

RESOLUTION NO. 2018 - 418

A RESOLUTION BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, AUTHORIZING THE COUNTY ADMINISTRATOR, OR DESIGNEE, TO AWARD RFQ NO. 19-16 AND TO EXECUTE AN AGREEMENT FOR DIGITAL ORTHOPHOTOGRAPHY AND LIDAR DELIVERABLES.

RECITALS

WHEREAS, the County desires to enter into contracts with Woolpert, Inc. to perform Digital Orthophotography and LiDAR Deliverables in accordance with RFQ No. 19-16; and

WHEREAS, the scope of the services shall consist of providing professional services for digital ortho photos for St. Johns County, Florida. The project area consists of 866 – 5,000’ x 5,000’ tiles for a total of 776 square miles. All tiles are full tiles where specific coastal tiles shall be collected within +/- 2 hours of Mean Lower Low Water (MLLW). The project also consists of providing LiDAR deliverables based on the Florida Department of Emergency Management/U.S. Geological Survey (FDEM/USGS) QL1 LiDAR data acquisition project which is to be made available as LAS files only. The County requires additional deliverables to the LAS files as follows: DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer; and

WHEREAS, through the County’s formal RFQ process, Woolpert, Inc. was selected as the highest ranked respondent to enter into contract with the County to perform the work referenced above; and

WHEREAS, the County has reviewed the terms, provisions, conditions and requirements of the proposed contract (attached hereto, an incorporated herein) and finds that entering into contract to complete the work services serves a public purpose; and

WHEREAS, the contract will be finalized after negotiations but will be in substantial conformance with the attached draft contract.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, as follows:

Section 1. The above Recitals are incorporated by reference into the body of this Resolution and such Recitals are adopted as finds of fact.

Section 2. The County Administrator, or designee, is hereby authorized to award RFQ 19-16 to Woolpert, Inc. and to conduct negotiations to provide the services set forth therein.

Section 3. Upon successful negotiations, the County Administrator, or designee, is further authorized to execute agreements in substantially the same form and format as the attached draft on behalf of the County to provide the scope of services as specifically provided in RFQ 19-16.

Section 4. To the extent that there are typographical and/or administrative errors that do not change the tone, tenor, or concept of this Resolution, then this Resolution may be revised without subsequent approval by the Board of County Commissioners.

PASSED AND ADOPTED by the Board of County Commissioners of St. Johns County, Florida, this 4 day of December, 2018.

BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA

By: Paul M. Waldron
Paul M. Waldron, Chair

ATTEST: Hunter S. Conrad, Clerk
By: Sam Hartman
Deputy Clerk

RENDITION DATE 12/6/18





CONTRACT AGREEMENT
RFQ NO: 19-16; Digital Orthophotography and LiDAR Deliverables
Master Contract #: 18-MAS-WOO-09979

This Contract Agreement, ("Agreement") is made as of this _____ day of _____, 2018, by and between **St. Johns County, FL** ("County"), a political subdivision of the State of Florida, with principal offices located at 500 San Sebastian View, St. Augustine, FL 32084, and **Wollpert, Inc.** ("Contractor"), authorized to do business in the State of Florida, with offices located at 4454 Idea Center Boulevard, Dayton, OH 45430-1500; Phone: (937) 461-5660; Fax: (937) 461-0743; and Email: jeff.lovin@wollpert.com.

In consideration of the mutual promises contained herein, the County and the Contractor agree as follows:

ARTICLE 1 – DURATION and EXTENSION

This Agreement shall become effective upon the Effective Date shown above, and shall remain in effect until 11:59 PM September 30, 2019, and may be extended as necessary to complete the required services, upon satisfactory performance by the Contractor, mutual agreement by both parties, and the availability of funds. While this Agreement may be extended as stated in this Article, it is expressly noted that the County is under no obligation to extend this Agreement. It is further expressly understood that the option of extension is exercisable only by the County, and only upon the County's determination that the Contractor satisfactorily performed the Services noted in the Contract Documents.

ARTICLE 2 - ENUMERATION OF CONTRACT DOCUMENTS

The term "Contract Documents" shall include all Bid Documents and any addenda/exhibits thereto; all Specifications; this Agreement, any duly executed amendments, addenda, and/or exhibits hereto; and any and all Change Orders.

ARTICLE 3 - SERVICES

The Contractor's responsibility under this Agreement is to provide any and all labor, materials, equipment, transportation, and supervision necessary to provide professional services for digital orthophotos for St. Johns County, Florida, as specified in the Scope of Work attached hereto as "Exhibit B", proposed by the Contractor, approved by the County in accordance with RFQ No: 19-16 and as otherwise provided in the Contract Documents.

The project area consists of 866 - 5,000' x 5,000' tiles for a total of 776 square miles. All tiles are full tiles where specific coastal tiles shall be collected within +/- 2 hours of Mean Lower Low Water (MLLW). The project also consists of providing LiDAR deliverables based on the FDEM/USGS QL1 LiDAR data acquisition project which is to be made available as LAS files only. The County requires additional deliverables to the LAS files as follows: DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer.

Services provided by the Contractor shall be under the general direction of St. Johns County Land Management Systems Department or other authorized County designee, who shall act as the County's representative throughout the duration of this Agreement.

ARTICLE 4 – SCHEDULE

The Contractor shall perform the required Services according to the schedule submitted and approved by the County. No changes to said schedule shall be made without prior written authorization from the County's representative.

ARTICLE 5 – COMPENSATION/BILLING/INVOICES

- A. The County shall compensate the Contractor a total lump sum amount not to exceed _____ (\$ _____) according to the pricing proposal attached hereto as Exhibit "A", which shall include any and all direct and indirect costs, and reimbursable expenses. The maximum amount available as compensation to Contractor under this Agreement shall not exceed the amount stated above without the County's express written approval, and amendment, to this Agreement.
- B. It is strictly understood that Contractor is not entitled to the above-referenced amount of compensation. Rather, Contractor's compensation is based upon Contractor's adhering to the Scope of Work, detailed in this Agreement. As such, the Contractor's compensation is dependent upon satisfactory completion and delivery of all work products and

deliverables noted in the Scope of Work, and detailed in this Agreement.

- C. The Contractor shall bill the County for services satisfactorily performed, and materials satisfactorily delivered at the end of the month services are completed. The signature of the Contractor's authorized representative on the submitted invoice shall constitute the Contractor's certification to the County that:
1. The Contractor has billed the County for all services rendered by it and any of its Contractors or sub-contractors through the date of the invoice;
 2. As of the date of the invoice, no other outstanding amounts are due from the County to the Contractor for services rendered;
 3. The reimbursable expenses, if any, have been reasonably incurred; and
 4. The amount requested is currently due and owing.
- D. Though there is no billing form or format pre-approved by either the County, or the Contractor, bills/invoices submitted by the Contractor shall include a detailed written report of the Work accomplished in connection with the Scope of Work, and must be submitted with a Request for Payment Form 1551, as provided by the County. The County may return a bill/invoice from the Contractor, and request additional documentation/information. Under such circumstances, the timeframe for payment will be extended by the time necessary to receive a verified bill/invoice.
- E. The Contractor's acceptance of the County's payment of an invoiced amount shall release the County from any claim by the Contractor, or by the Contractor's sub-contractors, for work performed but not invoiced during the time period indicated on the invoice for which payment was issued.
- F. Unless otherwise notified, bills/invoices should be delivered to:
- St. Johns County Land Management Systems Department
Attn: Gail Oliver, PLS, Director of Land Management Systems
500 San Sebastian View
St. Augustine, FL 32084
- G. FINAL INVOICE: In order for the County and the Contractor to reconcile/close their books and records, the Contractor shall clearly indicate "Final Invoice" on the Contractor's final bill/invoice to the County. Such indication establishes that all services have been satisfactorily performed and that all charges and costs have been invoiced to the County and that there is no further Work to be performed under this Agreement.

ARTICLE 6 – TRUTH-IN-NEGOTIATION CERTIFICATE

The signing of this Agreement by the Contractor shall act as the execution of a truth-in-negotiation certificate certifying that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current as of the date of this Agreement.

The original contract price and any additions thereto shall be adjusted to exclude any significant sums by which the County determines the contract price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract adjustments shall be made within one (1) year following the end of the Agreement.

ARTICLE 7 – ARREARS

The Contractor shall not pledge the County's credit or make it a guarantor of payment or surety for any contract, debt, obligation, judgement, lien, or any form of indebtedness. The Contractor further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Agreement.

ARTICLE 8 – TERMINATION

- A. This Agreement may be terminated by the County without cause upon at least thirty (30) calendar days advance written notice to the Contractor of such termination without cause.
- B. This Agreement may be terminated by the Contractor with cause upon at least fourteen (14) calendar days advance written notice of such termination with cause. Such written notice shall indicate the exact cause for termination.

ARTICLE 9 – NOTICE OF DEFAULT/RIGHT TO CURE

- A. Should the County fail to perform (default) under the terms of this Agreement, then the Contractor shall provide written notice to the County, which such notice shall include a timeframe of no fewer than fifteen (15) business days in which to cure the default. Failure to cure the default within the timeframe provided in the notice of default (or any such amount of time as mutually agreed to by the parties in writing), shall constitute cause for termination of this Agreement.
- B. Should the Contractor fail to perform (default) under the terms of this Agreement, then the County shall provide written notice to the Contractor, which such notice shall include a timeframe of no fewer than seven (7) calendar days in which to cure the default. Failure to cure the default within the timeframe provided in the notice of default (or any such amount of time as mutually agreed to by the parties in writing), shall constitute cause for termination of this Agreement.
- C. Consistent with other provisions in this Agreement, Contractor shall be paid for services authorized and satisfactorily performed under this Contract up to the effective date of termination.
- D. Upon receipt of a notice of termination, except as otherwise directed by the County in writing, the Contractor shall:
 - 1. Stop work on the date to the extent specified.
 - 2. Terminate and settle all orders and subcontracts relating to the performance of the terminated work.
 - 3. Transfer all work in process, completed work, and other material related to the terminated work to the County.
 - 4. Continue and complete all parts of the work that have not been terminated.

ARTICLE 10 – PERSONNEL

The Contractor represents that it has, or shall secure at its own expense, all necessary personnel required to perform the Work as provided in the Contract Documents. It is expressly understood that such personnel shall not be employees of, or have any contractual relationship with the County.

All Work required hereunder shall be performed by the Contractor, or under its supervision. All personnel engaged in performing the Work shall be fully qualified and, if required, authorized or permitted under federal, state and local law to perform such Work.

Any changes or substitutions in the Contractor's key personnel must be made known to the County's representative and written approval granted by the County before said change or substitution can become effective.

The Contractor warrants that all Work shall be performed by skilled and competent personnel to the highest professional standards in the field. The Contractor is responsible for the professional quality, technical accuracy, and timely completion of all work performed hereunder, and shall correct or revise any errors or deficiencies in the Work, without additional compensation.

ARTICLE 11 – SUBCONTRACTING

The County reserves the right to approve the use of any subcontractor, or to reject the selection of a particular subcontractor, and to inspect all facilities of any subcontractors in order to make a determination as to the capability of the subcontractor to perform the Work described in the Contract Documents. The Contractor is encouraged to seek minority and women business enterprises for participation in subcontracting opportunities.

If a subcontractor fails to satisfactorily perform in accordance with the Contract Documents, and it is necessary to replace the subcontractor to complete the Work in a timely fashion, the Contractor shall promptly do so, subject to approval by the County.

The County reserves the right to disqualify any subcontractor, vendor, or material supplier based upon prior unsatisfactory performance.

ARTICLE 12 – FEDERAL AND STATE TAX

In accordance with Local, State, and Federal law, the County is exempt from the payment of Sales and Use Taxes. The County shall provide a tax exemption certificate to the Contractor upon request. The Contractor shall not be exempt from the payment of all applicable taxes in its performance under this Agreement. It is expressly understood by the County and by the Contractor that the Contractor shall not be authorized to use the County's Tax Exemption status in any manner.

The Contractor shall be solely responsible for the payment and accounting of any and all applicable taxes and/or withholdings including but not limited to Social Security payroll taxes (FICA), associated with or stemming from Contractor's performance under this Agreement.

ARTICLE 13 – AVAILABILITY OF FUNDS

The County's obligations under this Agreement are contingent upon the lawful appropriation of sufficient funds, for that purpose, by the St. Johns County Board of County Commissioners. Pursuant to the requirements of Section 129.07, Florida Statutes, payment made under this Agreement shall not exceed the amount appropriate in the County's budget for such purpose in that fiscal year. Nothing in this Agreement shall create any obligation on the part of the Board of County Commissioners to appropriate such funds for the payment of services provided under this Agreement during any given County fiscal year. Moreover, it is expressly noted that the Contractor cannot demand that the County provide any such funds in any given County Fiscal Year.

ARTICLE 14 - INSURANCE

The Contractor shall not commence work under this Agreement until he/she has obtained all insurance required under this section and such insurance has been approved by the County. All insurance policies shall be issued by companies authorized to do business under the laws of the State of Florida. The Contractor shall furnish proof of Insurance to the County prior to the commencement of operations. The Certificate(s) shall clearly indicate the Contractor has obtained insurance of the type, amount, and classification as required by contract and that no material change or cancellation of the insurance shall be effective without thirty (30) days prior written notice to the County. Certificates shall specifically include the County as Additional Insured for all lines of coverage except Workers' Compensation and Professional Liability. A copy of the endorsement must accompany the certificate. Compliance with the foregoing requirements shall not relieve the Contractor of its liability and obligations under this Agreement.

Certificate Holder Address: St. Johns County, a political subdivision of the State of Florida
 500 San Sebastian View
 St. Augustine, FL 32084

The Contractor shall maintain during the life of this Agreement, Comprehensive General Liability Insurance with minimum limits of \$1,000,000 per occurrence, \$2,000,000 aggregate to protect the Contractor from claims for damages for bodily injury, including wrongful death, as well as from claims of property damages which may arise from any operations under this Agreement, whether such operations be by the Contractor or by anyone directly employed by or contracting with the Contractor.

The Contractor shall maintain during the life of this Agreement, Comprehensive Automobile Liability Insurance with minimum limits of \$2,000,000 combined single limit for bodily injury and property damage liability to protect the Contractor from claims for damages for bodily injury, including the ownership, use, or maintenance of owned and non-owned automobiles, including rented/hired automobiles whether such operations be by the Contractor or by anyone directly or indirectly employed by a Contractor.

The Contractor shall maintain during the life of the contract, Professional Liability or Errors and Omissions Insurance with minimum limits of \$1,000,000, if applicable.

The Contractor shall maintain during the life of this Agreement, adequate Workers' Compensation Insurance in at least such amounts as are required by the law for all of its employees (if three or more) per Florida Statute 440.02.

In the event of unusual circumstances, the County Administrator, or his designee, may adjust these insurance requirements.

ARTICLE 15 - INDEMNIFICATION

The Contractor shall indemnify and hold harmless the County, and its officers, and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, intentional/unintentional conduct or omission of the Contractor and other persons employed or utilized by the Contractor.

ARTICLE 16 – SUCCESSORS AND ASSIGNS

The County and the Contractor each binds itself and its partners, successors, executors, administrators and assigns to the other party of this Agreement and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement. Except as above, neither the County nor the Contractor shall assign, sublet, convey or transfer its interest in this Agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the County, which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the County and the Contractor.

ARTICLE 17 – NO THIRD PARTY BENEFICIARIES

It is expressly understood by the County, and the Contractor, and this Agreement explicitly states that no third party beneficiary status or interest is conferred to, or inferred to, any other person or entity.

ARTICLE 18 – REMEDIES

No remedy herein conferred upon any party is intended to be exclusive, or any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party of any right, power, or remedy hereunder shall preclude any other or further exercise thereof.

In any action brought by either party for the enforcement of the obligations of the other party, the prevailing party shall be entitled to recover reasonable attorney's fees.

ARTICLE 19 – CONFLICT OF INTEREST

The Contractor represents that it presently has no interest and shall acquire no interest, either directly or indirectly, which would conflict in any manner with the performance of services required hereunder. The Contractor further represents that no person having any interest shall be employed for said performance.

The Contractor shall promptly notify the County, in writing, by certified mail, of all potential conflicts of interest for any prospective business association, interest or other circumstance, which may influence or appear to influence the Contractor's judgment or quality of services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that the Contractor may undertake and request an opinion of the County; whether such association, interest, or circumstance constitutes a conflict of interest if entered into by the Contractor.

The County agrees to notify the Contractor of its opinion by certified mail within thirty (30) days of receipt of notification by the Contractor. If, in the opinion of the County, the prospective business association, interest or circumstance would not constitute a conflict of interest by the Contractor, the County shall so state in the notification and the Contractor shall, at his/her option enter into said association, interest or circumstance and it shall be deemed not in conflict of interest with respect to services provided to the County by the Contractor under the terms of this Agreement.

ARTICLE 20 – EXCUSABLE DELAYS

The Contractor shall not be considered in default by reason of any delay in performance if such delay arises out of causes reasonably beyond the Contractor's control and without its fault or negligence. Such cases may include, but are not limited to: acts of God; the County's omissive and commissive failures; natural or public health emergencies; freight embargoes; and severe weather conditions.

If delay is caused by the failure of the Contractor's subcontractor(s) to perform or make progress, and if such delay arises out of causes reasonably beyond the control of the Contractor and its subcontractor(s) and is without the fault or negligence of either of them, the Contractor shall not be deemed to be in default.

Upon the Contractor's request, the County shall consider the facts and extent of any delay in performing the work and, if the Contractor's failure to perform was without its fault or negligence, the Contract Schedule and/or any other affected provision of this Agreement shall be revised accordingly; subject to the County's right to change, terminate, or stop any or all of the Work at any time.

ARTICLE 21 – DISCLOSURE AND OWNERSHIP OF DOCUMENTS

The Contractor shall deliver to the County for approval and acceptance, and before being eligible for final payment of any amounts due, all documents and materials prepared by and for the County under this Agreement.

All written and oral information not in the public domain, or not previously known, and all information and data obtained, developed, or supplied by the County, or at its expense, shall be kept confidential by the Contractor and shall not be disclosed to any other party, directly or indirectly, without the County's prior written consent, unless required by a lawful order. All drawings, maps, sketches, and other data developed, or purchased under this Agreement, or at the County's expense, shall be and remains the County's property and may be reproduced and reused at the discretion of the County.

The County and the Contractor shall comply with the provisions of Chapter 119, Florida Statutes (Public Records Law).

All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party pursuant hereto, including but not limited to, any representations made herein relating to disclosure or ownership of documents, shall survive the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby.

ARTICLE 22 – INDEPENDENT CONTRACTOR RELATIONSHIP

The Contractor is, and shall be, in the performance of all work services and activities under this Agreement, an independent Contractor, and not an employee, agent, or servant of the County. All persons engaged in any of the work or services performed pursuant to this Agreement shall at all times and in all places be subject to the Contractor's sole direction, supervision, and control.

The Contractor shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the Contractor's relationship and the relationship of its employees to the County shall be that of an independent Contractor and not as employees or agents of the County. The Contractor does not have the power or authority to bind the County in any promise, agreement or representation other than specifically provided for in this Agreement.

ARTICLE 23 – CONTINGENT FEES

Pursuant to Section 287.055(6), Florida Statutes, the Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Contractor to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Agreement.

Violation of this section shall be grounds for termination of this Agreement. If this Agreement is terminated for violation of this section, the County may deduct from the contract price, or otherwise recover, the full amount of such fee, commission, percentage, gift, or other consideration.

ARTICLE 24 – ACCESS AND AUDITS

The Contractor shall maintain adequate records to justify all charges, expenses, and costs incurred in performing the work for at least three (3) years after completion of this Agreement. The County shall have access to such books, records, and documents as required in this section for the purpose of inspection or audit during normal business hours, at the County's cost, upon five (5) days written notice.

ARTICLE 25 – NONDISCRIMINATION

The Contractor warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, physical handicap, sex, age or national origin.

ARTICLE 26 – ENTIRETY OF CONTRACTUAL AGREEMENT

The County and the Contractor agree that this Agreement, signed by both parties sets forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein, or are incorporated by reference into this Agreement. None of the provisions, terms, conditions, requirements, or responsibilities noted in this Agreement may be amended, revised, deleted, altered, or otherwise changed, modified, or superseded, except by written

instrument, duly executed by authorized representatives of both the County, and the Contractor.

ARTICLE 27 – ENFORCEMENT COSTS

If any legal action or other proceeding is brought for the enforcement of this Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any provisions of this Agreement, the successful or prevailing party or parties shall be entitled to recover reasonable attorney's fees, court costs and all reasonable expenses even if not taxable as court costs (including, without limitation, all such reasonable fees, costs and expenses incident to appeals), incurred in that action or proceedings, in addition to any other relief to which such party or parties may be entitled.

ARTICLE 28 – COMPLIANCE WITH APPLICABLE LAWS

Both the County and the Contractor shall comply with any and all applicable laws, rules, regulations, orders, and policies of the County, State, and Federal Governments.

ARTICLE 29 – AUTHORITY TO PRACTICE

The Contractor hereby represents and warrants that it has and shall continue to maintain all licenses and approvals required to conduct its business, and that it shall at all times, conduct its business activities in a reputable manner.

ARTICLE 30 – SEVERABILITY

If any term or provision of this Agreement, or the application thereof to any person or circumstances shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement, or the application of such items or provision, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected and every other term and provision of this Agreement shall be deemed valid and enforceable to the extent permitted by law.

ARTICLE 31 - AMENDMENTS AND MODIFICATIONS

No amendments or modifications of this Agreement shall be valid unless in writing and signed by each of the parties.

The County reserves the right to make changes in the work, including alterations, reductions therein or additions thereto. Upon receipt by the Contractor of the County's notification of a contemplated change, the Contractor shall: (1) if requested by the County, provide an estimate for the increase or decrease in cost due to the contemplated change; (2) notify the County of any estimated change in the completion date; and (3) advise the County in writing if the contemplated change shall effect the Contractor's ability to meet the completion dates or schedules of this Agreement. If the County instructs in writing, the Contractor shall suspend work on that portion of the project, pending the County's decision to proceed with the change. If the County elects to make the change, the County shall issue a Change Order for changes, or a contract change order, if the original contract is to be changed or amended the Contractor shall not commence work on any such change until such written change order has been issued and signed by each of the parties.

ARTICLE 32 – FLORIDA LAW & VENUE

This Agreement shall be governed by the laws of the State of Florida. Any and all legal action necessary to enforce this Agreement shall be held in St. Johns County, Florida.

ARTICLE 33 – ARBITRATION

The County shall not be obligated to arbitrate or permit any arbitration binding on the County under any of the Contract Documents or in connection with the project in any manner whatsoever.

ARTICLE 34 - NOTICES

All notices required in this Agreement shall be sent by certified mail, return receipt requested, and if sent to the County shall be mailed to:

St. Johns County Purchasing Department
Attn: Jaime T. Locklear, MBA, CPPB, FCCM, Purchasing Manager
500 San Sebastian View
St. Augustine, FL 32084

and if sent to the Contractor shall be mailed to:

Woolpert, Inc.
Attn: Jeff S. Lovin, CP, PS, Senior Vice President
4454 Idea Center Boulevard
Dayton, OH 45430-1500

ARTICLE 35 - HEADINGS

The heading preceding the articles and sections herein are solely for convenience of reference and shall not constitute a part of this Agreement, or affect its meaning, construction or effect.

ARTICLE 36 –PUBLIC RECORDS

- A. The cost of reproduction, access to, disclosure, non-disclosure, or exemption of records, data, documents, and/or materials, associated with this Agreement shall be subject to the applicable provisions of the Florida Public Records Law (Chapter 119, Florida Statutes), and other applicable State and Federal provisions. Access to such public records, may not be blocked, thwarted, and/or hindered by placing the public records in the possession of a third party, or an unaffiliated party.
- B. In accordance with Florida law, to the extent that Contractor's performance under this Contract constitutes an act on behalf of the County, Contractor shall comply with all requirements of Florida's public records law. Specifically, if Contractor is expressly authorized, and acts on behalf of the County under this Agreement, Contractor shall:
- (1) Keep and maintain public records that ordinarily and necessarily would be required by the County in order to perform the Services;
 - (2) Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost as provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
 - (3) Ensure that public records related to this Agreement that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by applicable law for the duration of this Agreement and following completion of this Agreement if the Contractor does not transfer the records to the County; and
 - (4) Upon completion of this Agreement, transfer, at no cost, to the County all public records in possession of the Contractor or keep and maintain public records required by the County to perform the Services.

If the Contractor transfers all public records to the County upon completion of this Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the County's information technology systems.

Failure by the Contractor to comply with the requirements of this section shall be grounds for immediate, unilateral termination of this Agreement by the County.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: 500 San Sebastian View, St. Augustine, FL 32084, (904) 209-0805, publicrecords@sjcfl.us

ARTICLE 37 – USE OF COUNTY LOGO

Pursuant to, and consistent with, County Ordinance 92-2 and County Administrative Policy 101.3, the Contractor may not manufacture, use, display, or otherwise use any facsimile or reproduction of the County Seal/Logo without express written

approval St. Johns County, Florida.

ARTICLE 38 – SURVIVAL

It is explicitly noted that the following provisions of this Agreement, to the extent necessary, shall survive any suspension, termination, cancellation, revocation, and/or non-renewal of this Agreement, and therefore shall be both applicable and enforceable beyond any suspension, termination, cancellation, revocation, and/or non-renewal: (1) Truth-in-Negotiation; (2) Federal and State Taxes; (3) Insurance; (4) Indemnification; (5) Access and Audits; (6) Enforcement Costs; and (7) Access to Records.

ARTICLE 39 – AUTHORITY TO EXECUTE

Each party represents that it has the lawful authority to enter into this Agreement and has authorized the execution of this Agreement by the party’s authorized representative shown below.

IN WITNESS WHEREOF, authorized representatives of the COUNTY, and CONTRACTOR have executed this Contract Agreement on the day and year below noted.

ST. JOHNS COUNTY, FL:

CONTRACTOR:

Printed Name & Title County Representative

Woolpert, Inc.
Company Name

Signature County Representative

Signature of Contractor Representative

Date of Execution

Printed Name & Title

ATTEST:
ST. JOHNS COUNTY, FL
CLERK OF COURT

Date of Execution

Deputy Clerk

Date of Execution

LEGALLY SUFFICIENT

Deputy County Attorney

Date of Execution

RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

EXHIBIT "A" – CONTRACTORS'S PRICING PROPOSAL

RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

EXHIBIT "B" – SCOPE OF SERVICES

A. PROJECT DESCRIPTION

The project consists of providing professional services for digital orthophotos for St. Johns County, Florida. The project area consists of 866 - 5,000'x 5,000' tiles for a total of 776 square miles. All tiles are full tiles where specific coastal tiles shall be collected within +/- 2 hours of Mean Lower Low Water (MLLW).

The project also consists of providing LiDAR deliverables based on the FDEM/USGS QL1 LiDAR data acquisition project which is to be made available as LAS files only. The County requires additional deliverables to the LAS files as follows: DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer.

B. SCOPE OF SERVICES

The scope of services for this project shall include providing all of the following:

Aerial Services

- Obtain new 4-band (RGB/NIR) aerial imagery at nominal 0.5-foot ground sample distance (GSD).
- Use existing LiDAR data acquired by the County in 2013 for ortho-rectification
- Produce new 4-band digital orthoimagery with a 0.5-foot pixel resolution.
- Metadata – FGDC Compliant

Ground Control

Airborne GPS and IMU systems or equivalent methodology, along with ground GPS reference station and ground survey are required to meet the horizontal accuracy specification. Contractor is responsible for determining the design and extent of new ground survey, and/or the application of past ground surveys to meet the horizontal accuracy specification.

The contractor is responsible for any ground GPS reference station operations during the imagery acquisition phase of the project.

The County Survey Division is available for targeting and obtaining x,y,z values on targets and/or photo id points.

The 2016 Orthophoto project was based on a horizontal datum of Florida State Plane East, North American Datum of 1983/2011 adjustment. The vertical datum was referenced to North American Vertical Datum of 1988 (NAVD88), Geoid 12A. Units are US Survey Feet. During the project implementation phase the County and the Contractor will consider using Florida State Plane East, North American Datum of 1983/2011 adjustment (or most current adjustment) and North American Vertical Datum of 1988 (NAVD88), Geoid 12A (or most current geoid).

The County must approve any proposed control methodology and datum references prior to image acquisition.

Aerial Imagery

During January/February 2019 the Contractor is to acquire new color and near-infrared imagery simultaneously across the project area.

All imagery shall be collected during optimal leaf-off conditions relative to vegetation cover, sun angle, and client approval. The sun angle shall be 30-degrees or greater, and streams should be within their normal banks, unless otherwise negotiated. During flight planning and acquisition, a significant effort should be made to limit clouds, snow, fog, haze, smoke, or other ground obscuring conditions in the imagery. In no case shall the maximum cloud cover exceed 5% per image.

In addition, the Contractor shall limit flight planning and acquisition to +/- 2 hours of MLLW tide for specific coastal beach flight lines. Images are to be captured using an end lap of 60 percent, and side lap of 30 percent, and maximum

tilt of 3 degrees if using a framing sensor. If a push broom sensor is used, side lap may be reduced to 20%.

Contractor shall provide a flight line layout plan prior to the commencement of the acquisition phase. Contractor shall also be responsible for providing all the pertinent information required such as flight maps, flight log, aircraft, ABGPS, etc. as part of the Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17.

Image Quality

Digital imagery shall be uniform in contrast without abrupt variations between image frames/strips. Imagery shall be free of blemishes and artifacts that obscure ground feature detail.

Aerial Triangulation

The ground control network and digital aerial imagery shall undergo softcopy aerial triangulation to extend and densify the ground control across the entire project area.

Digital Orthoimagery

Contractor shall produce 4-band digital orthoimagery with a 0.5-foot pixel resolution. The images shall be mosaicked to produce imagery with consist tone, contrast, and color balance. Special attention shall be given to the placement of mosaic lines in developed areas so as not to bi-sect buildings, bridges or other man-made structures not at ground level, Special care around bridges and overpasses shall be given to correct excessive distortion. Overpasses/bridges along roadways should also retain location and geometry.

Digital Orthoimagery files will be delivered as uncompressed GeoTIFF with world file (.tfw). The imagery shall be delivered based upon the County's modular system of 5,000' X 5,000' tiles and will be labeled based on the concatenated lower left coordinates. Full tiles are to be delivered, partial tiles shall not be provided.

Digital Orthoimagery files will also be delivered as an image cache to be loaded into ArcGIS Server with the following specifications:

- Projection: WGS 1984 Web Mercator Auxiliary Sphere
- Image Format: Mixed
- Storage Format: Exploded
- Number of Levels: 21
- Tile Height & Width: 256
- DPI: 96

In addition, a compressed image dataset of the entire county is required in MrSID format with a 20:1 compression ratio. The 2016 Orthophoto Project was divided into 5 areas for final deliverables in MrSID format. During the project implementation phase the County and the Contractor will finalize the breakdown of the areas for deliverables.

Accuracy Standards

The orthoimagery shall meet or exceed American Society for Photogrammetry and Remote Sensing (ASPRS) Positional Accuracy Standards for Digital Geospatial Data as follows:

Table 1 – Absolute Accuracy Requirement	
RMSE	Horizontal Accuracy at 95% Confidence Level
1.0 feet	2.4 feet

QA/QC

Contractor will provide an online QA/QC tool to be used to review the Digital Orthophotography. This tool will allow the user to view the imagery and create redline markups for review and to receive feedback. The tool will also allow the user to add additional layers that can be overlaid with the imagery to assist in the review process.

LiDAR Deliverables Project

Generate a DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer, from the FDEM/USGS QL1 LiDAR data acquisition project.

Orthophoto Deliverables

- One set of 4-band digital orthoimagery tiles 0.5-foot pixel resolution in uncompressed GeoTIFF format with .tif, covering the entire project area.
- Image cache in ESRI ArcGIS Server format
- One 3-band color digital orthoimage with a 0.5-foot pixel resolution in MrSID format, compression ratio of 20:1.
- Flight lines ESRI ArcGIS v10 shapefile or geodatabase format.
- Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17
- Each deliverable product will include FGDC compliant metadata.
- Final deliverables (all items listed above) of all digital data will be provided to St. Johns County, FL on an external USB 3.0 hard drive.

LiDAR Deliverables

The LiDAR Deliverables will be based on the FDEM/USGS QL1 LiDAR data acquisition project which is to be made available as LAS files only.

- DEM (Bare Earth Surface) (Esri ArcGrid format)
- Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats)
- Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer
- Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17
- Each deliverable product will include FGDC compliant metadata.
- Final deliverables (all items listed above) of all digital data will be provided to St. Johns County, FL on an external USB 3.0 hard drive.

Ownership

All data received from the Contractor will become the property of St. Johns County, Florida.



St. Johns County Board of County Commissioners

Purchasing Division

NOTICE OF INTENT TO AWARD

November 8 2018

RE: RFQ No: 19-16; Digital Orthophotography and LIDAR Deliverables

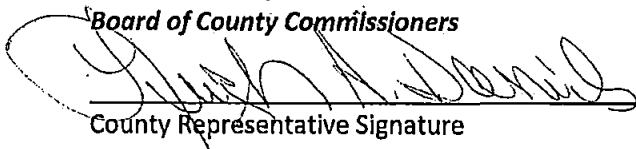
Please be advised that the Purchasing Department of St. Johns County is issuing this Notice of Intent to Award a contract, after successful negotiations, to Woolpert, Inc. as the top ranked firm under RFQ No: 19-16; Digital Orthophotography and LIDAR Deliverables. This notice will remain posted on the **St. Johns County Purchasing Department bulletin board** until 11:00 A.M., Wednesday, November 14, 2018.

Any person (including any bidder or proposer) who is, or claims to be, adversely affected by the County's decision or proposed decision shall file a written Notice of Protest with the Purchasing Department of St. Johns County within 72 hours after the posting of the notice of decision or proposed decision. Failure to file a Notice of Protest within the time prescribed in Section 304.10 of the St. Johns County Purchasing Manual (the Bid Protest Procedure), or failure to post the bond or other security required by the County within the time allowed for filing a bond, shall constitute a waiver of proceedings and a waiver of the right to protest. The protest procedures may be obtained from the Purchasing Department and are included in the County's Purchasing Manual. All of the terms and conditions of the County Purchasing Manual are incorporated herein by reference and are fully binding.

