CITY OF BETHLEHEM
INTER-DEPARTMENTAL CORRESPONDENCE

SUBJECT: Request for Approval by City Council of Contract Award or Contract Price Increase Pursuant to City Ordinance, Article 121.05 (a)

Project or Contract Reference: Urban Forestry GIS Database Development

TO: City Council, all members, and Council Solicitor

FROM: Michael Alkhal, P.E., Director of Public Works/City Engineer

DATE: July 7, 2020

On behalf of the Administration, pursuant to City Ordinances, Article 121.05, I request City Council's approval of the following recommendation of the referenced contract award or price increase.

- Check Type of Contract or Change:

  _____ The contract is for over $50,000 and required to be bid under the Third Class City Code. We have advertised the above referenced project and received qualified bids. We recommend award of the contract to the bidder identified and for the reasons stated below.

  _____ The recommendation is for a price increase of 10% or more for an existing contract over $50,000 that was previously bid and awarded under the Third Class City Code.

  ___✓___ The contract is for the engagement of professional services. We have received a proposal for professional services in connection with above referenced project. We recommend award of the contract to:

- Is the contract appropriation or price increase included in this year's budget? ✓ yes ___ no

  2020 Public Works' Urban Forestry Budget

- Identify contract funding sources (general fund, grants, loans, etc.....):

  Account 050301-42047

- The name and address of the recommended Professional Service Provider are:

  ArborPro Inc.
  22605 La Palma Ave #509
  Yorba Linda, CA 92887

- Term of contract or estimated completion date, subject to standard extensions:

  8 weeks from the NPT

- Description of project or scope of services to be provided:

  Consultant will collect data concerning the location, size, and condition of street trees throughout the City and create a tree inventory and report which will detail the health and maintenance needs, removal requirements, and areas for tree plantings, as well as the carbon sequester rates and capabilities of such trees.

- State the actual or estimated price to the City or the proposed Department budget allowance for the initial term; and state payment rate per unit of service if applicable:

  $44,250

- Number of renewal term options and duration of each renewal, if any:

  None

- Maximum dollar value of all renewals provided for beyond the original term as if all renewals were exercised:

  $44,250

- Reasons for recommendation of Administration and Council approval of contract:

  Three (3) proposals were received from qualified Urban Forestry GIS database development consultants. Phone and in person interviews were conducted with the 3 firms with the cost ranging from $44,250 to $107,546 with the lowest price proposal being ArborPro Inc. ArborPro Inc. has twelve field arborists that are ISA Certified Arborists, TRAQ qualified arborists, and Board-Certified Master Arborists. Finally, ArborPro Inc. has completed both small and large scale tree inventories throughout the United States. Among these, are inventories for Alexandria VA, Jacksonville FL, San Francisco, San Diego and Cedar Rapids. Therefore, it is recommended a contract be awarded to ArborPro Inc. at their proposal of $44,250.

Please approve this recommendation by passing the accompanying resolution. A vote of final approval is requested at the first City Council agenda listing of this matter.

By: _____
                                    Department Head

Copies To: Mayor
                Director of Administration
                Director of Budget and Finance
                Law Bureau
                Purchasing Bureau
                Controller
                Project Manager
Attachment: proposed resolution

RESOLUTION NO. _____

<u>Authorization for Contract or Amendment under Article 121.05(a)</u>

BE IT RESOLVED by the Council of the City of Bethlehem that the Mayor and the Controller and/or such other City officials as deemed appropriate by the City Solicitor, are hereby authorized to execute a Contract or Amendment and such other agreements and documents as are deemed by the City Solicitor to be necessary and/or related thereto, with the following named contractor, for the uses and purposes indicated in the supporting Recommendation of Award of Bid or Contract dated July 7, 2020.

1. Name of Contractor: ArborPro Inc.

2. Project or Contract Reference: Urban Forestry GIS Database Development

Sponsored by _____

_____

ADOPTED by Council this _____ day of _____, 20___.

_____
President of Council

ATTEST:

_____
City Clerk

ARBORPRO, INC.

