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# The Connecticut Surveyor



UConn Barn in Storrs, after the blizzard on January 4, 2018

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# CALS



## **Web Design**

We are delighted to announce that CALS has contracted with Nurenu Brand Marketing, in New Canaan, CT to redesign and host our new, State of the art website. Nurenu has worked with other surveying companies and municipalities and has a large support staff that will be creative and responsive to our needs. The new website will be easy to navigate and mobile friendly.

Much appreciation goes to New Haven County Director Rick Howard, who has worked tirelessly to find the right company to fit all of our needs.

Look for updates in the near future and please forgive any inconvenience while we make ourselves look great.

# President's Forum

Please feel free to submit your comments and thoughts.

Email - Kathy @ctsurveyors.org  
Phone - 860-563-1990



## Coastal Jurisdiction Line Notes on Maps under USACOE Permit Review



In Connecticut we use the "Coastal Jurisdiction Line" (CJL) elevation for state and federal public waters mapping permits, which replaces the old "High Tide Line" (HTL), pre-2012. However, the US Army Corps of Engineers New England District Office still uses the term "High Tide Line" as the regulatory line for their permits. The High Tide Line is equal to the Coastal Jurisdiction elevation in Connecticut.

The Land and Water Resources Division, Bureau of Water Protection and Land Reuse, CT-DEEP suggests that "If the HTL and the CJL are coincident [which they are], the Corps is OK with a revised CJL label that indicates "HTL/CJL" or a note on the plan that says as much"

Please make a note to follow this procedure when producing public waters permit mapping involving the USACOE, to avoid having your map product returned to you for correction.

Jay Doody PS/PE, email any questions or concerns to me at [jjdoody@snet.net](mailto:jjdoody@snet.net)

## CALS Sponsors CST Exam in a Workplace Setting



Thanks to the support of Adam Hoffman and Calvin Weingart, their employee who wanted to take the CST exam, along with two other Candidates, were able to take their exam right at the Godfrey-Hoffman Associates office. The CST exam was held on December 6, 2017 in their conference room, with no problems encountered. Jay Doody, the CST coordinator for Connecticut, is happy to work with employers to set up CST examinations right in their workplace, for small groups of interested survey technicians. You can call him at 203-933-3850 or email [jjdoody@snet.net](mailto:jjdoody@snet.net).

The next CST exam will be held on Friday, March 2, 2018 at Three Rivers Community College, Norwich, CT. The examinations can be offered online or on paper.



Congratulations to Kevin Anderson who passed Level 1 of Certified Survey Technician program. He worked hard preparing and we are proud of his effort. Kevin works for Godfrey Hoffman Associates.



December 5, 2017

Thank you for your generous donation of \$1,150 to the National Society of Professional Surveyors Foundation.



Your donation makes it possible for the NSPS Foundation to meet the current and future needs of the surveying profession by providing assistance with disaster and medical relief whenever these situations occur.

The Foundation appreciates your support.

Sincerely,  
Joseph M. Dolan  
NSPS Foundation Chairman





**Winners**  
are not people who  
**never fail,**  
but people who  
**never**  
**quit**

# University of Maine Surveying Engineering Technology Newsletter

The SVT faculty is pleased to share with you this information. We try to get the newsletter to more people/e mail addresses including more e mails of surveying degrees prior to SVT. If you know of someone who is not getting this (and should) please tell Ray. Any work or family related information you want in the next newsletter please e mail Ray.

**We are #1!!!!!!** At least according to NCEES <https://ncees.org/news/page/2/>. Note without the work of NCEES Maine survey representatives Elwood Ellis and Jim Nadeau this award would not have been possible. Thanks Elwood and Jim!

**University of Maine receives \$25,000 grand prize** - NCEES is pleased to announce the recipients of the 2017 NCEES Surveying Education Award. This annual award recognizes surveying programs that best reflect the organization's mission to advance licensure for surveyors in order to safeguard the health, safety, and welfare of the public. NCEES awarded the University of Maine's Surveying Engineering Technology program the \$25,000 grand prize. Six additional prizes were awarded to qualifying programs to assist with each program's continued efforts to promote the importance and value of surveying licensure. The award jury considered criteria such as student outcomes and involvement, outreach and recruitment, and the promotion of licensure. The award jury met June 15, 2017, in Clemson, South Carolina, to select the winners.

NCEES Surveying Education Award juror and president-elect of the Surveyors and Geomatics Educators Society (SaGES), Joseph Paiva, Ph.D., P.E., P.S., stated, "The University of Maine's surveying engineering technology program is impressive because it fosters the surveying profession in state, regionally, and nationally."

**May Graduates / Fundamental of Survey exam results** - All is quiet as most receive degrees in May and this take the FS exam in the spring. Note Professional Science Masters graduates will be of a significant number in May!

**New Surveying Licenses** - Please email Ray when you receive a new license as trying to figure this out online is not easy. Congratulations! First Time Ryan Bateman (ME) Devin Pike (ME) Melissa Soucie (CT) Gordon Wilson (ME) Additional licenses Jon Drew (ME) Sean Pierce (CT) Balkaran Samaroo (CT)

**Graduate School** - Mohammed Aljafar and Mansour Ali Alghamdi are pursuing master's degrees at King Fahd University of Petroleum & Minerals. Congratulations.

**Undergraduate enrollment Fall '17 undergraduates (as of Oct.) total 69 students** - This is the largest undergraduate population since the creation of surveying engineering in the late 1970's. 23 ME 15 MA 12 CT 6 VT 4 NH 4 NY 2 PA 1 NJ 1 RI 1 Saudi Arabia 28 of these are dual major Forestry and SVT.

**Professional Science Masters (PSM) in Surveying-Engineering news** - Our enrollment is 25 students in the completely on-line program. Note that is approximately 20% of the entire graduation school population of the College of Engineering. Knud has created an advanced survey law class that will be taught for the first time in spring 2018 and will have a more than 15 graduate students in it. Note anyone with basic boundary law class or boundary experience can still take this class as an undergrad, graduate, or undeclared major student.

**State Society Scholarships awarded** – Thanks for your support! Note most scholarships are awarded in the spring. New Hampshire James Clasby (NH) Cole Gallant (NH) Christian Stock (NH)

**Donations** - If you feel the need to donate to a scholarship or equipment fund please contact Ray. We are proud that every non-fully funded SVT undergraduate student has received a Foundation scholarship at some point in their academic careers.

Mr. Tom Drury of Cumberland, RI donated \$10,000 of “like new” survey equipment this past summer as he is enjoying retirement. Thanks Tom!

\$73,000 was added to the George and Carol Gay New England Section Scholarship Foundation account per the will of Mr. and Mrs. Gay. This substantial contribution was derived as a portion of the profit made on the sale of their house in MA. The Foundation can provide help in verbage if you want a donation made in your will.

Shep Sheppard and Rob Garster have pledged \$8,000 over 5 years to the Andrew J. Shyka Surveying (SVT) Scholarship Foundation account which will be matched 4:1 (\$2,000) by the Foundation.

David Titcomb has pledged \$8000 over 5 years to the Robert P. Titcomb Memorial Scholarship Foundation account which will be matched 4:1 (\$2,000) by the Foundation.

Until the pledged money runs out an \$8,000 donation spread over 5 years to the Foundation will result in a 4:1 (\$2,000) match. Please contact Ray if interested.

David Cook and Kerry Sack made donations to the Brian Kelly Surveying Scholarship Foundation account.

