



The Florida Surveyor

Volume XXVII, Issue 1

January 2019

***Happy New
Year!***

**2019 FSMS Board of
Directors**

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President's Message



Happy New Year to everyone! I hope you all had a joyous and blessed holiday season with family and friends. This is my first message as your new President of FSMS, and I want to start by again expressing my thanks to you, the membership, for affording me the honor, privilege and opportunity to serve this great Society.

2018 was another year of positive change for FSMS under Bob Strayer's tremendous leadership. I'd like to highlight some of our accomplishments here:

1) We changed our Officer and Director terms to follow our budget and calendar year. I truly believe that the benefit of having our new Board members attend a fall meeting, having our new committees get head starts on their goals, and having our budget be consistent with our terms of office will become more and more apparent.

2) We added the benefit of a free 3-CEC voucher for every Full member who renews with FSMS, which will continue this year. This means that every biennium, a Full member will receive 6 total free CEC's by taking any two of our 3-hour course offerings.

3) We have made ALL of our meetings open and transparent. We have Committees that take the lead on specific matters, but everyone can participate by putting forth ideas, recommendations and solutions to issues. Our Board and Committee meetings have taken on a new air of comradery and teamwork that I, personally, have never seen before in this organization.

4) With the leadership of Randy Tompkins, Rick Pryce and Allen Nobles, the Florida Surveying and Mapping Council has taken the lead in determining how Florida will be impacted by the 2020 Datum change. It's been great to see this group come back together to work towards a common goal.

5) Richard Allen has very capably assumed leadership of the Surveyors In Government group. Richard, and government surveyors around the state, began working on long-needed revisions to Chapter 177, with a specific focus on the Plat section. Richard also writes a monthly column in *The Florida Surveyor* about government surveying.

6) Our Annual Conference at the Tradewinds this past summer was one of the best I've ever seen from an attendance perspective, as well as from an educational perspective. The social and entertainment events were great too, with an overall vibe that was easy-going and comfortable. Our new Vice President and Annual Meeting chair, Matt LaLuzerne, is already well underway with his committee in getting our 2019 conference in Orlando organized. Great things are happening for next summer!

7) We have a GREAT administrative staff in our Tallahassee office. Tom Steckler, Rebecca Culverson and Dominic Levings have done an outstanding job. This past year, they oversaw the change to our new webhost, MemberClicks, published our newsletter magazine *The Florida Surveyor* each month, and made our conference run smoothly and efficiently. And I can't forget Cathy Campanile, who works tirelessly in anyway she's asked to help our Society - especially with our conference planning!

This is by no means all that has been done this past year. We are prepared and looking forward to 2019 and to making even more effective changes and improvements to all aspects of this organization.

One last item: Our membership numbers in 2018 were great, but we need to continue to improve our numbers so that this Society can truly represent our industry in Florida. If you haven't yet renewed your membership for 2019, please take the few minutes it takes to do so. The renewal process is very easy through our new website, or you can contact our office in Tallahassee. Encourage your support staff to become Associate members, and your companies to become Sustaining Firms. There are benefits for all, and always remember...our Society is YOU, the member!

"The achievements of an organization are the results of the combined effort of each individual." -Vince Lombardi

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Surveyors in Government



Richard Allen, PSM, CFM

Welcome to another year – boy, life is blowing by so quickly! It seemed that someone told me just the other day: “Just think, this will be the last time you ever see the teen years in your life”. Unfortunately, I seem to be similarly reminded every time I close in on a milestone. For instance, my wife told me five minutes before my 40th birthday to enjoy the last few minutes of my thirties! That scared the crap out of me - you sometimes don’t realize things until they are put into perspective! Anyhow, I hope everyone is enjoying the fruitfulness of a great economy and is still trucking full speed ahead. On the government side, we are staying busy reviewing subdivision plats and other survey submittals.

I want to discuss plats this month. In a previous article, the topic was about potential changes coming to Florida Statutes Chapter 177. I want to readdress this, so I can hopefully get feedback on the heartburn and inconsistencies between government agencies, or in areas that need clarification or need to be removed altogether in your eyes. This discussion will become more important once 177 is opened for changes and updates.

Change is necessary to update outdated items and to provide additional clarification for items that are vague, or that may be too defined. As professionals, we should have the leeway to determine how land is subdivided and how that land is denoted with anything that affects that property. This does not mean to create new avenues for including information that does not belong on a plat.

Items will change that do not have to be on the plat, but probably should, especially in the age of the property information report. That is one area that does need additional information, including a definition. Other areas will be discussed, and this will hopefully give us a clear and concise guidance on what is required to prepare a plat.

“Change is necessary to update outdated items and to provide additional clarification for items that are vague, or that may be too defined.”

As this process begins, be sure to provide your two cents! Input is needed from those of you that plat regularly, as you encounter issues first-hand and can provide insight that reviewers or others might not have. As they say, there is more than one way to skin a cat, and there are several different ways that we interpret or come to understand something. Clarity is key and should be the ultimate goal of this process, but at the same time, you do not want to define something too narrowly so there isn’t wiggle room for a surveyor’s discretion.

Until next month my friends...

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Mixed Reality Boosts BIM in Construction

By David Burczyk - January 1, 2019

This article originally appeared in the January 2019 issue of Point of Beginning.

