

STATE OF MICHIGAN
COUNTY OF WASHTENAW
ANN ARBOR CHARTER TOWNSHIP
ORDINANCE NO. 4 - 2011

AMENDMENT TO CHAPTER 74
TREE AND WOODLAND PROTECTION ORDINANCE

An Ordinance to amend Chapter 74, Article I, Section 74.2(b), Definitions, of the Ann Arbor Charter Township Zoning Code and to add new Section 74-605 to Chapter 74, Article V, Supplementary District Regulations to the Ann Arbor Charter Township Zoning Code.

The Ann Arbor Charter Township Board of Trustees ordains:

Article I. In General

Sec. 74-2. Definitions and Interpretation.

[Subsection (a) *Interpretation* remains the same.]

(b) *Definitions.* The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

[The following definitions shall be added to Section 74.2(b)]

Caliper. The method by which nursery tree stock is measured. This measurement is taken six (6) inches above the ground if caliper measurement is four (4) inches or less; if caliper measurement is larger, then the measurement is taken 12 inches above the ground.

Clear Cutting. A practice where most or all trees are cut down within a woodland within a short time period.

Critical root zone (CRZ). The circular area surrounding a tree which contains tree roots within 18 inches of the ground surface. The radius of the critical root zone is, in feet, the same numerical value as the tree's diameter at breast height (DBH) in inches and is measured outward from the center of the tree. For example, the critical root zone of a 12 inch DBH tree has a radius of 12 feet.

Diameter Breast Height (DBH). A tree's diameter in inches measured by diameter tape at four and one-half (4-1/2) feet above the ground. On multi-stem trees, the largest diameter stem shall be measured.

Dripline. The line extending vertically from the exterior edge of a tree's live crown to the ground.

Ecological Characterization Report. A report that provides reliable and factual data and information describing the ecological components, functions and value of tree and Woodland resource areas, such as native plant species (tree, understory and groundlayer), wildlife, habitat resources, wetland and riparian areas, steep slopes, and other information.

Forestry Operations. Activities related to the harvesting, reforestation, and other management activities, including, but not limited to, thinning, pest control, fertilization, and wildlife management, that are consistent with principles of sustainable forestry.

Grubbing. Removal of understory and ground layer vegetation from a woodland area.

Sustainable Forestry. Forestry practices that are designed to meet present and future wood product needs by employing a land stewardship ethic that integrates the reforestation, managing, growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, wildlife and fish habitat, and visual changes.

Tree. Any self-supporting, woody plant of a species which normally grows to an overall height of fifteen (15) feet or more and/or has a minimum DBH of three (3) inches.

Tree, invasive. Trees that are non-native and are likely to cause harm to local ecosystems by crowding out natives and thus reducing the diversity of the ecosystem as further defined in Section 74-605(j).

Tree, native. A tree species that has naturally evolved in an area over thousands of years under certain soil, hydrologic, and other site conditions. Where "native" tree or plant is used in the text, this means a straight species, not a cultivar of a species.

Tree, non-invasive. A plant species which spread is controlled in some manner and is NOT listed in this ordinance as an invasive tree.

Tree, non-native. A plant species that has evolved in a country or region other than Washtenaw County, Michigan, and has been introduced by human activity.

Tree, Landmark. Any tree in a healthy, live condition that is not an "invasive tree" as defined herein, that is 24 inches DBH or greater, or meets the minimum size (DBH) requirements of the species listed in this ordinance as further defined in Section 74-605(k). Landmark Trees are considered Protected Trees under this ordinance.

Tree, Protected. Any tree in a healthy, live condition that is not an “invasive tree” as defined herein, is at least 15 feet tall, and has a single stem trunk of eight (8) inches DBH or greater, or a multi-stem trunk system where one or more of the stems is four (4) inches DBH or greater. Landmark Trees are considered Protected Trees under this ordinance.

Tree/Woodland Removal Permit. A permit issued pursuant to Section 74-605(h).

Tree/Woodland Survey. A survey that describes, through plans, graphics and written narrative, the location, species, condition, and other details, as required by this ordinance, of existing tree and Woodland resources as further defined in Section 74-605(l).

