THE FLORIDA SURVEYOR

Volume XXVIII, Issue 10

IN THIS ISSUE: Get Kids into Survey! FSMS Award Winners FSMS Shout Out



II ID M

<

Defauit

FC-6000

Lengemann Topcon Master Dealer



Why Join FSMS?

• Legislative Support - The Legislative Committee and our Lobbyist are committed to keeping the Public and the Surveying & Mapping Profession protected

• Educational Benefits - With recently updated courses, getting your CEC's has never been better

• Networking - Attend our Annual Conference to meet other professionals and meet vendors with all the latest equipment

 Social Benefits - Attend local chapter meetings to meet individuals with common goals

Click Here to Join!

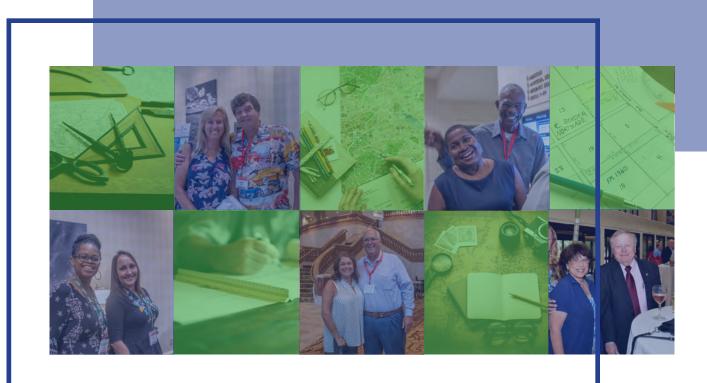
FLORIDA SURVEYING & MAPPING SOCIETY 1689 MAHAN CENTER BLVD., SUITE A TALLAHASSEE, FL 32308 WWW.FSMS.ORG 850.942.1900 office 850.877.4852 fax

TABLE OF contents

<u>SHOUT OUT:</u> <u>FSMS AWARD WINNERS</u>

9 <u>NOAA GPS BENCHMARKS</u>

I3 <u>FROM THE ARCHIVES</u>



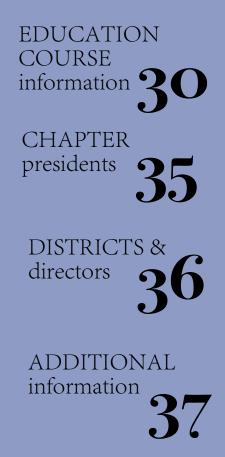
Cover Photo by: Richard Sagredo







SUSTAINING firms **25**





2020 FSMS officers







Treasurer Bon Dewitt

(321) 230-4420

President-Elect

(352) 547-3086

Vice President

(561) 687-2220

Jim Sullivan

Secretary

Joe Perez

halpeters@yahoo.com

Jim.Sullivan@wginc.com

jlperez@pesengsurv.com

Hal Peters

(352) 392-6010 bon@ufl.edu

Immediate Past President Dianne Collins (863) 937- 9052 dcollins@collinssurvey.com



PRESIDENT'S message

2020 has definitely been a year of adaptation to challenges. Our ongoing public health issues have been preventing the administration of the state jurisdictional exam to prospective survey licensees in Florida. This examination has always been given in-person, with proctoring by state employees. Over the last several months, Liz Compton, the Executive Director of the Board of Professional Surveyors and Mappers, has been working on resolving the impasse.

I'm happy to report that this resolution is nearly complete. By the end of this month, surveyors should be able to take the Florida specific exam from Prometric testing centers. Prometric is a nationally recognized administrator for academic and standardized tests. Prometric centers are scattered throughout the state, which means that no Florida resident should have to travel for more than a couple of hours at most to take the test.

This approach is consistent with the method by which the NCEES tests are administered as well. This is a significant step forward for testing accessibility for Florida surveyors and would have been a great move even in an environment without pandemic concerns. In the current climate, this is the difference between the possibility and the impossibility of becoming newly licensed.

This outcome would not have been possible without Liz Compton's persistence and as a profession, we owe her our thanks.

Our gratitude is also due to another woman who has been working hard to improve access to the profession in Florida, Maria Barboza. Maria's informational webinar last month (regarding the path to licensure for educated and experienced people from Latin locales who are planning to or have already legally emigrated to Florida) drew over 100 registrants! With the amount of interest that webinar drew, we will likely ask her to do another in the coming months. Thanks again to Maria (and to Greys Ocando, who helped facilitate).

By the end of October, we anticipate the rollout of a number of revised continuing education correspondence courses. Be watching your inboxes for further announcements on that topic soon.

At last week's FSMS Board of Directors meeting, scholarships were awarded to three deserving applicants. With the cancellation of this year's conference, contributions to both scholarship funds and to the PAC were significantly reduced. For this reason, whatever you can do to assist as chapters or as individuals to help is much appreciated. While we are not all gathering together in person currently, the needs for the work that these funds help us to accomplish do continue on.

Finally, whether you are voting by mail, in-person at an early voting site, or in-person on Election Day, please educate yourself about the candidates and issues on the ballot and vote accordingly. Although the Presidential race tends to draw most of the attention, the impacts of state and local races and state constitutional amendments are the ones we commonly feel most directly.

Until next month, stay safe out there!



President Don Elder (850) 354-9665 donelderpsm@gmail.com



Associate Member of the Year: Angela Bailey Fellow Member: Russell Hyatt

Professional Excellence Award: Celeste Van Gelder

Committee Chair of the Year: Dianne Collins STEVEN WOODS EXCEPTIONAL Volunteer Award: EARL SOEDER

H.O. Peters Surveyor & Mapper of the Year: Donald J. Elder

JIM BENNETT BOARD MEMBER OF THE YEAR: DODIE KEITH-LAZOWICK

CONGRATS TO THE FSMS 2020 AWARD WINNERS!



2020 UPDATED EDUCATION COURSES!

CHECK OUT PAGE 31 FOR DETAILS

BULK EDUCATION ORDERS (8 OR MORE COURSES) CAN RECEIVE A 10% DISCOUNT THROUGH

OCTOBER 31st!



YOUR TRUSTED FIELD-TO-FINISH SOLUTIONS PROVIDER

Offering the latest in Trimble instruments, software, accessories, supplies, rentals, training and maintenance



621 Brookhaven Dr, Orlando, FL 32803 | (407) 601-5816 | duncan-parnell.com



Trimble Inc. 935 Stewart Drive Sunnyvale, CA 94085 +1 408.481.8000 +1 408.481.8488 fax

NEWS RELEASE

Trimble Announces the Next Evolution of its Flagship GNSS Solution

Trimble R12i GNSS Receiver Incorporates Robust Tilt Compensation to Increase Productivity for Land Surveyors

SUNNYVALE, Calif., Sep. 1, 2020—Trimble (NASDAQ: TRMB) introduced today the Trimble[®] R12i GNSS receiver, the latest addition to its Global Navigation Satellite System (GNSS) portfolio. The Trimble R12i incorporates Inertial Measurement Unit (IMU)-based tilt compensation using Trimble TIP[™] technology, which enables points to be measured or staked out while the survey rod is tilted, empowering land surveyors to focus on the job at hand and complete work faster and more accurately.

The IMU-based tilt compensation capability of the Trimble R12i builds on Trimble's unrivaled ProPoint[™] GNSS positioning engine, which delivers more than 30 percent better performance in challenging environments compared to the Trimble R10-2 receiver across a variety of factors, including time to achieve survey precision levels, position accuracy and measurement reliability. Designed with flexible signal management that enables the use of all available GNSS constellations and signals, the Trimble ProPoint GNSS engine provides new levels of reliability and productivity. In addition, the ProPoint engine is a key enabler of the new TIP technology. Surveyors can continue to use the R12i's tilt compensation functionality even in challenging environments when other solutions struggle to maintain GNSS and inertial positioning.

The Trimble TIP technology allows users to accurately mark and measure points in areas previously inaccessible for GNSS rovers such as building corners, or in hazardous situations, for example the edge of an open excavation. The receiver operates calibration-free out of the box and is resistant to magnetic interference from sources such as cars or electrical utility boxes. The R12i also features real time automatic Inertial Navigation System (INS) integrity monitoring. This system allows users to detect and correct for IMU biases introduced by use over time, temperature or physical shocks helping ensure measurement quality and integrity for the life of the receiver.

