ARTICLE II. TREE PROTECTION AND PRESERVATION

Sec. 29 1/2-21. Intent

The intent of this article is to encourage site planning which furthers the preservation of trees and natural areas by these methods; to protect trees during construction; to facilitate site design and construction which contribute to the long term viability of existing trees; and to control the unnecessary removal of trees; require on-site replacement of trees that must be removed and require off-site replacement of trees that cannot be replaced on-site, either by direct planting or through a "tree trust." It is the further intent of this article to achieve the following broader objectives:

(1) Protect healthy trees and preserve the natural ecological environmental and aesthetic qualities of the city.

(2) Protect and increase the value of residential and commercial properties within the city.

(3) Prohibit the indiscriminate clear cutting of property.

(4) Maintain and enhance a positive image for the attraction of new business enterprises to the city.

(Ord. No. 772, Exh. A, § 1, 2-24-97)

Sec. 29 1/2-22. Definitions.

For the purpose of this article, certain words or terms applicable hereto are defined as hereinafter provided. Words and terms used in this article, but not defined in this article shall have the meanings ascribed thereto in the land use and urban development ordinance, landscape ordinance, or other ordinances in the city. Words and terms defined in two ordinances shall be read in harmony unless there exists an irreconcilable conflict in which case the definition contained in this article shall control.

**Buildable area:** The portion of a building site which excludes the required yard areas on which a structure or building improvements may be erected, including the building pad, driveway and pool, as shown on the building permit site plan.

**Building pad:** The actual foundation area of a building and a twelve-foot area around the foundation necessary for construction and grade transitions.

**Circumference:** Is measured four and one-half (4 1/2) feet above the ground using an ordinary tape measure or diameter tape. Measurement is taken just above or below any unusual swells in the trunk, as closely as possible to the four and one-half (4 1/2) foot
level. For multiple-trunk trees, the trunk circumference is deemed to equal the circumference of the largest trunk plus half the circumference of each additional trunk. Measurements should be accurate to the nearest one-half (1/2) inch.

**Criteria manual:** The manual to be used and interpreted by city personnel in accordance with the tree protection and preservation ordinance (attached to Ord. No. 772 as attachment A and incorporated herein for all purposes), for the city's urban forest preservation and enhancement.

**Critical root zone:** The area within the drip line of the tree. As a practical matter, this is the acute portion of the tree's root system. Approximately ninety-nine (99) percent of the tree's root mass occurs within the top three (3) feet of the soil and most of the fine feeder roots which collect moisture and nutrients are located in the top four (4) inches of the soil. Typically, a tree's root system extends as much as two (2) to three (3) times the distance from the trunk to the drip line.

**Damage or damaged:** To "damage" a tree means to take any action which could result in a tree's death, either immediately or after a period of two (2) years. Some examples of such action, which are not intended to limit this definition, are as follows: severing the main trunk or large branches or roots, girdling, poisoning, carving, mutilating, touching with live wires, piercing with nails or spikes, crushing or exposing the roots, digging or drilling any hole larger than three (3) cubic feet (a trench) within the critical root zone, covering a substantial part of the critical root zone or compacting a substantial part of the soil in the critical root zone.

**DBH (Diameter Breast Height):** The diameter of the tree measured four and one-half (4 1/2) feet above the ground using a diameter tape.

**Drip line:** An imaginary circle drawn around a tree, extending the same distance outward from the trunk to the trees branch limit.

**Located:** A tree is "located" within a given buildable area if any part of the trunk or critical root zone is within the buildable area at ground level.

**Official:** The city manager or his/her designee.

**Qualified tree:** Any tree listed in Class I or II of the Criteria Manual which has a trunk diameter of at least two (2) inches measured six (6) inches above ground.

**Temporary fencing:** It shall be the duty of each person who applies for a building permit for construction or for any major development to provide temporary fencing in accordance with this article. The tree disposition plan shall specify protective fencing of the critical root zone whenever reasonably practicable, unless the tree disposition plan specifies otherwise: (a) a six-foot high fence must surround each protected tree or group of protected trees, effectively preventing persons, machinery, trash, material, and other items from occupying the area within the protective fencing, and (b) the fence may
incorporate existing fences or walls as well as temporary fencing. A separate fence permit is not required for construction of a fence under this section, if a building permit for the work is in effect and a tree disposition plan has been approved.

