18. Rivers and Harbors Act (33 U.S.C. § 407)

19. Marine Protection, Research and Sanctuaries Act (Pub. L. 92-532, as amended), National Marine Sanctuaries Act (16 U.S.C. § 1431 et seq.), and Executive Order 13089 ("Coral Reef Protection")

20. Farmland Protection Policy Act (7 U.S.C. 4201 et seq.)

21. Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.)

22. Pursuant to 2 CFR §200.322, CONSULTANT must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

[Remainder of the page intentionally blank.]

ATTACHMENT "H"
EXPERIENCE OF RESPONDENT

The following questionnaire shall be answered by the bidder for use in evaluating the bid to determine the lowest, responsive, and responsible bidder, meeting the required specifications.

1. FIRM NAME: _____

Address: _____

City/State/Zip: _____

Phone: _____ Email: _____

Name of primary contact responsible for work performance: _____

Phone:_____ Cell Phone: _____

Email: _____

2. INSURANCE:

Surety Company: _____

Agent Company: _____

Agent Contact: _____

Total Bonding Capacity: $_____ Value of Work Presently Bonded: $_____

3. EXPERIENCE:

Years in business: _____

Years in business under this name: _____

Years performing this type of work: _____

Value of work now under contract: _____

Value of work in place last year: _____

Percentage (%) of work usually self-performed: _____

Name of subvendors you may use: _____

Has your firm: Failed to complete a contract: ___ Yes ___ No

Been involved in bankruptcy or reorganization: ___ Yes ___ No

Pending judgment claims or suits against firm: ___ Yes ___ No

4. PERSONNEL

How many employees does your company employ:

Management	_Full time	___Part time
Site/Crew Supervisors	__Full time	__Part time
Workers/Laborers	____Full time	____Part time
Clerical	____Full time	____Part time
Other	____Full time	____Part time

5. WORK EXPERIENCE:

List your three (3) most significant commercial accounts where the contract was similar in scope and size to this bid.

Reference #1:

Company/Agency Name: _____

Address: _____

Contract Person: _____

Phone: _____ Email: _____

Project Description: _____

Contract $ Amount: _____

Date Completed: _____

Reference #2:

Company/Agency Name: _____

Address: _____

Contract Person: _____

Phone: _____ Email: _____

Project Description: _____

Contract $ Amount: _____

Date Completed: _____

Reference #3:

Company/Agency Name: _____

Address: _____

Contract Person: _____

Phone: _____ Email: _____

Project Description: _____

Contract $ Amount: _____

Date Completed: _____

REMINDER:
THIS FORM IS TO BE INCLUDED WITH BID. FAILURE TO SUBMIT ALONG WITH BID MAY BE CAUSE FOR DISQUALIFICATION.

ATTACHMENT "I"

CONTRACT FOR ********** SERVICES

THIS CONTRACT entered into on _____, by and between the **BOARD OF COUNTY COMMISSIONERS OF NASSAU COUNTY, FLORIDA, a political subdivision of the State of Florida,** hereinafter referred to as the "County", and **_____,** located at _____, hereinafter referred to as the "Vendor".

WHEREAS, the County received _____ for concrete grinding services, on _____ at _____; and

WHEREAS, the Director of Public Works has determined that the Vendor was the lowest, most responsive and responsible bidder. A copy of the Vendor's Response Price Sheet is attached hereto as Attachment "A" and made a part hereof; and

NOW, THEREFORE, in consideration of the terms and conditions herein set forth, the County and the Vendor agree as follows:

SECTION 1. Description of Services and/or Materials to be Provided

The County does hereby retain the Vendor to provide the services and/or materials further described in the *Technical Specifications/Scope of Work*, a copy of which is attached hereto and incorporated herein as Attachment "B". This Contract standing alone does not authorize the performance of any work or require the County to place any orders for work. The Vendor shall commence the work in accordance with the issuance of a written Notice to Proceed for services and/or materials issued by the County.

SECTION 2. Receiving/Payment/Invoicing

No payment will be made for services and/or materials without proper County authorization and approval. The County shall pay the Vendor within forty-five (45) calendar days of receipt and acceptance of invoice by the Director of Public Works, pursuant to and in accordance with the promulgations set forth by the State of Florida's Prompt Payment Act. (Florida Statutes Section 218.70). The Vendor shall also submit a copy of all invoices submitted to Public Works for payment to invoices@nassaucountyfl.com. Payment shall not be made until services and/or materials have been received, inspected and accepted by the County in the quantity and/or quality ordered. Payment will be accomplished by submission of an invoice, with the contract

number referenced thereon. Payment in advance of receipt of services and/or materials by the County cannot be made.

The invoice submitted shall be in sufficient detail as to item, quantity and price in order for the County to verify compliance with the awarded bid.

SECTION 3. Acceptance of Services and/or Materials

Receipt of services and/or materials shall not constitute acceptance. Final acceptance and authorization of payment shall be given only after a thorough inspection indicates that the services and/or materials meet bid specifications and conditions. Should the quantity and/or quality differ in any respect from specifications, payment will be withheld until such time as the Vendor takes necessary corrective action. If the proposed corrective action is not acceptable to the County, the County Manager's Office may authorize the recipient to refuse final acceptance of the quantity and/or quality received. Should a representative of the County agree to accept the services and/or materials on condition that the Vendor will correct their performance within a stipulated time period, then payment will be withheld until said corrections are made.

SECTION 4. Firm Prices

Prices for services and/or materials covered in the specifications of this Contract shall remain firm for the period of this Contract pursuant to pricing as reflected in Attachment "A"; net delivered to the ordering agency, **F.O.B. DESTINATION**. No additional fees or charges shall be accepted.

SECTION 5. Fund Availability

This Contract is deemed effective only to the extent that appropriations are available. Pursuant to Florida Statutes, all appropriations lapse at the end of the Fiscal Year. Multi-year awards may be adequately funded but the County reserves the right not to appropriate for an ongoing procurement if it is deemed in its best interest.

SECTION 6. Expenses

Vendor shall be responsible for all expenses incurred while performing the services under this Contract. This includes, without limitation, license fees, memberships and dues; automobile and other travel expenses; meals and entertainment; insurance premiums; and all salary, expenses and other compensation paid to Vendor's agents, if any, hired by Vendor to complete the work under this Contract.

SECTION 7. Taxes and Liens

The Vendor recognizes that the County, by virtue of its sovereignty, is not required to pay any taxes on the services or goods purchased under the terms of this Contract. As such, the Vendor will refrain from including taxes in any billing. The Vendor is placed on notice that this exemption generally does not apply to nongovernmental entities, contractors, or subcontractors. Any questions regarding this tax exemption should be addressed to the County Manager.

The Vendor acknowledges that property being improved that is titled to the County, is not subject to lien of any kind for any reason. The Vendor shall include notice of such exemptions in any subcontracts and purchase orders issued under this Contract.

SECTION 8. Laws Governing this Contract

This Contract shall be consistent with, and be governed by, the Ordinances of Nassau County, the whole laws and rules of the State of Florida, both procedural and substantive, and applicable federal statutes, rules and regulations. Any and all litigation arising under this Contract shall be brought in Nassau County, Florida. Any mediation, pursuant to litigation, shall occur in Nassau County, Florida.

SECTION 9. Changes

The County reserves the right to order, in writing, changes in the work within the scope of the Contract, such as change in quantity or delivery schedule. The Vendor has the right to request an equitable price adjustment in cases where changes to the Contract under the authority of this clause result in increased costs to the Vendor.

SECTION 10. Modifications

In addition to modifications made under the changes clause, this Contract may be modified within the scope of the Contract upon the written and mutual consent of both parties, and approval by appropriate legal authority in the County.

SECTION 11. Assignment & Subcontracting

In order to assign its Contract with the County, or to subcontract any of the work requirements to be performed, the Vendor must ensure, and provide assurances to the County upon request, that any subcontractor selected for work under this Contract has the necessary qualifications and abilities to perform in accordance with the terms and conditions of this Contract. The Vendor must provide the County with the names of any subcontractor considered for work

under this Contract; the County reserves the right to reject any subcontractor whose qualifications or performance, in the County's judgement, are insufficient. The Vendors agrees to be responsible for all work performed and all expenses incurred with the project. Any subcontract arrangements must be evidenced by a written document available to the County upon request. The Vendor further agrees that the County shall not be liable to any subcontractor for any expenses or liabilities incurred under the subcontract. The Vendor, at its expense, will defend the County against such claims.

The Vendor agrees to make payments to any of its subcontractors within seven (7) working days after receipt of full or partial payments from the County in accordance with F.S. 287.0585, unless otherwise stated in the contract between the Vendor and subcontractor. The Vendor's failure to pay its subcontractor(s) within seven (7) working days will result in a penalty charged against the Vendor and paid to the subcontractor in the amount of one-half of one percent (0.50%) of the amount due per day from the expiration of the period allowed herein for payment. Such penalty shall be in addition to the actual payments owed and shall not exceed fifteen percent (15%) of the outstanding balance due.

SECTION 12. Severability

If any section, subsection, sentence, clause, phrase, or portion of this Contract is, for any reason, held invalid, unconstitutional, or unenforceable by any Court of Competent Jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

SECTION 13. Termination for Default, Fraud or Willful Misconduct

The performance of the Contract may be terminated by the County in accordance with this clause, in whole or in part, in writing, whenever the County shall determine that the Vendor has failed to meet the requirements as outlined in this Contract. Upon receipt of the written notice of termination, the Vendor shall immediately render to the County all property belonging to the County, including but not limited to, equipment, books, records, etc.

SECTION 14. Termination for Convenience

The County reserves the right to terminate the Contract in whole or part by giving the Vendor written notice at least thirty (30) days prior to the effective date of the termination. Upon receipt of written notice of termination from the County, the Vendor shall only provide those

services and/or materials specifically approved or directed by the County. All other rights and duties of the parties under the Contract shall continue during such notice period, and the County shall continue to be responsible to the Vendor for the payment of any obligations to the extent such responsibility has not been excused by breach or default of the Vendor. The Vendor shall promptly contact the County to make arrangements to render to the County all property belonging to the County, including but not limited to, equipment, books, records, etc.

SECTION 15. Force Majeure

Neither party of this Contract shall be liable to the other for any cost or damages if the failure to perform the Contract arises out of causes beyond the control and without the fault or negligence of the parties. Such causes may include, but are not restricted to, acts of nature, fires, quarantine restriction, strikes and freight embargoes. In all cases, the failure to perform must be totally beyond the control and without any fault or negligence of the party.

In the event of delay from the foregoing causes, the party shall take all reasonable measures to mitigate any and all resulting delay or disruption in the party's performance obligation under this Contract. If the delay is excusable under this paragraph, the delay will not result in any additional charge or cost under the Contract to either party. In the case of any delay the Vendor believes is excusable under this paragraph, the Vendor shall notify the County in writing of the delay or potential delay and describe the cause of the delay either: (1) within ten (10) calendar days after the cause that creates or will create the delay first arose, if the Vendor could reasonably foresee that a delay could occur as a result; or (2) within five (5) calendar days after the date the Vendor first had reason to believe that a delay could result, if the delay is not reasonably foreseeable. THE FOREGOING SHALL CONSTITUTE THE VENDOR'S SOLE REMEDY OR EXCUSE WITH RESPECT TO DELAY. Providing notice in strict accordance with this paragraph is a condition precedent to such remedy. The County, in its sole discretion, will determine if the delay is excusable under this paragraph and will notify the Vendor of its decision in writing. No claim for damages, other than for an extension of time, shall be asserted against the County. The Vendor shall not be entitled to an increase in the Contract price or payment of any kind from the County for direct, indirect, consequential, impact, or other costs, expenses or damages, including but not limited to costs of acceleration or inefficiency arising because of delay, disruption, interference, or hindrance from any cause whatsoever. If performance is suspended or

delayed, in whole or in part, due to any of the causes described in this paragraph, after the causes have ceased to exist, the Vendor shall perform at no increased cost, unless the County determines, in its sole discretion, that the delay will significantly impair the value of the Contract to the County, in which case, the County may do any or all of the following: (1) accept allocated performance or deliveries from the Vendor, provided that the Vendor grants preferential treatment to the County with respect to products or services subjected to allocation; (2) purchase from other sources (with out recourse to and by the Vendor for the related costs and expenses) to replace all or part of the products or services that are the subject of the delay, which purchases may be deducted from the Contract quantity; or (3) terminate the Contract in whole or in part.

SECTION 16. Access and Audits

The Vendor shall maintain adequate records to justify all charges, expenses, and costs incurred in providing the services and materials for at least three (3) years after completion of this Contract. The County and the Clerk of Courts 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 or the Clerk's cost, upon five (5) days' written notice.

