



# Iowa Department of Transportation

## SPECIAL PROVISIONS FOR TREE PROTECTION

Polk County  
STP-E-1945(765)--8V-77

Effective Date  
July 20, 2010

THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

### 097018.01 DESCRIPTION.

#### A. General.

This work consists of preparation of a Tree Protection Plan for the construction area, installation, inspection and maintenance of tree protection measures, and repair, and/or removal of damaged trees. Figures referenced in this special provision are included in the plans.

#### B. Definition Of Terms And Abbreviations.

1. Work Zone Protected Tree: A tree of any size that is located within the project's work zone and is to remain in place at the completion of the project.
2. Border Protected Tree: A tree of any size that is located outside the project's work zone, but has branches extending over the work area, or whose trunk is located within 10 feet of the edge of the work area.
3. Tree Protection Limit: The area around a tree, as defined in the Tree Protection Plan, in which no construction activity is allowed. If the tree protection limit is not defined in the Tree Protection Plan, it shall be considered to be equal to the Critical Root Radius.
4. dbh: Diameter at breast height: The diameter of a tree's trunk in inches measured at a height of 4.5 feet above the natural ground level.
5. CRR: Critical Root Radius: Expressed in feet equal to the dbh in inches. (The CRR of a tree with a 12 inch dbh is 12 feet) This is the desired distance from the tree trunk at which fencing is installed and no construction activity is allowed.

### 097018.02 MATERIALS.

Use orange mesh safety fence meeting the requirements of Article 4188.03.

### **097018.03 CONSTRUCTION.**

#### **A. General.**

The contractor shall not damage any trees and shrubs to remain in place, regardless of whether installation of tree protection measures is required or not. The contract documents may designate individual trees and/or areas of the project that require installation of tree protection measures as defined in this special provision. If the limits for tree protection are not designated in the contract documents, the Engineer will determine the limits prior to the start of construction. The Engineer may add, delete or revise the areas that require tree protection at any time prior to or during the project construction period. The Contractor shall install all tree protection measures before the commencement of any construction activities

#### **B. Preparation of Tree Protection Plan.**

1. If the contract includes the installation of tree protection measures, the contractor shall submit a Tree Protection Plan to the Engineer prior to starting work. The plan shall include the following items:
  - a. Work zone limits
  - b. Location and size of trees to removed
  - c. Location and size (dbh) of work zone protected trees
  - d. Location and size (dbh) of border protected trees
  - e. Proposed location of tree protection measures. See figure TP-1 "Typical Tree Protection Fencing-Work Zone Area" and figure TP-2 "Typical Tree Protection Fencing – Border Area" for placement and installation information.
  - f. Phasing of the tree protection installation, including phasing for utility work, if necessary
  - g. Location, size (dbh), and description of trees with existing damage that are not designated to be removed
  - h. Location and size (dbh) of dead trees that are not designated to be removed
  - i. Location and description of proposed tree trimming to complete the required construction work
2. The Contractor may submit an alternate to the installation of tree protection fencing, such as the installation of silt fencing along border trees, if such alternates provide acceptable tree protection. The Engineer shall have the sole authority for acceptance or rejection of alternates. Alternate plans may also take into consideration preliminary brush removal.

#### **C. Installation of Tree Protection Measures.**

After approval of the Tree Protection Plan by the Engineer, and prior to starting construction work, the contractor shall install the tree protection fencing or other approved measures in accordance with the Tree Protection Plan. Securely support the fence so it is in a vertical position without sagging. Locate and place the fence supports so they are not a safety hazard. Clearly mark with paint the trees to be removed in accordance with the Tree Protection Plan. No construction activity can commence until the tree protection fencing measures and the trees marked for removal have been reviewed on site by the Engineer. Phasing of the installation of tree protection measures will only be allowed if shown on the approved Tree Protection Plan.

#### **D. Damage to Trees.**

1. Damage to a work zone protected tree, a border protected tree, or any other tree not designated for removal shall be determined by the Engineer. Tree damage will include, but not be limited to, the following items:
  - a. Scratched or gouged bark.
  - b. Broken branches.

- c. Compaction of soil within the specified tree protection limits.
  - d. Storage of materials within a tree's critical root radius.
  - e. Operation of equipment within the specified tree protection limits.
  - f. Parking of vehicles or equipment within a tree's critical root radius.
  - g. Spilling of harmful substances around or within a tree's critical root radius.
2. The condition of any tree damaged by the Contractor will be evaluated by the engineer. The Contractor shall be required to repair damage to the tree as directed by the engineer. This could include, but not be limited to trimming and pruning of the branches and roots in accordance with Article 2610.03, C. If the damage is determined to be severe enough, the engineer may require the contractor to remove the tree, and stump and restore the vegetation. Repair and removal of damaged trees shall be completed at no cost to the City.

**E. Inspection, Documentation and Maintenance.**

- 1. The Contractor shall periodically inspect the tree protection fencing, repair any deficiencies, and update the Tree Protection Plan. All updates shall be submitted to the Engineer. A copy of the current Tree Protection Plan shall be available on the construction site.
- 2. If any tree not designated for removal is damaged, the Contractor shall notify the observer or engineer with 48 hours

**097018.04 METHOD OF MEASUREMENT.**

Measurement will be as follows:

**A. Tree Protection.**

Lump Sum.

**B. Tree Protection Fence.**

Linear feet constructed, measured along the fence at the bottom of the fabric.

**097018.05 BASIS OF PAYMENT.**

Payment will be as at the contract unit price as described below.

**A. Tree Protection.**

- 1. Lump Sum when there is a contract item for Tree Protection.
- 2. Payment is full compensation for providing the tree inventory, tree protection plan, documentation, inspection, and signing of work zone protected trees and border protected trees

**B. Tree Protection Fence.**

- 1. Per linear foot.
- 2. Payment is full compensation for furnishing all material and for construction, maintenance and removal of fence as provided herein, including clean up after the work is complete. If other types of fence, such as silt fence, is installed approved, and functions as tree protection fence, separate measurement and payment will not be made for this fence as tree protection fence.