

## SECTION 01 56 39 – TEMPORARY TREE AND PLANT PROTECTION

### PART 1 - GENERAL

#### 1.1.1 SCOPE OF STANDARDS

- A. This standard provides general guidance concerning the specific preferences of the Owner for Temporary Tree Protection.

#### 1.2 SUMMARY

- A. This Section tree includes preservation procedures including:
  1. Establishing adequate tree protection fencing.
  2. Raising low limbs by cabling, trimming or tying to allow access through existing roads and to allow access around the site.
  3. Containing concrete and other chemicals to specific washout areas away from root zones.
  4. Limiting liming of soil to a maximum distance of 10' from any tree drip line.

#### 1.3 QUALITY ASSURANCE

- A. The work of this section shall be performed by a company which specializes in the type of tree preservation work required for this Project, with successful experience and shall be performed by skilled workmen thoroughly experienced in the necessary crafts.

#### 1.4 WARRANTY

- A. Comply with General Conditions and Warranties.

### PART 2 - PRODUCTS

#### 2.1 UNAUTHORIZED MATERIALS

- A. Materials and products required for work of this section shall not contain polychlorinated biphenyls (PCB) or other hazardous materials identified by the Louisiana Department of Health.

#### 2.2 ACCEPTABLE MANUFACTURERS

- A. Products of the manufacturers specified in this section establish the minimum aesthetic, functional and quality standards required for the work of this section.

## PART 3 - EXECUTION

### 3.1 TREE PRESERVATION GUIDELINES

#### A. Damaging Conditions:

1. Care shall be taken to preserve the tree root system(s). In the event that root(s) are impacted during construction, care shall be taken to minimize the impact to the root system. The Critical Root Zone (CRZ) of each tree shall be determined by the Designer. Tree protection fencing shall be placed at the extent of the CRZ.
2. It shall be determined by the Designer what pruning will be required to accommodate equipment. Pruning shall be done by a licensed landscaping professional.
3. Prevent compaction of root zone areas by foot and vehicular traffic and material storage.
  - a. Soil compaction, one of the leading contributors to tree decline and death associated with construction, can be controlled with the use of adequate tree protection fencing and mulching.
  - b. Minimum tree protection fencing shall include the area from the tree trunk out to the canopy drip line or CRZ.
4. Prevent poisoning by pouring or spilling chemicals including gasoline, oil, paint, concrete and other injurious materials on or near root zone areas.
5. Prevent damage by improper pruning techniques or contact from any equipment.
6. Prevent damage from lack of moisture during periods without adequate natural rainfall, or from changing the natural drainage patterns. Supplemental irrigation may be required.
7. Prevent change in soil pH caused by the addition of lime in root zones by direct application or concrete waste. After protection fences are removed, no soil or fill shall be added within root zone.
8. Prevent change in grade. No change in grade within CRZ shall occur. Grade change outside of CRZ shall be limited to a maximum of 3" cut or fill.

#### B. Protection Procedures:

1. Limit construction access by placing temporary tree protection fencing around trees to be preserved (See A1 above). Fence location shall be inspected regularly to maintain integrity of protection.

- a. Fencing shall be placed as far out from the tree trunk as possible, a minimum distance to include the branch drip line or CRZ. And shall be installed and removed by hand.
  - b. In areas where construction access is required, the natural grade can be protected from compaction by placing a blanket of mulch 6 – 12” deep under  $\frac{3}{4}$ ” plywood over natural grade. This shall be removed by hand, using no equipment after the project is completed.
2. Route underground utility lines around root zone areas as a first priority; second priority, air spade; third priority, bore at a minimum depth of 3’ to eliminate open cuts through root zones.
  - a. When it is not possible to re-route, air spade, or to bore under the root system, hand dig to preserve roots  $\frac{3}{4}$ ” or larger. Air spade is required where applicable.
3. When, excavating with a backhoe or trencher in tree root zone areas is unavoidable, prune any ripped roots in the trench between the dig site and the tree trunk. Pruning shall take place with a chain saw, loppers, hand saw, etc. The cut shall take place behind the ripped area to the extent possible. (Depth of trench shall be limited to the depth of the required excavation for installation of the utility). Keep heavy equipment off of the area between the trench and trunk of the tree. Work from the outside most area of the tree, rather than setting up equipment between the proposed digging site and the trunk of the tree.
4. Cover exposed roots within 48 hours during hot dry periods to protect the roots from drying out.
  - a. Deep root fertilize.
    - 1) Recommended fertilizers – 3-1-1 or 2-1-1 ratio; the nitrogen content shall be no more than 50% water soluble.
    - 2) Remove any mulch by hand without using machinery.
    - 3) Apply approximately one (1) pound nitrogen per 1,000 square foot.
    - 4) Broadcast uniformly under the drip line of the tree and extend out approximately 10’ beyond the drip line.
    - 5) Replace the mulch.
    - 6) Irrigate sufficiently to activate the fertilizer; approximately 1” shall be applied in the absence of rain for three consecutive days.
5. During periods of minimal rainfall, supply supplemental moisture to damaged trees to help eliminate additional stress.
6. Wound dressing must be applied to pruning cuts or damage to trunks or limbs, on all oak trees within 15 minutes of damage.

C. Cautions:

1. The area of soil from the branch drip line to the tree trunk is considered the most important part of the tree feeder root zone area that should be protected from disturbance.
  - a. When possible, 10' beyond the drip line should also be protected.
2. Request consultation with the Designer before any disruption to the campus landscape.

3.2 TREE PRESERVATION PROCEDURES

A. Tree Protection Fencing:

1. Tree protection fencing shall be installed to protect all tree root zone areas adjacent to areas of construction activity as designated on the site plan.
  - a. Tree protection fences shall be installed to protect root zones as well as low growing limbs which exist adjacent to the construction and materials storage areas.
2. Tree protection fencing shall be installed prior to any site activity and shall remain in place in its original location until construction is complete and as authorized by the Owner.
3. Access into protected root zone areas should be prohibited.
  - a. Any necessary access into protected root zone areas should be approved by the Owner.

3.3 TREE SERVICES

A. Tree Limb Trimming:

1. Trees located adjacent to the construction access route shall be pruned by a licensed landscaping professional to allow access of vehicles hauling construction materials.
  - a. Raising low limbs temporarily by using ropes to tie limbs up may be an alternative to trimming.

END OF SECTION 01 56 39