

## Salve Regina University Tree Inventory and Management Plan

### MAKING THE MOST OF YOUR INVENTORY MANAGEMENT PLAN

Those who operate a large business or institution understand how inventory impacts operations and budgeting. One must know what's there, how much or how many, and where it all is. But the task doesn't end there. To obtain the greatest benefit from inventory, owners or their designees must *manage* it. Are a company's tools, for example, old and defective, in need of repair, in short supply, or useless and taking up space that could be better occupied?

A good management plan will address these issues and keep the inventory current, in good condition, and functioning for the benefit and safety of those involved.

Managing trees on a large property can seem like an overwhelming task, but the same principles of inventory management apply. This inventory and management plan should provide managers the data they need to develop realistic budgets for their tree maintenance needs, and it will help make the Salve Regina University campus a safer and more beautiful environment.

The following tips will assist you in making the most of this document:

#### **Who's Who**

Those who conducted the inventory and prepared this document are members of the Bartlett Inventory Solutions (BIS) team. They are also employees of Bartlett Tree Experts and operate from the Bartlett Tree Research Laboratories in Charlotte, North Carolina. Readers may interpret the terms "Bartlett Tree Experts," "Bartlett," "the BIS team," "the team," "we," and "our" as the Bartlett company and those who conducted the inventory and prepared this management plan.

#### **Subject Trees**

In this document, the term "subject trees" refers (depending on context) to some or all of the 1,194 trees (some of them groupings of trees) included in the inventory.

#### **Definitions & Bolded Terms**

Some definitions or specifications are detailed within a given section to explain how readers should interpret certain terms or classifications. We have also appended a Glossary for other terms that appear throughout the document. The first reference to each of these terms appears in bold for the reader's convenience.

#### **How This Document is Organized**

As usual, the Table of Contents provides an effective road map to document contents, but following it are a List of Tables and List of Maps that users will find helpful in locating specific findings, recommendations, or tree locations. Also, a handy outline appears on page 6 that introduces the order in which results, recommendations, and the Entire Inventory will appear. All tables, photos, maps, and diagrams have numbered captions for quick reference. Starting with the Introduction, pages are numbered consecutively up to the "Entire Inventory" at the back. So that it can stand alone as a main inventory document, the Entire Inventory starts over with page -1-.

## EXECUTIVE SUMMARY

In May, 2012, the Bartlett Inventory Solutions (BIS) Team from Bartlett Tree Experts conducted an inventory of trees on the campus of Salve Regina University. We identified 1,194 trees or groupings of trees that included 98 different species. The attributes that we collected include tree latitude and longitude, size, age and condition class, and a visual assessment of tree structure, health, and **vigor**.

We conducted the attribute collection using a sub-meter accuracy Global Positioning Satellite Receiver (GPSr) device with an error-in-location potential of not greater than three meters.

Our recommendations for the subject trees over the next three-year period include:

### **Pruning**

Prune 621 trees (52%) for safety, health, structure, and appearance. Pruning will comply with American National Standards Institute (ANSI) A300 for pruning and ANSI Z133.1 for safety.

### **Removals**

Remove 46 trees (4%) due to condition or because of its location in the landscape to try and prevent competition or damage to infrastructure.

### **Tree Risk Assessments**

Provide a tree risk assessment for 76 trees (6%) to evaluate the impact of wood decay in **stems** and **buttress roots** that show potential for failure.

### **Cabling & Bracing**

Install new structural support systems in 145 trees (12%) to reduce risk of branch or whole tree failure.

### **Lightning Protection**

Install lightning protection systems in 10 trees (1%) to try and provide a preferred path for lightning to the ground.

### **Root Collar Excavations**

Perform **root collar** excavations to 376 trees (31%) to lower risk of damaging conditions such as **girdling roots**, basal cankers, masking of root decay and lower-stem decay, and predisposing trees to various insect and disease pests.

### **Integrated Pest Management (IPM)**

Implement Bartlett's IPM program to monitor pests and diseases on the subject trees. Treatments are therapeutic and preventive, and treatment timing is based on pest life cycle.

### **Soil Samples**

Collect soil samples throughout the landscape and submit them for analysis that includes presence of soil nutrients, pH, organic matter, and **cation exchange capacity**.

### **Bulk Density Samples**

Collect bulk density samples throughout the landscape to determine the extent of **soil compaction**.

### **Root Invigoration**

Perform Bartlett's patented Root Invigoration program on trees affected by construction activities to improve aeration and promote more efficient root growth, especially for high-value trees in disturbed areas.