

SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION

PART 1 - GENERAL

1.01 APPLICABILITY

- A. This Section applies to all construction projects on property located adjacent to or within City of New Orleans owned property such as rights-of-way, parks, and public facilities and to those projects under the purview of the City of New Orleans Department of Parks and Parkways (PARKWAYS).

1.02 SCOPE OF THE WORK

- A. The scope or extent of work required under the sections of this division consists of all work and furnishing all related items necessary to complete the work described in these specifications and/or indicated on the project drawings. This includes, but is not limited to the following items depending on the scope of the specific project:

1. Tree protection
2. Tree damage remediation
3. Maintenance of City property
4. Installation of utility lines

1.03 DEFINITIONS

- A. Critical Root Zone: The Critical Root Zone (CRZ) of a tree is established on the basis of the trunk diameter. The CRZ is an equidistant circular area which has a radius calculated at one foot (1') to every one inch (1") diameter of trunk taken at four and one-half feet (4.5') above grade, or is defined as the outer edge of the dripline, whichever distance is furthest.

1.04 QUALITY ASSURANCE

- A. Contractor: For any work involving pruning, removal, treatment or protection of City trees:
1. Any construction work which occurs within the CRZ of a City tree requires the presence of a Louisiana licensed Arborist to ensure that correct arboreal practices are followed. The Contractor shall be responsible for retaining a Subcontractor who is a licensed and insured Arborist to trim any trees or tree roots and perform any other tree related work within the limits of construction.
 2. The Arborist must submit any proposed product specifications and rates of application to PARKWAYS for approval a minimum of two (2) weeks prior to application.

**SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION**

3. In instances where construction damage occurs to existing trees, the Contractor shall retain a Louisiana licensed Arborist Subcontractor to perform all tree related work. Under no circumstances may anyone other than a Louisiana Licensed Arborist perform work on any City trees.
 4. Before PARKWAYS assumes final acceptance of the work, all damage done to trees or plant material caused by construction must be repaired.
 5. The Arborist must apply for a permit through PARKWAYS prior to working on any City trees. The work will be supervised by PARKWAYS.
- B. All damaged portions of City property, including work resulting from other contracts which have been disturbed by causes due to, or incidental to, work performed under this contract shall be repaired and restored to the satisfaction of PARKWAYS.
1. For any remedial work involving transplanting or installation of landscaping, Section 32 90 00 PLANTING, applies.
 2. For any remedial work involving seeding or sodding and/or fine grading, Section 32 92 19 SEEDING or Section 32 92 23 SODDING, applies.
- C. All City-owned property shall be kept clean of soil, straw, mulch and other materials incidental to work of this contract.
1. No unauthorized materials or equipment are permitted for storage on City property.
 2. The Contractor shall be responsible for providing all necessary equipment, materials, and labor to complete the project.
- D. Personnel: The Contractor shall provide an Arborist, licensed by the Louisiana Horticultural Commission, to perform all tree work. The Arborist shall have knowledge of the natural habits of the trees so that their natural crown shapes will be preserved when removing any of the wood (branches, leaders, etc.). The Arborist shall have a minimum of five years (5) of experience as a licensed Arborist.
- E. Standards: The Contractor must meet all requirements and recommendations of the applicable portions of the latest edition of the Standards listed below:
1. United States Department of Agriculture (USDA)
 2. American National Standards for Tree Care Operations, ANSI A300. American National Standards Institute.
 3. International Society of Arboriculture (ISA)

SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION

PART 2 – PRODUCTS

2.01 MYCORRHIZAL FUNGAL INOCULATE

Mycor Tree Saver, or approved equivalent, shall be used as per the manufacturer's directions.

2.02 TERMITE TREATMENT

The termiticide Premise, manufactured by Bayer Corporation, or Termidor, manufactured by BASF, or approved equivalent, shall be used as per the manufacturer's directions.

2.03 MULCH

Shall be pine bark or pine needle. Material shall be organic, mulching grade, uniform in size, and free of foreign matter. Cypress mulch is prohibited.

2.04 GROWTH REGULATOR

Shall contain the same active ingredient as the active ingredient in Cambistat.