Woodland. A forested area (including all native trees, shrubs and ground cover thereon) of one acre or more containing 40 trees per one acre greater than eight (8) inches in diameter at breast height (DBH), or a plantation of one acre or more with a minimum average DBH of 10 inches. The critical root zone of all trees in the perimeter of the forested area or plantation defines the area of a Woodland.

Woodland Stewardship Plan. A written document listing activities that enhance or improve Woodland resources (wildlife, timber, soil, water, recreation and aesthetics) on private land over a ten-year period as further defined in Section 74-605(n).

[There are no other amendments to Section 74.2(b)]

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Article V. Supplementary District Regulations

[The following new Section 74-605 is added to Chapter 74, Article V]

Sec. 74-605. Tree and Woodland Resource Preservation.

(a) *Introduction and purpose.* Trees and Woodlands provide for a number of public benefits, including environmental, social, and aesthetic benefits. Uncontrolled development or tree removal could result in unnecessary removal of trees, Woodlands and related natural resources. Therefore, it is the intent of this ordinance to:

- (1) Encourage the preservation of trees and related natural resources of the Woodland ecosystem on undeveloped land and in connection with the development of land;
- (2) Prohibit clear cutting of Woodland areas prior to or in anticipation of development without prior approval from the Planning Commission;
- (3) Provide for the protection, preservation, proper maintenance and use of trees and Woodlands to minimize damage from erosion and siltation, loss of wildlife and vegetation, and/or from the destruction of the natural habitat;

- (4) Provide for the paramount public concern for these natural resources in the interest of the health, safety and general welfare of the residents of the Township, in keeping with Article IV, Section 52 of the Michigan Constitution of 1963 and the intent of the Michigan Natural Resources and Environmental Protection Act, PA 451 of 1994.

(c) *Applicability.* This Section shall apply to all land located in the Township, unless exempt pursuant to (e) below, including parcels that are in the process of being annexed to the City of Ann Arbor until the date that such annexation is final and notice of such official annexation is provided to the Township by the State of Michigan.

(d) *Prohibitions.* Clear cutting of Woodlands, including grubbing, on parcels covered by this Section is prohibited without first obtaining a Tree/Woodland Removal Permit. Clear cutting as a forestry management practice is allowed without a Tree/Woodland Removal Permit if consistent with the Woodland Stewardship Plan on file with the Township.

(e) *Exemptions.* Tree and Woodland removal associated with the following shall be exempt from the requirements of this Section:

- (1) Parcels that are not subject to Site Plan Review or Subdivision Plat Review as defined in Article II, and:
 - a. Are three (3) acres or less.
 - b. Are greater than three (3) acres, but where no more than 100 DBH inches of Protected Trees are removed within twelve (12) months.
- (2) Farming operations, as defined by the Right to Farm Act, which are lawfully existing and operating in accordance with Generally Accepted Agricultural Management Practices as adopted by the Michigan Department of Agriculture.
- (3) Forestry operations conducted in compliance with a Woodland Stewardship Plan that has been filed with the Township Building Official prior to the start of any forestry operations.
- (4) Installation, repair or maintenance of public utilities lawfully operating in the Township in accordance with an operating permit or right-of-way permit issued by the Township but only to the extent that such Tree or Woodland removal is necessary for protection of utility lines and the public health, safety and welfare.
- (5) Work within an existing public road right-of-way or an existing private road easement but only to the extent necessary for safe access along such right of way or private road easement and to protect the public health, safety and welfare in accordance with an operating permit or right-of-way permit issued by the Township.
- (6) Any trees which are demonstrated by the property owner to the satisfaction of the Township Building Official, in consultation with the Township Environmental

Consultant, to have a health and condition standard factor of less than fifty percent (50%) based upon the standards established by the International Society of Arboriculture.

- (7) Any tree that poses a safety hazard, whose removal will prevent injury or damage to persons or property, and provided that removal is accomplished through the use of accepted standard forestry practices.

(f) *Authorization.* Under certain conditions defined in this Section, a Tree/Woodland Removal Permit may be authorized by the Planning Commission to allow limited removal of tree/Woodland resources, or construction, activity, use, or operations within a Woodland area, if preservation techniques described in this Section have been applied to the greatest extent practical, and tree and/or Woodland removal is found by the Planning Commission to be unavoidable.

