Business Unit & Req. # 60460000 156968217 ECCN: _____ Total Amount: $250,000

Note: This Sole Source Certification will become a public document, open to public inspection; therefore, you should be certain all material facts are true, relevant and clearly understandable.

SOLE SOURCE CERTIFICATION

Under the requirement of University of Florida Rule No. 6C1-3.020(5)(f)(2), the following is submitted in support of this request for authority to purchase, without bidding, the items available from only one source.

Note: Sole Source means that the item/service is unique and that the vendor is the only one from whom the item/service can be provided. Best Price alone cannot be used for sole source. If the item/service is available from more than one source of supply, best price must be determined through the competitive bid process.

A. Sole Source Vendor Company Name: Phoenix LiDAR systems

Contact Person: Raymond Akol

Address: 2113 Wells Branch Pkwy, Building 1, Suite 4000, Austin TX 78728 USA

Telephone: 1-323-577- 3366 ext. 117 Fax: _____ Email: rakol@phoenixlidar.com

B. Describe in lay language, what the item/service is and how it is to be used in your area of research. (cont. P2)

This item to be rented is a fully integrated hardware + software sensor system comprised of a laser scanner, visual camera, radiometric thermal imager with custom cooling shell, and dual upward-downward facing hyperspectral cameras, with sensor suite computational core and hard drive. It will be used to collect high-resolution three-dimensional data for an externally-funded project to measure forest structure and composition across the Apalachicola National Forest in Florida. The data will be post-processed in Spatial Explorer Pro, to create LAS format lidar point clouds with infused lab-calibrated reflectance, and visual and radiometric thermal information, as well as geotagged visual and thermal images, and atmospheric condition normalized hyperspectral reflectance orthomosaics. This suite of data will enable us to map all trees within the study area, measure their height and crown structure, and estimate the health of trees and ecosystems. ** see next page **

C. What feature or special condition of this commodity/service is unique and cannot be obtained from any other source? Why are these features or special conditions important to the research?(cont. P2)

The combination of hardware and software components used in this company's sensor suite system are distinctive and unique in their class. Specifically, the well-established and proven combined hardware and software capability of complete real-time data visualization and custom simultaneous integration of specific external sensors, including the OC Flame and Headwall Nano, are unique to this vendor and critical to this research. They are the only manufacturer of the Phoenix Scout Lidar system, which is also the only system that meets our research requirements, including full integration with our custom processing code. A separate system would not be able to collect the data types and fusion that are required for our funded projects and our research program in general, which would lead to delays of years in hardware and software integration with very large associated costs. ** see next page **

D. Is this product being purchased directly from the manufacturer? ☒ Yes ☐ No

If No, is it available from more than one dealer? ☐ Yes ☒ No

If Yes, it is available from more than one dealer, why can this item not be bid? (cont. P2)

E. Prior to submitting this requisition, did you investigate other possible sources? ☒ Yes ☐ No

If Yes: 1) Did you obtain quotes from the other sources? ☐ Yes ☒ No If Yes, attach copies.

2) Is this Vendor's price lower than the other sources? ☐ Yes ☐ No If No, justify the additional cost below.

NA

F. What efforts have been made to obtain the best price possible? Why do you feel this price is fair and reasonable? (cont. P2)

Phoenix LiDAR is the sole manufacturer and distributor of this unique system, including for sales, rentals, and maintenance. No comparable system is available or exists through any other manufacturer or source.

I / We, the undersigned, certify the above to be true and correct to the best of my / our knowledge and belief and the user and / or undersigned does not have a financial interest in the above named vendor.

DEPARTMENT APPROVAL	PURCHASING APPROVAL
I hereby certify the validity of the information and feel confident the Sole Source Certification will meet University criteria and would withstand any audit or vendor protest.	This acquisition is approved as a non-competitive purchase.
Eben N Broadbent SPECLab, UFL 2022.06.14 10:16:06-04'00' — Principal Investigator's Signature — Date: 06/14/22	Purchasing Coordinator Signature — Date: 6/27/22
FAILURE TO FILE A PROTEST IN ACCORDANCE WITH BOARD OF GOVERNORS (BOG) REGULATION 18.002 OR FAILURE TO POST THE BOND OR OTHER SECURITY AS REQUIRED IN THE BOG REGULATION 18.002 AND 18.003(3) SHALL CONSTITUTE A WAIVER OF PROTEST PROCEEDING.	N.J. Heredia — Purchasing Authorized Signature — Date: 6/27/2022

Sole Source Certification (Continued)

Please use the following sections to continue documentation if needed.

B. continued

Specific additional research questions uniquely capable of being addressed with this system, is simultaneously addressing individual tree crown 3D structure, with associated health status metrics from the hyperspectral data, and relationships of health and position in the tree crown, with its thermal status (e.g., temperature in C). Furthermore, we can uniquely do this with simultaneous collection of detailed structural information from the high-resolution visual sensor. Having this information be collected time-synchronized is key to successfully interpreting their data, as that changes second to second with very small variations in atmospheric conditions which influence solar incoming radiation (e.g., clouds cause shade). This information is critical for research on forest health as relates to climate change, topographic position, and/or, for example, how different tree species respond to short and long term changes in water availability, temperature, or nutrient status (such as induced by fire).

C. continued

As described in section B, the suite of research questions and objectives, all critical to the research program funding source, require the underlying hardware and software that supports full time-synchronized integration of the full sensor suite, and with the custom and proprietary software to enable real-time visualization and control of these sensors and collected data, as is required to properly gauge data collection quality in the field under often challenging data collection environments, and with difficult or infeasible recollects possible if data collection were to be incomplete. The sensor system can be mounted on any platform of choice, including trucks, tripods, aircraft, UAVs, etc... as is best suited to meet project deliverables.

The rental approach was decided upon in discussion with and by request of our funding source partners, as it is the most efficient and effective manner to obtain the required project data deliverables, which include tree stem and crown maps, calibrated hyperspectral reflectance derived tree health, 3D radiometrically calibrated thermal (C) point clouds, and high-res visual orthomosaics, in part as it includes sensor maintenance, calibration, and custom viewing and post-processing software licenses that would otherwise need to be purchased/paid for separately.

D. continued

E. continued

F. continued

Cert. Posted Jeffrey Hendel

Digitally signed by Cert. Posted Jeffrey Hendel
Date: 2022.06.27 08:44:22 -04'00'