2.05 COMPOST

See SECTION 32 91 13 (SOIL PREPARATION)

SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION

PART 3 - EXECUTION

3.01 TREE PROTECTION

- A. Requirements and responsibilities of Contractor for work adjacent to or within City owned property:
1. Removal of any tree or shrub growing on City property without approval and written permission from PARKWAYS is prohibited.
 2. The Contractor shall be responsible for damage to all trees and plant materials on City owned property and liable to PARKWAYS and the City of New Orleans, for compensation or replacements as determined by PARKWAYS.
 3. If a construction plan specifies that removal of City owned trees or plant material and PARKWAYS agrees to the removal, the owner, contractor or agency authorizing the work shall compensate PARKWAYS prior to beginning construction.
 4. If a construction plan does not specify the removal of the City owned trees or plant material but it is found that trees or plant materials must be removed to complete a project and PARKWAYS agrees to the removal, the trees or plant materials shall be transplanted to an adjacent location if possible. If it is not possible to transplant these plant materials, but it is necessary to remove these materials, PARKWAYS shall be compensated for these removed plant materials. The minimum rate of replacement shall be one caliper inch of replacement tree caliper for each inch of diameter (DBH) as assigned by the project survey or Parkways Urban Forester. It is the Contractor's responsibility to notify PARKWAYS of any discrepancy in the plans, before any site work begins.
 5. The Contractor must identify those City owned trees which will require trimming to clear for construction and have the trees trimmed prior to beginning construction. All trimming must occur under supervision of PARKWAYS.
 6. Injury to City owned trees, including the misuse or removal of any device placed to protect any tree, is prohibited.
 7. Cutting, disturbing or interfering in any way with the roots of any City tree is prohibited.
 8. Dumping, pouring or spilling of oil, concrete mix, salt or salt water or other substances upon any City tree, including root system, is prohibited.
 9. No track vehicle or heavy equipment will be allowed to work within the critical root zones of City trees or plant materials.

SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION

10. No materials, debris or equipment shall be stored within the critical root zones of City trees or plant materials.
11. No equipment may be cleaned or repaired within the critical root zones of City trees or plant material.
12. Grade changes, either excavating or filling shall not exceed two inches (2") within the critical root zones of City trees and may only occur with the written consent of PARKWAYS.
13. Signs, barricades, equipment or materials may not be attached to City trees or plant materials. "Overhead Clearance" signs may be loosely attached using a rope or chain when approved by PARKWAYS.
14. PARKWAYS shall require the Contractor to erect a wooden or chain link barricade of at least five feet (5') in height along the critical root zone of City trees to avoid damaging trees and plant materials. Vehicles and materials are not allowed within the barricades. The barricade shall be constructed at the critical root zone of the trees unless otherwise approved by PARKWAYS. The Contractor is responsible for maintaining this temporary barricade to the satisfaction of PARKWAYS throughout the entire contract period. The barricade must be in place and approved by PARKWAYS prior to any clearing or site work.
15. All trees shall be irrigated at least two times per week for the period of April through October over the duration of the project. Irrigation must wet the soil within the tree protection zone to a depth of twenty-four inches (24").
16. Trenching within the critical root zone of City trees is not permitted. Only boring or air spading is permitted within the critical root zone. No roots two inches (2") or over shall be cut without prior approval by PARKWAYS. Roots less than two inches (2") can be cut with a chainsaw or shears.
17. In the event that a point of ingress/egress is required through a grove of City trees and all alternative routes have been investigated, PARKWAYS may allow a temporary pathway through the grove. Such a route will be as narrow as practical, temporarily covered with twelve inches (12") of gravel or wood chips to protect tree roots from heavy machinery, and enclosed by protective fencing on both sides. A licensed Arborist must be hired in order to properly prune tree branches damaged by construction equipment.
18. Failure to comply with these specifications may result in the City of New Orleans stopping work at the jobsite.
19. PARKWAYS must be notified three (3) working days in advance of the beginning of any work on the jobsite, and for meeting to resolve problems unforeseen on the jobsite.

**SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION**

20. Topping of City trees is prohibited.
21. Cutting, trimming, removing, spraying, treating or planting any tree, shrub or groundcover on City property without prior approval by PARKWAYS is prohibited.
22. The contractor shall promptly notify PARKWAYS of any damage to City trees and other plant materials and shall, within such reasonable time as specified by PARKWAYS, repair or replace the damaged plant materials to the satisfaction of PARKWAYS.

