AGENDA ITEM EXECUTIVE SUMMARY Title: Recommendation to Approve an Ordinance Amending Title 8, "Health and Safety" Chapter 8.30 "Tree Preservation on Property" of the St. Charles Municipal Code Presenter: Christopher Tiedt Please check appropriate box: Government Operations Government Services X Planning & Development (9/8/2014) City Council

If NO, please explain how item will be funded:

N/A

Executive Summary:

Estimated Cost:

The purpose of Chapter 8.30 "Tree Preservation on Private Property" is to maintain existing trees within the City to the greatest extent possible, while allowing for reasonable development of private property. In an effort to keep this Chapter of code up to date with current practices and be less onerous on the residents, staff is proposing amendments to Chapter 8.30 "Tree Preservation on Private Property" that will:

Budgeted:

YES

NO

- Add criteria to allow for the waiver of the Tree Preservation Plan requirement for the Preliminary Plan Submittal.
- Update Section 8.30.040 "Tree Preservation Requirements for Building Lots" to reflect current practices and procedures.
- Revise Emergency Removal procedures to allow removal of trees without first receiving approval from City.
- Allow maintenance and corrective measures to be performed within a Tree Conservation Area per the Tree Conservation Area guidelines without approval from the City.
- Require approval from the governing HOA, if one exists, prior to maintenance and corrective measures being performed within a Tree Conservation Area.

Legal Counsel has reviewed the proposed amendments.

Attachments: (please list)

• Proposed Amendments for Chapter 8.30 "Tree Preservation on Private Property"

Recommendation / Suggested Action (briefly explain):

Staff recommends approval of the Ordinance amending Title 8, "Health and Safety" Chapter 8.30 "Tree Preservation on Private Property" of the St. Charles Municipal Code

For office use only:	Agenda Item Number: 5h	
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Chapter 8.30

TREE PRESERVATION ON PRIVATE PROPERTY

Sections:	
8.30.010	Purpose
8.30.020	Definitions
8.30.030	Tree Preservation Requirements for Land Development
8.30.040	Tree Preservation Requirements for Building Lots
8.30.050	Tree Conservation Areas
8.30.060	Emergency Removal
8.30.070	Requirements for Tree Preservation Plans
8.30.080	Practices During Construction
8.30.090	Penalties

8.30.010 Purpose

The purpose of this Chapter is to maintain existing trees within the City to the greatest extent possible, while allowing for reasonable development of private property. Trees are assets to the community in many ways, including contributing to its character and scenic beauty, clean air, reducing noise, preventing erosion of topsoil, reducing the rate of stormwater runoff, providing nesting areas for birds and habitat for other wildlife, conserving energy, and providing shade and windbreaks. The health and general welfare of the community, as well as its tax base, are enhanced when trees are preserved. (Ord. 2001-M-73 § 1.)

8.30.020 Definitions

<u>Approved Trees</u>: Approved trees are those species described in Chapter 12.20 of this Code as being suitable street trees in the City of St. Charles, and shall not include restricted species listed in Chapter 12.20.

<u>Building Lot</u>: A lot for which application has been made for a building permit to construct a new building or structure, or to demolish or move an existing building or structure.

<u>Construction Zone</u>: The area of a site where construction of buildings and other site improvements may occur.

<u>DBH</u> (diameter at breast height): The diameter of a tree measured at a height of four and a half feet above the ground.

<u>Land Development</u>: The process of developing a parcel of land, starting with the submittal of a preliminary plan of subdivision or Planned Unit Development and concluding with the completion and acceptance of site improvements. Land development may involve unimproved vacant land, or land improved with buildings and/or site improvements that is proposed to be redeveloped, but does not include review and issuance of a building permit.

<u>Lot</u>: A parcel of land which is designated by its owner at the time of application for a building permit as a tract all of which is to be developed and used as one parcel under single ownership. A lot may consist of (a) a single lot of record or (b) a combination of contiguous lots of record.

<u>Remove or removal</u>: The actual physical removal of a tree, or the effective removal through damaging, cutting, poisoning, or other direct or indirect action resulting in, or likely to result in, the death of a tree.