(g) *Filing of application; fee.* Application for proposed Tree/Woodland Removal Permit shall be made by filing an application form and required fee with the Township Clerk. The fees shall be set by resolution of the Township Board.

(h) *Application procedure for Tree/Woodland Removal Permit.* The provisions of this ordinance shall apply to all parcels in the Township that (1) require Site Plan Review or Subdivision Plat Review as defined in Article II, or (2) are greater than 3 acres in area (unless exempted in (d) or (e)(1)(b) above). The procedure for review and approval of a Tree/Woodland Removal Permit is as follows:

- (1) *When site plan or subdivision plat review is required.* If Protected Trees or Woodlands are proposed for removal as part of a development proposal, the following are required as a component of the preliminary site plan submission pursuant to Section 74-175, or the preliminary plat, tentative approval pursuant to Section 58-72.
 - a. A Tree/Woodland Survey.
 - b. A Tree Replacement Plan (see Tree Replacement Options Section 74-605 (o)).

The Planning Commission shall review the Tree/Woodland Survey, any Tree Replacement Plan, and all information required by this Section and the site plan or plat review Sections, as applicable. The Planning Commission shall approve, approve with conditions or deny the applicant's Tree/Woodland Removal Permit in accordance with the standards set forth in this Section and the site plan or plat review sections, as applicable.

- (2) *When site plan or subdivision plat review is not required.* If Protected Trees or Woodlands are proposed for removal and are *not* part of a development proposal, the Planning Commission shall conduct a review of permit applications in the following situations:

- a. For parcels that are greater than 3 acres in area, when more than 100 DBH inches of Protected Trees are to be removed within twelve (12) months (unless exempt pursuant to (d) or (e)(1)(b) above).
- b. The Planning Commission may require a Tree/Woodland Survey in circumstances where the Commission determines that it would be helpful in understanding the number and/or sizes of trees proposed for removal. At a minimum, a plot plan, as defined in Section 74-605(m) of this ordinance, shall be submitted that provides the location, size and type of all Protected Trees and/or Woodlands to be removed as well as a Tree Replacement Plan and tree protection method where necessary.

The Planning Commission, in consultation with any appropriate consultants if needed, shall approve or deny the applicant's Tree/Woodland Removal Permit in accordance with the standards set forth in this Section.

(i) *Review criteria.* In determining whether the proposed disturbance or removal of trees and/or Woodlands is limited to the minimum necessary to allow a reasonable use of the land, the Planning Commission shall apply the following criteria:

- (1) The importance and overall value of the trees/Woodlands on the site. In general, the importance of trees/Woodlands increases with rarity, size, and age.
- (2) The existence of overlapping natural features such as wetlands, 100 year flood plains, Woodlands, Landmark Trees, steep slopes or endangered species in one area. Overlapping natural features increase the importance and overall value for preservation of the area.
- (3) The impact of the proposed disturbance on the integrity of ecological systems or the continuity between natural features. Wherever possible, ecological systems and continuity between natural features should be preserved.
- (4) The amount of disturbance in relation to the scale of the proposed development.
- (5) The adequacy of the Tree Replacement Plan or other mitigation plan.
- (6) The justification for forestry management practices, the benefits of the proposed disturbance and proposed coordination with the recommendations in the Woodland Stewardship Plan.

(j) *Invasive trees.* The following species are considered invasive and shall not be considered a Protected Tree under this ordinance.

COMMON NAME	BOTANICAL NAME
Alder (Black)	<i>Alnus glutinosa</i>
Buckthorn	<i>Rhamnus utilis</i>
Buckthorn(Common European)	<i>Rhamnus cathartica</i>
Buckthorn(Glossy, Tallhedge)	<i>Rhamnus frangula</i>
Elm (Siberian)	<i>Ulmus pumila</i>
Horse Chestnut	<i>Aesculus hippocastanum</i>
Locust (Black)	<i>Robinia pseudoacacia</i>
Locust (Bristly)	<i>Robinia hispida</i>
Locust (Clammy)	<i>Robinia viscosa</i>
Maple (Amur)	<i>Acer ginnala</i>
Maple (Norway)	<i>Acer platanoides</i>
Mulberry (Russian, White)	<i>Morus alba</i>
Olive (Autumn)	<i>Elaeagnus umbellata</i>
Olive (Russian)	<i>Elaeagnus angustifolia</i>
Poplar (Lombardy)	<i>Populus nigra var. italica</i>
Poplar (Silver, White)	<i>Populus alba</i>
Spindle Tree	<i>Euonymus europea</i>
Tree of Heaven	<i>Ailanthus altissima</i>
Willow (Crack)	<i>Salix fragilis</i>
Willow (Gray)	<i>Salix cinerea</i>
Willow (Laurel/Bayleaved)	<i>Salix pentandra</i>
Willow (White)	<i>Salix alba</i>

