March 13, 2006

TO: John Lamerato, Acting City Manager

FROM: Brian Murphy, Assistant City Manager/Services
Carol K. Anderson, Parks and Recreation Director

SUBJECT: Agenda Item: *City Ordinance*, *Chapter 28 and the Tree Ordinance* and *Landscape Design & Tree Preservations Standards*

RECOMMENDATION:

Attached please find the revised versions of *City Ordinance*, *Chapter 28 – Tree Ordinance* as well as the *Landscape Design & Tree Preservation Standards.* The changes in these documents clarify ambiguous sections and include changes as outlined below. Staff has reviewed and submits for consideration the attached revised ordinances and standards.

Chapter 28 to some extent, supports the standards, therefore, they were revised together. Chapter 28 – Tree & Plant Ordinance is being submitted for Council approval and the Landscape Design and Tree Preservation Standards are being submitted for review.

BACKGROUND:

The two documents, with little overlap, deal with three distinct areas. The purpose of Chapter 28 is to establish procedures, and practices governing the protection, installation and long-term maintenance of trees, plants and vegetation within the City of Troy. The Landscape Design and Tree Preservation Standards provides development standards for commercial properties and subdivisions. Chapter 28 overlaps and empowers the Standards in section # 28.02.15, 28.08.00, and 28.16.02. The following is a general outline of the functions of the two documents:

Chapter 28 – Tree & Plant Ordinance:

- ***Enforcement:***
  - 28.03.00 - Responsibility
  - 28.16.00 – Violation of Tree & Plant Ordinance
  - 28.17.00 – Procedure for Ordering Action on Violations
- ***Maintenance and planting of materials on municipal sites***
  - 28.04.00 – Permits for Planting, Care and Removal of Plants Public Space
  - 28.05.00 – Plant Removal – Public Space
  - 28.07.00 – Plant Protection – Public Spaces
  - 28.09.00 – Excavations near Plants – Public Spaces
  - 28.10.00 – Covering the Surface near Plants – Public Spaces
  - 28.11.00 – Regulations for New Planting – Public Spaces
- ***Responsibilities of private plant owners***
  - 28.06.00 – Duties of Private Plant Owners
  - 28.12.00 – Corner Clearance
  - 28.13.00 – Private Plant - Inspection
  - 28.14.00 – Lawn Extension & Subdivision Entry Islands / Cul-de-Sac

- 28.15.00 – Tree Spacing

- ***Responsibilities of property owner before and during development***
  - 28.08.00 – Plant Protection during Development – Public & Private Property

The Landscape Design and Tree Preservation Standard:

- ***Approval Process for Tree Preservation and Landscape Plans***
  - Page 3
- ***Request for Variance/Waiver***
  - LD2.00.00 – Circumstances for Variations
  - LD3.00.00 – Request for Variance
  - LD5.00.00 – Request for Waiver of Tree Preservation Standards
- ***Information required for review and format for submittal***
  - LD6.00.00 – Preliminary Tree Preservation Plan – General Requirements
  - LD7.00.00 – Final Tree Pres./ Landscape Plan – General Requirements
  - LD9.00.00 – Preliminary Tree Preservation Plans – Specific Requirements
  - LD10.00.00 – Final Tree Pres./ Landscape Plans – Specific Requirements
  - LD11.00.00 – Construction Drawings
  - LD12.00.00 – Landscape Planting Specifications
  - LD13.00.00 – Cost Estimate - Landscaping
  - LD14.00.00 – Submittal Requirements
  - LD16.00.00 – Submissions for Review
  - LD17.00.00 – Changes in Landscape Plan
- ***Tree Preservation and Protection***
  - LD8.00.00 – Tree Preservation Options
  - LD23.00.00 – Tree & Plant Protection
- ***Fees and Deposits***
  - LD18.00.00 – Tree Preservation / Landscape Plan Review Fee
  - LD19.00.00 – Landscape Deposit
- ***Inspections***
  - LD22.00.00 – Landscape Installation
  - LD24.00.00 – Inspection Schedule
  - LD25.00.00 – Initial Site Inspection
  - LD26.00.00 – First Implementation Inspection
  - LD27.00.00 – Final Implementation Inspection
  - LD28.00.00 – Maintenance Inspection
- ***Violations of these Standards***
  - LD20.00.00 – Tree Removals Prior to Final Site Approval
  - LD21.00.00 – Violation of Tree Preservation Plan
- ***Qualifications and Responsibilities of Individuals***
  - LD29.00.00 – Landscape Contractor Qualifications
  - LD30.00.00 – Landscape Contractor Responsibilities
  - LD31.00.00 – Tree Appraiser Qualifications
  - LD32.00.00 – Tree Appraiser Responsibilities
  - LD37.00.00 – Landscape Designer Qualifications
- ***Plant Material Requirements, Site Preparation and Plant Installation***

- LD33.00.00 – Plant Material Requirements
- LD34.00.00 – Other Requirements Placed on Plant Materials
- LD35.00.00 – Prohibited Plant Materials
- LD36.00.00 – Site Preparation Prior to Planting

SUMMARY:

In brief, the following additions and alterations are proposed. Verbiage has been simplified for clarity and understanding. However, these changes are not presented in the following bulleted items. A Table of Contents has been added to both documents understanding.

Chapter 28 – Tree Regulations

- Name has been changed to reflect a more accurate range of responsibilities encompassed by this ordinance.
- Numbering system has been revised to a standardized system that has been implemented in City Ordinances.
- Purpose and Intent section added to clarify reason for this Chapter. (28.01.00)
- Definition section expanded to clarify existing and proposed verbiage (28.02.00)
- Director's responsibilities required by this ordinance have been expanded. (28.03.00)
- Means of applying for planting permits, with an expansion of the Director's authority have been revised and expanded. (28.04.00)
- Director's responsibilities are clarified and expanded. (28.06.00)
- 28.07.00 has been expanded and clarified.
- 28.08.00 had been expanded and clarified to better support proposed changes to Landscape Design & Tree Preservation Standards.
- 28.09.00 was expanded to clarify City's response to damage of unauthorized underground burials on municipal property by private property owners.
- 28.14.00 was added to clarify the responsibilities of private property owners with regards to maintenance of municipal property located in front of their respective properties.
- 28.15.00 is information added to this chapter to assist property owners in proper selection of trees, their proposed locations and how private trees relate to public plantings.
- 28.16.00 is an expansion and clarification of penalties for violations of ordinances in this chapter. Previously listed penalties have been removed from various sections of Chapter 28, and placed in this section as an inclusive list. Additionally, existing penalties have been upgraded and new penalties added.

Landscape Design and Tree Preservation Standards

- Tree Preservation / Landscape Submittal / Approval Process Outline – a new addition to the standards to be used as an aid by the developer. This section provides a road map to guide them through the approval process.
- LD5.00.00 has been altered to allow waivers only if there are no trees on the site.
- LD6.00.00 & LD9.00.00– informational requirements have been increased to facilitate faster evaluation of the proposed project.
- LD7.00.00 & LD10.00.00 – the Final Tree Preservation Plan and the Landscape Plan have been combined into one drawing for review purposes.

- LD8.00.00 - a new section that requires the developer to preserve a percentage of existing trees and/or provide for replacement of trees lost.
- LD15.00.00 expanded the City review authority.
- LD 11.00.00 through LD17.00.00 are relatively unchanged
- LD18.00.00 – The Tree Preservation Review fee and the Landscape Review fee has been combined into one fee, thereby simplifying the approval process.
- LD19.00.00 – the Implementation Deposit and the Maintenance Deposits have been increased to better assure the work is completed as per approved drawings and receives the proper upkeep to maintain desired results.
- LD20.00.00 through LD32.00.00 further explains the developer's responsibilities and ties these responsibilities to City Ordinance.
- LD33.00.00 through LD 35.00.00 – clarifies and expands on plant material and planting requirements.
- LD36.00.00 – a new section, which is intended to improve plant-growing conditions, particularly in new subdivisions, thereby making it easier for new homeowners to maintain a quality landscape.
- LD37.00.00 – a new section that gives the minimum educational requirements to qualify as a designer of landscaping on projects requiring City approval.

Finally, the Landscape Design and Tree Preservation Standards contain various figures and fees (LD8.01.04, LD18.00.00, LD19.00.00) that require periodic adjustment. Staff requests the City Manager be authorized to approve these fees.

Reviewed as to form and legality.

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Lori Grigg Bluhm, City Attorney

CHAPTER 28

TREE AND PLANT ORDINANCE

Revised 3-8-06

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28.01.00 Purpose and Intent -

The City acknowledges that Troy's urban forest reduces noise; air pollution; energy costs; reflected light; and flooding, stabilizes soils, sequesters carbon, provides habitat for wildlife and increases the value of all properties in the area and the overall quality of life.

It is the City's intent that the urban forest be protected, preserved and/or restored. To that end the City has created these ordinances, the Landscape Design and Tree Preservations Standards and the Building/Developmental Standards.

The purpose of this Ordinance is to establish procedures and practices governing the protection, installation and long-term maintenance of trees, plants and vegetation within the City of Troy. The *City*'s purpose is to:

28.01.01 Promote the beautification of the City of Troy.

28.01.02 Create for present and future generations a planned pattern for the urban landscape within the City of Troy.

28.01.03 Promote reasonable preservation and replenishment of landscaping on existing commercial and public properties and to provide guidelines for protection of plants.

28.01.04 Safeguard and enhance property values and to protect public and private investment.

28.01.05 Provide an ordinance that is reasonable and enforceable.

28.01.06 Promote the awareness of the benefits of effective landscaping.

28.02.00 Definitions –

For the purposes of this Ordinance the following terms, phrases, words, and their derivations shall have the meaning given here. When not inconsistent with the context, words used in the present tense include the future, words in the plural number include the singular number and words in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

28.02.01 **Caliper** - the diameter of the *tree trunk* measured at:

- **a.** Six (6) inches above the ground level if four (4) inches in diameter or less
- **b.** twelve (12) inches above ground if greater than four (4) inches in diameter.

28.02.02 **City** - *City* of Troy, Michigan

28.02.03 **clearing** - the cutting down and/or removal of *plant*s and/or vegetation from a property whether by cutting or other means.

28.02.04 **damage** - includes any intentional or negligent act which will cause *plant*s to decline and die within a period of three (3) years, including but not limited to such *damage* inflicted upon the *root system* by the compaction of the soil within the *drip line* of a *tree* during the operation of heavy machinery; the change of the natural grade above the *root system*, around the *drip line*, or around the *trunk* of a *plant* and *damage* from injury or from fire to vegetation which results in or permits infection or *pest* infestation. *Damage* also includes application of soil within the *tree protection area* (28.02.23) or introduction into the water source, and/or release of products, which move through the environment of a *plant*, any petroleum products, pesticides, toxic chemicals or other injurious materials.

28.02.05 **DBH** (Diameter at Breast Height) - the diameter of the *tree trunk* measured at 4.5 feet above ground level.

28.02.06 **Department** - the *Department* of Parks and Recreation of the *City* of Troy.

28.02.07 **Director** - Parks and Recreation *Director* and all employees under her/his direction, authorized by her/him to seek compliance with provision of this ordinance.

28.02.08 **drip line** - the *drip line* of a *tree* or *plant* shall be determined by measuring from the center of the *trunk* to the tip of the farthest branch from the *trunk* center. This measurement shall be used as the radius of a circle drawn around the *plant* with the center of the *trunk* being the center of the circle.

28.02.09 **emergency** - an event or events, disease, *pest*, or condition which has *damage*d or destroyed a *tree* or *plant* such that the continued presence of such *damage*d or destroyed *tree* or *plant* threatens *public space* in proximity thereto.

28.02.10 **imminent danger** - any situation or occurrence that would cause directly or indirectly an immediate danger to any person in a *public space* within the *City*.

28.02.11 **grading** - the placement, removal or movement of earth or soil on a property by use of mechanical equipment or hand equipment.

28.02.12 **Listed Species** - any *plant* that is endangered or threatened or is a species of special concern as listed on the Federal Inventory List or Michigan Natural Features Inventory List (MNFI), which is maintained by the Michigan Natural Heritage Program and/or the Michigan Land Conservancy.

28.02.13 **pest** – the full range of dangerous; destructive; or infectious organisms, insects, diseases, pathogens and/or conditions which attack or effect *plants* or which hinder their development as horticultural subjects. This shall include but not be limited to all biotic and/or abiotic agents.

28.02.14 **plant(s)** - any *tree*, shrub, bush, perennial, annual, grass or other vegetation, native or introduced.

28.02.15 **prohibited *plant*s** – Plants that shall not to be planted within the municipal boundaries of the *City of Troy* include the following species and all cultivars thereof (see 28.06.04):

a.	Acer saccharinum	- Silver Maple
b.	Acer negundo	- Box Elder
c.	Acer platanoides	- Norway maple
d.	Ailanthus altissima	- Tree of Heaven
e.	Catalpa speciosa	- Northern Catalpa
f.	Fraxinus spp.	- Ash, all forms
g.	Paulownia tomentosa	- Royal Empress Tree
h.	Populus spp.	- Poplar / Cottonwood
i.	Pyrus calleryana 'Bradford'	- Bradford Pear
j.	Salix spp.	- Willow (excluding shrub forms)
k.	Ulmus	-Elm (excluding cultivars of U. parvifolia & U. americana)

See Temporary Banned plants in the Landscape Design and Tree Preservation Standards section #LD35.01.00.

28.02.16 **protective barrier** – (see figure #1) a minimum four (4) foot tall plastic mesh barrier constructed at the *drip line* of the *plant* to protect the *root system* and/or *trunk* of the *plant* from *damage* caused by but not limited to: construction, vehicular traffic, storage of equipment, debris, soil, fill or other materials. There shall be no undue compression of the earth or otherwise impeding or preventing the access of water or air to the *root system* of the *plant* or excavation around or removal of soil or earth or the addition of earth or any other materials within the *tree protection area* (see 28.02.23). Building material and other debris shall not be placed inside the *tree protection area.*

28.02.17 **public nuisance** - any *plant*:

a. with an infectious disease or *pest* problem that may infect municipal trees.

b. that is dead or dying that has the potential to fall into public spaces.
c. or limb of any plant that obstruct street lights, traffic signs, free passage of pedestrians or vehicles.
d. that poses a threat to the safety of individuals in *public space*s or poses a threat to *City* property.

