## Sample Requests for Proposals: Tree Inventory, Canopy Mapping, Management Plan

[**Date**]

**TEMPLATE: Request for Proposals (RFP) for any or all of the following (insert RFP Topics I, II, III as appropriate)**

I)Tree Inventory and Data Report, II) Urban Tree Canopy Map and Report and III) Management Plan

Requested by: [**Department**], [**City**]

Issuing Agency: [**City Address, City, SC ZIP**]

All Inquiries: [**Person, Email Address, Phone number**]

Submittal Deadline: [**Date**]

Attention: [**Person, Department]**

**Address, City, SC ZIP**]

**SCOPE OF SERVICES REQUESTED**

**Project Description**

The [**City/Town of \_\_\_**] is seeking proposals from qualified companies with experience in urban forest assessment and management to procure and prepare a **[pick one or more of the following]**:

1. Street Tree Inventory and Data Report
2. A Tree Canopy Map and Report
3. Urban Forest Management Plan

**Project Background**

[Add a paragraph here: Describe the need for the project (e.g. requested by City Council, needed for Open Space Plan), has this work been done previously (e.g. tree inventory was last done in 1990), community size, character. How will the results of this work be utilized by the community (describe)?]

**Deadline**

All work is to be completed by [**Date**].

**[Add any interim deliverables or draft products required before final submission.]**

**Ownership**

All data created for this project becomes the property of [**City/Town**].and must be turned over at the project’s completion. This includes all processed data, images, maps and analyses produced in final format. The firm may utilize these products to showcase their performance or in portfolios but they do not retain the rights to reproduce or share these data without prior permission from [**City/Town**].

**Discontinuance of Work**

The [**Appropriate Town/City Staff**] shall have the authority to suspend the work, wholly or in part by written order for such period as the [**Appropriate Town/City Staff**] may deem necessary due to unsuitable weather, or due to failure on the part of the Contractor to carry out the work to an acceptable level of quality or to comply with any provisions of the contract documents. Any practice obviously hazardous, as determined by the [**Appropriate Town/City Staff**] or his/her representative, shall be immediately discontinued by the Contractor upon receipt of either written or oral notice to discontinue such practice.

**I. Tree Inventory [GIS Data and Report]:**

**Scope of Work**

Conduct a street tree inventory in selected street rights-of-way, street tree easements, parks, public facilities grounds, and other public property for approximately [**XXXX**] trees **[Or by increments of each 1000 trees]**. Include cost per tree in bid and for additional increments of 1000. Contractor may use a GPS-based data collection system and must provide the data output to the [**City/Town**] in Microsoft Excel, Access, or ESRI shapefile formats. Locations to be inventoried include:

**[Specify exact locations for inventory, e.g. street rights of way, parks, schools and estimated # of trees]**

**DATA COLLECTION\*:**

Tree inventory data fields must include, but are not limited to:

* Location – street address, GPS coordinates to decimeter precision (4 inches), assign record # to tree (e.g. 1, 2, 3)
* Image of Tree (photo)
* Tree Common Name
* Tree Latin Name (Genus, species) unless unknown (e.g. crabapple)
* Trunk Diameter at Breast Height (DBH at 4.5’ above grade)
* Tree Height (Estimated in feet)
* Trunk Spread (Visual estimated in feet)
* Stems – number of stems below DBH
* Tree Health Condition (Overall) – good, fair, poor, dead as follows:

**Good-** normal for the species including shoot growth, wound wood development, foliar color and density, and absence of dieback or damaging pests

**Fair**- deficiency in one category such as below normal shoot growth, wound wood development, foliar color and density, or presence of dieback or a damaging pests or disease

**Poor**- below normal or deficiency in two or more categories such as shoot growth, wound wood development, foliar color and density, or presence of dieback or damaging pests

**Very Poor**- major deficiency in two or more categories such as shoot growth, wound wood development, foliar color and density, or presence of dieback or damaging pests

**Dead**- no living tissues

* **Tree Structure**: Condition of mechanical or structural portions of the tree, expressed as:

**Good**- absence of any significant mechanical defects although minor defects such as low amounts of decay that are unlikely to fail under normal weather conditions may be present

**Fair**- minor structural defect(s) is present that may fail under storm conditions, or several minor mechanical defects can be found

**Poor**- one or more significant structural defect is present that may fail under normal weather conditions

**Very Poor**-several significant structural defects are present that may fail under normal weather conditions

Most significant defect present and severity; Roots, Root Crown, Trunk, Trunk/Scaffold Union, Scaffolds, Branches