"The R12i represents Trimble's dedication to perfecting the user experience with the industry's best GNSS engine and now robust tilt compensation," said Ron Bisio, senior vice president of Trimble Geospatial. "Trimble has been the leader in GNSS technology for more than 30 years and the R12i demonstrates our continued commitment to providing surveyors with the world's most advanced and trusted GNSS systems."

Availability

The Trimble R12i GNSS System is available now through Trimble's Geospatial distribution channel. For more information, visit: <u>https://R12i.trimble.com</u>.

About Trimble Geospatial

Trimble Geospatial provides solutions that facilitate high-quality, productive workflows and information exchange, driving value for a global and diverse customer base of surveyors, engineering and GIS service companies, governments, utilities and transportation authorities. Trimble's innovative technologies include integrated sensors, field applications, real-time communications and office software for processing, modeling and data analytics. Using Trimble solutions, organizations can capture the most accurate spatial data and transform it into intelligence to deliver increased productivity and improved decision-making. Whether enabling more efficient use of natural resources or enhancing the performance and lifecycle of civil infrastructure, timely and reliable geospatial information is at the core of Trimble's solutions to transform the way work is done. For more information, visit: https://geospatial.trimble.com.

About Trimble

Trimble is transforming the way the world works by delivering products and services that connect the physical and digital worlds. Core technologies in positioning, modeling, connectivity and data analytics enable customers to improve productivity, quality, safety and sustainability. From purpose built products to enterprise lifecycle solutions, Trimble software, hardware and services are transforming industries such as agriculture, construction, geospatial and transportation. For more information about Trimble (NASDAQ:TRMB), visit: <u>www.trimble.com</u>.

GTRMB

—30—

Media Contact: Lea Ann McNabb +1 408-481-7808 leaann mcnabb@trimble.com

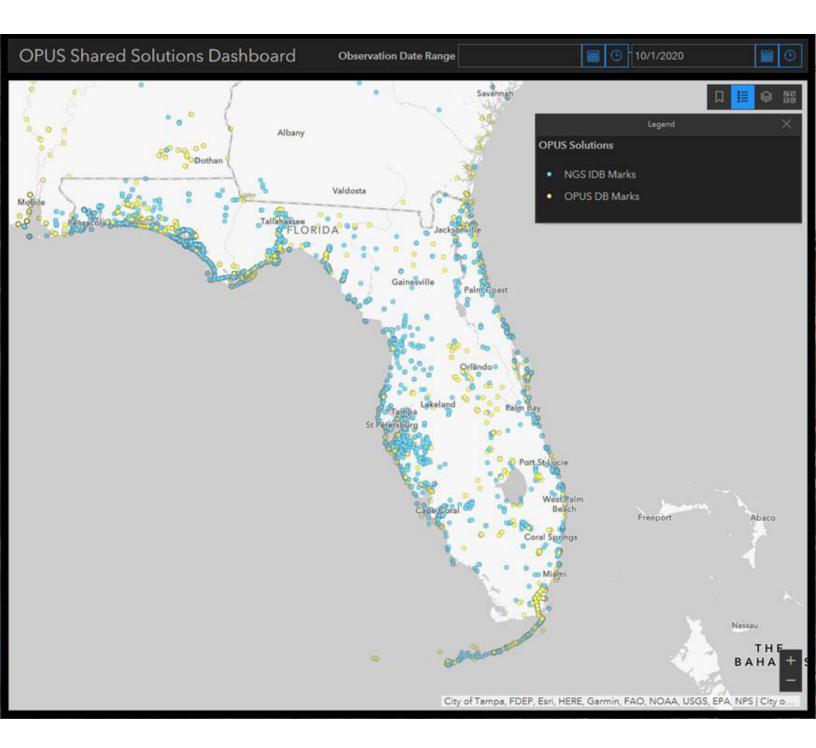
NOAA GPS Benchmarks

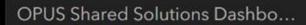
Florida is still the overall leader at least 2x more than any other State as of 10/1/20.

Thanks for your help in adding these new GPS data onto existing marks, maintaining local ties to the National Spatial Reference System. Discover these & more shared solutions using:

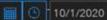
• OPUS Shared Solutions Dashboard, to filter by agency, date, and state.

 \cdot OPUS Share Monthly Map, another interactive map, formatted to facilitate integration of maplayers into your own web maps.



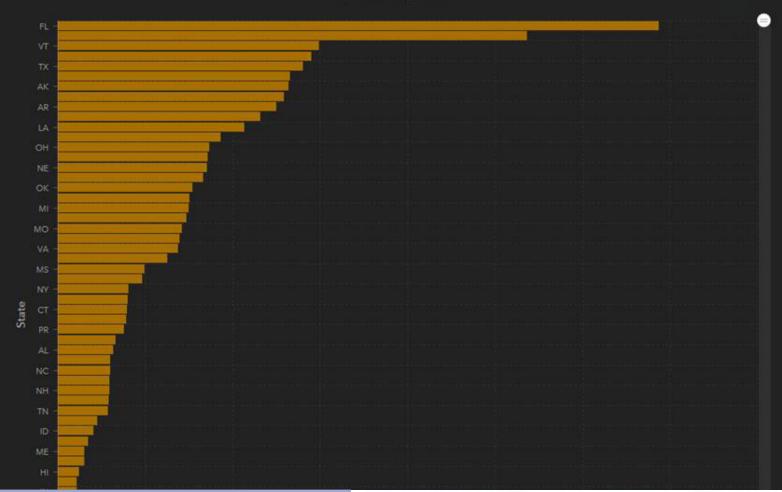


Observation Date Range

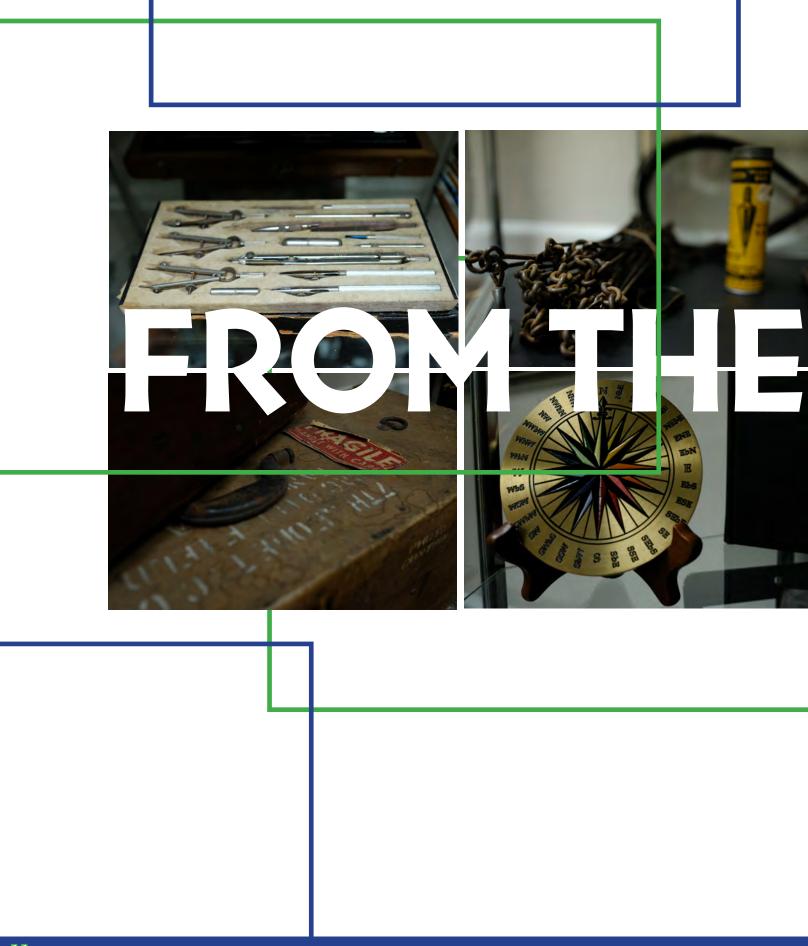




Solutions By State









SHADOWING PSMs

by Robert H. Hughan, Jr., PLS

During the month of March 2002, Jerry McCarthy (FDOT Survey, District IV) was contacted by Scott McLaughlin, President of the Broward County Local Chapter in reference to sponsoring a Career Shadowing Day for several high school mathematics teachers and their students. The idea was to teach the students how mathematics relates and interacts with surveying. Jerry McCarthy contacted Deborah Wells, Department Coordinator for the Broward County Schools, where she provided additional information on how to successfully host a one-day Shadowing Day for these teachers and students.