Proposal for Tree Inventory Services

February 4, 2020

David Shaffer
City of Bethlehem
10 East Church Street
Bethlehem, PA 18018

OVERVIEW

ArborPro, Inc. is a full-service Urban Forestry consulting company. We provide municipalities, universities, and government agencies with an array of products and services. Our core services include; GPS tree inventories, GIS-based management software, Urban Forest Management Plans, Planting Plans, Hazardous Tree Assessments, Utility Vegetation Management, and public education on the benefits of trees and tree inventories. We have been providing these services for over 15 years.

We have a total staff of 200 full-time employees which includes twelve field Arborists to perform our data collection services. Our field staff includes ISA Certified Arborists, TRAQ qualified arborists, and a Board-Certified Master Arborist. While our corporate offices are in California, our employees work remotely and reside in many regions of the country; including Louisiana, Florida, and Michigan.

We have completed both small- and large-scale tree inventory projects throughout the United States. Among these, are inventories for Alexandria VA, Jacksonville FL, San Francisco, San Diego and Cedar Rapids.

OUR PROPOSAL

We have used an estimate of 15,000 trees for this proposal based on information provided by the City. The cost outlined below is a per tree price. The final cost of the project will be determined by the actual number of sites collected and can be adjusted to accommodate additional data collection. A Geographic Information System (GIS)-based inventory of maintained trees, planting sites, and stumps located along public rights-of-way (ROW) will be performed based on American National Standards Institute (ANSI) A300 standards. Data fields collected during the assessment will include but are not limited to; address, utility conflict, species, height, DBH, canopy spread, condition, recommended maintenance, and additional observations.

PRICING

The following table details the pricing for delivery of the services outlined in this proposal.

Fixed Fees	Unit	Number of Trees	Price	Total
Tree Inventory Services	Per Tree	15,000	$2.95	$44,250
Total				$44,250

SOFTWARE

ArborPro will offer the City of Bethlehem a free, one-time, one-year trial of ArborPro Enterprise Software as part of the inventory & assessment project. The City's tree inventory data will be delivered in ArborPro's multi-purpose, Cloud based tree management software, and will also be provided as an Excel™ database and ESRI® shapefiles. ArborPro Enterprise gives the user the ability to access the database through any web enabled device; computer, smart phone, tablet, etc. While software is not a required component of this proposal, we are offering one year for free and have included the continued cost of our software for your review.

If the City chooses to continue using ArborPro's system after the first year, the following subscriptions are available.

Subscription Options

Term	Cost
One (1) Year	$2,250
Three (3) Years	$5,750
Five (5) Years	$9,000

If you have questions on this proposal, feel free to contact me at your convenience by email at cconlee@arborprousa.com or by phone at (714) 357-7261.

Thank you for your consideration,

Chris Conlee
Sales Manager
ArborPro, Inc.

ArborPro would like to provide our inventory services to the City with the full understanding that the objective in completing this inventory is for further planning of the City's urban forest. The inventory and resulting reports will provide the City with invaluable data for determining health and maintenance needs of the trees, removal requirements, as well as the carbon sequestered by the trees. Your urban forest offers value in many ways both financially and aesthetically and an inventory by ArborPro will be able to show you just how valuable it is and can be. Our approach will call for data collection and assessments to be performed by our in-house ISA certified arborists using hand held tablets.

Tree Inventory Data Fields

Data collected will contain at a minimum the following data attributes:

- GPS Coordinates with sub-meter accuracy
- Tree Location based on hierarchy – City, Zone, Address, On-Address, etc.
- Tree Name: Common Name, Genus and Species, plus variety if applicable
- Tree size: Diameter to the nearest inch at 4.5 feet above ground or diameter-breast height (DBH), height, and canopy diameter
- Number of trunks
- Risk Rating
- ISA based ANSI A300 (part 9) Standards review of the tree health and condition: Condition Assessment Methodology below
- Recommended maintenance for each tree based on ANSI A300 (part 9) Standards
- Overhead utilities (Y/N)
- Observations - Our Arborists will also provide each tree with a general observation. These observations will include presence of cavities, decay, pest problems, location issues, improper past pruning techniques, topped trees, structural problems, root problems, etc. Our staff will also notate any problems caused by the trees to any surrounding area, building, hardscape, sign clearance issues, etc.
- Hardscape damage (curb, sidewalk, street, etc.)
- Date of assessment