SECTION 17. Vendor Responsibilities

The Vendor will provide the services and materials agreed upon in a timely and professional manner in accordance with specifications referenced herein and in accordance with the *Technical Specifications/Scope of Work*.

SECTION 18. Public Emergencies

The Vendor shall agree before, during, and after a public emergency, disaster, hurricane, tornado, flood, or other acts of nature that the County shall require a "First Priority" for services and materials. It is vital and imperative that the majority of citizens are protected from any emergency situation that threatens public health and safety, as determined by the County. The Vendor agrees to sell all materials to and perform all services for the County or governmental entities on a "First Priority" basis. The County expects to pay a fair and reasonable price for all services and materials rendered or contracted in the event of a disaster, emergency, hurricane, tornado or other acts of nature.

SECTION 19. Period of Contract/Option to Extend or Renew

The performance period of this Contract shall begin upon full execution by the last party to execute this Contract and terminate on September 30, 2022. The performance period of this

Contract may be extended in one (1) year increments, unless otherwise agreed to by the parties, for up to two (2) additional years maximum upon mutual written agreement between the Vendor and the County with no change in terms or conditions. Any extensions shall be signed and approved by both parties. Any Contract or amendment to the Contract shall be subject to fund availability and mutual written agreement between the County and the Vendor.

In the event that the Contract is continued beyond the term provided, by mutual consent, the Contract shall be carried out on a month-to-month basis and shall not constitute an implied renewal of the Contract. Said month-to-month extension shall be upon the same terms of the Contract and at the compensation and payment provided herein.

SECTION 20. Probationary Period

The first ninety (90) days of this Contract are to be considered a "probationary" period. At the County's election, this Contract may be terminated, based on the performance of the Vendor, and a new award be granted without another formal bid.

SECTION 21. Independent Vendor Status

Vendor and County agree that: (a) Vendor has the right to perform services for others during the term of this Contract; (b) Vendor has the sole right to control and direct the means, manner and method by which the services required by this Contract will be performed; (c) Vendor has the right to perform the services required by this Contract at any location or time; (d) Vendor has the right to hire assistants as subcontractors, or to use employees to provide the services required by this Contract.

SECTION 22. Indemnification and Insurance

Vendor shall indemnify and hold harmless County and its agents and employees from liabilities, damages, losses and costs, including but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of Vendor and any persons employed or utilized by Vendor, in the performance of the Contract.

Vendor shall maintain such commercial (occurrence form) or comprehensive general liability, workers compensation, professional liability, and other insurance as is detailed in Exhibit "1" and as is appropriate for the goods or services being performed hereunder by Vendor, its employees or agents.

SECTION 23. Dispute Resolution

The County may utilize this section, at their discretion, as to disputes regarding Contract interpretation. The County may send a written communication to the Vendor by email, overnight mail, UPS, FedEx, or certified mail. The written notification shall set forth the County's interpretation of the Contract. A response shall be provided in the same manner prior to the initial meeting with the County Manager. This initial meeting shall take place no more than twenty (20) days from the written notification of the dispute addressed to the Vendor. The Vendor should have a representative, at the meeting that can render a decision on behalf of the Vendor.

If there is no satisfactory resolution as to the interpretation of the contract, the dispute may be submitted to mediation in accordance with mediation rules as established by the Florida Supreme Court. Mediators shall be chosen by the County and the cost of mediation shall be borne by the Vendor. The Vendor shall not stop work during the pendency of mediation or dispute resolution.

SECTION 24. E-Verify System

The Vendor must comply with F.S. 448.095 and use the United States Department of Homeland Security's E-Verify system ("E-Verify") to verify the employment eligibility of all persons hired by the Vendor during the term of this Contract to work in Florida. Additionally, if the Vendor uses subcontractors to perform any portion of the Work (under this Contract), the Vendor must include a requirement in the subcontractor's contract that the subcontractor use E-Verify to verify the employment eligibility of all persons hired by subcontractor to perform any such portion of the work. Answers to questions regarding E-Verify as well as instructions on enrollment may be found at the E-Verify website: www.uscis.gov/e-verify.

The Vendor further agrees to maintain records of its participation and compliance with the provisions of the E-Verify program, including participation by its subcontractors as provided above, and to make such records available to the County or other authorized entity consistent with the terms of the Vendor's enrollment in the program. This includes maintaining a copy of proof of the Vendor's and subcontractors' enrollment in the E-Verify program. If the Vendor enters into a contract with a subcontractor, the subcontractor must provide the Vendor with an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The Vendor shall maintain a copy of such affidavit for the duration of the Contract.

Compliance with the terms of the E-Verify program provision is made an express condition of this Contract and the County may treat a failure to comply as a material breach of the Contract. If the County terminates the Contract pursuant to F.S. 448.095(2)(c), the Vendor may not be awarded a public contract for at least one (1) year after the date on which the contract was terminated and the Vendor is liable for any additional costs incurred by the County as a result of the termination of this Contract.

SECTION 25. Public Records

The County is a public agency subject to Chapter 119, Florida Statutes**. IF THE VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (904) 530-6100, RECORDS@NASSAUCOUNTYFL.COM, 96135 NASSAU PLACE, SUITE 6, YULEE, FLORIDA 32097**. Under this agreement, to the extent that the Vendor is providing services to the County, and pursuant to section 119.0701, Florida Statutes, the Vendor shall:

a. Keep and maintain public records required by the public agency to perform the service.

b. Upon request from the public agency's custodian of public records, provide the public agency 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 provided in this chapter or as otherwise provided by law.

c. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Contract term and following completion of the Contract if the Vendor does not transfer the records to the public agency.

d. Upon completion of the Contract, transfer, at no cost, to the public agency all public records in possession of the Vendor or keep and maintain public records required by the public agency to perform the service. If the Vendor transfers all public records to the public agency upon completion of the Contract, the Vendor shall destroy any duplicate public records that are exempt

or confidential and exempt from public records disclosure requirements. If the Vendor keeps and maintains public records upon completion of the Contract, the Vendor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the public agency, upon request from the public agency's custodian of public records, in a format that is compatible with the information technology systems of the public agency.

SECTION 26. Request for Records; Noncompliance

A request to inspect or copy public records relating to a public agency's contract for materials must be made directly to the public agency. If the public agency does not possess the requested records, the public agency shall immediately notify the Vendor of the request, and the Vendor must provide the records to the public agency or allow the records to be inspected or copied within a reasonable time.

If a Vendor does not comply with the public agency's request for records, the public agency shall enforce the Contract provisions in accordance with the Contract.

A Vendor who fails to provide the public records to the public agency within a reasonable time may be subject to penalties under §119.10, Florida Statutes.

SECTION 27. Civil Action

If a civil action is filed against the Vendor to compel production of public records relating to the Contract, the Court shall assess and award against the Vendor the reasonable costs of enforcement, including reasonable attorney fees if:

(a) The Court determines that the Vendor unlawfully refused to comply with the public records request within a reasonable time; and

(b) At least eight (8) business days before filing the action, the plaintiff provided written notice of the public records request, including a statement that the Vendor has not complied with the request, the public agency and to the Vendor.

A notice complies with subparagraph (b), if it is sent to the public agency's custodian of public records and to the Vendor at the Vendor's address listed on its Contract with the public agency or to the Vendor's registered agent. Such notices must be sent by common carrier delivery service or by registered, Global Express Guaranteed, or certified mail, with postage or shipping paid by the sender and with evidence of delivery, which may be in an electronic format.

A Vendor who complies with a public records request within eight (8) business days after the notice is sent is not liable for the reasonable costs of enforcement.

SECTION 28. Disclosure of Litigation, Investigations, Arbitration or Administrative Decisions

The Vendor, during the term of this Contract, or any extension, has a continual duty to properly disclose to the County Attorney, in writing, upon occurrence, all civil or criminal litigation, arbitration, mediation, or administrative proceeding involving the Vendor. If the existence of the proceeding causes the County concerns that the Vendor's ability or willingness to perform this contract is jeopardized, the Vendor may be required to provide the County with reasonable written assurance to demonstrate the Vendor can perform the terms and conditions of the Contract.

SECTION 29. Entire Agreement

The written terms and provisions of this Contract shall supersede all prior verbal statements of any official or other representative of the County. Such statements shall not be effective or be construed as entering into, or forming a part of, or altering in any manner whatsoever, this Contract or Contract Documents.

IN WITNESS WHEREOF, the parties have executed this Contract which shall be deemed an original on this day and year first above written.

BOARD OF COUNTY COMMISSIONERS
NASSAU COUNTY, FLORIDA

_____
By: _____
Its: _____
Date: _____

Attest as to authenticity of the
Chair's signature:

_____
JOHN A. CRAWFORD
Its: Ex-Officio Clerk

Approved as to form and legality by the
Nassau County Attorney

_____
DENISE C. MAY

UNITED BROTHERS DEVELOPMENT CORPORATION

_____

By: _____

Its: _____

Date: _____

Exhibit "D"
Vendors Response

Nassau County
CONTINUING CONTRACT FOR PROFESSIONAL SURVEYING AND MAPPING SERVICES

RFQ No. NC23-011 | February 1, 2023

ETM
SURVEYING & MAPPING, INC.

Tab 1 - Cover Letter

ETM
VISION ▪ EXPERIENCE ▪ RESULTS

www.etminc.com
tel 904-642-8550 • fax 904-642-4165
14775 Old St. Augustine Road • Jacksonville, Florida 32258

February 1, 2023

Nassau County Board of County Commissioners
c/o John A. Crawford, Ex-Officio Clerk
Robert M. Foster Justice Center
76347 Veterans Way, Suite 456
Yulee, Florida 32097

Re: Continuing Contract for Professional Architectural and Engineering Services; RFQ No. NC23-009-RFQ

Members of the Selection Committee,

ETM Surveying & Mapping, Inc. (ETM Survey), is pleased to submit our qualifications in response to Nassau County's Continuing Contract for Professional Surveying and Mapping Services.

Our company has been providing high-quality surveying and mapping services to clients in Northeast Florida for nearly a century. During this period, we have built and sustained a reputation for integrity, service, and adding value to our clients' projects by combining the innovative use of technology, our geographic knowledge, our archives, and the skills of our licensed professionals.

ETM Survey understands that Nassau County is seeking a qualified Consultant with a current State of Florida Surveyor and Mapper License to provide professional surveying and mapping services for miscellaneous projects throughout the County. Project tasks include but may not be limited to preparation of land boundary surveys, topographic surveys, maintenance maps, right-of-way location surveys, legal descriptions, ground truthing and control for aerial surveys, cross sections, for drainage basin analysis, design surveys, construction layout, subsurface utility location, GIS grade, and 3D mapping. Due to our team's combined experience, knowledge, and resources, we are confident you will find that we are uniquely qualified and well-suited for this contract.

To support this contract, we have a staff of over 80 qualified employees that are experienced in performing the various surveying and mapping services anticipated, as well as the resources needed to respond quickly, efficiently, and effectively to all requests made by the County. In addition, we understand that the land surveying aspect of a county project is just a part of a much larger undertaking involving many professionals at all levels and will ensure that careful consideration is applied to all project schedules and budgets, and that all critical path survey data is delivered on time.

Our staff and subconsultants are experienced, responsive, dependable, and knowledgeable - all essential characteristics for successfully completing projects and developing professional partnerships. We understand that we represent the interests of Nassau County while not only providing high-quality professional services but also maintaining respect for the community, businesses, and property owners that we will encounter.

We are located at 14775 Old St. Augustine Road, Jacksonville, Florida 32258, where Scott A. Graham, PSM, will be the Principal-in-Charge and the authorized signatory to make representations on behalf of ETM Survey. Our Project Manager will be Cliff Colyer III, PSM and the single point-of-contact for this contract.

We are excited to have the opportunity to submit our qualifications and look forward to serving Nassau County as an extension of their staff and an integral partner in their growth.

Sincerely,
ETM SURVEYING & MAPPING, INC.