At that time, our department created a task team consisting of six employees. They were, Jerry McCarthy PLS, Kader Nazef, Paul Doll, Michelle Chafant, Mike Balogh and Dan Checchia, with John Brozic from our OIS Department as our Power Point advisor. Their goal was to formulate a program that would fulfill the requirements needed to host this Shadowing Day. After their meeting, they agreed that a Power Point presentation delineating the history of surveying, its methodology, and a pictorial on the instruments used in surveying and how they have evolved through the years as well as explaining how important mathematics is to the surveying field would be the most insightful method. This team worked very hard to prepare this presentation and they were prepared to tackle any questions the students or teachers would present.

On the days the presentations were to be held, it was important for the team to make the students and teachers alike feel comfortable. The students were from Miramar High School and the teachers represented seven different high schools within the District IV region. They were graciously greeted and introductions were made. The presentation began with Jerry McCarthy discussing the history of surveying and provided them with its definition, "Survey has to do with the determination of the relative spatial location of points on or near the surface of the earth." He went on to explain in terms these young students could understand this meaning. He discussed how explorers navigated the oceans using an astrolabe and sundials, such as Christopher Columbus. He also discussed how man created maps and provided a brief outline of the Lewis and Clark expedition. This was helpful to the students as they were all familiar with these explorers. He discussed how boundary surveying began in Egypt along the Nile River and how metes and bounds descriptions were used in Europe as well as in the original 13 Colonies in America. Photographs of three great American Presidents

20 • The Florida Surveyor Cotober 2002



were shown, George Washington, Thomas Jefferson and Abraham Lincoln, as they too were surveyors. Photographs of original government sur-

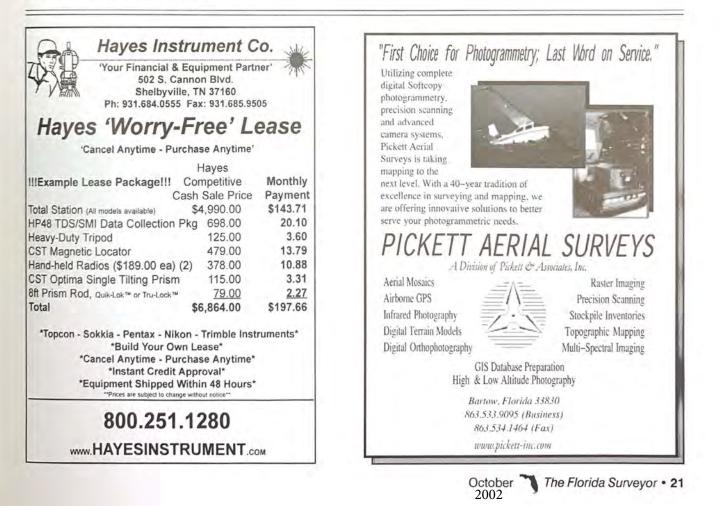
veyors depicting the hardships they endured were also shown. An explanation on how the Public Land Surveys vs. Metes and Bounds were made as well as how the initial point came about in Tallahassee.

Paul Doll followed the presentation and discussed datum's, coordinates, reference systems and photogrammetry. He explained that the starting point for the Horizontal 1927 datum was Meads Ranch in Kansas and that the Horizontal 1983/90 was best fit to the earth's center. The vertical 1929 datum was discussed including how it uses 26 tide gauges in the United States and Canada along with 100,000 benchmarks, and 102,724 km of leveling and how they were distorted to fit the tide gauges. The next item of discussion was the vertical 1988 NAVD based on Father's Point, Rimouski, Quebec, Canada and how it uses 450,000 benchmarks, with 1,001,500 km of leveling which best fits the continental model and uses the least square adjustment. He then discussed photogrammetry, the process of making maps or scaled drawings by aerial or other photography. The different accuracies using a fixed wing aircraft versus a rotary wing aircraft was discussed. LIDAR and how it is used in surveying was also discussed as well as trilateration and triangulation. He provided information on how these are used in surveying and photographs of the old towers were shown. Global Positioning Systems (GPS), rectangular coordinates, horizontal curves, right triangles, oblique triangles and leveling were also explained in detail.

Dan Checchia then provided a presentation on how surveying equipment has evolved through the years. He began by explaining how the different types of equipment operate, such as chains, a compass, a solar compass, transit, theodolite, data collectors and Global Positioning Systems. He explained to the students that the original chain was 66 feet long and consisted of 100 links and how today's chains and Electronic Distance Measurers (EDM's) function. He explained to them how a compass has no adjustment and always reads magnetic north, but that a vernier compass has an adjustable scale that allows for setting off the magnetic declination, enabling you to read true north. He explained how a solar compass operates and how its special purpose is to obtain latitude and longitude and after it was invented it was required by law to be used on all public land surveys. He discussed how the transit and theodolite made it easy to read angles and how the total station was used to measure horizontal and vertical angles and distances along with the data collectors to record all of the information electronically. He concluded by explaining how the GPS was developed by the Department of Defense and how it is based on an intricate network of 24 operational satellites that are designed to be resistant to jamming and interference and uses an atomic clock for precise time, which is necessary to calculate the distances from the satellites to the ground and how Continually Operating Reference Stations (CORS) operate and indicated that FDOT, District IV Office building has one mounted on the northwest corner of its roof.

After the Power Point presentation concluded the team lead the teachers and students outside to have them implement everything they had learned. They were to collect some data with conventional instruments and learn how the GPS units work. After the data was collected it was brought in and processed so they could view a small Digital Terrain Model (DTM). The students were given safety equipment to wear and were organized the same way a surveying crew would be. They all seemed excited. After all the presentations and demonstrations had concluded a small question and answer session ensued, and it was evident that their interest had been piqued. Some of their questions included, why there were no women surveyors. They were told that although District IV has no licensed professional women surveyors working in the surveying department, there were two women in the surveying department and one (Michele) was part of the six member team.

In conclusion the team felt that they had accomplished all that they had planned during their initial team meeting. They were able to provide insight on the history behind surveying, they taught the teachers and students the methodology behind surveying and gave them an opportunity to engage in a hands-on working environment, and of course the depth of importance mathematics plays in this dynamic field. The team worked very hard to prepare for these days, and it was evident that they all took pride in their field of work. Their history lessons in surveying were very refreshing even to the most experienced surveyors. Those long hours preparing for this day certainly paid off for this crew of six who took it upon themselves to provide a fascinating learning tool for these young students and their efforts are commendable in the eyes of all fellow surveyors. This was a very enjoyable experience for all of us and we welcome any ideas that would help improve any future Shadowing Days our Department will have.



GET KIDS into survey!

Get Kids into Survey is an organization set up by Elaine Ball in 2017. Elaine runs a technical marketing consultancy specialising in the geospatial industry. In October 2017, Elaine was asked to provide material for some free packs given out at The Survey Association (TSA) conference in the United Kingdom. Instead of creating some promotional

By: Elaine Ball & Elly Ball



material about her marketing workshops, Elaine thought it would be more fun and rewarding to do something good for the industry. And so, with help from some of her friends in the industry to provide support for the cost of artwork and printing, Elaine created a poster for the surveyors attending the conference that they could take home to their kids. Through the poster the surveyors could teach their kids what they do at work thus also combating the issue of recruitment we face in the industry. It was a success.

After the initial 500 posters were printed, Elaine then went on to produce the Antarctica poster. The interest skyrocketed and went beyond anything we imagined. In 2018 Timothy Burch of NSPS went out of his way to visit Elaine in

Florida where she was attending a conference for her client TopoDOT. It was then that the NSPS took on the distribution of the posters for the Americas. With that, we went into a more regular production of posters and other educational resources.