## We appreciate your financial support!

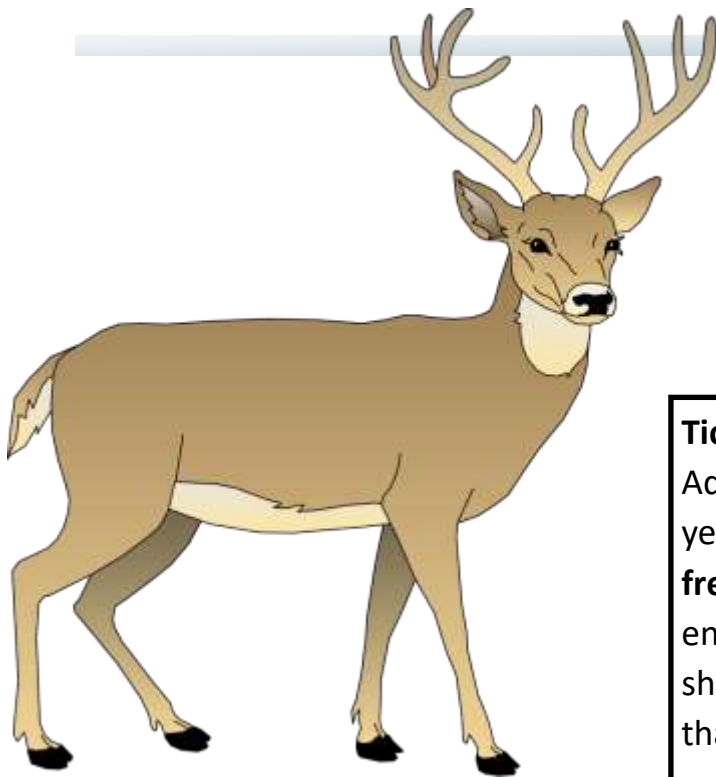
**Online SVT** – we need your help (but we are almost there)! The College of Engineering hired an outside specialist in analysis of market analysis of degrees to verify the suitability of an online BS degree in SVT. The analysis was a resounding yes the degree should exist! A proposal has now been prepared for the Provost at the urging of the Dean of the College of Engineering. Note nothing will change with our traditional classes. We have hope the online degree will be in existence this fall with E tuition (instate tuition \* 1.25) for all out of state students. If you know of someone who needs surveying education please pass this information on to them. The University of Maine Surveying Engineering Technology (SVT) invites the surveying community to take any of the following on-line classes Spring 2018 starting on Monday Jan. 22 CET 101 Plane Surveying (3 cr., Ray teaching) SVT 121 Auto-Cad (3 cr., Carlton teaching) SVT 201 Adjustment Computations (3 cr., Ray teaching) SVT 221 Boundary Law (3 cr., Carlton teaching) SVT 331 Photogrammetry (3 cr., Ray teaching) SVT 332 Civil Engr. for Surveyors (3 cr., Knud teaching) SVT 325 Surveying/Engineering Ethics (1 cr., Carlton teaching) SVT 352 Practical Field Operations (3 cr., Ray teaching) SVT 490 Capstone (3 cr., Ray teaching) SVT 512 Advanced Boundary Law (3 cr., Knud teaching) SVT 532 Lidar for Surveying (3 cr., Ray teaching) SVT 541 Geodesy (3 cr., Ray teaching) At search at [umaine.edu](http://umaine.edu) type in the course and you will get the description All twelve classes can count toward a BS in SVT. The 500+ courses count toward a Professional Science Master’s Degree (PSM) in Surveying Engineering. If you wish to take a class or classes please contact Ray Hintz ([Raymond.hintz@umit.maine.edu](mailto:Raymond.hintz@umit.maine.edu)) and I will set it up for you. The lectures, homework, and exams exist on an internet site and you have no exact lecture times. All homework and exams have exact due dates. Questions are presented via e mail and phone. NOTE – the classes do not show up as on-line because there are live lectures for the live students – do not be confused by this!! For Maine residents cost is simple – in state tuition. For the rest it is complicated. (1) Simply taking a class you will pay out-of-state tuition. (2) Applying to U Maine as a SVT undergrad will reduce tuition to the “NEBHE” rate – in state \*1.5 if you are from a New England state other than Maine (3) Applying to U Maine as a PSM graduate student will reduce tuition the E tuition rate – in state \* 1.25 for all states outside of Maine Applying for admission to a degree program immediately will be approved before classes begin – see <https://go.umaine.edu/apply/> or <https://umaine.edu/graduate/apply/>

**For Tuition questions see <http://umaine.edu/bursar/tuition-and-fees/>** - All veterans of the US Armed Forces pay in state tuition! We strongly need you to apply for admission to undergraduate or graduate SVT or PSM degree if you want to take classes! This lets us control the signing up of you for classes. Please apply for admission as soon as possible. Once the on-line BS surveying degree is approved all out-of-state students will pay the E tuition rate of 1.25 \* in-state tuition.

# University of Maine Surveying Engineering Technology Newsletter

## Faculty News –

- Knud Hermansen is on phased retirement which means he spends spring in the wintry confines of Florida. While we wish Knud the best he will be impossible to replace. Knud has built a large amount of on-line lectures for plane surveying, construction surveying, and a new class – SVT 332 Engineering for Surveyors that replaces CET 332 while relaxing in Florida. He will also teach SVT 512 Advanced Boundary Law for the first time (from Florida).
- Ray Hintz spent the previous academic year converting more SVT education to an on-line format. Note Plane Surveying (CET 101) was offered for the first time on-line this fall.
- Carlton Brown is building an on-line boundary law component which will be offered spring 2018. He captures his lectures while teaching boundary law live this semester then will edit them for production for all to see. He also contributes to several civil engineering capstone projects with data and education in Carlson Civil. He enjoyed the Surveyor's Educators Conference, in Oregon, this summer instead of being the organizer like two years ago.
- Steve Adam continues to teach SVT 475 Small Business Management which has become one of the most successful CED courses at the University of Maine. Note a wide variety of students not in SVT also take the course.
- Louis Morin teaches the Geographic Information Systems course for SVT students plus many School of Forest Resources students plus several other courses in SFR. The GIS course tends to be one of the most popular in the SVT curriculum. His support of the dual Forestry/SVT degree is the reason it has been so successful.



**Ticks can** be active even in the winter. ... Adult stage **deer ticks** become active every year after the first frost. They're not killed by **freezing** temperatures, and while other **ticks** enter a feeding diapause as day-lengths get shorter, **deer ticks will** be active any winter day that the **ground** is not snow-covered or **frozen**.





## On-line Classes at the University of Maine

By September 2018, the entire on-line degree option will be approved this all takes a lot of approvals.

When approved students will pay in-state\*1.25 big savings over out of state.

For now, students should apply as a “live student” (even though you are an on-line student) - once approved to SVT undergrad degree program you will pay in-state \* 1.5 (called NEBHE) big savings but will go down to 1.25 in September.

If you do not apply as real degree seeking SVT you will pay out-of-state tuition - ouch!

Tuition is at <https://umaine.edu/bursar/tuition-and-fees/fall-2017-spring-2018-undergraduate/> but once on-line in Sept. you pay E tuition <https://online.umaine.edu/tuition-and-fees/>

Students who are not seeking a degree will pay a significantly higher registration fee. It is advised that you apply ASAP as a degree seeking SVT as in spring 2018 in-state\*1.5 is big saving over out of state tuition.

Apply at <https://go.umaine.edu/apply/> especially if you have some credits after high school from a community college or University, they will expedite your application.

Next semester spring 18 on-line SVT courses are:

- SVT 121 AutoCad
- SVT 201 Adjustment Computations
- SVT 221 Boundary Law
- SVT 331 Photogrammetry
- SVT 322 Civil Engr. for Surveyors
- SVT 352 Practical Field Operations
- SVT 490 Capstone
- SVT 512 Advanced Boundary Law
- SVT 532 Lidar for Surveying
- SVT 541 Geodesy
- Using the search at umaine.edu type in the course and you will get the description

Note the masters program in surveying engr. has been on-line for a long time and is at in-state\*1.25 tuition <https://engineering.umaine.edu/psm/>

Contact Ray Hintz, SVT Program Coordinator [ray.hintz@maine.edu](mailto:ray.hintz@maine.edu) with any questions.