<u>Tree Preservation Plan</u>: A plan identifying existing trees, designating areas where trees will be preserved and removed, and detailing the location and type of tree protection measures to be undertaken during

and/or after construction. An easement for tree and/or natural area preservation established in a subdivision or Planned Unit Development approved prior to November 19, 2001, including but not limited to the Tree Conservation Areas listed in Section 8.30.050 § 1 hereof, shall constitute an approved Tree Preservation Plan where the Tree Preservation Zone is the area within the easement, and the Construction Zone is all areas outside the easement.

<u>Tree Preservation Zone</u>: The area of a site that is not necessary for construction of buildings and other site improvements and within which trees shall be preserved. (Ord. 2001-M-73 § 1.)

8.30.030 Tree Preservation Requirements for Land Development

- A. No live tree(s) with a trunk size of six inches (6") or more DBH shall be removed from any parcel undergoing Land Development except as permitted by an approved Tree Preservation Plan.
- B. In addition to the other requirements of this Chapter, where a Site Development Permit is required by Title 18 of the St. Charles Municipal Code no trees shall be removed from a site undergoing Land Development unless a Site Development Permit has been issued and remains valid.
- C. Where trees six inches (6") or more DBH exist on the property to be developed or redeveloped, a Tree Preservation Plan=shall be submitted with the preliminary plan of subdivision or planned unit development. If the preliminary plan stage is omitted or is combined with final engineering plans, the Tree Preservation Plan shall be submitted with the final engineering plans approval of the City Council at the time of approval of the Final Plat.

 The requirement to provide a Tree Preservation Plan as a part of an initial preliminary plan submittal
 - The requirement to provide a Tree Preservation Plan as a part of an initial preliminary plan submittal may be waived by the City Administrator or their designee where 1) existing vegetation on the parcel is comprised primarily of undesirable species and/or low quality specimens that do not warrant preservation, or 2) the area of the parcel identified for land development will be substantially modified such that any existing vegetation is unlikely to be successfully preserved. The City Administrator or their designee may require information demonstrating that a parcel meets the criteria prior to waiving the requirement. Notwithstanding the waiver of the requirement, the Plan Commission or City Council may require a Tree Preservation Plan prior to approval of a preliminary plan.
- D. The removal of trees six inches (6") or more DBH proposed as part of a Tree Preservation Plan shall be permitted only to the extent necessary to accommodate the construction of public and private site improvements, buildings and structures in conformance with the standards of 8.30.070 § 2 hereof. Submittal of a separate Tree Preservation Plan for each Building Lot shall not be required for Building Lots within a subdivision or Planned Unit Development if all areas where trees are to be removed are identified in the approved Tree Preservation Plan.
- E. Where an easement for tree and/or natural area preservation has been established in a subdivision or Planned Unit Development approved prior to November 19, 2001, including but not limited to the Tree Conservation Areas listed in Section 8.30.050 § 1 hereof, no additional Tree Preservation Plan approval shall be required to remove existing trees located outside of the established easement areas.

(Ord. 2001-M-73 § 1.)

8.30.040 Tree Preservation Requirements for Building Lots

- A. This section shall apply to Building Lots where a Tree Preservation Plan has previously been approved or where a Tree Preservation Plan for the Building Lot is required as a part of the approved preliminary plan of subdivision or planned unit development.
- B. No live tree(s) of six inches (6") or more DBH shall be removed from any Building Lot except as permitted by an approved Tree Preservation Plan.
- BC. A proposed Tree Preservation Plan shall be submitted with the application for a building permit where trees six inches (6") or more DBH exist on the Building Lot if (a) no Tree Preservation Plan has been approved for the property Building Lot or (b) the applicant proposes to alter the approved Tree Preservation Plan.

- C. Where a Site Development Permit is required (refer to Section 18.36.040 of this Code), a Tree-Preservation Plan for a Building Lot shall be approved only if a Site Development Permit has been issued and remains valid.
- D. The City Administrator or his designee shall approve a Tree Preservation Plan (or amendment thereto) for a Building Lot if the application complies with the provisions of this Chapter and in particular the standards of Section 8.30.070 § 1.
- E. Appeals: A property owner may appeal the denial of a Tree Preservation Plan to the City Council by submitting a written request. If the City Council finds that the standards of Section 8.30.070 § 2 have been met, it may approve the Tree Preservation Plan and may include conditions it deems necessary to ensure compliance with this Chapter.