Tree: A woody plant having one well-defined stem or trunk, a defined crown and a mature height of at least eight (8) feet. Trees defined, protected and/or regulated by this article are classified as Class I and Class II trees as set forth in the criteria manual attached to Ord. No. 772.

(1) Large tree means a tree with a circumference of nineteen (19) inches or more. In case a tree is removed, it is presumed to have been a large tree if the diameter of the stump is six (6) inches or greater, measured in any direction.

(2) Multiple trunk tree means a tree with two (2) or more trunks visibly connected above the ground.

(3) Replacement tree means any tree meeting the minimum criteria for replacement trees as set out in the criteria manual.

(4) Significant tree means a tree with a circumference of thirty-six (36) inches or more. In case a tree is removed, it is presumed to have been a significant tree if the diameter of the stump is twelve (12) inches or greater, measured in any direction.

(5) Heritage tree means a significant tree located on a state designated historical site, within the Old Town Site, or within the floodplain.

(6) Protected tree means:

a. Any tree within:
   (i) The front yard or front of the building site,
   (ii) The side yard (of corner sites),
   (iii) Right-of-way area.

b. Any significant tree within the city.

c. When there is a permit in effect for development or predevelopment activity on any subject site, "protected tree" includes all large trees located on that subject site.

Tree disposition plan: Specifies how large trees and critical root zones will be protected from development and pre-development activity. It may specify large trees to be relocated, removed, or replaced. The tree disposition plan must depict for any
buildable area: (a) every large tree located in the buildable area, and (b) every large tree located elsewhere which has thirty (30) percent or more of its critical root zone in such buildable area.

Tree survey: A tree survey is an on-the-ground survey containing the location of trees, their circumferences, types (species), and crown areas (drip line). The tree survey must depict for any given buildable area: (a) every large tree located in the buildable area, and (b) every large tree located elsewhere which has thirty (30) percent or more of its critical root zone in such buildable area.

Visibility triangle: The area at a street corner lying within a triangle beginning at the precise intersection point of the curbs of each of the two (2) streets forming the corner and extending twenty (20) feet along each curb line away from the curb intersection point, with the third side being determined by drawing a straight line connecting the ends of such twenty-foot extensions. If there is no curb on such a street, the twenty-foot line shall follow the central flow line of the ditch paralleling the uncurbed street. The visibility triangle may include both public and private property.

Urban forester: A resource professional, charged with the responsibility of planning, establishing, protecting, and managing trees and associated plants, individually, in small groups, and under forest conditions within the city, with full authority to enforce Ordinance No. 772 of the Code of Ordinances of the City of Pearland (Tree Protection and Preservation Ordinance) for violations of the same.

Tree trust: A capital project fund created for the purpose of purchasing, growing, and/or maintaining trees and associated plants within the city limits. Said fund is to be expended in conformance with a tree propagation program drafted by the urban forester and approved by city council, annually.

(Ord. No. 772, Exh. A, § 2, 2-24-97)

Sec. 29 1/2-23. Tree removal permit.

No person directly or indirectly shall cut down, destroy, remove, move, or destroy through damaging the roots, trunk or canopy, any tree situated on property regulated by this article without first submitting a tree disposition plan and a tree survey, unless otherwise exempted by the provisions of section 29 1/2-24(b) of this article.

(Ord. No. 772, Exh. A, § 3, 2-24-97)

Sec. 29 1/2-24. Applicability

The terms and provisions of this article shall apply to real properties, persons and trees as follows:
(a) Properties which are regulated by this article:

(1) Any real property for which a final plat has not been submitted on the date of acceptance of this article.

(2) Any real property for which a permit to construct has not been issued on the effective date of acceptance of this article.

(3) Any real property located within the Old Town Site, the floodplain, or which has been designated by the State of Texas as an historical site.

(4) All municipal/public domain property.

(b) With the exception of those persons who own or control real property located within the Old Town Site, the floodplain, or an historical site, duly designated as such by the State of Texas, the following persons are exempt from the provisions of this article only to the extent of their control over the particular class of properties and trees described below. Persons exempt from the provisions shall not be required to submit a tree disposition plan or tree survey in the circumstances described.

