

## Tree Care Plan – Loyola University Maryland

### Site Monitoring

An ISA Certified Arborist and/or Maryland State Tree Expert is assigned to regularly monitor the health and vigor of all campus trees. Monitoring will take place six to eight times annually. The arborist representative will seek to identify and mitigate conditions that may:

1. Compromise the safety and security of students, faculty, staff, and other visitors
2. Adversely affect the health and beauty of the tree canopy

### Pruning

#### *Pruning Guidelines*

The work to be performed under this section shall include pruning trees in accordance with the American National Standard for Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance - Standard Practices, ANSI A300 (Part 1) -2008 Pruning.

The following pruning methods will be employed to accomplish the objectives outlined above:

- *Crown Cleaning*: Pruning to remove one or more of the following non-beneficial parts: dead, diseased, and/or broken branches
- *Crown Elevation*: Selective pruning to provide vertical clearance
- *Crown Reduction*: Selective pruning to decrease height and/or spread
- *Thinning*: Selective pruning to reduce density of live branches
- *Restoration*: Selective pruning to redevelop structure, form, and appearance of severely pruned, vandalized, or damaged trees
- *Vista/View*: Utilization of one or more pruning methods for the purpose of enhancing a specific line of sight

Pruning activities will be performed on a prioritized basis in the interest of meeting the following objectives:

1. *Safety*: Dead, dying, or structurally unstable branches will be removed, as prioritized by type and volume of traffic, to reduce the likelihood of personal injury and/or property damage.
2. *Security*: Live foliage that can be used as cover or aid for criminal activity will be removed.
3. *Maintenance*: The pruning methods outlined above will be employed on an as needed basis to encourage proper structure, provide needed clearance, minimize insect and disease involvement, and reduce the damage associated with storm activity.
4. *Aesthetics*: While aesthetic value is not the primary driver of pruning activity on campus, maintaining the beauty of the tree canopy will be held as a guiding element of all tree care activity.

## Selective Removals

The work to be performed under this section shall include removing trees in accordance with the American National Standard for Arboricultural Operations - Pruning, Repairing, Maintaining and Removing Trees and Cutting Brush - Safety Requirements - ANSI Z133.1-2012.

Trees will be will generally only be designated for removal when required to protect the public safety, accommodate necessary development, or improve the overall quality of the landscape. Trees may be removed only after consultation with the university's authorized representative.

Designated trees will be removed in a controlled manner. Methods for removal may include the following:

- Climbing and rigging
- Aerial lift assisted
- Crane assisted
- Directional felling

All wood and debris will be cleaned up and hauled off site. Unless directed otherwise by the university's authorized representative, all stumps will be ground to a depth of 6"- 8" below grade. Stump chips will be removed, disposed of offsite, and replaced with screened topsoil and quality grass seed as appropriate.

## Integrated Pest Management

An Integrated Pest Management (IPM) approach will be used to manage insect and disease problems in the canopy. IPM is an environmentally sensitive approach to pest management that relies on a combination of common-sense practices.

The IPM program uses information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

IPM takes advantage of all appropriate pest management options including the use of pesticides. When practicing IPM, technicians follow a four-tiered approach. The four steps include:

1. *Set Action Thresholds:* Before taking any pest control action, IPM first sets an action threshold, a point at which pest populations or environmental conditions indicate that pest control action must be taken. Sighting a single pest does not always mean control is needed. The level at which pests will either become an aesthetic or economic threat is critical to guide future pest control decisions.
2. *Monitor and Identify Pests:* Not all insects and diseases require control. Many organisms are innocuous, and some are even beneficial. IPM programs work to monitor for pests and identify them accurately, so that appropriate control decisions can be made in conjunction with action thresholds. This monitoring and identification removes the

possibility that pesticides will be used when they are not really needed or that the wrong kind of pesticide will be used.

3. *Prevention:* As a first line of pest control, IPM programs work to manage the landscape to prevent pests from becoming a threat. This may mean using cultural methods, such as adjusting watering schedules, selecting pest-resistant varieties, and planting pest-free rootstock. These control methods can be very effective and cost-efficient and present little to no risk to people or the environment.
4. *Control:* Once monitoring, identification, and action thresholds indicate that pest control is required, and preventive methods are no longer effective or available, the IPM program then evaluates the proper control method both for effectiveness and risk. Effective, less risky pest controls are chosen first, including highly targeted chemicals, such as pheromones to disrupt pest mating, or mechanical control, such as trapping or pruning. If further monitoring, identifications and action thresholds indicate that less risky controls are not working, then additional pest control methods would be employed, such as targeted spraying of pesticides. Broadcast spraying of non-specific pesticides is a last resort.

## **Fertilization**

The work to be performed under this section shall include fertilizing trees in accordance with the American National Standard for Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance Standard Practices, ANSI A300 (Part 2) - 2008 Fertilization.

NPK fertilizer is applied as needed to maintain optimal nutrient levels in the critical root zones of campus trees. Poorly structured soil is treated using a combination of organic soil amendments and mycorrhizal fungi. These applications encourage beneficial microbial activity providing improved growing conditions that help sustain the health and beauty of the canopy.

## **Tree Preservation**

The work to be performed under this section shall include fertilizing trees in accordance with the American National Standard for Tree Care Operations - Tree, Shrub, and Other Woody Plant Maintenance Standard Practices, ANSI A300 (Part 5) - 2008 Management.

To ensure minimal impact of development activities on the tree canopy, tree preservation measures should be employed before, during, and after campus construction projects. These measures may include, but not be limited to, the following:

- *Root Pruning:* Based on site specifications, root pruning should be performed to cleanly sever the roots of trees whose critical root zone (CRZ) will be affected by construction activities.
- *Protective Fencing:* Tree protection fence should be installed to protect as much of the CRZ as possible from the encroachment of equipment and materials. The fence should be six-foot chain link with eight-foot poles laid ten foot on center. Forest conservation signs

marking the area as protected should be posted at increments clearly visible from all approach angles. Colored flagging tape should be used to mark spans not occupied by signage.

- *Soil Enhancement:* The soil within the CRZs of construction-affected trees may be subjected to mechanical compaction. If compaction is allowed to occur, some combination of root stimulation and the application of deep-root liquid fertilizer, bio-stimulants, and compost tea should be applied to help restore the affected trees to optimal health.
- *Mulch:* Mulch should be installed at a minimum depth of four inches within tree protection fencing and along fence lines to retain soil moisture, add organic nutrients, and aid in reducing soil compaction. The mulch should be installed with low-impact methods and be removed at the end of the project.