Operational Task List

Daily

- Data Collection will take place during the regular business hours of Monday – Friday, 7:30am – 5:00pm
- Data Review by GIS Analyst
- Quality Assurance Queries
- Abnormality Review
- Differential Correction

Weekly

- Map Review of Data Collected the Previous Week
- Error Correction
- Error Review with Data Collectors
- Data Delivery to Client in ArcGIS Shapefiles and Microsoft Excel
- Client Progress Reports of Data Collected Including Urban Forest Attribute Summaries and Maps

Tree Condition Assessment Methodology

Below is the standard tree condition assessment utilized by our team of arborists. We are willing to modify the definitions per the universities request. With regards to hazardous trees, many of our arborists maintain the ISA Tree Risk Assessment Qualification and will utilize the ISA protocols to rate hazardous trees.

Excellent 100% – The tree is near perfect condition; this determination is generally used for trees with no defects and young trees that have been properly maintained.

Very Good 90% – The tree is in very good condition with very minor defects that could be corrected by pruning. These trees generally "stand out" with respect to the aesthetic value they add to the Urban Forest.

Good 80% – The tree has no major structural problems; no significant damage from diseases or pests; no significant mechanical damage; a full, balanced crown, and normal twig condition and vigor for its species.

Fair 60% – The tree may exhibit the following characteristics: minor structural problems and/or mechanical damage; significant damage from non-fatal or disfiguring diseases; minor crown imbalance or thin crown; minor structural imbalance; or stunted growth compared to adjacent trees.

Poor 40% – The tree appears healthy but may have structural defects. This classification also includes healthy trees that have unbalanced structures or have been topped. Trees in this category may also have severe mechanical damage, decay, severe crown dieback or poor vigor/failure to thrive.

Very Poor 20%– The tree is in a physical state that requires immediate attention. Generally, these trees are recommended for a Priority One Removal

Dead 0%– Trees in advanced states of decline are not included. This category refers only to dead trees.

Maintenance Recommendation

Our Arborist will provide maintenance observations. Below is a list of standard maintenance recommendations these may be adjusted at our pre-job meeting if City staff would like to make any adjustments.

Priority One Prune – Trees which require pruning to remove deadwood and/or broken branches that pose an immediate safety risk that could result in personal injury or property damage. Trees have limbs that are more than 3 inches in diameter and pose an immediate safety risk. The trees that have been recommended for a priority 1 prune should be inspected by staff. These trees are in need of corrective maintenance.

Priority Two Prune – Trees having problems and conditions which may affect future safety, health or structure of the tree. This includes primarily large trees (over 20 feet in height) with minor amounts of deadwood and correctable structural problems.

Routine Prune – This includes pruning of trees with minor amounts of deadwood that pose little or no threat of personal injury or property damage and trees with correctable structural problems. Trees with growth patterns that will eventually obstruct or interfere with pedestrian or vehicular traffic, traffic control devices, lines of sight, or overhead utility lines are also included in this category. These trees are in satisfactory condition and can be pruned on a regular cycle.

Priority One Removal – Trees that are dead or have one or more defects that cannot be cost-effectively or practically remedied. Such defects include extensive trunk decay and severely decayed or weakened v-type crotches. These trees should be surveyed by staff and scheduled for removal and replacement if appropriate. This category includes trees that reflect dangerous conditions combined with significant targets such as proximity to high volume sidewalks or play areas.

Priority Two Removal - Trees that are structurally compromised but may be expected to be removed in 2 to 5 years. These trees should be scheduled for removal over a reasonable time period based on available funds. The removal process should be followed by a replanting program.

Training Prune – The most important time to prune a tree is within the first five years following planting. By properly pruning a young tree the city will save future maintenance costs that result from poor branch structure, dual leaders, etc.