Should the Purchasing Department receive no protests in response to this notice, an agenda item will be submitted to the St. Johns County Board of County Commissioners for their consideration and subsequent approval to enter into negotiations.

Please forward all correspondence, requests or inquiries directly to Diana M. Fye, AS, CPPB, Procurement Coordinator, at dfye@sjcfl.us.

Sincerely,
St. Johns County
Board of County Commissioners



County Representative Signature

Leigh Daniels, CPPB, Procurement Supervisor / Acting Purchasing Manager
Name & Title (Printed)

Date: 11/8/18



**ST. JOHNS COUNTY
PURCHASING DEPARTMENT**

500 San Sebastian View
St. Augustine, Florida 32084

I N T E R O F F I C E M E M O R A N D U M

TO: Gail Oliver, Land Management Director/County Surveyor
FROM: Diana M. Fye, CPPB, Procurement Coordinator
SUBJECT: RFQ # 19-16; Digital Orthophotography and LIDAR Deliverables
DATE: December 8, 2016

Attached please find a copy of the RFP Evaluation Summary Sheet for your file as recorded and verified at the Evaluation Committee Meeting.

Please review, evaluate and make a written recommendation for this project. Also, indicate the budgeted amount for this item along with the appropriate charge code and return to my attention as soon as possible.

Please let me know if I can assist your department in any other way.

Dept. Approval

Gail Oliver

Date:

November 8, 2018

Budget Amount:

\$490,000.00

Account Funding Title:

Countywide Contour Mapping; Digital Orthophotography

Funding Charge Code

1104-1190-53120; \$350,000.00

0001-0101-53150; \$108,000.00

4440-4401-53150; \$16,000.00

4444-4409-53150; \$16,000.00

Award to:

Woolpert, Inc.

Award Amount:

Not to Exceed \$490,000.00

EVALUATION SUMMARY SHEET

ST. JOHNS COUNTY, FLORIDA

Date: November 8, 2018
 RFQ: 19-16; Digital Orthophotography and
 LiDAR Deliverables

FIRM	RATER Gail Oliver	RATER Doug Tarbox	RATER Tom Tibbitts	RATER Mike Campbell	RATER Scott Lane	TOTAL	RANK	COMMENTS
Woolpert, Inc.	105	103	103	101	102	514	1	
GPI Geospatial, Inc.	64	93	103	82	72	414	2	
Surdex Corporation	74	96	86	90	58	404	3	
Pictometry International Corp.	55	95	90	80	67	387	4	

APPROVED: Acting Purchasing Manager

Land Management Director

NOTE:

THE RANKING SHOWN ABOVE MUST BE FOLLOWED UNLESS SPECIAL CONDITIONS MERIT A CHANGE IN THE NEGOTIATING ORDER, IN THIS CASE, THE SPECIAL CONDITIONS MUST BE EXPLAINED IN DETAIL IN THE COMMENTS SECTION OR ATTACHED TO THIS RANKING SHEET.

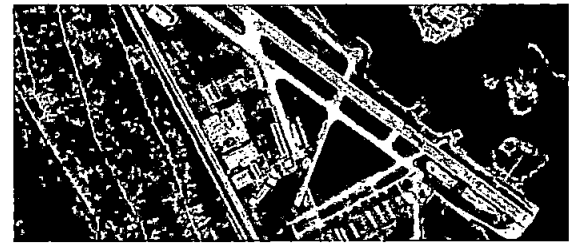
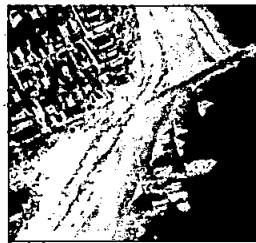
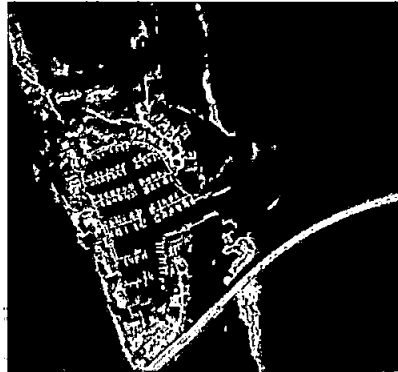
POSTING TIME/DATE FROM 11:00 a.m. November 8, 2018, UNTIL 11:00 a.m. November 14, 2018.

ANY RESPONDENT AFFECTED ADVERSELY BY AN INTENDED DECISION WITH RESPECT TO THE AWARD OF ANY REQUEST FOR PROPOSAL, SHALL FILE WITH THE PURCHASING DEPARTMENT FOR ST. JOHNS, A WRITTEN NOTICE OF INTENT TO FILE A PROTEST NOT LATER THAN SEVENTY-TWO (72) HOURS (EXCLUDING SATURDAY, SUNDAY AND LEGAL HOLIDAYS) AFTER THE POSTING OF THE SUMMARY SHEET. PROTEST PROCEDURES MAY BE OBTAINED IN THE PURCHASING DEPARTMENT.

RFQ No.: 19-16:

Digital Orthophotography and Lidar Deliverables

ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS



NOVEMBER 1, 2018


WOOLPERT

Section 1 | Cover Page



Section 1: Cover Page

RFQ NO. 19-16; DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES

PART VIII: – ATTACHMENTS/FORMS

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES**

COVER PAGE

**SUBMIT ONE (1) HARD-COPY ORIGINAL
AND ONE (1) EXACT ELECTRONIC PDF COPY ON USB DRIVE TO:**

**PURCHASING DEPARTMENT
ST. JOHNS COUNTY
500 SAN SEBASTIAN VIEW
ST. AUGUSTINE, FLORIDA 32084**

FULL LEGAL NAME OF COMPANY: Woolpert, Inc.

MAILING ADDRESS: 11486 Corporate Boulevard, Suite 190, Orlando, FL 32817

CONTACT EMAIL ADDRESS: eric.cole@woolpert.com

DATE: November 1, 2018



Section 2 | Cover Letter



Section 2: Cover Letter



St. Johns County Purchasing Department
500 San Sebastian View
St. Augustine, FL 32084

Woolpert, Inc. is pleased to submit our proposal to St. Johns County to provide digital aerial photogrammetric and lidar services. Nationally recognized for our outstanding professional competence in these core services, our specialized personnel provide the experience, knowledge, and personal commitment to successfully complete the assigned work within the County's budget and schedule.

Woolpert, Inc. is a national architecture, engineering and geospatial (AEG) corporation that delivers value to clients by strategically blending engineering excellence with leading-edge technology and geospatial applications. With a dynamic Research and Development department, Woolpert works with inventive business partners like Google; operates a fleet of planes, sensors and unmanned aerial systems (UAS); and continually pushes industry boundaries by working with advanced technologies. Woolpert's mission is to help our clients progress—and become more progressive.

With regional Florida offices in Orlando, Pensacola, Tampa and Miami, and with the experience providing mapping services in Florida for decades—*particularly for St. Johns County for the past 20 years*—we understand the geographic and climatic conditions in the area, as well as the unique issues Florida faces with population growth and the economic accelerators necessitating the need for accurate and up-to-date mapping.

As the teams' authorized signatory and a Woolpert Senior Vice President, I will administer this contract from Woolpert's headquarters office located at:

- 4454 Idea Center Boulevard, Dayton, OH 45430.1500
Office: 937.461.5660; Fax: 937.461.0743; <http://www.woolpert.com>

Eric Cole, our team's designated Project Manager, will be responsible for St. Johns County's satisfaction with all work under this contract. Eric received high marks from St. Johns County as project manager in 2012 and again for work he performed on the County's 2015-16 Digital Orthophotography project. **He is the team's designated point of contact and should be notified in the event of award should the County have any questions regarding this proposal.** Eric can be reached in Woolpert's Atlanta office located at 375 Northridge Rd #300, Atlanta, GA 30350 and at:

- Office: 678.537.8948; Mobile: 937.545.0842; Fax: 770.391.4104; Email: eric.cole@woolpert.com

Mike Zoltek, PSM, CP, CFedS, GISP, is our team's Production Manager and will assist Eric in ensuring the County's satisfaction with our team's performance on this contract. A Florida PSM and ASPRS certified photogrammetrist, Mike will oversee production and seal reports in accordance with MTS and Florida statutes. Mike can be reached in Woolpert's Florida office located at 11486 Corporate Blvd., Suite 190, Orlando, FL 32817 and at:

- Office: 407.591.5010; Mobile: 585.754.6500; Fax: 407.384.1185; Email: mike.zoltek@woolpert.com

Both Eric and Mike are available by telephone or to attend meetings, as appropriate, regarding the solicitation schedule.

Established in 1911, our longevity comes from a steady determination to add value in every endeavor. This commitment has given the firm the persistence and ingenuity not just to endure, but also to succeed and progress. For more than 100 years, we have been committed to providing quality deliverables and services that meet our clients' expectations, industry standards, government regulations, and our own professional benchmarks. Woolpert can perform the project services and provide a superior solution to the County:

- **Florida Experience.** We are no strangers to Florida. We opened our first Florida office in Orlando in 1988 and our office in Miami in 1996 to support the geospatial services work we've been providing in Florida since the early 1970s. Prominent Florida clients whom we have served include: **St. Johns County**; Martin County; Palm Beach County; South Florida Water Management District; Broward County; Miami-Dade County; Southwest Florida Water Management District; Monroe County; City of Tallahassee; St. Johns River Water Management District; Orange County; Florida Division of Emergency Management;



Volusia County; Polk County; Florida Department of Environmental Protection; Florida Department of Transportation; and others.

- **Professional and technical expertise.** Woolpert has the availability and adequacy of staff to perform all of the proposed services in-house. Our firm employs nearly 800 professional and technical staff with Professional Survey and Engineering licensure in nearly 50 states and Guam; 14 Certified Photogrammetrists; 23 GIS Professionals; 5 Certified Mapping Scientists – 2 Certified Mapping Scientist-Lidar Specialists; Network+, Security+ and Esri-Certified GIS Professionals; 21 Project Management Professionals ; 39 Leadership in Energy and Environmental Design Professionals; 8 Commercial Multi Engine Rating Licensed Pilots, 9 Unmanned Aircraft System Pilots and 7 Sensor Operators. With 148 staff members dedicated to the survey discipline, Woolpert can field 48 survey crews.
- **Relies upon the art of experience.** Woolpert's fleet of high performance aircraft, piloted by seasoned crew members, demonstrates our prowess in efficient airborne data capture in challenging environments. The mastery of radiometric and tonal adjustments among our image processing staff is well known in the industry. Woolpert's 107 years in delivering geospatial solutions speaks for itself.
- **Leverages the science within proven technology.** Woolpert combines multi-dimensioned acquisition aircraft with state-of-the-art imagery and lidar sensors. The sensors are included in systems equipped with flight management software, accelerating data capture and facilitating on-the-fly quality assurance. By coupling planes outfitted with innovative sensor systems with innovative work flows, Woolpert maximizes the capability of the powerful and efficient software and infrastructure, crunching massive data sets within shortened time schedules. Woolpert's imagery and lidar technologies lead the industry with system and data processing advancements. Our lidar offerings provide a wide range of applications—from impervious surface and flood plain mapping to change detection and 3D infrastructure modeling as well as the creation and delivery of all types of derivative products. With Woolpert's cutting edge lidar technologies, you can gain a valuable new perspective and unique services via a host of possible platforms.
- **Recognizes the value of client participation in quality assurance.** Woolpert is ISO 9001:2015 certified for the acquisition, processing, and utilization of geospatial data through photogrammetric/remote sensing techniques (certificate #11-R8033). This process ensures that data conforms to standards and accuracy thresholds however, public sector clients have the desire and availability of resources to participate in a timely manner with Woolpert's web-based tools which facilitate their valued input on the tile-by-tile appraisal of the project data.

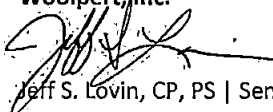
Woolpert is a corporation consisting of employee shareholders who annually elect a board of directors. Company officers are Stephen Phipps, president/chairman of the board; Scott Cattran, chief executive officer; and Josh Heid, CPA, chief financial officer/treasurer. They are responsible for directing the following functions: operations, finances, technical development, sales and marketing, human resources, and business planning. Stephen, Scott and Josh are supported by 30 Vice Presidents: Layton Hobbs, Joseph Seppi, Eric MacDonald, Steven Godfrey, Kendall Holbrook, Andrew Pack, Christopher Perry, Michael Avellano, Brian Stevens, James Riddle, Eric Dillinger, Jonathan Downey, Darius Hensley, Shane Imwalle, Jeff Lovin, Thomas Mackie, Thomas Mochty, Stephen Phipps, David Rickard, David Ziegman, Michael Battles, Lanie Wess, David Feurer, John Gerhard, Natasha Hartley, Joseph McClurkin, Douglas Brown, David Dillow, William Dougherty, Christopher Snyder, Thomas Murphy.

Woolpert's business philosophy is aimed at helping employees, clients and the world progress—to move forward through forward thinking. We are a unique AEG firm that has been delivering valuable solutions for more than 100 years to our private, federal, and state and local governments; private and public companies and universities; energy and transportation departments; and the United States Armed Forces. Our interest in submitting a response to St. Johns County's response to this solicitation is to partner with innovative clients where we maintain positive long-term relationships and strive for the successful completion of projects together, as a team.

Woolpert is committed to providing quality deliverables and services that meet our clients' expectations, industry standards, government regulations, and our own professional benchmarks. We hope you will give us the opportunity to work with you once again. Thank you.

Sincerely,

Woolpert, Inc.

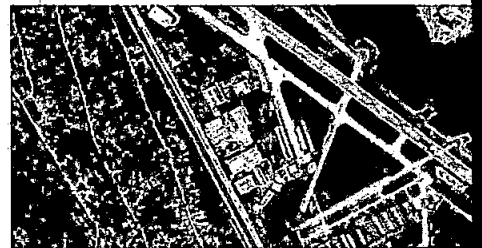
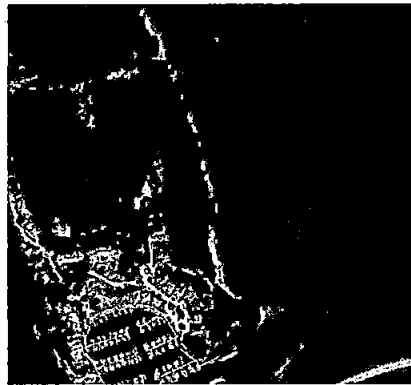


Jeff S. Lovin, CP, PS | Senior Vice President



Section 3

Company & Staff Qualifications and Team Organizations



Section 3: Company and Staff Qualifications and Resources

Founded in 1911 as a surveying and landscape design firm, Woolpert has grown to become a national architecture, engineering and geospatial (AEG) firm. Woolpert delivers value to clients by strategically blending high quality services with leading-edge technology and geospatial applications.

Woolpert is licensed with the state of Florida, Department of State, as an Ohio corporation authorized to transact business in the state of Florida. The document number of this corporation is F04000005579. Woolpert maintains a current Professional Surveyor and Mapper Business License—LB6777.

Geospatial Innovation


At Woolpert, we don't wait for new geospatial technology to arrive on the market; we create it. While our geospatial professionals are mapping and surveying tens of thousands of square miles each year for our clients across the country, our research and development group is finding new and better ways to acquire, process, visualize, analyze and deliver data. Our clients reap the benefits of Woolpert's visionary approach and state-of-the-art services and products.

Our team is leveraging technology to develop faster sensor tasking, faster acquisition systems and faster user access to the data and products we create. Though many of the systems and processes we use are built around mature, commercially available technologies, we use innovation, customization and experience to maximize our efficiency, effectiveness and responsiveness.

Mapping the Nation. Woolpert is currently the prime contractor for five multi-year statewide contracts—Ohio, Indiana, Maine, Texas and Tennessee. In each instance the client selected Woolpert for our team's unmatched digital orthoimagery data collection, processing and delivery experience. Woolpert has been successfully producing digital orthoimagery for 30 years and orthophotos for over 50 years. We have invested in the technology and infrastructure necessary to support large area orthoimagery production including petabytes of storage, high throughput processing nodes, experienced production teams and maintaining software licensing to ensure product deliverables are created in accordance with project specifications.

Woolpert Florida Office Locations



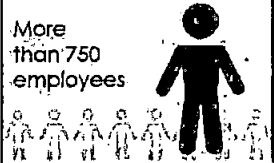
- 11486 Corporate Blvd, Suite 190, Orlando, FL 32817
- 6100 Blue Lagoon Drive, Suite 440, Miami, FL 33126-2037
- 700 South Palafox Street, Suite 200, Office B, Pensacola, FL 32502
- 8270 Woodland Center Blvd, Suite 123, Tampa, FL 33614



Our team is leveraging technology to develop faster sensor tasking, faster acquisition systems and faster user access to the data and products we create. Though many of the systems and processes we use are built around mature, commercially available technologies, we use innovation, customization and experience to maximize our efficiency, effectiveness and responsiveness.

Mapping the Nation. Woolpert is currently the prime contractor for five multi-year statewide contracts—Ohio, Indiana, Maine, Texas and Tennessee. In each instance the client selected Woolpert for our team's unmatched digital orthoimagery data collection,

Woolpert at a glance..

<p>1911</p>  <p>Opened first office offering surveying and landscaping</p>	<p>26</p> <p>Offices across the nation</p> 	<p>750+</p> <p>More than 750 employees</p> 
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Types of Services and Products Offered

Woolpert offers expertise in the areas of:

Aerial Acquisition | Woolpert operates six high-performance aircraft—three Cessna 404s, one Cessna 401, one Reims F406 and one Rockwell Turbo Commander 690B. These aircraft, configured with dual ports for simultaneous data collections, are outfitted with computer control navigation systems (CCNS) and multiple aerial data sensor systems – all equipped with GPS/GNSS/IMU technology. All acquired data is positioned using airborne Kinematic GPS.

Digital Imagery | Our digital imagery solution includes two Leica ADS80 units with two sensor head configurations. Our digital sensors collect a 12-bit image RGB & IR, with the dynamic range of each multispectral band at 4,096-pixel values, compared to 256 pixel values with traditional film.

Orthophotography | Utilizing the multispectral imagery, the Woolpert team offers a full complement of photogrammetric production services beyond imagery acquisition and initial processing. For aerial triangulation of the pushbroom multispectral imagery, we employ



the software suite of Leica XPro. Our digital orthophotography production team, brings a combined level of experience in orthophoto production that is unsurpassed in the industry. Merging this level of skill with successful workflow methodologies allows us to produce photogrammetric mapping and digital orthophoto products that will meet or exceed St. John's County's imagery product specifications.

Ground Control Surveying | Woolpert's survey crews collect high-quality geospatial data with both conventional and GPS/RTK survey techniques to provide unique survey solutions in all terrains and to all specifications. Our survey party chiefs are highly skilled in all aspects of land surveying and are equipped with the latest geospatial technology. In addition to the team's technical. Woolpert's field survey and safety procedures will be utilized by all of the team's field survey staff in order to maintain consistency between multiple field survey crews.

Previewing Web-based Services | Woolpert can offer St. Johns County its proven SmartView Connect solution which allows Woolpert to rapidly publish our data to the web. Using SmartView Woolpert will cut down on delivery times and allow St. Johns County to perform a full QA/QC review of the Woolpert's imagery without the need for a hard drive delivery or County resources. Datasets can be previewed on the web via the SVC website and brought into desktop software through OGC-compliant WMS. Usernames and login information can be provided to any staff designated by St. Johns County and the SmartView portal includes the ability to make and track comments and responses during the imagery review process.

Additional Service Offerings include:

Airborne lidar data collection and processing | The Woolpert team brings high performance lidar systems and sensor technology for the collection of topographic lidar or topographic and bathymetric lidar from a variety of platforms (aircraft, van/all-terrain vehicle, watercraft), or from a fixed position allowing us to operate the most advanced sensor systems and process large datasets. Woolpert processes over 100,000 square miles of lidar data annually. Woolpert can also provide the District with experience in the collection and processing of single photon lidar data.

Terrestrial scanning and mobile lidar mapping | The Woolpert team combines a long history of geospatial expertise with state-of-the-art terrestrial and mobile laser scanners to provide high-accuracy as-built documentation for all types of structures, whether plants, airports, buildings or underground structures. And because we provide a field-to-finish product, we will also deliver highly accurate CADD and GIS models, building information models and traditional 2D and 3D CAD drawings.

Remote Sensing | Woolpert's Remote Sensing group has developed proprietary methodologies to extract additional information and value from your data. Woolpert's remote sensing services offer value added products to include: Land use/land cover, Forestry characterization and metrics, Vegetation classification, Buildings and structures, Solar maps (for photovoltaic array placement), Transmission and utility maps, Emergency response plans and Pre- and post-event/disaster planning.

Surveying | Woolpert provides an array of surveying services to support all stages of a project, from initial planning through design and construction, including: Terrestrial 3-D laser scanning/as-builts, Geodetic control/height modernization, Mobile laser mapping solutions for roadway design and asset management, Aeronautical surveys, Obstruction analysis, ALTA and Boundary, Construction, Ground penetrating radar, Highway design and right-of-way, Hydrographic surveys/cross-sections, Subsurface utility engineering, Topographic survey, Utility infrastructure inspection, Volume calculations and Real Property Inventory.

Photogrammetry and Feature Extraction | Woolpert has the resources to collect geospatial data from the air or ground and deliver it within your project timeline and budget. Our photogrammetrists average 20 years of experience extracting information from various imagery and lidar sources including digital aerial imagery, mobile lidar, and aerial lidar platforms.

GIS | Woolpert provides GIS services that include consulting, data creation, and application development – services that range from business process, workflow analyses implementation planning, and application development, to deployment, onsite operation, and maintenance of systems.

Unmanned Aerial Systems (UAS) | Woolpert was the first engineering, surveying and mapping company to receive a Federal Aviation Administration (FAA) Section 333 Exemption to commercially fly UAS. Our capabilities seamlessly integrate and optimizes the entire UAS workflow—from sensor selection, calibration and collection to processing and dissemination. Our UAS team includes eight pilots with multidiscipline expertise in architecture, engineering and geospatial technologies. Our fleet includes the DJI Inspire Pro, DJI Matrice, DJI Phantom, Altavian, and Kespry Quadcopter.



3A: Licenses/Certifications

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES
Full Legal Company Name: Woolpert, Inc.
ATTACHMENT "3-A"
LICENSES, PERMITS, CERTIFICATIONS

In the space below, each Respondent shall list all current licenses and/or certifications to the required services as provided herein.

Each Respondent shall attach a copy of each license and/or certification listed below to his proposal as instructed.

License Name	License #	Issuing Agency	Expiration Date
Professional Survey and Mapper Business License	LB6777	State of Florida, Board of Professional Surveyors and Mappers	February 28, 2019
Professional Engineering License	7685	State of Florida, Board of Professional Engineers	February 28, 2019
Florida PSM License – Michael Zoltek	LS5751	State of Florida, Board of Professional Surveyors and Mappers	February 28, 2019
Florida PSM License – Jose Sanfiel	LS5636	State of Florida, Board of Professional Surveyors and Mappers	February 28, 2019





Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LB6777**
Expiration Date: February 28, 2019

Professional Surveyor and Mapper Business License
Under the provisions of Chapter 472, Florida Statutes

WOOLPERT INC
ATTN: COLINDA SHIELDS 4454 IDEA CENTER BLVD
DAYTON, OH 45430-1500

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

State of Florida
Board of Professional Engineers



Is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes:

Expiration: 2/28/2019
Audit No: 228201901252-R

CA Lic. No:
7685





Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LS5751**
Expiration Date: February 28, 2019

Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

MICHAEL JOHN ZOLTEK
2654 TOPSAIL HILL ST
ORLANDO, FL 32828-7798

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.



Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LS5636**
Expiration Date: February 28, 2019

Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

JOSE LUIS SANFIEL
10641 NW 18TH PL
PEMBROKE PINES, FL 33026-2301

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.



3B: Certificate of Insurance


In this section, Woolpert has provided copies of Certificate(s) of Insurance as outlined in the RFQ (G. Insurance Requirements) providing evidence of all coverages, as specified. Prior to issuance of an executed contract, Woolpert shall provide a Certificate of Insurance naming St. Johns County as "Additional Insured".

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
 DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES

Full Legal Company Name: Woolpert, Inc.

ATTACHMENT "3-B"

CERTIFICATES OF INSURANCE

ACORD		CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YYYY)		
<p>THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.</p> <p>IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).</p>						
<p>PRODUCER Marsh & McLennan Agency LLC 409 E Monument Ave, Ste 400 Dayton OH 45402</p>		<p>CONTACT NAME: Nicola Hall PHONE (A/C, No, Ext): 937.228.4135 FAX (A/C, No): E-MAIL: ADDRESS:</p>		<p>INSURER(S) AFFORDING COVERAGE</p>		
<p>INSURED Woolpert, Inc. 4454 Idea Center Blvd. Dayton OH 45430</p>		<p>INSURER A: Travelers Property Casualty Co of Amer 25674 INSURER B: Charter Oak Fire Ins Co. 25815 INSURER C: Ohio Casualty Insurance Company 24074 INSURER D: Phoenix Insurance Company 25623 INSURER E: Lloyds Syndicate 2623/623 55555 INSURER F:</p>		<p>NAIC #</p>		
<p>COVERAGES CERTIFICATE NUMBER: 568114474 REVISION NUMBER: 102</p> <p>THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.</p>						
ITEM #	TYPE OF INSURANCE	ADDITIONAL INFO (R/S, W/V, etc)	POLICY NUMBER	POLICY EFF. DATE (MM/DD/YYYY)	POLICY EXPI. DATE (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJE CT <input checked="" type="checkbox"/> LOC OTHER:		P0300057676	3/31/2018	3/31/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Per occurrence) \$ 600,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HERED AUTOS Comp: 500 <input checked="" type="checkbox"/> SCHEDUL ED AUTOS Cont: 1,000 <input checked="" type="checkbox"/> NON-OWNED AUTOS		P8109021905A	3/31/2018	3/31/2019	COMBINED SINGLE LIMIT (EA accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB CLAIMS-MADE		CLP8K730318	3/31/2018	3/31/2019	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 \$
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/EMER EXCLUDED? (Indicate by Y/N) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N/A	VB8-636987	3/31/2018	3/31/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Excess Liability (Type: Limit)		EC0175584408 W18705170401	3/31/2016 12/31/2017	3/31/2019 3/31/2019	Occ/Agg Limit 8,000,000 Occ/Agg Limit 8,000,000 Retention 60,000
<p>DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)</p>						
CERTIFICATE HOLDER			CANCELLATION			
			SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.			
			AUTHORIZED REPRESENTATIVE 			





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
7/13/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Ames & Gough 8300 Greenboro Dr. Suite 980 McLean VA 22102		CONTACT NAME PHONE (A/C No, Ext): 703-827-2277 FAX (A/C, No): 703-827-2279 E-MAIL ADDRESS: admin@amesgough.com	
INSURED Woolpert Inc. 4454 Idea Center Boulevard Dayton OH 45430-1500		INSURER(S) AFFORDING COVERAGE INSURER A: Continental Casualty Company (CNA) A, XV NAIC #: 20443 INSURER B: INSURER C: INSURER D: INSURER E: INSURER F:	

COVERAGES CERTIFICATE NUMBER: 897300773 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR	TYPE OF INSURANCE	ADDL(SUBR) (NS) (WAV)	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:					EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COM/PROP AGG \$
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS					COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/ MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A			<input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	Professional Liability		AEH28835072	7/8/2018	7/8/2019	Per Claim/Aggregate 2,000,000

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER 	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
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3C: Claims, Liens, Litigation History

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES
Full Legal Company Name: Woolpert, Inc.
ATTACHMENT "3-C"
CLAIMS, LIENS, LITIGATION HISTORY

1. Within the past 7 years, has your organization filed suit or a formal claim against a project owner (as a prime or subcontractor) or been sued by or had a formal claim filed by an owner, subcontractor or supplier resulting from a construction dispute?
2. Yes No If yes, please attach additional sheet(s) to include:

Description of every action Captions of the Litigation or Arbitration

Amount at issue: _____ Name (s) of the attorneys representing all parties: _____

Amount actually recovered, if any: _____

Name(s) of the project owner(s)/manager(s) to include address and phone number: _____

3. List all pending litigation and or arbitration.

As a national firm in existence since 1911 and with nearly 800 staff and 25 offices located throughout the United States, Woolpert has been involved with occasional litigation, which the Firm views as an unfortunate cost of business. Woolpert's litigation experience generally does not involve clients; rather, most litigation has derived from third party claims, and private development projects. Woolpert attributes this to the quality of its professional service, deliverables and controls, and the relationships established with its clients. As concerns the specific project constraints and requirements, Woolpert has never been sued or claimed, and has never brought an action or demand against an Owner. Woolpert is happy to provide additional information regarding its limited litigation history upon request.

4. List and explain all litigation and arbitration within the past seven (7) years - pending, resolved, dismissed, etc.
5. Within the past 7 years, please list all Liens, including Federal, State and Local, which have been filed against your Company. List in detail the type of Lien, date, amount and current status of each Lien.

N/A

6. Have you ever abandoned a job, been terminated or had a performance/surety bond called to complete a job?
Yes _____ No If yes, please explain in detail:
7. For all claims filed against your company within the past five-(5) years, have all been resolved satisfactorily with final judgment in favor of your company within 90 days of the date the judgment became final? Yes No If no, please explain why?

8. List the status of all pending claims currently filed against your company:

Currently, there are no claims against Woolpert involving any projects.

Liquidated Damages

1. Has a project owner ever withheld retainage, issued liquidated damages or made a claim against any Performance and Payment Bonds? Yes _____ No If yes, please explain in detail:

(Use additional or supplemental pages as needed)



3D: Company Organization

The following organization charts reflect Woolpert's corporate organization.

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES
 Full Legal Company Name: Woolpert, Inc.
ATTACHMENT "3-D"
COMPANY ORGANIZATION CHART

Business and Operations Team

President, Chief Executive Officer (CEO)

Discipline Director	Market/ Market Directors							Group/ Group Directors					
Design Geospatial/ Technology	Facilities	Government Solutions	Information Technology & Management Consulting	Military	National Security	Transportation	Water	Subscription Services	Integration and Special Projects	Research Development and Corporate IT	Sales and Marketing	Human Resources	Finance and Support

Markets, Practices and Disciplines

Design	Facilities	Military	ITMC	Transportation	Water	Government Solutions	National Security	Subscription Services	Geospatial/ IT
Kirk McClurkin	Chris Perry	David Ziegman	Dave Feuer	Tom Mochly	Flint Holbrook	Jeff Lovin	Joe Seppi	Jon Downey	Kirk McClurkin
Civil/Landscape Architecture/ Planning	Education & Athletics			Road & Bridge Design	Energy		Defense Geospatial Services		Developers, Asset Management/ Land, Licensing & Permitting
Gary Murray	Andrew Pack			Ron Maitox	Mike Baftles		Darius Hensley		Jen Kouns
Architecture	Commercial, Housing, Industrial			Roads & Bridge Geospatial			Aerospace & Intelligence Solutions		GIS, On-sites and Special Projects
Denise Breunig	Bill Dougherty			Tom Mochly			Paul Mullis		Nafasha Hartley
MEP/Structural				Aviation Design					Photogrammetry and Remote Sensing
Bret Paden				Chris Snyder					Joe Cantz
Water Resources				Aviation Geospatial					Aerial Acquisition
JP Johns				Tom Mackie					Jonas Svoboda
									Survey
									Dave Kuxhausen

LEGEND

Discipline/Discipline Director	Market/Market Director
Discipline/Discipline Leader	Practice/Practice Leader



3E: Project Team Organization

The individuals shown in the organization chart below are expected to be the most involved in this St. Johns County Digital Orthophotography and Lidar Deliverables project. These key project personnel possess the relevant experience, professional registrations, certifications, licensure and accreditations to successfully perform all the required services meeting the established qualifications to perform the work competently. As noted, resumes have been provided key personnel who will be directly responsible for performing and/or overseeing management, production, and quality control tasks.

REQUEST FOR QUALIFICATIONS (RFQ) NO. 19-16;
 DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES
 Full Legal Company Name: Woolpert, Inc.
 ATTACHMENT "3-E"
 PROJECT TEAM ORGANIZATION CHART

PROJECT MANAGER			
Eric Cole			
SURVEYING & CONTROL	FLORIDA PSM PRODUCTION MANAGER		
	Michael Zoltek, PSM, CP, CFedS, GISP <i>Project Surveyor</i>		
<i>Photo/Ground Control Surveyor Jose Sanfiel, PSM</i>	DATA ACQUISITION	PROCESSING AND PRODUCT GENERATION	GIS QA/QC & METADATA
	<i>Flight Operations Manager Jonas Svoboda</i>	<i>Imagery Processing and Aerial Triangulation Karl Leibfacher</i>	<i>Ortho QA/QC Bradley Fugate, CP</i>
		<i>Orthophoto Production Doug Joos Zack Rahbek</i>	<i>Contour QA/QC Jeff Meyer</i>
		<i>Planimetric and Contour Mapping Brian Foster, CP</i>	<i>Metadata Specialist Ryan Bowe, GISP</i>
		<i>Lidar Specialists Qian Xiao, CP Zach Shuler</i>	



3F: Key Personnel

Our management staff for this project has an average of more than 20 years of experience, including key members with several years of experience working for state departments prior to transitioning to their current positions. Each of our management team members brings a unique background and skillset to the project.