(Ord. 2001-M-73 § 1.)

8.30.050 Tree Conservation Areas

A. The Tree Conservation Areas listed in this section are hereby found to be unique community assets that, if protected, will enhance the value of the property encumbered by said covenants and easements as well as other property within the community. These Tree Conservation Areas shall be maintained in conformance with the provisions of their respective covenants and easements, and in conformance with the Tree Conservation Area Guidelines set forth in Exhibit "A" hereto (the "TCA Guidelines").

Tree Conservation Areas:

Red Gate Units 4, 5 and 7: Tree Preservation Area Red Gate Units 2 and 8: Natural Area Easement Tradition of St. Charles: Tree Conservation Easement

Woods of Crane Road: Natural Area Easement

Kingswood, and Kingswood Unit II and III: Tree Conservation Zone, Natural Area Easement

Majestic Oaks: Tree Conservation Easement Willowgate: Drainage and Conservation Easement

Woods of Delnor: Conservation Area

Woods of Fox Glen Units 1 and 2: Natural Area Easement

The Royal Fox: Natural Area Easement

- B. A property owner who proposes to make changes <u>or alterations</u> within a Tree Conservation Area <u>that are not in conformance with the TCA Guidelines</u> shall submit a written request to the City. Such request shall clearly describe the type of work to be undertaken, the locations, quantities, and specifications of materials and equipment, and the name and licensing of any contractor performing the work. Written approval from the City must be received before proceeding with any alterations, even if such alterations are <u>not in conformance withallowed by</u> the TCA Guidelines.
- C. Any encroachment in the Tree Conservation Area that has not been previously authorized by the City Administrator or their designee and is not inconformance with the TCA Guidelines, must be removed immediately by the property owner and at their expense. The property owner may however submit a written request to the City Administrator or their designee requesting that the encroachment be allowed to remain. Each request will be reviewed individually by the City Administrator or their designee, and on a case-by-case basis taking the TCA Guidelines and the following criteria into consideration:
 - 1. The length of the time the encroachment has been installed and whether it was installed by a previous owner.
 - 2. The quality/condition of the vegetation in the area prior to the installation of the encroachment.
 - 3. Whether the encroachment can be easily relocated outside of the easement.
 - 4. Potential for further damage to vegetation caused by removal of the encroachment.

The final determination shall be made by the City Administrator or their designee and shall be final. If any encroachment in the Tree Conservation Area is authorized to remain, it shall not be expanded, enlarged, or enhanced during its usable lifespan. At such a point that the encroachment

- is no longer usable or functional for its original purpose, it shall be completely removed at the property owner's expense. Removal shall include all above and below grade improvements, including, but not limited to, foundations, footings, utilities. The encroachment area shall be restored to its original condition. If the original condition is unknown, then the encroachment area shall be restored to match the conditions of the surrounding area.
- D. When active restorative measures such as planting or vegetation removal are necessary to bring a property into compliance with the TCA Guidelines, the owner shall submit a restoration plan within 60 days of written notification that the property is in violation of the TCA Guidelines. If the City Administrator or his designee determines the following proposed restoration plan will restore the area to a condition that conforms with the TCA Guidelines, he shall approve it. The owner shall restore the disturbed area in conformance with the approved restoration plan within twelve months following its approval.

(Ord. 2013-M-79 § 1; Ord. 2001-M-73 § 1.)

8.30.060 Emergency Removal

Notwithstanding other provisions of this Chapter, a Tree Preservation Plan or other approval is not required when removal of a tree is necessary due to an emergency situation posing an immediate danger to a person, property or the community, and where such emergency renders compliance with the permit process unreasonable. The individual who proposes to remove the tree(s) shall notify the City

Administrator or their designee or designee in writing after the emergency removal has occured. Such notice shall include documentation that clearly describes the time, location, quantites, and types of trees removed in the emergency situation contact the City Administrator or his designee to receive permission for emergency removal of the tree(s). If the contact is not during business hours, the individual shall leave a voicemail message indicating name, time, tree location, and phone number, and may then proceed with emergency removal.