Building information modeling (BIM) is no longer a future state, but something geospatial professionals and contractors are putting to use today on building and infrastructure projects. Whether it's visualizing a design, allowing stakeholders to 'walk through' a building before it's complete, or using models to validate work being done according to the design, BIM has arrived.

Another exciting development around BIM is mixed reality (MR) technologies. Mixed reality is a form of augmented reality (AR) that merges real and virtual worlds to create brand new environments where physical and digital components interact in real-time. In architecture, engineering and construction (AEC) industries, MR is bringing new levels of simplicity to BIM, making it a useful tool in

commercial applications. In fact, manufacturing and construction spending on AR and virtual reality (VR) solutions is poised to overtake the consumer sector in the next five years, according to International Data Corporation (IDC) research.

An Eye on Collaboration

Mixed reality solutions are being simplified through new data platforms that reduce the time needed to place models in the physical space, as well as robust wearable technology that can store and load data to speed review of modeled data on the worksite. More than just viewing data, today's MR applications allow users to also interact with what they see on a 1:1 scale and compare components against design and installation guidance. For instance, Microsoft HoloLens, a holographic computer and head-mounted display, attaches to hard hats and enables users to use natural gestures, such as clicking with fingers, pinching the screen or moving objects on the screen, to interact with data.

Bringing the utility of mixed reality onto the construction site even further is Trimble Connect for HoloLens (TCH). Trimble Connect for HoloLens enables users to view models that have been published to their HoloLens device via the Trimble Connect software application. The application links to project models stored on Trimble Connect, a cloud-based construction management solution that acts as a collaboration hub for AEC projects. By using it, contractors can work with BIM models and read files from several different sources, including from those tools used by other trades. Adding to collaboration efforts, with just a few clicks, a user can identify how the physical planes of the worksite relate to digital models.

Envision a superintendent on-site viewing the mixed reality data showing all the components and connections, down to the nuts, bolts and hangers 'behind the walls' directly in front of him. He discovers a clash between an existing wall penetration and the electrical plan. This triggers a request for information (RFI). He then

contacts the virtual design and construction manager back in the office, who, by using the same technology, “transports” himself to the worksite to see what the superintendent sees.

To facilitate this seamless workflow, the team had loaded the structural, architectural, electrical and mechanical models onto an ANSI-approved hard hat attachment for Microsoft HoloLens. The models, prepared by the design teams for each trade, were placed in the Trimble Connect dashboard. Wearing the HoloLens, stakeholders from the various trades were able to see the models overlaid on the physical space with surface-to-surface alignment. While this is a construction-specific, not survey-specific workflow, surveyors and geospatial professionals should be particularly invested in mixed reality’s success. Because surveyors establish boundaries and control for building projects, mixed reality can be a natural extension into new areas of service.

Practical Use of Mixed Reality

This scenario happened recently at the construction site of Trimble’s 118,000-square-foot, Phase 2 building in Westminster, Colorado just northwest of Denver. General contractor JE Dunn, architect OZ

Architecture, and several trade partners in mechanical, electrical, plumbing, (MEP) layout and concrete are involved in the project. A major goal of the construction process was to validate the application of technology to foster collaboration, automate field activities, and enhance both predictability and safety.

Mixed reality solutions including Microsoft HoloLens, SketchUp Viewer for HoloLens, Trimble Connect for HoloLens, and Trimble’s new hard hat attachment for HoloLens were tested early on during the Trimble project primarily for concept visualization, visual clash detection and as-built validation. Using the mixed reality solutions, Trimble, JE Dunn and other trade partners were able to view future work in the context of the current-built environment.

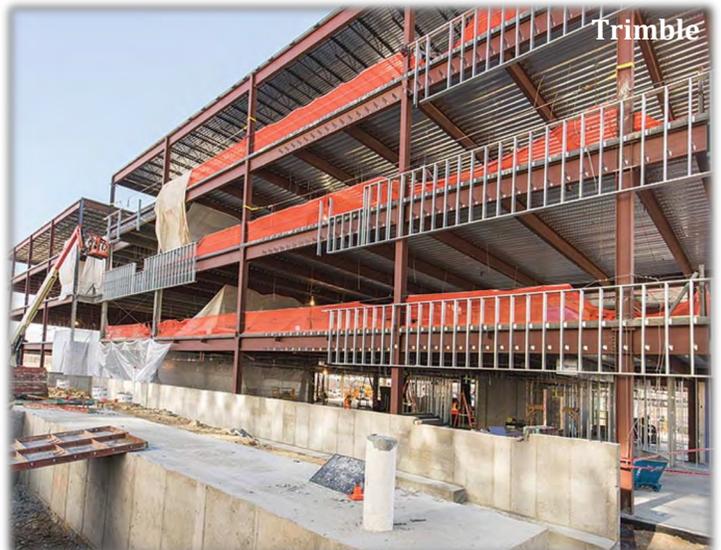
Mapping the Environment to Place the Model

While wearing the HoloLens on-site, the user logs into the Trimble Connect for HoloLens application to access the Trimble Connect dashboard and then selects the model layers he or she wants to view on site and loads them into the HoloLens. The Trimble Connect for HoloLens application then starts to “map” its environment in order to place the model. Common planes in the real world and the selected model are identified and verified by

the user. Once selected, these planes enable TCH to automatically align the model to the physical environment. Once placed, the user can begin to take measurements or annotate. Measurements can include real-world-to-real-world, virtual-element-to-real-world, or virtual-element-to-virtual-element.