28.02.18 **public spaces** - public streets, rights-of-way, alleys, avenues, lanes, parkways, sidewalks, walkways, trails, parks, open spaces, lots, retention/detention ponds, drains, streams, museums, bridges, parking lots, or paths within the *City* and all other lands controlled or publicly owned by the *City* or such land privately owned when such land comes within the purview of this ordinance because of the maintenance or continuation of any hazards injurious to property, or individuals in *public space*s or the public interest.

28.02.19 **public utility** - any person, corporation or organization owning or operating any pole, pipe, tower, satellite dish or conduit located in any *public space* or over or along any public easement or rights-of-way for the transmission of electricity, gas, telephone service, inter-net service, or any other means of electronic communication including the television transmission system and/or coaxial C.A.T.V. cable.

28.02.20 **root system** – the part of the *plant*, located within the *plant*s *drip line*, usually but not always underground that holds the *plant* in position, drawing water and nutrients from the soil.

28.02.21 **street tree** - any *tree* growing in the rights-of-way of the *City* of Troy. These *tree*s are generally but not always located between the sidewalk/curb or in the street islands/medians.

28.02.22 **tree** - any self-supporting woody *plant* having one or more defined stems or *trunk*s with a *DBH* of 1.25 inches or more and having a defined crown which customarily attains a mature height of eight (8) feet or greater.

28.02.23 **tree protection area** - the space between the *protective barrier* and the *trunk* of the *plant*. (see 28.02.16 and figure #1). Building material and other debris shall not be placed inside the *tree protection area.*

28.02.24 **trunk** - the main stem or body of a *plant*, to be considered apart from its *root system* and branches. In the case of a multiple trunked *plant*, the stem with the largest *caliper* shall be used for the purpose of this ordinance.

28.02.25 **topping** (also known as: Dead Heading and Severe Crown Reduction)- The reduction of the overall size of a *tree* and/or the severe internodal cutting back of branches or limbs to stubs within the *tree*s crown to such a degree so as to remove the normal *tree* canopy and disfigure the *tree*. *Topping* is not a form of pruning.

28.03.00 Responsibility

The *Director* shall be charged with the duty of enforcing the provisions of this ordinance and shall have exclusive jurisdiction and supervision over all *plant*s planted or growing in *public space*s.

28.03.01 ***Maintain, Preserve or Remove*** - The *Director* shall have the authority and it shall be the *Director's* duty to plant, trim, spray, preserve and remove *tree*s and other *plant*s and grassy areas in *public space*s to insure safety or to preserve the design intent of such *public space*s.

28.03.02 Unless otherwise directed by this or other *City* Ordinance, the *Director* is not required to notify the public of any actions taken when enforcing the provisions of this ordinance.

28.03.03 ***Order to Maintain, Preserve or Remove*** - The *Director* shall have the authority and it shall be her/his duty to order the maintenance, preservation or removal of *tree*s or *plant*s on private property when she/he shall find such *tree* or *plant* to

constitute a *public nuisance*.

28.03.04 ***Unlawful Interference*** - It shall be unlawful for any person to prevent, delay or interfere with the City tree crew, or City contractors while they are engaged in the planting, cultivating, mulching, pruning, spraying, treating, transplanting, or removing any tree on municipal property as authorized in this ordinance.

28.03.05 ***Issue Conditional Permits*** - the *Director* shall have the authority to affix reasonable conditions to the granting of a permit issued in accordance with the terms of this ordinance. Permits issued under this Ordinance shall be obtained through the Department of Parks and Recreation. Any conditions granted by the Director shall be based on current City policies.

28.03.06 ***Supervision*** - The *Director* shall have the authority and it shall be her/his duty to supervise all work done under a permit issued in accordance with the terms of this ordinance.

28.04.00 Permits for Planting, Care and Removal of *Plant*s - *Public Spaces*

The *Director* shall be charged with the duty of issuing and enforcing permits issued to residents, individuals, groups, organizations, companies, and/or corporations for the planting, care and removal of plants in *public spaces*.

28.04.01 ***Preserve, Remove or Treat*** – No person shall trim, spray, transplant, remove or cause/authorize any person to trim, spray, transplant, or remove *tree*s, *plant*s or grassy areas in *public space*s without first filing an application and procuring a permit from the *Director*. This excludes the treatment of turf grasses in Lawn Extensions (28.14.00) with weed/*pest* control and fertilizer when done in conjunction with the adjoining private turf areas.

28.04.02 ***Application Data*** - The application required by this ordinance shall state the number, size and variety of *plants* to be trimmed, sprayed, preserved, transplanted, or removed; the kind of treatment to be utilized, the kind and condition of nearest *plant*s upon the adjoining property. If planting, the application shall include drawings which indicates the variety and number of each *plant* type, the location, *plant* grade, and method of planting, including the supplying of suitable soil or soil amendments. When deemed necessary *Director* reserves the right to request addtional information.

28.04.03 ***Insurance*** - Before any permit shall be issued, each applicant shall first file evidence of possession of worker compensation and liability insurance with the *City*'s Department of Risk Management. The City Risk Manager will set actual amounts and types of insurance required.

28.04.04 ***Standards for Issuance*** - The *Director* shall issue the permit provided for in this ordinance when it is found that the desired action or treatment is necessary, effective, and appropriate and that the proposed method and workmanship is satisfactory and that such action is in conformance with this ordinance, the Landscape Design and Tree Preservation Standards and City Developmental Standards.

28.04.05 ***Permit Issuance*** – This permit shall be issued at the Department of Parks and Recreations, in the Troy Community Center – 3179 Livernois, Troy, MI 48083-5029.

28.04.06 ***Revoking Permit*** - the *Director* may revoke a permit when the permit holder refuses or neglects to comply with any of the provisions of this ordinance, the Landscape Design & Tree Preservation Standards, or specific conditions outlined in the permit.

28.04.07 ***Plant*** - No person shall plant or set out any *tree* or *plant* in *public space*s without first filing an application and procuring a permit from the *Director.*

28.04.08 ***Notice of Completion*** - A notice of work completion concerning all plantings, transplanting, removals, *pest* control or major pruning shall be given by the permit holder, within five (5) days of completion of the permitted work, to the *Director* for inspection and approval. Permit holder will be notified of any required corrections, changes, alterations, or deficiencies. Notification shall include scheduling for required work.

28.05.00 *Plant* Removal - *Public Spaces*

The *Director* shall be charged with the duty of removing or ordering removal of *plant*s in *public space*s:

28.05.01 The *Department* shall have the right to and remove *tree*s and/or *plant*s in *public space*s as may be necessary to ensure safety or to preserve the design intent of such *public space*s.

28.05.02 The *Director* may remove or cause or order to be removed, any *tree* or *plant* or part thereof which is in any unsafe condition or which is a prohibited species, or is affected with any injurious disease, fungus, *pest*, or otherwise be considered by the *City* to be a *public nuisance*.

28.05.03 Whenever the *Department* shall remove a *plant*, solely for the purpose of constructing any public work, the *Director* shall, if practical, replace the same at public expense, at some nearby location by planting another *plant,* but not necessarily of the same type or size.

28.06.00 Duties of Private *Plant* Owners

It shall be the duty of any person, organization, company, group, association, or corporation growing *tree*s and *plant*s within the *City* to:

28.06.01 ***Trim*** - To trim her/his *tree*s and *plant*s so as not to cause a hazard to *public space*s or interfere with the proper lighting of *public space*s by the streetlights.

- **a.** Any overhead portions of a plant/tree shall be a minimum of eight (8) feet above the surface of the street, sidewalk, trail system, or rights-of-way, which ever has the highest elevation and a minimum of one (1) foot off sidewalk (see figure #4).
- **b.** All private *plant*s shall be pruned so that the above ground portions do not extend beyond the property line into *public space*s.
- **c.** Said person shall remove all dead, diseased, or dangerous *tree*s and *plant*s, or broken or decayed limbs which constitute a menace to the safety of the public in *public space*s or which the *City* would otherwise consider a *public nuisance*.
- **d.** *Plant*s installed in the Corner Clearance Zone (see figure #2 & 28.12.00) shall be pruned and maintained to a height not to exceed thirty (30) inches above established street grade for shrubs and the lowest branch on a *tree* shall be eight (8) feet above the established street grade.
- **e.** Private trees planted within thirty (30) feet of municipal property shall be pruned to allow the natural growth and development of the municipal tree.

28.06.02 ***City Trimming*** - The *City* shall have the right to trim any *tree*s and *plant*s on private property which interfere with vehicular and/or pedestrian traffic in *public space*s or the proper spread of light along the street from street lights, or interferes with visibility of any traffic control device / signs or would otherwise be considered by the *City* to be a *public nuisance*. Such trimming is to be confined to that work deemed necessary by the City to eliminate the interference or *public nuisance.* Property

owner will be given 24 hours notice prior to removals unless need for removal is created by an *emergency* or an *imminent danger*. The Property owner shall pay all costs incurred by the City.

28.06.03 ***Private Plants - Diseased, Infested, Damaged, Dead, or Creating a Hazard***
When the *Director* shall discover any *tree* or *plant* on private property within the *City* is creating a *public nuisance (28.02.17),* the *Director* shall serve an order upon the property owner in the manner specified in Section 28.17.00 of this ordinance. This order shall describe the *tree* or *plant*, its location and condition and order the property owner to take such measures as may be reasonably necessary. Such order may require the pruning, spraying or destruction and/or removal of the *tree* or *plant*. Such order may indicate the manner of deposal for all debris created by the required destruction and removal. Every such order shall be completed within ten (10) business days after the notice has been issued, or within such time as may be stipulated in such order as provided in Section 28.17.02. In the event of an *emergency* or *imminent danger* situation the *Director* shall have the authority to take immediate action as is necessary to abate the situation. The Property owner shall pay all costs incurred by the City. The City does not chip private plant debris.

28.06.04 ***Prohibited Plants*** - The general public, individuals, groups, organizations, or corporations shall not plant or cause to be planted any of the *plant*s on the *City*'s *prohibited plant* list (see 28.02.15) or the Temporary Ban List (see Landscape Design and Tree Preservation Standards #LD35.01.00). The Director, on a case-by-case basis, can approve exceptions to this prohibition. Approval by the Director shall be based on current City policies.

28.06.05 ***Tree and* Plant *Protection Prior to Development*** - To prevent the unnecessary destruction of *plant*s and/or *listed species* on land where a building permit or subdivision approval has not been issued, the destruction within any five (5) year period, of more than twenty-five (25%) percent of the *tree*s on any parcel of real property within the *City*, without prior approval of the *Director* shall be prohibited (see 28.08.00, 28.16.02 and Landscape Design & Tree Preservation Standards and the City's Developmental Standards).

28.06.06 ***Chipping or Removal of Plant Debris*** - The *City* does not chip or remove leaves, limbs, stems, logs, roots, or any other debris created by a private *plant* owners or their agents during the maintenance or removing of *plant*s, thereby bring them into conformance to this ordinance.

28.06.07 ***Plant Debris Disposal*** - No individual, group, organization, company, or corporation shall;

- **a.** Dispose in the *City*, *plant* debris, and/or by-products of plants (lumber, logs, firewood, mulch, chips, leaves, etc.) from private or public *plants* that contains dangerous, destructive or infectious *pest*s without first obtaining a permit.
- **b.** Dispose on municipal property any *plant* debris, and/or by-products of plants (lumber, logs, firewood, mulch, chips, leaves, etc.) from private or public *plants* without first obtaining a permit.
- **c.** The *Director* shall have the authority to affix conditions to the granting of the permit issued in accordance with the terms of this ordinance. Affixed conditions shall be based on current City policies.

28.07.00 *Plant* Protection - *Public Spaces*

It shall be the duty of any and all residents, individuals, groups, organizations, companies, and/or corporations within the *City* to protect plantings in *public spaces* so that:

28.07.01 No person shall *damage*, break, injure, mutilate, kill, destroy, transplant, remove, or otherwise deface any *plant*, or set any fire within ten (10) feet of the *drip line* or permit any fire, or the heat from a fire, to injure any portion of any *plant*. No toxic chemicals or other injurious materials shall be allowed to seep, drain, or be emptied on, near, or about any *plant*.

28.07.02 No electric wires or any other lines or wires shall be permitted to come in contact with any *plant* in any manner that shall cause *damage* to the *plant* and no person shall attach any electrical insulation to any *plant*.

28.07.03 No person shall use any *plant* as an anchor except by special written permit from the *Director* and no material shall be fastened to or hung on any *plant*s in *public space*s.

28.07.04 No person shall install, remove, or injure any guard or device placed to protect any *tree*s.

28.07.05 All persons having under their care, custody or control, personal property which may obstruct with the trimming, care, removal or planting of any *plant*, shall, after notice by the *Director*, promptly abate, prior to the time requirement given in said notice, such obstruction in such manner as shall permit the trimming, care, removal or planting of such *plant*s by the *Department*.

28.07.06 At no time will the practice of *topping* be considered appropriate or normal practice for any person, firm or *City* department. *Tree*s severely *damage*d by storms or other causes, or certain *tree*s under utility wires or other obstructions where other pruning practices are impractical may be exempted from this ordinance at the determination of the *Director*. This determination shall be based on current City policies.

28.08.00 *Plant* Protection During Development - Public and Private Property

It shall be the duty of any residents, individuals, groups, organizations, companies, developers, and/or corporations developing property within the *City* to protect plantings so that:

28.08.01 During any building, exterior renovation or razing operations, the developer/builder shall erect and maintain suitable *protective barrier*s (see 28.02.16) around all *tree*s, *plant*s, on *public space*s and on private property, so as to prevent *damage* to *plant*s and/or areas intended for preservation. (See figure #1). Building material and other debris shall not be placed inside the *tree protection area (see 28.02.23).*

28.08.02 *Protective barriers* shall not be relocated or removed without prior approval of the *City*.