## Apply now or it will be too late!

# Professional Development

## CALS Seminars -

- Survey Technician Seminar: **Public Lands Of The United States**

Presented by Melissa Soucie, PLS  
Thursday, February 22, 2018, 8:30 am - 4:00 pm  
ITBD, 185 Main Street, New Britain, CT

CALS Members \$150, Non-Members \$200

Seminar includes coffee, lunch, free parking and handouts, plus and examination.

For more information Contact Jay Doody, CDT Coordinator at [jjdoody@snet.net](mailto:jjdoody@snet.net)

- **CTS Examination**, March 2, 2018, Three Rivers Community College, Norwich, CT, 8:30 am - 4:00 pm

Technicians who register for taking the CST Examination can choose this site to take a paper examination.

For more information contact Jay Doody, CDT Coordinator at [jjdoody@snet.net](mailto:jjdoody@snet.net).

To register go to - <http://ctsurveyors.org/wp-content/uploads/2018/01/Public-Land-System-2018.pdf>

**Central Connecticut State University will be offering the Geographic Information Science (GIS) Certificate program again starting February 10.** The program consists of 3 courses over a period of 9 months. Each course is on-line with 12 scheduled on-campus Saturday meetings with the instructor. This provides the freedom to learn on your schedule with the benefit of regularly scheduled one-on-one time throughout the program. The 3 courses are:

### Course 1- GIS Essentials

Includes discussion of basic geographic principles such as direction, coordinate systems, spatial relationships, and geographic thought; introduction to what GIS is and how it works in general; introduction to the ArcGIS environment and ArcMap/ArcCatalog applications. It also includes discussion regarding cartography and GIS data and data types. Students leave being able to navigate basic software tools including pan, zoom, query, identify and measure and create shapefiles and shapefile data.

### Course 2- Practical Applications of GIS

Discussion of practical applications of GIS in the real world using geoprocessing tools (buffer, clip, join) and an introduction to the geodatabase data structure. Discussion regarding GIS design, implementation and administration. Students leave with basic geoprocessing skills, geocoding, georeferencing, and being able to create a geodatabase and associated data structure. Discussion of applications of GIS in the real world, including crime analysis, geostatistical analysis and spatial analysis. ArcGIS Pro will be highlighted.

### Course 3- Advanced Applications of GIS

Discussion of Web GIS, GPS, Mobile GIS, Lidar and photogrammetry. Students will leave the course having created basic web GIS applications and exposure to using internet GIS data sources.

In addition to the University issued certificate, graduation from the program qualifies students for University credits when applied toward a CCSU Master's Degree.

An information presentation will be held to give perspective students a chance to ask questions and meet the instructor on Saturday, January 13 from 10 AM - 12 PM, at CCSU. Registration for the meeting (for facility purposes) can be found at <http://ce.ccsu.edu/courses.php?course=81>.



## **NYSAPLS 59<sup>th</sup> Annual Surveyors Conference & Exhibition**

January 17-19, 2018

Capital Center, Albany, NY

For more information and registration go to [www.nysapls.org](http://www.nysapls.org)



## **The 2018 MSLS Annual Meeting & Equipment Show will be held** Friday, January 26 & Saturday,

January 27<sup>th</sup>, at the Samoset

Camden-Rockport-Rockland, Maine

Featured Guest Speaker will be Gary Kent.

go to [www.msls.org/](http://www.msls.org/) for registration and more information.

# Reminisce of an Old Surveyor Measuring a Distance by Taping Part 1

By Knude E. Hermansen, P.L.S., P.E., Ph.D., Esq.

I don't like to think of myself as old but I am. I have been surveying for close to 50 years. The difference between how I used to survey and how surveying is done now is different. This difference was brought to the forefront of my thinking one day when I was surveying with a young surveyor. As we compared the distance we measured between two corner monuments to the distance set forth in the original survey performed in 1968, the young surveyor was appalled that the original surveyor was off six tenths of a foot between the two monuments. Until this young surveyor spoke I was thinking that the 1968 surveyor had done some exceedingly good measuring given the fact that the distance between the monuments was almost 2,000 feet across uneven landscape filled with puckerbrush. My young associate had never used a tape to measure a long distance. Had he done so, I think that he too would have marveled at the accuracy of the 1968 surveyor.

I would be surprised to hear that any surveying firm operating at this time still tapes long distances. If there is some firm that still practices this ancient art, surely they cannot compete on a fee basis with another firm.

So my young colleagues in the profession will better understand how the boundary they are now retracing was measured, I will reminisce about the lost art of taping a long distance.

Taping required at least two people in the survey crew. Three were ideal, with a person on each end of the tape and one person on the instrument to keep the two people on a straight line between the end points.

My employers at the time were somewhat tight-fisted with expenses so most of my taping was done with one other person.

With the direction to be measured selected, a distant object was chosen to use as a point of reference to guide us while taping. I suppose when taping across open land, a pole was included as part of the survey equipment. The pole was placed in the ground on line with the direction to be taped and used to guide the taping crew. Where I surveyed there was always some natural object that could be used or an appendage of a tree or bush where ribbon could be hung to serve as a guiding point.

Unless we were in farmland or urban land there followed some physical labor as brush and other vegetation was cut and removed from the direction to be taped. Of course if the distance to be taped was part of a traverse, the direction of the traverse was often selected so as to avoid the denser portions of vegetation thereby saving a great deal of physical labor involved with cutting a traverse line. If memory serves me, I seem to remember more time spent cutting a clear a line in preparation to taping the distance than actually measuring the line.

My employer favored a 200 foot steel tape. Most surveyors employed the standard 100 foot steel tape. I heard of a few surveyors that employed a 300 foot steel tape. The longer tape meant fewer markings on the ground that I shall explain later. However, the longer tape made a wicked sag unless extra tension could be exerted on the ends of the tape to reduce the sag. Of course the extra tension made plumbing the tape more difficult. Still, I came to appreciate the longer tape and used it when I first practiced on my own after becoming licensed.

Now I will say here and now that I was well familiar with tape corrections such as sag, tension, and temperature. We never made those corrections nor do I remember a surveyor that I met at this time that did so though they were common subjects in academic learning. I do not believe these calculations were omitted from ignorance. It must be remembered that calculations during these times were done without benefit of an electronic calculator. As a result, any calculations involving multiplication and division were a tedious undertaking.

Also, the errors associated with the failure to make tape corrections were often as not dwarfed by other factors present in the boundary survey. Would a temperature or sag correction to the steel tape make much of a difference when the corner monument was a 22 inch diameter tree or a three foot diameter stone pile?

# Reminisce of an Old Surveyor Measuring a Distance by Taping Part 1

By Knude E. Hermansen, P.L.S., P.E., Ph.D., Esq.

My employer did deem it important that the taping be done on a straight line and as near to horizontal as possible unless the end of the tape could be placed at the instrument allowing a vertical angle to be read and used to reduce the slope distance to a horizontal distance. I do not remember ever employing a hand level to check to insure the tape was horizontal, the level of the tape being accomplished by a fair estimate with the eye.

Leveling the tape required a plumb bob be suspended from at least one end of the tape and usually at both ends of the tape. Even on relatively level ground it was necessary to suspend the tape above the ground and employ plumb bobs or else the tape would weave up and down over brush we had cut, fallen trees, stones, and high grass that was normally present on the line of taping.