(k) *Landmark Trees.* The following species that meet the minimum size (DBH) requirement are considered Landmark Trees.

COMMON NAME	BOTANICAL NAME	LANDMARK TREE SIZE (DBH)
Any healthy tree with a DBH 24" or greater, (except invasive species), or a healthy tree of the species described below with the minimum DBH listed.		
Ash	<i>Fraxinus</i>	18"
Basswood	<i>Tilia</i>	18"
Beech, American	<i>Fagus grandifolia</i>	18"
Black Cherry	<i>Prunus serotina</i>	18"
Black Walnut	<i>Juglans nigra</i>	18"
Buckeye, Ohio	<i>Aesculus glabra</i>	18"
Douglas Fir	<i>Pseudotsuga menziesii</i>	18"
Elm	<i>Ulmus</i>	18"
Fir	<i>Abies</i>	18"
Kentucky Coffeetree	<i>Gymnocladus dioica</i>	18"
London Planetree/American Sycamore	<i>Platanus</i>	18"
Maple (Silver)	<i>Acer saccharinum</i>	18"
Pine (All species)	<i>Pinus</i>	18"
Spruce	<i>Picea</i>	18"
Tulip Poplar	<i>Liriodendron tulipifera</i>	18"

Landmark Trees (Continued)

COMMON NAME	BOTANICAL NAME	LANDMARK TREE SIZE (DBH)
Hickory	<i>Carya</i>	16"
Honey Locust	<i>Gleditsia tricanthos</i>	16"
Maple (Red)	<i>Acer rubrum</i>	16"
Maple (Sugar)	<i>Acer saccharum</i>	16"
Oak (All species)	<i>Quercus</i>	16"
Arborvitae	<i>Thuja</i>	12"
Bald Cypress	<i>Taxodium distichum</i>	12"
Birch	<i>Betula</i>	12"
Black Tupelo	<i>Nyssa sylvatica</i>	12"
Cherry, Flowering	<i>Prunus spp.</i>	12"
Crabapple/Hawthorne	<i>Malus/crataegus</i>	12"
Dawn Redwood	<i>Metasequoia glyptostroboides</i>	12"
Ginkgo	<i>Ginkgo</i>	12"
Hackberry	<i>Celtis occidentalis</i>	12"
Hawthorn	<i>Crataegus</i>	12"
Hemlock	<i>Tsuga</i>	12"
Larch/Tamarack	<i>Larix</i>	12"
Magnolia	<i>Magnolia</i>	12"
Pear	<i>Pyrus spp.</i>	12"
Persimmon	<i>Diospyros virginiana</i>	12"
Poplar	<i>Populus except for p. deltoides, alba</i>	12"
Sassafras	<i>Sassafras albidum</i>	12"
Sweetgum	<i>Liquidamber styraciflua</i>	12"
Yellow Wood	<i>Cladrastis lutea</i>	12"
Blue-Beech/Hornbeam	<i>Carpinus caroliniana</i>	8"
Butternut	<i>Juglans cinera</i>	8"
Cedar of Lebanon	<i>Cedrus spp.</i>	8"
Chestnut	<i>Castanea</i>	8"
Dogwood, Flowering	<i>Cornus florida</i>	8"
Eastern Red Cedar	<i>Juniperus virginiana</i>	8"
Hop-Hornbeam/Ironwood	<i>Ostrya virginiana</i>	8"
Maple, Mountain/Striped	<i>Acer spicatum/pensylvanicum</i>	8"
Paw Paw	<i>Asimina triloba</i>	8"
Redbud	<i>Cercis canadensis</i>	8"
Serviceberry	<i>Amelanchier</i>	8"