Fast forward to 2019. With the incredible momentum of the interest in the posters, Elaine decided it was time to put a real focus on the GKiS initiative and make it into its own enterprise, rather than just something she did in her spare time. In February 2019 Elly, Elaine's younger sister, took over the day to day running of Get Kids into Survey. In the last year we have gained 2 more distributors: The Chartered Institution for Civil Engineering Surveyors (CICES) in the UK for UK and Europe and more recently, The NSW Taskforce in Australia for Oceania who help

us to distribute our posters to their region as well as promote and support us. Additionally, 37 Brand Ambassadors (and growing) now represent us in 8 different countries who go above and beyond to share our free resources as well as take part in career fairs and presentations in schools.

Since 2017 we have gained more than 65 sponsors over 15 posters who each support our mission and help us to produce not only posters, but comic strips, colouring in sheets, activity pages and lesson plans. For this next year, our focus is to

collaborate with more educational organisations globally to get our material in the classroom as part of school projects and used in amongst the curriculum. In 2021, we will also be producing a full comic book complete with activities supported by our sponsors as well as a teaching curriculum that complements it. Our plan is for kids not only to enjoy the comic book for fun, but that it can be used in the classroom or as a homeschooling resource.

To preview the comic series, the California Surveyor is printing the first chapter for us. Share with your kids and enjoy! You can find chapter 2 on our website and chapter 3 is currently being published in POB Magazine monthly.

To help us with our mission to educate and excite the next generation of surveyors and geospatial experts, please get in touch.



First poster produced November 2017

hello@getkidsintosurvey.com www.getkidsintosurvey.com



Originally published in California Surveyor Magazine, September 2020 Reprinted in The Florida Surveyor with permission from Elly Ball



You can view our Brand Ambassadors on our website. <u>www.getkidsintosurvey.com/directory</u>

2020 Committees

Standing Committees							
Nominating Committee	Hal Peters						
Membership Committee	Dodie Keith-Lazowick						
Finance Committee	Bon Dewitt						
Executive Committee	Don Elder						
Education Committee	Dianne Collins						
Annual Meeting Committee	Jim Sullivan						
Legal Committee	Jack Breed						
Strategic Planning Committee	Hal Peters						
Ethics Committee	Joe Perez						
Legislative Committee	John Clyatt						
Surveying & Mapping Council	Randy Tompkins						
Constitution & Resolution Advisory Committee	Eric Stuart						

Special Committees

Equipment Theft	Manny Vera				
Awards Committee	Dianne Collins				
UF Alumni Recruiting Committee	Russell Hyatt				
Professional Practice Committee	Lou Campanile, Jr.				

Liaiso	ons
CST Program	Alex Jenkins
FDACS BPSM	Howard Ehmke
Surveyors in Government	Richard Allen
Academic Advisory UF	Bon Dewitt
FES	Lou Campanile, Jr.

Practice Sections

Geospatial Users Group

Earl Soeder

ADMINISTRATIVE staff









Executive Director Tom Steckler director@fsms.org

Education Director Rebecca Culverson education@fsms.org

Communications Director

Laura Levine communications@fsms.org

Regional Coordinator Cathy Campanile seminolecc84@gmail.com

The Florida Surveying and Mapping Society 1689-A Mahan Center Blvd., Tallahassee, FL 32330

Tom's Tip of the Month

The time is always right to do what is right.

Martin Luther King, Jr.

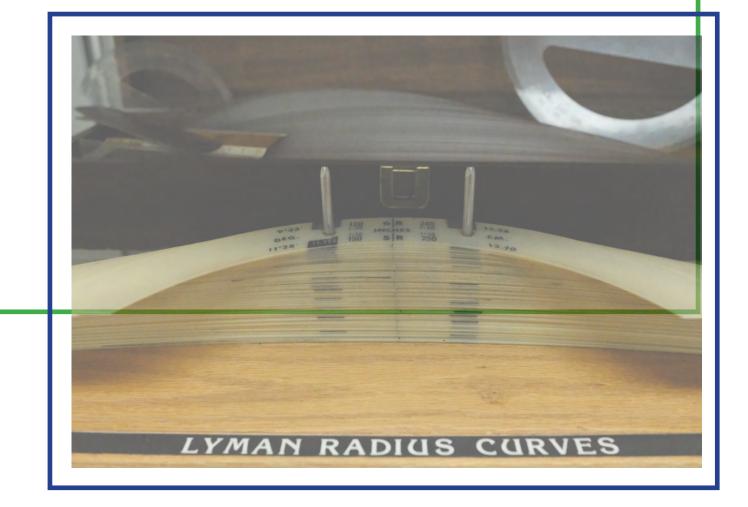
The Florida Surveyor is the official publication of the Florida Surveying and Mapping Society, Inc. (FSMS). It is published monthly for the purpose of communicating with the professional surveying community and related professions who are members of FSMS. Our award winning publication informs members eleven months of the year of national, state, and district events and accomplishments as well as articles relevant to the surveying profession. The latest educational offerings are also included.

INTEGRITY

Pass It On.com



Sustaining S Directory



А	
Accuright Surveys of	407-894-6314
Orlando, Inc.	
Agnoli, Barber &	239-597-3111
Brundage, Inc.	
AIM Engineering &	239-332-4569
Surveying	
Allen & Company, Inc.	407-654-5355
Allen Engineering, Inc.	321-783-7443
AM Engineering, Inc.	941-377-9178
American Consulting	813-435-2600
Professionals, LLC.	
American Surveying, Inc.	813-234-0103
Amerritt, Inc.	813-221-5200
Arc Surveying & Mapping,	904-384-8377
Inc.	
Associated Land Surveying	407-869-5002
& Mapping, Inc.	
Avirom & Associates, Inc.	561-392-2594
Axis Geospatial SE, LLC.	386-439-4848
В	
Banks Engineering	239-939-5490
Barnes, Ferland and	407-896-8608
Associates, Inc.	
Barraco & Associates, Inc.	239-461-3170
Bartram Trail Surveying,	904-284-2224
Inc.	
Bello & Bello Land	305-251-9606
Surveying Corporation	
Benchmark Surveying &	850-994-4882
Land Planning, Inc.	
Berntsen International	608-443-2773
Betsy Lindsay, Inc.	772-286-5753
Biscayne Engineering	305-324-7671
Company, Inc.	
Boatwright and Durden	904-241-8550
Land Surveyors, Inc.	
Bock & Clark Corporation	330-665-4821
Bowman Consulting	703-464-1000
Group, Ltd.	
Brown & Phillips, Inc.	561-615-3988
BSE Consultants, Inc.	321-725-3674
Buchanan & Harper, Inc.	850-763-7427
Bussen-Mayer Engineering Group, Inc.	321-453-0010

С						
C & M Road Builders, Inc.	941-758-1933					
Calvin, Giordano, &	954-921-7781					
Associates						
Cardno, Inc.	407-629-7144					
Carter Associates, Inc.	772-562-4191					
Caulfield & Wheeler, Inc.	561-392-1991					
Causseaux, Hewett &	352-331-1976					
Walpole, Inc.						
Chastain-Skillman, Inc.	863-646-1402					
CivilSurv Design Group,	863-646-4771					
Inc.						
Clary & Associates, Inc.	904-260-2703					
Clements Surveying, Inc.	941-729-6690					
Collins Survey Consulting,	863-937-9052					
LLC.						
Compass Engineering &	727-822-4151					
Surveying, Inc.						
Compass Point Surveyors,	954-332-8181					
PL						
Control Point Assocites FL,	908-668-0099					
LLC.						
Cousins Surveyors &	954-689-7766					
Associates, Inc.						
CPH, Inc.	407-322-6841					
Craven-Thompson &	954-739-6400					
Associates, Inc.	0.41 740 0240					
Cross Surveying, LLC.	941-748-8340					
Culpepper & Terpening	772-464-3537					
Inc.	727 224 1070					
Cumbey & Fair, Inc.	727-324-1070					
D						
Dagostino Geospatial, Inc.	239-352-6085					
DeGrove Surveyors, Inc.	904-722-0400					
Dennis J. Leavy &	561-753-0650					
Associates						
Dewberry	321-354-9729					
DMK Associates, Inc.	941-475-6596					
Donald W. McIntosh	407-644-4068					
Associates, Inc.						
Donoghue Construction	850-763-7427					
Layout, Inc.						