28.08.03 Silt screen or other acceptable measures shall be placed up slope for the *protective barrier*s. This silt protection barrier shall shield the area of preserved *tree*s or *plant*s from soil sedimentation intrusion into the *tree protection area*.

28.08.04 Where root loss will occur, root prune one foot beyond the *protective barrier*s using a vibrating saw or narrow trencher to make clean cuts. Cutting instrument shall have sharp blades to minimize *damage*. Back fill immediately and cover with three (3) inches of mulch.

28.08.05 When, <u>in isolated incidents</u>, as determined by the City, *protective barriers* may be impractical or ineffectual in protecting *roots* in the *tree protection area (28.02.23),* the developer shall provide temporary buffers as approved by the *City* to prevent *root* damage.

28.08.06 Pruning of preserved trees during development shall be limited to the removal of dead, dying, and/or damaged branches. Where necessary the Developer may, with City permission, prune trees to accommodate construction activities. Upon completion of the development, overall pruning to enhance the quality of the trees

may be done under the guidance and supervision of the City.

28.09.00 Excavations Near *Plants* - *Public Spaces*.

It shall be the duty of any residents, individuals, groups, organizations, companies, developers, and/or corporations working or owning property within the *City* to protect plantings in *public spaces* so that:

28.09.01 ***Excavations and Driveways*** Excavations and driveways shall not be placed within fifteen (15) feet of any existing *tree* without written permit from the *Director*. Any person making such excavation or construction shall erect and maintain a suitable *protective barrier* around the *tree* (see figure #1). Building material and other debris shall not be placed inside the *tree protection area (28-02.23).*

28.09.02 ***Irrigation Systems, Invisible Dog Fences, or any Unauthorized Underground Installation*** - The *City* shall not be responsible for damages to irrigation systems, invisible dog fences or any unauthorized underground installation installed in *public spaces* by private parties.

28.10.00 Covering the Surface near *Trees* - *Public Spaces*.

No person shall place within the *public space* any soil, stone, brick, sand, concrete, or other materials, which will in any way impede the full and free passage of water, air or fertilizer to the *root system* of any *plant* in a *public space*, except a sidewalk or driveway of authorized width and location.

28.11.00 Regulations for New Planting - Public *Spaces*

Work other than that in section 28.08.00 shall be done under a permit issued (see 28.04.00) in accordance with this ordinance, the Landscape Design and Tree Preservation Standards, and City Developmental Standards, shall be performed in strict accordance with the listed terms and with the following regulations for the planting, trimming and care of *tree*s and *plant*s in *public space*s:

28.11.01 *Tree*s must have a *caliper* of 1.5 inches or more for bare rootstock and 2.5 inches or more for container grown/balled and burlapped stock.

28.11.02 *Tree* types shall be selected from Parks and Recreations Recommended Deciduous Trees for Troy list unless otherwise approved by the *Director*. Approval by the Director shall be based on current City policies.

28.11.03 All replacement *plant*s other than *tree*s shall be a minimum of:

a. four (4) inch pot for perennials and non-turf grasses
b. one gallon for all shrubs.

28.11.04 All *tree*s with a *caliper* of two (2) inches or greater must be protected and supported by *tree* guards. (see figure #3)

28.11.05 In rights-of-way, all *tree*s shall be planted on fifty (50) foot centers, unless a special permit is obtained from the *Director* (see 28.04.00). All other plantings on municipal properties shall conform to the City's Developmental Standards. Permit approval by the Director shall be based on current City policies.

28.11.06 All *trees* shall be centered between the sidewalk and curb unless the *Director* issues a permit. Where no sidewalk and/or curb exist, the Director shall approve planting locations. Permit approval by the Director shall be based on current City policies.

28.11.07 No *tree* shall be planted within fifteen (15) feet either side of a driveway that opens onto a public street.

28.11.08 No plant that exceeds thirty (30) inches in height above the lowest established street grade, shall be planted within fifteen (15) feet either side of a driveway that opens onto a public street.

28.11.08 Other than turf grasses, no *tree*s or *plants* shall be planted within fifteen (15) feet of any fire hydrant or as to obstruct the fire hydrant when viewed from the street. Turf grasses planted around a fire hydrant shall be maintained at a mowed height of six (6) inches or less.

28.11.09 No *tree* shall be planted on private property within thirty (30) feet of a *tree* planted in the rights-of-way.

28.11.10 All planting shall be done in accordance with Park and Recreation planting specifications (see figure #3).

28.11.11 All plantings shall conform to Corner Clearance (28.12.00).

28.12.00 Corner Clearance (Visual Barrier Setback)

Property owners in the City shall:

28.12.01 In order that the view of the driver of a vehicle approaching a street intersection is not obstructed, all *plant*s located on the triangle formed by two (2) rights-of-way lines at the intersection of two (2) streets and extending for a distance of twenty-five (25) feet each way from the intersection of the rights-of-way lines on any corner lot within the *City*, shall not be permitted to grow to a height of more than thirty (30) inches from the lowest established street grade, along the legs of the fore mentioned triangle (see figure #2).

28.12.02 *Tree*s may be planted and maintained the corner clearance area, provided that all branches are trimmed for a vertical height of eight (8) feet above the highest established street grade perpendicular to the *tree trunk*.

28.12.03 Any person failing to trim any *plant*s to conformity with this ordinance shall be notified by the *Director* in the manner provided in Section 28.17.01 of this ordinance. Such notice shall require trimming or removal in conformity with this ordinance within the time prescribed in the notice as provided in 28.17.02 of this ordinance. Upon the expiration of such period, the *Director* may cause the trimming or removal to be done and the cost thereof may be collected from the owner of said property as provided in 28.17.06 of this ordinance.

28.13.00 Private *Plant* - Inspection

The *Director* shall have the authority to enter upon private property for the purpose of examining any *plant*s, for the presence of *pest*s and/or to determine if an *emergency* or *imminent danger* situation exists. No *damage*s shall be awarded for the destruction of any *plant*, fruit, or injury to the same, if done by the *Director* in accordance with this ordinance.

28.14.00 Lawn Extensions & Subdivision Entry Islands/Cul-de-sac Islands

Property owners in the City are charged with the responsibility of maintenance of *public spaces* adjacent to their property as follows:

28.14.01 Property owners and/or occupants shall maintain the lawn extensions (see 28.14.02) that abut their property and/or the street island directly in front of their property in a neat and orderly manner in compliance with *City* ordinances. At no time shall property owners and/or occupants allow poison ivy, ragweed or any other poisonous, noxious, or unhealthy growths to occur in the lawn extensions or street island in their care.

28.14.02 Lawn extensions shall be defined as that space between the property line and the curb/road edge.

28.14.03 No person shall willfully injure, destroy, remove, or transplant any *plant*s, or grasses

on any lawn extension / street island or throw papers, refuse, or any other thing thereon.

28.14.04 For other than turf type grasses; the property owner and/or occupants shall apply for a permit to plant in these areas (28.04.00). A proposed maintenance schedule and intended maintained size of the plants shall be provided when applying for permit.

28.14.05 All paved surfaces in the lawn extensions and islands shall be mechanically edged on a regular basis to maintain clean exposed edges and no dirt or other debris shall be allowed to collect on paved surfaces.

28.14.06 Property owners and/or occupants are not responsible for major tree maintenance in the lawn extensions and islands.

28.14.07 Any plantings by developers, property owners, occupants, homeowner's associations, or agents thereof shall conform to 28.11.00.

28.14.08 When necessary based on street layout, additional properties may be required to maintain any street islands. The *Director* shall review and assign responsible properties on a case-by-case basis. Assignments by the Director shall be based on current City policies.

28.15.00 *Tree* Spacing

To promote the awareness of the benefits of effective landscaping in the *City*, the following planting information has been prepared for trees planted on private or municipal property:

28.15.01 The City strongly encourages all *tree*s planted on private property conform to Parks and Recreation's Recommended Deciduous Trees for Troy list.

28.15.02 No *tree* shall be planted on private property within thirty (30) feet of a *tree* planted in the rights-of-way.

28.15.03 ***LARGE TREES*** - *Tree*s that will attain a mature height over fifty (50) feet and at least thirty-five (35) feet wide. These *tree*s should be spaced at least thirty-five (35) feet apart on private property (unless otherwise directed by City Ordinances and/or standards) and fifty (50) feet apart on *public space*s.

28.15.04 ***MEDIUM TREES*** - *Tree*s that will attain a mature height of thirty (30) to fifty (50) feet and at least twenty-five (25) feet wide. These *tree*s should be spaced at least twenty-five (25) feet apart on private property (unless otherwise directed by City Ordinances and/or standards) and as close as forty (40) feet apart on *public space*s if approved by *City*.

28.15.05 ***SMALL TREES*** - *Tree*s that will attain a mature height of fifteen (15) to thirty (30) feet and at least fifteen (15) feet wide. These *tree*s should be spaced at least fifteen (15) feet apart on private property (unless otherwise directed by City Ordinances and/or standards) and as close as thirty (30) feet apart on *public space*s if approved by *City*. Under no circumstance shall a small *tree* be considered for use as a *street tree* unless an overhead utility is involved.

28.15.06 All *tree*s shall have the following setbacks from an overhead utility lines (see figure #5):

- **a.** Large *tree*s shall be planted no closer than fifty (50) feet from the outer most utility line.
- **b.** Medium *tree*s shall be planted no closer than forty (40) feet from the outer most utility line.
- **c.** Small *tree*s may be planted directly under utility lines.

28.16.00 Violation of *Tree* and *Plant* Ordinance –

Except as otherwise provided, any resident, person, group, organization, company, firm or corporation violating the provisions of this Chapter is responsible for a Municipal Civil Infraction

and subject to the provisions of Chapter 100 of the Code of the City of Troy.

28.16.01 ***Penalties for Unauthorized Removals of Plants - Public Spaces***

a. Any person violating or causing to be violated any of the provisions of this ordinance including but not limited to any person cutting down or removing *tree*s or *plant*s without personally seeing a copy of a valid permit authorizing such cutting down or removal of the *tree*s or *plant*s shall be subject to a fine of up to $500.00 per offense, depending on the commercial and/or historical value of such *tree*s and *plant*s.

b. Each *tree* or *plant* destroyed or removed in violation of this ordinance shall be considered a separate offense.

c. In the case of unauthorized removal or destruction of *tree*s or *plant*s, in addition to the fine, each *plant* destroyed or removed in violation of this ordinance shall be replaced with another like *tree* or *plant*. If the responsible party is unable to locate similar sized, type, or quality plant materials, she/he may request a variance from the *Director*. If the *Director* grants a variance, the party replacing the *plant*s will pay the *City* the cost difference between the value of the destroyed *plant* and the value of the replacement. The latest revision of the Guide For Plant Appraisals as published by the International Society of Arboriculture shall be used to determine the value of the destroyed *plant*. Variances approved by the Director shall be based on current City policies.

28.16.02 ***Penalties for Unauthorized Removals or Damage to Plants during or before Development- Public Spaces and Private Property***

Performing any *plant* removals and/or damaging any plants designated for preservation during development or on sites not yet designated for development (28.06.05), found to be in violation of this Ordinance, Tree Preservation Standards or any other developmental standards shall result in the following penalties:

a. Payment of the Tree Preservation / Landscape Review Penalty Fee as found in Chapter 60.

b. Replacement of *tree*s and *plant*s by the property owner will be required when any removal is in violation of this ordinance, and/or the Tree Preservation Standards. Replacement tree varieties shall be selected from the City's *Recommended Deciduous Trees for Troy* list.

c. The property owner must submit for approval a list of replacement *plant* varieties for review by the City. Approval of the list of replacement *plant* varieties shall be based on current City policies.

d. All replacement *tree*s shall have a minimum *caliper* size of four (4) inches.

e. Property owner will be required to replace trees at a rate of three (3) *caliper* inches for each inch *DBH* lost.

f. Amount of inches *DBH* lost will be determined by:

1) City approved Tree Preservation plan if previously submitted and approved prior to removals, otherwise see 28.16.02f2
2) Onsite inspection by City Staff. If staff is not able to make an accurate assessment due to site conditions, see 28.16.02f3
3) Inches of *DBH* lost will be assessed at a rate of 1089 inches *DBH* per acre.
4) Or any combination of above as determined necessary by City Staff to make a reasonable assessment of lost inches *DBH*

g. All replacement *plant*s other than *tree*s shall be a minimum of:

1) one (1) gallon for perennials and non-turf grasses

2) five (5) gallon for all shrubs

h. Planting locations for replacement *plant*s shall be staked by the property owner and approved by the *Director* before any replacement plantings occur. Location approvals shall be based on current City policies.

i. Replacement plantings shall conform to "American Standard for Nursery Stock".

j. *Plant*s selected for use as replacements shall be free from injury, *pest*s, diseases, and nutritional disorders, root defects and must be in good vigor. The *Director* reserves the right to reject any or all *plant*s used as replacements. All rejected *plant*s shall be removed from the site. Rejection of plants shall be based on this ordinance and current City policy.

k. All replacement *plant*s shall carry a two-year unconditional guarantee.

l. All replacement *plant*s shall be planted as per Parks & Recreation specification. Copies of these specifications shall be obtained from the *Director*.

m. All plantings shall conform to Corner Clearance sec #28.12.00 of this ordinance.

28.16.03 ***Failure to Maintain Approved Plantings in Public Spaces***

Approved plantings in *public spaces* found to be poorly maintained shall, upon order by the City, be removed by the parties responsible for the maintenance and the site restored to turf or other City approved ground cover (plants or mulch). Failure to comply, see 28.17.05.