* Observations – general observations warranting recognition
* Primary Maintenance Needed
	+ Overhead utilities- presence of primary or secondary electrical distribution wires or telephone or street lighting
	+ Site Type –Planting Area – Most limiting dimension of planting area in feet
	+ Other – for trees requires further inspection;
		- Risk- for trees that need a full Tree Risk Assessment note need
		- Check ROW- determine if the tree is in the Right of Way
		- Limited access
* Growing Space Type: type of location the tree is growing in such as lawn area, natural area, border tree, tree lawn, or tree pit
* Quality Control -- All data, as itemized below, to be reviewed digitally for errors and errors corrected. Contractor will report the findings and corrections at the completion of each step.
	+ Field quality review of 2% of all data points collected in the first week of data collection with particular emphasis on trees identified for removal
	+ Field quality review of 1% of all data points collected each week after the first week of data collection with particular emphasis on trees identified for removal
	+ Cross data collector review (other reviewer than the original data collector) for all data collection personnel.
	+ Office review of 100% of data for data mismatch errors, for example, appropriate tree health or structural condition rating for "Removal" maintenance classification; appropriate street for side street versus on street classification, appropriate diameter size for "Train" maintenance classification, and all other similar data reviews that can be completed in the office.
	+ Field resolution of data errors identified.
	+ 100% correct species identification; no unknowns in data set.
	+ Visually review and correct mapped tree data for correct locations.

\* If interested in performing a Tree Risk Assessment: Require GPS location of each inventoried tree, performance of work by ISA Tree Risk Assessment Qualified (TRAQ) Professional and collection and recording of tree risk data as specified by ISA in their Tree Risk Assessment Manual and Form. For more see <https://wwv.isa-arbor.com/education/onlineresources/basictreeriskassessmentform>

**Deliverables: DATA and REPORT:**

The consultant will provide a map and database of all collected tree data.

The consultant shall provide an inventory report summarizing the methodologies, urban forest management statistics outlined as follows.

1. Inventory Methodologies
2. Quality Control Summary (methods and results)
3. Management Statistics
	1. Species Distribution
	2. Diameter Distribution
	3. Health Distribution
	4. Work Need
	5. Tree Species Exceeding 10% of the Total Population
		1. Diameter Distribution
		2. Health Distribution
		3. Trees Flagged for Additional Risk Assessment
		4. Work Needs/Recommendations
			1. **Tree Canopy Cover Data and Maps**

**Scope of Work**

The consultant will conduct the classification of citywide land cover using the most recent aerial imagery from the National Aerial Imagery Project (NAIP) (4-bands) available for [City/Town]. Specifically, imagery will be classified into all classes including tree canopy, other vegetation (turf, shrubs), impervious surfaces, bare soil/sand, building and non-building impervious surfaces, and water. Consultant to obtain the most recent LiDAR data to differentiate smaller shrubs from trees (e.g. under and over 10 feet). The city will provide the consultant with base GIS data to aid in the analysis (any existing data for roads, streets and rights of way, parcels, publicly owned properties such as parks and schools, and utilities).

Land cover classes will be calculated by percent and also by specific requested areas of analysis for urban tree canopy (up to 5 geographies, e.g. trees citywide, in parks, historic districts, census blocks/tracts, downtown).

Misidentification of shrubs versus trees is a common error in classification of vegetation in the south and application of LiDAR and other object recognition tools should be used to help to prevent this mistake.

The consultant will also prepare a QA/QC report for derived data to achieve at least 90% overall mapping accuracy. Consultant to report on how accuracy was determined (e.g. confusion matrix, field verification etc.).

The consultant will provide at minimum the following information based on the data collection in the form of data, maps and narrative:

1.Calculation of acres and percent of land area in covered by tree canopy citywide and at least three other geographies (e.g. land use, neighborhood, right of way, census block groups, parks).

2.Identification and mapping of areas that are suitable for tree planting = Potential Planting Areas (PPA). Consultant should detail how unsuitable areas (sports fields, utility conflicts) will be accounted for and removed from the PPA. Areas suitable for planting may also be categorized in terms of priority areas related to benefits of trees such as urban heat island, stormwater flooding, or other benefits.

3.Quantification of ecosystem services of the city’s tree canopy, which may include but are not limited to, stormwater management, air quality, carbon sequestration, and urban heat island mitigation. At the completion of this task, the consultant will present results to government staff. Tools in the i-Tree suite <https://www.itreetools.org/> can be used for some of these calculations.

4.Recommendations for a percentage tree canopy goal based on the current tree canopy percentage and the PPA determined.

5. The consultant will present a draft of the canopy data and maps to [City/Town] staff to review and staff comments will be addressed before the final maps and report are complete.