Douglass, Leavy &	954-344-7994
Associates, Inc.	
DRMP, Inc.	407-896-0594
DSW Surveying &	352-735-3796
Mapping, PLC.	
Duncan Parnell	407-601-5816
Durden Surveying &	904-853-6822
Mapping, Inc.	
Е	
Echezabal & Associates,	813-933-2505
Inc.	
ECHO UES, Inc.	888-778-3246
Eda Engineers-	352-373-3541
Surveyors-Planners, Inc.	
E.F. Gaines Surveying	239-418-0126
Services, Inc.	
Eiland & Associates, Inc.	904-272-1000
Element Engineering	813-386-2101
Group, LLC.	
Engenuity Group, Inc.	561-655-1151
Engineering Design &	772-462-2455
Construction, Inc.	
England, Thims & Miller, Inc.	904-642-8990
	205 960 2966
ER Brownell & Associates, Inc.	305-860-3866
ESP Associates	813-295-9024
ETM Suryeying & Mapping	904-642-8550
Exacta Land Surveyors, Inc.	305-668-6169
F	
First Choice Surveying, Inc.	407-951-3425
Florida Design Consultant,	727-849-7588
Inc.	/2/-04/-/300
Florida Engineering &	941-485-3100
Surveying, LLC.	
F.R. Aleman & Associates,	305-591-8777
Inc.	
F.R.S. & Associates, Inc.	561-478-7178
FLT Geosystems	954-763-5300
Fortin, Leavy, Skiles, Inc.	305-653-4493
FTE Engineers & Planners	800-639-4851

G	
Gary Allen Land Surveying	850-877-0541
Geodata Consultants, Inc.	407-732-6965
Geoline Surveying	386-418-0500
Geomatics Corporation	904-824-3086
Geo Networking, Inc.	407-549-5075
GeoPoint Surveying, Inc.	813-248-8888
George F. Young, Inc.	727-822-4317
GeoSurv, LLC.	877-407-3734
Germaine Surveying, Inc.	863-385-6856
GPI Geospatial, Inc.	407-851-7880
Gustin, Cothern & Tucker, Inc.	850-678-5141
Н	
Hamilton Engineering & Surveying, Inc.	813-250-3535
H.L. Bennett & Associates, Inc.	863-675-8882
Hanson Professional Services, Inc.	217-788-2450
Hanson, Walter & Associates, Inc.	407-847-9433
Hole Montes, Inc.	239-254-2000
Hyatt Survey Services, Inc.	941-748-4693
Ι	
I.F. Rooks & Associates, LLC.	813-752-2113
J	
John Ibarra & Associates, Inc.	305-262-0400
John Mella & Associates, Inc.	813-232-9441
Johnston's Surveying, Inc.	407-847-2179
Jones, Wood, & Gentry, Inc.	407-898-7780

К					
KCI Technologies, Inc.	954-776-1616				
Keith and Associates, Inc.	954-788-3400				
Kendrick Land Surveying	863-533-4874				
King Engineering	813-880-8881				
Associates, Inc.					
L					
L&S Diversified, LLC.	407-681-3836				
Landmark Engineering &	813-621-7841				
Surveying Corporation					
Land Precision	727-796-2737				
Corporation					
Langan Engineering	973-560-4900				
Leading Edge Land	407-351-6730				
Services, Inc.	205 (52 5122				
Leiter Perez & Associates, Inc.	305-652-5133				
Lengemann	352-669-2111				
Leo Mills & Associates, Inc.	941-722-2460				
LidarUSA	256-274-1616				
Long Surveying, Inc.	407-330-9717				
Ludovici & Orange	305-448-1600				
Consulting Engineers					
М					
M MacSurvey, Inc.	727-725-3269				
MacSurvey, Inc. Manuel G. Vera &	727-725-3269 305-221-6210				
MacSurvey, Inc.					
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying &					
MacSurvey, Inc. Manuel G. Vera & Associates, Inc.	305-221-6210				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC.	305-221-6210 239-389-0026				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A.	305-221-6210 239-389-0026 813-207-1061				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying	305-221-6210 239-389-0026 813-207-1061				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC.	305-221-6210 239-389-0026 813-207-1061 305-853-0066				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc.	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc. McKim & Creed, Inc.	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478 919-233-8091				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc.	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc. McCain Mills, Inc. McKim & Creed, Inc.	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478 919-233-8091				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc. McCain Mills, Inc. McKim & Creed, Inc. McLaughlin Engineering, Co. Metron Surveying and Mapping, LLC.	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478 919-233-8091 954-763-7611				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc. McCain Mills, Inc. McKim & Creed, Inc. McLaughlin Engineering, Co. Metron Surveying and Mapping, LLC. Metzger + Willard, Inc. Mock Roos & Associates,	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478 919-233-8091 954-763-7611 239-275-8575				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc. McCain Mills, Inc. McKim & Creed, Inc. McLaughlin Engineering, Co. Metron Surveying and Mapping, LLC. Metzger + Willard, Inc. Mock Roos & Associates, Inc.	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478 919-233-8091 954-763-7611 239-275-8575 813-977-6005 561-683-3113				
MacSurvey, Inc. Manuel G. Vera & Associates, Inc. Marco Surveying & Mapping, LLC. Maser Consulting, P.A. Massey-Richards Surveying & Mapping, LLC. Masteller, Moler & Taylor, Inc. McCain Mills, Inc. McCain Mills, Inc. McKim & Creed, Inc. McLaughlin Engineering, Co. Metron Surveying and Mapping, LLC. Metzger + Willard, Inc. Mock Roos & Associates,	305-221-6210 239-389-0026 813-207-1061 305-853-0066 772-564-8050 813-752-6478 919-233-8091 954-763-7611 239-275-8575 813-977-6005				