In the case of the Trimble Phase 2 project, the team did discover a clash in the ductwork between the hologram state and the existing steel. From there, they initiated a remote collaboration meeting, inviting the steel contractor to view both the scene and the models without leaving the office. This resulted in an immediate work order to correct the issue.

By bringing simplicity, practicality and real-time problem-solving capabilities to the worksite, mixed reality solutions are transforming the utility of BIM. The building construction industry is filled with opportunities for improved efficiency and productivity through BIM, which also is expanding into civil infrastructure, utilities, power stations and industrial facilities. With close collaboration among project stakeholders as one of the key benefits of BIM, cloud-based services and new mixed reality and software tools for visualization will continue to increase BIM’s efficiency and effectiveness over time.



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Historical Review of

THE SURVEYING CAREER OF FRANCIS LITTLEBURY DANCY: THE YEARS AS DEPUTY



by Joe Knetsch

Francis Littlebury Dancy is an important man in the history of Florida surveying, both as a Deputy Surveyor and as Surveyor General. During his life in Florida, Dancy was one of the few men to know the intimate details of Florida's topography. Dancy's career in the military prepared him well for the difficult tasks that were to befall his lot. In the course of his surveying career, he faced many of the same difficulties of all deputies, however, few had such problems presented to them as Dancy did as a special surveyor for Spanish Land Claims. Laying down the courses and lines of the grants proved to be trying in the extreme when land owners refused to show the proper lines, earlier surveyors had marked more than one line and the Spanish calls did not reflect the topography of the grant called for in the court's decisions. In East Florida, Dancy was presented with some of the most difficult and trying work faced by post Seminole War surveyors.

Dancy's career in Florida began within seven years of his graduation from West Point in July of 1826. Descending from the North Carolina-Virginia line of Dancys, Francis Littlebury was educated in his family home in Edgecomb County, North Carolina. He was the son of Edwin Dancy and Lucy Knight, a moderately well-to-do family. Entering the military academy in 1821, he learned, as all cadets did, the basics of the profession of surveying, mathematics, physical science and history. His first placement put him in the Artillery School at Fort Monroe, Virginia.

Within a short time, he was transferred to the Bureau of Topographical Engineers and placed under the command of Major J. D. Graham, an engineer of very wide experience and one of the most prolific engineers of his age, best known for his surveys of the Great Lakes. It was under Graham that he learned the daily tasks of engineering and route surveying in South Carolina. He also saw duty under the command of Colonel Stephen Long, another of the early and productive "Topogs" who oversaw the improvement of the Western waters of the United States for much of the decade of the 1840s. Dancy worked on the turnpike route through Eastern Kentucky, Virginia, Eastern Tennessee and into North Carolina while serving under Colonel Long.

The early 1830s finds Dancy working on the road between Muscle Shoals, Alabama and Knoxville, Tennessee. After service at Fort Moultrie, his regiment of the 2nd Artillery was transferred to St. Augustine, Florida and Dancy was assigned the duty of constructing and maintaining the seawall and the repairs to Fort Marion, the American name for the Castillo San Marcos. He also was assigned the repair of the road between St. Augustine and Tallahassee, popularly known as the Bellamy Road. Fascination with the Ancient City

and, more especially one of its female inhabitants, precluded further transfers to other climes. He married Florida Forsythe Reid, the daughter of Judge [later Governor] Robert Raymond Reid in 1833. From that time on, Francis L. Dancy's future was tied to that of his adopted home.

Dancy's Florida career began with his repairing of the Bellamy Road, which needed some of the more obtrusive stumps removed and causeways repaired over the marshy areas. Dancy did not find this road as poorly constructed as some writers have assumed. His second task was the repair and extension of the seawall and the walls around the Fort. The seawall was a necessity as St. Augustine has then recently suffered from some severe flooding which covered much of the original downtown area. The repair and extension of the seawall was to lead to untold political trouble for Dancy when he was accused of misappropriating money and men for alleged private use. Of these charges he was exonerated, but his reputation did suffer for it. The repair of the old fort, however, was another, more positive story. In this case, the citizens of St. Augustine petitioned the government for an appropriation to save the old fortification for current military uses and its historical significance. This was the first "historic preservation" project in Florida and remains an inspiration to the present day. It was early recognized that the Castillo is the center piece of early Florida history and St. Augustine's greatest tourist attraction.

While still in charge of the St. Augustine repairs, Dancy was assigned the task of overseeing the clearing out of the Ocklawaha River up to Silver Springs. Working directly under orders from General Duncan L. Clinch, Dancy commenced the work in November of 1835. The young Lieutenant also saw the need to repair the road between St. Augustine and its river base at Picolata, long the main crossing spot of the St. Johns River and site of an old Spanish fortification. With trouble brewing in the interior and the uncertainty of the St. Augustine bar, the most important post for supplying the Ancient City would be this road from the landing at Picolata. Dancy's insight in repairing this road can be seen when it is known that many of the Army's higher command recommended the landing at Palatka as the main entrepot into the interior. Within two months of the Dade Massacre, in late December of 1835, the settlement at Palatka was burned and the position lost for much of the first full year of the Second Seminole War. Picolata was the main post in the area for much of the war, serving as a hospital and base until late in 1841.