Position	Responsibility
Eric Cole Project Manager	<ul style="list-style-type: none"> • Serve as primary point-of-contact for St. Johns County and the project team - working with County stakeholders to help identify mapping needs and deliver appropriate geospatial solutions • Perform project planning, scheduling and resource allocation • Proactively monitor and manage schedule, budget and potential risks • Provide general oversight of the project and guidance to the County and Woolpert Production Manager, Michael Zoltek/Project team • Listen intently to the County's comments and concerns and work diligently to resolve any issues should they arise
Michael Zoltek, CP, PSM, CP, CFeds, GISP Florida PSM Production Manager	<ul style="list-style-type: none"> • Ensure compliance with imagery and lidar specifications, Chapter 472, FS, and Chapter 5J-17, FAC • Ensure compliance with Florida MTS and PSM standards • Bring experience in photogrammetry, surveying, and GIS as well as an understanding of the Florida geospatial services environment • Produce the final imagery and lidar report • Ensure adherence to project-specific QA/QC workflows
Jose Sanfiel, PSM Photo/Ground Control Survey	<ul style="list-style-type: none"> • Develop and implement project-specific survey QA/QC workflow • Ensure compliance with Florida MTS and PSM standards • Select appropriate equipment for field survey operations • Supervise field crews during field survey and imagery acquisition • Supervise field collection of photo control points • Document and photograph field survey for the development of the final survey report • Review/validate field data collected during field survey and imagery acquisition • Organize/prepare collected field survey data for the development of the final survey report
Jonas Svoboda Flight Operations Manager	<ul style="list-style-type: none"> • Work with the Project and Production Manager(s) to develop the acquisition plan, including selecting equipment • Manage the day-to-day operations of the lidar acquisition crew • Proactively track weather to keep acquisition on schedule • Assist in maintenance and operation of lidar equipment
Karl Leibfacher Image Processing and Aerial Triangulation	<ul style="list-style-type: none"> • Performs Aerial Triangulation • Responsible for producing and screening QC imagery for rectification, as well as rectifying aerial data for Woolpert's remote sensing and GIS projects
Doug Joos Orthophoto Production	<ul style="list-style-type: none"> • Produce digital orthophotography – applying standard photogrammetric techniques to process, georeference, mosaic, and rectify orthoimagery from aerial photographs and digital imagery systems
Zach Rahbek Orthophoto Production	<ul style="list-style-type: none"> • Produce digital orthophotography – applying standard photogrammetric techniques to process, georeference, mosaic, and rectify orthoimagery from aerial photographs and digital imagery systems
Brian Foster, CP Planimetric and Contour Mapping	<ul style="list-style-type: none"> • Direct the production, compilation and manual editing of 2D and 3D breaklines • Develop a contour generation methodology for implementation after District review and approval • Perform QA/QC of compiled breaklines to verify that there are no overlapping breaklines or incomplete polygons



Position	Responsibility
Qian Xiao, CP Lidar Specialist	<ul style="list-style-type: none"> • Develop and implement project-specific lidar data processing workflows • Ensure lidar adheres to project specifications • Assist in lidar processing, classification, and editing • Provide oversight and QA/QC of lidar processing tasks
Zach Shuler Lidar Specialist	<ul style="list-style-type: none"> • Perform IMU and lidar point processing • Calibrate, edit and classify lidar data • Adhere to project-specific workflows and QC processes
Bradley Fugate, CP Ortho QA/QC	<ul style="list-style-type: none"> • Will leverage his proficiency in industry best-practices and standards and experience managing production and QA/QC on similar projects to ensure all orthoimagery deliverables meet or exceed requirements
Jeff Meyer Contour QA/QC	<ul style="list-style-type: none"> • Verify accuracy, completeness, consistency and aesthetics of final lidar products • Perform peer-review of metadata deliverables
Ryan Bowe Metadata	<ul style="list-style-type: none"> • Create FGDC-compliant metadata for delivery in ArcGIS and XML formats • Assist in the development of the seamlines geodatabase as needed



**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
 DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES**

Full Legal Company Name: Woolpert, Inc.

ATTACHMENT "3-F"

KEY PERSONNEL LIST

In the space below, list all qualified personnel who are permanent employees of the company that may be utilized to perform the required scope of services. Attach brief but comprehensive resumes for each staff member listed below.

Employee Name	Employee Title	# Years Employed	Total # Yrs. Experience
Eric Cole	Geospatial Project Manager	11	34
Michael Zoltek, PSM, CP, CFedS, GISP	Florida PSM Production Manager – Project Surveyor	2	27
Jose Sanfiel, PSM	Surveyor	2	32
Jonas Svoboda	Flight Operations Manager	18	18
Karl Leibfacher	Geospatial Technician – Imagery Processing and Aerial Triangulation	12	12
Doug Joos	Geospatial Technician – Orthophoto Production	31	31
Zach Rahbek	Geospatial Technician – Orthophoto Production	19	22
Brian Foster, CP	Geospatial Technician – Planimetric and Contour Mapping	18	27
Qian Xiao, CP	Lidar Specialist	18	26
Zach Shuler	Lidar Specialist	11	11
Bradley Fugate, CP	Certified Photogrammetrist – Orthophoto QA/QC	39	39
Jeff Meyer	GIS Specialist (Contour QA/QC) / Cartographer	16	16
Ryan Bowe, GISP	Metadata Specialist	2	13



Eric Cole Project Manager

As a Geospatial Project Manager, Eric Cole oversees photogrammetry, remote sensing, and GIS operations on projects for municipal, state and federal clients. He provides comprehensive project management, including project scoping, scheduling, budgeting and quality control to ensure that complex, multifaceted acquisition and processing projects are completed on-time and to clients' required specifications. He leads the group's daily production by establishing data preparation procedures and step-by-step quality control processes—tailored to each projects' scope—and verifies that requirements for accuracy, completeness, consistency and aesthetics of photogrammetric and GIS products are met. He provides detailed attention to both client specifications and Woolpert's high standards for quality.

Eric has managed several large-scale mapping efforts, ranging from standard topographic and planimetric mapping to airborne terrestrial lidar, digital camera acquisition and processing, and Common Installation Picture (CIP) extraction. His project experience includes statewide orthophotography, aeronautical surveying, coastal mapping, oblique aerial imagery, lidar for clients such as the National Oceanic and Atmospheric Administration (NOAA), U.S. Geological Survey (USGS), and U.S. Army Corp of Engineers (USACE), as well as for numerous municipal government clients.

Selected Experience

Countywide Imagery | St. Johns County. Project Manager for this project to obtain new countywide four-band orthoimagery 6-inch pixel-resolution imagery for the ±776-square-mile county. The imagery was captured at 4,500-feet AGL using the Leica ADS80 large-format, multi-spectral cameras. Leica's XPro software was used to perform image processing.

Countywide Lidar | St. Johns County. Project Manager. Woolpert acquired new lidar data over the entire 715-square-mile county in a continuation of its relationship with St. Johns County. New aerial imagery in both color and color infrared was collected at a 1"=100' scale for production of half-foot pixel resolution orthophotos. The digital terrain model was produced with one-foot contours.

North Central Texas Council of Governments (NCTCOG) Orthoimagery Program | Texas. Project Manager responsible for project planning, scheduling, reporting, quality control, data security, and communication with the client and technical leads. Eric serves as an intermediary between the project director and technical staff executing tasks. In this role, he develops, implements, and monitors project plans that encompass communication protocols, survey and acquisition, data processing, project-specific QA/QC measures, and delivery. He is also responsible for allocating the appropriate resources and monitoring projects' schedules and budgets. The NCTCOG program is a five-year contract to perform photogrammetric, surveying and GIS services. The NCTCOG region includes 16 counties in Texas covering approximately 12,800 square miles. The 2013-2017 NCTCOG project consists of providing a range of geospatial services that includes aerial imagery acquisition; new photo-identifiable ground control; aerial triangulation; 4-band digital orthoimagery at 6-inch pixel resolution; and web hosting services.

49 Counties 0.7-Meter Lidar | U.S. Geological Survey. Geospatial Team Member who provided technical and project management support for this project to acquire and produce QL2, 0.7-meter NPS lidar elevation data for three separate projects across 49 Tennessee counties, covering an area of approximately ±19,000 square miles. Eric worked directly with the project manager to secure all required resources and monitor budgets and schedules. Two of the three contracts directly support the 3D Elevation Program (3DEP), which is a USGS initiative to collect accurate, high-resolution data via lidar to establish a national map. The third contract, which covers three counties in western Tennessee and meets 3DEP standards, was performed in partnership with the Natural Resources Conservation Service (NRCS). The 49-county project area was delivered in classified lidar point cloud data in LAS 1.4 format; a set of 8-bit gray scale intensity images in GeoTIFF format; 3D digital elevation models (DEMs) in ERDAS IMG format; breaklines developed for hydrologic flattening of the DEM in Esri format; 2D building footprints in an Esri geodatabase file format; and Federal Geographic Data Committee (FGDC)-compliant metadata in XML format.

Professional Data

Years of Experience: 34 years

Education: Associates | Architectural and Mechanical Drafting and Design

Professional Membership

American Society of Photogrammetry and Remote Sensing (ASPRS)

Presentations and Publications

Laser Technology, Engineering Week Technical Training Conference, February 2015

Coastal Geotools_CT Coastal Imagery, Lake Erie Watershed at Coastal Geotools 2017

Lidar Overview, SAME eWeek 2015

Simultaneous Lidar and Imagery Collection, Hexagon Conference 2012

UAS/UAV Capabilities, Hexagon Conference 2013



Michael Zoltek, PSM, CP, CFedS, GISP Project Manager

Mike Zoltek is a land surveyor, photogrammetrist, and GIS professional with over 27 years of experience. Mike brings clients a comprehensive background in surveying and mapping, which also includes data collection and processing from both fixed wing and UAS platforms, as well as project management, and QA/QC coordination.

His expertise includes collecting, processing, and reviewing imagery & lidar data in support of accuracy design requirements for roadway developments. Additionally, Mike has coordinated the collection of survey ground control points, prepared accuracy assessment reports, and performed QA/QC reviews of aero triangulation (AT) bundle adjustments for over 300 oblique and/or orthogonal imagery projects, as well as multiple lidar projects throughout the U.S. and Canada. He is familiar with a breadth of surveying and GIS technology.

Selected Experience

Countywide Imagery | St. Johns County. Licensed Surveyor/Production Manager for this project to obtain new countywide four-band orthoimagery 6-inch pixel-resolution imagery for the ±776-square-mile county. The imagery was captured at 4,500-foot AGL using the Leica ADS80 large-format, multi-spectral cameras. Leica's XPro software was used to perform image processing.

Florida Statewide Surveying and Mapping Contract County Orthophotography Services | FDOT Central Office. Project Manager for this 5-year, \$5 million statewide surveying and mapping contract responsible for managing multiple task order requests from headquarter staff that include a variety of solutions including aerial, mobile and terrestrial mapping, and lidar solutions. In April 2016, Woolpert was selected to provide statewide topographic mapping services to support planning, analysis and assessment of transportation infrastructure and natural features. The contract encompasses aerial orthophotography, topographic and bathymetric lidar, terrestrial mobile photography and lidar, hydro mobile photography, and bathymetric surveying. It also requires efficient collection and processing techniques to support time-critical work orders and adherence to standardized product specifications (e.g., 3DEP, ASPRS, etc.). As of June 2018, FDOT has issued six task work orders including: one to establish 83 photo identifiable ground control points to support the orthophotography of Clay and Putnam counties, three for countywide orthophotography collection, one for high density (100 PPM) aerial lidar data collection and one for analysis of corridor mapping technologies. For the countywide orthophotography task work orders, Woolpert collected and produced 4-band, 6-inch Ground Sample Distance (GSD) orthoimagery *with all orthoimagery projects meeting the new 2017 Florida County Digital Orthophotography Program Standards, published September 27, 2017.*

Countywide Contours Update | Martin County, Florida. Project Manager responsible for leading the Woolpert effort to generate and provide six-inch and -foot contours to Martin County, through utilizing the lidar QL2 data collected and delivered through a previous purchase order to support the USGS Elevation Program. The final accuracies of the contours on hard surface (pavement, parking lots, etc.) areas were 30 centimeters at the 95th percentile, and the accuracy of the contours on any non-hard surface area was dependent upon the local variation of the terrain, above ground features, and potential errors due to lack of complete breakline delineation. Woolpert utilized remote sensing methodologies to produce the contour dataset and delivered the contours in Esri ArcGIS geodatabase and AutoCAD DWG formats and delivery of a signed/sealed Surveys Report.

Area Development Plans, Boundary Survey, and Aerial Photography and Lidar Collection for Air Force Plant 42 | U.S. Army Corps of Engineers Sacramento. Licensed Surveyor and Certified Photogrammetrist responsible for performing a complete boundary survey and aerial photography in digital and hard copy formats. Supporting the geospatial task order requirements for this DoD facility to provide an updated boundary survey involving courthouse research, establishing an installation-wide geodetic control network, field reconnaissance, field tie existing property and controlling corners, data reduction, boundary resolution, calculations, and setting final corner monuments for the property. Aerial data acquisition included acquiring color aerial imagery at a 3-inch pixel resolution and lidar for development of a DTM of the installation. The resultant data is being used to keep up-to-date information about installation assets with changing missions.

Professional Data

Years of Experience: 27 years

Education: Bachelor of Science | Survey and Mapping

Professional Registrations: Professional Surveyor and Mapper | FL 5751

Professional Land Surveyor | AL, 25291; AZ, 53351; CA, 8878; CO, 38433; CT, 70378; GS, 2976; ID, 14353; LA, 4994; MS, 3088; NC, L-5094; NM, 20558; NV, 21183; NY, 50883; ND, 6646; PA, SU075435; SC, 27462; SD, 10187; TN, 2836; USVI, 1181LS; WA, 50992; WI 3039-8; WV, 2219

ASPRS-Certified Photogrammetrist | #1523

Certified GIS Professional | #91129

Certified Federal Surveyor (CFedS) | #1196

Professional Membership

American Society for Photogrammetry and Remote Sensing (ASPRS) | Member

Florida Survey and Mapping Society (FSMS) | Member



Jose Sanfiel, PSM Surveyor

As a Survey Team Leader for Woolpert's Geospatial Group, Jose Sanfiel supports the Survey Team in phasing and executing projects, monitors project schedules and budgets, and implements stringent QA/QC protocols to ensure deliverables are of high quality and accuracy. With more than 20 years of progressive experience in surveying and project management, Jose brings to his team a diverse proficiency in a wide variety of surveying disciplines, including boundary, construction, design, right-of-way mapping, and platting. His project management experience includes numerous Survey and Aerial Mapping Contracts for the Florida Department of Transportation (FDOT), as well as for Public Works and utilities clients. Prior to joining Woolpert, Jose also served as Consultant Coordinator and Field Crew Supervisor for FDOT, giving him a valuable, in-depth perspective that helps him shape project plans and communication to suit his clients' needs.

Further experience includes quality control of in-house final project deliverables involving baseline reports, Project Network Control (PNC) Sheets, Maintenance Maps, Right-of-Way Maps, Design (Topographic) Surveys, High Definition Laser Scanning Projects, and Boundary Surveys. He also has a considerable background in Subsurface Utility Engineering, which includes managing the daily operations for five in-house survey crews and a Subsurface Utility Engineering (SUE) crew

Selected Experience

Homestead Field Station Surveying | South Florida Water Management District. Project Manager who led the project team and provided final quality review of deliverables. The South Florida Water Management District (SFWMD) contracted Woolpert to update their 2010 topographic survey data of the Homestead Field Station site. The Woolpert survey team effectively located all above-ground markings of underground utilities, and then produced two hard copies of the survey results for the District's review.

Belaire Hydrographic and Topographic Survey | South Florida Water Management District. Project Manager who led the project team and provided final quality review of deliverables. The South Florida Water Management District (SFWMD) contracted Woolpert to provide professional surveying and mapping services for a project located along four sections of canals in Miami Dade County. The purpose of this project is to support determination of canal capacity, design capacity and potential structural and operational improvements. Woolpert collected three profile lines and cross sections at ± 500 -foot intervals along the ± 7.1 -mile stretch of canals; provided above water locations and hydrographic surveying services; and delivered CADD files consistent with SFWMD standards. Woolpert's subconsultant collected the hydrographic information and Woolpert performed QA/QC and merged the data with the above water cross sections.

Sanitary Sewer Data Collection and GIS Updates | Miami-Dade County. Survey Manager responsible for processing and documentation, coordinating daily field crew activities, and QA/QC. Jose collected data of manhole rim elevations and pipe inverts for those assets within the WASD GIS that do not have attributes. The CMOM programs are intended to reduce sanitary sewer overflows (SSO) through the improvement of the operation and maintenance of County wastewater collection, transmission, and treatment systems. The Woolpert crew surveyed manhole rim elevations, collected pipe inverts, and recorded them using ArcGIS.

Overseas Highway Mobile Mapping Survey | Florida Department of Transportation. Survey Manager responsible for daily coordination of field crew activities. FDOT District 6 selected Woolpert to collect Mobile Mapping lidar data along the Overseas Highway (US 1) in the Florida Keys, to support a milling and resurfacing project under Woolpert's district on-call contract. The 3D laser scan data was triangulated, processed, calibrated and quality-checked prior to extraction and CAD compilation. Deliverables were to FDOT CAD standards in MicroStation format.

SR 826 Intercoastal Bridges Surveying & Mapping | Florida Department of Transportation. Survey Manager tasked with target value analysis, review of the topography data and digital terrain model, and field edits. The Florida Department of Transportation, District Six, contracted with Woolpert to provide professional surveying and mapping services for a project located along SR 826 (NE 163 St/Sunny Isles Blvd). The Woolpert team provided the necessary services to support a bridge rehabilitation project, including collecting data using L.A.M.P. technology. Our subconsultants supported the tasks; M.G. Vera provided field ground surveying services, and I.F.R. provided the aerial acquisition.

Professional Data

Years of Experience: 32 years

Education: Bachelor of Arts | Survey and Mapping

Professional Registrations: Professional Surveyor and Mapper | FL 5636

Professional Membership:
Florida Survey and Mapping Society (FSMS)
| Member

Awards:

FSMS Chapter President of the Year |
Member, West Palm Beach



Jonas Svoboda Flight Operations Manager

An integral member of Woolpert's aerial data acquisition team, Jonas Svoboda is involved in the planning, data acquisition and data computations associated with analog film cameras, lidar, and digital aerial sensor systems and airborne GPS applications. As the Flight Operations Manager, Jonas coordinates the logistics necessary for the acquisition of airborne geospatial data across the U.S. and abroad. He manages day-to-day operations of the aerial acquisition flight crews and is well versed in its real-world obstacles, myriad of details, and intense and dynamic weather and timing requirements. He is familiar with airborne sensor maintenance and troubleshooting and fully realizes the importance of pre-planning and flexibility.

Professional Data

Years of Experience: 18 years.
Education: Bachelor of Science | Natural Resources
Certification: Certified Asset Management Professional

He also has experience integrating spatial data into enterprise solutions for government clients—giving him a practical knowledge of the potential applications of the data being collected and the data quality required to support them. He is proficient with ArcGIS Desktop, ArcSDE and ArcGIS Server, with a thorough understanding of the Esri product suite gained from implementing and using it in a production environment.

Selected Experience

Ohio Statewide Imagery Program (OSIP), Ohio Office of Information Technology (OIT) | Statewide, Ohio. Flight Operations Manager responsible for sensor and aircraft selection and coordinating the daily efforts of the aerial acquisition team. The base requirement under this contract consists of acquiring 4-band imagery covering the entire state of Ohio 41,276 square miles.

Maine Statewide Orthoimagery, Maine Geolibrary | Statewide, Maine. Flight Operations Manager responsible for acquisition planning and coordination. For this statewide, five-year, rotating orthoimagery acquisition program, Woolpert has developed digital orthoimagery for various base map products in a computerized GIS that is supporting the needs of the state and multiple stakeholders through applications such as multi-jurisdictional homeland security mapping applications; state and county emergency management applications; regional and local planning, state and local public safety applications; economic development and other GIS business applications.

Statewide Orthophotography Program, Indiana Office of Technology | Statewide, Indiana. Flight Operations Manager responsible for coordinating the day-to-day acquisition activities. This statewide initiative has included photogrammetric, GIS/remote sensing, QA/QC, surveying, and program development and outreach services. Base deliverables include nearly 40,000 square miles of 12-inch pixel resolution orthoimagery and nearly 30,000 square miles of 1.5-meter lidar.

Installation and Aerial Imagery Data Collection, AFSOC | Hurlburt Field, Florida. Flight Operations Manager responsible for coordinating the acquisition activities. Woolpert supported the Air Force Special Operations Command (AFSOC) with the AFSOC, ACC Installation Aerial Imagery Data Collection, Phase III tasks. Professional services included an in-brief with AFSOC technical staff to outline the collection and processing plans for each installation; training staff on point cloud assemblies; and will ultimately acquire lidar data for processing for Hurlburt Field. Deliverables will be LAS 1.2 classification for default, ground, outlier and overlap data; ArcGrid 32-bit raster format tiled datasets for reflective surface, bare earth, laser return and intensity; lidar intensity image 8-bit Geotiff format.



Karl Leibfacher

Image Processing and Aerial Triangulation

Karl Leibfacher is part of Woolpert's dynamic team of image specialists. As a Geospatial Technician, he is responsible for producing and screening QC imagery for rectification, as well as rectifying aerial data for Woolpert's remote sensing and GIS projects. He processes digital data from analog, digital, and thermal systems, and specializes in performing aerial triangulation (AT) on both push broom and frame images. Karl also consults with Woolpert's research and development (R&D) team as a photogrammetric expert for UAS and thermal technology R&D efforts, and has assisted in the calibration of frame and push broom cameras in support of aerial data acquisition research.

Professional Data

Years of Experience: 12 years
Education: Bachelor of Science |
Cartography

In addition to assisting in processing approximately half a petabyte of data per year, Karl also develops workflows for improved efficiency and reduced costs, allowing his team to offer more comprehensive value engineering services. He has processed imagery from the DMC, Ultracam, and Leica imagery systems, as well as film analog cameras, and is proficient in the use of XPro, POS Pac, ISAT, Socet-Set, Ultra Map, and Pictovera. He is also skilled at processing airborne GPS/IMU data for both fixed wing and UAS platforms using POSPac, IPAS Pro, IPAS CO, IPAS TC, Inertial explorer, and Grafnev AGPS processing software.

Selected Experience

Biennial Seagrass Mapping Orthoimagery Project | Florida. Geospatial Image Specialist who performed image processing, along with aerial triangulation to extend and densify the ground control in connection with this biennial seagrass coverage project that involved the acquisition of new natural color (RGB) and CIR digital imagery at one-foot pixel resolution for the project area of interest (AOI) that covered the five Gulf Coast estuaries: Tampa Bay, St. Joseph/Clearwater Harbor, Sarasota Bay, Lemon Bay and Charlotte Harbor, comprising approximately 2,539 square miles. The aerial imagery and subsequent creation of orthophotos needed were of high quality to allow for future completion of a detailed geospatial map characterizing the current seagrass distribution for these five estuaries.

St. Johns County 2016 Imagery | Florida. Geospatial Image Specialist who performed image processing, along with aerial triangulation to extend and densify the ground control to support the new digital orthoimagery of new 4-band imagery collected at a 6-inch GSD using a Leica ADS80 image sensor for the project area consisting of 776 square miles.

Bradford and Union County 6-Inch Orthoimagery for the Florida Department of Revenue | Florida. Geospatial Image Specialist who performed image processing, along with aerial triangulation to extend and densify the ground control to support new countywide 1"=100' scale 8-bit, 4-band (RGB&NIR) stacked digital orthoimagery with a 0.5-foot pixel resolution for the Counties of Bradford and Union. The new color 8-bit, 4-band stacked DOI encompassed the entire land area consisting of ~633 square miles.

Coastal Mapping | Palm Beach County, Florida. Geospatial Image Specialist who performed image processing, along with aerial triangulation to extend and densify the ground control to support 0.5-foot color (RGB) orthophotos of the coastline of Palm Beach County. Imagery was collected at 1.0-foot ground resolution of the county coastline at rising tide, with clear water, clear skies, and when the sun angle was between 15 and 35 degrees. Imagery was collected at 0.33-foot (10 cm) ground resolution at 3,165 feet above ground elevation. Final imagery was submitted at both 0.5-foot and 1.0-foot ground resolutions meetings 1"=100' NMAS horizontal accuracy.

North Central Texas Council of Governments Orthoimagery Services | Texas. Geospatial Image Specialist who performed image processing and aerial triangulation from the collected imagery for the subsequent production of 4-band digital orthoimagery with a 0.25-foot pixel resolution (for 3-inch AOI - 54.5 sq. miles) and 0.5-foot pixel resolution (for 6-inch AOIs 654.5 sq. miles) for the defined project areas. The images will be interactively mosaicked to produce imagery with consistent tone, density, and color balance. The project-wide imagery will be delivered in TIFF format with accompanying world files, along with MrSID files (Generation 2 and 4). Full tiles will be used for the entire project area; Woolpert will use NCTCOG's provided 2,000' X 3,000' tile grid.

Indiana Statewide Orthoimagery and Lidar Program | Indiana. Geospatial Image Specialist who supported this statewide initiative that includes photogrammetric, GIS, QA/QC, surveying, and program development and outreach services. A fleet of aircraft outfitted with Leica ADS digital sensors captured 1"= 200' scale 4-band DOI ($\pm 37,162$ square miles) at a 12-inch (with option six-inch and three-inch) pixel resolution throughout the state. The collected orthoimagery and lidar data supports the future applications of contours, planimetric mapping, automated feature extraction, building footprints, land cover/use, impervious surface mapping, 3-D modeling, H&H modeling, and wetlands delineation.

Doug Joos Orthophoto Production

As a senior image specialist, Doug Joos applies standard photogrammetric techniques to process, georeference, mosaic, and rectify orthoimagery from aerial photographs and digital imagery systems. He has experience with softcopy digital orthoimagery procedures and is proficient in using Inpho, Xpro, Intergraph ImageStation, OrthoVista, OrthoPro, GeoCue, TerraModel, and Global Mapper.

As phase manager and team lead, Doug is tasked with directing the day-to-day operations of Woolpert's photogrammetry department, as well as acting as an intermediary between clients and production staff. Mr. Joos is dedicated to delivering his clients a quality product within their unique time and budgetary constraints; by employing quality control and quality assurance (QA/QC) measures, such as the use of Woolpert's web hosting program—Smart View Connect—Doug and his clients are able to continually review and revise projects, thus limiting the amount of necessary rework and saving clients time and money.

Professional Data

Years of Experience: 31 years

Education: Course work in Geography

Selected Experience

Orthophoto Mapping, Palm Beach County | Palm Beach County, Florida. Ortho Production Manager and Geospatial Technician responsible who support this project involving ground survey, aerial acquisition and image processing services for true color and color infrared imagery at 0.5-foot resolution for 812-square miles of the urban and suburban areas of the county. Imagery was delivered in GeoTIFF and MrSID formats, with detailed individual metadata files for each image delivered.

North District Orthophoto Lidar Project, Southwest Florida Water Management District | Brooksville, Florida. Woolpert provided surveying and mapping services including: ground control survey, lidar acquisition and processing, aerial imagery acquisition and processing, aerial triangulation, photogrammetric mapping, DTM/DEM development, digital orthophoto imagery development and GIS services. Final products included color and color infrared imagery at a one-foot resolution, FEMA-compliant lidar DEM/masspoint data as LAS files, and one-foot contours (for cartographic visualization purposes only) meeting or exceeding National Map Accuracy Standards for two-foot contours. All products were provided in an ArcGIS geodatabase file format with a five-foot elevation field and index contour identifier.

Countywide Orthoimagery Acquisition Services | St. Johns County, Florida. Ortho Production Manager and Geospatial Technician responsible for the production of digital orthophotos. Doug used Leica's XPro software to perform image processing. Woolpert was selected by St. Johns County, Florida, to obtain new countywide four-band orthoimagery at a six-inch GSD to support six-inch pixel resolution at a mapping scale of 1"=100' (776 square miles). The imagery was captured at a slightly lower elevation than normal for a six-inch pixel resolution product and was acquired at 4,500-foot AGL. The Woolpert team utilized Leica ADS80 large-format, multi-spectral cameras. An aerial imagery report and Esri shapefile of the flight plan was delivered to the client.

North Central Texas Council of Governments (NCTCOG) Orthoimagery Program | Texas. Doug provided ongoing orthoimagery production support for the NCTCOG. He performed DEM updates, horizontal accuracy checks, and manual quality control reviews using Global Mapper; used OrthoVista and ZI OrthoPro software to tone balance and mosaic imagery; performed quality reviews and responded to flagged errors in Woolpert's SmartView Connect; and prepared final products for delivery to NCTCOG. The NCTCOG program is a five-year contract to perform photogrammetric, surveying and GIS services for the 16-county region covering approximately 12,800 square miles.

Statewide Imagery and Lidar Program | State of Maine. Geospatial (orthophoto) Technician supporting this 5-year rotating orthoimagery acquisition program (new 4-band orthoimagery at a various GSD to support 2-foot and 6- and 3-inch pixel resolution. New Lidar data at a 1.5-meter average post spacing was also collected) to facilitate state, regional and local government GIS base mapping. Digital orthoimagery ("multi-spectral" aerial imagery and lidar data products were produced for the entire 30,842 square mile). Both the orthoimagery and Lidar tiles are 5,000 feet x 5,000 feet in size. FGDC compliant metadata is being produced for the orthoimagery and lidar.



Zach Rahbek Orthophoto Production

Zach Rahbek is experienced in digital orthophoto production and providing image quality control for various federal, state, and county clients and projects. With a specialization in color balancing and a proficiency using the Adobe Suite of products – namely Adobe Photoshop for image editing – Mr. Rahbek specializes in image aesthetics, applying standard and proprietary imagery processing techniques to ensure color balance, tone, density, contrast, and brightness qualities to aerial imagery. He works closely with geospatial project team leads and Project Managers to develop final products and deliverables in accordance with project specifications and Woolpert's ISO protocols. He is knowledgeable in softcopy digital orthoimagery procedures and is skilled in using Inpho, Intergraph ImageStation, OrthoVista, OrthoPro, GeoCue, Terramodel, and Global Mapper.

Professional Data

Years of Experience: 22 years

Education: Associates | CAD Technology;
Associates | Computer Animation

Selected Experience

Countywide Orthoimagery Acquisition Services | St. Johns County, Florida. Geospatial technician who assist in the production of new digital orthophotos for this project where Woolpert was selected by St. Johns County, Florida, to obtain new countywide four-band orthoimagery at a six-inch GSD to support six-inch pixel resolution at a mapping scale of 1"=100' (776 square miles) using a Leica ADS80 large-format, multi-spectral camera. An aerial imagery report and Esri shapefile of the flight plan was delivered to the client. Zach used Leica's XPro software to perform image processing.

3-inch Countywide Orthoimagery | Huron County Ohio. Geospatial technician who assist in the production of new countywide color 4-band, 8-bit digital orthoimagery with a 3-inch pixel resolution. The 3-inch imagery was ortho-rectified and mosaicked into a geo-referenced, seamless image and was checked to ensure color/tonal quality and verify consistency with the DEM.

Orthophoto Mapping, Palm Beach County | Palm Beach County, Florida. Geospatial Technician who assisted in the production of digital orthophotography in the coastal areas for the purposes of monitoring coastal erosion, performance of restoration projects, accretion in inlet shoals, and mapping and quantifying exposed rock and/or reef in nearshore waters. The acquired aerial imagery was suitable for producing digital orthophotos at both 0.33-ft (4-inch) and 1.0-ft ground pixel resolution (GPR) and was flown at 1"= 600' (1:7200) nominal camera scale (NCS). Imagery was delivered in GeoTIFF and MrSID formats, with detailed individual metadata files for each image delivered.

North Central Texas Council of Governments (NCTCOG) Orthoimagery Program | Texas. Geospatial Technician who assisted in the production of orthoimagery. Zach performed DEM updates, horizontal accuracy checks, and manual quality control reviews using Global Mapper; used OrthoVista and ZI OrthoPro software to tone balance and mosaic imagery; performed quality reviews and responded to flagged errors in Woolpert's SmartView Connect; and prepared final products for delivery to NCTCOG. The NCTCOG program is a five-year contract to perform photogrammetric, surveying and GIS services for the 16-county region covering approximately 12,800 square miles.

Biennial Seagrass Mapping Orthoimagery Project, SWFWMD—Various, Florida. Geospatial Technician who assists in the production of orthoimagery for this biennial seagrass coverage project that involved the acquisition of new natural color (RGB) and CIR digital imagery at one-foot pixel resolution for the project area of interest (AOI) that covered the five Gulf Coast estuaries: Tampa Bay, St. Joseph/Clearwater Harbor, Sarasota Bay, Lemon Bay and Charlotte Harbor, comprising approximately 2,539 square miles. The aerial imagery and subsequent creation of orthophotos are of high quality to allow for future completion of a detailed geospatial map characterizing the current seagrass distribution for these five estuaries.

Ortho and Lidar Services | Columbus, Ohio. Image Specialist who produced a surface model to support future remote sensing applications. For the entire 700 square miles of the city of Columbus, Woolpert acquired new four-band (R, G, B, NIR) aerial imagery by using Leica ADS digital camera systems, and new lidar data acquired at a point density of four points per square meter, using Leica ALS aerial lidar systems. Woolpert also provided airborne GPS, aerial triangulation, and a project status review using Adobe Flex technology, for the purpose of error identification and corrections. This customized redlining tool provided a streamlined process for managing quality control of the orthoimagery in a secure environment.

Brian Foster, CP Photogrammetrist | Planimetric and Contour Mapping

Brian Foster is a Certified Photogrammetrist experienced in stereo production and cartography—to include image processing and triangulation, hydro-flattening, breakline production, contouring and DTM compilation—using Leica’s Xpro and ORIMA, Intergraph ImageStation, TerraSolid, ArcGIS, DATEM, MicroStation GeoCue, Global Mapper and other GIS software. His extensive technical background, which includes more than seven years of experience as a production team lead, gives Mr. Foster the specialized knowledge and insight necessary to act as an effective line of communication between Woolpert clients and production staff.

As a senior-level photogrammetrist, Mr. Foster is responsible for leading and training the production team, as well as developing and enforcing QA/QC standards to ensure all Woolpert deliverables are of the highest quality and accuracy. His project experience includes numerous DOT collaborations, as well as statewide imagery programs in Indiana, Ohio and Maine.

Professional Data

Years of Experience: 27 years

Education: Bachelor of Arts |
Geography/Cartography

Professional Registration: ASPRS Certified
Photogrammetrist | National 1460

Selected Experience

Coastal Orthophotos | Palm Beach County, Florida. Mapping/Compilation Specialist supporting this project involving the acquisition of high resolution natural color RGB imagery at 3,165 feet AGL with primary 0.5' and reduced resolution 1.0-foot ground resolutions covering 40 square miles of shoreline and coastal waters in support of sub-water feature mapping. The imagery was used to produce 0.5' color orthophotos meeting 1"=100' NMAS horizontal accuracy standards for use in evaluating the reefs in the nearshore waters. Imagery files included GeoTIFF and MrSID delivery formats.