NSignation Electronics, Inc.337-237-1413Northstar Geomatics, Inc.772-485-1415Northwest Surveying, Inc.813-889-9236NV5, Inc.407-896-3317OSignatureOSignatureOmni Communications, LLC.813-852-1888On The Mark Surveying, LLC.321-626-6376PEC Surveying & Mapping, LLC.407-542-4967Pennoni Associates, Inc.215-222-3000Pickett & Associates, Inc.863-533-9095Platinum Surveying & 863-904-4699863-904-4699Mapping, LLC.941-378-4797Point Break Surveying, LLC.941-378-4797Point Break Surveying, Surveyors, Inc.941-378-4797Porter Geographical Postioning & Surveying, Inc.863-853-1496Porter Geographical Postioning & Surveying, Inc.863-853-1496Pulice Land Surveyors, Inc.954-572-1777Q209-947-1144Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.352-622-3133Richard P. Clarson & Surveying, Inc.305-872-1348Rurveying, Inc.305-872-1348Rurveying, Inc.305-872-1348Rurveying, Inc.305-872-1348Surveying, Inc.305-872-1348Surveying, Inc.305-872-1348Surveying, Inc.305-872-1348Surv	Murphy's Land Surveying	727-347-8740					
Northstar Geomatics, Inc. 772-485-1415 Northwest Surveying, Inc. 813-889-9236 NV5, Inc. 407-896-3317 O	N						
Northwest Surveying, Inc.813-889-9236NV5, Inc.407-896-3317OOmni Communications, LLC.813-852-1888Don The Mark Surveying, LLC.321-626-6376PPEC Surveying & Mapping, LLC.407-542-4967Pickett & Associates, Inc.215-222-3000Pickett & Associates, Inc.863-904-4699Mapping, LLC.941-378-4797Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Polaris Associates, Inc.727-461-6113Potrer Geographical Positioning & Surveying, Inc.863-853-1496QGrady Minor & Associates, PA239-947-1144R239-947-1144Richard P. Clarson & Associates, Inc.904-396-2623Richard P. Clarson & Associates, Inc.352-622-3133R. M. Barrineau & Associates, Inc.352-622-3133R. M. Barrineau & Associates, Inc.305-872-1348Runc Recee & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Robayna and Associates, Inc.305-823-9316	Navigation Electronics, Inc.	337-237-1413					
Northwest Surveying, Inc.813-889-9236NV5, Inc.407-896-3317OOmni Communications, LLC.813-852-1888Don The Mark Surveying, LLC.321-626-6376PPEC Surveying & Mapping, LLC.407-542-4967Pickett & Associates, Inc.215-222-3000Pickett & Associates, Inc.863-904-4699Mapping, LLC.941-378-4797Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Polaris Associates, Inc.727-461-6113Potrer Geographical Positioning & Surveying, Inc.863-853-1496QGrady Minor & Associates, PA239-947-1144R239-947-1144Richard P. Clarson & Associates, Inc.904-396-2623Richard P. Clarson & Associates, Inc.352-622-3133R. M. Barrineau & Associates, Inc.352-622-3133R. M. Barrineau & Associates, Inc.305-872-1348Runc Recee & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Robayna and Associates, Inc.305-823-9316	Northstar Geomatics, Inc.	772-485-1415					
NV5, Inc.407-896-3317O813-852-1888LLC.813-852-1888LLC.321-626-6376On The Mark Surveying, LLC.321-626-6376P9PEC Surveying & Mapping, LLC.407-542-4967Pennoni Associates, Inc.215-222-3000Pickett & Associates, Inc.863-533-9095Platinum Surveying & Mapping, LLC.863-904-4699Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Porter Geographical Positioning & Surveying, Inc.863-853-1496Pointe Land Surveying, Inc.954-572-1777Q2Q Grady Minor & Associates, Inc.329-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Richard P. Clarson & Associates, Inc.305-872-1348Rurveying, Inc.305-872-1348Robayna and Associates, Inc.305-86-1111		813-889-9236					
OImage: style sty							
LLC.Image: constraint of the state of the sta							
LLC.Image: constraint of the state of the sta		212 052 1000					
On The Mark Surveying, LLC.321-626-6376PPEC Surveying & Mapping, LLC.407-542-4967Pennoni Associates, Inc.215-222-3000Pickett & Associates, Inc.863-533-9095Platinum Surveying & Mapping, LLC.863-904-4699Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Porter Geographical Positioning & Surveying, Inc.863-853-1496Pulice Land Surveyors, Inc.954-572-1777Q2Q Grady Minor & Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Rece & White Land Surveying, Inc.941-924-1600Robayna and Associates, Inc.95-872-1348Rogers, Gunter, Vaughn850-386-1111		813-852-1888					
LLC.Image: constraint of the symmetry		221 (26 6276					
PImage: series of the series of t		321-626-63/6					
PEC Surveying & Mapping, LLC.407-542-4967PENDONI Associates, Inc.215-222-3000Pickett & Associates, Inc.863-533-9095Platinum Surveying & Mapping, LLC.863-904-4699Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Points Associates, Inc.727-461-6113Potrer Geographical Positioning & Surveying, Inc.863-853-1496Police Land Surveyors, Inc.954-572-1777Q2Q Grady Minor & Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600R.J. Rhodes Engineering, Inc.941-924-1600Robayna and Associates, Inc.305-872-1348Rogers, Gunter, Vaughn850-386-1111							
LLC.Pennoni Associates, Inc.215-222-3000Pickett & Associates, Inc.863-533-9095Platinum Surveying & Mapping, LLC.863-904-4699Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Polaris Associates, Inc.727-461-6113Porter Geographical Positioning & Surveying, Inc.863-853-1496Polite Land Surveyors, Inc.954-572-1777Q2Q Grady Minor & Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600R.J. Rhodes Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	-						
Pickett & Associates, Inc.863-533-9095Platinum Surveying & Mapping, LLC.863-904-4699Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Polaris Associates, Inc.727-461-6113Porter Geographical Positioning & Surveying, Inc.863-853-1496Point o Point Surveyors, Inc.954-572-1777Q2Q2Q Grady Minor & Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Inc.305-872-1348Surveying, Inc.305-823-9316Rece & White Land Surveying, Inc.305-823-9316Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111		407-542-4967					
Platinum Surveying & Mapping, LLC.863-904-4699Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Polaris Associates, Inc.727-461-6113Porter Geographical Positioning & Surveying, Inc.863-853-1496Point to Surveyors, Inc.954-572-1777Q20Q Grady Minor & Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Recce & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Pennoni Associates, Inc.	215-222-3000					
Platinum Surveying & Mapping, LLC.863-904-4699Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Polaris Associates, Inc.727-461-6113Porter Geographical Positioning & Surveying, Inc.863-853-1496Point to Surveyors, Inc.954-572-1777Q20Q Grady Minor & Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Recce & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Pickett & Associates, Inc.	863-533-9095					
Mapping, LLC.941-378-4797Point Break Surveying, LLC.941-378-4797Point to Point Land Surveyors, Inc.678-565-4440Polaris Associates, Inc.727-461-6113Porter Geographical Positioning & Surveying, Inc.863-853-1496Positioning & Surveying, Inc.954-572-1777Q2Q Grady Minor & Associates, PA239-947-1144R239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Platinum Surveying &	863-904-4699					
LLC.Image: constraint of the section of t	, .						
LLC.Image: constraint of the section of t		941-378-4797					
Surveyors, Inc.727-461-6113Polaris Associates, Inc.727-461-6113Porter Geographical Positioning & Surveying, Inc.863-853-1496Pulice Land Surveyors, Inc.954-572-1777Q239-947-1144Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111							
Polaris Associates, Inc.727-461-6113Porter Geographical863-853-1496Positioning & Surveying, Inc.863-853-1496Pulice Land Surveyors, Inc.954-572-1777Q2Q Grady Minor & Associates, PA239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Recce & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Point to Point Land	678-565-4440					
Porter Geographical Positioning & Surveying, Inc.863-853-1496Pulice Land Surveyors, Inc.954-572-1777Q239-947-1144Q Grady Minor & Associates, PA239-947-1144R239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Recee & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Surveyors, Inc.						
Positioning & Surveying, Inc.954-572-1777Q954-572-1777Q239-947-1144Associates, PA239-947-1144R239-405-8166Surveying, Inc.904-396-2623Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Rece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Polaris Associates, Inc.	727-461-6113					
Inc.Inc.Pulice Land Surveyors, Inc.954-572-1777QImage: Constraint of the second seco	U 1	863-853-1496					
Pulice Land Surveyors, Inc.954-572-1777Q2Q Grady Minor & Associates, PA239-947-1144R239-947-1144Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111							
QImage: Constraint of the system							
Associates, PAAssociates, PAR239-405-8166Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Pulice Land Surveyors, Inc.	954-572-1777					
Associates, PAAssociates, PAR239-405-8166Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Q						
RImage: Second seco	Q Grady Minor &	239-947-1144					
Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Associates, PA						
Rhodes & Rhodes Land Surveying, Inc.239-405-8166Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	R						
Surveying, Inc.Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Rhodes & Rhodes Land	239-405-8166					
Richard P. Clarson & Associates, Inc.904-396-2623R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111							
R.M. Barrineau & Associates, Inc.352-622-3133R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111		904-396-2623					
Associates, Inc.941-924-1600R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Associates, Inc.						
R.J. Rhodes Engineering, Inc.941-924-1600Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	R.M. Barrineau &	352-622-3133					
Inc.Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Associates, Inc.						
Reece & White Land Surveying, Inc.305-872-1348Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	R.J. Rhodes Engineering,	941-924-1600					
Surveying, Inc.Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111	Inc.						
Robayna and Associates, Inc.305-823-9316Rogers, Gunter, Vaughn850-386-1111		305-872-1348					
Inc. Rogers, Gunter, Vaughn 850-386-1111							
Rogers, Gunter, Vaughn 850-386-1111	,	305-823-9316					
6							
Insurance, Inc. (HUB FL)	0	850-386-1111					
	Insurance, Inc. (HUB FL)						