B. Tree Preservation Plan for projects adjacent to or including City trees:

1. For projects adjacent to or including City trees, a Tree Preservation Plan must be approved by PARKWAYS prior to the commencement of any site work.
2. The Tree Preservation Plan shall include the location, size and condition of each tree to be preserved, along with an indication of proposed development features, which may impact such trees, any other pertinent information as required by PARKWAYS to evaluate existing and proposed conditions.
3. The Tree Preservation Plan shall include a detailed description of all methods to be used to ensure the survival of all trees scheduled for preservation credit, including information that may be required by PARKWAYS to interpret the intent and methodology proposed.
4. All tree preservation methodology shall conform to the standards of the Louisiana Department of Agriculture and Forestry, the Louisiana Horticulture Commission and the International Society of Arboriculture, or their successor agencies or organization.
5. Tree protection zones shall explicitly follow the terms and conditions of the approved Tree Preservation Plan for that project or site. Any variation must receive the prior approval of PARKWAYS.
6. Additional tree protection measures may be ordered by PARKWAYS if site conditions warrant them.

3.02 TREE DAMAGE REMEDIATION

- A. In the event that City trees are damaged as the result of a construction project, the Contractor will be required to hire a licensed Arborist to perform the following work at the discretion of PARKWAYS:
 1. Root Pruning:

SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION

- a. All roots of City owned trees damaged during removal of curbs, sidewalks and driveways shall be root pruned. All trees roots damaged during any excavation operation; including yard drains, collector lines, etc., shall be root pruned. The trees or roots shall be pruned in accordance with generally accepted arboricultural practices.
 - b. The Contractor shall notify PARKWAYS whenever trees or roots need to be pruned prior to beginning construction. All pruning is to be done under the supervision of PARKWAYS.
 - c. Excavation of roots that need to be pruned must be done by hand within the critical root zone of the tree
2. Termite Treatment:
- a. All trees root pruned due to construction shall be treated for termites.
3. Mulching:
- a. A two inch (2") layer of mulch shall be applied over all construction damaged tree root zones. The mulch shall extend out as far as determined practical by PARKWAYS.
 - b. No mulch shall directly contact the tree trunk.
4. Irrigation and Drainage:
- a. An adequate, but not excessive, supply of water shall be supplied to the root zone of all construction damaged trees for a minimum period of two (2) years from the time of the damage.
 - b. Irrigation shall consist of a long, slow soak over the entire root zone as often as is necessary in order to keep the top twelve inches (12") of the soil moist.
 - c. Overwatering and frequent shallow watering are prohibited.
5. Vertical Mulching:
- a. In instances where soil compaction or grade increases of over two inches (2") have occurred, the root zone of the affected tree shall be aerated through the drilling of two to four inch (2"-4") diameter holes utilizing a coring drill or auger. The holes shall be made three feet (3') on center throughout the root zone of the tree to a depth of at least twelve inches (12"). The holes shall be filled with peat moss or organic mulch such as wood chips, shredded bark or pine needles.

**SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION**

6. Radial Aeration:

- a. Radial aeration may be performed as an alternative to vertical mulching in instances where soil has been compacted or grade increases of over two (2) inches have occurred. Utilizing a compressed air gun, trenches approximately four inches (4") wide shall be cut in a radial pattern throughout the root zone. The trenches shall begin no closer than four to eight feet (4'-8') from the trunk of the tree to avoid cutting any major support roots. The trenches must extend at least as far as the critical root zone of the tree. The trenches shall be eight to twelve inches (8"-12") in depth and backfilled with organic compost.

7. Mycorrhizal Fungal Inoculate:

- a. Mycorrhizal Fungal Inoculate treatment shall be applied to all construction damaged tree root zones per manufacturer's directions.

8. Corrective Pruning:

- a. Corrective pruning make be required in order to eliminate or repair damaged branches or limbs.

9. Growth Regulator:

- a. Cambistat or approved equal shall be applied by a licensed arborist as per the manufacturer's instructions.