**Deliverables: REPORT and DATA:**

1. Tree canopy assessment report [XX pages] including findings and methods to also include maps of tree canopy, potential planting areas, identified priority areas by canopy cover (e.g. parks), and documentation of ecosystem services’ calculations. The report will be formatted for printing and an ADA compliant version digital version will be provided for the City website. [Optional: Specify X # printed copies to be provided by consultant].
2. PPTX presentation of results in slide deck to be used for community education [15-20 slides] including maps and canopy assessment results.
3. A GIS file and geodatabase of the tree canopy and land cover to incorporate into the city’s GIS system. GIS files must include tree canopy data in both raw raster and vector formats, as well as pre-made map documents from (1) above that include all relevant files created for the project.
4. [Optional: Add community education event, workshop or survey on tree values to engage the community in understanding canopy assessment and supporting canopy protection or expansion.]
	* + 1. **Urban Forest Management Plan**

**3) Urban Forest Management Plan:** The contractor will support the [**City/Town**] in developing a comprehensive urban forest management plan. The plan shall be based on inventory data and discuss major trends, such as species composition and tree conditions, as identified in the inventory. Tree characteristics that affect management, such as species diversity, condition, and maintenance requirements, should also be discussed. Provide a multi-year budget and management recommendations. Additional content may include, but are not limited to:

* Trends – species diversity, size distribution, condition, primary maintenance needs, etc.
* Ecosystem Benefits – using the digital tree inventory data, i-Tree, or generating report through i-Tree Eco.
* Current Canopy Cover (by percentage if known)
* 5 and 10 year strategies for maintenance schedules.
* Annual, 5-year and 10-year budgets for maintenance activities.
* Assessment of current personnel, equipment and capacities to meet management needs
* Potential pest and disease management
* General recommendations including relevant goals for forest cover
* Applicable charts and graphs
* Appendices

**Project Pricing**

|  |
| --- |
| **I. GIS Based Tree Inventory** |
|  Data Collection Cost per tree | **$** |
|  Cost per each increment of 1000  | **$** |
|  Total Data Collection Cost for [# trees, e.g. 2000] | **$** |
| Total Cost for Inventory | **$** |
| **II. Tree Canopy Cover Data, Maps and Report** |
| Total Cost for Tree Canopy Assessment | **$** |
| **III. Urban Forest Management Plan Development** |
|  Urban Forest Management Plan Cost | **$** |

**<see next page for general legal clauses>**

**< Clauses below are provided as examples only. Check with the town/city/county procurement office for a complete list of what to include. Some clauses, such as e-verify, are required when using federal funds.>**

1. **References and Qualifications**

Provide at least three (3) references with contact information and detail the firm’s relevant prior work. References should relate to similar work performed and demonstrate the firm’s qualifications to perform the Scope of Services. If available, provide links to digital work samples.

Relevant qualifications for all staff to be included in the project along with roles must be specified. For example, if the principal is a certified arborist, the qualifications should specify their role in the project (project manager, field data collection etc.).

[For tree inventory work add: Bidder shall be able to recognize the native trees of SC as well as a wide variety of ornamental trees. \* Bidder shall be an ISA Certified Arborist for at least 3 years and Tree Risk Assessment Qualified for at least 1 year. \* Bidder shall be proficient in using tree inventory software. Must provide Documentation of ISA Certified Arborist Number and TRAQ Certification]

1. **Terms of Contract**

Once awarded, the term of this contract shall be for the period of \_\_\_\_\_\_ [Years/Months] and may be extended for up to \_\_\_\_ [Years/Months] upon written agreement between the [**City/Town of** ] and the contractor.

1. **Insurance**

Contractor shall file with the [**City/Town of** ] evidence of Workman’s Compensation, Commercial General Liability, and Business Auto Liability for owned or non-owned automobiles. Limits of insurance shall be as follows: Minimum amounts of $1,000,000 in employer liability, statutory required amounts in Workman’s Compensation, $1,000,000 Commercial General Liability, and $500,000 in Auto Liability. A certificate of insurance shall be filed with [**City Staff, Title**, **City/Town of** ] prior to award of contract. The [**City/Town of** \_\_\_\_\_\_\_] shall be listed as an additional insured under General Liability and also listed as a certificate holder. Such insurance shall be maintained throughout the term of this contract.

1. **Indemnification**

The contractor agrees to hold harmless and indemnify the [**City/Town of** ] against any and all claims, suits, damages, costs, or legal expense as a result of bodily injury or property damage resulting from the negligence of the contractor. All policies of insurance carried by the contractor shall be written as primary policies, not contributing with and not in excess of insurance coverage which the [**City/Town of** ] may carry.