Scott A. Graham, PSM
Vice President
14775 Old St. Augustine Road
Jacksonville, Florida 32258
(904) 642-8550
GrahamS@etmsurvey.com

Project Manager/Primary Point of Contact
Cliff Colyer III, PSM
14775 Old St. Augustine Road
Jacksonville, Florida 32258
(904) 642-8550
ColyerC@etmsurvey.com

Tab 2 - Table of Contents

SECTION 2 - TABLE OF CONTENTS

Tab 3 - Team Organization, Experience and Qualifications

SECTION 3 - TEAM ORGANIZATION, EXPERIENCE AND QUALIFICATIONS

A. ORGANIZATION, STRUCTURE AND PHILOSOPHY

Organization

ETM Surveying & Mapping, Inc. (ETM Survey) is a licensed land surveying and mapping company that provides comprehensive services to both public and private sector clients throughout Northeast Florida. Our corporate foundation was laid nearly a century ago with our founding company, Robert M. Angas Associates, Inc. in 1924. Today, through acquisition and merger, ETM Survey is a wholly owned affiliate of England-Thims & Miller, Inc. (ETM), a multi-disciplined engineering consultant services provider. The merger of these two companies resulted in a single company with extensive historical resources, current progressive technology, and technical expertise from an experienced and diverse staff. As a result, ETM Survey has emerged as a versatile and innovative land surveying company that offers a wide spectrum of services and innovative solutions to our clients' many challenges.

ETM Survey established and maintained our reputation for being responsive to our client's needs through our involvement with many on-call consultant contracts. Our experience has provided us with a unique understanding of Nassau County's needs and will prove to be advantageous to the County for the proposed scope of services. Our vast resources, equipment, and knowledge will ensure that schedules and quality expectations are met. Cliff Colyer III, PSM, is eminently qualified to serve as your Surveyor. He has worked on a variety of surveys for park sites; design routes for potential utility improvements; designs for roadway, drainage, and intersection improvements; right-of-way closures; right-of-way mapping; residential and roadway platting; construction layout; and various other miscellaneous surveys. As Project Manager, Mr. Colyer will apply his hands-on leadership style, strong track record for attention to detail, and his understanding of County challenges. Combined with ETM Survey's Northeast Florida experience, you can be confident that our team will reliably deliver all tasks assigned by Nassau County.

Structure

Founded in 1924, ETM Survey is a privately owned Florida corporation headquartered in Jacksonville. The ownership of the firm is dispersed among six shareholders.

The Executive Leadership Team is comprised of ETM Survey's Chief Executive Officer and President, Executive Vice President, Chief Administrative Officer, and two Vice Presidents. Each Executive Leadership Team member is responsible for managing a team of professionals and overseeing department resources, project schedules, and budgets.

Philosophy

ETM Survey's philosophy is to serve the needs of our clients by delivering a superior product with excellent service. With a dedicated staff that has impressive technical strength and depth, you will find that ETM Survey provides the highest level of availability, technical excellence, and responsiveness. Being in business for nearly a century has afforded us with the opportunity to establish valuable relationships with permitting agencies and utility companies that will be key stakeholders affecting schedules for this contract.

B. FIRM'S YEARS OF EXPERIENCE AND APPLICABLE PROJECT EXPERIENCE

ETM Survey's team members possess decades of combined experience, practice a hands-on approach, and uphold the company's commitment to provide innovative solutions while providing the highest level of technical service. The depth of our firm's professional services allows us to efficiently complete many task work orders with our in-house staff.

Our firm, which has been in business for almost a century, routinely provide the following services:

- Boundary Surveys
- Topographic Surveys (including direct measurement or remote sensing methods)
- As-built Surveys
- Construction Layout Surveys
- Control Surveys
- Hydrographic/Bathymetric Surveys
- Quantity Surveys
- Roadway Maintenance Maps (Specific Purpose Surveys)
- Photogrammetic Surveys (including orthorectified imagery)

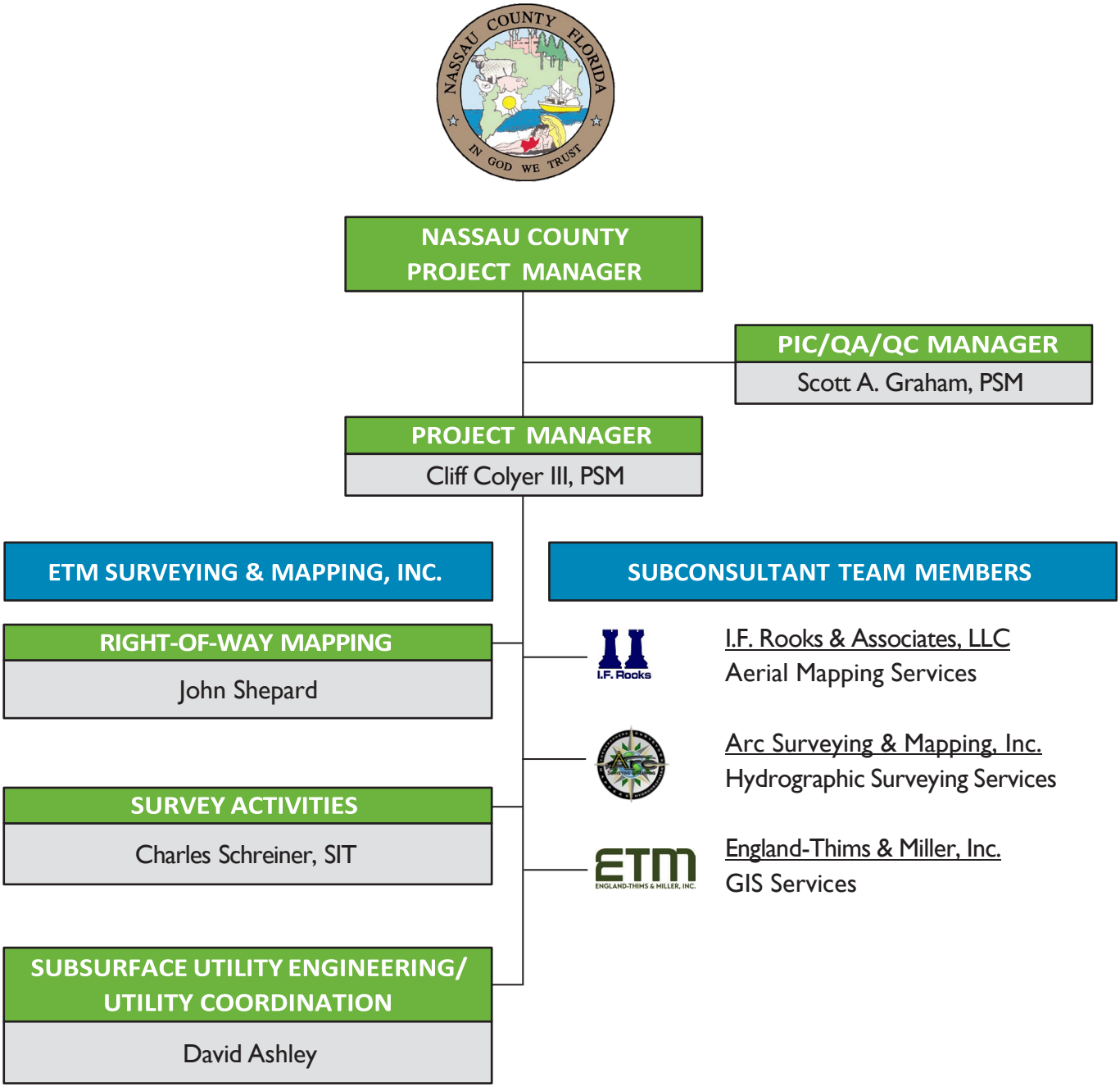
Repeat Business

ETM Survey has managed many multi-year professional services contracts with Nassau County, the City of Jacksonville, JEA, St. Johns County, and the FDOT. Additionally, ETM Survey has been involved with many large tract boundary and topographic surveys in Nassau, Flagler, St. Johns, Duval, and Putnam counties.

There is no substitute for an effective start to a project and the application of proven skill and experience throughout its life cycle. The ETM Survey team is experienced in monitoring compliance for plans and specifications as previously mentioned in our QA/QC Plan. This exemplifies ETM Survey's commitment to providing the highest quality of professional services that consistently exceeds the expectations of their clients.

C. PROJECT TEAM

Our experienced office staff and field technicians have the knowledge, resources, and qualifications to provide outstanding high-quality professional surveying and mapping services while maintaining their high standards and reputation for excellence. With almost a century of experience, ETM Survey will provide Nassau County with innovative solutions and local, available staff for this contract. On the following pages, you will find qualifications and abilities of the ETM Survey team.



PROJECT TEAM

Cliff Colyer III, PSM - Project Manager

Contact Information: ColyerC@etmsurvey.com | (904) 376-6355
Education: BS, Geomatics, Troy University, 2008
Professional License: Florida Professional Surveyor and Mapper, L.S. No. 6963
Relevant Project Experience:

- SR 200, FDOT District 2, Nassau County, Florida
- SR 9A, FDOT District 2, Duval County, Florida
- SR 200/US 301 (Baldwin Bypass), FDOT District 2, Duval County, Florida

Mr. Colyer is a Professional Land Surveyor with 22 years of field and office experience on a wide variety of public and private sector projects including numerous FDOT right-of-way corridors and large commercial and residential land developments. He is intimately familiar with FDOT database management and procedures, private sector mapping management and procedures, elevation certificates, property title report reviews, AutoCAD Civil 3D, MicroStation SS10/Power GEOPAK and MicroStation Open Roads Designer, and CAiCE. **As Project Manager, he will oversee the project schedule, budget, key personnel, subconsultants, and communications with the County, direct surveying efforts, perform any administrative activities as required, and serve as the single Point-of-Contact for Nassau County.**

Scott Graham, PSM - Principal-in-Charge | QA/QC Manager

Contact Information: GrahamS@etmsurvey.com | (904) 265-3111
Education: Denver Institute of Technology, Brinker School of Surveying, 1986
Professional License: Florida Professional Surveyor and Mapper, L.S. No. 5546
Relevant Project Experience:

- SR 200, FDOT District 2, Nassau County, Florida
- SR 115, FDOT District 2, Duval County, Florida
- Old Middleburg Road, City of Jacksonville, Duval County, Florida

Mr. Graham has 37 years of experience and has managed FDOT transportation survey projects. He was the Chief Surveyor and Project Managerfor a variety of relevant projects, such a FDOT District 2's SR 200. Mr. Graham specializes in right-of-way mapping, boundary surveying, sectional retracement, and topographic and route surveys for transportation facilities. **As QA/QC Manager, he will assign disciplined reviewers to provide QC for all work and confirm that QA/QC reviews are conducted on all documents prior to submittal.**

John Shepard - Right-of-Way Mapping

Contact Information: ShepardJ@etmsurvey.com | (904) 376-6324
Education: AS, Drafting & Design Technology, Daytona State College
Certifications: Certified Survey Technician Level 2 Office
Relevant Project Experience:

- Old Middleburg Road, City of Jacksonville, Duval County, Florida

Mr. Shepard has over 25 years in the surveying and mapping industry including, right-of-way, topographic, and Geographic Information Systems. He is proficient in MicroStation Power GeoPAK, AutoCAD, and ESRI ArcGIS. **Mr. Shepard will provide right-of-way mapping services for this contract.**

Charles Schreiner, SIT - Survey Activities

Contact Information: SchreinerC@etmsurvey.com | (407) 921-445
Education: BS, Geomatics, University of Florida, 2020
Professional License: Florida Professional Surveyor in Training
Certifications: sUAS Certificate, Small Unmanned Aerial Systems Part 107 Certification
Relevant Project Experience:

- SR 200, FDOT District 2, Nassau County, Florida
- Traffic Signal Engineering - TWO #1, City of Jacksonville, Duval County, Florida
- Traffic Signal Engineering - TWO #3, City of Jacksonville, Duval County, Florida
- CR 2209, St. Johns County, Florida

Mr. Schreiner has six years of experience in surveying and mapping. Since 2017, he has been involved in the management of multiple major survey projects throughout the Eastern United States. He specializes in Unmanned Aerial Systems (UAS), Terrestrial Laser Scanning, and conventional surveying. Mr. Schreiner is responsible for day-to-day field crew operations and assists in the coordination of all UAS projects. He is proficient in in Revit, Civil3D, AutoCAD, Trimble Business Center, Trimble Access, Trimble Field Link, POSPac, Leica Cyclone, Leica Captivate, Leica Infinity, Reigl, and Microstation. **Mr. Schreiner will perform a variety of survey activities for this contract.**

David Ashley - Subsurface Utility Engineering, Utility Coordination

Contact Information: AshleyD@etmsurvey.com | (904) 376-6298
Education: BA, Business Management, Jacksonville University, 2007
Relevant Project Experience:

- Galvanized Pipe Replacement, JEA, Jacksonville, Florida
- Septic Tank Phase Out Program (Beverly Hills), JEA, Jacksonville, Florida

Mr. Ashley has 37 years of experience in the utility industry. His experience includes electric, water and reuse distribution, and wastewater collection system construction, maintenance, and design. He is responsible for estimating, planning, scheduling, and QA/QC of SUE services, and management of utility coordination, in addition to serving as a technical advisor to ETM's engineering teams. He has direct involvement with land clearing, earthwork, drainage, underground utilities, subgrades, asphalt, concrete, and landscaping. **Mr. Ashley will provide subsurface utility engineering services and utility coordination for the County under this contract.**

SUBCONSULTANTS

To complement ETM Survey's staff, we have partnered with specialty subconsultants to provide aerial mapping and hydrographic surveying services. The subconsultants chosen for our project team have outstanding qualifications. We have teamed with these firms on previous projects and have complete confidence that our combined efforts will provide exceptional technical and administrative services to Nassau County.