(Ord. 2001-M-73 § 1.)

8.30.070 Requirements for Tree Preservation Plans

- 1. A proposed Tree Preservation Plan shall include the following written and graphic information:
 - 1.1 A survey of existing trees six inches (6") or more DBH within the entire site or lot, identifying their locations, size and species, and a plan overlaid on the survey or at the same scale showing proposed Construction Zones and Tree Preservation Zones.
 - 1.2 The proposed Tree Preservation Zone shall encompass all of the property having six inch (6") DBH or larger trees that will not be disturbed by construction activities. All buildings, structures, parking areas, driveways, stormwater management facilities, utilities, and other site improvements shall be located to minimize tree damage and removal; preference shall be given to tree preservation when reasonable alternatives are available for the location of buildings and other site improvements.
 - 1.3 The proposed Construction Zone shall include only the areas to be directly affected by buildings, site improvements and grading activities related to the approved construction. The Construction Zone shall be as small as possible, considering factors such as the depth of excavation, necessary spoil areas, and space required for access to construction activity.
 - 1.4 The location and description of protective fencing, root pruning, canopy pruning and other protective and conservation measures necessary to protect the trees within the Tree Conservation Zone shall be indicated.
- 2. Standards: Removal of trees shall be authorized by Tree Preservation Plans only when one or more of the following conditions exist, as determined by the City:
 - 2.1 The tree is diseased, dead or dying.
 - 2.2 The tree is damaged or injured to the extent that it is likely to die or become diseased, or such that it becomes a hazard.
 - 2.3 Removal of the tree is consistent with good forestry practices, that is, consideration is given to the species of the tree, location, conditions, age, safety, and the historic and aesthetic value of the tree to be removed.

- 2.4 Removal of the tree will enhance the health of remaining trees within the immediate vicinity.
- 2.5 Removal of the tree is required to repair a sewer line or water main, or excavation for such repair will damage the tree to the extent that it is likely to die or become diseased.
- 2.6 All reasonable efforts have been undertaken in the land planning, architectural and engineering design of the proposed building, building addition, development or site improvement to minimize tree damage and/or removal, and the tree or trees must be removed to provide adequate space for the permitted construction.

(Ord. 2001-M-73 § 1.)

8.30.080 Practices During Construction

- A. All Tree Preservation Zones shall be maintained free of all construction activity, construction equipment, material or spoils storage, compaction, fill, and debris.
- B. Crushed limestone, hydrocarbons, or other materials detrimental to trees shall not be dumped within the root zone of any tree to be preserved nor at any higher elevation where drainage toward the tree could affect its health.
- C. No attachments, signs, fences, or wires, other than those approved for bracing, guying or wrapping trees, shall be attached to trees during the construction period.
- D. Unless otherwise authorized by an approved Tree Preservation Plan, no soil shall be removed or added within the root zone of any tree to be preserved.
- E. The boundary between the Construction Zone and the Tree Preservation Zone shall be fenced during the course of construction in a manner that clearly identifies where construction activity is prohibited. The City Engineer-shall have the authority to issue a stop work order until adequate fencing is provided or repaired.

(Ord. 2001-M-73 § 1.)

8.30.090 Penalties

- A. Any violation of this Chapter shall be punishable by a fine of not more than \$500.00 for each violation.
- B. <u>Unauthorized removal of trees: If a tree is removed prior to approval of a Tree Preservation Plan or other approval, and the City Administrator or his designee determines the removed tree was of a species or condition that would have justified approval of a Tree Preservation Plan or other approval to remove it if application had been made, the penalties hereof shall not apply.</u>
- C. Replacement Trees. In addition to any fine that may be assessed, each tree of six inches or more DBH which is removed in violation of this Chapter shall be replaced with trees of at least a three inch (3") caliper selected from the list of Approved Trees according to the following schedule. The diameter of removed trees shall be determined by the average stump diameter where cut at six inches (6") from surrounding ground level.