I don't believe a plumb bob can be found among the equipment of the modern surveyor. Perhaps it may be found buried in the equipment box on the survey truck yet. The plumb bob does not hang from the belt of the surveyor like it did decades ago. To come to the field without a plumb bob was a serious omission – akin to forgetting the tripod. Not only was the plumb bob necessary for taping but it was a necessary piece of equipment to hang under the tripod in order to place the instrument over the point, the optical plummet not being present on transits and compasses that were used to measure directions at that time.

Beginning at the instrument, the tape was laid out in the direction to be measured. Perhaps laid out is the wrong word - for the procedure was to grab the 'zero' end of the tape and drag it in the direction to be measured until the rear tape person would yell "stop" or some other recognizable command. Now in doing this simple task it was important that someone watch the tape or at least be sensitive to the resistance to the drag offered by the tape to prevent the tape from looping upon itself where continued tension would cause the loop to collapse and the steel tape to break. Careful observation was especially important when turning the tape back upon itself. Breaking a tape would cause the ire of even the most placid employer because there was no reason for this event to occur

but for negligence. I am sure some survey crew members did try their best to think of some other plausible excuse that would explain a broken tape and not attach blame to themselves.

Having dragged the tape to its farthest extent without causing the tape to break, the forward tape person would be directed to the right or left by the rear tape person so as to cause the forward tape person to be on a straight line between the two points where the distance was required. This is where the pole or point of reference spoken of earlier assists the taping crew.

More times than not it seemed this simple task would reveal that the forward tape person had passed on the wrong side of a tree or bush requiring the forward tape person to drag the tape back to the offending tree or bush and pass on the correct side of this transgressing vegetation. Surely if the tape did not kink or break in laying the tape out, the risk of a break by kinking the tape increased with this realignment because the forward tape person was looping the tape back upon itself and was now agitated with the extra effort necessary to make the measurement. In their frustration they would tend to pull on the tape harder than good practice should allow.

In some instances, it would be determined that rather than drag the tape back and go on the other side of the offending vegetation, the vegetation could be cut and removed. This idea was good in theory but often fraught in practice. More than once I have seen a good swing of the machete or brush hook designed to cut the offending brush not only cut the brush but go on to cut the tape as well, the tape being next to the offending brush because of the circumstances I have mentioned.

It was always a discussion among survey crew members whether the employer will think the intelligence of an employee to be less if they broke the tape with an overlooked kink or the result of a powerful stroke of a machete. Thankfully that is one conversation and confession that will no longer occur with modern survey practice.



# Reminisce of an Old Surveyor Measuring a Distance by Taping Part 1

By Knude E. Hermansen, P.L.S., P.E., Ph.D., Esq.

Once satisfied the tape is aligned properly in the direction of the survey, the tape would be raised off the ground in a manner to effectuate a level line. In raising the tape, the taping party often discovers that the recent maneuvering with the tape has allowed the tape to seep under some brush that had been previously cut in clearing the line and allowed to remain in the vicinity. The discovery of the offending vegetation occurred when an effort is made to raise the tape and one or more pieces of brush would also rise with the tape. At this discovery some vigorous attempt is made at shaking the tape to throw off the offending brush. This effort seldom worked other than to jerk the end of the tape out of a person's hand.

With the failure of shaking the brush off, it became necessary for someone to once again walk along the length of the tape and remove offending pieces of brush that had found their way to laying on the tape rather than under the tape.

If a person is following this story and is counting the trips along a particular segment of line, they will realize that the distance of the tape has probably been walked three or four times. First, a person must walk the line to cut a clear sight along the line. Second, a person will walk the line to drag the tape to set up the measurement. The third walk occurs when retracing the steps in order to come back around the correct side of a tree. Finally, the fourth walk of the line is to throw off brush and vegetation that has climbed on the tape. I know that vegetation can't move or climb on its own but if you had been there you would swear it does just that.

Finally, the tape could now be raised off the ground to effectuate as near as possible a horizontal line that could never be a straight and level line since the weight of the steel tape always caused a sag. To remove some of the offending sag, tension had to be applied to the ends of the tape. I suppose there were surveyors that employed tension handles in the field that allowed the tension, measured in pounds, to be carefully applied to the tape's length but I have never met the field crew that used them in the field doing a boundary retracement survey. Perhaps a diligent survey firm would have had at least one tension handle in their office in order to show a new employee what 15 to 20 pounds of tension felt like.

For those surveyors that have never seen a tension handle, a close similarity can be visualized by thinking of certain weight scales with a handle at one end and a hook at the other end that are sold to fisherman to weigh the trophy fish they plan to catch. I suspect that some of the survey tension handles that were purchased by surveyors were used more often for weighing fish rather than applying tension on a tape.

With the tape raised off the ground, great skill must now be employed to do several tasks at once. The tape person had to keep the tape level, at a consistent tension, and steady enough to fix a point on the ground using a suspended plumb bob.

The rendition of these tasks in print does not begin to describe the difficulty of combining these tasks in practice. First, the plumb bob string must remain fixed and immovable on a mark found on the tape. This requires one hand be employed to clamp the plumb bob string securely to a mark etched on the steel tape. The other hand is employed pulling on the end of the tape to keep a constant and desired tension. It must be remembered that the steel tape is a smooth ribbon but for some minor roughness caused by marks on the tape surface indicating feet, tenths and hundredths of a foot. The last two mentioned etchings only present at the ends of the tape. The combination of the tension, tape smoothness, and liberal sweat on the hands resulting from the physical labor involve in surveying at the time and the reader can deduce the challenge required in making a measurement while exerting tension on the tape. Usually a leather thong at the end of the tape was used rather than holding the tape itself. A consistent tension was employed by tucking the hand next to the body and leaning the body in the direction away from the other person in order to render the desired tension.

# Reminisce of an Old Surveyor Measuring a Distance by Taping Part 1

By Knude E. Hermansen, P.L.S., P.E., Ph.D., Esq.

Where a leather thong was not present or 'breaking the tape' required, often as not the tape person would grab hold of the tape and bend the tape down at their hand to afford a better grip – much as a person would do when pulling a rope to get a better grip. This grip often left a 'jog' in the tape at the completion of the measurement. After years of usage, a tape would no longer lay flat but would have rises and dips along its length that would be coupled with a few points of extra thickness where the tape had been repaired.

Let me pause in my rendition of taping to state that when I speak of 'breaking the tape' in this instance, I am not speaking of physically breaking the tape. Rather the phrase was used to indicate the entire length of the tape was not to be employed in making the measurement required.

Long ago, some entrepreneur invented a tape clamp. The tape clamp was a handy little gadget that allowed the user to firmly secure the tape with the clamp using the two finger rings that were part of the clamp. Using the finger rings, the tape could be easily pulled without bending of the tape or permitting a slippage along the tape.

I doubt much money was made from the invention. The survey firms that had purchased this gadget were likely as not to leave it unused in the office. When brought to the field, it never seemed to be with the tape person that needed it.

Having mastered the combination of holding the tape level, keeping pressure on the tape, and keeping the plumb bob string firmly attached to a mark along the tape, the tape person could now focus their attention to the suspended plumb bob that was likely as not swinging over the ground much as a lookout does in a crow's nest over a ship in rough seas. Restraining the plumb bob from wild gyrations required the tape person to periodically tap the plumb bob into the ground until the swinging of the plumb bob settled down.

The person at the rear of the tape had a mark that the plumb bob had to be over. When he was satisfied that he had wrestled the plumb bob and by extension the appropriate part of the steel tape over this point he would repeatedly shout some agreed upon term to the forward tape person to let that person know that a measurement could now be reliably made by the forward tape person.

I have seen the patience of the rear tape person sorely tested by the inability of the lead tape person to make a timely mark or reading. The rear tape person will make repeated statements of "good" or "mark" to indicate that he is over the point and the measurement can be made. After some repetition, the rear tape person will become agitated by his own endless repetition and may be heard to stop the repetition in order to yell: "god damn it, I'm good at this end. What is taking so damn long."