(1) *Tree/Woodland Survey.* A Tree/Woodland Survey shall meet the following requirements:

- (1) *Plan requirements.* If a Tree/Woodland Survey is required as part of the site plan or subdivision plat review process, then the scale of the Survey shall be the same as the Site Plan or the Subdivision Plat. In any other case, a Tree/Woodland Survey shall be a scaled drawing which shall not exceed 100 feet to the inch.
- (2) *Plan contents.* In all cases a Tree/Woodland Survey shall show all Protected Trees and Woodlands to be removed and to remain. (Note that the phrase “Protected Trees” includes “Landmark Trees.”) The Survey shall contain the following:

- a. Location of all Protected Trees and Woodlands accurately plotted;
- b. Common and botanical names of all Protected Trees, their size in inches at their DBH, and a description of each tree's health
- c. Ecological Characterization Report, prepared by a professional or professionals qualified in the areas of ecology, botany, wildlife biology or other relevant discipline that includes, at a minimum, the following information.
 1. The plant species, plant communities/associations (paying particular attention to Michigan endangered, threatened, and special concern species) that the Woodland contains;
 2. The wildlife use and habitat (paying particular attention to Michigan endangered, threatened, and special concern species) showing the species using the Woodland, wildlife movement corridors, the times or seasons that the Woodland is used by those species and the "functions" (meaning feeding, watering, cover, nesting, roosting, and/or perching) that the Woodland provides for such wildlife species;
 3. The boundary of wetlands that are located within, either partially or wholly, the Woodland and a description of the vegetation and ecological functions provided by those wetlands;
 4. The pattern, species, and location of native trees, native tree stands, and other native site vegetation including their relationship to adjacent areas;
 5. The top of the bank or shoreline of any inland lake or stream located, either partially or wholly, within the Woodland; and
 6. The general ecological functions provided by the Woodland and its features.
 7. Other information necessary or advisable for a proper evaluation of the site and proposed tree removal.

If the proposed activity or proposed Woodland impacts are minimal as determined by the Planning Commission, and as assisted by the Building Official, Environmental Consultant, or others, the Planning Commission may, in its discretion, waive the requirement for an Ecological Characterization Report.

- (3) *Tree tags.* All Protected Trees shall be numbered and non-corrosive tags bearing that number shall be attached to each respective tree.
- (4) *Professional qualifications.* The Tree/Woodland Survey must be sealed by a forester registered in the State of Michigan, an International Society of Arboriculture certified arborist, or a forester certified by the Society of American Forestry. The ecological

characterization report that is part of the Tree/Woodland Survey must be signed by the ecologist, botanist, wildlife biologist or other, stating their qualifications to prepare such report.

- (5) *Extent of Survey.* In the case of large or heavily wooded parcels, plotting of Protected Trees that are more than 100 feet outside of the edge of the area to be disturbed may be waived by the Planning Commission at the request of the applicant and upon a recommendation by the Township Environmental Consultant.

(m) *Plot Plan.* When this Section requires a Plot Plan, the plan shall include the following information:

- (1) Scale, date, and north directional arrow.
- (2) Location map showing major intersections, and dimensioned diagram of the parcel.
- (3) Dimensioned location, outline, and dimensions of all existing and proposed structures, and the location and extent of all uses not involving structures.
- (4) Location, species, size, and condition of Protected Trees and Woodlands to be removed.
- (5) Additional information as required by the Planning Commission for the purposes of determining compliance with the provisions of this chapter.

(n) *Woodland Stewardship Plan.* When this Section requires a Woodland Stewardship Plan, the plan shall meet the following requirements:

- (1) *Plan contents.* The contents of a Woodland Stewardship Plan must comply with the requirements established by the State of Michigan's Forest Stewardship Program (FSP) including:
 - a. Property Identification and Overview: Landowner and plan writer's names, addresses, phone numbers and signatures; acreage under the stewardship plan; date; landowners goals; location of site and directions to property; cover page with FSP logo, date, etc.; completed Landowner Assessment form; interaction with surrounding landscape.
 - b. Property Maps and Location Information: General property description; forest type map; activity map; soils map, legend, and soils description.
 - c. Resource Descriptions: Narrative description of management unit; stands described by cover type and acreage; major species; stand size class, density soil type, site quality; stand quality, including age, health, growth rate, volume, timber quality, threatened and endangered species database checked, habitat class information, culturage heritage data, stand history, wildlife habitat quality and

uses, timber production potential, recreational opportunities, wetlands and water quality issues, and aesthetics.