Existing Tree's Stump Diameter	Number of replacement trees
36 inches or more	One for each inch of stump diameter
More than 30 but less than 36 inches	11
More than 24 but less than 30 inches	9
More than 18 but less than 24 inches	7
More than 12 but less than 18 inches	5
At least 6 but less than 12 inches	3

€D. Location of replacement trees. The location of replacement trees shall be as determined by the City Administrator or his designee. If it is determined that an insufficient onsite area exists to support some or all of the replacement trees, then prior to issuance of any building permit, site development permit or approval of a plat of subdivision or planned unit development the property owner shall

- pay the cost of the replacement trees that cannot be accommodated onsite to the City. The funds collected from such payments shall be used for the sole purpose of planting trees at other locations determined by the City.
- D. Financial Guarantee for onsite replacement trees. Prior to issuance of a building permit, site-development permit, or approval of a plat of subdivision or planned unit development the property owner shall submit a financial guarantee subject to the approval of the City Administrator or his designee in the amount of 115% of the estimated cost to install the required onsite replacement trees. If replacement trees are not installed within the next planting season (spring or fall) after the prohibited tree removal, the City may use the proceeds of the financial guarantee to plant the replacement trees. If the property owner does not permit planting of the replacement trees onsite, the City may plant trees at other locations as determined by the City.
- EE. Suspension of Permits: The <u>Building and Zoning Commissioner City</u> may suspend any and all building permits issued by the City and issue stop work orders with respect to any parcel of land where <u>he it has been determined determines</u> that the provisions of this ordinance are not being complied with.
- F. Removal of undesirable trees: If a tree is removed prior to approval of a Tree Preservation Plan or other approval, and the City Administrator or his designee determines the removed tree was of a species or condition that would have justified approval of a Tree Preservation Plan or other approval to remove it if application had been made, the penalties hereof shall not apply.

 (Ord. 2001-M-73 § 1.)

Exhibit A Tree Conservation Area Guidelines

Intent

The intent of these Guidelines is to protect and enhance the diversity, health and vigor of the tree, shrub, herbaceous plant, forb and grass species within the designated Tree Conservation Areas in order to protect wildlife habitat as well as enhance the aesthetic qualities and value of the properties adjacent to them.

The conservation of existing plant material is to be achieved primarily through restricting access to and limiting activities within the Tree Conservation Areas. However, intervention to perform maintenance and corrective measures is appropriate, <u>must be approved by the appropriate Homeowner's Association (HOA)</u>, and does not require approval from the City in the following circumstances:

- 1. The presence of invasive plant species including noxious weed or alien plant species that may threaten the health of indigenous plants in the Tree Conservation Areas.
- 2. The presence of damaged, diseased or dead trees which may constitute a hazard to persons or property.
- 3. Where the City has approved a plan to re-establish trees, shrubs, and other plants that are indigenous to the Tree Conservation Zone.
- 4. Emergency removal as described in 8.30.060.

Definitions

- 1. Alien: a plant native to one region but brought to another as a result of human activity.
- 2. Forb: a non-grassy herbaceous plant, primarily referring to broad-leaved plants of prairies and savannas.
- 3. Herbaceous: pertaining to or characteristic of a plant that has a fleshy stem, as distinguished from a woody plant.
- 4. Indigenous: occurring or living naturally in an area, not introduced; native.
- 5. Noxious weed: a weed specified by law as being especially undesirable, troublesome, and difficult to control.
- 6. Other plants: all vegetation, woody or otherwise, except lawn grass and flowers less than 24 inches in height.
- 7. Overstory trees: deciduous trees that generally grow to a height in excess of 30 feet.
- 8. Shrub: a woody perennial smaller than a tree, usually having permanent stems branching from or near the ground.
- 9. Savanna: a transitional zone between grasslands and forests, on which there are scattered individual trees and/or clumps of trees and shrubs.
- 10. Transitional Border: a strip of land within a Tree Conservation Area along its edge which has been disturbed and which may provide a visual and functional transition between the Tree Conservation Area and the remainder of the lot.