I.F. Rooks & Associates, LLC - Aerial Mapping Services

Address: 106 NW Drane Street, Plant City, Florida
Phone Number: (813) 752-2113

I.F. Rooks & Associates, LLC (IFR) is a full-service geospatial firm, providing a full suite of geospatial services including Low Altitude Photogrammetry and Aerial Lidar. IFR is an FDOT mapping firm and offers an unmatched combination of experience, technical capability, and in-depth knowledge of the County's need for, and utilization of, highly accurate aerial imagery and photogrammetry. They have a staff of 22 which includes two PSMs, three Certified Photogrammetrists, one flight crew, and 10 Photogrammetric technicians available to concentrate their efforts on this project.

David F. McKay, PSM, CP - Chief Surveyor

Contact Information: DaveM@ifrooks.com | (813) 752-2113
Education: Algonquin College, Photogrammetric Technician Diploma, 1982
Professional License: Florida Professional Surveyor and Mapper, L.S. No. 5435; American Society of Photogrammetry & Remote Sensing ASPRS No. 10898; Certified Photogrammetrist ASPRS No. 1114

Mr. McKay is an accomplished geospatial professional with 39 years of technical, managerial and leadership experience within the private sector disciplines of surveying, photogrammetric mapping, Lidar, and related geospatial services. He is a Florida licensed Professional Surveyor and Mapper as well as an ASPRS Certified Photogrammetrist. Experience includes the organization and management of major domestic and foreign surveying and mapping projects for rail, highway, electric, and oil/gas transmission corridors. Business associations include federal, state and local government agencies, private sector engineering, and surveying firms. During his career, Mr. McKay has served as the project manager, client liaison, direct of business development, and technical compliance manager and/or surveyor of record for numerous state and local agency project undertakings.

Arc Surveying and Mapping, Inc. - Hydrographic Surveying Services

Address: 5202 San Juan Avenue, Jacksonville, Florida 32210
Phone Number: (904) 384-8377

Arc Surveying & Mapping, Inc. (Arc) is a multi-disciplined company with an office in Jacksonville, Florida. Since 1986, Arc has helped public and private sector clients to achieve their goals by providing accurate, reliable, cost effective topographic, hydrographic, geophysical, 3D Terrestrial Laser Scanning and UAV surveys.

Richard Sawyer, PSM/CH - Certified Hydrographer

Contact Information: JMaffett@arcsurveyors.com | (904) 384-8377
Education: AS, Civil Engineering Technology
Professional License: Florida Professional Surveyor and Mapper, L.S. No. 6131; Certified Hydrographer ACSM #194; FAA Remote UAS Pilot #3958472
Certifications: Shallow Water Mulitbeam Training, US and Canadian Hydrographic Commission; Trimble Geomatics GPS Processing Training; Side Scan Sonar Processing and Mosaicing; Bentley's Microstation, InRoads and Descartes Mapping Training; CADD Development; Hydrographic Data Acquisition and Processing, Coastal Oceanographics

Mr. Sawyer, PSM/CH is a Professional Surveyor & Mapper and a Certified Hydrographer with over 35 years of experience in all phases of surveying including topographic and hydrographic projects. He has been in charge of surveys on multi-million-dollar contracts with various agencies including NOAA, USACE, NGS, the Department of Transportation, numerous engineering clients and port authorities. Mr. Sawyer is especially proficient in Arc's Quality Assurance/Quality Control program which assures surveys meet or exceed local, state, and federal standards.

England-Thims & Miller, Inc. - GIS Services

Address: 14775 Old St. Augustine Road, Jacksonville, Florida 32258
Phone Number: (904) 642-8990

ETM is a team of Infrastructure and Development Consultants that create community through innovative planning, technology, engineering, and construction management expertise. Solving complex challenges with actionable solutions, ETM specializes in civil engineering, geospatial technologies, real estate consulting, program management, survey, transportation solutions, and construction management.

ETM's Geospatial Technologies team maintains partnerships with leading GIS and Asset Management companies, such as Cartegraph and Esri, to seamlessly multiply the effectiveness of their systems without the need for time-consuming integration. The result is a comprehensive, interactive, web-based mapping system that improves data-driven problem-solving by connecting people, processes, and products.

Kim Garbade, GISP - Senior GIS Analyst

Contact Information: GarbadeK@etmsurvey.com | (904) 384-8377
Education: BA, Geography, University of Florida, 1989
Professional License: Certified Geographic Information Systems Professional (00058328)

Mr. Garbade has 34 years of Geographic Information Systems (GIS) experience and currently serves as a GIS Project Manager for ETM. During his 23-year career with ETM, Mr. Garbade has worked as an analyst, programmer, and GIS section lead, all the while maintaining a hands-on knowledge of Esri's ArcGIS software and extensions.

Mr. Garbade has designed and implemented geodatabases based on the Esri Water Utility Network model that were customized specifically for stormwater drainage. He has also written tools to perform data entry into those databases and to perform automated QA/QC on those same assets.

Scott A. Graham, PSM
Principal-in-Charge/QA/QC Manager
ETM Surveying & Mapping, Inc.

Education:
Denver Institute of Technology, Brinker School of Surveying, 1986

Years of Experience:
Total: 37
with ETM: 10

Registration(s):
Florida Professional Surveyor and Mapper, No. L.S. 5546

Surveyor in Training Colorado, #845

Survey Safety & Maintenance of Traffic Certification

FDOT Railroad Worker Safety Training and E-Rail Safe Certification

Affiliation(s):
Florida Crown Chapter FSMS

Northeast Florida ASHE

Mr. Graham has managed FDOT transportation survey projects since 1996 and was the Chief Surveyor and Senior Surveyor on many high profile FDOT projects including 17th Street Causeway Bridge in Fort Lauderdale, the Ernest Lyons Causeway Bridge in Martin County, the Jensen Beach Causeway Bridge in St. Lucie County, the PGA Boulevard Flyover Atl. A1A in Palm Beach County and the I-95 Overland Bridge Project in Jacksonville.

Mr. Graham specializes in right-of-way mapping, boundary surveying, sectional retracement, topographic surveys and route surveys for transportation facilities. His expertise and relationships built with various FDOT Districts were instrumental with ETM Survey being selected by District 2 for a second Districtwide Surveying and Mapping Continuing Services Contract of which he is the Chief Surveyor and point-of-contact for the contract.

Project Experience:

SR 200, FDOT District 2, Nassau County, Florida - Chief Surveyor and Project Manager for a 3D design survey for approximately 6 miles of SR 200 from west of Griffin Road to the west of I-95. Responsible for scope development and schedule. Tasks included 3D design survey and right-of-way survey and calculations. Responsible for project coordination, supervision and QC of data, and deliverable packages. This was a MicroStation Connect Edition FDOT Open Roads Designer deliverable project.

SR 51 at SR 8 (I-10), FDOT District 2, Suwannee County, Florida - Chief Surveyor and Project Manager for a 3D design survey for approximately 2,500' of SR 8 and 5,000' of SR 51. Responsible for scope development and schedule. Tasks included 3D design survey, right-of-way survey and calculations, and SUE. Responsible for project coordination, supervision and QC of data, and deliverable packages. This was a MicroStation Connect Edition FDOT Open Roads Designer deliverable project.

SR 115, FDOT District 2, Duval County, Florida - Chief Surveyor and Project Manager for a 3D design survey for approximately 4 miles of SR 115 from US 1 north to SR 202. Responsible for scope development and schedule. Tasks included establishing horizontal and vertical control, 3D design survey, and right-of-way survey and calculations. Responsible for project coordination, supervision and QC of data, and deliverable packages. This was a MicroStation Connect Edition FDOT Open Roads Designer deliverable project.

Old Middleburg Road, City of Jacksonville, Duval County, Florida - Chief Surveyor and Project Manager for a 3D design survey and preparation of right-of-way maps for 4 miles of Old Middleburg Road from the Argyle Forest Boulevard north to NW 103rd Street (SR 134). Responsible for scope development and schedule. Tasks included establishing horizontal and vertical control, 3D design survey and right-of-way survey and calculations, and sectional survey. Responsible for project coordination, supervision and QC of data, and deliverable packages.

SR 100, FDOT District 2, Putnam County, Florida - Chief Surveyor and Project Manager for a 3D design survey for 2.525 miles of SR 100 from Mile Post 18.836 to 21.361. Responsible for scope development and schedule. Tasks included establishing horizontal and vertical control, 3D design survey, right-of-way survey and calculations, and sectional survey. Responsible for project coordination, supervision and QC of data, and deliverable packages. This was a MicroStation Connect Edition FDOT Open Roads Designer deliverable project.

SR 9 (I-95), FDOT District 2, St. Johns County, Florida - Chief Surveyor and Project Manager for the milling and resurfacing project from the Flagler County Line to South of SR 207 (13.5 miles). Responsible for scope and schedule of all survey tasks. Established a horizontal and vertical control network, and coordinated with adjoining FDOT projects on SR 5 and SR 206. Laser scanned the entire project and extracted 1,000-foot interval cross sections and 3D Survey in the areas identified by the Engineer. Performed database QC, supervision, and preparation of FDOT deliverable package in MicroStation SS4 database format.

CSI/Flagler County, CR 304, Flagler County, Florida - Chief Surveyor and Project Manager for a 3D design survey of four bridge sites on CR 304 from Cody's Cornet to Dupont. The project involved a standard design survey of roadway and existing bridges, channel survey, and floodplain mapping for hydraulics studies. Preparation of a TITTF easement sketch and description at one of the bridges.

SR A1A, FDOT District 2, St Johns County, Florida - Chief Surveyor and Project Manager for a 3D design survey for a drainage improvement project from Villano Beach North for 6 miles. Responsible for project scope and schedule. Specific tasks included topographic survey and 3D modeling preparation. Performed database QC, supervision, and preparation of FDOT deliverable package in CAiCE and MicroStation SS4 database format.

Cliff Colyer III, PSM
Project Manager
ETM Surveying & Mapping, Inc.

Mr. Colyer is a Professional Land Surveyor with field and office experience on a wide variety of public and private sector projects including FDOT right-of-way corridors and large commercial and residential land developments. He is intimately familiar with FDOT database management and procedures, private sector mapping management and procedures, elevation certificates, property title report reviews, CAiCE, MicroStation SS10/Power GEOPAK, and MicroStation FDOT ORD.

Education:
BS, Geomatics,
Troy University,
2008

Years of Experience:
Total: 22
with ETM: 1

Registration(s):
Florida Professional Surveyor and Mapper, No. L.S. 6963

Project Experience:

State Road No. 200 (A1A), FDOT District 2, Nassau County, Florida - Project Surveyor for approximately 2 miles Monumentation Map in Nassau County. Responsibilities include horizontal project network control, right-of-way and baseline reference calculations, field work coordination, mapping, reports, and submittals. Microstation Select Series 10, PDF, and hard copy deliverables.

State Road No. 9A (I-295), FDOT District 2, Duval County, Florida - Project Surveyor for approximately 5.5 miles of topographic and route survey from the North end of the Dames Point Bridge approach ramp to Pulaski Road in Duval County. Responsibilities included establishing Horizontal and Vertical control network, field coordination for collecting topography and drainage in medians, 3D Terrestrial scanning of bridges, database management, reports, and submittals. Microstation Open Roads Designer Connect Edition deliverable.

State Road No. 20 (NW US 441) Lateral Ditch, FDOT District 2, Alachua County, Florida - Project Surveyor for the topographic and specific purpose survey of existing conditions of an FDOT lateral ditch site in between NW 43rd Street and NW 93rd Avenue in Alachua County. Responsibilities included mapping topographic and utility features collected in the field for AutoCAD Civil 3D and PDF deliverables.

State Road No. 23 (First Coast Outer Beltway), FDOT District 2, Clay County, Florida - Project Surveyor for approximately 23 miles of right-of-way mapping from the St. Johns River to north of Blanding Boulevard in Clay County. Responsibilities included property title review, property acquisition and easement calculations, mapping, tabulation sheets, legal descriptions, and submittals. Microstation Select Series 10, PDF, and hard copy deliverables.