28.16.04 ***Penalties for Damaging Plants - Public Spaces***

Any person or persons who cause *damage* to any *City tree*s and/or *plant*s by the improper use of any machines, automobile, chemicals, or other activities shall be held liable for *damage*s to said *tree*s and *plant*s. *Damage*s shall be corrected, repaired and/or replaced by the *Department* as instructed by the *Director*. All costs incurred by the *City* for corrections, repairs, and replacements including administrative and process costs, shall be billed to the person or persons responsible for the *damage*s. Should the *City* choose not to replace *damaged plant*s, the person or persons responsible for said *damage* shall be billed for the value of the *plant*s as determined in accordance with the latest revision of the Guide for Plant Appraisal (issued by the Council of Tree and Landscape Appraisers) and/or cost estimates for repairs/replacement, including all administrative costs.

28.17.00 Procedure for Ordering Action on Violations of *Tree* and *Plant* Ordinance

When the *Director* shall find it necessary to order the trimming, preservation, spraying or removal of *plant*s on private property or in *public spaces,* as authorized by this ordinance he shall serve a written order on the property owner in which the necessary corrections and time limits are listed.

28.17.01 Such order required herein shall be served in one of the following manners:

a. By making personal delivery of the order to the property owner.

b. By leaving the order with some person of suitable age and discretion upon the premises.

c. By mailing a copy of the order to the last known address of the owner of the property by registered mail.

d. By affixing a copy of the order to the door at the entrance to the premises in violation.

e. By publishing the order in a local paper once a week for three (3) successive

weeks.

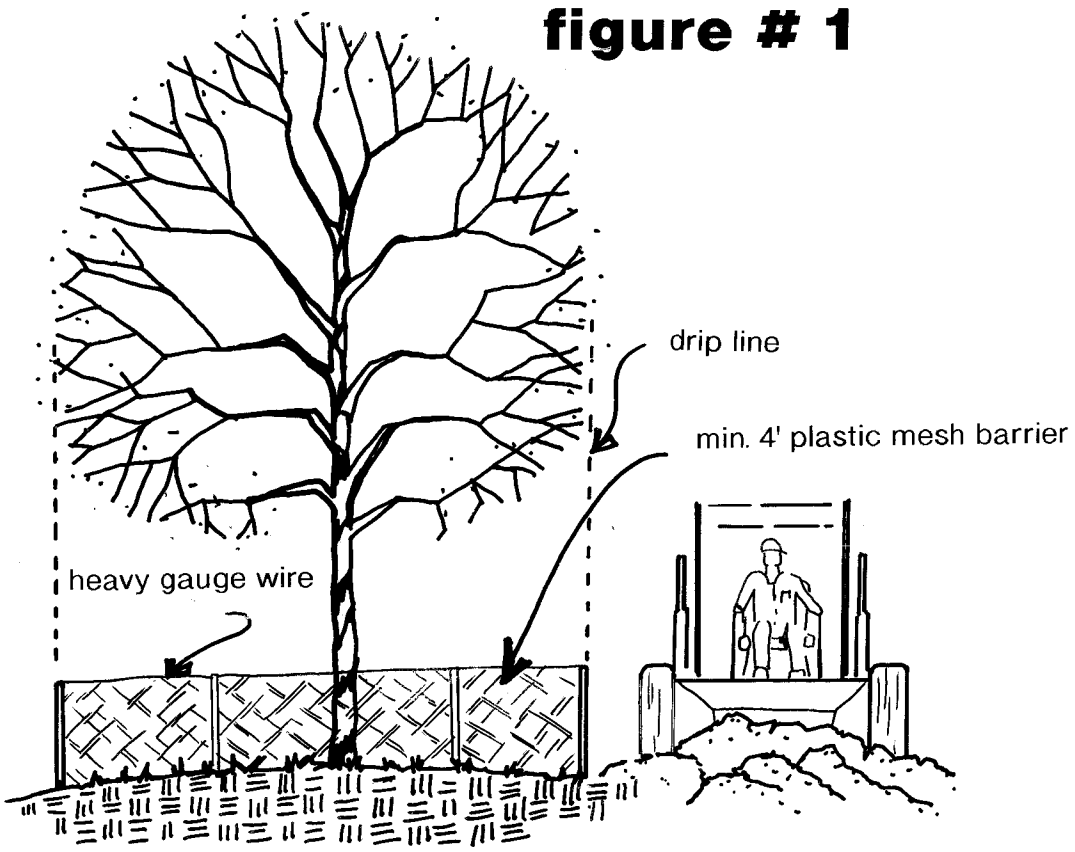
28.17.02 ***Time for Compliance*** - Such order shall set forth a time limit for compliance dependent upon the hazard and danger created by the violation. In no case shall the time limit be less than ten (10) business days, except in case of an *emergency* or an *imminent danger*, nor more than thirty (30) calendar days. In case of *emergency* or *imminent danger* the *City* shall eliminate or lessen the hazard and assess the costs to the owner as provided in Section 28.14.11 of this ordinance.

28.17.03 ***Notice of Compliance*** - Cited individual shall send a notice of compliance within five (5) days of completion of work to the *Director* for her/his inspection of completed work.

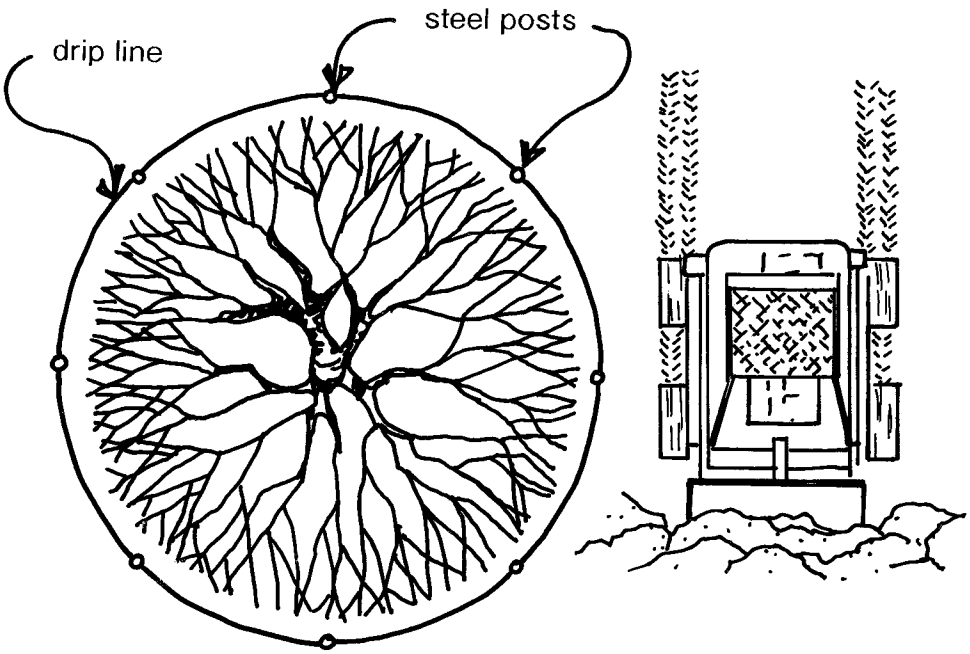
28.17.04 ***Appeal from Order*** - A person to whom such an order is directed shall have the right, within forty-eight (48) hours of service of such order, to appeal to the *City* Manager, of the *City* of Troy who shall review such order within five (5) business days and file her/his decision with the *City* Clerk with a copy to the *Director* of Parks and Recreation and to the appellant which shall be served in any of the methods provided in sec. # 28.17.01; unless the order is revoked or modified it shall remain in full force and shall be obeyed by the person to whom it is directed. No person to whom the order is directed shall fail to comply with such order within ten (10) business days or such additional time as prescribed in the order after an appeal shall have been determined. In the case of *imminent danger*, as described above, the *Director* shall have the authority to require compliance immediately upon service of the order which expressly dictates that the matter is of *imminent danger*.

28.17.05 ***Failure to Comply*** - When a person to whom an order is directed shall fail to comply within the specified time, or in the specified manner, the *Director* shall remedy the conditions or contract with others for the purpose and charge the costs thereof to the person to whom the order is directed. The person remedying the condition under a contract made with the *City* shall be authorized to enter the property for that purpose.

28.17.06 ***Lien Against Property*** - If the cost of remedying a condition is not paid within thirty (30) days after receipt of a statement from the *City*, such cost shall be levied against the property upon which said hazard exists or existed. Levying of such cost shall be certified by the *Director* to the *City* Treasurer and shall become a lien upon such property, and shall be included in the next tax bill rendered to the owner or owners unless paid before, and shall be collected in the same manner as other taxes against such property.



Tree Protection Area study



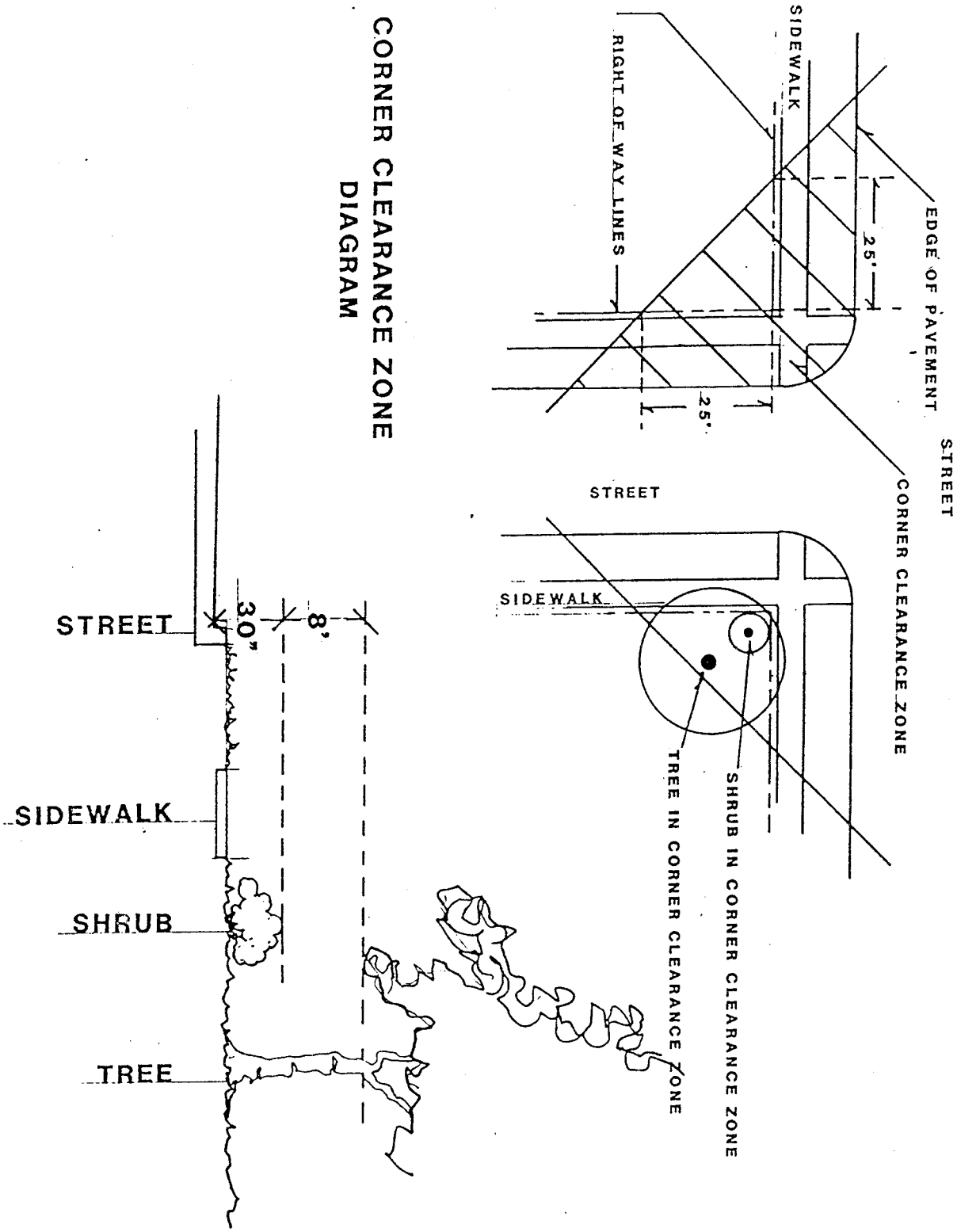
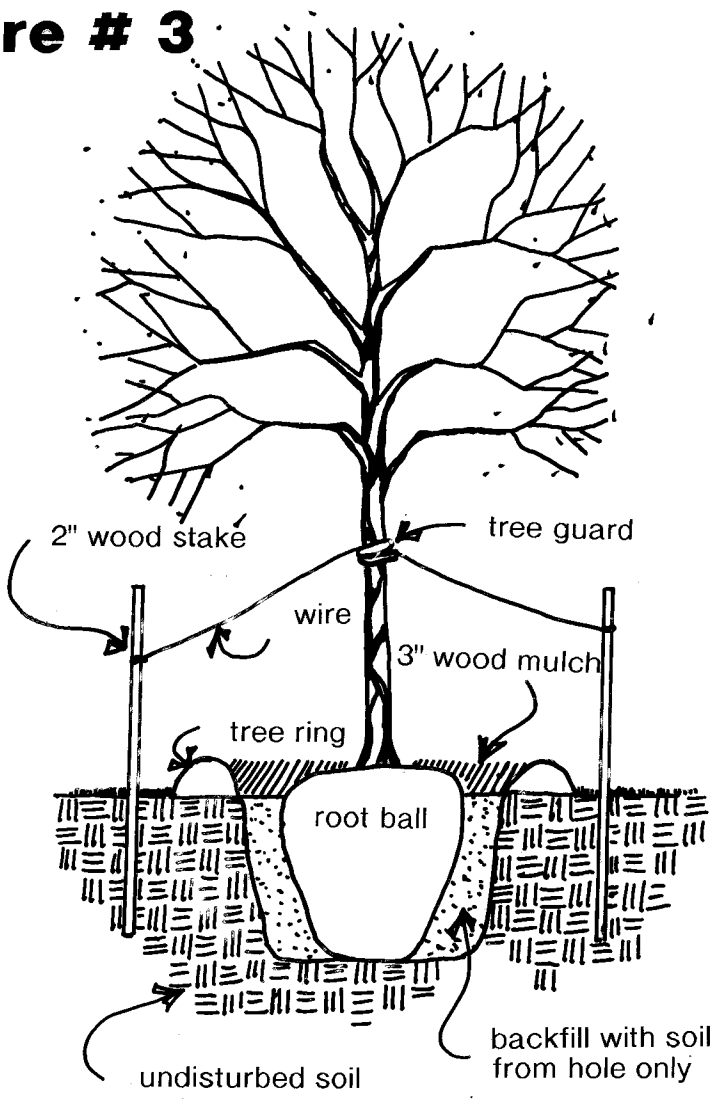
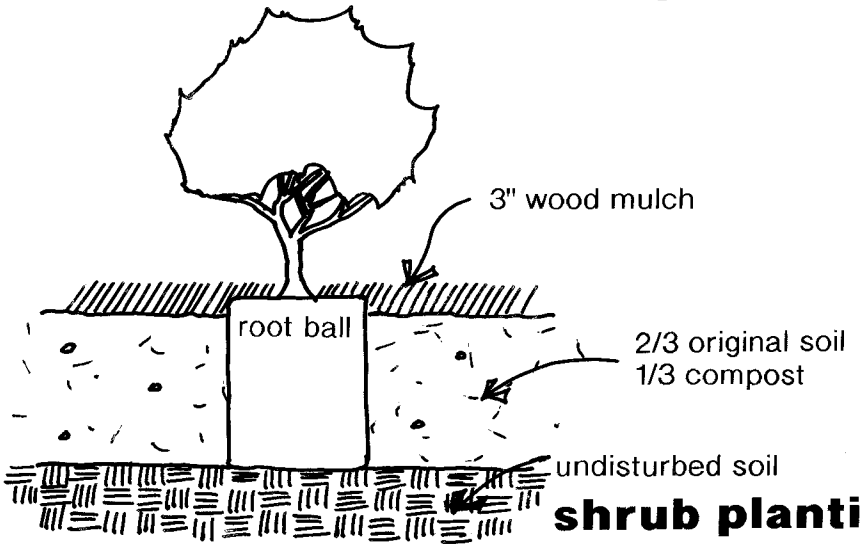