Guidelines

- A. Removal of vegetation: The following activities are permitted within the Tree Conservation Zone, but only with the specific approval of the City.
 - 1. No healthy woody vegetation shall be removed except for the restricted species listed in Chapter 12.20 of the City Code and with the specific approval of the City.
 - 2. Where permission has been granted to remove woody vegetation, it shall be sawed or cut down to existing grade. No removal or disturbance shall occur below grade.
 - 3. If the City has approved a plan to re-establish the growth of indigenous plants, noxious weeds and alien herbaceous vegetation may be removed by: (a) applying a three (3) inch layer of organic hardwood mulch, or (b) herbicide application by a licensed professional.
 - 4. Dead or fallen trees and limbs shall remain, except where a standing dead tree is located so that it could fall upon a building or structure.

- B. Planting: The following plantings are permitted within the Tree Conservation Zone, but only with the specific approval of the City. Appendix I lists some native, non-native and weedy plants as a reference. Additional lists and guides to native plants are found in references such as Swink and Wilhelm's *Plants of the Chicago Region*, and Dick Young's *Kane County Wild Plants and Natural Areas*. 2nd Edition.
 - 1. Indigenous grasses, flowers and other herbaceous plants may be planted by hand installation of plugs or by seeding. Prairie forbs and grasses shall be restricted to those areas/lots with limited scattered trees. Commercial prairie mixes may contain non-native and non-hardy species, so consulting a native plant supplier or prairie restoration specialist is recommended.
 - 2. Planting common turf grass such as Kentucky bluegrass, ryegrass, and fescue is not permitted except in transitional borders with specific approval of the City. The soil preparation typically required damages the root system of trees, and the nutrient and pH requirements for mowed turf grasses are not optimally compatible with those of most woody plants.
 - 3. Non-native plant material is not permitted. Some non-native plants reseed aggressively and become invasive, crowding out indigenous species.
 - 4. Indigenous container perennials, woody shrubs, and trees are permitted if planted in compliance with the following guidelines:
 - a. All digging and planting shall be performed by hand. No vehicles, augurs or rototillers are permitted.
 - b. Only minimal digging shall be allowed within the tree's critical root zone, i.e., the area equivalent to one foot of radius per inch of the tree's trunk caliper, measured out from the center of the tree. Plant type and size should be limited within this area to minimize damage to tree roots.
 - c. No overstory tree shall be planted directly under the drip-line of an existing tree.
 - d. Areas disturbed by planting must be thoroughly watered immediately after planting and periodically for one month following planting to reduce stress to existing trees. Do not overwater.
 - e. A three (3) inch layer of organic hardwood mulch in a dish or saucer pattern may be used around the base of newly planted trees and shrubs during the first growing season to conserve moisture in the soil.
 - f. If proper installation methods are used, additional plant material can reduce or control access into Tree Conservation Areas and will provide wildlife food and habitat.

C. Transitional Border:

- 1. A transitional border may be delineated at the common boundary of the Tree Conservation Area and the remainder of the lot. The transitional border may extend into the Tree Conservation Area a maximum of three (3) feet, or within one (1) foot of existing trees within the Tree Conservation Area, whichever dimension is less. (See Appendix II)
- 2. Due to disturbances caused by utility installation, restoration of the transitional border may include turf grasses and non-indigenous plant materials. However, restoration with indigenous plant materials is strongly encouraged.
- 3. Yard accessories are permitted in the transitional border area as described below in D-1.
- 4. Organic hardwood mulch is permitted to minimize the encroachment of indigenous plants into an adjoining managed plant material area such as turf or perennials.
- 5. In order to preserve the health and vigor of the Tree Conservation Area, invasive plants or vegetation that is difficult to control shall not be permitted in the transitional border. (Refer to Appendix I for a list of invasive and difficult to control plants.)