With the commencement of the war, Dancy joined his regiment and was rushed to the aid of General Clinch at the latter's residence,

Auld Lang Syne Plantation, now constituted as Fort Drane. He was the officer in charge of the post when the Battle of the Withlacoochee took place, which became one of the most controversial battles of the era and set the tone for numerous disputes between the Army and Florida's militia forces. Putting his engineering training to good use, Dancy constructed two blockhouses and improved the breastworks of the fort prior to the return of the main army. The return of the forces, with numerous wounded and dead, was a pathetic sight and it was all Dr. John Bemrose and his staff could do to keep up with the primitive treatments of the day. Many died at this location and it was soon abandoned as unhealthy. Dancy, who served the remainder of his federal service at Fort Drane, considered it, "a perfect grave yard." By July of 1836, citing health considerations and having more lucrative offers elsewhere, Dancy resigned his commission and returned to St. Augustine.

Upon his return he almost immediately entered into the contract to finish the seawall. This was a political nightmare brought on by his father-in-laws' opponent, Congressional Delegate Charles Downing. Downing questioned the appointment of Dancy as the contractor at the very outset of the project and soon had his allies in Washington looking into every expenditure and hire. After two years of the project, it was removed from Dancy's hands and placed in the hands of Lieutenant Henry W. Benham, who had just recently graduated first in his class at West Point (Class of 1837) and had only one year of service under his belt. Benham was critical of Dancy and an easy tool for the manipulations of Downing and his political allies. After a few weeks of hearings concerning the charges of malfeasance, the military court found that although some small indiscretions had taken place, none were of a criminal nature and the charges were dismissed. The main problem, using the carpenters and masons on the seawall job for personal work, was explained by the fact that these were the only skilled men available in St. Augustine, this being a frontier town and a war being waged in the interior.

Dancy immediately turned to his private projects in developing his property in and around St. Augustine. His St. Augustine Heights and Shell Bluff properties received the bulk of his attention. These were supplemented by the development, in conjunction with his brother-in-law, John Graham, another recently resigned officer, of the San Sebastian River property across this river from St. Augustine. Dancy had another diversion from the loss of his contract, he served as mayor of the City of St. Augustine from January 1838 until November of 1840. During his tenure of office, ordinances were passed for the appointing of a town marshal and against public intoxication. As one would expect in the vicinity of a major Army post, much of the attention of the town council was centered upon the rough and tumble soldiers during their off duty hours and those who inhabit the fringes of such a society.

It is a fact of life on the frontier that during an Indian War, property sales are often less than brisk. Because of this, Dancy sought employment in other areas and, in 1842, called upon his friend and political ally, David Levy [Yulee was added later], the Congressional Delegate replacing Downing, for assistance in obtaining a job as Deputy Surveyor. In his letter of recommendation, Levy also reminded the Surveyor General, Valentine Conway, of their mutual need to have the Surveyor General's Office transferred to St. Augustine from Tallahassee. Conway did not miss the connection between the two topics in Levy's letter and soon employed Dancy as a special surveyor for Spanish Land Claims. Dancy's service in the Territorial Legislature delayed his beginning on the contract,

but he soon took the field.

Dancy's job was not made easy by the lack of direction by the Surveyor General, Valentine Conway, whose unique instructions have baffled many surveyors. In late 1844, Dancy had a number of queries for Conway which were not answered by his specific instructions.

Finding it impracticable to proceed with the Survey of the Private Land Claims, under instructions already received from you on the subject, I have deemed it the most certain course to apply to you for instructions on the following points:

1st When the Spanish survey is before me, and no person can be found in the neighborhood who can point out either a corner or any traces of the old line of the tract, and when after diligent Search by myself no traces can be found by what rules am I to be governed?

2nd When the starting point cannot be fully identified, but points apparently answering to the calls of the Grant (in Locality) are found, but on running out the lines & courses of the grant, the lines fall materially Shorter or longer than the Spanish Survey, What is there to be done?

3rd When two or more grants cover portions of the same land, the older grant I presume is to have preference; What rules are to govern in locating the other grants? 4th When no traces of the public Surveys are to be found (which is the case in the part of the Country in which I am now operating) How are the private Grants to be connected with the public Surveys? I will further State that I have found but one man who even professes to be able to point out the lines of his Grant.

Dancy had every reason to question what he was not finding on the ground. Much of his surveying in this period was done in Duval County, where the lines were probably never actually run on the ground by the Spanish surveyors. His instructions could never have contemplated this circumstance.