Digital Orthoimagery, Southwest Florida Water Management District | Florida. Mapping/Compilation Specialist for this project involving the collection and processing of digital orthoimagery covering a 3,584 square mile area encompassing the counties of Citrus, Hernando, Levy, Marion, Pasco, and Sumter within the District's boundary. Three thousand nine hundred ninety-seven 5,000' x 5,000' Digital orthophoto imagery (3,997 - 5,000 x 5,000 tiles at a 1.0' pixel resolution) were delivered in a 32-bit four-band stack image format. Federal Geographic Data Committee compliant metadata was provided for each digital orthophoto image tile. All products were delivered to the District within 120 days from successful collection of digital aerial imagery.

Indiana Statewide Orthoimagery and Lidar Program | Indiana. Mapping/Compilation Specialist and client interface responsible for performing QA/QC of the deliverables and producing monthly status reports associated with this statewide initiative that includes photogrammetric, GIS, surveying and program development and outreach services. A fleet of aircraft outfitted with Leica ADS digital sensors captured 1"= 200' scale 4-band DOI (±37,162 sq mi) at a 12-inch (with option 6-inch and 3-inch) pixel resolution throughout the state. The collected orthoimagery and lidar data supports the future applications of contours, planimetric mapping, automated feature extraction, building footprints, land cover/use, impervious surface mapping, 3-D modeling, H&H modeling, and wetlands delineation.

Coastal Orthophotos | Department of Environmental Resources Management. Mapping/Compilation Specialist supporting this project involving the acquisition of high resolution natural color RGB imagery at 3,165 feet AGL with primary 6-inch and reduced resolution 12-inch ground resolutions covering 40 square miles of shoreline and coastal waters in support of sub-water feature mapping. The imagery was used to produce 6-inch color orthophotos meeting 1"=100' NMAS horizontal accuracy standards for use in evaluating the reefs in the near-shore waters. Imagery files included GeoTIFF and MrSID delivery formats.

County QL2 Lidar Services | Martin County. Mapping Specialist who assisted in lidar processing. Woolpert acquired and processed ±566 square miles of v.1.2 Quality Level 2 lidar at a nominal pulse spacing of 0.7 meters. The ground control portion of this project encompassed the uniform dispersal of ±100 ground checkpoints over the project area and a complete ground control report.

2012 Countywide Mapping | St. John County. Mapping Specialist who supported the development of comprehensive countywide base mapping and GIS enhancements to support master drainage planning, transportation planning, and preliminary engineering and wetland preservation studies. Woolpert was contracted to develop the new imagery and new Digital Terrain Model (DTM) from the collection of new 6-inch 4-band orthoimagery and 1-meter lidar. One-foot contours and topographic/planimetric feature updates were also produced.

Qian Xiao, CP Photogrammetrist | Planimetric and Contour Mapping

As a remote sensing specialist, Qian Xiao is integral in the post processing of lidar data acquired by Aerial and Terrestrial lidar systems from Leica, Trimble, Optech, and other proprietary systems. He develops software and methodology for lidar calibration, automation, QA/QC, and custom applications and assists with various automation and processing tasks.

Qian applies his mathematical and geospatial background to streamline standard lidar production of thousands of square miles of data annually, from optimizing point cloud filtering to raw and processed data control. He also facilitates projects involving innovative applications of lidar data and multiple sensor data co-registration and fusion. Qian has successfully and accurately fused aerial and terrestrial lidar together with a wide spectrum of EO image data. He has developed a custom calibration and pushed lidar accuracies down below 3-centimeter absolute, as well as merged lidar from multiple sensors into a seamless, intensity-balanced dataset.

Selected Experience

Seven Cities Lidar | National Geospatial Intelligence Agency. Lidar Specialist for the process automation, editing, calibrating, classifying and/or QC for this task order (and others under this program). Woolpert acquired and processed lidar for seven cities in Arizona, Pennsylvania, Tennessee, Ohio, South Carolina, and New York. The specifications required acquisition of data at a nominal Ground Sample Distance (GSD) of 0.5- and 1-meter; the production of DEMs to include reflective last return and penetrative bare earth surface; lidar intensity images; automated filtering; and attribution to facilitate feature extraction.

Georgia Department of Natural Resources Elevation Data | National Oceanic and Atmospheric Administration. Lidar Specialist for the process automation and production streamlining for this NOAA task involving ground control survey, lidar data acquisition, and processing for ±1,455 square miles for Morgan, Putnam, Hancock, and Baldwin counties in Georgia. The lidar data was acquired at a nominal pulse spacing (NPS) of 1.0 meter. Hydrologic flattening of the lidar data was performed on the lidar data to meet the National Elevation Dataset (NED) requirements. The hydrologic breakline shape files, Digital Elevation Models (DEMs) in Esri ArcGRID format, LAS files, and FGDC-compliant metadata were provided for the final data products.

Ohio Statewide Imagery Program (OSIP) | Ohio Office of Information Technology. Lidar SME responsible for the post acquisition review and QC, ABGPS processing and QC, and calibration of the collected lidar data. Specifications included county/city-based coverage in 1-meter (or denser) lidar point density, delivered in 2,500 by 2,500 feet or 1,250 by 1,250 feet grid tiles (based upon the ortho buy-up that each County/City selects (6-inch or 3-inch). As of spring 2011, 17 counties/cities had exercised the lidar-enhanced buy-ups. This contract, issued by the State of Ohio, is for the acquisition of professional mapping services: lidar, natural color oblique imagery, four-band orthoimagery, and the ability to provide information from any other remotely sensed data source (i.e. IfSAR, bathymetric lidar, etc.) as required by the State.

Indiana Statewide Orthoimagery and Lidar Program | Indiana Office of Technology. Lidar SME responsible for the post acquisition review and QC, ABGPS processing and QC, and calibration of the collected lidar data. The scope of this statewide initiative includes photogrammetric, GIS, QA/QC, surveying and program development and outreach services. A fleet of aircraft outfitted with Leica ADS digital sensors captured 1"= 200' scale 4-band DOI (±37,162 square miles) at a 12-inch (with option 6-inch and 3-inch) pixel resolution throughout the state. The collected orthoimagery and lidar data supports the future applications of contours, planimetric mapping, automated feature extraction, building footprints, land cover/use, impervious surface mapping, 3-D modeling, H&H modeling, and wetlands delineation.

White Sands Quality Level QL0 Lidar | U.S. Geological Survey. Lidar SME responsible for the post acquisition review and QC, ABGPS processing and QC, and calibration of the collected lidar data. This project involved the collection and data processing of 43 total square miles of airborne topographic lidar data at a 0.25-meter nominal pulse spacing, 16 PPSM over the White Sands National Monument located in Otero County, New Mexico.

Professional Data

Years of Experience: 26 years

Education

Bachelor of Science | Mathematics

Master of Science | Computing Science and Mathematics

Master of Science | Geodetic Science and Surveying

Professional Registration

Certified Photogrammetrist | R1281

Professional Membership

American Society for Photogrammetry and Remote Sensing (ASPRS) | Member



Zach Shuler Lidar Specialist

Zach Shuler is a geospatial specialist with nearly 10 years of experience in aerial data acquisition, processing and production. As a Geospatial Lead, Zach leads a team of analysts in processing lidar data into deliverable products, such as Digital Elevation Models (DEMs), Digital Surface Models (DSMs), classified point cloud data, and LAS and ASCII (XYZ) files, for various federal, city, state and county clients, including USGS, USDA, NOAA, Departments of Transportation (DOTs) and Departments of Natural Resources (DNRs). Prior to leading the production team, Zach operated Woolpert's Leica Airborne Laser Sensors(ALS), Leica ADS80 Airborne Digital Sensors, and performed QA/QC of airborne GPS and raw sensor data—contributing to his practical knowledge for guiding efficient and accurate production tasks.

Professional Data

Years of Experience: 11 years

Education: Bachelor of Arts | Geography

Zach uses a diverse range of software, including MicroStation, TerraSolid, Global Mapper, QT Modeler, LP360, GeoCue, and Esri's ArcGIS suite, to produce intensity images and extract various hydrographic and planimetric features, such as rivers, shorelines, streams, lakes, ponds, docks, seawalls, and ditches, as well as bridges, curbs, and vegetation. His project experience includes producing lidar and DEM files for the entire state of Indiana within a three-year timeframe, numerous elevation data projects for NOAA, and a Mississippi Coastal Mapping 3D Elevation Program (3DEP) project. Additionally, Zach assisted in the production of basemaps, DTMs, SLOSH basins and a complete raster dataset for nine coastal Florida counties for a collaborative project involving Florida Division of Emergency Management (FDEM), FEMA, NOAA, SWFWMD, NFWMD, Florida Department of Revenue (FDOR) and FDOT. He has substantial experience in watershed delineation, including feature extraction using lidar intensity and hydro flattening via ArcGIS. Having worked on numerous federal and state projects, Zach is proficient in the latest USGS-NGP Lidar Guidelines and Base Specification and US National Map Accuracy Standards and remains current in the latest standard software and deliverable formats.

Selected Experience

Mississippi Coastal QL2 Lidar with 3DEP Extension | U.S. Geological Survey. Lidar Specialist who assisted in processing and editing for approximately 3,585.63 square miles of v.1.2 lidar in the southeast corner of Mississippi. For this task order, Woolpert acquired and processed $\pm 3,585.63$ square miles of v.1.2 lidar in the southeast corner of Mississippi. In addition, Pike, Lincoln, Copiah, Simpson and some of Lawrence Counties—a total of $\pm 5,981$ square miles—were acquired as a 3DEP extension. The team collected static survey data using dual-frequency DGPS base stations; utilized existing NGS control for each priority area to verify and update control coordinates; obtained lidar data with Cessna 404 aircraft configured with Leica and Optech Gemini ALTM systems; and used the bare-earth data and lidar intensity imagery to perform hydrologic flattening of water bodies with TerraScan software. The 3DEP Extension AOI was provided in a 1,500 x 1,500-metered tiling scheme.

Coastal Mapping Project | Florida Division of Emergency Management. Lidar Specialist who assisted in processing, editing and QC of the collected lidar data. Woolpert was one of three prime contractors selected to create a new lidar surface model of Florida's coastline in order to update the storm surge modeling and evacuation routes. A combination of lidar and photogrammetric data collection techniques were used to create the new Sea, Lake and Overland Surges from Hurricanes (SLOSH) basins. Woolpert assisted in the collection and processing of $\pm 15,000$ square-miles of lidar, including: $\pm 4,887$ square miles of terrestrial lidar with breaklines, a new DEM, and 1-foot contours and $\pm 2,957$ square miles of true color and color infrared orthophoto imagery. Using the DEM and breakline vector data, Woolpert updated and revised the SLOSH databases and model grid for the Tampa Bay and Ft. Myers Basins.

Lake Erie Watershed Orthophotography, Lidar and Hydrology Project | Pennsylvania State University. Lidar Specialist for the processing of the lidar data including ABGPS and masspoints collected at a 0.7-meter average point density with the final bare earth data capable of supporting 1-foot contour generation with supplemental breaklines. Processing included deriving a point cloud from the individual flight lines, classifying the point cloud, and translating the raw lidar bare earth data into the appropriate map projection.

Minnesota Statewide Lidar Program | Minnesota Department of Natural Resources. Lidar Specialist who assisted in processing and calibrating the collected lidar data. Woolpert leveraged proprietary algorithms, developed in-house, to handle the filtering and classifications challenges of the unique hydrographic nature of the Arrowhead region. Woolpert collected and processed high-resolution lidar data at an average post spacing of 1.5-meters for nearly half of the entire state of Minnesota.

White Sands Quality Level QL0 Lidar | U.S. Geological Survey. Lidar Specialist who assisted in processing and calibrating the collected lidar data. This project involved the collection and data processing of 43 total square miles of airborne topographic lidar data at a 0.25-meter nominal pulse spacing, 16 PPSM over the White Sands National Monument located in Otero County, New Mexico.



Bradley Fugate, CP Mapping Specialist and QA/QC Manager

A veteran photogrammetrist with decades of photogrammetry and remote sensing experience, Brad supports a number of the firm's on-call geospatial aerial and photogrammetric services contracts. His experience encompasses all aspects of digital mapping and photogrammetry with specialized knowledge of transportation and design mapping services. He is proficient in aerial mission flight design, aerial, static, mobile collection and processing, control surveys, aerial triangulation, stereo compilation, and output of digital mapping solutions in various file formats. For this project Brad will work to ensure image quality and perform accuracy validation and accuracy assessment of the deliverable product.

Selected Experience

North Central Texas Council of Governments (NCTCOG) Program | NCTCOG. Ortho QA/QC Specialist who provides technical guidance to the ortho production team and performing QA/QC of orthoimagery. The NCTCOG program is a five-year contract to perform photogrammetric, surveying and GIS services. The NCTCOG region includes 16 counties in Texas covering approximately 12,800 square miles. The NCTCOG project consisted of providing a range of geospatial services that includes aerial imagery acquisition; new photo-identifiable ground control; aerial triangulation; 4-band digital orthoimagery at 6-inch pixel resolution; and web hosting services.

Maine Statewide Orthoimagery and Lidar Program | Maine GeoLibrary. Ortho QA/QC Specialist who provided quality control and project management support. The Maine GeoLibrary Board (MEGIS) developed a statewide, five-year, rotating orthoimagery acquisition program for Maine to facilitate state, regional and local government GIS base mapping in an efficient and cost-effective program. Woolpert developed digital orthoimagery for various base map products in a computerized GIS that will support the needs of the state and multiple stakeholders through applications such as multi-jurisdictional homeland security mapping applications; state and county emergency management applications; regional and local planning, state and local public safety applications; economic development and other GIS business objectives.

Indiana Statewide Orthoimagery Program | Indiana Office of Information Technology. Responsible for leading the ortho production team and ensuring the overall quality of deliverables. The State of Indiana was developing and updating various geospatial data sets for use by government agencies, academia, and the general public, and for inclusion in the IndianaMap. Woolpert provided photogrammetry services in support of this data set. This statewide initiative included photogrammetric, GIS/remote sensing, QA/QC, surveying and program development and outreach services. The entire state will be flown during the three-year period. A fleet of aircraft outfitted with Leica ADS digital sensors captured 1"= 200' scale 4-band (R, G, B and NIR) digital orthoimagery ($\pm 37,162$ square miles) at a 12-inch pixel resolution throughout the state. Digital orthoimagery collection and processing with optional 6-inch and 3-inch resolutions were also available. The lidar portion of the project includes existing lidar data and new data that Woolpert will collect at a 1.5-meter average post spacing over approximately 29,218 square miles.

Ohio Statewide Imagery Program (OSIP) | Ohio Office of Technology (OIT). Geospatial Technician and QA/QC Specialist responsible for the production and QA/QC of orthoimagery deliverables. The Ohio Statewide Imagery Project (OSIP) is a contract issued by the state of Ohio for the acquisition of professional mapping services. Services include lidar, natural color oblique imagery, 4-band ortho imagery, and the ability to provide information from any other remotely sensed data source (i.e., bathymetric lidar, etc.) as may be required by the State. The scope of this contract includes the entire geographic area of the state of Ohio and immediately adjacent territory. The Base Requirement under this contract consists of acquiring 4-band imagery covering the entire state of Ohio (41,276 square miles) and delivering orthorectified and mosaicked imagery (at a 12-inch pixel resolution delivered in 5,000' x 5,000' tiles as uncompressed GeoTIFFs with World Files) and as individual county mosaics in MrSID format. In addition to providing the base deliverables, Woolpert has contracted with 62 of Ohio's 88 counties through "buy-up" orders, requiring additional airborne acquisition of data covering more than half the state's 41,276 square miles. Specifications for the buy-ups have included acquisition of lidar at a nominal GSD of 0.7-meter and 1-meter, 4-band imagery at pixel resolutions of 3-inch and 6-inch, Natural Color Oblique Imagery and feature extraction of building footprints, land use/cover polygons, change detection, solar potential and impervious surface polygons, to name a few.

Professional Data

Years of Experience: 39 years

Education

Associates, Business Administration

Professional Registration

ASPRS Certified Photogrammetrist, 1048

Professional Land Surveyor, North Carolina, L-4062

Professional Photogrammetric Surveyor | South Carolina #23655

Professional Membership

American Society of Photogrammetry and Remote Sensing (ASPRS)

IMAGIN

Society of American Military Engineers (SAME)



Jeff Meyer QA/QC

As a Quality Assurance/Quality Control Specialist, Jeff is responsible for data translations, conversions, editing, processing and QA/QC of spatial information. He designs and implements custom QA/QC processes for each individual project using Woolpert's ISO procedures. He verifies that requirements for accuracy, completeness, consistency, and aesthetics of mapping and GIS products are met.

He is experienced with: ArcGIS, ArcMap, AutoCAD, AXIOM, MicroStation, GeoGraphics, GEOPAK, Feature Manipulation Engine, DATEM, InRoads, CAICE, TerraScan, and TerraModeler. Jeff also creates macroscripts to automate procedures. Additionally, he is an experienced field surveyor familiar with a variety of mapping standards such as: American Society of Photogrammetry and Remote Sensing, National Map Accuracy Standards, and National Standards for Spatial Data Accuracy.

Professional Data

Years of Experience: 16 years

Education: Certificate | GIS Technician

Continuing Education: CAICE Technician,
Certified Autodesk, Avatech Solutions

Selected Experience

Countywide Lidar | St. Johns County, Florida. Cartographer/Metadata production specialist for this project where Woolpert acquired new lidar data over the entire 715-square-mile county in a continuation of its relationship with St. Johns County. New aerial imagery in both color and color infrared was collected at a 1"=100' scale for production of 6-inch pixel resolution orthophotos. The digital terrain model was produced with one-foot contours.

Orthophotography and Lidar | Volusia County, Florida. Cartographer/Metadata production specialist associated with the deliverables for this digital mapping services project involving the acquisition of new color aerial imagery and bare earth lidar data. The digital terrain model with one-foot contours and digital orthoimagery was produced to meet FEMA's standard for revisions to the Flood Insurance Rate Map. While mapping the entire 938-square-mile county was in progress, a tornado struck a portion of the county in the spring of 2007. Woolpert acquired additional imagery and lidar data of the area affected by the tornado to aid in reconstruction and relief efforts.

Countywide Contours Update | Martin County, Florida. QA/QC Specialist responsible for contour translation and final quality reviews. Woolpert generated and provided six-inch and one-foot contours to Martin County utilizing the lidar QL2 data collected through a previous 3DEP purchase order. The contours and low-confidence polygons were delivered in Esri ArcGIS geodatabase and AutoCAD DWG formats.

County QL2 Lidar Services | Martin County. QA/QC Specialist who performed final review of the deliverables. Woolpert acquired and processed ±566 square miles of v.1.2 Quality Level 2 lidar at a nominal pulse spacing of 0.7 meters. The ground control portion of this project encompassed the uniform dispersal of ±100 ground checkpoints over the project area and a complete ground control report.

Palm Beach County Lidar | South Florida Water Management District. Cartographer responsible for compilation, orthophoto production and cartography. Woolpert acquired lidar data for parcels that SFWMD planned to convert to man-made treatment wetlands. The lidar data of the expansion areas allowed the District to initiate preliminary engineering design analysis. The ultimate goal of the expansion areas was to grade to create a flat plane upon which water will sheet flow through the treatment wetlands.

SR 826 Intercoastal Bridges Surveying & Mapping | Florida Department of Transportation. Cartographer responsible for compilation, orthophoto production and cartography. The Florida Department of Transportation, District Six, contracted with Woolpert to provide professional surveying and mapping services for a project located along SR 826 (NE 163 St/Sunny Isles Blvd). The Woolpert team provided the necessary services to support a bridge rehabilitation project, including collecting data using L.A.M.P. technology. Our subconsultants supported the tasks; M.G. Vera provided field ground surveying services, and I.F.R. provided the aerial acquisition.

Overseas Highway Mobile Mapping Survey | Florida Department of Transportation. QA/QC Specialist and Cartographer responsible for calibration, quality control, and compilation. FDOT District 6 selected Woolpert to collect Mobile Mapping lidar data along the Overseas Highway (US 1) in the Florida Keys, to support a milling and resurfacing project under Woolpert's district on-call contract. The 3D laser scan data was triangulated, processed, calibrated and QA/QC'ed prior to extraction and CAD compilation. Deliverables were to FDOT CAD standards in MicroStation format.



Ryan Bowe, GISP

Photogrammetrist | Planimetric and Contour Mapping

Ryan Bowe is a Metadata Specialist and Geospatial Phase Manager with more than 11 years of experience specializing in data quality control and metadata creation. Ryan is responsible for data translations, conversions, metadata, and final QA/QC of geospatial information. She designs and implements custom QA/QC processes for each individual project using Woolpert's ISO 9001:2008 procedures and verifies that the requirements for accuracy, completeness, consistency and aesthetics of the mapping and GIS products are met. Ryan also has experience in flight planning and acquisition, giving her valuable insight that allows her to work effectively with the project team.

She has provided quality control and metadata for a range of geospatial programs, including for the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Agriculture (USDA), Federal Emergency Management Agency (FEMA), Department of Homeland Security (DHS), and U.S. Army Corps of Engineers. Ryan has additional experience with the U.S. Geological Survey, where she provided metadata, seamline databases, and project reports for over 10,000 square miles of high-resolution orthoimagery and lidar. Ryan has also provided metadata for DOT, municipal, state and local clients, most frequently for the Southwest Florida Water Management District (SWFWMD), Kentucky, Tennessee DOT, and North Carolina.

Her blend of experience in the aerial image and lidar acquisition, processing and final product delivery, along with her expertise in QA/QC of geospatial data gives her a well-rounded perspective and unique ability to understand and meet clients' needs.

Selected Experience

Metadata Creation and Quality Management | Southwest Florida Water Management District. Metadata Specialist who provided seamline optimization, metadata creation, project report generation, and deliverable preparation on numerous projects. Ryan has served in this capacity on several SWFWMD projects, including for seagrass mapping and countywide orthoimagery projects. For the Hillsborough Orthoimagery Project, Ryan served in a phase management role, interfacing directly with the client, managing subcontractors, and delivering the final reports and products. She has also participated in SWFWMD metadata workshops.

3DEP and Orthoimagery Projects | U.S. Geological Survey. QA/QC and Metadata Specialist for multiple USGS task orders. Ryan has several years of experience creating seamline geodatabases; generating both file- and project-level metadata; developing project reports detailing mission-specific information; and creating flight maps and various GIS deliverables. She also collaborated with a USGS scientist to improve USGS Lidar Base Specification metadata.

QA/QC Report Generation | U.S. Geological Survey. QA/QC Specialist who generated thorough QA/QC reports for $\pm 7,000$ square miles of high-resolution, 0.3-meter GSD, 4-band (RGB-IR) orthoimagery. Ryan performed independent QC reviews of imagery collected by multiple USGS contractors for the following project areas: Baton Rouge, Louisiana; San Francisco, Oakland and Orange County, California; and Charleston, West Virginia.

IPD Survey | Flagler County Airport. Phase Manager for aerial acquisition, scanning and aerial triangulation, obstruction analysis, and orthorectification and color balancing. Woolpert provided an Airport Airspace Analysis Survey (AAAS) for the future approaches of Runway 11/29. Once construction is complete, Woolpert will create an as-built survey of the runway.

Enterprise Data Warehouse | U.S. Forest Service. QA/QC and Metadata Specialist responsible for metadata cleanup and generation for the USFS's geodatabase. Ryan managed attribute data via ArcGIS, coordinated with the subject matter experts to verify content, and created monthly status reports. This project was performed as a subcontractor to Science Applications International Corp. (SAIC) as part of an overall program to improve information security and quality and required USFS clearance.

Professional Data

Years of Experience: 13 years

Education: Bachelor of Arts |
Anthropology/Sociology

Professional Registration: Certified GIS
Professional | 67155

Professional Membership

American Society of Photogrammetry and
Remote Sensing (ASPRS) | Member

Federation of Earth Science Information
Professionals (ESIP) Partner | Member

Kentucky Association of Mapping
Professionals (KAMP) | Member

Urban Regional Information Systems
Association (URISA) | Cumberland Chapter,
Ohio Chapter | Member

Presentations and Publications

Avoiding Last Minute Metadata Misery
ArcNews 2012

Proper Care and Feeding of Metadata Ohio
GIS Conference 2013, CaGIS/ASPRS Fall
Specialty Conference 2013



Section 4

Related Experience



Section 4: Related Experience

The services requested under this contract are the CORE COMPETENCIES of the Woolpert team. A program such as this requires vast resources, experience, and knowledge. Woolpert has been performing large regional and statewide programs for over 20 years—and work for the Florida Department of Revenue since the late 1990s [Clay County, Indian River, St. Lucie County, Martin, Okeechobee, Bradford and Union Counties and more recently (2017/18) Okeechobee, Nassau and Flagler Counties through Woolpert's FDOT Central Office Contract].

Woolpert's proposed project manager, Eric Cole, brings a wealth of knowledge and experience in geospatial services in the state of Florida. An experienced project manager, his goal is to take a complex initiative and make it uncomplicated and straightforward.

Recent Woolpert projects include:

2016 Countywide Imagery | St. Johns County, Florida. Obtained new countywide four-band orthoimagery 6-inch pixel-resolution imagery for the ±776-square-mile county. The imagery was captured at 4,500-feet AGL using the Leica ADS80 large-format, multi-spectral cameras. Leica's XPro software was used to perform image processing. This project met the requirements of the new 2017 Florida County Digital Orthophotography Program Standards, published September 27, 2017.

2016, 2017 & 2018 Palm Beach Coastal Mapping, Palm Beach County Department of Environmental Resources Management | Palm Beach County, Florida. Photogrammetry services provided to Palm Beach County, Florida to include natural color RGB digital orthophotography of just over 40 square-miles of shoreline and coastal waters, in support of sub water feature mapping. High resolution imagery was collected at 3,200 feet AGL with 0.1-meter ground resolution using a Leica ADS80 digital camera, and 6-inch natural color orthophotos were delivered meeting 1"=100' NMAS horizontal accuracy standards.

2016 and 2018 Biennial Seagrass Mapping Orthoimagery Project | Southwest Florida Water Management District. Acquisition of new natural color (RGB) and color infrared (CIR) digital imagery at one-foot pixel resolution for a ±2,539-square-mile project area that covered the five Gulf Coast estuaries: Tampa Bay, St. Joseph/Clearwater Harbor, Sarasota Bay, Lemon Bay and Charlotte Harbor. The aerial imagery and subsequent creation of orthophotos needed were of high quality to allow for future completion of a detailed geospatial map characterizing the current seagrass distribution for these five estuaries.

2018 Okeechobee County Orthophotography Project | Florida Department of Transportation, Florida. Obtained new countywide four-band orthoimagery 6-inch pixel-resolution imagery for the ±995-square-mile county. The imagery was captured at 4,500-feet AGL using the Leica ADS80 large-format, multi-spectral cameras. Leica's XPro software was used to perform image processing. This project met the requirements of the new 2017 Florida County Digital Orthophotography Program Standards, published September 27, 2017.

2017 Flagler County Orthophotography Project | Florida Department of Transportation, Florida. Obtained new countywide four-band orthoimagery 6-inch pixel-resolution imagery for the ±570-square-mile county. The imagery was captured at 4,500-feet AGL using the Leica ADS80 large-format, multi-spectral cameras. Leica's XPro software was used to perform image processing. This project met the requirements of the new 2017 Florida County Digital Orthophotography Program Standards, published September 27, 2017.

2017 Nassau County Orthophotography Project | Florida Department of Transportation, Florida. Obtained new countywide four-band orthoimagery 6-inch pixel-resolution imagery for the ±800-square-mile county. The imagery was captured at 4,500-feet AGL using the Leica ADS80 large-format, multi-spectral cameras. Leica's XPro software was used to perform image processing. This project met the requirements of the new 2017 Florida County Digital Orthophotography Program Standards, published September 27, 2017.

2016 Palm Beach County Orthophotography Project | Florida. Obtained new countywide four-band orthoimagery 6-inch pixel-resolution imagery for the ±825-square-mile county. The imagery was captured at 4,500-feet AGL using the Leica ADS80 large-format, multi-spectral cameras. Leica's XPro software was used to perform image processing. This project met the requirements of the new 2017 Florida County Digital Orthophotography Program Standards, published September 27, 2017.

Open-End Professional Surveying and Mapping Services | Martin County, Hutchinson Island, Phipps Park and Lake Point | Florida

Woolpert has been performing professional services for Martin County since 1995 and Woolpert currently holds a 5-year continuing services Surveying & Mapping Mapping contract with the county that expire in 2021 if extensions are executed.

- **Martin County, Florida.** Woolpert acquired and processed airborne lidar of an ±566 square mile area at a NPS of not greater than 0.7 meters using a Leica ALS80 lidar sensor. Breaklines defining water bodies and streams were compiled as this task required hydrologic flattening. The hydrologic flattening of the lidar data was performed for inclusion into the National Elevation Dataset (NED). Woolpert surveyors provided ground control and quality control check points to support the lidar



data production. Ground check points were dispersed over the Lidar AOI in each of the land cover classifications in which there is more than 10% coverage will be collected to perform the accuracy validation.)

- **Hutchinson Island, Florida.** New aerial imagery was obtained for the project area, generally along NE Ocean Boulevard (1A) and NE MacArthur Boulevard on Hutchinson Island. Woolpert produced 1"=20' scale planimetric/topographic mapping with a 1-foot contour interval and digital orthoimagery with a 0.25-foot pixel resolution.
- **Phipps Park, Florida.** New aerial imagery was obtained for the project area west of the Florida Turnpike known as Phipps Park. Woolpert produced 1"=50' scale planimetric/topographic mapping with a 1-foot contour interval and digital orthoimagery with a 0.25-foot pixel resolution. Deliverables included one set of color digital orthoimagery at 1" = 50' scale with a 0.25-foot pixel resolution in uncompressed .TIFF format covering the entire project area; and one file with all mapping content, planimetric, DTM, 1-foot contours, and spot elevations in AutoCAD format.
- **Lake Point, Florida.** New aerial imagery was obtained for the project area along Lake Okeechobee, known as Lake Point. Woolpert produced 1"=20' scale planimetric/topographic mapping with a 1-foot contour interval and digital orthoimagery with a 0.25-foot pixel resolution.

The following program – while not performed within the State of Florida – speaks to Woolpert’s competency in the collection and processing of imagery and lidar (QL0, QL1 and QL2 specifications), nationwide. It is relevant to this effort as it demonstrates Woolpert’s ability to fully support the lidar services requirements requested in this RFQ.



USGS Geospatial Products and Services Contract (GPSC) | Locations Nationwide

Woolpert was awarded the Geospatial Products and Services Contract II (**GPSC II**) from USGS in March of 2010. During the period of performance, approximately \$27.7M was contracted for various geospatial services. The 74 task orders included topographic lidar data, bathymetric lidar data, and digital imagery acquisition and processing. Of the 74 task orders, **8 were collected and processed to QL1 specifications.**

Over 148,000 square miles of lidar data was acquired and processed for task orders awarded on GPSC II.

1. **Lidar task orders** involved lidar (topographic – bathymetric – single photon lidar) data acquisition at various nominal pulse spacing (NPS) at multiple geographic locations involving a range of technical requirements. Standard task order deliverables have included kick-off meetings with both USGS personnel and project customers, lidar data acquisition to include weekly lidar updates; ground control survey field work; ground control and land cover classification check points; lidar data processing; hydrologically flattened DEMs; classified lidar point clouds in LAS format; FGDC compliant metadata in XML format and a final task order report.
2. **Imagery task orders** have supported USGS for the 133 Urban Area digital orthophoto imagery program. These tasks required ground control survey, aerial imagery acquisition, aerial triangulation, imagery rectification and imagery mosaicking. Final products included GeoTIFF imagery with FGDC compliant metadata.

In February 2016, Woolpert was awarded the **GPSC III** from USGS. To date, we have received 28 task order awards on GPSC III for approximately \$35.5M. The task orders comprise **over 164,000 square miles of topographic lidar acquisition and processing.** In the **first quarter of 2018, approximately 63,000 square miles of topographic lidar** was acquired by Woolpert for USGS.

The following list is a brief representation of task orders performed by Woolpert for the USGS under the Geospatial Product and Services Contract II (GPSC II) at QL1 specifications.

Hawaii Island Quality Level (QL1) Lidar | Big Island of Hawaii. For the Hawaii Island QL1 Lidar task order, the National Oceanic and Atmospheric Administration (NOAA) is leveraging the U.S. Geological Survey’s (USGS) Geospatial Product Services Contract (GPSC) program to procure services for Single-Photon Lidar (SPL) data acquisition and processing. As the prime contractor for this task order, Woolpert is providing all technical expertise, services and equipment required to produce 3,160 square miles of high-resolution SPL data encompassing the Big Island of Hawaii.

Ground control was established using a combination of Real-Time Kinematics (RTK), Rapid-Static, and Virtual Reference System (VRS) GPS. Approximately 240 ground check points will be collected to support the lidar data production and quality reviews. Woolpert surveyors will collect 80 points to perform the lidar data calibration. NOAA staff will collect an additional 160 points for Woolpert and USGS to use in data accuracy validation.



Lidar data acquisition was performed in January through February of 2018 using the Sigma Space's High-Resolution Quantum Lidar System, SPL100 mounted on a Twin Aero Commander aircraft. Once acquisition and GPS and IMU processing are complete, the team will perform the formal data reduction process: calculate laser point position, test relative accuracy, classify ground and non-ground points, and create ground models/digital elevation models (DEMs).