D. Installation of Yard Accessories:

1. Small yard accessories such as benches, bird baths, bat houses, butterfly houses, and bird feeders are permitted within the transitional border, only. Yard accessories shall be limited to

- not more than one (1) per fifty (50) square feet of transitional border. No yard accessories are permitted in the balance of the Tree Conservation Area.
- 2. Permanent or temporary structures, play equipment, paths, paving, structures attached to trees such as tree houses, and any items requiring footings are prohibited.
- E. Prohibited Activities: The following activities and uses are specifically prohibited within Tree Conservation Areas:
 - 1. Composting or dumping of lawn waste, Christmas trees, potted plants, or similar organic waste.
 - 2. Stacking or firewood.
 - 3. Dumping of any materials.
 - 4. Mowing.
 - 5. Fire pits and barbecues.
 - 6. Tree swings.
 - 7. Dog waste.
 - 8. Vegetable or flower gardens.
 - 9. Lawn irrigation systems.
 - 10. Yard accessories.
 - 11. Fences.
 - 12. Any other similar uses determined by the City to be detrimental to the protection of the Tree Conservation Area.
- F. Miscellaneous: The following activities are not permitted unless approved by the City in conjunction with a plan to remove and/or restore plant material in accordance with these guidelines:
 - 1. The use of motorized vehicles such as garden tractors and mowers.
 - 2. The use of fertilizers, herbicides and pesticides.
 - 3. Alteration of existing grade elevation.

Appendix I Representative Species of Plant Material

Indigenous (native) plants:

Overstory Trees

Acer nigrum
saccharum
Carya cordiformis
Carya ovata

Black maple Acer
Sugar maple
Bitternut hickory
Shagbark hickory

Fraxinus americana White ash
Juglans cinerea Butternut
Juglans nigra Black walnut
Quercus alba White oak
Quercus macrocarpa Bur oak

Quercus muhlenbergii Chinquapin oak Quercus rubra Northern red oak Tilia americana American linden

Understory Trees

Amelanchier arborea Serviceberry; shadbush

Amelanchier laevis Allegheny shadblow serviceberry

Cercis canadensis Redbud

Cornus alternifolia Alternate-leaved dogwood

Cornus florida Flowering dogwood

Corylus americana Hazelnut
Dirca palustris Leatherwood
Hamamelis virginiana Witch hazel
Ostrya virginiana Hop hornbeam
Prunus americana American plum
Prunus virginiana Chokecherry

Shrubs

Euonymus atropurpureus Eastern wahoo Lindera benzoin Spicebush

Ribes cynosbati Prickly wild gooseberry

Ribes missouriense Wild gooseberry Sambucus canadensis Elderberry

Viburnum acerifolium Mapleleaf viburnum Viburnum lentago Nannyberry viburnum Viburnum prunifolium Blackhaw viburnum

Viburnum rafinesquianum Downy arrowwood viburnum

Ground Layer

Common Plants

Allium tricoccum Wild leek
Anemonella thalictroides Rue anemone
Arisaema triphyllum Jack-in-the-pulpit

Carex plantaginea Plaintain-leaved sedge Carex rosea Sedge Caulophyllum

thalictroides Blue cohosh
Claytonia virginica Spring beauty
Contained of the cohosh Spring beauty

Dentaria laciniata Cut-leaved toothwort

Desmodium glutinosum Tick trefoil

Dryopteris spinulosa Spinulose wood fern Erythronium albidum White trout lily Galium aparine Shining bedstraw Wild geranium Geranium maculatum Osmorhiza claytoni Hairy sweet cicely Parthenocissus quinquefolia Virginia creeper Mayapple Podophyllum peltatum Prenanthes alba Lion's foot

Sanicula gregaria

Clustered black snakeroot
Smilacina racemosa

Uvularia grandflora

Viola eriocarpa

Clustered black snakeroot
False Solomon's seal
Large-flowered bellwort
Smooth yellow violet

Others

Actaea pachypoda White baneberry
Adiantum pedatum Maidenhair fern
Allium tricoccum Wild leek
Anemone cylindrical Thimbleweed
Anemone quinquefolia Wood anemone
Apocynum androsaemifolium Spreading dogbane

Aralia racemosa Spikenard Arisaema draconitum Green dragon Wild ginger Asarum canadense Arrowleaf aster Aster sagittifolius Aster shortii Short's aster Athyrium filix-femina Lady fern Blephilia hirsute Wood mint Botrychium virginianum Rattlesnake fern Cardamine douglassii Purple cress Carex hirtifolia Hairy sedge

Carex pensylvanica Pennsylvania sedge

Celastrus scandens Bittersweet

Dicentra cucullaria

Dutchman's breeches
Eupatorium rugosum
Eupatorium purpureum
Euphorbia corollata
Fragaria virginiana
Galium circaezans
Geum canadense