- d. Prescriptions/Recommendations: Schedule of prescribed activities for the next 10 years; stand/management unit specific goals statement; how prescriptions use the appropriate best management practices to minimize damage to the resources in each management unit; long-range silvicultural objectives for each stand or cover type clearly stated and related to landowners' goals.

- (2) *Professional qualifications*. All Woodland Stewardship Plans must be prepared by a certified forester. Certified foresters are foresters registered with the State of Michigan or a conservation district forester.

(o) *Tree replacement options and requirements*. The tree replacement requirements herein can be met in part or in whole by the landscape requirements set forth in Section 74-586 Landscaping and Transition Strips.

- (1) *Protected tree replacement*. For every one (1) inch DBH of Protected Trees removed, one-half (.5) inch DBH of replacement trees shall be planted on the parcel, each of which replacement trees shall have a 2.0 inch minimum caliper for deciduous trees, or six (6) feet in height for coniferous trees. To compensate for the disparity between DBH and caliper inch measurements, replacement trees using caliper measurements must be provided at 140% of the DBH removed. Replacement trees shall be species native to Michigan, and non-sterile varieties. If more than 20 replacement trees are required, a mixture of three (3) or more species must be used.

EXAMPLE:

Trees to be Removed in Woodland Area Greater than Three (3) Acres = 200 DBH inches

$(200 \text{ DBH} \times 140\%) \times .5 = 140$ caliper inches of replacement trees

$140 / 2.0 = 70$ replacement trees at 2.0 caliper inch required

- (2) *Tree Replacement and Woodland Stewardship Plans*. If removal of Protected Trees is conducted in compliance with a Woodland Stewardship Plan, then replacement trees are not required.
- (3) Tree Replacement Plan Contents.

- a. *Plan requirements*. If a Tree Replacement Plan is required as part of the site plan review or subdivision plat review process as set forth in 74-605(h)(1), then the scale of the Tree Replacement Plan shall be the same as either the Site Survey, the Site Plan, and/or the Subdivision Plat. If a Tree Replacement Plan is required for other Woodland or Protected tree removal as set forth in 74-605(h)(2), the Tree Replacement Plan, if required, shall be a scaled drawing and the scale shall not exceed 100 feet to the inch.

- b. *Plan contents*. In all cases a Tree Replacement Plan shall contain the following:

1. Property boundaries, existing and proposed buildings and structures, pavement, overhead and underground utilities, and other permanent features of the property.
 2. Existing natural features such as edges of Woodlands, Protected Trees to remain, wetlands, water courses and water features (ponds, lakes, etc.).
 3. Location, size, species (common and botanical names), and number of all proposed trees;
- (4) *Tree removal without permission.* If Protected Trees are removed without the required review and approval, or without filing any required Woodland Stewardship Plan, then, in addition to sanctions for violation of this Chapter, each one (1) inch DBH removed must be replaced with two (2) DBH inches in replacement trees. Replacement trees shall meet the same minimum size, species, and diversity requirements as noted in (1) and (2) above. Plans showing the location, size, species, and other relevant information regarding tree mitigation and replacement as required by this subsection shall be submitted to the Township Building Official for review and approval, in consultation with the Township's Environmental Consultant if needed.
- (5) *Transplanting trees.* Where native Woodland species are being displaced by development, smaller sized native trees transplanted from the disturbed area of the site may be used to fulfill tree replacement requirements. Transplanted trees shall be native species, no less than 1.0" caliper for deciduous trees or 3 feet tall for evergreen trees, and the total number of plants used adds up to the size requirements for a single species. For example, two rescued 1.0" caliper oaks can be used instead of 1, 2.0" caliper oak. Native species transplanted from the site shall not be removed from undisturbed areas of the site, or areas designated as preservation or conservation areas. Federal and state laws protecting native plant species designated as endangered, threatened or of special concern must be adhered to and under no circumstances shall these plants be damaged, destroyed or removed from the site.
- (6) *Woodland restoration.* If deemed appropriate by the Planning Commission, Woodland areas disturbed by development activities may be mitigated by the creation of an area planted with a native plant community appropriate to the area. The proposed plant community shall be illustrated on a Tree Replacement Plan, including information about all proposed plant material. In reviewing such a proposal, the Planning Commission shall apply the following standards:
- a. The use of existing Woodland soils from the site to establish necessary soil conditions for Woodland plants to establish themselves.
 - b. The native species diversity proposed for tree, understory and groundlayer plants.