(1) An employee of a public utility or an authorized contractor working in a dedicated public right-of-way, drainage or utility easement may in the course of business, remove or prune that portion of a tree which prohibits the safe construction, repair or maintenance of a service line or facility. Trees must be pruned according to specifications set forth by the National Association of Arborists.

(2) The resident of a single-family home may remove all or a portion of a tree which exists on the lot of record on which the single-family home is built.

Those persons who own or control real property located within the Old Town Site, the floodplain, or an historical site, duly designated as such by the State of Texas, are exempt from the provisions of this article and shall not be required to submit a tree disposition plan or tree survey to the extent that said owners may trim branches of heritage trees so long as said branches are less than or equal to one (1) inch in diameter. The trimming of branches of heritage trees larger than one (1) inch in diameter require prior approval of the city’s urban forester in accordance with this article. Additional alterations to heritage trees, including but not limited to the removal of same, shall be regulated by this article.

(3) All persons involved in the planting or transplanting of trees shall be exempt from the terms and provisions of this section only in relation to those trees planted and grown for the sale or intended sale to the general public.
(4) Any person may remove all or a portion of a tree which has disrupted a public utility service due to tornado, storm, flood, or other act of God, but only that portion of the tree which is necessary to safely restore normal utility service.

(5) Any person may, after appropriate documentation and following the city's expeditious approval, remove all or a portion of a tree which poses a hazard or harm to persons or property directly adjacent to same tree.

(Ord. No. 772, Exh. A, § 4, 2-24-97)

Sec. 29 1/2-25. Approval process and administrative procedures.

The city manager or his/her designee is responsible for the review and approval or disapproval of all tree disposition plans. The plan shall be submitted in accordance with the requirements specified herein:

(a) Residential subdivisions. The city manager or his/her designee shall determine from a review of the tree disposition plan, survey, grading and drainage plans the following:

(1) The trees outside of the exempted areas of right-of-way, easement and buildable area which are slated for removal.

(2) The extent of tree replacement in accordance with section 29 1/2-27.

(3) Final approval of the subdivision plat by the planning and zoning commission shall constitute approval of a tree disposition plan for the street and utility construction phase of the subdivision.

(b) Platted lots. The city manager or his/her designee shall review building permits and applications for platted lots.

(1) No building permit shall be issued unless the applicant signs an application or permit request which states that all construction activities shall meet the requirements of the tree protection and preservation ordinance.

(2) If the application is made in conjunction with a site plan submitted for approval, the application will be considered as part of the site plan and no permit shall be issued without site plan approval.

(c) Appeals. Any decision made by the city manager or his/her designee with regard to the tree disposition plan may be appealed by any party to the planning and zoning commission. All actions of the commission are final.
(d) **Permit validity.** Tree disposition plans accepted in connection with a building permit, subdivision plan and site plan shall be valid for the period of the building permit or site plan validity.

(Ord. No. 772, Exh. A, § 5, 2-24-97)

**Sec. 29 1/2-26. Submittal requirements.**

The city manager or his/her designee shall establish administrative procedures necessary to facilitate the implementation and enforcement of this article. These procedures shall include the following:

(a) Tree disposition plan/tree survey must be submitted and approved prior to the removal or destruction of any tree.

(b) An application involving a limited portion of a site may be based on an exhibit showing only that portion of the site.

(c) Aerial photographs interpretation may supplant the ground survey for preliminary analyses of large scale developments, such as subdivisions, utility corridors, and golf courses, at the discretion of the city. Large scale developments are also required to include impact areas where existing trees are located.

(d) The items required on a submitted exhibit:

1. **Title block** includes street address; legal description (lot and block, subdivision name); date or revised date, north arrow, graphic and written scale; name, address, telephone number of owner or person preparing the exhibit.

2. **Location of all existing or proposed structures, improvements and site uses** including pavement and landscaping, setbacks, easements and service connections, all property dimensions with references to property lines.

3. **Existing and proposed site elevations, grades and major contours.**

4. **Construction details of permanent grade changes around all trees.**

5. **Tree disposition plan** showing location of all existing trees, graphically differentiating between the trees to remain and those to be removed. Trees located off-site with critical root zones located within the construction site shall also be included. A plus (+) character shall indicate trunk location and concentric circle shall indicate the size and canopy configuration.

6. **Proposed general areas or locations of the replacement trees.**
(6) Listing of all trees on-site and their condition.