If the forward tape person was not measuring to a previously established point, they would tap the plumb bob point onto the ground to make a mark in the dirt, having previously kicked away grass, leaves, and twigs to clear a space on the ground. Once the forward tape person was satisfied the mark made by the plumb bob point represented a fair measurement, they would release the tension in the tape and put a pin into the ground at the mark. This pin would become the basis for the rear tape person to advance upon and measure over.

As I previously mentioned my employer was a kindly man but did not feel justified in purchasing equipment that was not absolutely necessary. Rather than using chaining pins, as they were commonly known, to fix the limit of the tape measurement, we would use nails or sticks with flagging tied to the end of the stick.

Having marked the length of the tape on the ground, the forward person would drag the tape in the direction of the survey to begin again the process of making the next measurement. The rear tape person would follow with the other end of the tape. Now if the rear tape person was not paying attention, they would likely as not kick the pin or nail out of the ground before they spotted it. If the rear tape person did a good job of kicking the pin loose from the ground, the taping would have to begin anew back at the starting point with numerous expletives used against the rear tape person for not paying attention to where they placed their feet. To avoid repeating the process of taping or bringing upon themselves embarrassment and attracting the ire of the other crew members, more than one rear tape person made a best guess where the pin may have resided before they inadvertently kicked it out. If possible the misfeasance was corrected without the forward tape person realizing what was being done.

# Reminisce of an Old Surveyor Measuring a Distance by Taping Part 1

By Knude E. Hermansen, P.L.S., P.E., Ph.D., Esq.

I should mention that had the forward tape person measured into a mark or corner already fixed, his job was a little more difficult. Rather than stick a pin, nail, or stick in the ground, he had to find a way to maintain the tension, keep the tape horizontal, maintain a steady plumb bob over the point, and read the marks on the tape at the plumb bob string.

This was done by firmly clasping the plumb bob string over and on the tape using the index finger and thumb and sliding the string along the tape until the plumb bob was over the desired point. The tension was then released while still keeping a firm grasp of the string on the tape. Once all the other distractions were eliminated, the forward tape person could peak under his thumb and see what incremental hundredths of a foot mark the string was held upon.

At this point it is worth mentioning a problem that has plagued surveyors using a tape or chain for a couple of centuries – keeping track of the whole lengths that are used when measuring between two points. When a survey crew measures long distances, it is necessary to tally the number of full tape lengths used. Now it would be wise for a crew member to make a mark in a field book each time a tape length is achieved. What is wise and what was done are two different things. If field books were not available putting notches on a stick or moving stones or acorns from one pocket to another was employed. Despite the best efforts, there are numerous distances where a tally was lost or added that should not have been.

I have alluded to a plumb bob suspended from the tape to the ground. The term ‘suspended’ is only accurate after some effort is obtained to stop the plumb bob from swinging in arcs over the ground. It is not possible to get a plumb bob to hang from the tape to the ground without some swinging. The plumb bob was determined to be contrary when let loose to hang. There were times when the plumb bob was stationary but not vertical as in the case when the plumb bob had to be dropped from chest height and there was a strong wind blowing across the open field. It seems to me that the wind was usually combined with cold temperatures. To all the other problems I have alluded to in trying to keep the plumb bob steady over

a mark must be added the lost sensitivity of the fingers when using gloves and the shaking of the body from the cold temperature.

Eventually, the plumb bob was finally settled into compliance by tapping the plumb bob upon the ground until finally the tip of the plumb bob was confined to a small area meeting the tolerance of the tape person. Of course before the tapping could take place, the forward tape person usually had to expose the ground by kicking away sod, sticks, leaves, and other debris using the toe of his boot. This often accounted for the delay that caused the agitation of the rear tape person that I have previously mentioned.

I must not close this reminisce on taping before adding a few more tidbits that provide some added insight into taping practice.

Many tapes were not marked or inscribed like a more recent steel tape or the fiberglass tape still found in the surveyor’s tool kit. What I mean is the tape did not contain marks to the hundredth of a foot along the entire length of the tape. The old tapes were only marked every foot except for the very end of the tape where the tenths and hundredth of a foot marks could be found. This necessitated the rear tape person find a whole foot mark to hold to and the forward tape person use the end of the tape to measure the increments of a foot. To set this up involved the forward tape person yelling back to the rear tape person to ‘take a foot’ or ‘give a foot.’

While on the subject of marks on the tape, I must state that dragging a tape along the ground for days, weeks, and years often succeeded in smoothing the tape and erasing the stampings of the whole feet and making the marking of whole feet difficult to read. More than once I had to look up or down the tape to find a readable mark and work my way back to the mark I was to hold at in order to know what whole foot I was holding at.

# Reminisce of an Old Surveyor Measuring a Distance by Taping Part 1

By Knude E. Hermansen, P.L.S., P.E., Ph.D., Esq.

I have about exhausted my memory of taping but for three situations often encountered in taping. One situation is the delicate taping required when taping through an electrified cow fence with a steel tape. I need say no more on that topic as the reader can well imagine what often happened. I must add that in addition to the electrified wire, once the survey crew has cleared the electric fence and entered the field, the reason for the electrified wire becomes obvious. Curious cows tend to congregate about the surveyor and become a hindrance in the taping process. However, I suppose a curious cow or heifer is far better than the bulls I encountered from time to time that took offense at the red often worn by the surveyor.

The second situation not fondly remembered is taping upon a concrete or asphalt surface. Since such surfaces were often flat and without obstructions, the tape was laid flat on the surface. Tension was put on the tape ends during the measurement with knuckles touching the asphalt or concrete. In such cases one tape person usually released their tension unexpectedly with the result that the other tape person often left some skin from their fingers on the rough surface of concrete or asphalt.

The third situation that still can incite bad dreams occurred when taping across a busy road or sidewalk. You did not have to experience this situation in order to imagine the peril of a tape suspended above the road surface when a car is observed much too late traveling down the road. Dropping the tape quickly to the road surface would often preserve the tape. Yet, there is many a time the survey crew returning to the office with a broken tape that claimed this very event to be the cause of the broken tape. Of course, there was nothing they could have done to prevent this happening. At least that is what they claimed.

I will close this reminisce by speaking about securing the equipment used in taping. The tape was coiled with attention paid to making consistent sized loops. The tape was then thrown. I don't mean heaved to the side. I mean that the tape was made into a figure 8 then into a compact circled loop using a twisting of the hands. Throwing a tape was an art that was often done at a surveyor's convention to show prowess. If a person did not know how to throw a tape it turned into a wrestling match where the tape refused to cooperate and often as not ended in a jumble rivaling any fishing line tangle. If the person did know how to throw the tape, a person watching would have the unmistakable impression that a magic trick just occurred. One minute the tape is in a large loop and the next it is neatly coiled in a compact loop.

The other item of equipment deserving some effort at storage was the plumb bob. To see a plumb bob being stored with the string hanging loosely from the end of the plumb bob would reflect poorly on the owner. At some point, another inventor came up with a gammon reel that wound the string up unless the owner resisted the urge of the gammon reel. Before the gammon reel arrived at the scene, a plumb bob string would be carefully wrapped around the head of the plumb bob and a slip put into the string to hold the string in place. A carefully tug on the string would unwrap the string from the plumb bob. A knot in the plumb bob string spoke of an untrained crew person. A knot in a plumb bob string was akin to a hang nail on the finger – it's presence always felt and always hanging up at inopportune times.

Keep this rendition of the taping process in mind young surveyor before disparaging that old surveyor that taped those long distance one small segment at a time.



