further reimbursement will be allowed.

6.4. Suspension or Revocation

The Reviewing Agent may suspend or revoke your Tree Permit at any time if you fail to comply with either the Bylaw or the conditions of the permit. Notice may be made via certified or registered mail, return receipt requested, or hand delivered. It must provide you an opportunity to correct the non-compliance. This may include remediation or other requirements identified by the Reviewing Agent. You may apply for a renewal of the Tree Permit once the project is returned to compliance or remediation completed, where practicable. Note that if your Tree Permit is suspended or revoked, the Building Inspections Division may issue fines until you correct the noncompliance and your Tree Permit has been renewed or reinstated.

6.5. Irreparable Damage

If the Reviewing Agent determines that you damaged a tree approved for Retention and Protection during construction to an extent that may significantly compromise its survival and future health, he or she may require that you provide mitigation per the terms of the Bylaw.

6.6. Non-Criminal Fines

If the Reviewing Agent or Building Inspector identifies any issues of non-compliance, you will accrue fines per the Bylaw if you do not correct them within 30 days. Each consecutive day the non-compliance continues is considered a separate offense.

Appendix A: Tree Inventory and Mitigation Table

Appendix A provides an example of a Protected Tree inventory table and proposed mitigation that combines proposed tree planting and contribution options to compensate for the removal of Protected Trees.

In this example, five Protected Trees exist on the property. The applicant chose to retain and protect three of the trees, and to replant four trees totaling 10.5 caliper inches. Since tree replanting is required at a rate of 0.5” for every DBH inch removed, the 10.5” of new trees accounts for 21 DBH inches of Protected Trees removed; therefore, the applicant would have 7 DBH inches remaining to compensate for, which was done through a contribution to the Tree Fund, totaling \$2,625.00.

Table 1. Protected Tree Inventory and Mitigation Table

PROTECTED TREE INVENTORY						
Site Key	DBH (inch)	Tree Species	Retained and Protected	Removed	DBH of Removed Trees	Comments
A	14"	Maple	X			Tree Save Area
B	24"	Red Oak	X			Rootpruning and tree well construction, see plan. Water weekly throughout construction.
C	18"	Red Oak		X	18"	
D	10"	Hawthorn		X	10"	
E	10"	Dogwood	X			Tree Save Area
					28"	Total DBH Requiring Mitigation
PROPOSED TREE PLANTING						
Quantity	Height (feet) ¹	Caliper (inch)	Tree Species	Aggregate Caliper (qty x cal)	Replacement Factor ² (x2)	
2	N/A	2.5"	Red Oak	5"		
1	N/A	3"	Sugar Maple	3"		
1	10'	2.5"	White Pine	2.5"		
			Total Inches Proposed	10.5"	21"	Mitigation Offset from Proposed Planting
¹ Height applies only to multi-stemmed and evergreen trees. Height in feet x 0.25 = equivalent caliper inch contribution.						
² Bylaw requires .5" caliper replacement per 1" DBH removed.						
TREE FUND CONTRIBUTION						
Total DBH Requiring Mitigation	minus (-)	Mitigation Offset from Proposed Planting	equals (=)	Remaining DBH Requiring Mitigation	Tree Fund Contribution (\$375/in)	
28"		21"		7"	\$2,625	Mitigation Provided via Contribution to Tree Fund

Appendix B: Contribution Rate Schedule

Per Section 5.3, and following a public meeting, the Select Board voted to establish the following contribution rate schedule at a meeting held on November 13, 2017:

Contribution Rate Schedule	
Contribution per inch of DBH not otherwise mitigated	\$375 per inch

Example:

Total DBH to be removed and *not otherwise mitigated* = 10”: contribution of \$3,750 (10 x \$375)