By February of the next year, Dancy was finding ever more frustrating the lack of actual evidence of surveys on the ground. "Most of my time has been taken up in trying to run the various grants from corners and lines pointed out by the claimants or their agents, but in very few instances," he complained, "have I found them to answer the calls of the Surveys made under the Spanish authorities either in courses or distances, and have consequently after spending much time and labor in satisfying myself as well as the claimants that the lines could not be run or the survey made under my instructions [I have] been compelled to pass them over." He advised Conway that he would soon explain these problems to him in St. Augustine. Upon arriving there, he found that the funds appropriated for the chain carriers and other crew members were nearly exhausted, which soon forced him to suspend operations. This delay, fortunately, was short-lived and he was back in the field by Mid-April of 1845. By the end of that month, he was on his way to New Smyrna to tackle the grants remaining in that vicinity.

Again, he found many difficulties in locating the Spanish grants. In one specific case he found that there had been no less than three previous surveys of the grant, that of a Mr. Sadler from McIntosh and, earlier, McQueen. The first survey, that of Eastlake, was the one held valid by the courts. The others, run much later by Andres Burgevin and Joshua A. Coffee, clouded the northern boundary line of the grant, according to Dancy's on the ground observations. Along this line he found numerous markings, each different

yet close enough to the line of alleged survey that they caused confusion. To make matters worse, his "guide", a local named Judan and his brother-in-law, attempted to show him the true line but, remarked to Dancy that he was "unacquainted with the country woods," and could not find the line until he reached a certain camp. Dancy informed his guides that he could not afford "fooling away my time in hunting for an object in the woods with a person who did not know where he was." They soon left upon informing Dancy that they could not work on the Sabbath Day. After the departure of his guides, Dancy continued to follow the line and did recover two corners, each 2 1/2 degrees from the courses called for in the Eastlake survey. Because these, and one other, were uniformly off by 2 1/2 degrees, Dancy decided that he must be on the correct line. In retracing the Eastlake survey, Dancy found another problem; the corner set on the river bank had eroded away. This contingency could not have been foreseen by anyone, but it did, in all likelihood, cause the surveys of Burgevin and Coffee to be askew. Dancy's perseverance in the face of these difficulties is quite admirable.

Continuing his work in the New Smyrna area, Dancy had difficulty in locating the earlier lines of Frederick Ming, an earlier surveyor of public lands in the area. Indeed, he was able to find only two hundred yards of line marked by Ming, after which he could find no additional traces of his lines. He also experienced having an incomplete diagram for his surveys sent out by Conway. So unclear and indistinct was his diagram that he could not make out the range lines or the numbers of the townships he was supposed to locate in order to commence his work. He therefore had to request an additional diagram which more clearly delineated these marks. Working further down the coast, he noted that he would finish his district by mid-July, providing he did not meet with unforeseen accident or detention. Dancy also reported that the "insects as yet are only moderate," in the first part of June.

Francis Dancy was prepared to survey in difficult territory and seldom complained about the weather, insects or Indians, however, he was not prepared for the onslaught of criticism by the U. S. Timber Agent, Hezekial Thistle. Thistle, a short, pugnacious and inventive man, was the agent assigned to prevent the depredations on Federal reserves of live oak, cedar and cypress, set aside throughout Florida for the use of the U. S. Navy. He took his job quite seriously, but was not the most knowledgeable man regarding survey lines. Thistle, at the time of Dancy's work in East Florida, was on the trail of the lumbering firm of Ferris and Palmer, who had the contract with the Navy to supply it with needed materials. Thistle constantly maintained that this firm was one of the largest of the predators on public lands. Because of Dancy's surveys of the grants, Thistle attacked him for running the lines so as to make the firm exempt from prosecution. Dancy had to defend himself against

these charges and did so very ably, noting that, "I am to act on my own judgement in the performance of my duty and not on Capt. Thistles where we differ." The case against Ferris and Palmer was dropped, the firm being represented by David Levy Yulee in court. Dancy and Yulee, coincidentally, were close personal and political friends.

In what was to be his last tour as a Deputy Surveyor, F. L. Dancy was ordered to make connections of the grants with the public land surveys adjacent to the grants. Dancy, who had been doing this work for nearly three years at this point (mid-September 1845), was taken aback by the demand to measure back to each corner nearest to where the grant lines crossed those of the public surveys. As he noted:

In reference to the connexions with the public Surveys, I conceived my instructions complied with, when I had made a connexion at a single known point, which was done in every instance, where the public lines could be found, in the vicinity of the grants. I never crossed a line of the public Surveys knowingly without duly noticing it, in my field notes and marking the intersections on the ground. But after having obtained a connexion with any fixed point of the public Surveys, I did not deem it required to measure from every intersection of the lines of the same grant to the several corners of the public Survey lines so intersected.

Dancy informed the Surveyor General that to do this would require additional time and money. It would also be complicated by the fact of the obliteration of many of the old corners by fire, decay or human intent. New lines would be no problem, but the older lines and corners had probably been obliterated within the last decade or more. It was the expenses incumbent upon such an exercise that worried Dancy the most, after all, it was difficult and expensive enough without the additional requirement he now faced.

The office which Dancy held, that of special surveyor for private land claims, was abolished in late 1845, and he soon informed the "new" Surveyor General, Robert Butler, that his office equipment and other public property was ready for his inspection and assumption. Dancy left the office with few regrets, having done a difficult task under trying circumstances. But he was not through with the profession of surveying and kept his skills sharp surveying his own property along the St. Johns River and developing his property in and around St. Augustine. With the aid of Senator Yulee, he would be appointed State Geologist and Engineer in the 1850s and, in 1858, become Surveyor General of Florida. He was the last man to hold that post prior to the outbreak of the War Between the States.