Final lidar product deliverables will include classified lidar data (all returns point clouds) in LAS 1.4 format; 1-meter pixel raster 8-bit, 256 gray scale intensity images; 1-meter pixel raster DEMs in Erdas IMG format; hydrologic breaklines provided as an Esri file geodatabase and PolygonZ files; FGDC-compliant metadata in XML format; and 1-, 2- and 10-foot contours delivered in tiled feature classes in a geodatabase

Olympic Peninsula Quality Level (QL) 1 Lidar | Washington. This project consisted of lidar data acquisition and processing of approximately 437 total square miles of the Olympic Peninsula in the counties of Jefferson and Clallam in north-western coastal Washington. This project supports the National Spatial Data Infrastructure (NSDI) and is a priority of WA DNR to acquire lidar data over agency-managed lands in the Western Olympic Peninsula to include forestry, land and ecosystem management, geologic research, and geologic hazard identification. Simultaneous to the lidar data acquisition, field crews conducted a static (1 Hz recording frequency) survey of the horizontal and vertical positions of two or more survey control dual-frequency DGPS base stations established at monuments with known coordinates.

Malheur County Quality Level (QL 1) Lidar | Oregon. Woolpert acquired and processed new QL1 lidar data for USGS for an 855-square-mile portion of Malheur County. The field crew utilized a combination of GPS survey techniques, including Real-Time Kinematics, Rapid-Static, and the use of a VRS network.

The lidar collected met or exceeded the following accuracies: RMSEz less than or equal to 10 centimeters; NVA less than or equal to 19.6 centimeters at 95% confidence (tested against the swath and DEM); and vegetated vertical accuracy (VVA) less than or equal to 29.4 centimeters at the 95th percentile (tested against the DEM). The acquisition report, a shapefile of the flight plan, data in LAS 1.2 format (calibrated for geometric systemic error factors), metadata, and a modified DTM were delivered.

Multnomah County Quality Level (QL) Lidar | Oregon. Woolpert acquired and processed approximately 3,341 square miles of lidar at a NPS of no greater than 0.7 meters. 5.6 square miles within the project area was collected at a NPS of .35 meters (QL1 specs) and with a point density of 8 PPSM. To support accuracy analysis, over 230 check points were uniformly dispersed over the AOI, including 65 lidar data calibration points; 94 non-vegetated vertical accuracy points (NVA); and 74 VVA points. The lidar ground points and hydrologic feature breaklines were used to generate a new DEM, which was hydroflattened for insertion into the National Elevation Database (NED).

4A: Previous Experience

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES
ATTACHMENT "4-A"
PREVIOUS EXPERIENCE

Attach or insert copy here of a written narrative for at least three (3) projects in the State of Florida completed (as the lead firm) within the past seven (7) years)

Project 1—2016 Countywide Mapping | St. Johns County, Florida

Nature of Work

Woolpert was selected by St. Johns County, Florida, to obtain new countywide four-band orthoimagery at a six-inch GSD for the 776 square mile County to support 1"=100' scale mapping at a 6-inch pixel resolution. The imagery was captured at a slightly lower elevation than normal for a six-inch pixel resolution product and was acquired at 4,500-foot AGL. The Woolpert team utilized Leica ADS80 large-format, multi-spectral cameras. The Leica's XPro 5.0 software was used to perform image processing. The aerial imagery report and Esri shapefile of the flight plan were delivered to the client.

Data Acquisition. Woolpert acquired new panchromatic, color, and near-infrared imagery simultaneously across the project area using a Leica ADS80 large-format, multispectral sensor. The aerial imagery was captured to produce planimetric/topographic and orthoimagery mapping at a scale of at 1"=100' with 1-foot contours. All imagery was collected during leaf-off conditions based on vegetation cover, sun angle and client approval.

Ground Control Survey. Ground control to support aerial triangulation of the imagery was performed by the County. An estimated 40 control points were surveyed to support the 2016 project. Along with ground control, Woolpert obtained QA/QC points for verification of the vertical accuracy blocks to support the lidar.

Orthoimagery. Woolpert produced new 8-bit, 4-band stacked color digital orthoimagery at 6-inch pixel resolutions, with accurate X, Y ground coordinates, and RGBN scale values from 0 to 255. Woolpert matched the new lidar derived DEM data to a photo image through Z/I ImageStation software to create a digital orthoimage. The relevant DTM data was then merged with the orientation parameters and the new digital imagery.

Ground control, digital orthoimagery and lidar was horizontally referenced to Florida State Plane East, North American Datum of 1983/2011 adjustment. Vertical datum referenced to the North American Vertical Datum of 1988 (NAVD88), Geoid12A with units provided in US Survey Feet.

GIS Redline QA/QC Tool. To streamline QA/QC tracking, Woolpert used an application known as SmartView Connect (SVC). A website built and maintained by Woolpert, SVC is an Open Geospatial Consortium (OGC) compliant imagery and vector service that allows internet viewing access to all the project deliverables while the project is underway.

Key Participants

- Eric Cole, Project Manager
- Michael Zoltek, PSM, CP, CFeds, GISP, Production Manager
- Doug Joos, Orthophoto Production
- Zach Rahbek, Orthophoto Production
- Jonas Svoboda, Flight Operations Manager
- Karl Leibfacher, Geospatial Image Specialist
- Jeff Meyer, Cartographer/Metadata Specialist



Project 2—2017 Palm Beach County Urban Orthophotography Project | Florida

Nature of Work

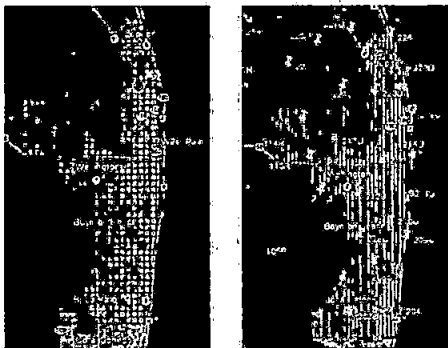
Woolpert provided 0.5-foot natural color (RGB) orthophotos of Palm Beach County consisting of the 825-square mile urban developed area along the east coast of the County. Using the existing 2009 Digital Elevation Model (DEM) produced for the County, Woolpert performed minor DEM modifications as necessary to support the orthoimagery. Building footprints were provided by Palm Beach County to support the orthoimagery mosaicking process. The project area was comprised of a collection of 5000 x 5000-foot tiles that serve as the tiling scheme for orthophoto data deliverables. All mapping work was performed in accordance with Chapter 472, F.S., Professional Surveying and Mapping and Chapter 5J-17 of the Florida Administrative Code.

Specifics of the work performed included the following:

Aerial Imagery Acquisition. New natural color imagery was collected by another contractor secured by Palm Beach County at a scale of 1"=100' scale for the production of 8-bit digital orthoimagery at a 6-inch pixel resolution in accordance with National Map Accuracy Standards (NMAS).

Ground Control. Palm Beach County provided Woolpert with the ground control survey data (control diagrams, point descriptions, diagrams, log sheets, X,Y,Z coordinates etc.) needed to support the aerial triangulation. The horizontal datum was in the Florida State Plane Coordinate System East Zone (NAD 1983, 1990 Adjustment).

Image Processing and Triangulation. Using existing PID ground control points, Woolpert performed analytical triangulation using softcopy methods. Mensuration was performed using Leica's Xpro software and ORIMA by Leica Geosystems Triangulation Software. Woolpert will use the CAP-A module of ORIMA software for the initial blunder detection, to catch any obvious errors in data input or mensuration, correct, and then reprocess for the final bundle adjustment. Finally, simultaneous adjustment of all analytical triangulation data (bundle adjustment) is performed and a multi-ray point intersection is run to refine the bundle solution. RMS misclosures in ground units are printed for horizontal and vertical ground control points as a final check for the overall solution.



Digital Orthoimagery. Woolpert produced new color RGB, 8-bit digital orthoimagery at a 6-inch pixel resolution. The dataset was produced to meet or exceed a horizontal accuracy of 3.79 feet at the 95% confidence interval as specified in the FGDC "Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (NSSDA)".

The project-wide imagery was delivered in .tif and .tfw format based on Palm Beach County's tiling system. The 6-inch imagery was based on the 5,000 x 5,000 modular tile grids. A MrSID data set was delivered for each 5,000 x 5,000 tile as a 30x compression and additional MrSID files based on the County's existing 8 tile layout.

Quality Assurance/Quality Control. Within approximately 2 weeks of receipt of imagery data, raw Leica ADS imagery tiles were made available for virtual online review to check data collection progress by the County via SmartView Connect. Woolpert provided log-in information for reviewing the digital orthoimagery.

Key Participants

- Michael Zoltek, PSM, CP, CFeds, GISP, Project Manager
- Zach Rahbek, Orthophoto Production
- Brian Foster, CP, Mapping/Compilation Specialist
- Jose Sanfiel, PSM, Surveyor
- Jonas Svoboda, Flight Operations Manager
- Karl Leibfacher, Geospatial Image Specialist



Project 3—2017 Post Hurricane Irma Emergency Response Imagery | Miami-Dade County, Florida

Nature of Work

In September 2017, Woolpert began collecting imagery 72 hours of the passage of Hurricane Irma and began posting of high-resolution, 4-band imagery within 5 days of the storm event. This imagery was provided to Miami-Dade County to assist with flooding and damage assessment. Imagery is available to the public at maps.woolpert.com/Irma.

Miami-Dade County contracted with Woolpert for post-storm imagery as Hurricane Irma approached: The County wanted imagery from after the event for the purposes of documenting damage assessment.

Imagery was collected and posted to Woolpert's disaster relief website within 48 hours of collection and was made available via web access to Miami-Dade County and its emergency responders. Imagery collection continued as weather allowed throughout the week, with that imagery was also subsequently posted.

The collection included 4-band, 6-inch ground sample distance (GSD) orthoimagery. Woolpert captured aerial imagery, processed the data, paired it with comparable imagery collected prior to the hurricane, delivered it to clients and posted it on a before-and-after online slider for use by anyone affected by the disaster.

The resulting online maps, aggregated with data from the National Oceanic and Atmospheric Administration (NOAA) and Google, enable viewers to look up an address, navigate to an area of concern, and zoom in and out.

Woolpert aircraft had just returned from mapping the devastation in Houston after Hurricane Harvey when contacted by Miami-Dade, credited the county for preparing for recovery efforts before the storm hit. By arranging these services prior to Irma making landfall, we were able to have our flight plans prepared and our planes ready and stationed nearby. Understanding the needs of the customer allowed us to adjust to the shifting trajectory of the hurricane and quickly get our collection underway.



Key Participants

- Michael Zoltek, PSM, CP, CFeds, GISP, Project Manager
- Doug Joos, Orthophoto Production
- Jonas Svoboda, Flight Operations Manager
- Karl Leibfacher, Geospatial Image Specialist

Project 4—2017 Post Hurricane Irma Emergency Response Imagery | St. Johns River Drainage Basin, Florida

Nature of Work

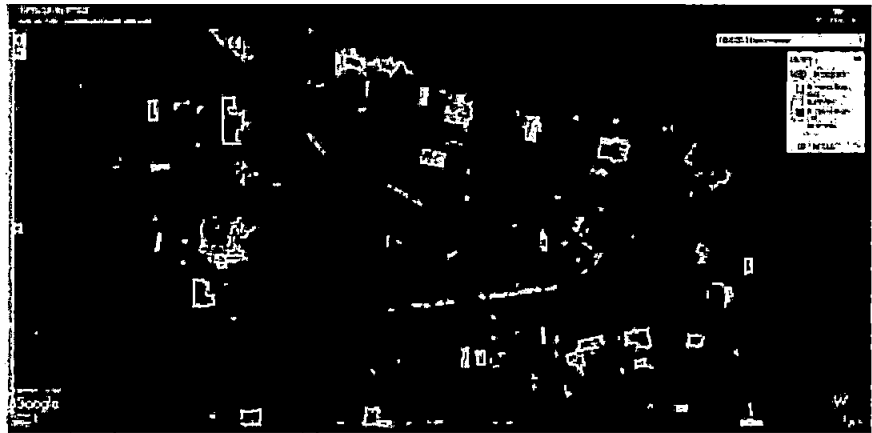
In September 2017, Woolpert collected and posted high-resolution, post event emergency 4-band imagery for over 900 square miles of the St. Johns River Drainage basin in Florida affected by Hurricane Irma to assist with flooding and damage assessment. Initial imagery is available to the public at maps.woolpert.com/irma. This work with the Florida Department of Transportation (FDOT) was part of an existing five-year, statewide contract for emergency mapping services.

FDOT wanted to see how high the water got at the peak of the flooding to gauge current flood conditions. The imagery, collected across four counties—St. Johns, Duval, Putnam and Clay—from Palatka to Jacksonville – was captured in a single day as the water was cresting.

Imagery was collected and posted to Woolpert’s disaster relief website within 48 hours of collection and was made available via web access to FDOT and/or emergency responders as designated by FDOT.

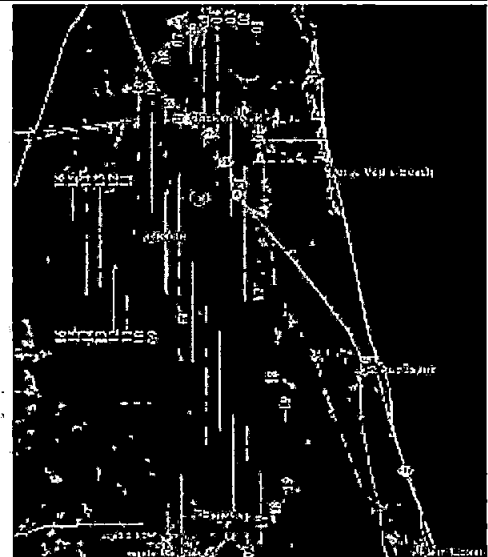
The collections included 1-foot ground sampling distance (GSD) orthoimagery. As part of this process, Woolpert captured aerial imagery, processed the data, paired it with comparable imagery collected prior to the hurricane, delivered it to clients and posted it on a before-and-after online slider for use by anyone affected by the disaster.

The resulting online maps, aggregated with data from the National Oceanic and Atmospheric Administration (NOAA) and Google, enable viewers to look up an address, navigate to an area of concern, and zoom in and out.



Key Participants

- Michael Zoltek, PSM, CP, CFeds, GISP, Production Manager
- Doug Joos, Orthophoto Production
- Zach Rahbek, Orthophoto Production
- Jonas Svoboda, Flight Operations Manager
- Karl Leibfacher, Geospatial Image Specialist



Project 5—2016 and 2018 Seagrass Mapping Project for the Southwest Florida Water Management District (SWFWMD) | Florida

Nature of Work

Under Woolpert's contract with the District (Agreement No. 14MA0000062) to perform on-call surveying and mapping services, Woolpert was tasked to perform services in connection with the Biennial Seagrass Coverage project that involved the acquisition of new natural 4-band (RGB-IR) digital imagery at one-foot pixel resolution for the project area of interest (AOI) that covered the five Gulf Coast estuaries: Tampa Bay, St. Joseph/Clearwater Harbor, Sarasota Bay, Lemon Bay and Charlotte Harbor, comprising approximately 2,539 square miles. The aerial imagery and subsequent creation of orthophotos needed to be of high quality to allow for future completion of a detailed geospatial map characterizing the current seagrass distribution for these five estuaries.

Aerial Imagery Acquisition. Woolpert acquired new RGB digital imagery of an $\pm 2,852$ square mile area at a one-foot ground sampling distance (GSD) at a flying height of 9,494 feet above mean terrain for five Gulf Coast estuaries using a Leica ADS digital camera system for the production of orthoimagery at 30 cm pixel resolution. Specific environmental condition criteria were met to ensure successful imagery capture for visualization of benthic features and included monitoring of tidal condition, wave height, wind speed, water clarity, preceding weather, sun angle and cloud cover. Woolpert also coordinated a team of on-the-ground observers during the entire aerial acquisition process to ensure the water quality requirements were met at the time of capture.

Within approximately 2-3 days of acquisition, raw Leica ADS80 imagery tiles were made available for virtual online review to check data collection efforts for turbidity and water clarity issues by the District via SmartView Connect. This online image viewing tool was developed, by Woolpert, to facilitate an efficient QA/QC review of both imagery and vector data. Woolpert provided a SVC log-in to the District for reviewing the digital orthoimagery. Once approved, Woolpert commenced image processing.

Orthoimagery. Woolpert produced new 8-bit, 4-band stacked color digital orthoimagery at 30 cm pixel resolutions, with accurate X, Y ground coordinates, and RGBN scale values from 0 to 255. This imagery was specifically captured to allow for the mapping of submerged Seagrass features. Special care was taken to capture the imagery at specific tidal and water clarity conditions. The goal of this project was to produce separate, color balanced ortho deliverables for each of the five estuaries. Each estuary is its own eco-system with its own image classification and image interpretation techniques. Woolpert matched the existing DEM data to a photo image through Z/I ImageStation software to create a digital orthoimage. The relevant DTM data was then merged with the orientation parameters and the new digital imagery. A complete differential rectification was carried out with a set of algorithms that removed image displacement due to topographic relief and the tip and tilt of the aircraft at the moment of exposure. Woolpert's ortho specialists used Orthovista and ZI Orthopro software for tone balancing and image mosaicking and to ensure a seamless and uniform balanced color. Woolpert provided the imagery in the **Florida Department of Revenue (FDOR)** 5,000 x 5,000 tile index format.

Deliverables. Project deliverables included one set of 4-band stacked digital orthoimagery at 30 cm pixel resolution for each tile in GeoTIFF format; an Esri shapefile of flightlines with acquisition dates; an Esri shapefile of control points; an Esri shapefile of tile index and an Esri shapefile of seamlines. Each deliverable product included fully compliant FGDC metadata.

Key Participants

- Michael Zoltek, PSM, CP, CFeds, GISP, Project Manager
- Doug Joos, Orthophoto Production
- Zach Rahbek, Orthophoto Production
- Bradley Fugate, CP, Orthophoto Photo QA/QC
- Jonas Svoboda, Flight Operations Manager
- Brian Foster, CP, Mapping/Compilation Specialist
- Karl Leibfacher, Geospatial Image Specialist
- Ryan Bowe, GISP, Cartographer/Metadata Specialist



Project 6—2016 Flagler County Orthophotography Project | Florida

Nature of Work

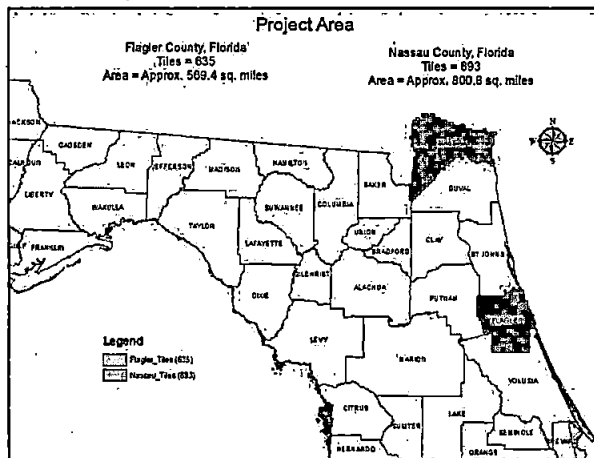
Under Woolpert's contract with the Florida Department of Transportation (FDOT) State Topographic Mapping Contract (C9P01), Woolpert produced 6-inch Ground Sample Distance (GSD) digital aerial imagery over a ± 570 square mile area covering Flagler County, Florida. Four-band aerial imagery collection, color balancing of the natural color, and color infrared (RGBNIR) orthoimagery, along with geospatial metadata was performed. The project area comprised a collection of 5000 x 5000-foot tiles that served as the tiling scheme for orthophoto data deliverables using the FDOT/FDOR standard tiling scheme. The orthophoto area mapped consisted of 635 tiles.

Aerial Imagery Acquisition. Woolpert acquired new 4-band (R, G, B, and NIR) aerial imagery covering the entire project area using Leica ADS digital camera systems.

Image Processing and Triangulation. Woolpert performed image processing, along with aerial triangulation to extend and densify the ground control to support the new digital orthoimagery. After the imagery was processed, QA/QC of the acquisition imagery strips was performed to verify coverage and quality. Mensuration was performed using Leica's Xpro software and ORIMA by Leica Geosystems Triangulation Software. Woolpert used the multi-sensor triangulation software module, which incorporates automatic pass point selection, numbering, and measurement in one batch process.

The horizontal datum used for this project was North American Datum 1983 2011, Florida State Plane, and expressed in US Survey Feet. The vertical datum used for this project was the North American Vertical Datum 1988 (NAVD88), and expressed in US Survey Feet.

Height displacement was corrected on imagery of paved roadways and bridges so that images have misalignments of 2 pixels or less along seamlines, and 3 pixels or less on remaining imagery.



Orthoimagery. Woolpert used publicly available DEM data to orthorectify the newly collected aerial imagery to validate the DEM against the vertical GCP, aerial triangulation and check point values prior to proceeding to orthorectification. Technicians used the provided tiling format layout, with each orthoimagery covering 5,000' x 5,000' and defined by even NAD83 Florida State Plane Coordinate grid lines, clipping them to eliminate overlap between adjacent tiles. The file size for each tile was approximately 400 MBs. An interactive process for tone balancing and image mosaicking was employed, and full image tiles were used throughout the project.

Deliverables. Project deliverables included orthorectified natural color and color infrared (RGBNIR) products integrated into a 4-band stack along with natural color imagery (RGB) with metadata and color infrared imagery (CIR) with metadata. Imagery was delivered as uncompressed four band GeoTIFF images with valid projection header information. One

GeoTIFF file per 5000 x 5000-foot tile was required using the FDOT/FDOR standard tiling scheme.

Key Participants

- Mike Zoltek, PSM, CP, CFedS, GISP, Project Manager
- Doug Joos, Orthophoto Production
- Zach Rahbek, Orthophoto Production
- Brian Foster, CP, Mapping/Compilation Specialist
- Jonas Svoboda, Flight Operations Manager
- Karl Leibfacher, Geospatial Image Specialist
- Ryan Bowe, GISP, Cartographer/Metadata Specialist

4B: Project References

In this section, Woolpert has provided client contact reference information for those projects showcased in Section 4A above. The projects that range from currently in production to completed, involving the services and specifications highlighted in the RFQ. These projects (aside from those that are ongoing) have been satisfactorily completed within budget and in accordance with project specifications, were invoiced and paid in full, providing further evidence of satisfactory project completion. We invite you to contact these individuals to discuss project performance and deliverables.

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES
ATTACHMENT "4-B"
PROJECT REFERENCES**

Each Respondent must submit a list of minimum of three (3) project references from individuals, firms or agencies that have contracted with the respondent as the lead firm in the past seven (7) years to perform services of similar size and scope as those described in this RFQ. The information required shall include: reference company name, date(s) of service, project information including name of project, and a contact person name, title, phone number and email address. References shall be checked by the Purchasing Department, for the number one ranked firm, to verify capability to perform the work, and responsibility to fulfill the requirements of the contract.

Project 1

Reference Company Name: St. Johns County, Florida

Date(s) of Service: 10/2016 – 05/2017

Project Information: Woolpert obtained new countywide four-band orthoimagery at a six-inch GSD for the 776 square mile County to support 1"=100' scale mapping at a 6-inch pixel resolution.

Primary Reference Contact Name and Title: Gail Oliver, PSM, County Surveyor

Contact Phone Number: 904.209.0770

Contact Email Address: goliver@sjcfl.us

Project 2

Reference Company Name: Palm Beach County, Information Systems Services

Date(s) of Service: 08/2016 – 08/2017

Project Information: Woolpert produced 0.5-foot natural color (RGB) orthophotos of Palm Beach County consisting of the 825-square mile urban developed area along the east coast of the County.

Primary Reference Contact Name and Title: Christine Benkly, Countywide GIS Coordinator

Contact Phone Number: 561.233.5305

Contact Email Address: cbenkly@pbcgov.org

Project 3

Reference Company Name: Miami-Dade County, Florida

Date(s) of Service: 09/2017

Project Information: Woolpert collected imagery 72 hours of the passage of Hurricane Irma and began posting of high-resolution, 4-band imagery within 5 days of the storm event. This imagery was provided to Miami-Dade County to assist with flooding and damage assessment.

Primary Reference Contact Name and Title: Mairim Avila (ETSD) and Jose Lopez (ITD)

Contact Phone Number: 305.596.8090 and 305.596.8461

Contact Email Address: avilam@miamidade.gov and jose.lopez5@miamidade.gov

Project 4

Reference Company Name: Florida Department of Transportation (FDOT)

Date(s) of Service: 09/2017

Project Information: Woolpert collected and posted high-resolution, post event emergency 4-band imagery for over 900 square miles of the St. Johns River Drainage basin in Florida affected by Hurricane Irma to assist with flooding and damage assessment



Primary Reference Contact Name and Title: Brett Wood, PSM
Contact Phone Number: 850.414.4431
Contact Email Address: brett.wood@dot.state.fl.us

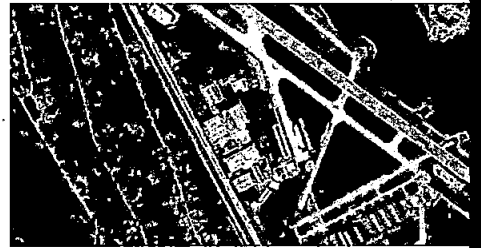
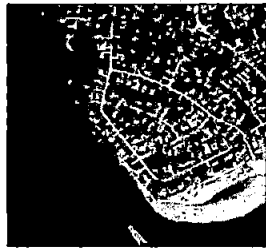
Project 5

Reference Company Name: Southwest Florida Water Management District
Date(s) of Service: 12/2015-06/2016; 08/2017 – 05/2018
Project Information: Under Woolpert's contract with the District (Agreement No. 14MA0000062) to perform on-call surveying and mapping services, Woolpert acquired new natural 4-band (RGB-IR) digital imagery at one-foot pixel resolution for the project area of interest (AOI) that covered the five Gulf Coast estuaries: Tampa Bay, St. Joseph/Clearwater Harbor, Sarasota Bay, Lemon Bay and Charlotte Harbor, comprising approximately 2,539 square miles.
Primary Reference Contact Name and Title: Al Karlin, Sr. GIS Scientist
Contact Phone Number: 352.796.7211
Contact Email Address: al.karlin@swfwmd.fl.us

Project 6

Reference Company Name: Florida Department of Transportation (FDOT), Survey and Mapping Office
Date(s) of Service: 10/2016 – 05/2017
Project Information: Under Woolpert's contract with the FDOT State Topographic Mapping Contract (C9P01), Woolpert produced 6-inch Ground Sample Distance (GSD) digital aerial imagery over a ±570 square mile area covering Flagler County, Florida. Four-band aerial imagery collection, color balancing of the natural color, and color infrared (RGBNIR) orthoimagery, along with geospatial metadata was performed.
Primary Reference Contact Name and Title: Brett Wood, PSM
Contact Phone Number: 850.414.4431
Contact Email Address: brett.wood@dot.state.fl.us

Section 5 | Project Approach & Understanding



Section 5: Project Approach and Understanding

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and Lidar DELIVERABLES
Full Legal Company Name: Woolpert, Inc.
ATTACHMENT "5-A"
PROJECT APPROACH & UNDERSTANDING

As stated in the RFQ, the project goal is to acquire new 4-band aerial imagery at a nominal 0.5-foot GSD for the subsequent production of digital orthophotography with a 0.5-foot pixel resolution delivered in uncompressed GeoTIFF format with FGDC compliant metadata.

The project also consists of providing lidar deliverables including a DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer only. These lidar deliverables will be generated based on the FDEM/USGS QL1 lidar data which is to be made available to the county.

Woolpert proposes a project approach that provides oversight of all facets of the project with two Florida licensed Professional Surveyors and Mappers (PSMs) on the project team (*Jose Sanfiel, PSM, for ground control and Michael Zoltek, PSM, CFedS for certification of the digital orthoimagery*), an office location within Florida and superior customer service coupled with high-quality digital mapping products. Woolpert will use the most cost-effective and efficient technology to produce the products and services that meet St. Johns County's accuracy and quality expectations.

Specific Elements of the Technical Approach

Project Planning

This phase will allow for the finalization of a project plan, scope of services, schedules, communication/coordination protocols, tracking, and QA/QC procedures.

Woolpert's Project Manager, Eric Cole, will tailor the project plan for presentation during a kickoff meeting, which will occur first with Woolpert's production members and then with St. Johns County. An important element of these meetings is the assignment of roles and responsibilities among team members and the client.

Aerial Imagery Acquisition

Color (RGB) and Color Infrared (CIR) will be captured simultaneously across the project area using Woolpert's Leica ADS80 large-format, multi-spectral sensors across the entire 776 square mile project areas (~866 – 5,000 x 5,000 tiles). The aerial imagery will be acquired at a flying height capable of producing 1"=100' scale equivalent orthoimagery with a 0.5-foot (6-inch) pixel resolution where specific coastal tiles shall be collected within ±2 hours of Mean Lower Low Water (MLLW).

- **Flight Parameters** | Flying Height = 4,431' AGL; GSD Output Resolution = 6-inch; Sidelap = 30%; Forward Lap = Continuous (push broom sensor); Number of Flight Lines = 42; Number of Flight Line Miles = 1,125; Flying Speed = 140 knots.

The flight parameters are set to acquire the imagery slightly lower than what is required for a 6-inch pixel resolution to provide a clearer and more detailed image for St. Johns County.

Woolpert will run the raw ADS imagery through initial processes immediately after acquisition has been completed to ensure that all project specifications have been met. This allows any necessary reflights to be accomplished as soon as possible after the date of the original acquisition.

Aerial imagery will be obtained when the solar angle will be at least 30 degrees or more above the horizon at the time of exposure. Imagery will be collected when the sky is sufficiently clear; the ground is sufficiently free from haze, fog, smoke, or dust; and when streams are within their normal banks. All flight will adhere to all other inflight requirements pertaining to the crab and tilt of the aircraft. Woolpert's Leica ADS sensor will capture all 4-bands of imagery individually and does not require a pan-sharpening process



to produce the infrared band. The resulting orthoimagery will support high geometric accuracies and is compatible with existing softcopy environments.

Ground Control

Ground control will be required to support aerial triangulation of the imagery. Woolpert understands the County will be performing the ground control survey services including targeting. The County will maintain these targets until completion of all data acquisition. It is estimated that approximately 40 ground control points will need to be surveyed by the county.

Woolpert will also acquire 25 QA/QC control points to verify the accuracy of the imagery as required by the new FDOR Standards for Orthoimagery. The 2016 orthoimagery project was based on a horizontal datum of Florida State Plane East, North American Datum of 1983/2011 adjustment and the vertical datum was referenced to North American Vertical Datum of 1988 (NAVD88), Geoid 12A. Units are US Survey Feet. During the project implementation phase the County and Woolpert will discuss using Florida State Plane East, North American Datum of 1983/2011 adjustment (or most current adjustment) and North American Vertical Datum of 1988 (NAVD88), Geoid 12A (or most current geoid).

For this project, locally based surveyor Jose Sanfiel, PSM, certified by the Board of Surveyors and Mappers, pursuant to Chapter 472, Florida Statutes, will oversee the surveying services for the project. Woolpert will work with the county to provide targeting and surveying services. Additionally, Woolpert will provide airborne GPS using a procedure that encompasses these steps:

- Survey planning and preparation
- Ground control reconnaissance and targeting
- Airborne GPS.

Aerial Triangulation and Orthoimagery Processing

Woolpert's the aerial triangulation process is similar to conventional operations, where the imagery is passed through Automatic Point Measurement, the resulting tie points and ground control are adjusted using CAP-A and ORIMA software. Blunders are removed, and the block is analyzed for weak network areas, and if required, manual points are added. The final adjustment output consists of precise orientation data files for each band, calibration parameters and metadata.

For the aerial triangulation (AT) solution, a sufficient amount of control test points will be used per data acquisition block to validate the accuracy of the solution. The test control point coordinates will be withheld from the initial AT adjustment and compared to the coordinates produced by the AT to confirm the accuracy of the adjustment. For the rectification process, cubic convolution algorithms will be used which provide the best imagery clarity. Each digital orthoimagery tile will be checked and corrected to ensure proper and consistent tone, density, contrast, and brightness.

Woolpert will produce new 4-band stacked color digital orthoimagery at 6-inch pixel resolutions, with accurate X, Y ground coordinates, and RGBN scale values from 0 to 255. Woolpert will match the 2013 lidar derived DEM data to a photo image to create a digital orthoimage. The relevant DTM data will be merged with the orientation parameters and the new digital imagery. A complete differential rectification is carried out with a set of algorithms that remove image displacement due to topographic relief and the tip and tilt of the aircraft at the moment of exposure. Rectification will be done as a batch process. Overlapping nadir image strips will be developed from the triangulated flight lines to support full differential rectification performed on each image strip using Leica's XPro software.

After completion of the image rectification process, Woolpert will use Orthovista to perform additional radiometry adjustments and mosaic seam line creation. Image strips will be mosaicked within the 30% sidelap area to help minimize building lean. Feature detection is also used in the generation of the seam lines to avoid cutting through manmade features such as buildings and bridges. Special attention will be given to the placement of mosaic lines in developed areas so as not to bisect buildings, bridges or other man-made structures at ground level. Overpasses and bridges along roadways shall retain location and geometry. The resulting mosaicked image with the generated seam lines will then be manually reviewed in order to identify any areas where the software may have failed. Subsequently, seam lines will be manually adjusted utilizing the seam line editor tool, and a final mosaicked dataset will be created. Orthovista software will be used for tone balancing and image mosaicking. Tiles will be mosaicked so the images appear to be completely seamless, except at mosaic lines on bodies of water.

As part of this image processing procedure, Woolpert will provide image datasets that include vegetation with various color balance, tone, density, contrast, and brightness qualities. Woolpert will meet with SWFWMD to determine the appropriate image sample to be used as a guideline for the full implementation of the project. Special attention and adjustments will be made for "Hot-Spots" or reflections from water, auto and mobile homes.

The final mosaicked dataset is then cut into appropriate tile layouts based on the final pixel resolution. Tiles are then manually reviewed and corrected using Adobe Photoshop software. Final tiles are then loaded to SmartView for client review.

Lidar Data Processing

Woolpert's understands that the County will provide the FDEM/USGS QL1 lidar data. It is also our understanding that the FDEM/USGS data that the County will receive will include the DEM (Bare Earth Surface) and the planimetric "water features" which are being compiled as part of the FDEM/USGS project for the purpose of hydro flattening.