SR 200/US 301 (Baldwin Bypass), FDOT District 2, Duval County, Florida - Project Surveyor for approximately 4 miles of right-of-way mapping from SR 8 (I-10) to south of Summer Field Lane in Duval County. Responsibilities included property title review, property acquisition and easement calculations, mapping, tabulation sheets, legal descriptions, and submittals. Microstation Select Series 10, PDF, and hard copy deliverables.

State Road No. 20, FDOT District 2, Alachua/Putnam County, Florida - Project Surveyor for approximately 7 miles of right-of-way mapping from the Alachua County Line to SW 56th Avenue in Putnam County. Responsibilities included property title review, property acquisition and easement calculations, mapping, Tabulation Sheets, legal descriptions, and submittals. Microstation Select Series 10, PDF, and hard copy deliverables.

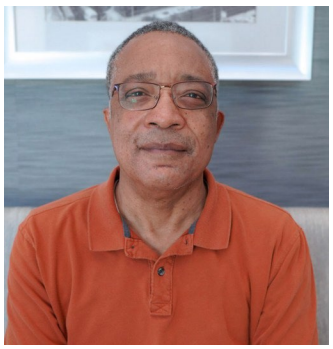
Arlington Wastewater Facility, JEA, Jacksonville, Florida - Project Surveyor for Topographic and Specific Purpose Survey of portions of the JEA Arlington Wastewater Facility site in Duval County. Responsibilities included mapping topographic and utility features collected in the field for AutoCAD Civil 3D and PDF deliverables.

P670, B868, and ARMAG Sites, Navy Gateway Inn and Suites, and NAS Mayport Regulator Station, NAS Jacksonville and NAS Mayport, Jacksonville, Florida - Project Surveyor for Topographic and Specific Purpose Surveys of various sites on NAS Jacksonville and Mayport. Responsibilities included mapping topographic and utility features collected in the field, all to NAS CAD standards and specifications. AutoCAD Civil 3D, and PDF deliverables.

Florida Air National Guard site at Jacksonville International Airport, Florida Air National Guard, Jacksonville, Florida - Project Surveyor for Topographic and Specific Purpose Survey of a portion of the Florida Air National Guard site in Duval County. Responsibilities included mapping topographic and utility features collected in the field for AutoCAD Civil 3D and PDF deliverables.

The Pavilion at Durbin Park, St. Johns County, Florida - Project Surveyor for large scale retail development in St. Johns County. Responsibilities included boundary, topographic, and easement mapping, sketch and descriptions, elevation certificates, land title research, calculations for buildings and other features for construction stakeout, field coordination, AutoCAD Civil 3D and PDF deliverables.

John Shepard
Right-of-Way Mapping
ETM Surveying & Mapping, Inc.



Education:
AS, Drafting & Design Technology, Daytona State College

Years of Experience:
Total: 26
with ETM: 3

Certification(s):
Certified Survey Technician 2

Mr. Shepard has 26 years in the surveying and mapping industry including, Right of Way, Topographic, and Geographic Information Systems. He is proficient in MicroStation Power GeoPAK, AutoCAD, and ESRI ArcGIS.

Project Experience:

SR 51, FDOT District 2, Suwannee County, Florida - MicroStation CAD for right-of-way, monumentation and control survey map for 17.5-mile project. Scope included determining right-of-way by deed, and monumentation, field stakeout, and project quality control.

Old Middleburg Road, Right-of-Way Control Survey, City of Jacksonville, Florida - Performed right-of-way calculations for fee simple takings, permanent, and temporary construction easements. Calculated parent tracts from deeds. Researched encumbrances, subdivision plats, and existing side street right-of-ways. Produced sketch and descriptions for 23 parcels.

Right-of-Way Mapping Director, Clary & Associates, Inc. -

- Coordinate mapping efforts with project engineers and project managers and project surveyors. Preparation of:
  - Control surveys
  - Right-of-way maps
  - Monumentation surveys
  - Maintenance maps
  - Transfer maps
  - Tiitf/mhwl sketches
  - License agreements
  - Parcel sketches
  - Project network control sheets
  - GIS mapping with Esri arcgis
  - Boundary surveys
  - Topographic surveys
  - Legal descriptions
  - Field stake-out reports
- Calculate fee simple takes/easements and remainder parcels utilizing geopak software
- Coordinate with title companies
- Review title reports
- Provide coordinate between government/engineering clients
- Perform map quality control/quality assurance
- Prepare submittal packages

- Conduct project research
- Research FDOT survey database files and legacy right-of-way map files
- Prepare preliminary aerial maps/google earth kmz files
- Plot/calculate title deeds easements encumbrances powergeopak ss4/FDOT open roads
- Project document management responsible for:
  - Maps and surveys by others-convert to.pdf files
  - Existing deeds, easements, plats
  - Project correspondence: emails, letters, memo, etc.
  - Digital project archives
  - Surveyors reports
  - As-built records
- Research labins for township plates and aerial files
- Prepare certified corner records
- File conversion microstation .dgn to autocad .dwg
- Convert Esri .shp shapefiles to .dgn/.dwg/.pdf
- Convert .dwg/.dgn to adobe postscript .pdf files
- Project design-change and map revision management
- Bentley microstation software license management
- Coordinate with IT administrator in all aspects of Bentley license management, upgrades, and software purchase recommendations
- Perform FDOT software interface updates
- Mapping quality control work-flow documentation
- Provide man-hour guidance and estimates for mapping projects
- Project coordinate with survey field operations manager

Redistricting Project, AMI-Applied Mapping, Jacksonville, Florida - Provided mapping and consulting services for 14 council districts, five at-large council districts, and seven school board districts.

- Performed demographic analysis/legal research and produced
- Reports, and district descriptions utilizing US census data
- Provided mapping scenarios utilizing Esri arcview gis software
- Coordinated activities with city council leaders,
- City attorneys, and planning department

Charles Schreiner, SIT
Survey Activities
ETM Surveying & Mapping, Inc.

Since 2017, Mr. Schreiner has been involved in the management of multiple major survey projects throughout the Eastern United States. He specializes in Unmanned Aerial Systems (UAS), Terrestrial Laser Scanning, and conventional surveying. Mr. Schreiner is responsible for day-to-day field crew operations and assists in the coordination of all UAS projects. He is proficient in in Revit, Civil3D, AutoCAD, Trimble Business Center, Trimble Access, Trimble Field Link, POSPac, Leica Cyclone, Leica Captivate, Leica Infinity, Reigl, and Microstation.

Education:
BS, Geomatics, University of Florida, 2020

Years of Experience:
Total: 6
with ETM: 3

Registration(s):
Surveyor in Training

Certification(s):
sUAS Certificate

Small Unmanned Aerial Systems

Part 107 Certification

Project Experience:

Ranger Station North Aerial Topographic Survey, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques as well as UAS lidar mapping. Responsible for Horizontal and Vertical site control layout, field crew oversight, and UAS lidar mapping oversight. CAD work included lidar data extraction and surface creation.

Columbus Avenue, JEA SDPRP, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

JEA SDPRP - McConihe St, JEA SDPRP, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

JEA SDPRP - Antisdale St, JEA SDPRP, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

CR 2209, St. Johns County, Topographic Route Survey Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques as well as UAS lidar mapping. Responsible for Horizontal and Vertical site control layout, field crew oversight, and UAS lidar mapping oversight. CAD work included lidar data extraction, surface creation, and final survey mapping.

Traffic Signal Engineering - TWO #14, City of Jacksonville, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

Traffic Signal Engineering - TWO #15, City of Jacksonville, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

Traffic Signal Engineering - TWO #16, City of Jacksonville, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

Traffic Signal Engineering - TWO #8, City of Jacksonville, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and Technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

Traffic Signal Engineering - TWO #3, City of Jacksonville, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

Traffic Signal Engineering - TWO #1, City of Jacksonville, Duval County, Florida - Survey Technician for a 3D design survey utilizing conventional survey techniques. Responsibilities include support for survey crews on control layout, topographic acquisition, and technical surveying questions to fulfill client needs. CAD work included linework, QA/QC, surface creation, and final survey mapping.

David Ashley
Subsurface Utility Engineering/Utility Coordination
ETM Surveying & Mapping, Inc.

Education:

BA, Business Management, Jacksonville University, 2007

Years of Experience:

Total: 37
with ETM: 4

CERTIFICATION(S):

Water Distribution System Operator 1

Wastewater Collection System Operator A

Reclaimed Water Distribution C

AFFILIATION(S):

Florida Water & Pollution Control, Operator Association

Mr. Ashley has years of progressive experience in the utility industry, including as an Operations and Maintenance Manager with JEA. His career emphasis includes electric, water and reuse distribution, and wastewater collection system construction, maintenance, and design. He was an integral leader in establishing JEA's Reclaimed Water Rules and Regulation. In his current role, he is responsible for estimating, planning, scheduling, and QA/QC of our SUE services, and management of utility coordination, in addition to serving as a technical advisor to ETM's engineering teams. Mr. Ashley's hands-on utility experience is a proven commodity in streamlining matters with utility companies. He had direct involvement with land clearing, earthwork, drainage, underground utilities, subgrades, asphalt, concrete, and landscaping.

Project Experience:

Cordova Palms, Jacksonville, Florida - Utility Coordination for new roadway (SR 313) connection to SR 5 (US 1) crossing dual railroad tracks. UC, SUE Levels D-A (10 VVH and 2 Mast Arms) (ETM - Utility Coordination & SUE Management).

Silverleaf, Jacksonville, Florida - Utility Coordination for new roadway connection to SR 16. UC, SUE Levels D-A (12 VVH) (ETM - Utility Coordination & SUE Management).

ENCPA Commerce Park, Jacksonville, Florida - Utility Coordination for new roadway connection to SR 200 (US 301). UC, SUE Levels D-A (15 VVH) (ETM - Utility Coordination & SUE Management).

JEA Galvanized Pipe Replacement, Jacksonville, Florida - Five-year Program Management (PM) contract involving all SUE levels for design and PM of continuing pipe replacement contract. (UC, SUE Levels D-A (To date B - over 5 utility miles A - over 100 VVH) (ETM - Utility Coordination & SUE Management).

JEA Septic Tank Phase Out Program (Beverly Hills), Jacksonville, Florida - UC for +/- 1-mile FM and full design of sanitary sewer system. UC, SUE Levels D-A (To date B - > 5 utility miles A - 15 VVH) (ETM - Utility Coordination & SUE Management).

Union and State Street (US-23, US-17) Area Sewer Improvements, FDOT/ JEA, Jacksonville, Florida - (JEA- Utility Design Team, Utility Plan Review, Utility Construction Inspection).

David McKay, PSM, CP

SUR Chief Surveyor
8.3 Photogrammetric Mapping

I.F. Rooks & Associates Geospatial Services

Mr. McKay is an accomplished geospatial professional with 39 years of technical, managerial and leadership experience within the private sector disciplines of surveying, photogrammetric mapping, LiDAR and related geospatial services. He is a Florida licensed Professional Surveyor and Mapper as well as an ASPRS Certified Photogrammetrist. Experience includes the organization and management of major domestic and foreign surveying and mapping projects for rail, highway, electric and oil / gas transmission corridors. Business associations include federal, state and local government agencies, private sector engineering and surveying firms. During his career, Mr. McKay has served as the project manager, client liaison, direct of business development, technical compliance manager and/or surveyor of record for numerous state and local agency project undertakings.

EDUCATION

Algonquin College
Photogrammetric Technician Diploma (1982)
Pierrefonds Comprehensive High School
Academic Certificate (1977)
Continuing Education: Ongoing

ACADEMIC & PROFESSIONAL AFFILIATIONS

Photogrammetrist Technical Diploma from Algonquin College, Ottawa, ON (1982)
Registered Professional Surveyor and Mapper, State of Florida (1995) No. 5435
American Society of Photogrammetry & Remote Sensing (ASPRS, 1987) No. 10898
Certified Photogrammetrist (1998) ASPRS No. 1114

OFFICE LOCATION

106 NW Drane St., Plant City, FL 33563

PROJECT EXPERIENCE

SR 25 (US 441) From the Marion County Line to SR 331 (Alachua County)

FDOT District 2
I.F. Rooks was contracted to perform a Helicopter photo mission at 350' AGL to acquire imagery for preparing a 3D design file in MicroStation SS-4 format.

SR 93 (I-75) from SR 47 to US 90 (Columbia County)

FDOT District 2
I.F. Rooks was contracted to perform a Fixed-wing and Low altitude photo mission to acquire imagery for delivery of a 3D Design File in Microstation SS-4 for selected areas and X-sections and digital mosaic at 1"=40' (HMR & TIF format.)