## With Sincere Condolences



Donald T. Ballou

Donald T. Ballou of Branford, died Friday, January 5, 2018 at his home. He was the beloved husband of Priscilla Rutherford Ballou. Don was born January 10, 1931 in New Haven, son of the late Raymond and Edith Ballou. He was a U. S. Air Force veteran at the time of the Korean Conflict; a Navigator flying in the B-26 and B-57 aircraft. Don was a graduate of the University of Connecticut and became a Civil Engineer. His primary practice was Hydrology, Hydraulics and the design of dams. He started at the Soil Conservation Service in California, moved back east to work with several private companies, including Goodkind & O'dea and Cahn Engineers and then became self-employed. He was still active in his beloved career at the time of his passing. Don gave generously to his community and cherished his time on the Board of the Branford Cemetery Association. Don's family and friends meant the world to him. Besides his beloved wife, he is survived by his son Mark Ballou of Branford; his granddaughter Amanda Ballou; his great-grandchildren, Olivia and Delilah and his brother Howard Ballou. He was predeceased by his brothers Raymond, William and Murray Ballou. Friends may call Wednesday evening from 5:00 – 7:00 p.m., with a service at 7:00 p.m., at the W. S. Clancy Memorial Funeral Home, 244 North Main Street, Branford. Burial will be private.





## NSPS Foundation Disaster Relief Help Available

The Foundation is a tax deductible 501 c3 organization.

### **[DONATE NOW](#) to the NSPS Foundation Disaster Relief Fund**

With the recent weather-related disasters across the United States, the NSPS Foundation stands ready to provide assistance to our fellow surveyors when disasters strike.

Disaster Relief applications are being accepted, whether the applicant is an NSPS member or not. The primary requirement is that the geographic area where the applicant resides, must have been designated a disaster area by a federal, state, or local government authority. Those requesting funds will need to submit a copy of the declaration of disaster along with the request for funds. If no government authority declares an emergency, other supporting evidence of the loss may be considered.

Completed applications will be accepted by regular mail, fax (240-439-4952) or [email](#).

NSPS Foundation - Disaster Relief, 5119 Pegasus Court, Suite Q, Frederick, MD 21704

Please feel free to contact Trisha Milburn with any questions at 240-439-4615, ext. 105 or [trisha.milburn@nsp.us.com](mailto:trisha.milburn@nsp.us.com)

[Disaster Relief Assistance Application Form](#) (PDF)

[Relief Donation Form](#) (PDF)

[Guidelines for Disaster Relief Fund](#) (PDF)

### **Help Build Up the NSPS Foundation Disaster Relief Fund**

Donations of any amount are being accepted to the fund as we try to build it back-up after disbursements are made. You can make checks payable to the NSPS Foundation and write Disaster Relief Fund in the memo field and mail to NSPS headquarters. Thank you in advance for your support of the Foundation and your fellow surveyors.

Our Sincere Thanks, The Foundation Trustees

**QUESTIONS?** Call 240-439-4615

CALS was proud to raise \$1150 for the  
NSPS Disaster Relief Fund at the Annual Meeting  
on November 3, 2017.

## In New York, Drawing Flood Maps Is a 'Game of Inches'

As FEMA revises the maps to account for climate change, deciding who is in the flood zone will be a battle with millions of dollars at stake.

[https://www.nytimes.com/2018/01/07/nyregion/new-york-city-flood-maps-fema.html?rref=collection%2Fbyline%2Fdavid-w.-chen&action=click&contentCollection=undefined&region=stream&module=stream\\_unit&version=latest&contentPlacement=2&pgtype=collection](https://www.nytimes.com/2018/01/07/nyregion/new-york-city-flood-maps-fema.html?rref=collection%2Fbyline%2Fdavid-w.-chen&action=click&contentCollection=undefined&region=stream&module=stream_unit&version=latest&contentPlacement=2&pgtype=collection)

Interesting article  
submitted by Ed Ruchin, L.S.



# FEMA

[Subscribe to e-mail updates](#) on flood hazard mapping activities.



### CONNECTICUT ASSOCIATION OF LAND SURVEYORS

78 Beaver Road, Wethersfield, Connecticut 06109

Tel. (860) 563-1990 Fax (860) 529-9700

kathy@ctsurveyors.org

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## CALS 2018 MEMORIAL SCHOLARSHIPS

### ESTABLISHED IN HONOR OF THE FOLLOWING CALS MEMBERS:

- **HARRY E. COLE – 1909-1984**
- **OLIVER H. PAQUETTE – 1931-1992**
- **WILLIAM G. BERGLUND – 1918-1989**
- **WILLIAM W. SEYMOUR – 1947-1998**

The Connecticut Association of Land Surveyors is pleased to offer annual scholarships to deserving students of surveying.

To qualify an applicant must:

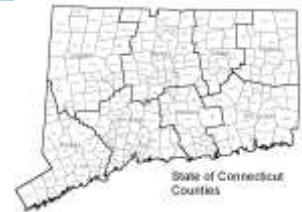
- 1) Be a resident of Connecticut.
- 2) Be enrolled in a program leading to a BS, AS or Certificate program in surveying, or a student in a BS or AS program who has a proven record of surveying employment, as evidenced by letters of recommendation from his or her employer.
- 3) Show an interest in being a part of the surveying profession.
- 4) Students must be in their BS program junior or senior year, or AS second year.

Please submit a statement outlining qualifications, together with a transcript, resume, and other pertinent information to:

CALS SCHOLARSHIP COMMITTEE  
c/o JAY DOODY  
49 ARLINGTON STREET  
WEST HAVEN, CT 06516

*The deadline for applications is June 1, 2018*

## Classified Ads



### Fairfield County

- **Licensed Land Surveyor** - S.E. Minor & Company, based in Greenwich, CT seeks to hire a full time CT licensed land surveyor. Experience with all phases of land development is essential. Needs to be able to communicate effectively with survey and engineering staff, clients, municipal review boards and other design professionals. Requires ability to work independently and with a team, assist in establishing project budgets, schedules, and meet established deadlines. Minimum 6 years relevant experience; L.S. required. Requires excellent verbal and written communication skills as well as proficiency in the use of AutoCAD and related software.

Competitive salary commensurate with experience; health and 401k benefits package offered. Candidates should email resumes to: [resumes@seminor.com](mailto:resumes@seminor.com).

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Surveyors and Field Technicians, Build your future with us!

**Join the Redniss & Mead Team** of Land Use Specialists in our firm located in **Fairfield County, CT**. With a strong commitment to our core values of Quality, Integrity, Service and Respect, Redniss & Mead prides itself on a work environment where you learn from and collaborate with an experienced team of civil engineers, land surveyors and planners. You will be part of a culture that encourages work-life balance, career growth and personal development. We are currently in search of both **entry level and experienced candidates** to join our team to support a busy workload.

- **Surveyor** candidates should have experience in the processing and preparation of all types of surveys, including boundary surveys, topographic surveys and construction layout. Knowledge of AutoCAD is required. Responsibilities include: performing fieldwork, processing and mapping of fieldwork, coordination with clients and in-house teams of surveyors, engineers and planners.
- **Field Technician** candidates should have an education background in a field related to land surveying and some relative work experience (data collection experience is beneficial). The position entails instrument operation, collecting and uploading survey data, maintaining field equipment, conducting deed research and frequently meeting with the Project Surveyor team.

For both positions, the candidate will have the opportunity to work on a variety of project types including residential, commercial and institutional. For consideration, please apply via LinkedIn or forward your resume to: Lawrence W. Posson, PLS, Director of Surveying: [L.Posson@rednissmead.com](mailto:L.Posson@rednissmead.com). *We are an Equal Opportunity Employer and offer competitive compensation and an excellent benefits package including merit-based bonuses, medical/dental/vision, paid time off, life and disability insurance, 401K retirement plan, family/medical/military leave, health club membership and financial support for professional licensing, certification and membership fees. Visit our website at [www.rednissmead.com](http://www.rednissmead.com).*

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- **Connecticut Licensed Land Surveyor** to perform land record research, field work, office computations and drafting. CAD experience a must with newer versions of Autocad. This is a full-time position.