S	
SAM Surveying & Mapping, LLC.	850-385-1179
Sergio Redondo & Associates, Inc.	305-378-4443
Settimio Consulting Services	850-341-0507
SGC Engineering, LLC.	207-347-8100
Shah Drotos & Associates, PA	954-943-9433
Shannon Surveying, Inc.	407-774-8372
Sherco, Inc.	863-453-4113
Sliger & Associates	386-761-5385
S&ME, Inc.	407-975-1273
Southeastern Surveying & Mapping Corp.	407-292-8580
Stephen H. Gibbs Land Surveyors, Inc.	954-923-7666
Stoner & Associates, Inc.	954-585-0997
Strayer Surveying & Mapping, Inc.	941-497-1290
Suarez Surveying & Mapping, Inc.	305-596-1799
Surv-Kap	520-622-6011
SurvTech Solutions, Inc.	813-621-4929
Т	
T2UES, Inc.	855-222-8283
Thurman Roddenberry & Associates, Inc.	850-962-2538
Tuck Mapping Solutions, Inc.	276-523-4669

U				
Upham, Inc.	386-672-9515			
W				
Wade Surveying, Inc.	352-753-6511			
Wallace Surveying Corp.	561-640-4551			
Wantman Group, Inc.	561-687-2220			
WBQ Design & Engineering, Inc.	407-839-4300			
Winningham & Fradley, Inc.	954-771-7440			
Woolpert, Inc.	937-461-5660			
Ζ				
ZNS Engineering, LLC.	941-748-8080			

FSMS

MEMBERSHIP BENEFITS



Brand Awareness

For unique and creative branded products! Send your logo and receive a free sample!

(850) 510-0273 www.BurkeBuchanan.com

Copier Services

Call Scott Tharpe at Advanced Business Systems for member discounts on all office automation & IT needs, including all Canon, Toshiba, Savin, HP, & Kyocera. We can ship anywhere in the U.S.

(850) 222-2308 www.a-b-s.com

Payroll Services

For all your payroll needs, call Philip Browning.

(850) 224-2439 www.NorthFloridaPayroll.com

Background Checks

Researcher's Associates has been in business for 40 years, providing background checks for employers, insurance companies & attorneys. We wil be happy to tailor our services to meet your needs.

Mary Gay (850) 893-2548

Florida Surveying & Mapping Society 1689 Mahan Center Blvd., Suite A Tallahassee, FL 32308

Rental Car Discounts

Enjoy great savings every time you rent from Alamo Rent A Car, Enterprise & National.

Wendy Silva (407) 447-7999 Contact FSMS office for the link to discount.

Tech Strategy

Trulight is an advisor for tech strategy. We show organizations how to highlight areas of opportunity, while minimizing areas of risk. Key to minimizing risk, is a well defined and implemented cyber security strategy and plan.

Jonathan Kilpatrick Jonathan.Kilpatrick@trulightconsulting.com

Insurance

Rogers, Gunter, Vaughn Insurance (RGVI)/HUB Florida has been the endorsed agent by FSMS for over 35 years, providing specialized insurance for Surveying, Mapping, Architectural, and Engineering Firms. RGVI/HUB can assist you and your firm in obtaining all lines of insurance.

Agent: Russ Browning 1117 Thomasville Road, Tallahassee, FL 32303 Office: (850) 205-0559 Mobile: (850) 545-5219 Russ.Browning@hubinternational.com

> Phone: (850) 942-1900 Fax: (850) 877-4852 www.fsms.org



2020 eLearning Courses

6 General CEC - \$120/course

- Professional Ethics & Professional Courtesy FULL
 Video Course #8363
- Georgia Technical Standards for Property Surveys-Course #8554
- History of Surveying Course #7140
- Identification of Native & Non-Native Trees in Florida - Course #8132
- Ethics for the Design Professional Course #8621
- Land Tenure & Cadastral Systems Course # 8260
- Map Projections & Plane Coordinate Systems -Course #8261
- Mean High Water Observations & Computations -Course #8262
- Public Land Survey System Course #7147
- Remote Sensing Applications to Surveying & Mapping - Course #7148
- Practical Geometry for Surveyors Course #7141

3 General CEC - \$70/course

- Basics of Real Property Course #8360
- Contracts for the Professional- Course #8412
- Elevation Certificates & the Community Rating System - Course #8256
- Introduction to Photogrammetry Course #7968
- Writing Boundary Descriptions Course #8362

6 SOP/L&R CEC - \$120/course

- Boundaries in Florida Course #8255
- Florida Laws Course #7149

FLORIDA SURVEYING & MAPPING SOCIETY 1689 MAHAN CENTER BLVD., SUITE A TALLAHASSEE, FL 32308 WWW.FSMS.ORG 850.942.1900 OFFICE 850.877.4852 FAX

FSMS Correspondence Courses

Florida Surveying and Mapping Continuing Education Provider Offering 25 Years of Dedication, Quality & Trusted Services

Step 1: Choose Course(s)

3 Hour Courses Available

- □ A History of the Prime Meridian Marker, #8403, 3 CEC
- □ Basics of Real Property, #8359, 3 CEC
- Digital Signatures for Surveyors, #8491, 3 CEC
- □ Elevation Certificates and the Community Rating System, #8257, 3 CEC
- □ Introduction to Photogrammetry, #7887, 3 CEC
- □ Quality Assurance/Quality Control for the Design Professional and Technical Staff, #9293, 3 CEC
- □ Writing Boundary Descriptions, #8361, 3 CEC *2020 UPDATED COURSE

6 Hour Courses Available

- □ Boundaries in Florida, #7667, 6 CEC
- □ Chapter 177, Platting (Plat Law), #6970, 6 CEC
- Critical Communication for Surveying & Mapping Professionals, #7228, 6 CEC
- Easements and Rights of Ways, #9945, 6 CEC *2020 UPDATED COURSE
- □ Ethics for the Design Professional, #8620, 6 CEC
- D Florida Laws, #6966, 6 CEC
- □ Florida Surveying Law and Rule Changes, #9574, 6 CEC
- □ Geographic Information Systems (GIS), #7107, 6 CEC
- □ History of Surveying, #7108, 6 CEC
- □ Identification of Native and Non-Native Trees in Florida, #7874, 6 CEC
- □ Land Tenure and Cadastral Systems, #7829, 6 CEC
- □ Map Projections and Plane Coordinate Systems, #7669, 6 CEC
- □ Practical Geometry for Surveyors, #7109, 6 CEC
- □ Public Land Survey System, #6979, 6 CEC
- $\hfill\square$ Remote Sensing Applications to Surveying & Mapping, #6972, 6 CEC

FSMS Correspondence Courses

	<u>S Member</u>	Step 2: Ch				• 7 P				
	EMAILED 6 CEC	Fee		Quantity	_	^	Amount			
		\$115 Per Course			=	ې د				
	3 CEC	\$58 Per Course	х		=	≯				
	MAILED 6 CEC	\$125 Per Course	v		_	¢				
	3 CEC	\$68 Per Course	x		_	ም \$				
	3 626	TOTAL	^			Ψ ¢				
		IOTAL		_	0	م				
Non-	<u>Member</u>	AP				U,	91			
	EMAILED	Fee		Quantity			Amount			
	6 CEC	\$135 Per Course	х	_	=	\$	\sim			
	3 CEC	\$78 Per Course	Х		=	\$	N I			
	MAILED						1			
	6 CEC	\$145 Per Course	х		=	\$	T.	7		
	3 CEC	\$88 Per Course	Х		=	\$		5		
	~	TOTAL				\$		11		
Non-	Licensed in	ANY State	1							
	EMAILED	Fee		Quantity			Amount			
	6 CEC	\$100 Per Course	Х		=	\$				
T	3 CEC	\$60 Per Course	Х		=	\$				
Y	MAILED	C110 Day Course			_	*				
	6 CEC 3 CEC	\$110 Per Course \$70 Per Course			Ξ.	¢				
	3 CEC	The second se	Х			*		7		
	1	TOTAL	-			*	<u> </u>			
	2	Step 3: Pa	ayn	n <mark>ent Info</mark>	rm	atio	n ///			
e:			PSN	N#:	S	tate: _	FSMS Mem	ber:	YES	N
		0-					Sustaining F	irm:	YES	N
ess:						C	j			
State:		V CA					Zip C	code:		
il Address:						_ Wo	ork Phone:			
nent Informatior	n: (Check Enclosed (Pa	ayab	le to FSMS)		VISA/MasterCa	rd/Am	erican Ex	pres
#:				Exp. Date:	:		CVV Code:			
	redit Card:									
g Address of C										
g Address of C ature:										



Avoid touching your eyes, nose, and mouth.



cdc.gov/COVID19

STOP THE SPREAD OF GERMS Help prevent the spread of respiratory diseases like <u>COVID-19</u>.