3.03 MAINTENANCE OF RIGHTS-OF-WAY, PARKS, PUBLIC FACILITIES AND OTHER CITY GREENSPACES DURING CONSTRUCTION

A. Requirements and responsibilities of the Contractor for construction projects located adjacent to or within City rights-of-way, parks, public facilities or other City property:

1. The Contractor shall assume all responsibility of the maintenance of the affected City property; from the commencement of construction through the construction period, and substantial completion, until acceptance by the PARKWAYS after the final inspection.
2. The Contractor shall mow the grass when necessary. The Contractor shall not allow the grass to grow above the maximum acceptable height of eight inches (8").
3. The City Code cities several violations for parking, driving and/or storage of materials and equipment on public rights-of-way which are subject to fines. Storage of equipment and materials shall take place in the adjacent roadway if necessary. The Contractor shall occupy only one lane of the roadway and shall leave a minimum of fifty percent (50%) of the roadway open to traffic, on each side of the neutral ground.

**SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION**

The Contractor shall work with the Department of Streets Traffic Engineering Division and Parking Control.

4. During construction, it may sometimes become necessary to waive violations with permission from PARKWAYS. This can be accomplished by directing a letter requesting to the Director of PARKWAYS. The Contractor must state the reasons why s/he must use the neutral ground or right-of-way and each location must be shown in plan.
5. The Contractor is cautioned to minimize during construction, the occupied spaces, and the damage to the neutral ground or public right-of-way.
6. Care must be taken to protect all trees and landscape materials while performing routine maintenance operations (i.e. grass cutting, trenching, etc.).

3.04 INSTALLATION OR REPLACEMENT OF UTILITY LINES

- A. If the installation of new utility lines or the replacement of old utility lines is to take place within the critical root zone of any existing trees or shrubs, no trenching is to be allowed. Only hydraulic jacking (boring), air spading or hand digging is allowed within the plant material's critical root zones.
- B. The Contractor must notify PARKWAYS at least three (3) working days in advance of the prior to any utility line construction within the barricade(s), and within the tree(s) critical root zone(s).
- C. If possible, confine the location of underground utilities to areas away from tree roots. When it is necessary to pass close to a tree, corridors must be tunneled under major roots rather than using trenches. Boring or air spading may not begin closer than ten feet (10') from the trunk of the tree. Boring or air spading this close to a tree, within a tree's critical root zone, shall only be permitted under extremely confined urban situations for distances and depths of boring as may be permitted. All final decisions on distances and depths shall be made by PARKWAYS. In all locations where it is obvious and possible, air spading or boring shall begin one foot (1') outside of the tree's critical root zone and end on the opposite side of the tree one foot (1') outside of the tree's critical root zone or canopy. The depth of all air spading or boring shall be a minimum of thirty inches (30").
- D. PARKWAYS must be contracted at least three (3) working days prior to boring or air spading under any City tree.
- E. If it becomes necessary to contact PARKWAYS after normal working hours, on weekends or holidays the "Tree Emergency" number is 911.

PART 4 - PENALTIES

SECTION 01 56 39
TEMPORARY TREE & PLANT PROTECTION

4.01 LIQUIDATED DAMAGES

- A. PARKWAYS shall evaluate whether any tree or plant is damaged or removed due to construction work.
- B. If damaged plant material has not been removed and cannot be salvaged, the Contractor shall be responsible for removal of the damaged plant material, with PARKWAYS approval.
- C. If plant material has been removed or damaged beyond the point of being salvaged, the Contractor shall be responsible for compensation to PARKWAYS through approved implementation of replacement as detailed in Section 3.01 A. 4. or through compensation to the Plant-A-Tree Trust Fund, based upon the established value of the tree.
- D. The compensation for the removed plant material shall be reimbursed to PARKWAYS prior to the final inspection.
- E. The value of damaged trees and shrubs shall be determined by PARKWAYS, by the appropriate formula contained in the "Guide for Establishing Values of Trees and Other Plants" prepared by the Council of Tree and Landscape Appraisers, and published by International Society of Arboriculture.
- F. Damage assessments in the amount of the percentage of the prohibited practice's severity will be multiplied by the dollar value of the affected tree to determine the cost of the liquidated damages.
- G. The Contractor shall be assessed liquidated damages for conducting prohibited practices within protection zones. Violation of tree protection plans, tree protection fencing, or tree protection specifications without approval from PARKWAYS shall result in a \$1000 fine per infraction. If damage to a tree occurs due to infractions, an additional damage assessment shall be performed and Contractor will be fined based on value of assessment.

END OF SECTION