I-10 from the Baker County Line to the Duval County Line (Baker County)

FDOT District 2
I.F. Rooks was contracted to perform a Low Altitude Helicopter photo mission to provide a 3D Design Survey File in OpenRoads.

SR 8 (I-10) from SR 121 to the Nassau County Line (Nassau County)

FDOT District 2
I.F. Rooks was contracted to perform a Low Altitude Helicopter photo mission to provide a 3D Design Survey File in OpenRoads.

SR-8 (I-10) from Columbia County Line to MP 8.942 and from MP 8.942 to MP 20.4 (Baker County)

FDOT District 2
I.F. Rooks was contracted to perform a Low Altitude Helicopter photo mission to provide a 3D Design Survey File in OpenRoads.

SR 9A (I-295) from New Berlin Rd to S end of Dames Point Bridge (Duval County)

FDOT District 2
I.F. Rooks was contracted to perform a Helicopter photo mission at 350' AGL to acquire imagery for preparing a 3D design file in MicroStation SS-4 format.

I-95 from Flagler County Line to SR 207 (St. Johns County)

FDOT District 2
I.F. Rooks was contracted to perform a Fixed Wing photo mission to acquire imagery for 2D planimetric mapping and 1" = 50' digital mosaic in HMR and TIF format.

I-95 from S of Moncrief Creek to SR111 (Duval County)
FDOT District 2
I.F. Rooks was contracted to perform a Low Altitude - Helicopter photo mission to acquire five (5) lines of color digital imagery with a ground sample distance (GSD) of 0.04' for the project corridor (± 2-miles). Deliverables included a 3D Design File (MicroStation SS-4) at 1" = 20' and digital mosaic @ 1" = 50' per FDOT Specifications.

I-95 from Volusia County Line to St. Johns County Line (Flagler County)
FDOT District 5
I.F. Rooks was contracted to perform a Fixed-wing and Low Altitude Helicopter photo mission to acquire film to provide a 3D Design File (Microstation SS-4) and a 2D File (Microstation – EP lines in both directions).

SR A1A from 28th St. to 9th St. and 18th St. to Osprey Drive (Flagler County)
FDOT District 5
I.F. Rooks was contracted to perform a Fixed-wing and Low Altitude Helicopter photo mission to acquire film to provide a 3D Design File (Microstation SS-4) and digital mosaics 1"= 50' and 1"=200' in HMR & TIF format.

PD&E Widen Homestead Extension of Florida's Turnpike (SR 821) from US 1 South pf Palm Drive to Campbell Drive in Miami-Dade County
Turnpike District
I.F. Rooks was contracted to perform a Fixed-wing photo mission to acquire color digital imagery to produce a digital mosaic (HMR & TIFF formats) @ 1" = 200'.

US 1 from Canal St. to Beville Road (Volusia County)
FDOT District 5
I.F. Rooks was contracted to perform a Fixed-wing photo mission to acquire film of the corridor and provide a digital mosaic 1"= 200' in HMR & TIF format.

US 98 from Edgewood Dr. to Main St. (Polk County)
FDOT District 1
I.F. Rooks was contracted to perform a Fixed-wing photo mission to acquire b/w film for production of b/w digital mosaic @ 1"=40', 1" =200 and 1"=400' in HMR and TIF format.

SR 684 from SR 789 to 123rd St. (Manatee County)
FDOT District 1
I.F. Rooks was contracted to perform a Fixed-wing photo mission to acquire b/w film for production of b/w digital mosaic @ 1"=40', 1" =200 and 1"=400' in HMR and TIF format.

CPP from SR570 to SR35 (Polk County)
FDOT Turnpike District
I.F. Rooks was contracted to perform a Fixed-wing photo mission to acquire b/w film for production of b/w digital mosaic @ 1"=40', 1" =200 and 1"=400' in HMR and TIF format.

I-595 Extension Design Build (Broward County)
FDOT District 4
Scope: Low Altitude Helicopter photo mission to provide a 3D Sesign File in Microstation SS-4

SR-25 / US-27 (Palm Beach County, Florida)
Acquire black/white aerial photography at a scale of 1" = 300' to support 1" = 50' 2D planimetric mapping for ± 10.1 miles along the 400' project corridor'. CAD data delivered in MicroStation format per FDOT specifications.
Mr. McKay was responsible for and actively participated in the following activities: 28.1 Flight Preparation, 28.2 Control Point Coordination, 28.21 Field Review, 28.22 Technical Meetings, 28.23 Quality Assurance/Quality Control, 28.24 Supervision, 28.25 Coordination.

SR 595 from 4th Street to 58th Street, Pinellas County, Florida
Acquire black/white aerial photography at a scale of 1" = 58' for ± 4.5 miles to support 1" = 20' 2D planimetric mapping and 3D DTM/TIN with particular attentions to all undulations / changes in sidewalk slabs for the project corridor. Acquire black/white aerial photography at scales of 1" = 300' and 1" = 1000' along project corridor to support DTM/Breakline data collection to produce digital mosaics at scales of 1" = 50' and 1" = 200'. CAD data delivered in MicroStation format and the digital mosaic was provided in HMR format per FDOT specifications.
Mr. McKay was responsible for and actively participated in the following activities: 28.1 Flight Preparation, 28.2 Control Point Coordination, 28.22 Technical Meetings, 28.23 Quality Assurance/Quality Control, 28.24 Supervision, 28.25 Coordination

Richard J. Sawyer PSM, CH
Vice President

Florida Professional Surveyor and Mapper/Certified Hydrographer/FAA UAS Remote Pilot Certification

Richard J. Sawyer, PSM/CH is a Professional Surveyor & Mapper and a Certified Hydrographer with over 35 years of experience in all phases of surveying including topographic and hydrographic projects. He has been in responsible charge of surveys on multimillion-dollar contracts with various agencies including NOAA, the US Army Corps of Engineers, NGS, the Department of Transportation, numerous engineering clients and port authorities. Through years of training, hands-on surveying, mapping and computing he has become an expert, has been published and a guest speaker at professional seminars. Mr. Sawyer is especially proficient in the Quality Assurance/Quality Control program of Arc Surveying & Mapping which assures surveys meet or exceed local, state and federal standards.

Registrations:
Professional Surveyor and Mapper, FL#LS6131
Certified Hydrographer ACSM #194
FAA Remote UAS Pilot #3958472

Education:
Associates Degree: Civil Engineering Technology

Shallow Water Mulitbeam Training, U.S and Canadian Hydrographic Commission; Trimble Geomatics GPS Processing Training; Side Scan Sonar Processing and Mosaicing; Bentley's Microstation, InRoads and Descartes Mapping Training; CADD Development; Hydrographic Data Acquisition and Processing, Coastal Oceanographics

Years of Experience:
35

Years with Firm:
24

Nassau Sound Ebb Shoal Survey, Nassau, Fl

Richard J. Sawyer, PLS, CH was Project Manager for the Nassau Sound Ebb Shoal Survey, Nassau County, Florida. He researched and located existing primary control monuments, acquired bathymetric data describing existing site conditions, facilitating the creation of a numerical model of Nassau Sound. Single beam bathymetry was acquired at 400 ft. line spacing beginning west of the Nassau Sound bridge, continuing east until the 30 ft. contour was reached. Upland data was acquired in areas of emergent islands. Horizontal datum was based on the Projection for the East Zone of Florida (0901) 83/90 NAVD83/90. Vertical Datum was NAVD88. Units of measurement were in US Survey Feet. The survey was performed to FDEP standards for Coastal Monitoring and the Florida Minimum Standards for Surveying & Mapping. Hard copy maps were provide including ASCII files containing raw xyz profile data points.

South Amelia Island Shore Stabilization Project, Nassau County, Florida

Research and locate the existing primary control monuments, acquire topographic beach monitoring upland data and offshore bathymetric data for historic beach monitoring profiles located along a portion of Nassau County. Objective of the survey was to document accurate topographic and bathymetric existing site conditions along historic beach profiles R-55 through R-82 including half stations between R-17 to R82 in Nassau County. Richard Sawyer was Surveyor in Charge.

Pensacola Beach Monitoring Profiles and Borrow Site, Pensacola, Florida

Richard J. Sawyer, PLS, CH was responsible for the Pensacola Beach, Florida Monitoring Profiles and Borrow site survey for Olsen Associates, Inc. Under Mr. Sawyers direction, Arc Surveying & Mapping's crews performed upland beach topographic profiles beginning approximately 75 ft. landward of existing vegetation or the wrack line (no Vegetation). Profiles were continued seaward to a wading depth of 3 ft. below the water surface at low tide. Bathymetric data was acquired along the historic azimuth for each monitoring profile, extending 300 ft. seaward or to a depth of elevation -30. A Borrow Site Survey, approximately 4 miles offshore was surveyed using multibeam swath sounding techniques, providing 100 % coverage of the 7500' x 7500' seafloor area. Deliverables included a Survey Report certifying that work was performed to FDEP standards and meeting the Minimum Technical Requirements of the State of Florida.

ST. Johns County Beach Restoration Project, St. Johns, Florida

Arc Surveying & Mapping, Inc. was selected by ACOE Jacksonville District to survey St. Johns County Beach in St. Augustine, Florida. Monitoring, Plans, and Specification surveys were collected for beach profiles from R-109 thru T-157 including intermediate from R-137 thru R-151, borrow area survey and aerial photography from R-109 thru T-157. Additional profiles were collected for R-197 thru R-209. Collect topographic and hydrographic beach profile data. Utilized DEP coordinates, elevations, and azimuths as provided. The project was performed on time and under budget.

Flagler County Beach Monitoring Profiles, Flagler County, Florida

This project lies along the North Atlantic coastline and includes approximately 18 miles of coastline in Flagler County, Florida. Research and locate the existing primary control monuments, acquire topographic beach monitoring upland data and offshore bathymetric data for historic beach monitoring profiles. The objective of the survey was to document accurate topographic and bathymetric existing site conditions along historic beach profiles R-01 through R-101. The project included the acquisition of side-scan sonar data along near shore coastal coquina outcropping in addition to off-shore multibeam surveys for sand sourcing.

Kim Garbade
Senior GIS Analyst
England-Thims & Miller, Inc.

Mr. Garbade has 34 years of Geographic Information Systems (GIS) experience and currently serves as a GIS Project Manager for ETM. During his 23-year career with ETM, Mr. Garbade has worked as an analyst, programmer, and GIS section lead, all the while maintaining a hands-on knowledge of Esri's ArcGIS software and extensions.

Mr. Garbade has designed and implemented geodatabases based on the Esri Water Utility Network model that were customized specifically for stormwater drainage. He has also written tools to perform data entry into those databases and to perform automated QA/QC on those same assets.

EDUCATION:

BA, Geography, University of Florida, 1989

YEARS OF EXPERIENCE:

Total: 34

with ETM: 23

REGISTRATION:

Certified Geographic Information Systems Professional (00058328)

CONTINUING EDUCATION:

ArcHydro

GIS for Water Resources

Introduction to ArcGIS Server

ArcObjects with VBA and C#

Deploying and Maintaining Multiuser Geodatabases

Versioning Workflows in Multiuser Geodatabases

RDBMS Data Modeling

PROJECT EXPERIENCE:

NPDES Permit Administration Program, Jacksonville, Florida (Cycle 4) - Responsible for the inventory and data storage associated with the over 280,000 stormwater structures contained within the 700+ square-miles of the City of Jacksonville. To stay current with Esri's increasingly web based architecture, Mr. Garbade migrated the existing traditionally versioned Esri geodatabase stored in SQL Server into a Branch versioned, service based, Esri architecture (also stored in SQL Server). This move facilitated the use of Esri's Workflow Manager Server product and integration with the Cartegraph Operations Management Software (OMS) currently used by COJ staff for inspection and maintenance of the stormwater system. Since the migration of the data into a new data structure deprecated the existing data entry tools, Mr. Garbade developed a new mapping, database editing, and QA toolset using Esri's proprietary Arcade scripting language. The new tools assist a team of four in manually transferring invert and rim elevation data, in addition to other important characteristics and metrics about each asset, from digital and hard copy as-builts, into the geodatabase. Additionally, Mr. Garbade worked on the team that integrated the MS4 asset data stored within the GIS with Cartegraph OMS. He is also primarily responsible for the MS4 geodatabase's schema and day-to-day management.