(7) Listing of all off-site trees where critical root zones will be impacted.

(e) Tree information required shall be summarized in legend form on the plan and shall include:

(1) The list of trees to be removed and the reason for removal.

(2) The total diameter of trees to be removed.

(3) Replacement trees listed by species name, quantity, size and total diameter required for replacement of trees. (See the criteria manual for replacement tree list.)

(f) Tree protection notes and details shall be included on site plans, subdivision plans or landscape plans and always included with the bid documents given to the contractor.

(Ord. No. 772, Exh. A, § 6, 2-24-97)

Sec. 29 1/2-27. Tree replacement requirements.

In the event that it is necessary to remove a tree which is located on the buildable site, the applicant, as a condition to issuance of a building permit, shall be required to replace the tree(s) being removed with quality trees as defined herein. This mitigative measure is not meant to supplant good site planning.

(a) A sufficient number and diameter of replacement trees shall be planted in order to equal the total diameter inches or fraction thereof of trees slated for removal. If this is not feasible, the permitted must either: (1) plant and maintain off-site replacement trees, subject to the provisions of the criteria manual; or (2) provide replacement trees by means of replacement inches obtained through a tree trust, as set forth in the criteria manual.

Examples:

1. A total of eighteen (18) inch diameter to be removed shall be replaced with six (6) three-inch diameter trees.

2. A total of nineteen (19) inch diameter to be removed shall be replaced with seven (7) three-inch trees or five (5) three-inch trees and one (1) four-inch tree.
(b) Replacement trees shall meet the American Association of Nurserymen Standards. The minimum size of replacement tree is designated in the criteria manual. (See criteria manual.)

(c) **Qualified trees under ordinance.** To be a "qualified tree" under the ordinance, a tree must comply with the definition of "qualified tree" set out in this article.

(d) **Standard of review.** The city manager or his/her designee shall use reasonable best efforts to determine the type and number of replacement trees required in an attempt to minimize any burden resulting from this article.

(e) **Replacement inch certificates.** If a tree trust issues an effective "replacement inch" certificate to the city, the "replacement inches" described in the certificate are treated the same as trees actually planted as of the date of the certificate. To be effective, the "replacement inch" certificate must state unconditionally:

1. The name of the applicant and the project to which the "replacement inches" apply;
2. The tree trust will plant the specified "replacement inches" within reasonable proximity of the subject site, and within the city limits, on or before a specified planting date, which must fall within three hundred sixty-five (365) days following the date of the certificate;
3. That the "replacement inches" will be planted and maintained in accordance with the provisions of this article and the criteria manual; and
4. That all costs have been paid.

A certificate may be conditioned so that it would only become effective if the applicant fails to plant other trees by the specified planting date.

(f) **Replacement inch credits.** An owner of a site in the city who plants a Class I or Class II tree on that site is eligible to receive credit for future "replacement inches." The owner may use the credit to offset the number of "replacement inches" assessed for protected trees removed from the same site at any time in the future. Credits are subject to the following:

1. **Issuance.** Credits are only available for trees registered with the city within thirty (30) days following the day they are planted. Registration requires application and proof of planting. The registration form shall specify the size and species of each tree planted and its location on the site.

2. **Measurement.** The number of replacement inches actually credited is determined by the city at the time an offset in request, based on the health
and size of the previously-registered trees and apply the provisions of the criteria manual regarding calculation of replacement inches.

(3) **Transferability.** Credits are not transferable to another site but may be claimed by subsequent owners of the same site.

(4) **Records.** The city is not responsible for keeping registration or other records of credit. A person claiming a credit must present documents to show that the credit is available and applicable.

(Ord. No. 772, Exh. A, § 7, 2-24-97)

**Sec. 29 1/2-28. Tree protection.**

A major purpose of this article is to protect all trees which are not removed and to allow approved construction to occur. The following procedures shall apply to all types of construction projects which involve development around trees. The following procedures are deemed appropriate in the situations noted; however, unique circumstances may allow modifications if deemed necessary by the city manager or his/her designee.

(a) **Prohibited activities.** The following activities shall be prohibited within the limits of the drip line of any tree which is subject to the requirements of this article.

(1) **Material storage.** No materials intended for use in construction or waste materials accumulated due to excavation or demolition shall be placed within the limits of the drip line of any tree.