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Michael Whitling, PSM

Why is Wednesday called “Wednesday?”

From Saturn comes Saturday. From the sun comes Sunday. From the moon comes Monday. But what is the origin of Tuesday? Wednesday? Thursday? Friday? The answer takes us to the Viking mythology that dominated North Europe for centuries before the arrival of Christianity. The tribes who subscribed to this mythology were the barbarians who constantly threatened the northern frontiers of the Roman Empire, and plundered the monasteries and settlements on the coasts of England and France in the 9th and 10th centuries. The principal god of this mythology was the one-eyed Woden, god of wisdom and divination, whose crows told him everything that happens in the world and who with his rune stones could always see the past and the future. His day, Woden’s day, is now called Wednesday. The day before Woden’s day, Tuesday, belonged to Tiw, the brave god of war, who placed his arm in the mouth of a giant wolf so that he could be chained by the dwarves and thus restrained from destroying the world. The day after Woden’s day belonged to Thor, the great hero, lord of thunder, Woden’s son by Friia, the love-goddess who gave her name to Friday.



Why is that large structure on a farm called a “barn?”

A barn is an agricultural building usually on farms and used for various purposes. In the North American area, a barn refers to structures that house livestock, including cattle and horses, as well as equipment and fodder, and often grain. In the British Isles, the term barn is restricted mainly to storage of cereals and fodder. The word “barn” comes from the Old English *bere*, for barley or grain, and *aern*, for storage place. Eventually the word *bere-ern*, meaning storehouse for grain, became the word “barn.” Note: A “Barn” is a unit of area used in nuclear physics. When atoms are bombarded with smaller particles such as electrons, the electrons are scattered as if the nucleus of the atom was a tiny solid object. The “Barn” is used to express the apparent cross-sectional area of this scattering object. One “Barn” is equal to 10^{-28} square meters.



Why is some unspecified object or small device called a “doohickey?”

“Dohickey” began life as US Navy slang in the early 1900’s. It is a blend of “doodad” and “hickey.” “Doodad” and “hickey” are both slightly older, and it appears that Navy men (who dealt with a large array of miscellaneous devices) pushed the two terms together to form a third. “Hickey” has largely died out. It originally referred to a pipe bending apparatus, but had become a generic phrase for any object with an unknown name. “Doodad” is a trivial ornament or gadget, especially one whose name the speaker does not know or cannot recall.

what are other words for doodad?

doohickey, widget, gimmick, gizmo, gismo, thingamajig, thingummy, thingamabob, whatchamacallit, contraption



Thesaurus.plus

Quick Facts:

⇒ Babies, particularly newborns, are surprisingly different from the children they'll grow up to be. When they're born, their heads account for a quarter of their full body weight, and the size of their brains will double in the first year of life. Babies have 300 bones and around 10,000 taste buds all over their mouth. Some of the bones will fuse as they age (into 206, as an adult), but the taste buds not on the tongue will eventually vanish.



⇒ In a strange and growing trend, some people who get bitten by the Lone Star tick can develop a sudden allergy to red meat. Beef, lamb, and pork (which is technically classified as a red meat) can make people with this allergy experience headaches, sneezing, a runny nose, and nausea. In severe cases, it can cause the person to be unable to breathe. For some sufferers, the allergy fades over time, but for others, it's permanent.

⇒ First written in 1838, the Constitution of the state of Florida guarantees the right to privacy, the freedom of speech, and the right of pregnant pigs to be free from cages. Unlike many crazy or outdated laws, this amendment is recent (passed in 2002) and comes from a well-meaning place: the prevention of cruelty to animals. During pregnancy, a pig must not be caged or even tethered such that it can't turn around freely.

⇒ Greenland Sharks are known to be some of the oldest living animals in our world. Researchers did carbon dating on a Greenland Shark that was caught four years ago and found it to be around 392 years old. Further testing revealed that some of our fishy friends could be up to 512 years old.



⇒ While sharks account for about 53 bites per year, only one of those ends up being fatal. Cows, on the other hand (or hoof), kill around 20 people per year.

⇒ A car traveling 70mph struck Matthew McKnight, an off-duty paramedic, when he stopped to help at an accident on the side of an interstate in 2001. He was thrown 118 feet, almost half a football field. He sur-

vived and set the World Record for Greatest Distance Thrown in a Car Accident.

⇒ You're Pronouncing Dr. Seuss' Name Wrong. Dr. Seuss, the popular children's book author who is known for his rhyming skills, was born with the name Theodor Seuss Geisel. Seuss is his mother's maiden name, and their family pronounces it as "soice" (rhyming with voice).



⇒ We walk an Earth that has seen the extinction of 99 percent of all of the species who've ever lived on it.

⇒ The Silverback gorilla can lift up to 10 times their body weight on average: a total of about 2,000 pounds.



⇒ Your angsty teenage dreams of being the most original, unique person alive could actually come true! Grab a deck of cards and shuffle. Most likely, you will have created a combination of cards that had never existed yet until that moment. For those math nerds out there, you know that this is because the probability comes out to 52 factorial or 52! (52 x 51 x 50 ... x 2 x 1). The probability that two card shuffles are exactly the same is so small, it likely will never happen.