Woolpert would receive that FDEM/USGS data from the county and review the DEM (bare earth surface) for completeness and format it to the requirements of St. Johns County. We would review all provided planimetric water features for completeness and accuracy as well as compile any additional breaklines needed for contour generation and deliver the planimetric water features in File Geodatabase and AutoCAD formats. After review of the DEM, review of provided planimetric features and compilation of additional features we will generate the 1' contours and deliver them in File Geodatabase and AutoCAD formats

For this project the first step would be a review and quality check of the FDEM/USGS data.

As a quality control procedure, a review of the point cloud and Digital Elevation Model (DEM) surface will be conducted to assist with our goal of a consistent and topographically accurate data set.

Following DEM quality control procedures, a rasterized Digital Elevation Model of the Bare Earth Surface (Digital Terrain Model) will be produced in Esri 32-bit floating point grid format.

Stereo Compilation

Breaklines. Woolpert understands that the ultimate goal of this lidar project is to create hydroenforced DEM's and 1' contours that accurately represent water flow.

Woolpert will use an approach that combines lidar ground points and stereo models developed from the new imagery. These models will be used by experienced stereo-compilation specialists to collect additional hydrographic, coastline, and breakline features necessary for the generation of 1' contours.

Breaklines and the majority of hydrographic planimetric features will both be captured as 3D lines and attributed as Z-enabled. No lidar points will be coincidental with a breakline and our filtering routines will remove all points within 3-feet of the breakline. Great care will be taken to ensure that all features are collected topologically correct and without, intersecting or overlapping breaklines or incomplete polygons.

Coastal Features. Woolpert will delineate the coastal features at the land-water interface using both the lidar data and stereo models as a reference. Coastal islands will be captured, with the inner and outer shorelines creating a 'donut' effect.

Linear Hydrographic Features. In addition to the FDEM/USGS provided hydrographic data other necessary streams, shorelines, canals, swales and embankments will be delivered as breaklines with varying elevations. Woolpert will collect all of these features as 3D breaklines, however if these features are centerlines, they will have varying, non-constant, elevations. Additional 3D features, Top of Bank and Toe of Slope will be collected, as required.

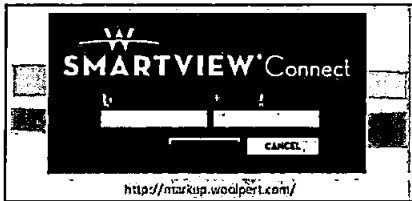
Low Confidence Areas. Obscured vegetated areas or other areas where the lidar pulses have a reduced certainty of penetrating to ground—making the vertical data less reliable—will be collected as Low Confidence Area and be outlined with 2D polygons.

Contours. Woolpert will deliver a seamless contour coverage of elevation lines at a 1-foot interval. These contours will be created from compiled data and lidar points to meet an NSSDA 95% confidence level accuracy at 0.60 feet in unobscured land cover areas and 1.19 feet in obscured land cover areas. Woolpert will supply a pilot area of project deliverables for review and approval before full delivery area deliverables are generated. Five-foot indexes will be used for this project. Contours of 100-foot length or less will be removed from the dataset and all delivered contours will be smoothed to avoid minor surface variations. These contours will be delivered in File Geodatabase and AutoCAD formats format.

Online QA/QC Tool

Woolpert offers a streamlined QA/QC tracking application known as SmartView™ Connect (SVC). SmartView™ Connect is an Open Geospatial Consortium (OGC) compliant imagery and vector service that allows internet and WMS viewing access to all the project deliverables while the project is underway. SVC is a website that was built and is maintained by Woolpert. It continues to be used by current clients for preliminary imagery and QC process. It will preclude the need, cost, and time consumed for preparing and shipping of draft data products from Woolpert to the County and vice versa.

Within two weeks preceding the creation of the orthoimagery deliverable, our staff will publish the data to SmartView Connect and alert relevant parties that the data is ready for review. The County and its stakeholders will be provided login access to the site and immediately be able to access the orthoimagery via a browser without the need to install proprietary software. The main advantage of using this system, other than the time and cost savings, is that SVC has tools for issue tracking. In the event that the County encounters an error in the data while browsing the site, they will be able to markup the error on the screen using tools available in SVC. Because each member of the County and its partners' reviewing team will be granted a username to access the site, each issue created will be stored and tracked within the system and the Woolpert team will immediately respond to that issue.



Once all issues have been reported to Woolpert, we will work diligently to resolve each and every one. Upon completion of the issue resolution phase of the project, Woolpert will create an issue resolution report and post the final, revised data to the SVC website. After Woolpert and the County are satisfied that all issues and concerns have been addressed, Woolpert will package the final orthophotography for delivery. This final delivery will also contain a geodatabase of all issues, along with the history of each issue, to serve as a permanent record of what was reported to Woolpert, what fixes were made, and who accepted the final imagery.

Schedule

Woolpert stands ready to commence work upon notice to proceed at which time a project work plan and a schedule of milestones, activities and deadlines will be defined to ensure delivery expectations are met.

Deliverables

Orthoimagery Deliverables

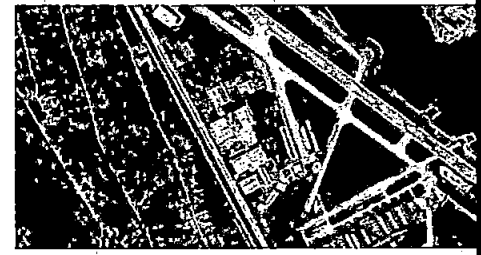
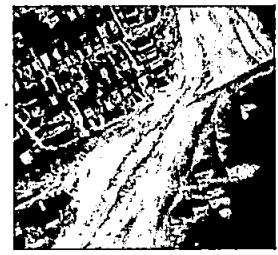
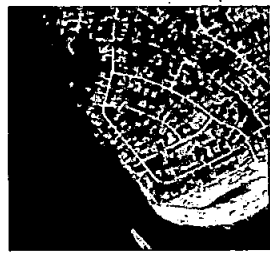
As required by the County, Woolpert will produce the following deliverables:

- One set of 4-band digital orthoimagery tiles 6-inch pixel resolution in uncompressed GeoTIFF format with .tfw, covering the entire project area
- Image cache in Esri ArcGIS Server format
- One 3-band color digital orthoimage with a 6-inch pixel resolution in MrSID format with a compression ratio of 20:1
- Flight lines in Esri ArcGIS v10 shapefile or geodatabase format
- Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17
- FGDC compliant metadata
- Final deliverables on an external USB 3.0 hard drive

Lidar Deliverables

- DEM (Bare Earth Surface) (Esri ArcGrid format)
- Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats)
- Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer
- Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17
- Each deliverable product will include FGDC compliant metadata.
- Final deliverables (all items listed above) of all digital data will be provided to St. Johns County, FL on an external USB 3.0 hard drive.

Section 6 | Quality & Schedule Control



Section 6: Quality and Schedule Control

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES
Full Legal Company Name: Woolpert, Inc.
ATTACHMENT "6-A"
QUALITY & SCHEDULE CONTROL

(Attach or insert copy here of a written narrative of the respondent's project management methods to establish, monitor and track quality control methods and ability to meet schedules in a timely manner. Limit narrative to 3-4 pages)

Project Team Governance

Woolpert understands that Project Management deals with all activities (administrative as well as technical) needed for a smooth execution of the project within the specified time frame. Overall management includes an intimate understanding of County needs, objectives, and goals as well as an understanding of general activities such as maintaining contact between team members, ensuring adequate flow of data, information and developed tools, enhancing cooperation when needed, coordinating the preparation of field activities and supervising their execution. Designated Project Manager (PM) Eric Cole will deal with project issues in compliance with our ISO 9001:2015 Management and QA/QC policy requirements, regulations, and procedures to include periodic financial reports and constant contact with the production management staff and project task leaders. In addition, members of our team have experience working with St. Johns County through existing contracts.

Project Management Methodology

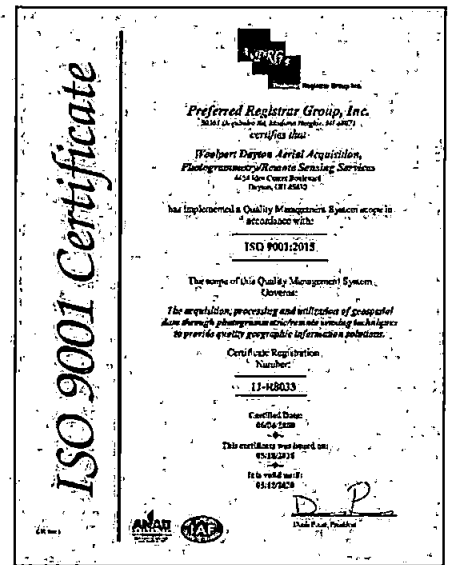
Woolpert is ISO 9001:2015 certified by the ANSI-ASQ National Accreditation Board (03/2000) for the acquisition, processing, and utilization of geospatial data through photogrammetric/remote sensing techniques (certificate #11-R8033). Woolpert will maintain this certification throughout the duration of the St. Johns County Digital Orthophotography and Lidar Deliverables Project. Woolpert was one of the first firms offering photogrammetry and mapping services to receive ISO certification. Our certification demonstrates that we have coherent, documented QA/QC procedures in place to successfully complete all services in the required time.

Ensuring Product Quality. A professional Project Management Program—resulting in the ability to accomplish work (despite the timing or complexity of requirements) while delivering a quality product—begins with the understanding that management personnel must possess the planning, organizing, and managing resources in order to ensure successful project execution. Woolpert brings to the County an experienced team that has proven its ability to meet specific project goals and objectives leading to the successful completion of a variety of geospatial projects.

Woolpert has been ISO certified since May 2000. Through our ISO 9001:2015 QA/QC approach, we have established lines of authority and communication, levels of management oversight, coordination between work groups and subcontractors, synergistic QA/QC checks throughout all of our procedures and between work groups, project document control mechanisms, project tracking mechanisms, and experience and training needs for personnel.

As part of our Quality Management Program (QMP), Woolpert has developed and documented standards for work processes and procedures; implemented the standards through training; established and documented QMP processes to help manage the standards; and prepared a Quality Manual that outlines the QMP. By modeling our Quality Control Plan for this effort after the requirements of our QMP, Woolpert demonstrates consistency of products and services that meets our client's expectations and applicable governmental statutes and regulations.

Our Quality Control Plan incorporates both Quality Assurance and Quality Control. Quality assurance (QA) is process oriented and is used by Woolpert professionals to execute the right processes/procedures, with the right qualified staff, and at the right time in order to meet and exceed the listed quality expectations. Our QA efforts focus on the following seven areas: work



Woolpert's ISO Certification



processes and procedures; client quality requirements; quality policy and objectives; QMP leadership, resource allocation; project plans; and client satisfaction surveys.

Quality control is product oriented and designed to consistently produce a predictable result that meets the quality expectations of both Woolpert and the client. Quality control uses techniques (cross-checking and traceability) and activities to fulfill the requirements for quality. Woolpert uses the Deming cycle of Plan-Do-Check-Act (PDCA) in conducting our quality control, and we focus on the following seven areas: quality plan; quality procedure manual; quality processes and procedures; document and data control; verification of quality; notification; and remedial action.

Quality Control and Corrective Actions. The success of this contract will be realized through a combination of comprehensive planning and a highly structured approach to quality control that is designed to prevent the occurrence of errors and omissions that could disrupt the production workflow and potentially impact the quality of the final geospatial products produced for the County. A key component to the effectiveness of our quality management system is the ongoing process of auditing and updating production and management procedures and related tools. Technology and the associated production processes are constantly changing and improving, so it is imperative that procedures are constantly reviewed and updated.

Approach to Meeting Time and Budget Requirements

Initiating. Woolpert stands ready to commence upon notice to proceed. We have performed a preliminary analysis to determine the resources required for this project and are confident that we can meet the County's delivery schedule. Woolpert has the aircraft, image collection sensors, processing equipment and qualified personnel to deliver the requested 4-band imagery in accordance with the project specifications outlined in the RFQ within 60 days from the successful completion of aerial imagery acquisition. PM Eric Cole will discuss, refine/clarify, and finalize all project requirements, expectations, and specifications with the County during this stage to ensure complete understanding of responsibilities—both for Woolpert and St. Johns County—prior to commencing the planning stage.

Woolpert's PM will tailor the project plan to present during a Project Initiation Meeting. Within two weeks after contract signing, this kickoff meeting occurs with Woolpert's production members. As/if necessary, the PM will meet in person with designated representatives of the County (at their earliest convenience) at the St. Johns County office in St. Augustine, FL, after the internal Woolpert kickoff meeting. An important element of these meetings is the assignment of roles and responsibilities among team members and the client. The proposed flight, ground control and accuracy assessment control plans will be presented and reviewed, with any changes implemented and plans revised and forwarded to the County within 10 working days of the meeting. During the meeting, Woolpert will work with the County to develop a final schedule with measurable milestones and identify the responsible party for each phase of the project. A summary will be distributed within 10 working days of the meeting, outlining all pertinent issues and clarifications identified in the meeting.

Planning. Woolpert employs PMI best practices to ensure a project delivery that is on time and at/under budget. Through enterprise resource planning and capacity forecasting we maintain the appropriate staff and resources to successfully carry out data collection and data processing for multiple concurrent projects. Eric will develop and deliver a Project Work Plan in alignment with this Project Management Plan. It will be developed with input from stakeholders and technical leads from Woolpert's project team. Once agreed upon and approved by the team, it provided to St. Johns County for review. We believe a properly planned, communicated and executed project will remain within the budget. We are committed to the process and mitigating risk wherever possible to provide quality professional services. Our commitment to St. Johns County is to guarantee that the project will demonstrate economical use of funding.

- **Business Continuity Plan.** Our team offers St. Johns County a highly stable corporate and production environment that facilitates on-going operations and service with minimal risk of disruption through team features and solutions that include a stable prime consultant.
- **Risk Management.** Woolpert exercises careful planning to identify and then remove or reduce potential risks to project success. Our teaming partner and staff understand the importance of identifying these risks at the beginning and during the project and to communicate these risks along with solid mitigation steps. As part of our risk management approach, each risk identified is assigned a criticality factor based on potential impact on the project, which helps to prioritize risk factors. Any significant risk factor will have a documented mitigation plan, and a risk registry will be maintained to aid in developing mitigation strategies as well as help ensure that any future task order risks are identified and mitigated before they occur.
- **Schedule and Budget Management.** Given the photogrammetric nature of this project, the most common risks to the schedule include those associated with equipment, weather delays, project planning, and management of internal and external communication channels. Successful schedule and budget management therefore requires that the Woolpert team,

with guidance from St. Johns County, plan the project thoroughly before proceeding with acquisition, processing and delivery. Fortunately, Woolpert is experienced with managing large statewide programs with complex processes. Our processes are well established and promote redundancy and checks. Furthermore, our processes include both corrective measures for addressing scheduling shortfalls and the administration of adjustments to account for significant changes to project milestones. All Woolpert managers use Microsoft Project and Deltek for monitoring project budgets and schedule. Each major task, including project planning, ground survey, aerial acquisition, aerial triangulation, image rectification, seam-lining and orthoimagery production, will be broken out as a phase within the project. All phases will have an individual written plan, phase manager, schedule, and milestone completion date(s), as well as an assigned budget. This provides a clear view of actual progress on a task, phase and/or project level in relation to the prescribed schedule. In addition to the PM, Woolpert assigns a key team member to manage/oversee each project phase. These team leads are responsible for managing the schedule, budget and personnel for their specific phases. This provides an independent check, in addition to the PM, to assure that the schedule and budget are met. Woolpert also monitors the status of deliverables, accounting factors (enlisting Woolpert's management information system), and progress relative to pre-established project milestones.

- **Task Management.** Our team employs a repeatable and systematic process to manage individual tasks. This process features a phased approach with emphasis on open communication, timeliness of deliverables and quality of performance. Woolpert's PM will evaluate the requirements, initiate the proposal response, develop a project plan that best fits the scenario and then confer with the appropriate stakeholders to rapidly execute the plan. Experienced team members (leads are shown in our organization chart) will be assigned accordingly, based on the task scope. The project plan will include a technical approach, and sections for schedule, cost, quality, communications and risk management. A kick-off meeting with the appropriate staff from St. Johns County and the team will be held prior to starting this project.

Executing. PM Eric Cole will follow the PMI methodology and employ inputs, tools, techniques, processes and outputs as appropriate for the management of the project. Specifically, he will provide attendance at required project meetings; schedule development; status reports to and communication with St. Johns County's project manager; timely updating of project schedule and project website (as/if applicable); validation of project deliverables for completeness, accuracy and timeliness; proactive identification of any issues affecting schedule, delays and/or quality; planning and coordination with the County and its business partners; and responses to emails/phone calls from the County's project manager within one (1) business day. Eric has the authority to execute the approved Project Management Plan. He will coordinate resources, manage stakeholder engagement, integrate and perform the activities of the work needed to meet project requirements and objectives according to the Project Management Plan.

- **Contract Level Management.** Our team organization chart depicts a management structure designed to facilitate rapid communication within our team and with appropriate County staff while maintaining functional accountability. Woolpert's management approach focuses on meeting the contract and task objectives through effective project organization and management; optimum selection and use of our available aerial assets and personnel; continual monitoring of available resources to initiate emergency response/project expansion or acceleration, as needed; and implementation of client communication and control systems, with a commitment to quality and an emphasis on keeping the County informed.
- **Subcontractor Management.** Woolpert will perform all work in-house. No subcontractors will be used on this project.
- **Staff Availability.** Woolpert understands that St. Johns County expects our key project team to be available for work without interference from other contractual obligations. Our current workload commitments in no way negatively impact Woolpert's ability to successfully accomplish work for the duration of this Aerial Photogrammetry project.
- **Surge Capacity.** With nearly 800 professional and technical personnel—including more than 300 assigned to Woolpert's geospatial discipline—Woolpert has the capacity to perform simultaneous projects on schedule and within budget. An important benefit that we provide our clients is the ability to respond promptly to urgent needs. Even during peak production, we maintain a cushion of about 4,000 hours of staff and equipment time. This flexibility consistently enables us to provide our clients with the experience, knowledge and technology their projects require. We understand that staff development is an investment in the whole firm's future, and we're proud to say that our greatest assets are the abilities of our managers, technicians and production personnel. We hire the best staff available, and we balance ongoing training opportunities with our client workload. Our well-trained staff is equipped to meet even unexpected project needs that may arise.
- **Project Management Website.** To support the extensive communication measures of the project, Woolpert will also jointly maintain a secure Project Management website to coordinate distribution of information to all authorized participants within the County project. The Project Website will be password protected, allowing the County to control the access to the information. Any project documentation distributed will be available on the project website, including the following:



- Progress Reports
- Meeting Minutes
- Project Plan
- Project/Weather Logs
- Flight Maps
- Production Indices
- Aerial Acquisition/Airborne GPS Report
- Survey and Accuracy Assessment Reports
- QA/QC Procedure Manual

- **Status Meetings/Reports and Conference Calls.** The Project Manager will generate regular progress reports submitted to St. Johns County. Progress reports will contain a status of all task requirements—data acquisition, data production, and QA/QC feedback. Woolpert’s technical staff members will evaluate and solve any problems that occur throughout the life of the project. Our team will document the nature of problems encountered and the processes used to resolve the problems. St. Johns County staff will be immediately informed of any quality issues that may affect the project schedule, as the team is committed to delivering data products that meet all aspects of the project specifications. In the vast majority of cases, the quality of the end product is not affected, and the delivery schedule is not disrupted. Upon completion of tasks, Woolpert will conduct internal performance evaluations to document lessons learned. The project manager will also host a weekly conference call for all key staff members to review the status report and discuss any unforeseen issues. A meeting summary will be created and included in the next required report.
- **Post-Flight Evaluation Meeting.** Eric, and any additional staff he deems necessary, will attend a post-flight evaluation meeting following acquisition. Flight acquisition data will be compared to the originally proposed flight plan data, with any changes noted, and a plan will be made to correct the issues. A meeting summary will be distributed to St. Johns County within 10 working days of the meeting, outlining all pertinent issues, clarifications and proposed changes resulting from the meeting.

Monitoring and Controlling. Eric will continuously monitor and control the project. Woolpert provides tools that support real-time situational awareness of project financial performance, procurement, contract administration, schedule management, forecasting, and resource allocation. Woolpert also performs monthly project reviews between the PM and a Woolpert Project Analyst (PA).

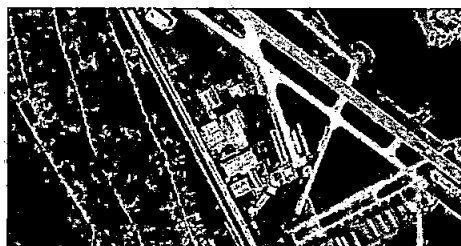
- **Cost Control.** To effectively manage multiple projects, Woolpert uses Deltek cost accounting software for cost control and time management. Woolpert is among the thousands of A/E firms around the world that look to Deltek for a robust, project-based Enterprise Resource Planning (ERP) system to effectively monitor, schedule and budget for each project or task order.
- **Methods for Identifying, Preventing and Resolving Deficiencies.** A key component of our quality management system is the ongoing process of auditing and updating production and management procedures and related tools. No final product will be shipped, delivered, or otherwise communicated to the County until all required quality documentation has been reviewed and found complete via the final inspection process. The PM will have ultimate responsibility to implement this requirement. Detailed quality records will be maintained of all nonconforming products, including the procedures utilized to correct them. We will provide a procedure for resolution of quality problems and nonconformities that result in corrective actions designed to prevent their reoccurrence. Our quality management system contains an array of metrics which are used to monitor cycle times for each production process as well as time expended for rework. These tools will provide a means to verify that the quality issue has been successfully mitigated. The level of inspection can also be varied throughout the life of the project in response to different issues that may arise. The PM has primary responsibility for monitoring the quality of production and ensuring that corrective measures are taken. The PM will summarize nonconformities for review at the regularly scheduled quality meetings, including discussion of QA/QC feedback. During these sessions, participants will investigate the cause(s) of such quality problems; determine the corrective actions needed; verify that corrective actions are taken and produce desired results; and review the actions taken on quality problems considered in previous staff meetings.
- **Safety.** It is Woolpert’s policy to conduct all of its operations and activities in a manner that ensures a healthy and safe work environment for all employees. We believe that a safe working environment leads to better productivity.

Closing. Eric will work with St. Johns County and all project stakeholders to formally close the project. Once all project tasks are complete and deliverables are accepted by the County, Eric will coordinate a project closeout meeting. The meeting includes a project outbrief to recap the project and discuss any lessons learned.



Section 7

Additional Information



Section 7: Additional Information

To complement the digital orthoimagery and lidar deliverables work being requested, the following are a few examples in innovation Woolpert can offer St. Johns County, Florida.

- Woolpert has long sought a targeted solution to the problem of lidar exploitation, so we devised and developed a framework, **Automated Building Extraction (ABE)**, that uses open-source data toolkits and libraries to detect objects in lidar data, extract them and construct realistic surfaces representing solids within the point cloud. The main goal of this approach was to create a framework that extracts accurate polygons for use as a mapping product in GIS from lidar data of varying densities. Toolkits such as the Point-Cloud Library, GDAL, PDAL and libLAS were incorporated in the framework to overcome the challenges of unstructured point clouds and extract planes and edges of physical structures. Open-source tools are highly customizable and enable the detailed investigation of point cloud characteristics and manipulation of modeling parameters for the production of robust solutions.
- **Unmanned Aerial System/Vehicle (UAS/V) solution.** Woolpert was the first Design/Geospatial consulting company in the US to be granted permission by the FAA to use UAS for commercial activity. Our capabilities ensure an entire UAS workflow—from sensor selection, calibration and collection to processing and dissemination—and are seamlessly integrated and optimized. We offer high-performance UAS technology, but the equipment is only part of the overall solution.
- Woolpert can provide **thematic mapping** by experienced analysts using multiple geospatial data sources and sophisticated software packages. The data fusion techniques employed allow for more than one input data type, such as imagery and lidar, as well as additional vector datasets to be used as the basis for the feature extraction. During the thematic-mapping process, features of interest can be identified, classified, and mapped utilizing remote sensing techniques that are based on analyzing attributes in the fused data.
- Using remotely sensed data collected by digital camera systems, satellites, airborne lidar and/or multi-spectral sensors, Woolpert has experience creating **land use/land cover** digital database of coastal regions, utilizing a standardized classification system. Our staff of highly qualified remote sensing specialists and software programmers has developed proprietary image processing algorithms and techniques utilized in the production of land use/land cover databases.
- **Elevation Hydrology (elehydro)** Woolpert's automated feature extraction techniques are revolutionizing the way we map water. Using lidar point clouds, we can automate the extraction of hydrology networks using a pre-determined set of rules. This not only creates a very consistent methodology for extracting hydrology by removing any type of manual interpretation, but also provides a highly-accurate 3D hydrology network that can be used to support the local resolution National Hydrology Dataset (NHD) and other hydrographic datasets.
- **Planimetric Data.** Woolpert has extensive experience in extracting information from aerial imagery and lidar through remote sensing methods. Woolpert has extracted over 20,000 of square miles of features using remote sensing techniques. Our unique processes use a combination of COTS software and proprietary programs to develop methods for extraction. While there is no 100% automated method for extracting the features (ie: Buildings, Lakes/Ponds/Streams, Groups of Vegetation, Unpaved Roads, Driveways, Paved Roads, Sidewalks, Swimming Pools, etc.) Woolpert makes every attempt to automate as much of the process as possible. Our automated extraction routines are followed by a manual QC review by our remote sensing team to assure the final quality meets or exceeds client expectations. The size and accuracy of the features to be extracted will be dependent on the resolution of the base imagery and lidar for the area selected.
- **Mobile Mapping.** Woolpert is recognized as an industry leader in mobile lidar/mobile mapping services (MMS). Woolpert's Optech Lynx M1 Mobile Mapping System (MMS) is one of the most versatile mobile lidar mapping systems on the market due to its ability to be configured for specific types of projects. The system consists of two lidar sensors that collect lidar in a 360-degree pattern, with each sensor collecting up to 500,000 points per second for a total of 1,000,000 points per second. The M1 system is also equipped with four 5-megapixel cameras which are able to be mounted in customizable, project-specific positions to enable more accurate and detailed image capture. These cameras can also produce 360-degree coverage. In addition to the two lidar sensors and four cameras, Woolpert's Optech M1 MMS is also equipped with a highly accurate positioning and orientation system (POS) made up of two GPS/GNSS receivers, a 200 Hz Applanix POS LV inertial measurement unit (IMU), and a distance measuring indicator (DMI). Combined, this network provides highly accurate measurements and parameters of the vehicles movement and positioning which ultimately aids in the accuracy of the final mobile mapping data.
- **Airborne (linear mode) Lidar.** Woolpert has provided airborne topographic lidar services since 1999. Our airborne lidar capacity includes three Leica ALS80-HP systems. These systems can be mounted and operated on fixed-wing and helicopter platforms and collect high density data point clouds of multiple returns, with 12-bit dynamic range intensity values. These systems are capable of ranging the terrain from 150 kHz to 1000 kHz. Woolpert uses both proprietary "in-house" and COTS



software packages/tools for processing topographic lidar datasets. Applanix POSPac and Leica Inertial Explorer software are used for processing lidar GPS and IMU data. Software such as Leica ALS post-processor, Dashmap, and TerraSolid are used when processing and filtering lidar point clouds.

- **Geiger Mode Lidar.** Geiger-mode aerial lidar can map land features at high point densities (greater than 20-30 points per square meter) relatively quickly, penetrate tree canopy better to detect ground, utility wires, and other pole structures for asset management, vegetation management, infrastructure planning, and support other user applications.
- **Single Photo Lidar (SPL).** SPL systems provide high resolution 3D data used by decision makers across industries. SPL cost efficiency and speed provides affordable and timely information in a wide-area scale previously unavailable. For the first time, evaluation of 3D change in a dynamic manner is possible with survey grade accuracy, high spatial resolution and state-wide area scale. Vertically integrated data acquisition-to-final product enterprise is currently providing 3D terrain and infrastructure data products to government and commercial customers. These high-speed scanners are synchronized to the laser pulse train and can generate a wide variety of patterns allowing you to see the fine details like individual power lines and forest canopy structure from altitudes of 25,000 feet. The transmitter and receiver share a common telescope and scanner resulting in resolution accurate to centimeters thanks to a sub-nanosecond pulse.
- **Bathymetric Lidar.** Woolpert provides lidar survey for both shallow and deep-water bathymetry. By collecting elevation and water depth simultaneously, we are able to analyze the entire water column—providing detailed data for safe navigation and charting. In addition, combining Woolpert's bathymetric and topographic survey capabilities provides attractive solutions for the generation of coastal DEMs, allowing us to integrate ocean bathymetry and land topography in one seamless 3D model.
- **Thermal Mapping Services.** Digital thermal sensors technologies matured rapidly in the last decade or so. Woolpert is at the forefront of the mapping industry, adopting new technologies and exploring applications for existing sensors to push beyond the capabilities of traditional imagery. Woolpert uses the finest quality, large format, infrared camera systems, developed by FLIR Advanced Thermal Solutions (ATS) to meet the needs of the research and industrial communities. Such infrared camera systems are manufactured with cooled Indium Antimonide (InSb) detector to cover the shortwave and mid-wave infrared bands. Woolpert's thermal mapping products are produced using a stringent photogrammetric workflow resulting in a seamless orthorectified mosaic with high geometric and radiometric fidelity. Woolpert orthorectified thermal products can be provided with 8 bits, 16 bits, and 32 bits format to fit the requirements of the mission at hand.
- **Solar Potential.** Woolpert's expertise in remote sensing and GIS allows us to extract polygons of rooftops and structures, remove obstructions from building footprints, and calculate the solar potential of structures based on their size, elevation, and location. This capability, paired with our experience developing custom GIS databases and web-applications, has enabled us to create solar potential maps for numerous clients.
- **Utility Inventories.** Equipped with the latest surface geophysical equipment, our surveyors can perform precise utility designating and locating "trace and search projects" to define the alignment of existing subsurface utilities in accordance with the ASCE 38-02 utility mapping industry standards. As utilities are designated and marked in accordance with national American Public Works industry standard colors, our surveyors use GPS or conventional survey equipment to locate and record the pertinent utility features, markings and information in hand-held data collectors.
- **GIS Application Development.** Woolpert's customizable solutions provide an array of opportunities and the potential to maximize the efficiency of your day-to-day processes and programs. Whether it is to facilitate interdepartmental communication, assist user/organization interaction, integrate business systems or create custom functions within your already-established programs, our team not only has full capabilities to create your unique digital solution, we have a deep understanding of your market to ensure that it is developed with you, your users and employees in mind.



Aircraft

The following chart illustrates the available aircraft for the St. Johns County project.

Airworthy Aircraft (fixed-wing) with airborne GPS capability for navigation and photo control			
1	Rockwell Turbo Commander 690B (N690LS)	1	Cessna 401 (N6255Q)
3	Cessna 404 (N7079F, N404CP, N475RC)	1	Reims F406 (N406SD)

Image Collection Sensors

To support aerial imagery collection, Woolpert's available aerial assets (*shown in the table below*) includes a total of two Leica ADS80 digital cameras that are available for the St. Johns County project. Woolpert's aerial acquisition team has extensive experience in sensor management and makes every attempt not to move sensors from aircraft to aircraft.

Digital Aerial Imaging	
2	Leica – ADS80

- *Applicable sensors are fixed with airborne global positioning systems (GPS), an inertial measurement unit (IMU), and ground-based GPS receivers to support acquisition requirements.*
- *Woolpert employs the appropriate manufacturer's proprietary flight planning software as well as other COTS software. Woolpert digital aerial systems are integrated with Inertial Measurement Unit (IMU); Global Navigation Satellite System (GLONASS technology, and gyro-stabilized mounts).*

Orthophoto Data Processing Hardware and Software

Woolpert utilizes Leica's IPAS Pro v.1.35 and Applanix POSGNSS v. 5.20 for processing of GSP/IMU Solutions (SBET) and Leica XPro v6.x for image processing and aerial triangulation. Additionally, Woolpert uses Z/I ImageStation software to create the initial digital orthoimages and Inpho's Orthovista software for tone balancing and image mosaicking.

Processing for aerial triangulation, orthorectification and image mosaicking will be performed on Micron Dual Xeon, 2.83 GHz photogrammetric workstations.

Survey Equipment

The following is a partial list of survey and related support equipment own and operated by Woolpert. This equipment is available to collect and process field data used for control and accuracy surveys in support of this County orthoimagery project.

Trimble GPS Receivers: (10) 4000 | (1) GR-3 | (2) NetRS | (6) Pro-XR | (7) Trimble 4700 | (4) Trimble 5700 | (9) Trimble 5800 | (1) Trimble NetR9 | (4) Trimble ProXH | (17) Trimble R10 | (3) Trimble R7 | (8) Trimble R8 | (27) Trimble R8 Model 2 | (37) Trimble R8 Model 3 | (4) Trimble R8 Model 4 | (1) Trimble V10

Leveling Equipment: (3) DiNi 0.3 | (2) DiNi 0.7 | (3) DiNi 12 | (8) Leica NA2002 | (1) Leica NA3003 | Leica (1) DNA03 | (1) Leica DNA10

Scanners: (2) Scan Station C10 | (1) Leica P40

Total Stations: (25) Trimble 5600 | (2) DTM-521 | (3) Topcon GTS-701 | (6) Trimble S6 DR Vision | (12) Trimble S6 DR 300+ | (2) Topcon GTS-302D | (1) TS02 | (1) Topcon GTS-3B | (1) Topcon GTS-2B | (2) Topcon GTS-711 | (1) Topcon GTS-312 | (23) Topcon GTS-300 | (1) Trimble S3 DR | (1) Trimble S6 DR Vision | (1) Topcon GPT 2005 | (1) Trimble S8 | (1) Leica TCR 1105 | (1) Sokkia Set 3100

Survey Software: Trimble Business Center, Trimble Geomatics Office; GPSurvey, , Trimble Survey Controller; Corpscon, Vertcon, Blue Marble Graphics; Leica Digilev; STARPLUS STAR*LEV; PenMetrics FieldNotes; Condor Earth Technologies Penmap; Whalen blue-book; Whalen DIBOOK, NGS' PAGE-NT; NGS' ADJUST; NGS' WDDPROC.