- c. The age diversity of the proposed tree canopy. (Native trees and shrubs of various ages and sizes are appropriate for this type of planting. Therefore the minimum tree size requirements do not apply here.)
 - d. The use of plants with local genotypes, including rescued plants from the disturbed portion of the site, seed, and propagates from the local plant populations.
 - e. The habitat values created by the proposed mitigation, including plant species proposed adjacent to other site features, such as contiguous Woodlands, tree rows, wetlands, streams, or other features.
- (7) *Security.* After issuance of a permit under this Section the applicant shall deposit with the Township security in the form of cash, surety bond or letter of credit, in an amount recommended by the Township Environmental Consultant and approved by the Planning Commission, and in a form approved by the Township Building Official and Township attorney to ensure survival of replacement trees, transplanted trees, and/or Woodland plants for a period of three (3) years after the later of (i) planting, (ii) issuance of a certificate of occupancy for the Project, or (iii) final permit approval. The Tree Replacement Plan shall include a description of the proposed amount and type of security to be posted. The applicant and the Township shall enter into an escrow agreement pertaining to the conditions for release of the security in a form approved by the Township attorney and Building Official at the time the security is posted.
- (8) *Alternative Mitigation Measures.* The Planning Commission shall be authorized to waive a portion of the tree replacement requirements of this Section when site factors, tree condition or development requirements make conformity to the tree replacement requirements of this Section difficult or undesirable. In such case, the applicant shall propose either (i) a plan for planting a portion of the required replacement trees or other plantings in other areas of the Township, or (ii) a monetary contribution to the Township Woodlands/Natural Features Fund, which contribution shall be in an amount reasonably related to the cost of the tree replacement requirement waived. The Planning Commission shall review such proposal and may request revisions to the proposal and may approve, approve with modifications and conditions, or deny such proposal for waiver of tree replacement requirements.

The Township Woodlands/Natural Features Fund shall be a separate Township fund which shall serve as the depository for all monetary contributions as provided in this subsection.

The Township Board shall administer and use the Township Woodlands/Natural Features Fund for the public purposes of planting and maintaining trees, Woodlands, and other natural features within the Township, and for other public purposes related to stewardship, preservation and restoration of natural features, trees or Woodlands in the Township in accordance with specific programs developed by the Planning Commission and approved by the Township Board. Such programs may include but are not limited to the following, all to be conducted within the Township: (i) invasive species removal, (ii) stream bank restoration, (iii) park path way restoration, (iv)

assessment, mapping or surveys of waterways, (v) replacement of dead ash trees along roads, or (vi) installation of trees as windbreaks.

(p) *Preservation of existing trees and Woodlands.* Protected Trees, Landmark Trees and Woodlands shall be preserved to the greatest extent practicable through the use of site development techniques including but not limited to the following:

- (1) In general, Landmark Trees should not be removed for development. Site design should consider any Landmark Tree on a site as an important design element. Removal of Landmark Trees should occur rarely and should be considered only after alternatives are studied and found to be not feasible.
- (2) Locate development in areas of the site that are already disturbed or cleared of trees and woody vegetation.
- (3) Minimize clearing and grading of the site by working with the site's existing topography. Grading, roads, walkways, utility lines, and all other aspects of soil disturbance shall be minimized to the extent possible considering standards of sound design and public safety. Clearing for buildings should be limited to the smallest area needed for safe and effective building work. Excavated soil and materials from basements and grading shall not be spread in the Woodland area. Careful handling of trees and use of adequate tree protection measures should be undertaken, especially for trees near the building envelope.
- (4) Use retaining walls and other techniques to minimize grade changes near trees.
- (5) Provide tree and understory/groundlayer protection during all construction phases of the project. Woodland areas excluded from development should be protected from all intrusions during development by well-maintained barrier fencing. (See Subsection (q) *Tree protection during construction* below for minimum requirements.) If construction or grading is to occur within a portion of Woodlands those Woodland areas excluded from development should be clearly marked and/or fenced off during development. Unpermitted intrusions include any activity that could adversely affect the plants (trees, shrubs, and herbaceous/groundlayer plants) within the fenced-off Woodland including, but not limited to, the following: driving vehicles and/or heavy equipment; stockpiling, storage or parking of any soils, materials, equipment or vehicles; spreading excess fill/soil; dumping of construction or landscaping wastes; and clearing/removal of the understory or groundlayer of vegetation within the Woodland.
- (6) Minimize the building/construction footprint on individual lots to preserve trees within lot boundaries.
- (7) Maintain grades and moisture conditions within the Critical Root Zone (CRZ) of trees. Many of the native hardwood trees: oaks, hickories, maples and beeches, for example, and most old trees do not adapt to environmental changes brought about by construction. Grading changes should not occur within the CRZ of a tree. In addition,

grading on a site should neither increase or decrease moisture conditions within a tree's CRZ. The area of concern around an important tree may be significantly larger than the CRZ. The drip line of the tree shall be used for comparison, and if larger than the CRZ, the dripline should be used to determine how best to protect an important tree.

- (8) Locate utility lines away from trees to be retained. If this is not possible, install utility lines through bored tunnels instead of trenches.
- (9) Conduct any necessary excavation around trees by hand.
- (q) *Tree protection during construction.*
- (1) *Critical Root Zone.* No disturbance or construction activities may occur within the Critical Root Zone of any Protected or Landmark Tree designated to remain as shown on the Tree/Woodland survey, site plan, or subdivision plat.
- (2) *Protected barrier.* The applicant, and the applicant's agents and successors shall erect and maintain suitable barriers as approved by the Township to protect trees designated to remain as shown on the approved site plan or subdivision plat. Protected barriers shall be placed at the outer limits of the Critical Root Zone, or drip line if larger and if required by the Planning Commission to provide greater protection for an important tree, and shall remain in place until the Township authorizes removal based on tree protection factors or issues a final certificate of zoning compliance, whichever occurs first.
- (3) *Inspections.* The Township shall have the right to periodically inspect the site during site plan or subdivision plat review, land clearing, and/or construction to ensure compliance with this Section.
- (4) *Construction damage.* Any Woodland, Protected Tree or Landmark Tree that is determined to be dead, dying or severely damaged due to construction activity within three (3) years after the later of issuance of a certificate of occupancy or final permit approval for development authorized by an approved site plan, subdivision plat, or Tree/Woodland Removal Permit shall be replaced by the applicant in the amount specified in the requirements for mitigation of Woodlands. Plans showing the location, size, species, and other relevant information regarding tree mitigation shall be submitted to the Township Building Official for review and approval, in consultation with the Township's Environmental Consultant.
- (r) *Appeals and variances.* All appeals or requests for variances from the provisions of this Section shall be made to the Ann Arbor Township Zoning Board of Appeals. Any appeal must be received in writing by the Township Clerk within 28 days after the date of the meeting at which the Planning Commission made its decision.
- (s) *Violations and penalties.*

- (1) Any person found in violation of the provisions of this Section shall be subject to the provisions in Article II, Division 2 of this chapter, and may be cited for each day of violation. The Township, in addition to other remedies, may institute any appropriate action or proceeding to prevent, abate or restrain the violation.

- (2) In addition to the provisions contained in this Section, the Planning Commission, at a regular or special meeting, shall have the authority to direct the Zoning Officer or other designated person to notify the Township Supervisor that a stop work order (or stop construction order as described in section 74-98) shall be issued upon any project subject to this Section, with the concurrence of the Township Supervisor, when it is determined that a violation has occurred.

May 16, 2011 AS ADOPTED

CERTIFICATION

It is hereby certified that the foregoing Ordinance was adopted by the Township Board of Ann Arbor Charter Township, Washtenaw County, Michigan at a meeting of the Board duly called and held on May 16, 2011.

ANN ARBOR CHARTER TOWNSHIP

By: _____
Michael C. Moran, Supervisor

By: _____
Rena Basch, Clerk

Public Hearing April 5, 2010
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