STREET
CORNER CLEARANCE ZONE
EDGE OF PAVEMENT
25'
SIDEWALK
RIGHT OF WAY LINES
25'
STREET
SIDEWALK
SHRUB IN CORNER CLEARANCE ZONE
TREE IN CORNER CLEARANCE ZONE
CORNER CLEARANCE ZONE
DIAGRAM
STREET
30"
8'
SIDEWALK
SHRUB
TREE

figure # 2

figure # 3

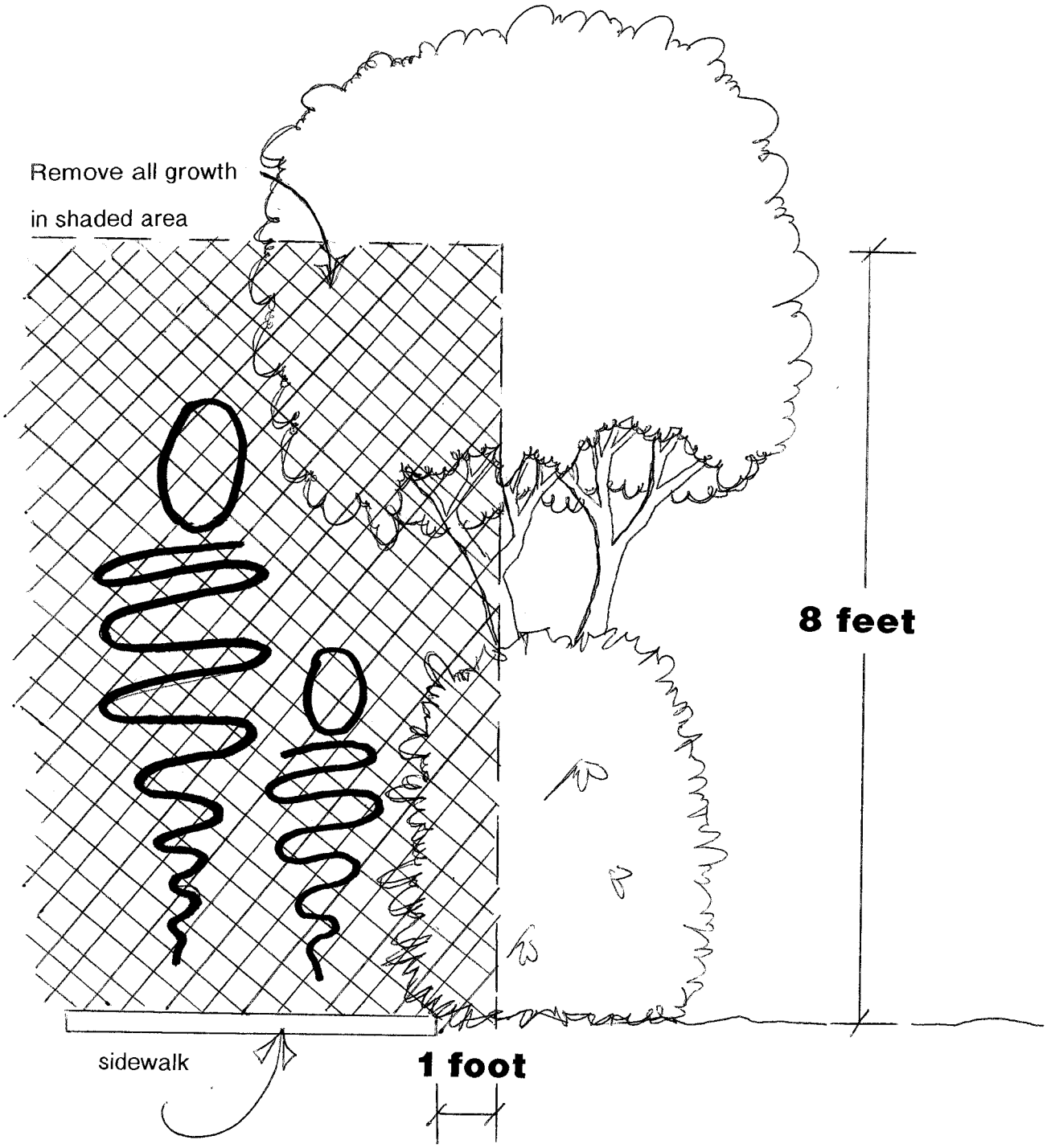


tree planting study



shrub planting study

figure # 4



Area to be cleared.

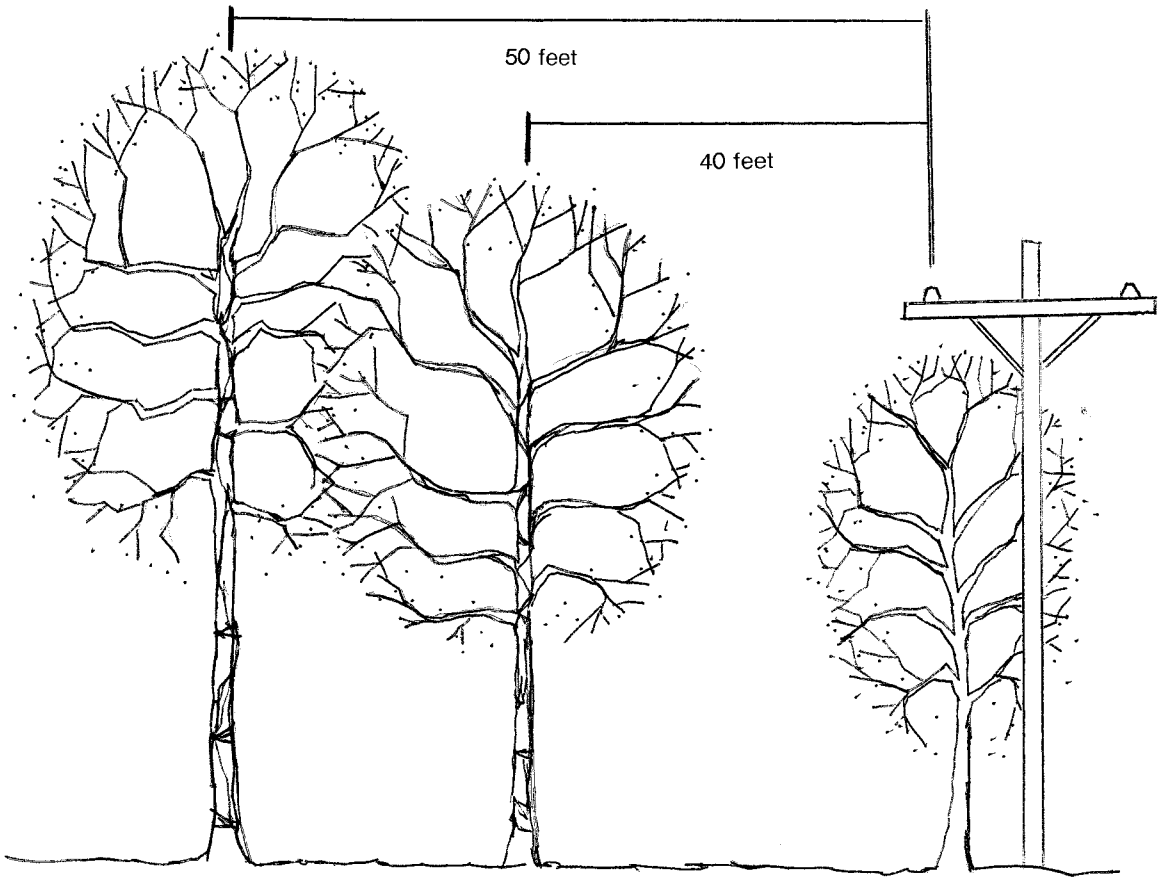


figure # 5

Landscape Design and Tree Preservation Standards

Adopted 09/15/75
Revised 01/13/77
Revised 11/03/86
Revised 03/16/87
Revised 02/12/96
Revised 03-13-06

Changes as of 3-13-06

Reviewing Agency:

City of Troy
Parks and Recreation Department

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Tree Preservation / Landscape Submittal / Approval Process Outline

Preliminary Site Plan Approval

1. Developer submits three (3) copies of **Preliminary** Tree Preservation plan (**PTPP**)(LD6.00.00, LD9.00.00) to Parks and Recreation (P&R) or submits written request for for variance (LD3.00.00) or Waiver of Tree Preservation Standards (LD5.00.00).
2. P&R reviews **PTPP** or request for waiver and validates the survey.
3. P&R comments, if any, will be forwarded to Planning & Building Departments.
4. Developer resubmits three (3) copies of revised **PTPP** plan based on P&R comments. If no comments go to #5.
5. P&R approves PTPP and signs off on preliminary sign off sheet.

Final Tree Preservation / Landscape Plan Approval

6. Developer submits three (3) copies of the **Final** Tree Preservation / Landscape Plan **(FTPLP**)(LD7.00.00, LD10.00.00), Construction Drawings (LD11.00.00), planting specifications (LD12.00.00) and line item cost estimates (commercial only) (LD13.00.00) to P&R.
7. P&R comments, if any, will be forwarded to Planning and Building Departments.
8. Developer resubmits three (3) copies of revised **FTPLP**. If no comments go to #9.
9. For commercial properties, P&R sets and collects Review fees (LD18.00.00) and Landscape Deposits (LD19.00.00). For sub-divisions, required landscape deposits are collected by the Engineering and/or Planning Department.
10. P&R signs off on Final project sheet.

Work Begins

11. P&R advised twenty-four (24) hours prior to tree clearing operation (LD20.02.00).
12. P&R monitors tree removal
13. P&R advised twenty-four (24) hours prior to landscaping operations (LD22.00.00)
14. P&R monitors installation of landscape.

Landscape Inspections called

15. Commercial Properties

- **a.** Developer calls for First Implementation Inspection (**FII**)(LD26.00.00).
- **b.** P&R comments based on **FII** forwarded to Building Department. If no comments **FII** shall be considered the Final Implementation Inspection.
- **c.** Developer calls for Final Implementation Inspection (LD27.00.00)
- **d.** P&R forwards comments to Building Department, if necessary, based on inspection.
- **e.** P&R approves implementation and releases Implementation Deposit, collects Maintenance Deposit (LD19.00.02) and advises Building Department that P&R approves issuance of Certificate of Occupancy.
- **f.** Minimum of twelve (12) months, maximum of thirty-six (36) months later, Developer calls for Maintenance Inspection (LD28.00.00). ***Deposit is forfeited after 36 months***.
- **g.** P&R forwards comments based on Maintenance Inspection to Developer.
- **h.** Developer calls for re-inspections.
- **i.** If P&R approves Landscape, Maintenance Deposit is refunded.

16. Subdivisions

- **a.** Developer calls for **FII** (LD26.00.00).
- **b.** P&R comments based on **FII** forwarded to Developer. If no comments **FII** shall be considered the Final Implementation Inspection.
- **c.** After implementation of City comments, Developer calls for Final Implementation Inspection (LD27.00.00)
- **d.** P&R forwards comments to Developer, if necessary, based on inspection.
- **e.** P&R approves implementation and authorizes release of 90% appropriate landscape deposits. Note, subdivision guaranteed see 34.00.00i

Landscape Design and Tree Preservation Standards

LD1.00.00 ***Introduction - It*** is the intent of the City Code Chapter 28, and Chapter 39, Section 12.60.01; 11.50.05; 12.60.02; 13.60.00; 15.60.00; 16.60.00; 17.60.00; 39.30.01-07; 10.30.03 (C); 18.30.03 (B); 10.30.01 (E); 22.30.01 (B); 24.30.06 (B) and Chapter 41, Sections (E) and (F) to obtain an environment which is responsive to human needs, socially positive, economically viable and environmentally satisfying. Additionally these standards promote reasonable preservation and replenishment of landscaping in developments, commercial properties and municipal grounds by providing guidelines for protection of plants during construction, development and redevelopment.