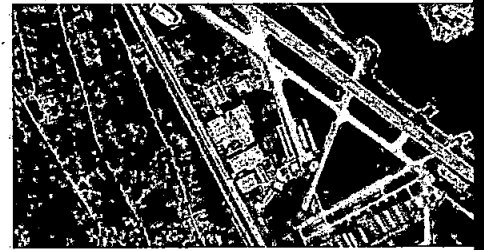
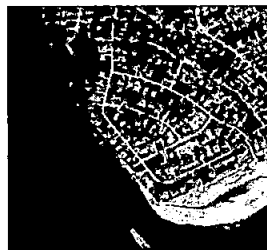
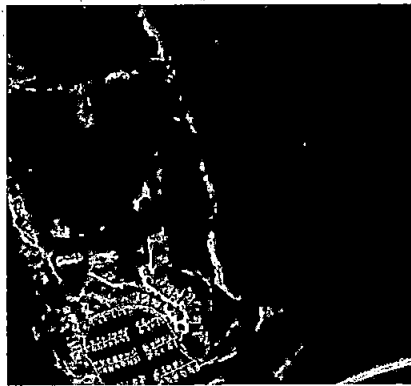
Vehicles: Fleet of Toyota Tacoma 4WD and GMC Sierra 4x4 Crew Cab 2500 vehicles

Accuracy Estimates

- **GNSS Receivers** | More recent (and likely most utilized) models have a real-time kinematic (RTK) surveying accuracy of approximately 8 mm (millimeters) + 1 ppm (parts per million) RMS (root-mean square 1-sigma) horizontally, and 15 mm + 1 ppm RMS vertically. These numbers can fluctuate due to multipath, satellite geometry, obstructions, and atmospheric conditions. Recent models include the Trimble R10 GNSS receiver.
- **Total Stations** | More recent (and likely most utilized) models have an angular accuracy of 3 seconds, and a distance accuracy of 2 mm + 2 ppm. Recent models include the Trimble S6 total station.

- **Levels** | More recent (and likely most utilized) models have accuracies ranging from 0.3-0.7 mm per km. Recent models include the Trimble DiNi 0.3 and Trimble Dini 0.7.
- Woolpert's general surveying processing software includes Trimble Business Center (version 3.61) and AutoCAD Civil 3D 2013 (Service Pack 2).

Section 8 | Administrative Information



Section 8: Administrative Information

Per the requirements of this RFQ, the following administrative information/forms are included in this section:

- Attachment A..... Notarized Qualification Certification
- Attachment B..... Affidavit of Solvency
- Attachment C..... St. Johns County Affidavit
- Attachment D Conflict of Interest Disclosure
- Attachment E..... Drug-Free Workplace Form
- All Addendasigned and dated, as applicable



Attachment A

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES**

ATTACHMENT "A"

**CERTIFICATION FOR
RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES**

The Undersigned submits this Qualification Package to be considered as a Qualified Contractor for provision of Digital Orthophotography and LiDAR Deliverables.

A copy of the license(s) under which our firm is engaged in the business of contracting in the state of Florida is attached. This license was issued in accordance with provisions of Section 489.113, Florida Statutes, and is currently valid and in force.

It is further understood that qualification, if given, shall be valid for the purpose of submitting pricing for the above referenced contract, unless suspended or terminated by St. Johns County.

The Undersigned authorizes and requests any public official, engineer, architect, Surety Company, bank depository, material or equipment manufacture or distributor or any person, firm or corporation to furnish all information requested by St. Johns County, to verify statements given with this Qualification Package.

The Undersigned further authorizes the St. Johns County, FL designee to disclose, without any liability whatsoever, any and all information contained in the pre-qualification package.

The Undersigned has not been disqualified by any public agency in Florida except as indicated below. (If none, insert: "N/A")


Woolpert, Inc.

(Full Legal Company Name)

This 11th day of October, 2018


Attest:

By:


Name and Title of Officer
Jeff S. Lovin, CP, PS, Senior Vice President

APPROVED:

By:


Name and Title of Authorized Officer
Jeff S. Lovin, CP, PS, Senior Vice President

As Notarized

By:



(Corporate Seal)

PAMELA E BRUN, Notary Public
In and for the State of Ohio
My Commission Expires March 13, 2022



State of Florida Department of State

I certify from the records of this office that WOOLPERT, INC. is an Ohio corporation authorized to transact business in the State of Florida, qualified on September 27, 2004.

The document number of this corporation is F04000005579.

I further certify that said corporation has paid all fees due this office through December 31, 2018, that its most recent annual report/uniform business report was filed on March 14, 2018, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Twenty-third day of August,
2018.*



Ken Detzner
Secretary of State

Tracking Number: CU4674204SS0

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

<https://services.sunbiz.org/Fillings/CertificateOfStatus/CertificateAuthentication>



Attachment B

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES**

ATTACHMENT "B"

AFFIDAVIT OF SOLVENCY

PERTAINING TO THE SOLVENCY OF Woolpert, Inc., being of lawful age and being duly sworn I, Jeff S. Lovin, as Senior Vice President (ex: CEO, officer, president, duly authorized representative, etc.) hereby certify under

penalty of perjury that:

1. I have reviewed and am familiar with the financial status of above stated entity.
2. The above stated entity possesses adequate capital in relation to its business operations or any contemplated or undertaken transaction to timely pay its debts and liabilities (including, but not limited to, unliquidated liabilities, unmatured liabilities and contingent liabilities) as they become absolute and due.
3. The above stated entity has not, nor intends to, incur any debts and/or liabilities beyond its ability to timely pay such debts and/or liabilities as they become due.
4. I fully understand failure to make truthful disclosure of any fact or item of information contained herein may result in denial of the application, revocation of the Certificate of Public Necessity if granted and/or other action authorized by law.

The undersigned has executed this Affidavit of Solvency, in his/her capacity as a duly authorized representative of the above stated entity, and not individually, as of this 11th day of October, 2018



Signature of Affiant

STATE OF Ohio

COUNTY OF Greene

Subscribed and sworn to before me this 11th day of October, 2018, by Jeff S. Lovin
who personally appeared before me at the time of notarization, and who is personally known to me or who has produced
n/a as identification.



Notary Public

My commission expires:

3/13/22
PAMELA E. BRUN, Notary Public
In and for the State of Ohio
My Commission Expires March 13, 2022



Attachment C

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES**

ATTACHMENT "C"

AFFIDAVIT

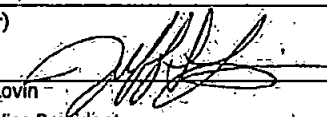
ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS
ST. AUGUSTINE, FLORIDA

At the time the proposal is submitted, the Respondent shall attach to his proposal a sworn statement.

The sworn statement shall be an affidavit in the following form, executed by an officer of the firm, association or corporation submitting the proposal and shall be sworn to before a person who is authorized by law to administer oaths.

STATE OF Ohio COUNTY OF Greene Before me, the undersigned authority, personally appeared Jeff S. Lovin, CP, PS who, being duly sworn, deposes and says he is Senior Vice President (Title) of Woolpert, Inc. (Firm) the respondent submitting the attached proposal for the services covered by the RFQ documents for RFQ No: 19-16; Digital Orthophotography and LiDAR Deliverables.

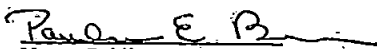
The affiant further states that no more than one proposal for the above referenced project will be submitted from the individual, his firm or corporation under the same or different name and that such respondent has no financial interest in the firm of another respondent for the same work, that neither he, his firm, association nor corporation has either directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this firm's proposal on the above described project. Furthermore, neither the firm nor any of its officers are debarred from participating in public contract lettings in any other state.

Woolpert, Inc.
(Proposer)
By 
Jeff S. Lovin
Senior Vice President
(Title)

STATE OF Ohio)

COUNTY OF Greene)

Subscribed and sworn to before me this 11th day of October, 20 18, by Jeff S. Lovin who personally appeared before me at the time of notarization, and who is personally known to me or who has produced self as identification.


Notary Public

My commission expires:

3/13/22

PAMELA E BRUN, Notary Public
In and for the State of Ohio
My Commission Expires March 13, 2022

VENDOR ON ALL COUNTY PROJECTS MUST EXECUTE AND ATTACH THIS AFFIDAVIT TO EACH PROPOSAL.



Attachment D

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Company Name: Woolpert, Inc.

**St. Johns County Board of County Commissioners
ATTACHMENT "D"**

CONFLICT OF INTEREST DISCLOSURE FORM

Project (RFQ) Number/Description: RFQ No 19-16; Digital Orthophotography and LiDAR Deliverables

The term "conflict of interest" refers to situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting a consultant's/contractor's professional judgment in completing work for the benefit of St. Johns County ("County"). The bias such conflicts could conceivably impart may inappropriately affect the goals, processes, methods of analysis or outcomes desired by the County.

Consultants/Contractors are expected to safeguard their ability to make objective, fair, and impartial decisions when performing work for the benefit of the County. Consultants/Contractors, therefore must avoid situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting the Consultant's/Contractor's professional judgement when completing work for the benefit of the County.


The mere appearance of a conflict may be as serious and potentially damaging as an actual distortion of goals, processes, and methods of analysis or outcomes. Reports of conflicts based upon appearances can undermine public trust in ways that may not be adequately restored even when the mitigating facts of a situation are brought to light. Apparent conflicts, therefore, should be disclosed and evaluated with the same vigor as actual conflicts.

It is expressly understood that failure to disclose conflicts of interest as described herein may result in immediate disqualification from evaluation or immediate termination from work for the County.

Please check the appropriate statement:

- I hereby attest that the undersigned Respondent has no actual or potential conflict of interest due to any other clients, contracts, or property interests for completing work on the above referenced project.
- The undersigned Respondent, by attachment to this form, submits information which may be a potential conflict of interest due to other clients, contracts or property interests for completing work on the above-referenced project.

Legal Name of Respondent: Woolpert, Inc.

Authorized Representative(s): 

Jeff S. Lovin, CP, PS, Senior Vice President
Print Name/Title

Signature

Print Name/Title



Attachment E

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LIDAR DELIVERABLES**

ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS

ATTACHMENT "E"

DRUG-FREE WORKPLACE FORM

The undersigned firm, in accordance with Florida Statute 287.087 hereby certifies that

Woolpert, Inc. does:
Name of Firm

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the danger of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the contractual services that are described in St. Johns County's request for qualifications to provide bond underwriter services a copy of the statement specified in paragraph 1.
4. In the statement specified in paragraph 1, notify the employees that, as a condition of working on the contractual services described in paragraph 3, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Florida Statute 893, as amended, or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction or plea.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.
6. Consistent with applicable provisions with State or Federal law, rule, or regulation, make a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs 1 through 5.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.


Signature Director, Human Resources

10/10/18
Date



Addenda



St. Johns County Board of County Commissioners

Purchasing Division

October 8, 2018

ADDENDUM #1

To: Prospective Proposers
From: St. Johns County Purchasing Department
Subject: RFQ No. 19-16; Digital Orthophotography and LiDAR Deliverables

This Addendum #1 is issued for further respondent's information and is hereby incorporated into the RFQ documents. Each respondent will ascertain before submitting a proposal that he/she has received all Addenda, and return an original and two (2) copies of this signed Addendum with the submitted RFQ proposal to the St. Johns County Purchasing Department, Diana M. Fye, AS, CPPB; Procurement Coordinator, 500 San Sebastian View; St. Augustine, FL 32084.

Questions:

1. We would like to request digital boundary files – shp files for the project area. Are they available for download or can they be sent via e-mail?

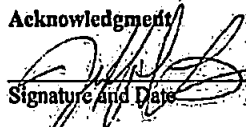
Answer: The requested files are available for download at the following locations:

The County Boundary shapefile is available for download from the St. Johns County GIS Data Depot site at the following link: <http://www.sjcf.us/GIS/DataDepot.aspx>

The Aerial Index shapefile, which includes the total number of tiles in this project, has been uploaded to the St. Johns County GIS FTP Site and is available for download from the following link: <ftp://rpanon.sjcf.us/gis/Users/Mike/DOP/>

THE RFQ DUE DATE REMAINS NOVEMBER 1, 2018 AT 4:00 P.M.

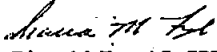
Acknowledgment

Signature and Date:  17 October 2018

Jeff S. Lovin, CP, PS / Senior Vice President
Printed Name/Title

Woolpert, Inc.
Company Name (Print)

Sincerely,


Diana M. Fye, AS, CPPB
Procurement Coordinator

END OF ADDENDUM NO. 1

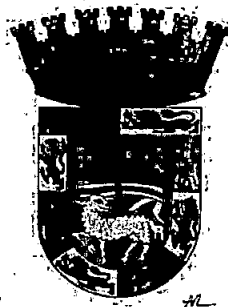
500 San Sebastian View, St. Augustine, FL 32084 | P: 904.209.0150 | F: 904.209.0151

www.sjcf.us





WOOLPERT
ARCHITECTURE | ENGINEERING | GEOSPATIAL



**ST. JOHNS COUNTY
BOARD OF COUNTY COMMISSIONERS**

**RFQ NO. 19-16
REQUEST FOR QUALIFICATIONS**

**DIGITAL ORTHOPHOTOGRAPHY
and LiDAR DELIVERABLES**

St. Johns County Purchasing Department
500 San Sebastian View
St. Augustine FL 32084
(904) 209-0150 – Main

FINAL: 10/03/18

RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

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PART II:	INTRODUCTION
PART III:	GENERAL REQUIREMENTS
PART IV:	CONTRACT REQUIREMENTS
PART V:	QUALIFICATIONS PACKAGE SUBMITTAL REQUIREMENTS
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PART VIII:	OPTIONAL CHECKLIST
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ST. JOHNS COUNTY, FL
RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

PART I: ADVERTISEMENT

Notice is hereby given that St. Johns County, FL is soliciting responses for **RFQ No: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**. Interested and qualified respondents may submit Qualification Packages, in accordance with the requirements described herein, to the St. Johns County Purchasing Department located at 500 San Sebastian View, St. Augustine, FL 32084. **All RFQ Packages are due by or before 4:00 P.M. (EST) on Thursday, November 1, 2018.** Any packages delivered to or received after the 4:00 P.M. deadline will not be considered and shall be returned unopened to the addressee.

In accordance with Florida Statutes, Section 287.055 Consultant's Competitive Negotiation Act (CCNA), St. Johns County is soliciting qualifications from interested firms to provide Digital Orthophotography and LiDAR Deliverables. The project consists of providing professional services for digital orthophotos for St. Johns County, Florida. The project area consists of 866 - 5,000'x 5,000' tiles for a total of 776 square miles. All tiles are full tiles where specific coastal tiles shall be collected within +/- 2 hours of Mean Lower Low Water (MLLW). The project also consists of providing LiDAR deliverables based on the Florida Department of Emergency Management/U.S. Geological Survey (FDEM/USGS) QL1 LiDAR data acquisition project which is to be made available as LAS files only. The County requires additional deliverables to the LAS files as follows: DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer.

In order to submit a proposal, the Contractor must be currently licensed to do business in the State of Florida, must be currently licensed under Chapter 472, Florida Statute to offer surveying and mapping services in the State of Florida, and must have successfully completed, a minimum of three (3) projects in the State of Florida as the lead firm in the last seven (7) years of similar size and scope to that described herein with emphasis on Digital Orthophotography and LiDAR projects.

RFQ Packages are available for downloading from Onvia Demandstar, Inc., at their website www.demandstar.com, or by calling 800-711-1712 and requesting Document #19-16 Vendors registered with Demandstar may download most packages at no cost from the website. Download fees may apply to vendors not registered on the website. Packages are also available from the SJC Purchasing Department. When making a request provide the full company name, full company address, company phone number, primary contact and email address.

Any and all questions or requests for information relating to this Request for Qualifications shall be **submitted in writing** by or before five o'clock (5:00PM) on October 18, 2018 to the Designated Point of Contact provided below:

Designated Point of Contact: Diana M. Fye, AS, CPPB
Procurement Coordinator
SJC Purchasing Department
500 San Sebastian View
St. Augustine FL 32084
Email: dfye@sjcfl.us
Fax: (904) 209-0163

In the event the Designated Point of Contact provided above is absent or otherwise unavailable for more than three (3) business days, firms may contact Leigh Daniels, CPPB, Procurement Supervisor at ldaniels@sjcfl.us.

Interested firms shall not contact any staff member of St. Johns County, including members of the Board of County Commissioners, except the above referenced individual, with regard to this RFQ as stated in SJC Purchasing Code 304.6.5 "Procedures Concerning Lobbying". Any such communication shall result in disqualification from consideration for award of a contract for these services.

RFQ Packages **MUST** be submitted in a **SEALED** envelope or container and clearly marked on the exterior of the package: **RFQ 19-16; Digital Orthophotography and LiDAR Deliverables**. Each package submitted must have the respondent's name and mailing address marked plainly on the outside of the envelope/container. Each package shall consist of one (1) hard-copy original and one (1) exact electronic PDF copy on a USB Drive which shall include all required documents and any supplemental information. In the event of a discrepancy between the submitted hard-copy and electronic copy, the hard-copy will supersede.

Deliver or Ship RFQ Packages to: St. Johns County Purchasing Department
500 San Sebastian View
St. Augustine FL 32084

Vendors shall not contact, lobby or otherwise communicate with any SJC employee, including any member of the Board of County Commissioners, other than the above referenced individual from the point of advertisement of the RFQ until contract(s) are executed by all parties, per SJC Purchasing Code 304.6.5 "Procedures Concerning Lobbying". According to SJC policy, any such communication shall disqualify the vendor or Contractor from responding to the subject invitation to bid, request for quote, request for proposal, invitation to negotiate or request for proposals and possible debarment for periods up to twelve (12) months.

Any bidder, proposer or person substantially and adversely affected by an intended decision or by any term, condition, procedure or specification with respect to any bid, invitation, solicitation of proposals or Request for Proposals, shall file with the Purchasing Department for St. Johns County, a written notice of intent to protest no later than seventy two (72) hours (excluding Saturdays, Sundays, and legal holidays for employees of St. Johns County) after the posting either electronically or by other means of the notice of intended action, notice of intended award, bid tabulation, publication by posting electronically or by other means of a procedure, specification, term or condition which the person intends to protest, or the right to protest such matter shall be waived. The protest procedures may be obtained from the Purchasing Department and are included in St. Johns County's Purchasing Manual. All of the terms and conditions of the County's Purchasing Manual are incorporated by reference and are fully binding.

St. Johns County reserves the right to accept or reject any or all bids/proposals, waive minor formalities, and to award the bid/proposal that best serves the interests of St. Johns County. St. Johns County also reserves the right to award the base bid and any alternate bids in any combination that best suits the needs of the County.

BOARD OF COUNTY COMMISSIONERS
OF ST. JOHNS COUNTY, FLORIDA
HUNTER S. CONRAD, CLERK

BY: _____
Deputy Clerk

RFQ NO. 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

PART II: INTRODUCTION

A. PURPOSE

The purpose of this RFQ is to evaluate, rank, and shortlist firms seeking qualification in order to submit a pricing proposal for providing Digital Orthophotography and LiDAR Deliverables for St. Johns County Land Management. Interested respondents must be qualified and experienced in providing services of similar size, dollar value, and scope of the proposed Project. Firms must provide evidence of required qualifications, experience, and financial capability and stability in accordance with the information specified in this document. The intent of this RFQ is to qualify firms using the established selection criteria provided herein. Only those firms qualified through this RFQ process will be eligible to submit a pricing proposal for the completion of the Project.

B. TENTATIVE SCHEDULE OF EVENTS

The County proposes the tentative schedule of events below. The dates provided may change at the discretion of the County. If any modifications impact the schedule of this RFQ, through and until the deadline for submitted RFQ Packages, the County will notify all interested respondents via Addendum.

Advertisement of Request for Qualifications for Contractors	October 6, 2018
Deadline for Questions / Requests for Information/Clarifications	October 18, 2018
Issuance of Final Addendum	October 25, 2018
Qualification Package Submission Deadline	November 1, 2018
Evaluation of Submitted RFQ Packages	November 8, 2018
Presentation of Firms Recommended for Award to BOCC	December 4, 2018
Negotiation of Contract	December 7, 2018
Award of Contract	December 18, 2019

C. DUE DATE & LOCATION

Qualification Packages submitted in response to this Request for Qualifications (RFQ) must be delivered to, and received by the SJC Purchasing Department by or before **four o'clock (4:00PM)** on **Thursday, November 1, 2018**. Any packages received by the SJC Purchasing Department after this deadline will be deemed non-responsive, and shall be returned to the Respondent, unopened.

Qualification Packages must be submitted to: SJC Purchasing Department
500 San Sebastian View
St. Augustine, FL 32084

D. DESIGNATED POINT OF CONTACT

Any and all questions or requests for information relating to this RFQ must be directed, **in writing**, to the following Designated Point of Contact provided below:

Designated Point of Contact Information: Diana M. Fye, AS, CPPB
Procurement Coordinator
SJC Purchasing Department
500 San Sebastian View
St. Augustine, FL 32084
Email: dfye@sjcfl.us
Fax: (904) 209-0163

In the event the Designated Point of Contact provided above is absent or otherwise unavailable for more than three (3) business days, firms may contact Leigh Daniels, CPPB, Procurement Supervisor at ldaniels@sjcfl.us.

Interested firms **SHALL NOT** contact any staff member of St. Johns County, including members of the Board of County Commissioners, except the above referenced individual, with regard to this RFQ as stated in SJC Purchasing Code 304.6.5 "Procedures Concerning Lobbying". All inquiries will be routed to the appropriate staff member for response. Any such communication may result in disqualification from consideration for award of a contract for these services.

E. SUBMITTAL OF QUESTIONS/INQUIRIES

Any and all questions and/or inquiries related to this RFQ, shall be directed, in writing, to the Designated Point of Contact as provided above, by or before five o'clock (5:00PM) EST on Thursday, October 18, 2018. Any questions received after this deadline will not be addressed or clarified by the County, unless it is determined to be in the best interest of the County to do so. The County reserves the right to extend the deadline for RFQ submission in order to clarify or answer questions as necessary to serve the best interest of the County.

F. ADDENDA

Any and all clarifications, answers to questions, or changes to this RFQ shall be provided through a County issued Addendum, posted on www.demandstar.com. Any clarifications, answers, or changes provided in any manner other than a formally issued addendum, are to be considered "unofficial" and shall not bind the County to any requirements, terms or conditions not stated herein.

The County shall make every possible, good faith effort to issue any and all addenda no later than seven (7) days prior to the due date for proposals. Any addenda issued after this date shall be for material, necessary clarifications to the Request for Qualifications.

Any and all issued Addenda must be included with all copies of each Respondent's submitted RFQ Package. Failure to submit an issued addendum with the submitted RFQ Package may result in the Respondent being deemed non-responsive, and being removed from consideration for award. The County reserves the right to request from any Respondent, copies of any missing addenda, if the content included in the Addenda is not of a material nature to the merit of the submitted Pre-Qualifications Package.

G. EQUAL EMPLOYMENT OPPORTUNITY

In accordance with Federal, State and Local law, the submitting firm shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, or handicap. The submitting firm shall be required to comply with all aspects of the Americans with Disabilities Act (ADA) during the performance of the work.

H. SOLICITATION POSTPONEMENT/CANCELLATION

The County may, at its sole and absolute discretion, postpone, cancel, or re-advertise, at any time, this solicitation process for any reason, as determined by County Staff, in order to best serve the interests of St. Johns County.

I. RIGHT TO REJECT/ACCEPT

The County reserves the right to accept or reject any or all proposals, waive minor formalities, and to award to the Respondent that best serves the interest of St. Johns County.

J. COMPLIANCE WITH ST. JOHNS COUNTY PURCHASING POLICY AND PROCEDURES MANUAL

All terms and conditions of the St. Johns County Purchasing Procedure Manual are incorporated into this RFQ Document by reference, and are fully binding. Respondents are required to submit their responses to this RFQ, and to conduct their activities during this process in accordance with the St. Johns County Purchasing Procedure Manual. This solicitation, the subsequent evaluation, negotiations and contract award shall be in accordance with the St. Johns County Purchasing Procedure Manual. The County reserves the right to disqualify, remove from consideration, or debar as appropriate, any vendor that does not comply with the applicable requirements set forth in the St. Johns County Purchasing Procedure Manual.

RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

PART III: GENERAL REQUIREMENTS

A. PROJECT DESCRIPTION

The project consists of providing professional services for digital orthophotos for St. Johns County, Florida. The project area consists of 866 - 5,000' x 5,000' tiles for a total of 776 square miles. All tiles are full tiles where specific coastal tiles shall be collected within +/- 2 hours of Mean Lower Low Water (MLLW).

The project also consists of providing LiDAR deliverables based on the FDEM/USGS QL1 LiDAR data acquisition project which is to be made available as LAS files only. The County requires additional deliverables to the LAS files as follows: DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer.

B. SCOPE OF SERVICES

The scope of services for this project shall include providing all of the following:

Aerial Services

- Obtain new 4-band (RGB/NIR) aerial imagery at nominal 0.5-foot ground sample distance (GSD).
- Use existing LiDAR data acquired by the County in 2013 for ortho-rectification
- Produce new 4-band digital orthoimagery with a 0.5-foot pixel resolution.
- Metadata – FGDC Compliant

Ground Control

Airborne GPS and IMU systems or equivalent methodology, along with ground GPS reference station and ground survey are required to meet the horizontal accuracy specification. Contractor is responsible for determining the design and extent of new ground survey, and/or the application of past ground surveys to meet the horizontal accuracy specification.

The contractor is responsible for any ground GPS reference station operations during the imagery acquisition phase of the project.

The County Survey Division is available for targeting and obtaining x,y,z values on targets and/or photo id points.

The 2016 Orthophoto project was based on a horizontal datum of Florida State Plane East, North American Datum of 1983/2011 adjustment. The vertical datum was referenced to North American Vertical Datum of 1988 (NAVD88), Geoid 12A. Units are US Survey Feet. During the project implementation phase the County and the Contractor will consider using Florida State Plane East, North American Datum of 1983/2011 adjustment (or most current adjustment) and North American Vertical Datum of 1988 (NAVD88), Geoid 12A (or most current geoid).

The County must approve any proposed control methodology and datum references prior to image acquisition.

Aerial Imagery

During January/February 2019 the Contractor is to acquire new color and near-infrared imagery simultaneously across the project area.

All imagery shall be collected during optimal leaf-off conditions relative to vegetation cover, sun angle, and client approval. The sun angle shall be 30-degrees or greater, and streams should be within their normal banks, unless otherwise negotiated. During flight planning and acquisition, a significant effort should be made to limit clouds, snow, fog, haze, smoke, or other ground obscuring conditions in the imagery. In no case shall the maximum cloud cover exceed 5% per image.

In addition, the Contractor shall limit flight planning and acquisition to +/- 2 hours of MLLW tide for specific coastal beach flight lines. Images are to be captured using an end lap of 60 percent, and side lap of 30 percent, and maximum tilt of 3 degrees if using a framing sensor. If a push broom sensor is used, side lap may be reduced to 20%.

Contractor shall provide a flight line layout plan prior to the commencement of the acquisition phase. Contractor shall also be responsible for providing all the pertinent information required such as flight maps, flight log, aircraft, ABGPS, etc. as part of the Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17.

Image Quality

Digital imagery shall be uniform in contrast without abrupt variations between image frames/strips. Imagery shall be free of blemishes and artifacts that obscure ground feature detail.

Aerial Triangulation

The ground control network and digital aerial imagery shall undergo softcopy aerial triangulation to extend and densify the ground control across the entire project area.

Digital Orthoimagery

Contractor shall produce 4-band digital orthoimagery with a 0.5-foot pixel resolution. The images shall be mosaicked to produce imagery with consist tone, contrast, and color balance. Special attention shall be given to the placement of mosaic lines in developed areas so as not to bi-sect buildings, bridges or other man-made structures not at ground level, Special care around bridges and overpasses shall be given to correct excessive distortion. Overpasses/bridges along roadways should also retain location and geometry.

Digital Orthoimagery files will be delivered as uncompressed GeoTIFF with world file (.tfw). The imagery shall be delivered based upon the County’s modular system of 5,000’ X 5,000’ tiles and will be labeled based on the concatenated lower left coordinates. Full tiles are to be delivered, partial tiles shall not be provided.

Digital Orthoimagery files will also be delivered as an image cache to be loaded into ArcGIS Server with the following specifications:

- Projection: WGS 1984 Web Mercator Auxiliary Sphere
- Image Format: Mixed
- Storage Format: Exploded
- Number of Levels: 21
- Tile Height & Width: 256
- DPI: 96

In addition, a compressed image dataset of the entire county is required in MrSID format with a 20:1 compression ratio. The 2016 Orthophoto Project was divided into 5 areas for final deliverables in MrSID format. During the project implementation phase the County and the Contractor will finalize the breakdown of the areas for deliverables.

Accuracy Standards

The orthoimagery shall meet or exceed American Society for Photogrammetry and Remote Sensing (ASPRS) Positional Accuracy Standards for Digital Geospatial Data as follows:

Table 1 – Absolute Accuracy Requirement	
RMSE	Horizontal Accuracy at 95% Confidence Level
1.0 feet	2.4 feet

QA/QC

Contractor will provide an online QA/QC tool to be used to review the Digital Orthophotography. This tool will allow the user to view the imagery and create redline markups for review and to receive feedback. The tool will also allow

the user to add additional layers that can be overlaid with the imagery to assist in the review process.

LiDAR Deliverables Project

Generate a DEM (Bare Earth Surface) (Esri ArcGrid format); Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats), and Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer, from the FDEM/USGS QL1 LiDAR data acquisition project.

Orthophoto Deliverables

- One set of 4-band digital orthoimagery tiles 0.5-foot pixel resolution in uncompressed GeoTIFF format with .tfw, covering the entire project area.
- Image cache in ESRI ArcGIS Server format
- One 3-band color digital orthoimage with a 0.5-foot pixel resolution in MrSID format, compression ratio of 20:1.
- Flight lines ESRI ArcGIS v10 shapefile or geodatabase format.
- Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17
- Each deliverable product will include FGDC compliant metadata.
- Final deliverables (all items listed above) of all digital data will be provided to St. Johns County, FL on an external USB 3.0 hard drive.

LiDAR Deliverables

The LiDAR Deliverables will be based on the FDEM/USGS QL1 LiDAR data acquisition project which is to be made available as LAS files only.

- DEM (Bare Earth Surface) (Esri ArcGrid format)
- Elevation Contours, 1 foot (File Geodatabase and AutoCAD formats)
- Planimetric Features (File Geodatabase and AutoCAD formats) for the water layer
- Surveying and Mapping Report meeting the Florida Standards of Practice as per the Florida Administrative Code 5J17
- Each deliverable product will include FGDC compliant metadata.
- Final deliverables (all items listed above) of all digital data will be provided to St. Johns County, FL on an external USB 3.0 hard drive.

Ownership

All data received from the Contractor will become the property of St. Johns County, Florida.

C. Sub-Consultants:

Sub-consultants are not allowed for this project.

RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

PART VI: CONTRACT REQUIREMENTS

A. CONTRACT AGREEMENT & TERM

The intent of this RFQ is to select the number one ranked firm through the evaluation process and to award a contract upon successful negotiations to that firm. It is anticipated the County will issue a professional services contract for the duration of the project.

Any contract(s) negotiated with any individual or firm responding to this Request for Qualifications will be non-exclusive. The County reserves the right to: (1) enter into contracts with firms for some or all of the services; and to (2) subsequently solicit proposals and negotiate contracts, for such services with respect to specific projects. All such actions shall be subject to the sole discretion of the County.

The County may consider extending any executed Contract/Agreement under mutually acceptable terms and conditions. However, the County is under no obligation to extend any executed Contract/Agreement. Moreover, it is expressly understood that the option of extension is exercisable only by the County, and only upon the County's determination of satisfactory performance of any executed Contract/Agreement, including specifically, the Scope of Work/Services. Any contract renewal will be upon mutual agreement by all parties and based upon the availability of funds and the need for services.

In the event that a Contract Agreement is attached to the RFQ, such attached Contract Agreement is for discussion purposes only, and not necessarily reflective of any Contract that may be ultimately entered into by the County. In the event that a Contract Agreement is not attached to the RFQ, it is expressly understood that the Board of County Commissioner's (Board's) preference/selection of any proposal does not constitute an award of a Contract Agreement with the County. It is anticipated that subsequent to the Board's preference/selection of any proposal, contract negotiations will follow between the County and the selected Respondent. It is further expressly understood that no contractual relationship exists with the County until a Contract has been executed by both the County and the selected Respondent. The County reserves the right to delete, add to, or modify one or more components of the selected Respondent's proposal in order to accommodate changed or evolving circumstances that the County may have encountered since the issuance of the RFQ.

B. CONTRACT AWARD:

Recommendation shall be made to the Board of County Commissioners (BOCC) by County Staff to enter into negotiations with the highest ranked firm with the intention of coming to agreement over terms, conditions, and pricing in order to award a Contract for the services described herein.

The contract shall not be effective until December 4, 2018 or later. The project will consist of two parts, Digital Orthophotography and LiDAR Deliverables. The LiDAR Deliverable portion of the project is contingent upon the delivery of FDEM/USGS QL1 LiDAR data acquisition project which includes LAS files only.

C. CONTRACT PERFORMANCE

At any point in time during the term of the Contract with the awarded firm, County Staff may review records of performance to ensure that the awarded firm is continuing to provide sufficient financial support, equipment and organization as prescribed herein. The County may place said contract on probationary status and implement termination procedures if the County determines that an awarded firm no longer possesses the financial support, equipment and organization which would have been necessary during the RFQ evaluation period in order to comply with this demonstration of competency section.

D. TERMINATION

Failure on the part of the Contractor to comply with any portion of the duties and obligations under the Contract Agreement shall be cause for termination. If the Contractor fails to perform any aspect of the responsibilities described herein or as designated in an issued Task Order, St. Johns County shall provide written notification stating any and all items of non-compliance. The Contractor shall then have seven (7) consecutive calendar days to correct any and all items of non-compliance. If the items of non-compliance are not corrected, or acceptable corrective action, as approved by the County, has not been taken within the seven (7) consecutive calendar days, the Contract Agreement may be

terminated by St. Johns County for cause, upon giving seven (7) consecutive calendar days written notice to the Consultant.