Wash your hands often with soap and water for at least 20 seconds.



cdc.gov/COVID19

STOP THE SPREAD OF GERMS Help prevent the spread of respiratory diseases like COVID-19.

Clean and disinfect frequently touched objects and surfaces.







cdc.gov/COVID19-es

DETENGA LA PROPAGACIÓN DE LOS MICROBIOS

Ayude a prevenir la propagación de enfermedades respiratorias como el COVID-19.

Limpie y desinfecte los objetos y las superficies que se tocan frecuentemente.



cdc.gov/COVID19-es

2020 Chapter Presidents

District 1

Panhandle Mike Blanton Michael.Blanton@nee.com

> **Gulf Coast** Frederic Rankin erankin@dewberry.com

> **Chipola** Jesse Snelgrove jsnelgrove@ snelgrovesurveying.com

Northwest FL Jeremy Fletcher fletcher.jwf@gmail.com

District 2

FL Crown Kathy Wade kathy@boatwrightland.com

> **N. Central FL** Brian Murphy bmurphy@3002inc.com

> > UF Geomatics Scott Edenfield sedenfield@ufl.edu

District 3

Central FL Leon Hampton lham5910@yahoo.com

Indian River Brion Yancy brionyancy@gmail.com

> Volusia Anthony Sanzone eastcoastland@ bellsouth.net

District 4

Ridge Larry Sharp lsharp@collinssurvey.com

Tampa Bay Charlie Arnett CArnett@ Geopointsurveying.com

District 5

Charlotte Harbor Derek Miller millersurveying@ comcast.net

Collier-Lee Steve Shawles II sshawles@cesincusa.com

Manasota Donald A. Bouchard, Jr. donb@znseng.com

District 6

Broward Earl Soeder earl@gpserv.com

Palm Beach Clyde Mason clyde@ritzel-mason.com

> FAU Geomatics Gerardo Rojas grojas2017@fau.edu

District 7

Miami-Dade Frank Pauas-Suiero fparuas@gpinet.com

2020 Districts & Directors

District 1 -/Northwest

Bay, Calhoun, Escambia, Franklin, Gadsden, Madison, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton, Washington

Eric Stuart (850)857-7725 eric.stuart@sam.biz Chad Thurner (850) 200-2441 chad.thurner@sam.biz

District 2 / Northeast

Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Gilchrist, Hamilton, Lafayette, Levy, Marion, Nassau, Putnam, Suwannee, St. Johns, Union

Nick Digruttolo (863) 344-2330 ndigruttolo@pickettusa.com Randy Tompkins (904) 755-4235 randytompkins1@ outlook.com

District 3/East Central

Brevard, Flagler, Indian River, Lake, Okeechobee, Orange, Osceola, Seminole, Martin, St. Lucie, Volusia

Al Quickel (407) 567-1566 alq.fsms@gmail.com Howard Ehmke (561) 682-2987 hehmke@sfwmd.gov

District 4/ West Central

Citrus, Hernando, Hillsborough, Pasco, Pinellas, Polk, Sumter

Greg Prather (863) 533-9095 gprather@pickettusa.com

Alex Parnes (727) 847-2411 alexwolfeparnes@gmail.com

District 5/ Southwest

Collier, Charlotte, DeSoto, Glades, Hardee, Hendry, Highlands, Lee, Manatee, Sarasota

Shane Christy (941) 748-4693 shane@hyattsurvey.com Jeffrey Cooner (239) 829-7016 jeff.cooner@cardno.com



District 6/Southeast

Broward, Palm Beach

Ken Buchanan (561) 687-2220 ken.buchanan@wginc.com Dodie Keith-Lazowick (954) 788-3400 dkeith@keithteam.com

District 7/South

Miami-Dade, Monroe

Manny Vera, Jr. (305) 221-6210 mverajr@mgvera.com

NSPS Director

Russell Hyatt (941) 748-4693 russell@hyattsurvey.com Lou Campanile (954) 980-8888 lou@campanile.net

Additional Information

Past Presidents

1956 *H.O. Peters Harry C. Schwebke John P. Goggin R.H. Jones*

1960

Hugh A. Binyon Russell H. DeGrove Perry C. McGriff Carl E. Johnson James A. Thigpenn, III Harold A. Schuler, Jr. Shields E. Clark Maurice E. Berry II William C.. Hart Frank R. Schilling, Jr.

1970

William V. Keith James M. King Broward P. Davis E.R. (Ed) Brownell E.W. (Gene) Stoner Lewis H. Kent Robert S. Harris Paul T. O'Hargan William G. Wallace, Jr. Robert W. Wigglesworth **1980** Ben P. Blackburn William B. Thompson, II John R. Gargis Robert A. Bannerman H. Bruce Durden Buell H. Harper Jan L. Skipper Steven M. Woods Stephen G. Vrabel W. Lamar Evers

1990

Joseph S. Boggs Robert L. Graham Nicholas D. Miller Loren E. Mercer Kent Green Robert D. Cross Thomas L. Conner Gordon R. Niles, Jr. Dennis E. Blankenship W. Lanier Mathews, II Jack Breed

2000

Arthur A. Mastronicola Michael H. Maxwell John M. Clyatt David W. Schryver Stephen M. Gordon Richard G. Powell Michael J. Whitling Robert W. Jackson, Jr. Pablo Ferrari Steve Stinson

2010

Dan Ferrans Jeremiah Slaymaker Ken Glass Russell Hyatt Bill Rowe Dale Bradshaw Lou Campanile, Jr. Bob Strayer, Jr. Dianne Collins



Advertise With Us!

All advertisements contained within the publication are published as a service to readers. Publication of the advertisements does not imply or express any endorsement or recommendation by FSMS. The rates are as follows.

Requirements: Contracts for one year (11 issues) receive 10% discount if paid in advance; camera-ready copy (JPEG, PDF, GIF, PNG docs); new ads and/or changes are due by the 15th of each month. It is the responsibility of the client ot submit new ads or changes.

Benefits: Full color; hot links to your websites added to your ad.

L J		J	
	Size	1 Issue	2-11 Issues
	Inside Front Cover	n/a	\$525/issue
	Inside Back Cover	n/a	\$525/issue
	Full Page	\$720	\$395/issue
	1/2 Page	\$575	\$320/issue
	1/4 Page	\$290	\$175/issue
	Business Card	\$120	\$100/issue

SURV-KAP®

No Boundaries On Customer Service

We manufacture a full line of brass survey markers for all of your surveying needs.

MONUMENTS, MARKERS, CAPS & ACCESSORIES ORDER NOW: 800-445-5320 • SURV-KAP.COM



Stan Wilson | FL Sales & Support Rep | swilson@egps.net c: 770.715.3891 | o: 770.695.3361 | www.egps.net

🎔 🞯 in 🖸

YOUR ONE-STOP SHOP FOR ALL SURVEYING NEEDS!

RTK Network | Equipment, Supplies, Accessories | Tech Support Certified Repairs | Rentals | Data Plans | UAV, LiDAR Sales & Training





andmar



Gold Status GeoMax-Authorized Total Station, Robotics and GPS Service Center.





THE NEW GS18 I

The world's first GNSS smart antenna with visual positioning, redefines what an RTK rover is capable of.



www.FLTgeosystems.com





FT. LAUDERDALE

800 PROGRESSO DR., FT. LAUDERDALE, FL 33304 (954)763-5300 · FAX: (954)462-4121 1-800-327-0775

 TAMPA
 5468 56TH COMMERCE PARK BLVD., TAMPA, FL 33610 (813)623-3307 • FAX: (813)623-2100

 We'RE AN EQUAL OPPORTUNITY EMPLOYER
 1-800-282-7003