Contact Paul at Brautigam Land Surveyors, P.C. 203-270-7810.  
Or send resume to [Surveyor@BrautigamLand.com](mailto:Surveyor@BrautigamLand.com).

## Classified Ads

### Fairfield County continued...

- **Survey Technician/Party Chief** - Arcamone Land Surveyors LLC located in Norwalk, CT is looking to hire a full or part time CT surveyor. Responsibilities include performing land title search, zoning location surveys, property surveys, topographic surveys, construction layout and staking and elevation certificates. Knowledge of AutoCAD and data collection in processing and preparation of all surveys is required. Ideal candidate should have a minimum of 6 years field experience. Robotic/GPS experience a plus. A valid driver's license with a clean driving record is required. Arcamone Land Surveyors offers a competitive salary, paid vacation, paid holiday and health club benefit.  
Please submit resume to Wayne Arcamone P.L.S./Owner at [wayne@arcamonesurveyors.com](mailto:wayne@arcamonesurveyors.com).

### Hartford County

- Bongiovanni Group, Inc., located in Central Ct, a leader in the Land Surveying Profession for over 33 years, is looking for Professional/Career orientated people to join our Firm. We are seeking qualified candidates to fill positions for a unique, long term project. We will entertain applicants with qualifications ranging from experienced [Instrument Operators and Party Chiefs to Licensed Land Surveyors](#). This is an extraordinary opportunity for motivated, conscientious, and detail-oriented individuals that offers the highest levels of compensation.

Experience using robotic total stations and controllers is required. Use of Leica equipment, multi-stations/scanning and GPS equipment will be given a preference. Use of AutoCAD Civil 3D and MicroSurvey StarNet software are helpful. All successful applicants will be subject to drug testing and background checks performed. A valid Ct. driver's license is required.

Please send Resumes to: Alan Bongiovanni, L.S., Bongiovanni Group, Inc., 170 Pane Rd., 2<sup>nd</sup> Floor, Newington, Ct. 06111-5521 or email to [al@bgils.com](mailto:al@bgils.com). Phone (860) 666-0134. All inquiries are kept confidential. EOE/AA.

- **Party Chief** - Martin Surveying Associates, LLC, a growing firm located in Berlin, Connecticut is seeking a party chief with the following qualifications:
  - 5+ years of experience in the role of a Party Chief.
  - Ability to perform and work as a one-person crew utilizing robotic total stations and GPS equipment.
  - Experienced in ALTA/NSPS Surveys, boundary surveys, topographic surveys and construction layout on large commercial projects. AutoCAD experience a plus.

Please send Resume to: Martin Surveying Associates, LLC, 321 Ellis Street, New Britain, CT 06051  
[martinsurveying148@yahoo.com](mailto:martinsurveying148@yahoo.com)



## Classified Ads

### Hartford County continued...

**BSC Group** - Join our dynamic group of Professional Surveyors, Landscape Architects, Engineers and Environmental Scientists with offices in Glastonbury, Connecticut and several Massachusetts locations including Boston, Worcester and Cape Cod. BSC Group was founded more than 50 years ago with our roots in Land Surveying and our sight set on the future. We utilize current technologies, monitor futuristic techniques and encourage creative productivity. The company is currently in search of talented Surveyors to support on-going projects and meet our expected growth in the public and private sectors. We currently have full-time **Land Surveying** positions available in our Glastonbury office. BSC Group offers a comprehensive salary and benefit package including vacation and sick time, medical, dental, 401(k), life and disability insurance.

All levels of experience are encouraged to apply.

- **Land Surveyor/Project Manager** – Requires a broad range of skills necessary to support public and private clients, as well as to provide support to in-house civil engineering staff. Requires a BS degree with licenses in MA or CT with at least five years of supervisory experience in land title surveys, topographic/existing condition surveys, boundary surveys and subdivision work, and the ability to perform land record research of complex title histories. Project management and business development skills are highly desirable. Familiarity with the use of field equipment including conventional, robotic total stations, GPS with field to finish techniques utilizing Civil 3D and/or Carlson is desired.
- **Survey Party Chief** – requires excellent knowledge of field to finish survey techniques using total station and leveling equipment. Knowledge of GPS data collection is desirable. Responsibilities include performing existing condition/topographic surveys, boundary surveys, and construction staking. A minimum of 5-6 years of field experience, valid driver's license with clean driving record, and excellent math skills. Associate's or Bachelor's degree a plus.
- **Survey Technician/Instrument Operator** – Must have a minimum of 2 years' experience using total station & electronic data collector. Experience with Carlson and Civil 3D is a plus. Candidates must have high school diploma, valid driver's license with clean driving record, and good math skills.

Please submit resume with cover letter in confidence to: Human Resources Department, BSC Group, Inc., 803 Summer Street, Boston, MA 02127; e-mail: [info@bscgroup.com](mailto:info@bscgroup.com); fax: 617-896-4301.

No telephone calls, no recruiters, please.

BSC is proud to be an AA/EEO employer. Women, minorities, persons with disabilities and veterans are encouraged to apply.

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- **Surveyor Party Chief** - J.R. Russo & Associates, LLC, is a growing civil engineering and land surveying firm in East Windsor, Connecticut providing land surveying and site engineering services in both Connecticut and Massachusetts. Our comfortable atmosphere and excellent benefits have enabled us to retain an experienced workforce, many with over 20 years of service. We have an opportunity for a dependable and motivated full-time Survey Party Chief to join our survey team.

The successful candidate will have 6 years of experience in land, boundary and topographic surveying and construction layout. Experience with robotics, GPS and Leica equipment is a plus. Valid driver's license and clean driving record a must.

We offer a competitive salary, medical and dental insurance, paid personal time off, paid holidays and retirement plan. Please submit your resume to [Inoble@jrrusso.com](mailto:Inoble@jrrusso.com).

## Classified Ads - Hartford County continued...

### Hartford County continued...

- VHB's growing Wethersfield, CT office is looking for an experienced **Survey Instrument Operator** to join our Survey team. This position will also require some work out of our Springfield, MA office, so an ability/willingness to travel is required.

#### **Responsibilities**

Operation, transport and setup of Total Stations, Data Collectors, GPS, and other land surveying equipment  
Land surveying including boundary line, topographic survey, construction stakeout and utility surveys  
Supervision of field crews when necessary  
Reconnaissance and recovery of land surveying markers through use of hand tools and digging  
Construction stakeout of proposed improvements, including installation of stakes through use of sledgehammers and hand tools  
Maintains proper care of all survey equipment  
Documents all phases of survey work through clear field notes and data collection  
Trains junior staff as necessary

#### **Skills and Abilities**

Ability to learn the proper use of GPS equipment and Robotic Instruments and mathematical concepts such as fundamentals of geometry  
Understands the basics of boundary survey, topographic, construction and utility surveys  
Ability to transport land surveying equipment, navigate and traverse through difficult terrain, environments and wooded areas  
AutoCAD experience desirable

#### **Qualifications**

3+ years of progressive land surveying experience  
Associates degree preferred  
Must have a valid driver's license and a good driving record  
Ability/willingness to travel to work based out of our Springfield, MA office as needed  
Must be able to lift up to 50 lbs

Candidates can apply online directly at:

<https://vhb.clearcompany.com/careers/jobs/1a8a5a15-68a2-8205-037d-0e308f6d3944/apply?source=629400-CJB-0>

Or resumes can be submitted to [kmcneil@vhb.com](mailto:kmcneil@vhb.com).