In addition to the above, the County may terminate the Contract Agreement at any time, without cause, upon thirty (30) days written notice to the Consultant.

E. GOVERNING LAWS & REGULATIONS

It shall be the responsibility of the Contractor to be familiar and comply with any and all federal, state, and local laws, ordinances, rules and regulations relevant to the services to be performed under this Contract. The Contract Agreement shall be governed by the laws of the State of Florida and the County both as to interpretation and performance.

F. LICENSES, PERMITS & CERTIFICATIONS

The Contractor shall be responsible for acquiring and maintaining any and all necessary licenses, permits, and/or certifications required to perform the work described herein throughout the duration of the Contract. The Contractor shall be solely responsible for paying any and all fines, penalties or fees assessed to the County, or the Contractor, for any lapse in require licenses, permits, or certifications required for any portion of the work.

G. INSURANCE REQUIREMENTS

The Contractor shall not commence work under this Contract until he/she has obtained all insurance required under this section and such insurance has been approved by the County. All insurance policies shall be issued by companies authorized to do business under the laws of the State of Florida. The Contractor shall furnish proof of Insurance to the County prior to the commencement of operations. The Certificate(s) shall clearly indicate the Contractor has obtained insurance of the type, amount, and classification as required by contract and that no material change or cancellation of the insurance shall be effective without thirty (30) days prior written notice to the County. Certificates shall specifically include the County as Additional Insured for all lines of coverage except Workers' Compensation and Professional Liability. A copy of the endorsement must accompany the certificate. Compliance with the foregoing requirements shall not relieve the Contractor of its liability and obligations under this Contract.

Certificate Holder Address: St. Johns County, a political subdivision of the State of Florida
500 San Sebastian View
St. Augustine, FL 32084

The Contractor shall maintain during the life of this Contract, Comprehensive General Liability Insurance with minimum limits of \$1,000,000 per occurrence, \$2,000,000 aggregate to protect the Contractor from claims for damages for bodily injury, including wrongful death, as well as from claims of property damages which may arise from any operations under this Contract, whether such operations be by the Contractor or by anyone directly employed by or contracting with the Contractor.

The Contractor shall maintain during the life of the contract, Professional Liability or Errors and Omissions Insurance with minimum limits of \$1,000,000, if applicable.

The Contractor shall maintain during the life of this Contract, Comprehensive Automobile Liability Insurance with minimum limits of \$2,000,000 combined single limit for bodily injury and property damage liability to protect the Contractor from claims for damages for bodily injury, including the ownership, use, or maintenance of owned and non-owned automobiles, including rented/hired automobiles whether such operations be by the Contractor/Consultant or by anyone directly or indirectly employed by a Contractor.

The Contractor shall maintain Umbrella or Excess Liability Insurance covering workers compensation, commercial general liability and business auto liability with minimum limits of liability of \$1,000,000.

The Contractor shall maintain during the life of this Contract, adequate Workers' Compensation Insurance in at least such amounts as are required by the law for all of its employees per Florida Statute 440.02.

In the event of unusual circumstances, the County Administrator, or his designee, may adjust these insurance requirements.

H. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless St. Johns County, Florida, and

employees from and against liability, claims, damages, losses and expenses, including attorney's fees, arising out of or resulting from performance of the Work, provided that such liability, claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or injury to or destruction to tangible property (other than the Work itself) including loss of use resulting there from, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, a Sub- Contractor, or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such liability, claim, damage, loss or expense is caused in part by a party indemnified hereunder.

In claims against any person or entity indemnified under this Paragraph by an employee of the Contractor, a Sub-Contractor, any one directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Sub-Contractor under workers' compensation acts, disability benefits acts or other employee benefit acts.

I. SUB-CONTRACTORS

Sub-contractors shall not be permitted for this project.

J. FORCE MAJEURE

If awarded on the basis of this proposal, the undersigned pledges to provide the equipment/services as specified in the Proposal and County Specifications barring any delays due to strikes, fires, transportation difficulties or other causes beyond the control of the undersigned.

RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

PART VI: RFQ SUBMITTAL INSTRUCTIONS & FORMAT

A. RESPONDENT RESPONSIBILITIES

Respondents are responsible for any and all costs associated with developing and submitting an RFQ Package in response to this Request for Qualifications. Respondents are also solely responsible for any and all costs associated with interviews and/or presentations requested by the County. It is expressly understood, no Respondent may seek or claim any award and/or re-imburement from the County for any expenses, costs, and/or fees (including attorneys' fees) borne by any Respondent, during the entire RFQ process. Such expenses, costs, and/or fees (including attorneys' fees) are the sole responsibility of the Respondent.

All RFQ Packages received in response to this Request for Qualifications shall become the property of St. Johns County and will not be returned. In the event of contract award, all documentation produced as part of the contract will become the exclusive property of St. Johns County.

By submitting an RFQ Package, each Respondent certifies that the proposer has fully read and understands any and all instructions in the Request for Proposals, and has full knowledge of the scope, nature, and quality of work to be performed. All RFQ Packages submitted shall be binding for one hundred twenty (120) consecutive calendar days

B. MINIMUM QUALIFICATIONS OF CONTRACTORS

The following are minimum qualification requirements that solicitation Respondents must meet in order to be eligible to submit a proposal. Responses must clearly show compliance to these minimum qualifications.

Firms or individuals interested in submitting an RFQ Package for this project must also meet, and show proof of the following qualifications:

1. The Contractor must be currently licensed to do business in the State of Florida and must be currently licensed under Chapter 472, Florida Statute to offer surveying and mapping services in the State of Florida, and
2. Must have successfully completed, a minimum of three (3) projects in the State of Florida as the lead firm in the last seven (7) years of similar size and scope to that described herein with emphasis on Digital Orthophotography and LiDAR projects.

Each Respondent shall demonstrate the necessary minimum qualifications, along with supplemental information in the designated section, as provided in Section IV below. Failure by any Respondent to sufficiently demonstrate compliance with the minimum qualification requirements stated above, may result in the Respondent being deemed non-responsive, and removal from the evaluation, and consideration for pre-qualification.

C. RFQ PACKAGE SUBMITAL FORMAT

The RFQ Package format must sufficiently address and demonstrate all required components, and follow the order of sections described below. The aim of the required format is to simplify the preparation and evaluation of the RFQ Packages.

All RFQ Packages must include the following components:

<u>Section</u>	<u>Topic</u>
1	Cover Page
2	Cover Letter
3	Company & Staff Qualifications and Team Organizations
4	Related Experience
5	Project Approach & Understanding
6	Quality & Schedule Control
7	Additional Information
8	Administrative Information

D. TRADE SECRETS

To qualify any submitted information as Trade Secret, or confidential, the Respondent must mark each page of the

submitted RFQ Package or specific portion of a document as “trade secret.” All material marked as a trade secret must be separated from all non-trade secret material, such as being submitted in a separate envelope clearly marked as “trade secret.” If the County receives a public records request for a document or information that is marked and certified as a trade secret, the County shall release any information not verified as “trade secret”, in accordance with applicable Public Records laws.

To invoke the provisions of Florida Statute 812.081, Trade Secrets, or other applicable law, the requesting firm must complete an Affidavit for Trade Secret Confidentiality, signed by an officer of the company, and submit the affidavit with the information classified as “Trade Secret” with other proposal documents. The affidavit must reference the applicable law or laws under which trade secret status is to be granted.

E. PUBLIC RECORDS

In accordance with Chapter 119 of the Florida Statutes (Public Records Law) and except as may be provided by other applicable State and Federal Law, all proposers should be aware that Request for Qualifications and the responses thereto are in the public domain. However, the proposers are requested to identify specifically any information contained in their proposals which they consider confidential and/or proprietary and which they believe to be exempt from disclosure, citing specifically the applicable exempting law.

F. USE OF COUNTY LOGO

Pursuant to, and consistent with, County Ordinance 92-2 and County Administrative Policy 101.3, Respondents may not manufacture, use, display, or otherwise use any facsimile or reproduction of the County Seal/Logo without express written approval of the Board of County Commissioners of St. Johns County, Florida.

Respondents shall not include the St. Johns County Seal/Logo in any part of their submitted package. Any packages received by the SJC Purchasing Department, which contain the County Seal/Logo may be deemed nonresponsive to this requirement. The County reserves the right to request the submitting firm to resubmit a package with the County Seal/Logo removed, within twenty four (24) hours of the submittal deadline provided herein, or as necessary to serve the needs of the County.

G. CONFLICT OF INTEREST

Respondents must certify that they presently have no interest and shall acquire no interest, either directly or indirectly, which would conflict in any manner with the performance of required services as provided herein. Respondents must certify that no person having any interest shall be employed for the performance of any of the required services as provided herein.

Respondents are required to disclose to the County any and all potential conflicts of interest for any prospective business association, interest or circumstance, the nature of work the Respondent may undertake and request an opinion from the County, whether such association, interest, or circumstance constitutes a conflict of interest.

H. QUALIFICATIONS PACKAGE COMPONENTS

All of the components outlined below must be included with each copy of the RFQ Package and submitted as follows: one (1) original hard copy original on and one (1) exact electronic copy on USB drive, submitted in a sealed envelope or container labeled with Company name and RFQ Number and name. Additionally, all headings, sections and sub-sections shall be identified appropriately. In order to insure a uniform review process and to obtain the maximum degree of comparability, it is recommended that proposals be organized in the manner specified as follows:

Section 1: RFQ Cover Page (Complete and Submit)

Section 2: Cover Letter

In this section of the package, Respondents shall provide a cover letter. Include the original signed cover letter with the original proposal and a copy of the cover letter with the PDF copy of the proposal. The cover letter should provide the following:

- Full legal company name,
- Physical street address and mailing address if different than street address (include location address of office that will perform the services under this Contract),
- Primary company phone and fax numbers and email address,

- Company type, i.e. Corporation, Partnership, etc.,
- Names and titles of principals,
- Brief statement of company history (date of establishment, number of years in business, number of employees, etc.),
- Brief description of business philosophy, and
- Reason for interest in submitting a response to this solicitation.

Section 3: Company & Staff Qualifications and Resources

In this section, Respondents shall provide evidence that the firm has qualified and experienced staff to perform the scope of services required for this project. In addition, provide a brief summary of the firm's overall capabilities relative to the Digital Orthophotography and LiDAR Deliverables as outlined in the scope of services relative to this project.

3-A. Licenses/Certifications

In this section of the package, Respondents shall provide a list and copies of all current licenses and certifications. Minimum documentation shall be shown by completing and submitting **Attachment "3-A"** – License/Certification.

3-B. Certificate of Insurance

In this section, Respondents shall provide copies of Certificate(s) of Insurance providing evidence of all coverages as specified in Section IV above and submitted as **Attachment "3-B"** – Certificates of Insurance. (Prior to issuance of an executed contract, awarded respondent shall provide a Certificate of Insurance naming St. Johns County as "Additional Insured".)

3-C. Claims, Liens, Litigation History

In this section of the package, Respondents shall provide a list of all claims, liens and/or litigation history for the past seven (7) years by completing and submitting **Attachment "3-C"** – Claims, Liens, and Litigation History.

3-D. Company Organization

In this section, Respondents shall submit Company Organization Chart reflecting the organization of the company by submitting **Attachment "3-D"** – Company Organization Chart.

3-E. Project Team Organization

In this section, Respondent shall submit names, titles and organization of the proposed project team by submitting **Attachment "3-E"** – Project Team Organization Chart.

3-F. Key Personnel

In this section, Respondents shall submit evidence of qualified personnel shown on the Project Organization Chart who are proposed to perform the scope of work by completing all information and submitting **Attachment "3-F"** – Key Personnel List. The personnel list shall include any one who will be performing the responsibilities of a project manager, project administration and any other key position for this project. Brief comprehensive resumes should be provided for each staff member listed.

Section 4: Related Experience

In this section of the package, Respondents shall provide evidence of successful completion of three (3) projects in the State of Florida in the last seven (7) years as described in the Project Description. Emphasis should be on Digital Orthophotography and LiDAR projects. Digital files of sample orthophotography and LiDAR projects can be submitted to illustrate each project but must be clearly marked with the project name and date. Proof shall be provided by completing and submitting the following information and attachments:

4-A. Previous Experience

In this section, Respondents shall provide a written narrative describing a minimum three (3) projects in the State of Florida as the lead firm in the last seven (7) years where the firm completed Digital Orthophotography and LiDAR projects by submitting **Attachment "4-A"** – Previous Experience. The written narrative must include, at a minimum: (1) Company or client category; (2) Background information or situation analysis; (3) Approach; (4) Deliverables; and (5) Identify the key participants involved and the role each of them played.

4-B. Project References

In this section, Respondents shall provide a list of a minimum of three (3) project references from individuals, firms or agencies that have contracted with the respondent to perform services of similar size and scope as those described herein. The information required shall include: reference company name, date(s) of service, project information including name of the project, and a contact person name, title, phone number and email address. Each firm must include **Attachment “4-B”** – References in this section. References should include the primary contacts for the projects listed in the narrative for Section “4-A”

References shall be checked by the Purchasing Department, for the number one ranked Respondent, to verify capability to perform the work, and responsibility to fulfill the requirements of the contract.

Section 5: Project Approach & Understanding

In this section of the package, Respondents shall provide a written narrative (limit narrative to 3-4 pages) describing the proposed approach and understanding of this project by submitting **Attachment “5-A”** – Project Approach & Understanding. The narrative must provide a synopsis of the respondent’s understanding of the scope of services and the intent of the project. Briefly describe the approach the firm intends to take to successfully complete a quality and timely project.

Section 6: Quality & Schedule Control

In this section, Respondents shall provide a written narrative (limit narrative to 3-4 pages) of the firm’s project management methods to establish, monitor, and track quality control methods and ability to meet schedules in a timely manner by completing and submitting **Attachment “6-A”** – Quality & Schedule Control.

Section 7: Additional Information

In this section, at the Respondent’s discretion, include additional information to support the proposal. This may include information such as aircraft, cameras, hardware and software to be used on the project. However, choose the additional information carefully, because this section of the proposal should not constitute the bulk of the submission.

Section 8: Administrative Information

Each Respondent shall submit in this section of the RFQ Package the following forms:

- Attachment “A” – Qualification Certification Notarized,
- Attachment “B” – Affidavit of Solvency,
- Attachment “C” – St. Johns County Affidavit,
- Attachment “D” – Conflict of Interest Disclosure,
- Attachment “E” – Drug-Free Workplace Form, and
- All Addenda (signed and dated, if applicable)

I. DETERMINATION OF RESPONSIVENESS

The County shall make a determination for each Respondent, as to the responsiveness of the submitted RFQ Package to the requirements provided herein. Any Respondent who is not responsive to the requirements of this Request for Qualifications may be determined non-responsive, and may be removed from consideration by the Evaluation Committee. Only those respondents who are fully responsive to the requirements herein will be evaluated for consideration of award.

The County reserves the right to waive any minor formality or irregularity in any submitted RFQ Proposal. However, any missing information or document(s) that are material to the purpose of the RFQ shall not be waived as a minor formality.

J. EVALUATION OF QUALIFICATION PACKAGES

All properly submitted RFQ Packages that are determined to be responsive to the requirements of this RFQ shall be

evaluated by an Evaluation Committee of no less than three (3) representatives. Each Evaluation Committee Team Member will receive an electronic copy of all responsive RFQ Packages submitted, an electronic copy of the RFQ Document with all issued Addenda, an Evaluator's Score Sheet, and an Evaluator's Narrative Sheet. Evaluators shall review and score the submitted, responsive, RFQ Packages individually, with no interaction or communication with any other individual. Evaluators' scores shall be announced at a public Evaluation Meeting.

County Staff may consider any evidence available regarding financial, technical, other qualifications and abilities of a respondent, including past performance (experience) with the County prior to recommending approval of award to the St. Johns County Board of County Commissioners.

The St. Johns County Board of County Commissioners reserves the right to reject any or all proposals, waive minor formalities or award to/negotiate with the firm whose proposal best serves the interest of the County.

C. EVALUATION CRITERIA

It is the intention of St. Johns County to evaluate, and rank the Respondents that submit RFQ Packages from highest to lowest utilizing the evaluation criteria listed below.

Evaluation of the responses to this RFQ will comply with the specific criteria as follows:

<u>Evaluation Criteria:</u>	<u>Maximum Possible Points per Evaluator:</u>
A. Company Qualifications	20
B. Staff Qualifications & Resources	15
C. Previous Project Experience	25
D. Project Approach	20
E. Quality & Schedule Control	15
F. Quality of Submittal & Additional Information	10
Total Points Possible:	105

K. PRESENTATION BY SHORT-LISTED FIRMS

In the event the Evaluation Committee and Purchasing Department determines that presentations from short-listed firms are necessary to make a final recommendation, short-listed firms will be notified by the County. Presentation will be evaluated by the Evaluation Committee, and the scores from each Evaluator shall be added to the points awarded for each firm, to determine the Total Score for each firm. The criteria by which presentations will be scored will be provided to the short-listed firms with the above referenced notification by the County.

L. RECOMMENDATION FOR AWARD

It is the intent of County Staff to make a recommendation for award to the St. Johns County Board of County Commissioners for the highest ranked firm based on the evaluation of responsive, submitted RFQ Packages. Recommendation shall be to approve the award and authorize the negotiations with the highest ranked firm, and upon successful negotiations, enter into a Contract Agreement. If negotiations with the highest ranked firm are unsuccessful, the County reserves the right to discontinue negotiations with the highest ranked firm and begin negotiations with the subsequently ranked firms until agreement can be reached over terms and conditions, or until the County determines that continuing with negotiations is not in the best interest of the County.

M. PROTEST PROCEDURES

Any Respondent adversely affected by an intended decision, or by any term, condition, or procedure or specification with respect to this Request for Proposals, shall file, with the SJC Purchasing Department, a written Notice of Protest, no later than seventy two (72) hours (excluding Saturdays, Sundays, and legal holidays for employees of St. Johns County) after the posting, either electronically, or by other means, of the notice of intended action, notice of intended award, bid tabulation, publication by posting electronically or by other means of a procedure, specification, term or condition which the person intends to protest, or the right to protest such matter shall be waived. The protest procedures may be obtained from the SJC Purchasing Department, and are included in St. Johns County's Purchasing Manual. All of the terms and conditions of the County's Purchasing Manual are incorporated into this Request for Proposals by reference, and are fully binding.

RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

PART VII: EVALUATOR'S SCORE SHEET EXAMPLE

**ST. JOHNS COUNTY FLORIDA
BOARD OF COUNTY COMMISSIONERS**

**DATE:
PROJECT:**

CRITERIA RANKING:

RESPONDENTS	A.	B.	C.	D.	E.	F.	TOTALS
	COMPANY QUALIFICATIONS 0 TO 20	STAFF QUALIFICATIONS & RESOURCES 0 TO 15	RELATED EXPERIENCE 0 TO 25	PROJECT APPROACH & UNDERSTANDING 0 TO 20	QUALITY & SCHEDULE CONTROL 0 TO 15	QUALITY OF SUBMITTAL & ADDITIONAL INFORMATION 0 TO 10	0 - 105

SIGNATURE OF RATER: _____ PRINT NAME: _____ DATE: _____

RFQ NO. 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

PART VIII: – ATTACHMENTS/FORMS

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

COVER PAGE

**SUBMIT ONE (1) HARD-COPY ORIGINAL
AND ONE (1) EXACT ELECTRONIC PDF COPY ON USB DRIVE TO:**

PURCHASING DEPARTMENT
ST. JOHNS COUNTY
500 SAN SEBASTIAN VIEW
ST. AUGUSTINE, FLORIDA 32084

FULL LEGAL NAME OF COMPANY: _____

MAILING ADDRESS: _____

CONTACT EMAIL ADDRESS: _____

DATE: _____

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

ATTACHMENT "A"

**CERTIFICATION FOR
RFQ NO: 19-16; DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

The Undersigned submits this Qualification Package to be considered as a Qualified Contractor for provision of Digital Orthophotography and LiDAR Deliverables.

A copy of the license(s) under which our firm is engaged in the business of contracting in the state of Florida is attached. This license was issued in accordance with provisions of Section 489.113, Florida Statutes, and is currently valid and in force.

It is further understood that qualification, if given, shall be valid for the purpose of submitting pricing for the above referenced contract, unless suspended or terminated by St. Johns County.

The Undersigned authorizes and requests any public official, engineer, architect, Surety Company, bank depository, material or equipment manufacture or distributor or any person, firm or corporation to furnish all information requested by St. Johns County, to verify statements given with this Qualification Package.

The Undersigned further authorizes the St. Johns County, FL designee to disclose, without any liability whatsoever, any and all information contained in the pre-qualification package.

The Undersigned has not been disqualified by any public agency in Florida except as indicated below. (If none, insert: "N/A")

(Full Legal Company Name)

This ____ day of _____, 20 ____

Attest:

APPROVED:

By: _____
Name and Title of Officer

By: _____
Name and Title of Authorized Officer

As Notarized

By: _____

(Corporate Seal)

REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES

ATTACHMENT "B"

AFFIDAVIT OF SOLVENCY

PERTAINING TO THE SOLVENCY OF {insert entity name}, being of lawful age and being duly sworn I, {insert affiant name}, as {insert position or title} (ex: CEO, officer, president, duly authorized representative, etc.) hereby certify under penalty of perjury that:

1. I have reviewed and am familiar with the financial status of above stated entity.
2. The above stated entity possesses adequate capital in relation to its business operations or any contemplated or undertaken transaction to timely pay its debts and liabilities (including, but not limited to, unliquidated liabilities, unmatured liabilities and contingent liabilities) as they become absolute and due.
3. The above stated entity has not, nor intends to, incur any debts and/or liabilities beyond its ability to timely pay such debts and/or liabilities as they become due.
4. I fully understand failure to make truthful disclosure of any fact or item of information contained herein may result in denial of the application, revocation of the Certificate of Public Necessity if granted and/or other action authorized by law.

The undersigned has executed this Affidavit of Solvency, in his/her capacity as a duly authorized representative of the above stated entity, and not individually, as of this ____ day of _____, 20____.

Signature of Affiant

STATE OF _____)

COUNTY OF _____)

Subscribed and sworn to before me this ____ day of _____, 20____, by _____ who personally appeared before me at the time of notarization, and who is personally known to me or who has produced _____ as identification.

Notary Public

My commission expires:

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

ATTACHMENT "C"

AFFIDAVIT

ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS
ST. AUGUSTINE, FLORIDA

At the time the proposal is submitted, the Respondent shall attach to his proposal a sworn statement.

The sworn statement shall be an affidavit in the following form, executed by an officer of the firm, association or corporation submitting the proposal and shall be sworn to before a person who is authorized by law to administer oaths.

STATE OF _____ COUNTY OF _____. Before me, the undersigned authority, personally appeared _____ who, being duly sworn, deposes and says he is _____ (Title) of _____ (Firm) the respondent submitting the attached proposal for the services covered by the RFQ documents for RFQ No: 19-16: Digital Orthophotography and LiDAR Deliverables.

The affiant further states that no more than one proposal for the above referenced project will be submitted from the individual, his firm or corporation under the same or different name and that such respondent has no financial interest in the firm of another respondent for the same work, that neither he, his firm, association nor corporation has either directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this firm's proposal on the above described project. Furthermore, neither the firm nor any of its officers are debarred from participating in public contract lettings in any other state.

(Proposer)

By _____

(Title)

STATE OF _____)

COUNTY OF _____)

Subscribed and sworn to before me this _____ day of _____, 20____, by _____ who personally appeared before me at the time of notarization, and who is personally known to me or who has produced _____ as identification.

Notary Public

My commission expires:

VENDOR ON ALL COUNTY PROJECTS MUST EXECUTE AND ATTACH THIS AFFIDAVIT TO EACH PROPOSAL.

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Company Name: _____

St. Johns County Board of County Commissioners

ATTACHMENT "D"

CONFLICT OF INTEREST DISCLOSURE FORM

Project (RFQ) Number/Description: RFQ No 19-16; Digital Orthophotography and LiDAR Deliverables

The term "conflict of interest" refers to situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting a consultant's/contractor's professional judgment in completing work for the benefit of St. Johns County ("County"). The bias such conflicts could conceivably impart may inappropriately affect the goals, processes, methods of analysis or outcomes desired by the County.

Consultants/Contractors are expected to safeguard their ability to make objective, fair, and impartial decisions when performing work for the benefit of the County. Consultants/Contractors, therefore must there avoid situations in which financial or other considerations may adversely affect, or have the appearance of adversely affecting the Consultant's/Contractor's professional judgement when completing work for the benefit of the County.

The mere appearance of a conflict may be as serious and potentially damaging as an actual distortion of goals, processes, and methods of analysis or outcomes. Reports of conflicts based upon appearances can undermine public trust in ways that may not be adequately restored even when the mitigating facts of a situation are brought to light. Apparent conflicts, therefore, should be disclosed and evaluated with the same vigor as actual conflicts.

It is expressly understood that failure to disclose conflicts of interest as described herein may result in immediate disqualification from evaluation or immediate termination from work for the County.

Please check the appropriate statement:

I hereby attest that the undersigned Respondent has no actual or potential conflict of interest due to any other clients, contracts, or property interests for completing work on the above referenced project.

The undersigned Respondent, by attachment to this form, submits information which may be a potential conflict of interest due to other clients, contracts or property interests for completing work on the above referenced project.

Legal Name of Respondent: _____

Authorized Representative(s):

 Signature Print Name/Title

Signature Print Name/Title

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

ST. JOHNS COUNTY BOARD OF COUNTY COMMISSIONERS

ATTACHMENT "E"

DRUG-FREE WORKPLACE FORM

The undersigned firm, in accordance with Florida Statute 287.087 hereby certifies that

_____ does:

Name of Firm

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the danger of drug abuse in the workplace, the business' policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the contractual services that are described in St. Johns County's request for qualifications to provide bond underwriter services a copy of the statement specified in paragraph 1.
4. In the statement specified in paragraph 1, notify the employees that, as a condition of working on the contractual services described in paragraph 3, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Florida Statute 893, as amended, or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction or plea.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.
6. Consistent with applicable provisions with State or Federal law, rule, or regulation, make a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs 1 through 5.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

Signature

Date

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

ATTACHMENT "3-A"

LICENSES, PERMITS, CERTIFICATIONS

In the space below, each Respondent shall list all current licenses and/or certifications held relative to the required services as provided herein.

Each Respondent shall attach a copy of each current license and/or certification listed below to his proposal as instructed.

License Name	License #	Issuing Agency	Expiration Date

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Full Legal Company Name: _____

ATTACHMENT "3-B"
CERTIFICATES OF INSURANCE
(Attach or insert copy here)

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

ATTACHMENT "3-C"

CLAIMS, LIENS, LITIGATION HISTORY
(Complete and Submit)

1. Within the past 7 years, has your organization filed suit or a formal claim against a project owner (as a prime or subcontractor) or been sued by or had a formal claim filed by an owner, subcontractor or supplier resulting from a construction dispute? Yes _____ No _____. If yes, please attach additional sheet(s) to include:

Description of every action Captions of the Litigation or Arbitration

Amount at issue: _____ Name (s) of the attorneys representing all parties:

Amount actually recovered, if any: _____

Name(s) of the project owner(s)/manager(s) to include address and phone number:

2. List all pending litigation and or arbitration.
3. List and explain all litigation and arbitration within the past seven (7) years - pending, resolved, dismissed, etc.
4. Within the past 7 years, please list all Liens, including Federal, State and Local, which have been filed against your Company. List in detail the type of Lien, date, amount and current status of each Lien.

5. Have you ever abandoned a job, been terminated or had a performance/surety bond called to complete a job?

Yes _____ No _____ If yes, please explain in detail:

6. For all claims filed against your company within the past five-(5) years, have all been resolved satisfactorily with final judgment in favor of your company within 90 days of the date the judgment became final? Yes _____ No _____
If no, please explain why? _____

7. List the status of all pending claims currently filed against your company:

Liquidated Damages

1. Has a project owner ever withheld retainage, issued liquidated damages or made a claim against any Performance and Payment Bonds? Yes _____ No _____ If yes, please explain in detail:

(Use additional or supplemental pages as needed)

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Full Legal Company Name: _____

ATTACHMENT "3-D"

COMPANY ORGANIZATION CHART

(Attach or insert copy here)

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Full Legal Company Name: _____

ATTACHMENT "3-E"

PROJECT TEAM ORGANIZATION CHART

(Attach or insert copy here)

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Full Legal Company Name: _____

**ATTACHMENT "3-F"
KEY PERSONNEL LIST**

In the space below, list all qualified personnel who are permanent employees of the company that may be utilized to perform the required scope of services. Attach brief but comprehensive resumes for each staff member listed below.

Employee Name	Employee Title	# Years Employed	Total # Yrs. Experience

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

ATTACHMENT "4-A"

PREVIOUS EXPERIENCE

(Attach or insert copy here of a written narrative for at least three (3) projects in the State of Florida completed (as the lead firm) within the past seven (7) years)

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

ATTACHMENT "4-B"

PROJECT REFERENCES

Each Respondent must submit a list of minimum of three (3) project references from individuals, firms or agencies that have contracted with the respondent as the lead firm in the past seven (7) years to perform services of similar size and scope as those described in this RFQ. The information required shall include: reference company name, date(s) of service, project information including name of project, and a contact person name, title, phone number and email address. References shall be checked by the Purchasing Department, for the number one ranked firm, to verify capability to perform the work, and responsibility to fulfill the requirements of the contract.

1. Reference Company Name: _____
Date(s) of Service: _____
Project Information: _____

Primary Reference Contact Name and Title: _____
Contact Phone Number: _____
Contact Email Address: _____

2. Reference Company Name: _____
Date(s) of Service: _____
Project Information: _____

Primary Reference Contact Name and Title: _____
Contact Phone Number: _____
Contact Email Address: _____

3. Reference Company Name: _____
Date(s) of Service: _____
Project Information: _____

Primary Reference Contact Name and Title: _____
Contact Phone Number: _____
Contact Email Address: _____

4. Reference Company Name: _____
Date(s) of Service: _____
Project Information: _____

Primary Reference Contact Name and Title: _____
Contact Phone Number: _____
Contact Email Address: _____

5. Reference Company Name: _____
Date(s) of Service: _____
Project Information: _____

Primary Reference Contact Name and Title: _____
Contact Phone Number: _____
Contact Email Address: _____

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Full Legal Company Name: _____

ATTACHMENT "5-A"

PROJECT APPROACH & UNDERSTANDING

(Attach or insert copy here)

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

Full Legal Company Name: _____

ATTACHMENT "6-A"

QUALITY & SCHEDULE CONTROL

(Attach or insert copy here of a written narrative of the respondent's project management methods to establish, monitor and track quality control methods and ability to meet schedules in a timely manner.

(Limit narrative to 3-4 pages)

PART IX: OPTIONAL CHECKLIST

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**


SECTION	RFQ PACKAGE COMPONENTS	CHECK BOX
Section 1	Cover Page	
Section 2	Cover Letter	
Section 3	Company & Staff Qualifications and Resources:	
	Attachment "3-A" – Licenses/Certifications	
	Attachment "3-B" – Certificates of Insurance	
	Attachment "3-C" – Claims, Liens, Litigation History	
	Attachment "3-D" – Company Organization Chart	
	Attachment "3-E" – Project Organization Chart	
	Attachment "3-F" – Key Personnel List	
Section 4	Related Experience:	
	Attachment "4-A" – Related Experience Narrative	
	Attachment "4-B" – Project References	
Section 5	Attachment "5-A" – Project Approach & Understanding Narrative	
Section 6	Attachment "6-A" – Quality & Schedule Control Narrative	
Section 7	Additional Information	
Section 8	Other Required Forms:	
	Attachment "A" –Qualifications Certification Notarized	
	Attachment "B" – Affidavit of Solvency	
	Attachment "C" – St. Johns County Affidavit	
	Attachment "D" – Conflict of Interest Disclosure Form	
	Attachment "E" – Drug-Free Workplace Form	
	Acknowledged (signed) Addenda	

PART X: SEALED RFQ MAILING LABEL

**REQUEST FOR QUALIFICATIONS (RFQ) NO: 19-16;
DIGITAL ORTHOPHOTOGRAPHY and LiDAR DELIVERABLES**

**Cut along the outer border and affix this label
to your sealed bid envelope to identify it as a
"Sealed RFQ"**

SEALED RFQ • DO NOT OPEN	
SEALED RFQ #:	RFQ 19-16
RFQ TITLE:	Digital Orthophotography and LiDAR Deliverables
DUE DATE/TIME:	Thursday, November 1, 2018 No Later Than 4:00 P.M.
SUBMITTED BY:	
	Company Name
	Company Address
	Company Address
DELIVER TO:	St. Johns County Purchasing ATTN: Diana M. Fye, AS, CPPB 500 San Sebastian View St St. Augustine FL 32084



END OF DOCUMENT



St. Johns County Board of County Commissioners

Purchasing Division

October 8, 2018

ADDENDUM #1

To: Prospective Proposers
From: St. Johns County Purchasing Department
Subject: RFQ No. 19-16; Digital Orthophotography and LiDAR Deliverables

This Addendum #1 is issued for further respondent's information and is hereby incorporated into the RFQ documents. Each respondent will ascertain before submitting a proposal that he/she has received all Addenda, and return an original and two (2) copies of this signed Addendum with the submitted RFQ proposal to the St. Johns County Purchasing Department, Diana M. Fye, AS, CPPB; Procurement Coordinator, 500 San Sebastian View; St. Augustine, FL 32084.

Questions:

- 1. We would like to request digital boundary files – shp files for the project area. Are they available for download or can they be sent via e-mail?

Answer: The requested files are available for download at the following locations:

The County Boundary shapefile is available for download from the St. Johns County GIS Data Depot site at the following link: <http://www.sjcfl.us/GIS/DataDepot.aspx>

The Aerial Index shapefile, which includes the total number of tiles in this project, has been uploaded to the St. Johns County GIS FTP Site and is available for download from the following link: <ftp://ftpanon.sjcfl.us/gis/Users/Mike/DOP/>

THE RFQ DUE DATE REMAINS NOVEMBER 1, 2018 AT 4:00 P.M.

Acknowledgment

Sincerely,

Signature and Date

Diana M. Fye, AS, CPPB
Procurement Coordinator

Printed Name/Title

Company Name (Print)

END OF ADDENDUM NO. 1