⇒ In 1958, a B-47 plane was headed to the United Kingdom and was armed with an atomic bomb. This bomb was even bigger than the "Fat Boy," the atomic bomb dropped on Nagasaki. Pilots noticed a fault light, so one of them decided to check it out. In doing so, he accidentally released the emergency pin, watching in horror as it dropped to the ground. A critical part of the bomb, needed to set it off, was still on the plane, so the bomb itself never exploded.



Send your thoughts to drmjw@aol.com

Florida Surveying Law & Rules Changes

Don Elder, PSM



FSMS Live Seminar
Friday, January 18th
 Milton, FL
 8:30 am – 3:30 pm
 Course #9573
 6 CEC's

The varied laws which impact the practice of surveying and mapping are continuously evolving, but the years of 2016 – 2018 brought more changes to the statutes and administrative codes directly governing PSM's than have been seen in many years. In this course, we will review recent changes to Florida Statutes Chapter 472 and Florida Administrative Code 5J-17, and will consider some of the intent behind and the implications of those changes.



Don Elder, PSM - Don Elder, PSM, GISP is a professional surveyor and mapper licensed in Florida, Alabama, and Mississippi, and has over 20 years of surveying experience. He is a certified GIS professional, and holds a Master's degree from the University of Florida Geomatics program and a Bachelor's degree in Information Engineering Technology from the University of West Florida. Mr. Elder is currently employed by Gulf Power Company, where he performs a diverse range of surveying and land information systems services. Don Elder has served on the FSMS Board of Directors in multiple capacities since 2014, and he is currently the FSMS Secretary.

Location:
Santa Rosa County Development Services Center - Media Room
6051 Old Bagdad Highway
Milton, FL 32583

MEMBER: _____ \$140
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We reserve the right to cancel a seminar for reasons beyond our control. Due to the cost incurred for preparation of the seminar, you will receive a voucher for a Correspondence Course in exchange for the seminar if it is cancelled. No refunds will be given.

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\$ 120⁰⁰



Contracts for the Professional Course #8412 (3 General CEC)

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Elevation Certificates and the Community Rating System Course #8256 (3 General CEC)

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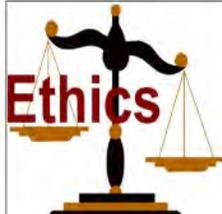
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Professional Ethics and Professional Courses FULL Video Course #8363 (6 General CEC)

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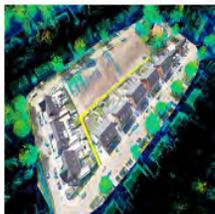
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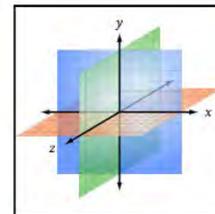
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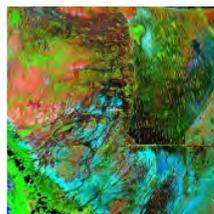
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<i>MAILED</i>			
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TOTAL			\$ _____

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<i>MAILED</i>			
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3 CEC	\$88 Per Course	x _____ =	\$ _____
TOTAL			\$ _____

Non-Licensed in ANY State

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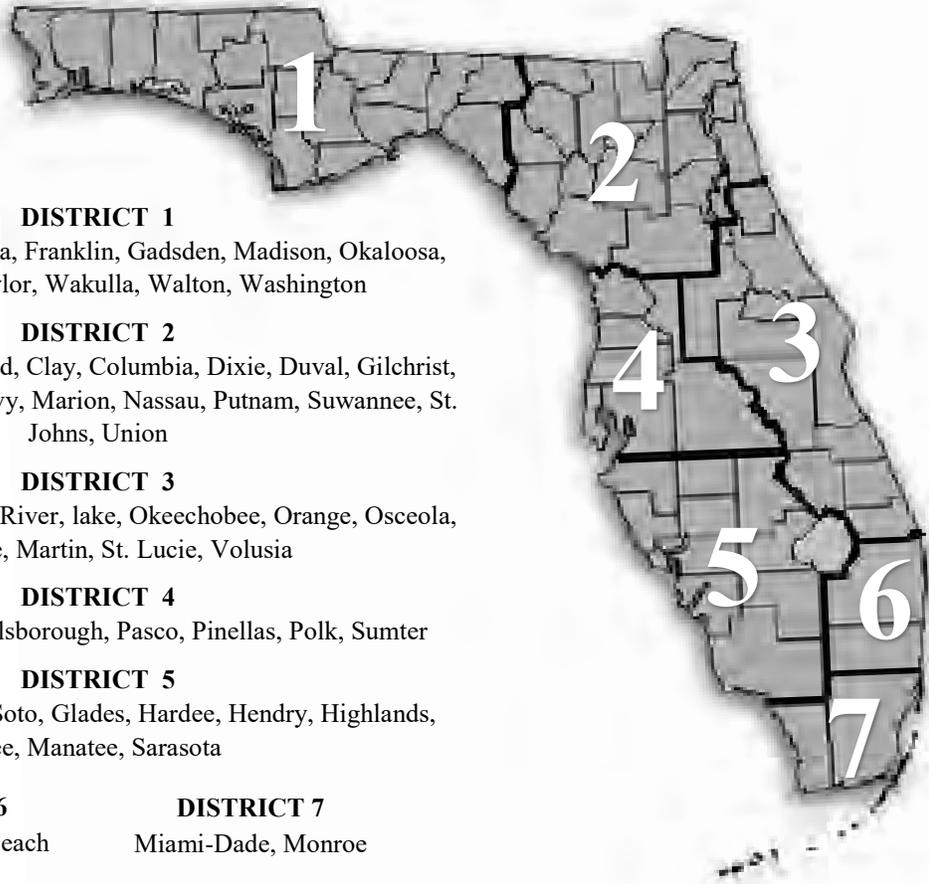
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Tom's Tip of the Month