Dutchman's breeches
White snakeroot
Purple Joe-Pye weed
Flowering spurge
Wild strawberry
Wild licorice
Wood avens

Helianthus strumosus Pale-leaved sunflower

Hepatica acutiloba Hepatica

Hydrophyllum appendiculatum Great waterleaf Hydrophyllum virginianum Virginia waterleaf

Hystrix patula Bottlebrush grass

Impatiens pallida Pale touch-me-not Isopyrum biternatum False rue anemone

Jeffersonia diphylla Twinleaf

Lactuca biennis Tall blue lettuce Lonicera prolifera Yellow honeysuckle

Menispermum canadenseMoonseedMitella diphyllaBishop's capMonarda fistulosaBergamotOsmorhiza longistylisSweet cicely

Panicum latifolium Broad-leaved panic grass

Phlox divaricata Woodland phlox Phryma leptostachya Lopseed Pilea pumila

Clearweed

Polygonatum canaliculatum
Potentilla simplex
Prenanthes altissima

Large Solomon's seal
Common cinquefoil
Tall white lettuce

Rosa spp. Rose
Sanguinaria canadensis Bloodroot

Smilacina stellata
Smilax ecirrhata
Upright carrion flower
Smilax taminoides
Solidago flexicaulis
Solidago ulmifolia
Thalictrum dioicum
Trillium grandiflorum
Starry Solomon's plume
Upright carrion flower
Bristly greenbrier
Broad-leaved goldenrod
Elm-leaved goldenrod
Early meadow rue
Large-flowered trillium

Trillium recurvatum Prairie trillium
Trillium sessile Toad trillium
Veronicastrum virginicum Culver's root

Aggressive non-native species that should be removed such as:

Alliaria officinalis Garlic mustard
Berberis vulgaris European barberry
Celastrus orbiculatus Oriental bittersweet

Elaeagnus umbellate Olive bush

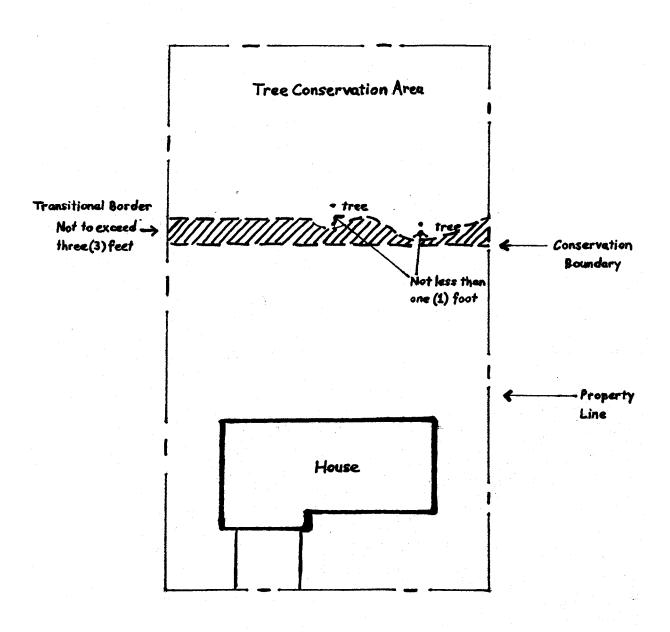
Lonicera maackii
Lonicera tatarica
Morus alba
Populus alba
Rhamnus cathartica
Rhamnus frangula
Solanum dulcamara
Amur honeysuckle
Tatarian honeysuckle
White mulberry
White poplar
Common buckthorn
Glossy buckthorn
Nightshade bittersweet

Viburnum opulus European cranberrybush viburnum

Native weedy species that should be controlled such as:

Acer negundo Boxelder
Parthenocissus quinquefolia Virginia creeper
Rhus radicans Poison ivy
Robinia pseudo-acacia Black locust
Rubus occidentalis Black raspberry
Vitis riparia Riverbank grape

Appendix I LOCATION OF TRANSITIONAL BORDER



(Ord. 2001-M-73 § 1.)