(2) **Equipment cleaning/liquid disposal.** No equipment may be cleaned or other liquids deposited within the limits of the drip line of any tree. This would include but not limited to, paint, oil, solvents, asphalt, concrete, mortar or other materials.

(3) **Tree attachments.** No signs, wires or other attachments, other than those of a protective nature shall be attached to any tree.

(4) **Vehicular traffic.** No vehicle, construction equipment or parking is allowed within the limits of the drip line of any tree.

(5) **Trespassing.** Trespass into protective fencing is prohibited.

(b) **Pre-construction activities.** The following procedures shall be followed prior to construction.
(1) **Tree flagging.** All trees to be removed from the construction site shall be flagged with bright red vinyl tape wrapped around the main trunk at a height of four (4) feet or more such that the tape is visible to workers on foot or operating heavy equipment.

(2) **Protective fencing.** Unless otherwise specified in the applicable tree disposition conditions, each protected tree to be preserved must be fenced during development or pre-development activity.

a. **Fencing criteria.** The tree disposition plan shall specify protective fencing of the critical root zone whenever reasonably practicable, unless a different area is prescribed in accordance with the criteria manual. Unless the tree disposition conditions specify otherwise:

1. A six-foot or higher fence must surround each protected tree or group of protected trees, effectively preventing persons, machinery, trash, material and other items from occupying the area within the protective fencing;

2. The fence must be constructed of durable, high visibility materials supported on poles or fence posts set firmly in the ground;

3. The fence must be able to resist intrusions and impacts likely to be encountered on a construction site;

4. The fence may incorporate existing fences or walls as well as temporary fencing; and

5. Each fence must display a prominent bilingual warning sign as set forth in the criteria manual.

b. **Fence permit.** A separate fence permit is not required for construction of a fence under this section, if a permit for the work is in effect and includes tree disposition conditions.

c. **Trash, storage prohibited.** It shall be unlawful for any person to use the area within the protective fencing, required by this section, for trash disposal, storage, vehicle parking or any other use that could adversely affect tree roots.

(3) **Bark protection.** In situations where a protected tree remains in the immediate area of intended construction, the tree shall be protected by enclosing the entire circumference of the tree’s trunk with lumber encircled with wire or other means that does not damage the tree.
(4) **Construction pruning.** In cases where a tree has a low canopy or limbs may be broken during the course of construction, the obtrusive limb(s) may be cut. Pruning shall be done according to the National Association of Arborists standards.

(5) **Mulch.** In areas where construction of protection fencing is prohibitive, the addition of four (4) inches of shredded mulch or wood chips covered by a sheet of three-quarter-inch plywood is necessary to reduce the risk of severe soil compaction. The mulch shall be spread on-site or removed following the completion of the project.

(6) **Watering.** Trees which are being protected should receive supplemental water during times of drought or low rainfall. As a rule of thumb a weekly application of approximately fifty (50) gallons of water per one-inch diameter applied slowly to the root zone will be sufficient.

(c) **Improvement within the critical root zone of a protected tree.** Design constraints dictate that trees slated for preservation have some encroachment on their critical root zone. The following is the minimum design criteria which are allowed within the critical root zone of a protected tree. Development exceeding the criteria would put the tree at risk and therefore it could no longer be considered a protected tree. In such a case, replacement trees shall be required.

(1) **Grade changes.** In the event that grade changes must be made around a protected tree or group of trees, the following shall be implemented in order to maintain oxygen and water exchange within the tree's critical root zone.

   a. A minimum of seventy-five (75) percent of the critical root zone shall be preserved at natural grade with natural ground cover or landscaping for the tree to be considered a protected tree.

   b. No cut or fill greater than two (2) inches shall be located closer to the tree trunk than one-half of the radius of the critical root zone radius distance.

   c. Increase grade: Soil grade within the critical root zone of trees should not be increased more than one (1) to two (2) inches per year. Any increase above this can be very detrimental to the tree. Any attempts to protect trees from the detrimental effects of increased grade, must be approved by the city manager or his/her designee.

   d. Decrease grade: Provide retaining walls outside the drip line to mitigate cuts.