1. **Governing law and venue:**

Contracts shall be governed by the laws of the State of South Carolina.

1. **E-Verify:**

Contractor shall utilize e-verify to confirm the status of each employee or contractor utilized to complete the work under this RFP. <https://www.e-verify.gov/employers>

1. **Iran Divestment Act**

The Contractor shall submit a form stating that their company is not on the SC Final Divestment List, in accordance with the Iran Divestment Act, before being awarded a contract. The [**City/Town**] is prohibited to contract with any company that is on the SC State Treasurer’s Final Divestment List. For more information see: SC Code § 11-57-330 (2014)

**Proposal Evaluation and Consultant Selection**

The [**City/Town of** ] Board of Commissioners/City Council has established procedures to be followed in selecting professional services. Procedures, as established, are for the purpose of ensuring the contractor is selected in a fair and uniform manner, that those selected for work are qualified and experienced. Applicants shall demonstrate their qualifications to satisfy the Scope of Services. The firm’s submittal shall address all aspects of the RFP and clearly express the applicant’s understanding of the [**City/Town**]’s specific requirements, indicating the company’s personnel qualifications to conduct these services in a thorough and efficient manner.

[**City/Town of** \_\_\_\_\_] will select from offering firms presenting complete submittals by [**time am/pm on date**].

Selection will be based on:

* Company qualifications
* Relevant experience of company
* Relevant certifications and qualifications,
* Demonstration of understanding of the project description, scope of services and work to be performed
* Schedule and cost estimated for identical tasks in the scope of services
* Other relevant experience
* Current or prior work in [**City/Town of**\_\_\_\_\_\_]**.**

**Administrative Information**

1. **Standard Terms and Conditions of Request for Proposals**
	1. All submittals must be valid for a minimum period of ninety (90) days after the date of the submission.
	2. The [**City/Town of** ] makes no guarantees to any offering company until such time the [**City/Town of** \_\_\_\_\_] approves the contract.
	3. The [**City/Town of** \_\_] reserves the right to reject any or all proposals and to make the award as deemed in the best interest of the [**City/Town of**\_\_\_\_\_].
2. **Project Contact**

The [**City/Town of** ]’s contact for this project is [\_\_\_\_\_\_\_\_\_ **City Staff**]. Prospective applicants may make inquiries concerning the Request for Proposals to obtain clarification of the requirements. Direct all inquiries to:

[**Appropriate City Staff Title**

**Address City**, SC, **ZIP**

**Phone number** or by email at [**Email address**]

1. **Purpose**

This RFP provides perspective companies with sufficient information to prepare and submit quotations for consideration by the [**City/Town of** \_\_\_\_]. To be considered, each offering must demonstrate the ability to complete the scope of services outlined in the RFP.

1. **Submittal**

The offering shall be submitted to the attention of [\_\_\_\_\_\_\_\_\_\_\_ **City Staff**] at the [\_\_\_\_\_\_\_\_\_\_ **Department**] by [**time am/pm on date**]. Electronic copies may be submitted to [\_\_\_\_\_\_\_\_\_\_\_ **email address**]. The [\_\_\_\_\_\_\_\_\_ **Department**] is located at [\_\_\_\_\_\_\_\_\_\_ **Address**]. Late submissions will not be accepted. It is the responsibility of each firm submitting a proposal to ensure that the documents arrive at the [**Appropriate Department**] by the submittal deadline. The submission must be on the vendor’s letterhead. Applicants are encouraged to submit a digital copy of all or part of the proposal for ease of distribution.

1. **Response Material Ownership**

All materials submitted regarding the RFP become the property of the [**City/Town of** ] and will only be returned at the [**City/Town**]’s option. Responses may be viewed by any person after the final selection has been made. The [**City/Town**] has the right to use any or all of the material outlined in the Proprietary Information above.

1. **Incurring Costs**

The [**City/Town**] is not liable for any costs incurred by those who have submitted proposals prior to issuance of a signed contract.

1. **Acceptance of Scope of Services**

The Scope of Services will become contractual obligations if a subsequent agreement is reached. Failure of the selected firm to accept these obligations may result in cancellation of the award.

1. **Acceptance Time**

The [**City/Town of** \_\_\_\_\_\_] intends to make a selection by [**Date**].

1. **Payment for Services**

The Vendor agrees to bill the [**City/Town of**\_\_\_\_\_\_\_\_] at an interval of **[monthly, quarterly]** with the invoice to include reporting on completed tasks, percent completion and any reasons for anticipated delays in deliverables. Vendor to allow 30 days for payment to be received from date of receipt by agency.