NPDES Permit Administration Program, Jacksonville, Florida (Cycle 3) - Mr. Garbade designed a geodatabase based on the Esri Water Utility Network model customized for drainage. Additionally, he developed data entry tools that helped to streamline entry into the system. The tool automatically populated asset attributes as they were entered based on data entered on end user forms and on overlay analysis. The tool set was a customized ArcMap extension programmed in MicroSoft C# using Esri's ArcObjects in Visual Studio. Mr. Garbade also used the Esri Data Reviewer environment to ensure the data was entered correctly and checked thoroughly. Furthermore, Mr. Garbade managed the MS4 database's schema and updates. Additional responsibilities included developing a methodology for the improved identification of major outfall locations and ongoing analysis tasks.

Ash Contamination Site Remediation Program, Jacksonville, Florida - Responsible for coordinating GIS support services associated with the City of Jacksonville's Ash Contamination Site Remediation Program. This work has included development and maintenance of a comprehensive set of mapping and spatial data QA tools. Also responsible for database management of an Esri Enterprise Geodatabase specifically customized to store sampling location and attribute data. He is also primarily responsible for generating Electronic Data Deliverables for EPA Region 4, for inclusion in their Data Archival and ReTrieval database.

Kim Garbade
Senior GIS Analyst
England-Thims & Miller, Inc.

Parcel Spatial Data Correction, Clay County, Florida - Project Manager and Technical Lead of a team responsible for the correction of parcel lines from existing locations to visual cues of land ownership on a highly accurate aerial photography base. The existing parcel data had been digitized over many years from poor quality source maps resulting in a parcel data set that overlaid inadequately with modern highly accurate aerial photography. Ideally, correction would have been based on densification of survey control and the COGO of legal descriptions. Because of the limited budget, ETM was asked to employ Esri's Spatial Adjustment toolset. Mr. Garbade wrote extensive ArcObjects code to translate parcel annotation layers into line and point representations, and then recreated the annotation files after the lines and points had been adjusted relative to the parcel boundaries. The project also removed thousands of sliver polygons and ensured parcel attribute data was maintained unchanged and correctly linked.

Enterprise GIS Implementation, Jacksonville Airport Authority, Jacksonville, Florida - Project Manager responsible for the conversion of spatial data sources pertaining to the Jacksonville Airport Authority's assets located on the four air transportation hubs operated by the Authority. Guided the project through a phased and practical approach to GIS implementation. Formulated a Needs Assessment based on user interviews and examination of existing databases and business practices. Used the defined needs to guide the creation of a customized geodatabase schema. Coordinated the automated data conversion and manual data entry procedures (including coordinate geometry data entry) required to populate the implemented database design. Also coordinated the efforts of the quality assurance staff. In addition, supervised the application development team tasked with integrating GIS functionality into the business practices of the Authority's diverse operating units.

Marine Enterprise GIS, Jacksonville Port Authority (JAXPORT), Jacksonville, Florida - Primarily responsible for managing all aspects of the JAXPORT Marine Division's GIS creation and conversion project. Tasks included coordination with survey field crews providing GPS field data collection, geospatial database modeling based on the SDS/FIE, GIS integration with existing databases and systems, source document identification, data cataloging and conversion, metadata creation, QA/QC, and ArcIMS application development. Worked with the client to balance the goals and priorities outlined in the needs assessment with time and budget constraints spelled out in the contract.

Data Conversion, JEA, Jacksonville, Florida - Project Manager responsible for the conversion of spatial and attribute data stored on AutoCAD drawing as graphical points, lines, and text into an Esri geodatabase format. The CAD files pertained to both water and wastewater network information spanning roughly 100-square-miles. The sources of the CAD files were two utility companies recently acquired by the JEA and the CAD files themselves were created in diverse spatial projections and with varying levels of quality and completeness. Supervised the team of GIS Analysts who used advanced conversion tools and methods to standardize the data and reorganize it into intelligent GIS feature classes. Ensured that the final geodatabase design supported the importation of the newly converted data into the existing JEA SDE/Oracle geodatabase and also was responsible for the quality assurance testing of the final deliverable.

D. INNOVATIVE TECHNOLOGY-BASED CAPACITIES AND EXAMPLES

ETM Survey meets all requirements of this contract and is authorized and licensed by the State of Florida to perform the professional services required. We commit to providing the top professional supervision and technical support required to complete every task assignment in a thorough and expeditious manner.

Our experienced office personnel and field crews are qualified to perform surveying on all projects that will be assigned. All field crews are FDOT Intermediate Temporary Traffic Control (TTC) Certified, and On Track Worker Safety Certified for both CSX/FEC and Norfolk Railroads. ETM Survey also maintains two field survey crews with the 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) certification.

Equipment, Software and Facilities

In addition to our state-of-the-art office equipment, our full-size 4-wheel drive trucks are equipped with standard survey equipment. Our SUE crews are equipped with electronic locators, Ground Penetrating Radar (GPR) and truck mounted vacuum excavation equipment which, when combined with our survey technology, can provide state-of-the-art full-service utility location and mapping.

ETM Survey utilizes the following specialty survey equipment:

Field Equipment

- LEICA GPS with Glonass
- LEICA Robotic and Conventional Total Stations
- LEICA Digital Levels
- Carlson Surveyor Data Collectors
- Hydrolite Single Beam Sonar
- Surface Pro Computers with LTE
- Freightliner Vacuum Excavation Trucks
- LEICA Ground Penetrating Radar Units
- LEICA Ultra Cable Locators
- Leica Terrestrial Lidar Scanners
- Harris H6 Gas/Electric Hybrid Drone
- Riegl VUX-1 Lidar Scanner
- DJI photogrammetry Drone

Office Equipment and Software

- Dell, HP, and Puget Sound Computers
- AutoCAD Civil 3D 2019
- Microstation SS10 & Open Roads Designer
- GeoPak, Survey, Roads and Site
- LEICA Cyclone
- LEICA Captivate Software
- LEICA Infinity Software
- Riegl Riprocess UAV Software
- Terrascan Software
- Terra Model Software
- Terra Match Software
- ArcGis 10.2
- Star*Net

We also partnered with ETM on many other GIS projects involving the data collection and GIS mapping for online accessible databases and web-based hosting services, including the City of Jacksonville's NPDES project. The ETM Geospatial Technologies group also has worked on the creation and maintenance of many GIS database systems for various local, county, and state government departments such as the City of Jacksonville Ash Remediation Project, Clay County GIS Basemap and GPS Control Network, and the JAA Capital Improvement Project.

We have provided more examples of our innovative technologies in Tab 7.

State of Florida
Department of State

I certify from the records of this office that ETM SURVEYING & MAPPING, INC. is a corporation organized under the laws of the State of Florida, filed on December 21, 1982.

The document number of this corporation is G14942.

I further certify that said corporation has paid all fees due this office through December 31, 2023, that its most recent annual report/uniform business report was filed on January 4, 2023, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Fourth day of January, 2023

Secretary of State

Tracking Number: 2486627352CC

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

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

E. KNOWLEDGE OF AND COMPLIANCE WITH STATE AND LOCAL LAWS

ETM is a corporation organized under the laws of the State of Florida and as such, we are familiar with State laws. Additionally, we have a local field office in Nassau County at 463688 State Road 200 #7, Yulee, Florida and our headquarters is located in Jacksonville. These locations provide us with in depth knowledge of local laws and permitting requirements.

Tab 4 - Project Understanding, Approach, and Schedule

SECTION 4 - PROJECT UNDERSTANDING, APPROACH, AND SCHEDULE

UNDERSTANDING/COMMITMENT TO THE SCOPE OF SERVICES

ETM Survey understands that this contract is to provide professional surveying and mapping services in the form of written task work orders issued by Nassau County. We are committed to working with Nassau County to reach their desired project outcomes. These services may include, but are not limited to, any of the following areas, all of which ETM Survey and our team are specialized in.

Boundary Surveys

Our firm provides boundary surveys which establish the boundary lines of a parcel of land, as defined by deed or plat, on the ground and ties these boundary lines to monuments and other fixed features and improvements on the parcel.

Topographic Surveys

A topographic survey is essential to engineering design work. Our team of qualified surveyors provide topographic surveys that map the above ground features and documents the horizontal and sometimes the vertical spatial relationship of these features to each other and a parcel boundary.

Maintenance Maps

Our firm provides maintenance maps which are boundary surveys as defined by the Standards of Practice as adopted by the Florida Department of Agriculture and Consumer Services and will be signed and sealed by one of our Florida licensed Surveyors & Mappers. They are used as the control to reestablish approved alignments for

right-of-way mapping and construction purposes. Maintained right-of-way mapping is coordinated with the County and the Engineer-of-Record to properly depict the right-of-way claimed by maintenance. These maps are also used for appraisal purposes during the property acquisition phase which makes it important to properly show certain topographic features shown on the maps.

Right-of-Way Surveys

At ETM Survey, we conduct right-of-way surveys which are typically retracement surveys and require that existing monumentation along a right-of-way corridor be located and research into record documents adjoining the right-of-way is performed. A right-of-way survey will result in a map and is a type of specific purpose survey.

Legal Descriptions

Legal descriptions will be formatted and written to the preferred County format for recording. All descriptions are read and checked to the right-of-way maps twice with graphical and COGO closure checks. Check sheets are then filed as part of our Quality Control plan. All descriptions will be prepared to the Standards of Practice and will be signed and sealed by one of our Florida Certified Professional Surveyor and Mappers.

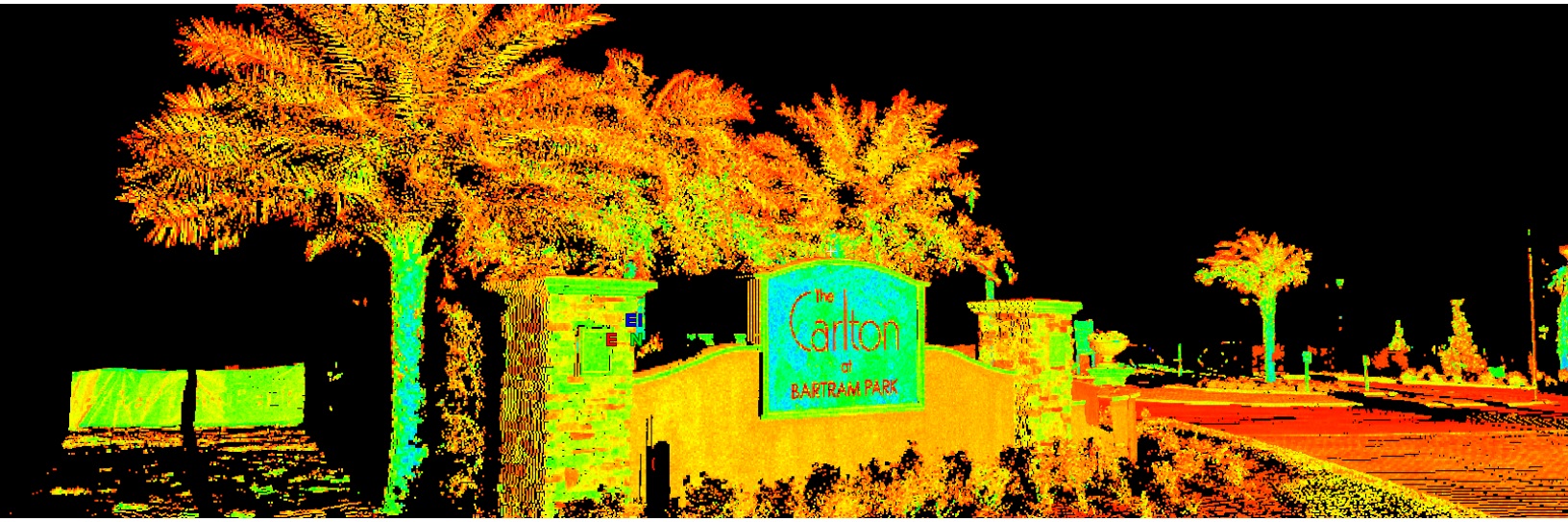
Aerial Orthophotography

Our Aerial Solutions team uses innovative technologies to provide aerial orthophotography, which is a geometrically corrected aerial photograph, with uniform scale, showing true horizontal position in raster form. Once an image is orthorectified, it has been adjusted for topographic relief and is an accurate representation of the Earth's surface. At this point, the orthophotograph can be used for measurement of planimetric features.

Terrestrial and Aerial Lidar

Lidar is a remote sensing technology that measures distance by sending a laser towards an object and analyzing the reflected light (also called returns). The Lidar returns are then used to create a digital representation of a terrain's surface or Digital Terrain Model (DTM).

State-of-the-art 3D laser scanning methods and technology are referred to as Terrestrial Lidar. This cutting-edge technology allows our team to collect spatial data from a site, structure, or object rapidly and remotely. The information from a 3D scan provides extremely accurate data in the form of an XYZ point cloud that can easily be modeled, geo-referenced and surveyed electronically, used to create contours and TINs, or exported into CAD software.