The reviewing agency for these standards is the City of Troy Parks and Recreation Department (248-524-3484).

These Standards apply to any person or persons developing a subdivision or commercial property, and to individuals purchasing developed or undeveloped commercial property and/or developed or undeveloped residential property. Previously owned and occupied houses are exempt.

LD2.00.00 *Circumstances for Variations* - These Standards are not intended to be arbitrary or inhibiting to creative solutions. Project conditions may justify modifications of these standards when conditions arise where full compliance is impossible or under circumstances where achievement of the City's objectives can be better obtained through modified requirements. Therefore, in specific cases, variation from the requirements may be permitted by the Director of Parks and Recreation when this variation more fully achieves the objective contained herein and when one or more of the following conditions justify the variance*:*

LD2.01.00 Topography, soil, or other site conditions are such that full compliance is impossible.

LD2.02.00 Improved environmental quality, and/or utility would result from the variance.

LD2.03.00 Alternate methods, materials or equipment may be used when their use would more closely fulfill the intended objectives of these standards.

LD2.04.00 Lack of existing native vegetation within the limits of the property.

LD3.00.00 Request for Variance

A request for variance must be submitted to the Director of Parks and Recreation in writing at the beginning of the review procedure, describe completely the rationale for the variance request.

LD3.01.00 Special Conditions - Because of various conditions in a specific project, the Director of Parks and Recreation may require compliance with standards other than those contained herein, in order to obtain those characteristics of viability,

utility, service, public safety, and low maintenance expense, while satisfying its objectives and to ensure continued market acceptance of the project.

LD4.00.00 **Federal and State Standards -**It should be noted that where Federal and/or State Standards pertain, the higher standard shall govern. An example of a possible higher standard would be the Federal Government's Endangered Species Act.

LD5.00.00 **Request for Waiver of Tree Preservation Standards** - If there are no trees on the site, the Developer may request relief from conforming to the tree preservation portion of these standards by requesting a waiver. Written requests should be directed to the Parks and Recreation Department. City staff will evaluate the waiver request and the Developer will be advised of the findings.

LD6.00.00 **Preliminary Tree Preservation Plan – General Requirements.** The preliminary tree preservation plans shall conform to this format. Three (3) copies shall be provided to the Department of Parks and Recreation, at the time of each submittal.

LD6.01.00 **Title block shall include:**

- **a.** Project name, address (if currently assigned) and Sid well numbers
- **b.** Project location map with a scale of 1" = 200'
- **c.** Name of the Developer, address, phone and fax number
- **d.** Name or Project Engineering Firm, address, phone and fax number
- **e.** Name, address, phone and fax number of Landscape Architect, Designer and/or Tree Appraiser
- **f.** Zoning Classification of the project

LD6.02.00 **Information to be included on all other sheets**

- **a.** Number
- **b.** Scale
- **c.** North Arrow (except on detail sheet)
- **d.** Title
- **e.** Legend
- **f.** Property Lines
- **g.** All structures existing on the site
- **h.** Proposed and existing easements, utilities, rights-of-ways and building envelopes.
- **i.** Adjacent land use
- **j.** Label existing topographic contours on preliminary plans
- **k.** Attach relevant sections of Consent Judgment if applicable.
- **l.** See LD9.00.00 for additional required information

LD7.00.00 **Final Tree Preservation / Landscape Plan - General Requirement** The Final Tree Preservation and Landscape plans shall conform to this format. Three (3) copies shall be provided to the Department of Parks and Recreation, at the time of each submittal.

LD7.01.00 **Title block shall include:**

- **a.** Project name, address (if currently assigned) and Sid well numbers

b. Project location map with a scale of 1" = 200'
c. Name of the Developer, address phone and fax number
d. Name or Project Engineering Firm, Landscape Architect/Designer, addresses, phone and fax numbers.
e. Zoning classification of the project

LD7.02.00 **Information to be included on all other sheets**

a. Number
b. Scale - commercial/individual lots min. 1" = 30', max. 1" = 5' Subdivisions min. 1" = 100'
c. North arrow (except on detail sheet)
d. Title
e. Legend
f. Property lines
g. Structures to remain or to be built on the site
h. Proposed and existing easements, utilities, rights-of-ways and building envelopes.
i. Adjacent land use
j. Label existing topographic contours on preliminary plans
k. Label existing and proposed topographic contour lines on final plans.
l. Location and number code of preserved trees (see also 8.02.04)
m. Location of reforested trees – must be called out.
n. Plant list indicating quantity, botanical name, size, condition (bare root, container/size, B&B, etc.),
o. Planting specifications
p. Attach relevant sections of Consent Judgment if applicable.

LD8.00.00 **Tree Preservation Options -** Developer shall use one of the following options or a combination thereof:

LD8.01.00 Preservation of 30% of ***total site DBH inches***. (see LD8.04.00)

LD8.01.01 ***Total site DBH inches*** shall be the total number of DBH (diameter at breast height) inches existing on the site for all trees four (4) inches DBH and up.

LD8.02.00 Replacement of 30% of total site DBH (see LD8.01.01) with new plantings (A.K.A. *Reforestation Plantings*) at a rate of one (1) DBH inch = one and one half (1 ½") caliper inches. (see LD 8.05.00)

LD8.03.00 Should the site be unable to accommodate all or part of the required *Reforestation Plantings*, upon approval by the City, the Developer may pay into the City's Tree Fund at a rate of one (1) DBH inch = two (2) caliper inches, multiplied by the Tree Reforestation Dollar Value (TRDV) (see LD8.01.04) as set annually by the City.

a. Example - 1000 Total Site DBH inches X 2 X TRDV = amount to be paid into City Tree Fund.

LD8.03.01 2006 Tree Reforestation Dollar Value (TRDV) = $114.00

LD8.04.00 **Trees Preserved -** If the Developer chooses to preserve existing trees, tree selection shall be based on the following:

LD8.04.01 Trees to be considered preserved shall be within the size range of four (4) inches DBH and up.

LD8.04.02 Preserved trees shall not be on the City's prohibited species list. Trees on the prohibited species list can be maintained but will not be considered preserved trees.

LD8.04.03 Any tree that is endangered or threatened, or is a species of special concern as listed on the Federal Inventory List or Michigan Natural Features Inventory List (MNFI), which is maintained by the Michigan Natural Heritage Program and/or the Michigan Land Conservancy shall be preserved.

LD8.04.04 Any tree of a unique nature, size, or type that by its presence enhances the quality of the overall landscape design. These trees shall be called out on the Preliminary Tree Preservation Plan and Final Tree Preservation / Landscape Plan. The City reserves the right to remove these trees from the list of preserved trees.

LD8.04.05 Trees to be preserved shall be in good to fair condition at the time of development.

LD8.04.06 At the City's discretion, <u>any tree</u> can be removed from the proposed list of preserved trees.

LD8.05.00 ***<u>Reforestation Plantings</u>***

Reforestation Plants shall conform to the following:

LD8.05.01 Size -

- **a.** Deciduous shade - minimum of 2 ½" caliper
- **b.** Deciduous flowering – minimum 1 ½" caliper
- **c.** Coniferous – minimum of 8 feet tall

LD8.05.02 Deciduous tree varieties shall be selected from the City's <u>Recommended D*eciduous Trees for Troy*</u> list. Proposed tree varieties not found on the City's list must be approved by the City

LD8.05.03 Front, back and side yards are the primary planting locations.

LD8.05.04 If the Developer proves to the City's satisfaction that the required number of trees cannot be located in these areas, the City reserves the option of assigning additional planting sites within the project boundaries.

LD8.05.05 Reforestation trees shall be a minimum of thirty (30) feet away from the right-of –way.

LD8.05.06 Reforestation trees shall not be planted in easements.

LD8.05.07 In areas with above ground utility lines, trees with a matured height of more than twenty (20) feet <u>shall not</u> be planted within fifteen (15) feet of the utility poles. (see City Ordinance 28.15.06)

LD8.05.08 Reforestation trees shall not be incorporated into any green belts, non-access green belts, detention ponds, street planting, medians, cul-de-sac planting or any other landscaping required by the Developmental Standards without City approval. If approved (see LD8.03.04) the trees will be used to augment not replace required landscaping.

LD9.00.00 Preliminary Tree Preservation Plans – Specific Requirements

Preliminary Tree Preservation plans shall be submitted to the Director of Parks and Recreation when making the submittal to the Planning and or Building Department for Preliminary Site plan review for a building project or when the Preliminary plan for a subdivision is submitted for review.

LD9.01.00 Plan shall include:

- **a.** All information listed in LD6.00.00
- **b.** Location of all trees four (4) inches DBH and larger within the projects property lines and all trees on adjoining properties that have drip lines

extending onto the site, shall be located on Preliminary Tree Preservation plan. Each tree shall be number coded.

c. Table of trees shall be created indicating tree number code, DBH, species (maple, elm, spruce, etc.) and condition (good, fair, poor)

d. Total site DBH for all trees four (4) inch and greater shall be included with above listed table.

e. Copies of relevant sections of Consent Judgment if applicable.

LD10.00.00 **Final Tree Preservation / Landscape Plan Specific Requirements**

It is the intent of the Final Tree Preservation / Landscape plan to indicate location of preserved and/or reforested trees and show their relationship to the projects overall landscaping. Additionally, this plan will delineate all required and/or proposed landscaping

LD10.01.00 Final Tree Preservation/Landscape plan shall include the following:

a. Base sheet information, as indicated in LD7.00.00.

b. Location of trees to be preserved as per these standards and/or locations of reforestation plantings.

c. Plant list. The plant list can be printed on the plan or can be typed and attached to each of three (3) sets of plans submitted for review. Plant list shall include:

1. Botanical name
2. Common name
3. Plant size
4. Number of each plant variety used
5. Condition
   - **a.** Balled and burlapped
   - **b.** Bare root
   - **c.** Potted
   - **d.** Container grown

LD10.01.01 All plants shall be identified with the proper botanical name. This requirement does not preclude the use of a key system method of identifying plant materials on the plan.

LD10.01.02 Planting details shall be provided for each plant group to be installed on the site (shade/flowering trees, shrubs, evergreens, perennials, ground covers, annuals, etc.)

LD10.01.03 The City reserves to right to reject any proposed plant materials or proposed planting locations.

LD10.01.04 A break down of the Tree Preservation option(s) used and shall also indicate:

a. Option(s) used

b. Total Site DBH inches (see LD8.01.01)

c. Number and size of trees preserved, or replanted, or amount to be paid into City Tree Fund

d. <u>Show calculations for all options used</u>

e. Construction drawings (11.00.00), landscape planting specifications (12.00.00) and cost estimates (13.00.00) shall be submitted at the same time as Final Tree Preservation / Landscape Plan.

LD11.00.00 Construction Drawings - All construction (engineering) drawings and specifications shall conform to the City of Troy Development Design Standards and the Landscape Design and Tree Preservation Standards.

LD12.00.00 Landscape Planting Specifications - The Developer is required to provide a copy of the landscape planting specifications that will be employed during the implementation of the project. If these specifications are found to be insufficient, the proper changes are required to be made before the landscape plans will be approved.

LD13.00.00 Cost Estimate - Landscaping (commercial only) – An itemized estimate covering the costs of all landscaping (hardscape and softscape) scheduled for the project shall be submitted with all landscape plans. The cost estimate shall be in the form of a line item cost break out. A single total cost for the project is not acceptable. Irrigation shall not be included in the cost estimates.

LD14.00.00 Submittal Requirements - It is the intent of the Landscape Design Standards to inform the Developer of submittal requirements, review procedures, fees and inspections and guarantees. It should be noted that strict adherence to the procedures outlined herein will ensure expeditious processing of plans and thereby minimize the need for project modifications.

LD15.00.00 The Reviewing Body - The Tree Preservation Plans, Landscape Plans, cost estimates, construction drawings, details, and specifications will be reviewed by the Director of Parks and Recreation or her/his designated agent.

LD15.01.00 All submitted drawings, and supporting documentation shall be reviewed for:

- **a.** Conformity to all current City Ordinances and Standards.
- **b.** Aesthetic quality.
- **c.** Appropriate selection and use of all plants.
- **d.** Due to the unique natural of each site, no one set of ordinances or standards can cover all contingencies. The City reserves the right to critic any aspect of the proposed design. The Designer/Developer shall resolve any issues brought to their attention by the City.

LD16.00.00 Submission for Review

It is required that all landscape data be submitted, reviewed and approved before any Building permit / Final Site Approval can be issued. <u>No tree regardless of size, shall be removed until the Final Site Approval is issued (see 28.06.05).</u>

LD16.01.00 Three (3) copies of required plans, planting specifications (statements that outline the procedures that will be used to install all plant materials and other landscape elements) and itemized cost estimates will be submitted to the Parks and Recreation Department.

LD16.02.00 On-site changes of an approved landscape plan may be made using the following:

- **a.** The City of Troy must approve all changes.
- **b.** Prior to any deviation from the accepted plan, the City of Troy must be contacted and asked for an evaluation of the proposed change.

c. In projects where deviation from the accepted landscape plan has been approved, the Developer shall forward as-built drawings to the City of Troy prior to the implementation inspection.

d. Any changes made to the required plans, specifications, details, and/or cost estimates after the issuance of Final Site Approval could delay the issuance of the Final Certification of Occupancy, and release of the Implementation and/or Maintenance Deposits.

LD17.00.00 Changes in a Landscape Plan Resulting from Review Process - Any changes required by the reviewing body must be included in three (3) complete sets of revised plans to be submitted to Parks and Recreation, along with the revised specifications and cost estimates.