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**Surveyor Party Chief** - J.R. Russo & Associates, LLC, is a growing civil engineering and land surveying firm in East Windsor, Connecticut providing land surveying and site engineering services in both Connecticut and Massachusetts. Our comfortable atmosphere and excellent benefits have enabled us to retain an experienced workforce, many with over 20 years of service. We have an opportunity for a dependable and motivated full-time Survey Party Chief to join our survey team. The successful candidate will have 6 years of experience in land, boundary and topographic surveying and construction layout. Experience with robotics, GPS and Leica equipment is a plus. Valid driver's license and clean driving record a must. We offer a competitive salary, medical and dental insurance, paid personal time off, paid holidays and retirement plan. Please submit your resume to [Inoble@jrrusso.com](mailto:Inoble@jrrusso.com)

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## Classified Ads

### Litchfield County

- **Licensed Land Surveyor** - Civil 1, a civil engineering, planning, consulting and land surveying firm, located in Woodbury, CT, seeks to hire a professional land surveyor (PLS) with 5+ years of experience. Qualified individual will lead the land surveying department in researching land records, conducting field work, utilizing state-of-the-art Robotic/GPS instruments, survey calculations, construction stakeout, overseeing the operation and maintenance of survey equipment, and communicating with the project team. This position requires a self-starter who is proficient using AutoCAD Civil 3D and GPS/RTK; has prior experience as a crew chief; is able to read and interpret construction plans; and can operate survey equipment, including but not limited to robotic total stations, GSP survey equipment, data collectors and automatic level. The candidate must hold a valid driver's license with a clean record. Civil 1 offers a salary commensurate with experience, paid vacation and holidays, and a competitive benefit package.  
Please submit resume to Alice Jones, Office Manager at [alice@civil1.com](mailto:alice@civil1.com).

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### Middlesex County

- **Survey Project Manager** - BL Companies, an ENR Top 500 Architectural, Engineering, Environmental and Land Surveying Consulting Firm has an exciting career opportunity immediately available for a Survey Project Manager to join the firm's growing survey division in its Meriden, Connecticut office. The selected candidate will have at least 8 years' experience and will be responsible for managing the successful delivery of survey projects. The position includes the preparation of proposals, estimating project costs, managing project budgets, resource planning, and client contact. Excellent verbal and written communication skills along with organizational skills are required for this position. Professional license is not required but desirable. This individual will work closely with BL's Survey Management team and will participate in overall operations of the department. The candidate will also participate in BL's leadership development programs and will have a unique opportunity to make a broad and significant contribution to BL's growth while advancing their leadership skills. BL Companies offers an excellent benefits package and fosters a growth-oriented work environment. Please send resume to: Human Resources, BL Companies, 355 Research Parkway, Meriden, CT 06450, via fax to 203-630-2615 or e-mail [resumes@blcompanies.com](mailto:resumes@blcompanies.com). EOE. Visit our website at [www.blcompanies.com](http://www.blcompanies.com). An Employee Owned Company.

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### New Haven County

**Career Opportunity** - Godfrey-Hoffman Associates, LLC & Hodge, LLC are small survey/civil firms with our headquarters in North Haven, CT and a satellite office in Farmington CT. Since 1924 & 1925 respectively GHA & Hodge have provided Connecticut with superior service and integrity in the land surveying & civil engineering arena.

- **Civil Engineer, Project Manager:** Small multi-discipline firm looking for self-motivated, energetic engineer to fill this full-time permanent position. Duties to include, residential & commercial site planning, subdivision design, storm water management and onsite sewage disposal system design. Must possess excellent written and verbal skills as well as be experienced with AutoCAD, and the public approval process required. Minimum 5 years' experience. PE license preferred but not required. Career oriented individual willing to work on projects from initial concept, thru design and construction. Some night commission meetings will be required. This position offers exposure to a diverse workload that provides for excellent professional development with a future. Come join a great team at Godfrey-Hoffman and Hodge.

All inquiries will be kept completely confidential. Respond to [ahoffman@godfreyhoffman.com](mailto:ahoffman@godfreyhoffman.com)

## Classified Ads

### New Haven County continued

- **Survey/Field Technician** needed for a small civil/land surveying firm in Meriden. Candidate must have a min 2 years experience in the surveying field and experience in the processing and preparation of all types of surveys, including boundary surveys, topographic surveys and construction layout. Knowledge of AutoCAD and Data Collection is required. Responsibilities include performing fieldwork, processing and mapping of fieldwork, coordination with clients and in-house staff. Work for this position will be on a variety of project types including residential, commercial and industrial. For consideration, please forward your resume to Scott Poryanda at [scott@cce95.com](mailto:scott@cce95.com) or call the office 203-639-8636.
- **Civil Engineering Technician** needed for a small civil/land surveying firm in Meriden. Candidate must have a min 2 years experience in the civil engineering field. Knowledge of AutoCAD is required. Some responsibilities will include the designing of subdivisions, septic systems, plot plans, and commercial projects. If you are looking to expand your experience, please forward your resume to Scott at [scott@cce95.com](mailto:scott@cce95.com) or call the office 203-639-8636.

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### Free to a good home

1 Kenwood Walkie Talkie (Freetalk XLS), 2 chargers - Free to a good home. Hoping someone can make use of my single unit. You can probably surmise what happened to the other one. Contact Rick 203-317-0570 for more information.

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### For Sale

J.R. Russo & Associates has a Kip 7170 Large format printer, copier and scanner with stacking table for sale. Purchased in December of 2013, we have recently upgraded and have no room This would be a great scanner and plotter for a survey/engineering firm looking for a second plotter or a new firm just getting started. Full disclosure this unit does need to have the drum replaced as it leaves a 1/8" strip of blank space. The estimated cost of repair is around \$1k. Asking price is \$4,900. Feel free to contact Bob Saunders or David Fortin a t 860-623-0569 or by email at [rsaunders@jrrusso.com](mailto:rsaunders@jrrusso.com) or [dfortin@jrrusso.com](mailto:dfortin@jrrusso.com)

# Calendar



2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 New Year's Day	2	3	4	5	6
7	8	9	10	11	* 12	13
14	* 15 Martin Luther King Day	* 16	* 17 NYSPLS Conference Albany, NY	* 18	19	20
21	22	23	24	25 CAL S BOD Meeting	26 MSLS Annual Meeting Rockport ME	27
28	29	30	31			

\*The CALS office will be closed from January 12 - 18th while Kathy spoils her grandchildren in Seattle!

## Martin Luther King Day



Martin Luther King, Jr.'s birthday is January 15, 1929, but the observance is always the third Monday in January.

Mr. King was a preacher's kid. His father, Martin Luther King, Sr., was pastor of the Ebenezer Baptist Church in Atlanta, GA. Mr. King did not achieve national importance until 1955 when he led the bus boycott in Montgomery, AL. The boycott was focused around a black seamstress named Rosa Parks who refused to give up her seat to a white male passenger and was fined \$14. Mr. King's intention for this boycott was to end segregation in the city's transit system.

Later, in 1960, Mr. King was chosen to head the Southern Christian Leadership Conference. This organization gave him his foundation to expand his civil rights campaign throughout the South. Martin Luther King, Jr. organized many protests and marches. His most famous was his 1963 "March on Washington" where he delivered his infamous speech titled, "I Have A Dream."

In 1964, Martin Luther King, Jr. received the Nobel Peace Prize!

Four years later, on April 4, 1968, he was assassinated by James Earl Ray who shot him while he was standing on the balcony of his hotel room, in Memphis TN, while helping to organize a strike of the city sanitation workers who were mostly black.

Eight days after his death, U.S. Representative John Conyers called for a holiday honoring Dr. King. The bill got stalled in Congress, so a petition of over 6 million names was then submitted. It took over 15 years for his birthday to become a holiday when it was passed in the 1983 Congress and was signed by President Ronald Reagan.





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