Happy New Year Motivation

Click on the picture below to view the video!



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Allterra	954-850-0795	Culpepper & Terpening Inc.	772-464-3537
AM Engineering, Inc.	941-377-9178	Cumbey & Fair, Inc.	727-324-1070
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ATS Land Surveying, LLC	386.264.8490	Douglass, Leavy & Associates, Inc.	954-344-7994
Avirom & Associates, Inc.	561-392-2594	DRMP, Inc.	407-896-0594
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Barraco & Associates, Inc.	239-461-3170	Echezabal & Associates, Inc.	813-933-2505
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Keith & Associates, Inc.	954-788-3400	Reece & White Land Surveying, Inc.	305-872-1348
Keith & Schnars, P.A.	954-776-1616	Rhodes & Rhodes Land Surveying, Inc.	239-405-8166
Kendrick Land Surveying	863-533-4874	Richard P. Clarson & Associates, Inc.	904-396-2623
King Engineering Associates, Inc.	813-880-8881	Riegl USA	407-248-9927
Kuhar Surveying & Mapping, LLC	386-672-0002	Robayna and Associates, Inc.	305-823-9316
L&S DIVERSIFIED, LLC	407-681-3836	Robert M. Angas Associates, Inc.	904-642-8550
Landmark Engineering & Surveying Corporation	813-621-7841	Rogers, Gunter, Vaughn Insurance, Inc.	850-386-1111
Leading Edge Land Services, Inc.	407-351-6730	S&ME, INC.	407-975-1273
Leiter Perez & Associates, Inc.	305-652-5133	SAM Surveying and Mapping, LLC	512 447-0575
Leo Mills & Associates, Inc.	941-722-2460	Sergio Redondo & Associates, Inc.	305-378-4443
Long Surveying, Inc.	407-330-9717	SETTIMIO CONSULTING SERVICES	850-341-0507
Ludovici & Orange Consulting Engineers, Inc.	305-448-1600	Shah Drotos & Associates, PA	954-943-9433
MacSurvey, Inc.	727-725-3269	Shannon Surveying, Inc.	407-774-8372
Manuel G. Vera & Associates, Inc.	305-221-6210	Sherco, Inc.	863-453-4113
Mapping Resource Group, Inc.	386-439-4848	Southeastern Surveying & Mapping Corporation	407-292-8580
Marco Surveying & Mapping, LLC	239-389-0026	Spalding DeDecker Associates, Inc.	248-844-5400
Maser Consulting, P.A.	813-207-1061	Stephen H. Gibbs Land Surveyors, Inc.	954-923-7666
Massey-Richards Surveying & Mapping, LLC	305-853-0066	Stoner & Associates, Inc.	954-585-0997
Masteller, Moler & Taylor, Inc.	772-564-8050	Strayer Surveying & Mapping, Inc.	941-497-1290
McKim & Creed, Inc.	919-233-8091	Suarez Surveying & Mapping, Inc.	305-596-1799
MCLAUGHLIN ENGINEERING, CO	954-763-7611	SurvTech Solutions, Inc.	813-621-4929
Metron Surveying and Mapping, LLC	239-275-8575	Thurman Roddenberry & Associates, Inc.	850-962-2538
Mock Roos & Associates, Inc.	561-683-3113	Tradewinds Surveying Services, LLC	863-763-2887
Moore Bass Consulting, Inc.	850-222-5678	Tuck Mapping Solutions, Inc	276-523-4669
Morris-Depew Associates, Inc.	239-337-3993	Upham, Inc.	386-672-9515
Murphy's Land Surveying, Inc.	727-347-8740	Van Kleeck	386-761-5385
Navigation Electronics, Inc.	337-237-1413	Wade Surveying, Inc.	352-753-6511
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Northwest Surveying, Inc.	813-889-9236	Wantman Group, Inc.	561-687-2220
NV5	407-896-3317	WBQ Design & Engineering, Inc.	407-839-4300
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Omni Communications, LLC	813-852-1888	Woolpert, Inc.	937-461-5660
On the Mark Surveying, LLC	321-626-6376	York & Associates Engineering, Inc.	229-248-0141
		ZNS Engineering, LC	941-748-8080

Additional Information

Upcoming Events

January 11, 2019

FSMS Board Meeting
Lakeland

January 18, 2019

Florida Surveying Law & Rule Changes
(Live Seminar)
Milton

March 2, 2019

2nd Annual Indian River Clay Shoot
Okeechobee

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