For topographic, as-built, and engineering design surveys, Terrestrial Laser Scanning is setting new standards for the way surveying work gets done. ETM Survey's team increases the data acquisition speed for many projects utilizing this essential tool for capturing and managing complex and detailed 3D geospatial data. Terrestrial Laser Scanning is especially useful for complex areas and structures that may be difficult to access. Bridges, overpasses, railroads, high-speed interstates, and high-volume local roadways may all be scanned, with much more detail, greater efficiency, and cost effectiveness than conventional surveying techniques.

All Terrestrial Laser Scanning projects are performed under the responsible charge of a professional surveyor and mapper to ensure the proper quality control procedures are followed. We employ the top of the line Leica P-40 High Definition Laser Scanner that collects over one-million points per second. This fast data acquisition translates to safety for survey field personnel, allows us to be responsive to time sensitive projects, and gives us the ability to deliver high quality and accurate 3D geospatial data and calibrated imagery to our clients.

This technology can also be vehicle based to collect the same type of data in a mobile environment. This technology allows for automated data and asset extraction of storm and sanitary sewer manholes, drop inlets, and catch basins. Mobile mapping offers an efficient and safe solution to obtaining survey data along heavily travelled roads.

In addition, our firm offers Aerial Lidar services to acquire data and produce high-resolution mapping products. To complete these services, we use our unique Harris Aerial Drones with Lidar sensors.

Cross Sections for Drainage Basin Analysis

Also known as FEMA cross sections, ETM Survey performs cross section for drainage basin analysis larger areas to obtain spot elevation data for sites to determine drainage flow of the surface and possible flood plain identification.

Design Surveys

We have surveyed many miles of roadways with conventional survey techniques and static terrestrial Lidar. We are experts in blending the data from both survey data into a single seamless survey deliverable for the engineers to use.

Construction Layout Surveys

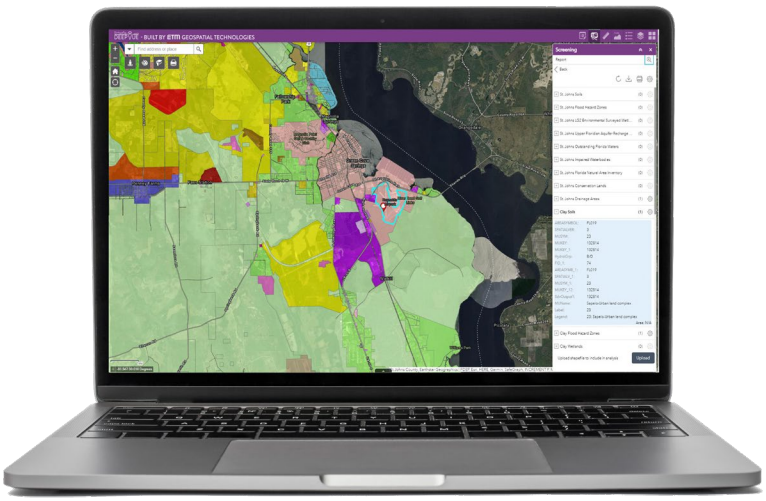
We conduct construction layout surveys to make measurements prior to or during construction, to control elevation, configuration, and horizontal position and dimensions.

Utility and Public Infrastructure Surveys

Our firm conducts utility and public infrastructure surveys to locate features specific to utility or infrastructure features. This type of survey typically will include SUE work to help map underground features.

GIS Database Creation and Management

ETM Survey's parent company, ETM, incorporated the use of GIS and GPS technology in 1991 to deliver engineering and planning services more efficiently. They have been delivering GIS planning, data conversion, application development, and related support services since 1995 and have been an Esri Consulting Business Partner since 1997.



Title Work and Deed Investigation

At ETM Survey, our title work and deed Investigation involves searching the public records for the history of ownership, known as chain of title, and also for any encumbrances of record to the property. Title work and deed investigation is required for all ALTA surveys and typically performed when land acquisition/ transaction is to occur for a parcel of land.

Global Positioning System (GPS) Data Collection

A type of data collection utilizing the United States based NAVSTAR satellites and can also include utilizing the Russian GLONASS satellite constellation to determine the latitude and longitude of a feature on the Earth's surface. Survey grade GPS receivers render sub-centimeter positional accuracy.

Tree Surveys

A tree survey is a type of specific purpose survey that accurately locates the position of the center of a tree along with other details such as diameter of the tree, common name, scientific name, diameter of drip line, and height of clear wood on palm trees. We typically number and tag trees in the field to allow for correlation of the survey map by Landscape Architects or other end users.

Wetland Surveys

Our wetland surveys involve the location of delineations placed by others to mark the location of the transition between wetlands and uplands. The location of these marks is surveyed using conventional and GPS survey techniques.

Specific Purpose Surveys

Our specific purpose surveys are performed for a purpose which cannot be categorized under another type of survey per Chapter 5J-17, Florida Administrative Code. Examples of specific purpose surveys are a map to show a right-of-way or a tree survey.

Final Measure/Record Surveys

Our team performs as-built surveys to obtain horizontal and/or vertical dimensional data so that constructed improvements may be delineated in such a way that the location of the construction may be compared with the construction plans.

ALTA/NSPS Land Titles

An ALTA survey is a boundary survey performed to the national standards of the American Land Title Association and the National Society of Professional Surveyors. Our firm offers many optional services that can also be included as part of an ALTA survey and are negotiated with the client prior to the survey being initiated.

Bathymetric Surveys

Bathymetry is the measurement of the depths of water bodies from the water surface. It is the marine equivalent to topography. We conduct bathymetric surveys with a transducer which both transmits a sound pulse from the water surface (usually attached to a boat) and records that same signal when it bounces from the bottom of the water body. An echosounder attached to the transducer filters and records the travel time of the pulse. While the pulse occurs, a GPS unit can record the location of the reading.

APPROACH TO PROJECT

The demands of this Continuing Professional Surveying and Mapping Services Contract require a versatile firm that is established within the community and has access to historical resources and a variety of means to reach desired goals. Since merging with ETM, our company has developed into a multi-faceted, robust firm that is fully capable of meeting the challenges of the prevailing economic climate in Florida. The strengths of these two organizations have proven to fit together in a highly complementary fashion, effectively blending the use of the most up-to-date technological advancements with the knowledge and wisdom inherently gained with almost a century of land surveying. The resultant mix has rendered a diversified, forward-thinking organization, devoted to the production of an accurate product that satisfies both established standards and the practical needs of their clientele. This diversity that ETM Survey possesses lends itself to the demands of a surveying and mapping continuing services contract. ETM Survey deals with a wide range of survey needs on a daily basis and is always seeking innovative and progressive methods by which these needs can be met.

From an administrative standpoint, it is our goal to submit a superior survey product that is cost efficient and exceeds all expectations. The first step in the successful execution of our survey services is a function of communication. Cliff Colyer III, PSM will meet with Nassau County's Project Manager to determine the exact nature of the scope of services required for each specific survey project. A manhour assessment of the anticipated work effort will be produced based on a review of the specific site and analysis of past projects of a similar scope and magnitude. ETM Survey will then seek to negotiate a project specific contract with Nassau County's Project Manager that is fair and equitable to both parties.

Production Methodology

Once the specific goals for the survey task have been clearly determined, ETM Survey's Project Manager will assemble the team best suited to that end. The project will be further assessed, and a specific plan will be formulated. Discussion with and input from all team members, including Project Surveyors, CAD Technicians, Field Crew Coordinators, and Field Crew Chiefs will be considered in this process. Additional meetings over the course of the project will keep ETM Survey's Project Manager abreast of the progress and quality of the work effort. Mr. Colyer will review and bear responsibility for all survey decisions required over the life of the project and will apprise Nassau County's Project Manager of the status of the project on a monthly basis or upon request.

Upon determination of the appropriate team, research of the Public Records and compilation of existing data pertinent to the project will be undertaken by the Project Surveyor who supplies information to the CAD Technician and oversees the production of preliminary maps and search ties for field crews. Field Crew Coordinators are also involved at this juncture, aiding in our efforts to provide field crews with the information they need to optimize data collection efficiency. ETM Survey believes that a well informed and prepared field crew is critical to the success of a project from the onset.

As field work progresses, it is imperative that the work is monitored for accuracy and completeness on a regular basis. The work is usually broken up into logical segments and processed in increments. In this way, we can evaluate the data and determine if adjustments to field methodology are needed. This also allows our office personnel to begin mapping efforts prior to the completion of field work. Invariably, this work segmentation also keeps the ETM Survey Project Manager involved with the project on a daily basis as decisions regarding interpretation of the data are required and reviewed.

As the final mapping stage of production nears completion, Scott A. Graham, PSM will begin the Quality Assurance and Quality Control (QA/QC) review of the product. This review includes any digital products that may be submitted as well as prints of the survey. The product is reviewed for compliance with Chapters 177 and 472 of the Florida Statutes, Chapter 5J-17 of the Florida Administrative Code and with specific regard to Nassau County ordinances and standards.

Field reviews of preliminary maps are also conducted at this stage. The maps are then submitted to ETM Survey's Project Manager for further review prior to being submitted to Nassau County.

Problem Areas/Solutions

Based on our experience, the most identifiable source of problems in survey production is lack of a clear understanding of the needs and expectations of the client. The solution to this problem begins at the administration level. The County and Consultant Project Managers must work toward the common goal and ask questions of each other until all parties are assured of a clear understanding of what is expected. The communication then needs to continue down the ranks so that all team members have a thorough understanding of the goal and can contribute to its realization. This is a primary goal at ETM Survey. We believe that informed Party Chiefs equate to fewer return visits to a site. Likewise, knowledgeable Survey CAD Technicians can alert the Project Surveyor to deficiencies in field data. A Project Surveyor and Field Crew Coordinator with an accurate understanding of the project goals can help streamline operations and enhance the quality of the product while keeping the project on-budget and on-schedule.

SPECIAL CONSIDERATIONS

ETM Survey has embraced the notion that the land surveyor's final product is no longer simply their signed and sealed map of a survey, but rather a digital file to be used well into the future, serving a variety of functions, which can be incorporated into a larger database. This is exemplified by the horizontal and vertical control network which our firm is building throughout Florida.

ETM Survey is currently engaged in the creation of a GIS Database for our in-house use, which will include this control network, published control both horizontal and vertical, secondary GPS control, traverse points, temporary benchmarks, etc. Attributes attached to the points that populate this database include to reach information, date of observation, source monumentation, datum, project association, etc. Links to our other project tracking and management software tools and references to related files potentially can make our extensive records available at the mere click of a button.

With this concept in mind, ETM Survey proposes that all survey work associated with this contract be based on, or tied to the Florida State Plane coordinate system, regardless of the magnitude of the specific projects scope of services. We would further recommend that control data for these miscellaneous survey projects (complete with attached attribute data) be submitted to the County in a format that would allow for its eventual inclusion into a similar GIS database.

RELEVANT TEAM EXPERTISE

Our team has significant expertise providing specialized services that are applicable to the type of projects under this contract. Specifically, our project team's experience in the following areas ensures that projects of this type will be completed professionally and efficiently.

Roadway Design Surveys

We have surveyed many miles of roadways with conventional survey techniques and static Terrestrial Lidar. We are experts in blending the data from both survey data into a single seamless survey deliverable for the engineers to use.

Sectional and Right-of-Way Retracement

We have a vast library of sectional, right-of-way, and land boundary information in our archives. This gives us unique access to non-public information on sectional and right-of-way data. We have extensive experience retracing sectional and right-of-way information for both public and private projects.

Lidar Services

Lidar data provides a level of coverage that conventional survey techniques simply cannot, utilizing millions of points of light painting a 3D view of the world around us. Not only are we afforded the ability to extract additional data not initially in the scope without returning to the field, but the initial data acquisition is able to be done with no interruption to traffic and in a much safer manner for our crews.

Terrestrial Lidar

ETM Survey has submitted multiple projects involving Terrestrial Lidar data acquisition methods to allow the creation of a single 3D file for design purposes for our engineering partners. These methods allow our crews to quickly scan the project and get that data to the office for our techs to take over, thus freeing the crews up to perform other project tasks and functions.

Aerial Lidar

ETM Survey is proud to be one of the first in the area to utilize long range hybrid drones. Our Harris H6 hybrid electric drones allow for hour+ flight times allowing for the collection of 200-acres worth of data in a single flight and allowing us to produce a much denser and more accurate product that conventional survey methods provide. Aerial Lidar accuracy is maintained by a ground control point network and ground check points. Aerial Lidar is then certified to ASPRS and NSSDA standards to guarantee precision and accuracy.