LD18.00.00 Tree Preservation / Landscape Plan Review Fee

The Tree Preservation / Landscape Plan Review Fee is based on the total (gross) acreage of the project. Final Site approval will not be issued until this fee is paid. The non-refundable fee will be charged at the rate of:

a. Less than five acres - $400.00

b. Five acres or more - $50.00 per acre with a minimum charge of $400.00

LD18.01.00 **Tree Preservation / Landscape Plan <u>Penalty</u> Review fee:**

a. Less than five acre - $800.00

b. Five acres or more - $100.00 per acre with a minimum charge of $800.00

LD19.00.00 Landscape Deposits

Landscape Deposits listed in this section are for all sites <u>other than sub-division</u> developments. Final Site approval will not be issued until this deposit is made.

LD19.01.00 **Implementation Deposit** – After the Final Tree Preservation / Landscape Plans, planting specifications and cost estimates have been approved, and prior to the issuance of Final Site Approval, the Developer shall post with the City of Troy an Irrevocable Bank Letter of Credit and/or cash deposit that will serve as the Implementation Deposit.

LD19.01.01 The amount of Implementation Deposit shall be determined by the Parks and Recreation Department based on the following percentages:

a. Forty-five (45) percent of the total project's landscaping costs of $3999.99 or less

b. Twenty-five (25) percent of the total project's landscaping cost of $4000.00 or more.

LD19.01.02 **No inspections shall be made if Bank Letter of Credit has expired.**

LD19.02.00 ***Maintenance Deposit*** – Once the Final Tree Preservation / Landscape plan has been fully implemented and the implementation has been approved by the City of Troy (LD27.00.00), the City of Troy shall release the Landscape Deposit less the M*aintenance Deposit*. Twenty (20) percent of the total estimate or $1000.00 (whichever is greater) shall be posted as a Maintenance Deposit with the Parks and Recreation Department prior to the issuance of the final Certification of Occupancy. <u>The Property Owner/Developer is responsible for requesting all inspections</u>

LD19.02.01 Final inspection of the landscape for release of Maintenance Deposit

may be called for one year after receiving implementation approval. The Property Owner/Developer is responsible for requesting all inspections

LD19.02.02 The intent of this requirement is to ensure that all dead, dying, diseased and/or weakened plant materials found during the Final Maintenance Inspection shall be replaced with viable plant materials during the next acceptable planting season. Additionally, it ensures that the site has received proper landscape maintenance.

LD19.02.03 The Irrevocable Bank Letter of Credit and/or cash deposit will be held for a minimum of one year. The Developer/Property Owner is responsible for requesting inspections. The Developer/Property Owner will be notified by the City of any replacements / repairs / corrections required. The replacements / repairs / corrections to the landscape shall be made within thirty days of notice unless approved by City.

LD19.02.04 When the replacements / repairs / corrections have been made to the satisfaction of the City, the Bank Letter of Credit and/or cash deposit will be released, and a final project approval will be forwarded to the Building Department.

LD19.02.05 Failure on the part of the Property Owner to comply with these standards may result in the forfeiture of either or both of the Irrevocable Letters of Credit and/or cash.

LD19.02.06 Should it be found that the Bank Letter of Credit has expired before the City has performed the Final Implementation Inspection and approved the landscape, the amount of the appropriate deposit and all administrative costs, may (at the City's discretion) be levied against the property.

a. Levying of such cost shall be certified by the Director of Parks and Recreation to the City of Troy Treasurer and shall become a lien upon such property, and shall be included in the next tax bill rendered to the Property Owner or Property Owners unless paid before and shall be collected in the same manner as other taxes against such property.

b. Of the monies collected in this manner only the original amount of the deposit is refundable and only after the maintenance inspection has been completed and the landscape receives final approval.

LD19.03.00 Depositor shall forfeit the Maintenance Deposit if the Maintenance Inspection is not called for within three years of Final Implementation Inspection, or unless otherwise approved by the Director of Parks and Recreation.

LD20.00.00 Tree removals prior to Final Site Approval –

No tree, regardless of size, shall be removed without Final Site Approval.

LD20.01.00 Undergrowth may be removed at any time. However, if in the process of removing the undergrowth, soil is disturbed, all work shall cease until the City's Environmental Specialist clears the site for the continuation of work.

LD20.02.00 The Parks and Recreation Department shall be notified twenty-four hours prior to the beginning of **any** type of clearing operation.

LD21.00.00 Violation of Tree Preservation plan

Performing any tree or *plant* removals in violation of the City Ordinance Chapter 28 (Tree and Plant Ordinance) and/or the "Tree Preservation and Landscape Design Standards" shall result in the following:

- **a.** Issue of "Stop Work Order"
- **b.** Cancellation of all currently held Tree Preservation and Landscape approvals.
- **c.** See City ordinance 28.16.02

LD22.00.00 Landscape Installation

Prior to and during landscape installation:

LD22.01.00 No landscape work shall take place without final site approval.

LD22.02.00 The Parks and Recreation Department shall be notified of the proposed starting date twenty-four (24) hours before work on the project begins.

LD22.03.00 Landscaping not conforming to approved drawing and specification shall result in the:

- **a.** Issuance of a "Stop Work Order"
- **b.** Cancellation of all currently held permits
- **c.** See LD18.00.03
- **d.** All changes in approved Final Tree Preservation / Landscape plans shall be approved in writing prior to implementation of changes.

LD22.04.00 No temporary or final certificate of occupancy will be granted until these Standards are complied with fully.

LD23.00.00 Tree and Plant Protection

Developer is required to:

LD23.01.00 Adhere to the tree and plant protection measures as listed in Chapter 28 & 39 of City Code.

LD23.02.00 If encroachment into a tree protection area occurs, resulting in irreparable damage to the trees or the area inside the tree protection area, a "*Stop Work Order"* will be issued and the Final Tree Preservation/Landscape plan shall be revised to indicate reforestation planting required compensating for tree loss/damage. (see City ordinance 28.16.02) All revised plans will have to be re-approved. (see LD18.01.00)

LD23.03.00 Under no circumstance shall the Developer be relieved of the responsibility of compliance with the provisions of this Standard, City Ordinances and Developmental Standards.

LD23.04.00 ***Pre-construction Tree Protection***

Prior to construction:

- **a.** All protective measures as outlined in this standard and City Ordinance 28.08.00 shall be in place before any site work will be permitted.
- **b.** Remove non-preserved trees. Cut rather than push over with dozers to protect roots of preserved trees.
- **c.** With City approval, the Developer may prune limbs in the way of improvements prior to construction.

LD23.05.00 ***Construction Tree Protection***

During construction operations:

LD23.05.01 Keep all construction activities out of "Tree Protection Area" (City Ordinance 28.02.23). NO storage of any type of materials, equipment, or any other activity will be allowed inside the Tree Protection Area.

LD23.06.00 ***<u>Post—Construction Tree Protection</u>***

After all construction and the establishment of final grade:

- **a.** Remove all fences
- **b.** Prune any damaged trees
- **c.** Replace preserved trees that died during construction (see City Ordinance 28.16.02)

LD24.00.00 Inspection Schedule - The intent of the following sections is to inform the Developer of the inspection schedule which will be employed by the City of Troy during the landscape construction period. This section also informs the Developer of what procedures must be employed in order to receive an inspection at the request time, and the scope of each inspection. Developer / Property Owner is responsible for requesting all inspections.

LD25.00.00 Initial Site Inspection - When the Parks and Recreation Department receives any plans, a site inspection may be made to help the reviewer(s) determine if any problems areas can be found that may not be fully delineated on the plans. This will also help the reviewers realize the full impact of the proposed development on the local environment. The City of Troy will carry out this inspection.

LD26.00.00 First Implementation Inspection

After the Final Tree Preservation Landscape plan has been approved, review fee paid, landscape deposit posted, Final Site Approval issued, and the Parks and Recreation Department has been notified of installation schedule, the implementation of the Final Tree Preservation / Landscape plan can begin.

LD26.01.00 During the implementation of landscape the City reserves the right to perform unscheduled inspections of the site, and all landscape materials.

LD26.02.00 Developer shall be advised of any sub-standard plant materials, which shall be removed from the site.

LD26.02.00 Developer shall be advised of any installation concerns. These concerns shall be corrected within the time frame given or a “Stop Work Order” will be issued.

LD26.03.00 Failure to follow this procedure on the part of the Developer will result in a “Stop Work Order”.

LD27.00.00 Final Implementation Inspection

The Developer/Property Owner will request a Final Implementation Inspection by the City of Troy at least five (5) working days prior to the proposed inspection date.

LD27.01.00 When the project has been approved by the City of Troy, the Parks and Recreation Department shall forward to the City of Troy Building Department all approvals and upon receipt of Maintenance Deposit the City will release the Implementation Deposit.

LD27.02.00 In cases where the City has not approved the project, the objections shall be outlined in writing and shall be forwarded to the Developer and Building Department. This notice will also stipulate the date and/or dates by which the required alterations will be completed.

LD27.03.00 When a project has not been approved at the time of the Final Implementation Inspection, additional inspections will be made as the required alterations have

been completed. The Developer /Property Owner will contact the City of Troy at least twenty-four (24) hours prior to the proposed re-inspection date.

LD27.04.00 The deposits will not be returned until the required corrections are complete.

LD28.00.00 Maintenance Inspection (Final)

This inspection will take place a minimum of twelve (12) months and a maximum of thirty-six (36) months after the last Implementation Inspection. The depositor forfeits the Landscape Maintenance Deposit after thirty-six (36) months. Developer/Property Owner is responsible for requesting all inspections.

LD28.01.00 It is the responsibility of the Developer/Property Owner to contact the City of Troy and request all inspections. Requests shall be made at least five (5) working days before inspection date.

LD28.02.00 All materials that do not pass this inspection will be listed in written form and forwarded to the Developer by the City of Troy. This notice will also stipulate the date by which all replacements will be completed.

LD28.03.00 When a project has not been approved at the time of the Maintenance Inspection, additional inspections will be made when the required alterations have been completed. The date for this inspection can be established by contacting the City of Troy at least forty-eight (48) hours prior to the proposed inspection date.

LD28.04.00 When the project has been approved by the City of Troy, the Maintenance Deposit shall be released.

LD28.05.00 Failure on the part of the Developer to follow this procedure will result in the forfeiture of the Irrevocable Bank Letter of Credit and/or cash deposit.

LD29.00.00 Landscape Contractor Qualifications -

The intent of this section of the Standards is to inform the Developer of what minimum qualifications a Tree Appraiser and/or Landscape Contractor must have prior to any landscape project coming under the control of these standards. Information as to the responsibilities of the Landscape Contractor other than the simple implementation of the landscape plans can be found in this section of these standards.

LD29.01.00 The Landscape Contractor (person and/or firm responsible for the implementation of the approved landscape development plan) shall be licensed by the State of Michigan, Department of Agriculture Plant Industries Division to handle plant materials.

LD29.02.00 The Landscape Contractor will be covered by a public liability property damage insurance policy.

LD29.03.00 The Landscape Contractor shall conform to all Federal and State Labor Laws.

LD30.00.00 Landscape Contractor Responsibilities

The Landscape Contractor shall guarantee that all plants are true to botanical name, and that the quality and size meet the approved specifications.

LD30.01.00 The Landscape Contractor shall fully guarantee that all plants are in a vigorous growing condition during and at the end of the guarantee periods. This guarantee period shall be minimum of one (1) year from the issuance of Final Implementation Inspection.

LD30.02.00 Replacement plants and/or landscape materials other than plants shall be in accordance with the approved original specifications.

LD30.03.00 The Contractor shall at all times keep the premises and public streets free from any excessive accumulation of soil and waste material or rubbish caused by his employees or work, and at the completion of the work, he shall remove all his waste, excessive material, rubbish and equipment so as to leave the premises neat and clean and ready for the purpose for which it was intended.

LD30.04.00 The Landscape Contractor shall properly protect all existing structures and property on land abutting the project. This is to include, but not be limited to:

- **a.** Sidewalks
- **b.** Curbs
- **c.** Fences
- **d.** Buildings
- **e.** Lawns
- **f.** Trees
- **g.** Shrubbery
- **h.** Irrigation systems
- **i.** Lighting systems
- **j.** Ornamental structures

LD31.00.00 Tree Appraiser Qualifications –

The intent of this section of the Standards is to inform the Developer of what minimum qualifications a Tree Appraiser must have prior to a tree preservation project coming under the control of these standards. Information as the responsibilities of the Tree Appraiser other than the simple implementation of the landscape plans can be found in this section of these standards.

LD31.01.00 A qualified Tree Appraiser shall have a minimum of two (2) years of college in the areas of Horticulture, Forestry, Urban Forestry, Landscape Architecture or related field or two (2) years experience at a supervisory level in one of these disciplines or related fields. The Parks and Recreation Department will review credentials upon request of the Developer.

LD32.00.00 Tree Appraiser Responsibilities

Shall be able to provide the necessary graphic and written reports as outlined in this standard.

LD32.01.00 The Tree Appraiser shall be held accountable for the accuracy of all graphic and written submittals.

LD33.00.00 Plant Material Requirements - The intent of this section of the Landscape Design and Tree Preservation Standard is to inform the Developer of the minimum requirements placed on all plant materials used to implement those landscape requirements as called for by the City Code.

The following information includes the definitions of the seven (7) major plant groups that come under the control of these standards and the specific requirements placed on each plant group.

LD33.01.00 **Broadleaf Evergreens -** As the name implies, this group of plant materials have broad leaves, rather than needles, and retain their

foliage throughout the winter months. This plant group is a woody ornament having both low spreading varieties and shrub forms.

a. Minimum required size for low spreading varieties of broadleaf evergreens is fifteen (15) to eighteen (18) inches in width.
b. Minimum required size for shrub form broadleaf evergreens is eighteen (18) to twenty-four (24) inches in height.

LD33.02.00 Coniferous Evergreens - This group of plant materials maintains its foliage throughout the entire year in a green condition. These plants are woody ornamentals and for the most part, have very narrow leaves, often referred to as needles. It should be noted that coniferous evergreens have both spreading and upright varieties.

a. Minimum required size for spreading coniferous evergreens is fifteen (15) to eighteen (18) inches in width.
b. Minimum required size for upright coniferous evergreens is five (5) to six (6) feet in height.