(2) **Boring of utilities.** Boring may be permitted under protected trees in certain circumstances. The minimum length of the bore shall be the width of the tree's canopy and shall be a minimum depth of forty-eight (48) inches.
(3) **Trenching.** Irrigation systems shall be designed to avoid trenching across the critical root zone of any large tree.

(4) **Paving.** A maximum of twenty-five (25) percent of the critical root zone of a protected tree may be covered with impervious material. The pavement and the cut and fill for the pavement shall not exceed one-half of the critical root zone radius distance.

(Ord. No. 772, Exh. A, § 8, 2-24-97)

### Sec. 29 1/2-29. Tree planting regulations.

(a) **Easements and rights-of-way.** The location of replacement trees shall not be an area such that the mature canopy or roots of the tree will interfere with any public utility. No tree shall be planted within ten (10) feet of a fire hydrant.

(b) **Off-site planting of replacement trees.** Replacement trees should be planted on the site or easement from which the existing trees are to be removed. If this is not feasible, an applicant may initiate a proposal to plant trees off-site. This may be approved if the planting site is in reasonable proximity to the project area.

(c) **Plantings after project completion.** Replacement trees shall be planted prior to the issuance of the certificate of occupancy or project release. Optimum planting times do not always correspond with project completion. For that reason, replacement tree plantings may take place after the project is released by the city; provided, that before project release, a fiscal security is posted in the amount equal to the prevailing rate for installed trees with a one (1) year guarantee, plus fifteen (15) percent to cover administrative cost.

(d) **Visibility triangle.** It shall be unlawful for any person to plant, grow or maintain any plant material, except a tree, within a visibility triangle, if the plant has, or probably will have, a height greater than three (3) feet above the street. It shall be unlawful for any person to plant, grow or maintain a tree which has branches or foliage within or above the visibility triangle at a height lower than fifteen (15) feet above the street. It is presumed that a person who owns or controls real property within the city maintains all trees and plants on that property. The city may enter a visibility triangle and remove growths prohibited by this section, and there shall be no liability to others for taking or not taking such action.

(Ord. No. 772, Exh. A, § 9, 2-24-97)

### Sec. 29 1/2-30. Violations/enforcement.
(a) **Removal, damaging, killing of protected trees.** Except as authorized by tree disposition plan filed and approved under this article, it shall be unlawful, at any time, for a person to remove, damage or kill a protected tree within the city, or for a person who owns or controls any existing or potential buildable site, to cause or allow a protected tree to be removed, damaged or killed if it is located within the buildable area.

(b) **Conditions.** It shall be unlawful for any person who applies for or receives a permit regulated by this article to fail or refuse to comply with a condition of the permit or this article. Any related permit for the building site in question may be withheld until the condition is complied with to the satisfaction of the city manager or his/her designee or any other city staff members who are called upon to enforce this article.

(c) **Immediate shutdown.** Violations of this article may cause the immediate cessation of all work on the property until the violation is remedied or the builder agrees to replace damaged trees, if the damage is likely to cause the ultimate death of the tree.

(d) **Building inspectors.** All city building inspectors shall monitor for compliance of the tree protection and preservation ordinance and have the authority to shut down a job for infractions. Protective fencing shall be inspected prior to construction.

(e) **Penalty clause.** Any person, firm, or corporation violating any of the provisions of this article shall be guilty of a misdemeanor, and upon final conviction thereof shall be fined in a sum not to exceed two thousand dollars ($2,000.00) for each offense. Each day such violation continues to exist shall constitute a separate offense. But in case any person, firm or corporation violates any of the provisions of this article or fails to comply therewith, the City of Pearland, in addition to imposing the penalties above provided, may institute any appropriate action or proceedings in court to prevent, restrain, correct, or abate or to prevent any illegal act pertaining to trees protected by this article; and the definition of any violation of the terms of this article as a misdemeanor, shall not preclude the City of Pearland from invoking the civil remedies given it by law in such cases; but same shall be cumulative of and in addition to the penalties prescribed for such violation.

(f) **Affirmative defenses.** It shall be an affirmative defense to prosecution under this article that: (i) immediate action to remove, damage or kill the tree in question was necessary to prevent harm to persons or property, (ii) an appropriate tree disposition plan had been filed and approved, (iii) there was full compliance with all conditions of the tree disposition plan.

(Ord. No. 772, Exh. A, § 10, 2-24-97)