LD33.03.00 Deciduous Shrubs - This group is made up of those woody ornamental plants with several self-supporting stems, which lose their foliage each autumn.

a. Each plant will have a minimum of at least three (3) stems, at least eighteen (18) to twenty-four (24) inches long.
b. This requirement does not preclude the possibility of using espaliered or topiary shrubs.

LD33.04.00 Deciduous Shade and Small Flowering Trees - These trees and shrubs are those woody ornamental; plant materials with one or more self-supporting stems or trunks with a usually well-defined branching network located near the distal end of the trunk. The foliage of this plant group is dropped each autumn, and is renewed in the spring of the year.

a. The minimum heights and caliper requirements for shade trees are as follows:

1. The minimum caliper - two (2) inches to two and one half (2½) inches.
2. The minimum height - ten (10) feet.

b. The minimum height and caliper requirements for small flowering trees are as follow:

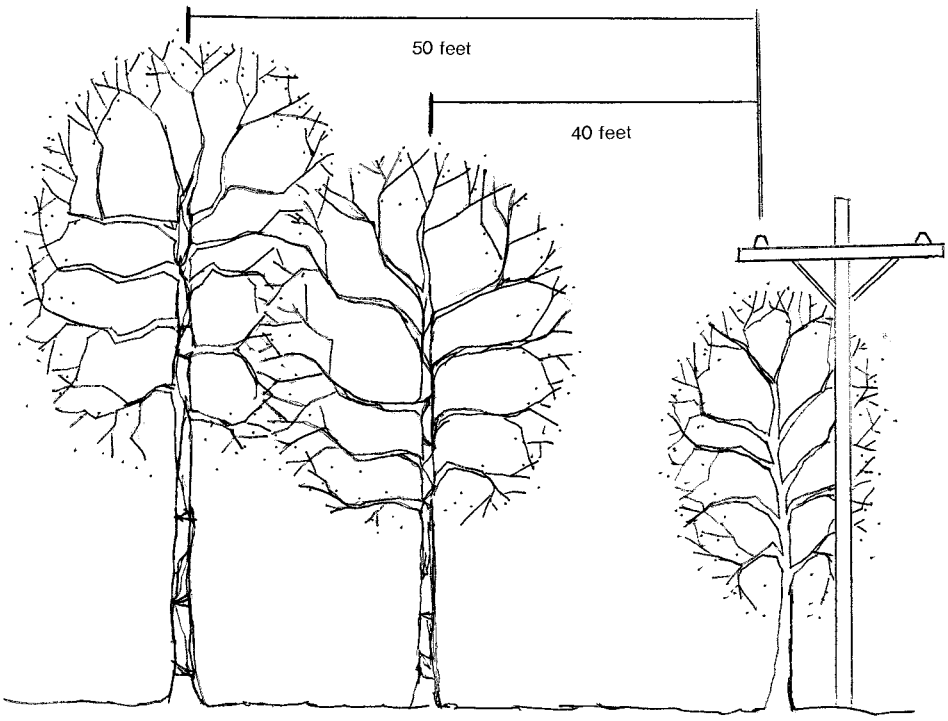
3. Minimum caliper - one and one-half (1½) to one and three-quarters (1¾) inches.
4. Minimum height – five (5) feet.

c. It should be noted that all caliper measurements will be taken at least six (6) inches above the graft (on grafted materials) and six (6) inches above root, shoot junction on all non-grafted materials.
d. All height measurements will be taken from the soil line at the base of the tree to the end of the central leader.
e. Minimum Soil Surface Areas – When planting trees in areas totally surrounded by impermeable surfacing (i.e. Concrete, pavers, asphalt

buildings, etc.), there shall be a minimum of thirty-six (36) square feet of exposed soil surface for *each* tree.

f. All tree spacing in the landscape and setbacks from overhead utility lines shall conform to City Ordinance 28.15.06 & Figure #5 (see below) unless otherwise required (see Developmental Standards) or approved by the City.

g. All parking lots shall contain a minimum of one (1) tree for every 20 parking spaces.



Large (50+ feet) **Medium** (30 – 50 feet) **Small** (15 – 30 Feet)

figure # 5

LD33.05.00 Ground Covers

a. As a general requirement placed on all ground covers, no rooted cuttings shall be deemed as acceptable plant materials. All ground cover materials shall be at least one (1) year bedded stock.

b. The following requirements shall govern those ground covers that spread over the desired area by the use of above ground runners:

1. The minimum number of runners required per plant - three (3).
2. The minimum required length of each runner - six (6) inches.

c. Maximum spacing between plants at installation shall not exceed:

1. 4” root ball and smaller - six (6) inches on center.
2. 6” root ball – twelve (12) inches on center
3. one gallon – twenty four (24) inches on center

d. The following requirements shall govern those ground covers that spread over the desired area by the use of under ground runners:

1. All plants shall be potted either four (4) or six (6) inch pots.
2. All plants shall be well balanced and have a well-established root system.

LD33.06.00 ***Perennials –*** This group is made up of those herbaceous ornamental plants that generally dies down to the ground each fall, but re-grow from the root system for a minimum of three years.

a. The following requirements shall govern perennial plants:

1. All plants shall be potted in minimum six (6) inch pots
2. All plants shall have a well-established root system.

b. Spacing - If used in a mass planting the maximum spacing between plants shall not exceed:

1. Plants with foliage height between one (1) and six (6) inches – twelve (12) inches on center.
2. Plants with foliage height between seven (7) and twelve (12) inches – eighteen (18) inches on center.
3. Plants with foliage height between thirteen (13) and twenty-four (24) inches – thirty (30) inches on center.
4. Plants with foliage height between twenty-five (25) and thirty-six (36) inches – thirty-six (36) inches on center.
5. Plants with foliage height greater than thirty-six (36) inches – forty-eight (48) inches on center

LD33.07.00 ***Turf Grass -*** Those herbaceous plant materials, which have a low spreading growth habit covering the soil surface often used in lieu of an ornamental ground cover, or an organic/inorganic material such as woodchips or stone.

a. City's Development Design Standards shall govern turf grass installations.

LD34.00.00 Other Requirements Placed on Plant Materials - The following information is a list of all other requirements placed on all plant materials used in the implementation of those landscape projects called for by City Code.

a. All plant material shall conform in botanical name, dimensions, and quality of the "Horticultural Standards" adopted by the *American Association of Nurserymen.*

b. All bare root plant material shall have a well-branched root system, characteristic of the species. The root system will meet the minimum standards for bare root nursery stock as set down by the *American Association of Nurserymen.*

c. Balled and Burlapped plant material shall be balled with original soil, intact with the fibrous roots to insure maximum recovery after transplanting.

d. Plants shall conform to the above standards when materials are balled and burlapped.

e. Potted plants shall have sufficient root structures to ensure full recovery and development.

f. Any plants existing on the site requiring relocation must be dug in accordance with the above stated standards.

g. Nursery stock shall be vigorous, free from disease, insects, insect eggs, or larvae.

h. All tree selections shall be made using the City's "*Recommended Deciduous Trees"* list unless otherwise approved.

i. Substitution of materials included in an approved plan shall only be made with the consent of the City of Troy. The Property Owner/Developer may request an amendment verbally or in writing. Approval can be given verbally and followed up in writing. The Property Owner/Developer shall provide an as-built drawing indicating the changes prior to the request for the implementation inspection.

j. All sub-division plantings shall be 100% guaranteed for one (1) year after the City releases relevant landscape deposits.

LD35.00.00 Prohibited Plant Materials -

*Plant*s that shall not be planted by the general public and Developers within the *City* include the following species and all cultivars thereof:

a.	Acer saccharinum	- Silver Maple
b.	Acer negundo	- Box Elder
c.	Acer platanoides	- Norway maple
d.	Ailanthus altissima	- Tree of Heaven
e.	Catalpa speciosa	- Northern Catalpa
f.	Fraxinus spp.	- Ash, all forms
g.	Paulownia tomentosa	- Royal Empress Tree
h.	Populus spp.	- Poplar / Cottonwood
i.	Pyrus calleryana 'Bradford'	- Bradford Pear
j.	Salix spp.	- Willow (excluding shrub forms)
k.	Ulmus	- Elm (excluding cultivars of U. parvifolia & U. americana)

LD35.01.00 Temporary Ban:

At this time the City will not approve the following plants, and all cultivars thereof, for planting in the City of Troy:

a.	Acer spp. (excluding Japanese forms)	-Maple
b.	Betula spp.	-Birch
c.	Gleditsia triacanthos	-Honeylocust
d.	Platanus occidentalis	-Sycamore
e.	Quercus spp.	-Oak
f.	Robinia pseudoacacia	-Black Locust
g.	Sorbus acucparia	-Mountain Ash
h.	Tilia spp. (excluding tomentosa 'Sterling')	-Linden

LD36.00.00 Site Preparation Prior to Plant and Irrigation Installation

LD36.01.00 No construction debris larger than one (1) inch in any dimension shall be found in the top twelve (12) inches of soil after completion of rough grading.

LD36.02.00 No construction debris larger than six (6) inches in any dimension shall be found between twelve (12) inches and twenty-four (24) inches below the topsoil.

LD36.03.00 Rough grades shall be established prior to soil fracturing.

LD36.04.00 Developer shall submit drawings indicating areas to be fractured. City reserves the right to add or delete areas.

LD36.05.00 Prior to the introduction of topsoil or soil improvers all designated areas not covered by hard surfaces, buildings, fences, etc. <u>but excluding the tree protection area(s) and retention/detention ponds</u>, shall be mechanically fractured to a minimum depth of eight (8) inches and re-graded to rough grades. Approved fracturing techniques include but shall not be limited to:

a. Plow
b. Hydro jet
c. Till
d. Drill-n-fill
e. Compressed air treatments
f. Hollow tine aerification

LD36.06.00 To reduce the degree of difficulty during soil compaction mediation, the City encourages Developers/Contractors to limit and confine activities that will cause and/or increase soil compaction.

LD36.07.00 Once the soils have been mechanically fractured, re-compaction of the soils shall be avoided. Should it be found that re-compaction or inadequate fracturing has occurred, the City shall designate those areas that shall be re-fractured.

LD36.08.00 Should it be determined, by the City, that soil fracturing can not be done in all areas, then:

a. Each location to receive a tree:
    1. Shall be radiate trenched. Eight (8) trenches shall radiate out from the tree planting hole, and shall measure a minimum of fifteen (15) feet long from center of hole, a minimum of thirty-six (36) inches deep, and a minimum of six (6) inches wide.
    2. 2/3 original soil, 1/3 decomposed organic matter shall be mixed and used as the trenching backfill.
b. Each location to receive shrubs/perennials/etc. shall be excavated to a depth of twelve (12) inches and backfilled with screened topsoil. (see LD36.01.00)

LD36.09.00 All areas to be maintained as turf shall receive a minimum of two (2) inches of screened topsoil after fracturing. (see LD36.01.00)

LD36.10.00 All finished grades shall be a minimum of one (1) inch and a maximum of two (2) inches below hard surfaces (i.e. concrete, asphalt, etc.) unless otherwise approved by the City.

LD36.11.00 Finish grading shall not be done when soils are wet.

LD37.00.00 Landscape Designer Qualifications and Responsibilities

Individuals designing landscapes for commercial properties or subdivisions, prior to doing the submitted designs, shall have one of the following qualifications:

a. For proposed landscapes with total installed cost of $2000.00 or less - Michigan Certified Nurseryman or equivalent from another state.

b. Landscapes with total installed cost over $2,000.00 to $350,000.00 - Bachelors in Landscape Architecture, Architecture, Landscape Design, Horticulture, or Agriculture.

c. Landscapes with total installed cost over $350,000.00 – Registered Landscape Architect.

LD37.01.00 Responsibilities – Individuals creating landscape designs for commercial Properties and/or subdivisions shall:

a. Thoroughly acquaint themselves with site conditions found in the general area and on their specific project. This shall include but not be limited to:

1. All plants hardy to USDA Hardiness Zone 5b
2. Typical soil type – heavy clay
3. Plants located next to streets must tolerate aerial salt.

b. Produce high quality, easy to read, scaled drawings and details.

c. Produce an aesthetic design using the unique feature on the site.

Landscaping Required

District	*Present Landscape Requirements*
C-F, B-1, B-2, B-3, H-S, O-1, O-M, O-S-C, R-C, M-1, P-1	✓ Ten (10) foot greenbelt along any public street, with one (1) tree for every thirty (30) lineal feet of frontage. ✓ Ten (10) percent of site area landscape – front and side yards only. ✓ General Note – not more than twenty (20) percent of required landscape area will be covered with non-living material, i.e. woodchips, stone etc.
R-1, R-2	✓ Subdivision Control Ordinance requirements only
CR-1	✓ Ten (10) foot greenbelt along any public street, with one (1) tree planted for every twenty (20) feet of frontage. ✓ Five (5) foot berm along any property line abutting a major thoroughfare with one (1) tree planted for every twenty (20) feet of frontage. ✓ Fifteen (15) percent of site shall be landscaped open space. ✓ One (1) tree shall be planted for every two (2) dwelling units.
R-1T, R-M, R-EC	✓ Ten (10) foot greenbelt along any public street with one (1) tree planted for every twenty (20) feet of frontage. ✓ Four (4) foot berm along any property line abutting a major thoroughfare, with one (1) tree planted for every twenty (20) feet of frontage. ✓ Five (5) berm along any property line abutting freeway, landscaped with double row six (6) feet apart, evergreen species, four (4) feet on center staggered two (2) feet on center.
RM-1	✓ Same as R-1T and R-M, with the exception that a five (5) foot rather than a four (4) foot minimum height berm is required along any property line abutting a major thoroughfare.
RM-2, RM-3	✓ Same as RM-1 with the following exceptions: • Seventy-five (75) percent (vs. 70%) of required yards shall be landscaped • Overall requirement for four hundred and fifty (450) feet of landscaped open space per dwelling unit. Sixty (60) percent of this open space area shall be located in direct proximity to the buildings.