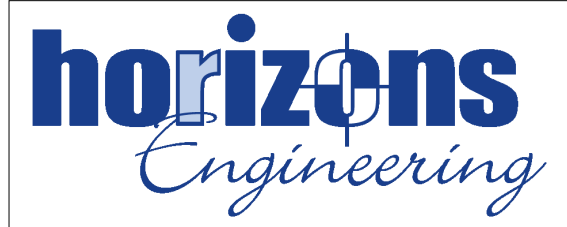




New Hampshire Land Surveyors Association

52nd Annual Meeting & Equipment Show



Meet Our Sponsors



December 16—17, 2021

Courtyard **Marriott** Grappone
Conference Center

70 Constitution Avenue, Concord, NH



PROGRAM AT A GLANCE

NHLSA 52nd Annual Meeting & Equipment Show

Thursday *2.0 CEUs for session 1*
December 16, 2021

7:30 AM

◆ **Registration Desk Open (Pre-function Area)**

◆ **All Day Break Package
(Pre-function Area)**

Seasonal cut fresh fruit and berries; Individual Stonyfield yogurts; Fresh baked croissants, Danish, muffins and fruit breads; Whole grain and gluten free toasting breads with jelly and butter; Chilled orange and cranberry juice; Freshly brewed organic coffee, decaffeinated coffee and a selection of fine teas

(Salon A)

8:00 AM—10:00 AM

Session 1: Gary Kent—The NEW ALTA/NSPS Land Title Survey Standards

10:00 AM—10:15 AM

◆ **All Day Break Package (Pre-function Area)**

Freshly brewed organic coffee, decaffeinated coffee and a selection of fine teas; Assorted soda and water (throughout the day)

10:15 AM—12:00 PM

◆ **Session 1: continued**

12:00 PM—1:00 PM

◆ **Lunch Buffet (Salon A)**

Traditional Deli Buffet: Mixed greens with tomato, cucumber, carrot, vinaigrette and creamy dressing; Red bliss potato salad; Italian rotini pasta salad; White meat diced chicken salad; Oven roast turkey, Black forest smoked ham, farm raised roast beef; Swiss, Provolone and Muenster cheese; Grilled vegetables, eggplant, green and yellow squash, bell peppers and asparagus with hummus; Pickle spears, sliced tomato and lettuce leaf; Deli sandwich breads, multigrain, oatmeal, scali, sourdough and dark rye; Potato chips, bbq, sour cream and onion, regular and whole grain tortilla; Fresh baked cookies and brownie; Freshly brewed organic coffee, and decaffeinated coffee and a selection of fine teas

1:00 PM—2:15 PM

◆ **Session 2: The Art of Retracement**

2:15 PM—2:30 PM

◆ **All Day Break Package (Pre-function Area)**

Selection of whole seasonal fresh fruit; Fresh baked assorted cookies, chocolate chip, chocolate crackle, oatmeal, ginger and lemon; Double chocolate brownies; Freshly brewed organic coffee, decaffeinated coffee and a selection of fine teas

2:30 PM—3:30 PM

◆ **Session 2: continued**

3:30 PM—4:00 PM

◆ **Seminar wrap-up, Q&A, & Committee Meetings**

4:00 PM—6:00 PM

◆ **Business Meeting, Awards (Salon A)**

6:00 PM—7:00 PM

◆ **Reception (State Rooms)**

Hors d'oeuvres: Fresh Sliced Fruit Display: Vine ripened cantaloupe, honey dew, watermelon and pineapple with red seedless grapes and fresh berries; Hummus trilogy: Crisp pita chips and grilled flatbread with bowls of artichoke with roasted garlic hummus, yellow saffron hummus and roasted red pepper hummus

7:00 PM—9:00 PM

◆ **Banquet (State Rooms)**

Entrée Choices: **Slow Roasted Prime Rib of Beef**, rosemary au jus, served with baked potato; **OR New England Baked Haddock**, with shrimp and butter crumb topping, lemon butter, served with roasted rosemary baby red potatoes. Both to include: Artisan roll and butter, first course (Chopped greens, dried apple, cranberries, toasted walnut and apple cider vinaigrette), chef's seasonal vegetable; Dessert (New York style cheesecake with strawberry sauce and fresh whipped cream); and freshly brewed organic coffee, decaffeinated coffee and a selection of fine teas

Entertainment: Foundation Benefit Auction featuring Terry Eldredge.

REGISTRATION—PRE-FUNCTION AREA

BADGES REQUIRED - ALL EVENTS

Please help your fellow members and guests identify you by name by wearing your badge. (meal tickets included in your badge)

SILENT AUCTION

The silent auction is back!
See **page 6** for details.

PROGRAM AT A GLANCE

NHLSA 52nd Annual Meeting & Equipment Show

Friday
December 17, 2021

7:30 AM

◆ **Registration Desk Open (Pre-function Area)**

◆ **All Day Break Package**
(Exhibit Hall)

Same as Thursday

7:30 AM—9:00 AM

◆ **Past Presidents' Breakfast (Pierce Room)**
Classic Breakfast Buffet: seasonal cut fresh fruit and berries; Individual Stonyfield yogurts; Fresh baked croissants, Danish, muffins and fruit breads; Whole grain and gluten free toasting breads; Cage free scrambled eggs; Applewood smoked bacon; Home fried potatoes; Hot oatmeal with brown sugar and golden raisins; Chilled orange and cranberry juice; Freshly brewed organic coffee, decaffeinated coffee and a selection of fine teas

8:00 AM—4:00 PM

◆ **Exhibit Hall Open (Salon A/B)**

Concurrent Sessions

8:00 AM—10:00 AM

◆ **Session 3: Laser Scanning—Which Problem Solving Solution is Right for You?**
(Merrimack Room)

8:00 AM—11:00 AM

◆ **Session 4: Subsurface Systems Bureau Update (Concord Room)**

8:00 AM—10:00 AM

◆ **Session 5: Computers, Networks, Internet & Security (Capital Room)**

9:00 AM—10:00 AM

◆ **Session 6: NESS Roundtable (Pierce Room)**

10:00 AM—10:15 AM

◆ **All Day Break Package (Exhibit Hall)**
Same as Thursday

10:15 AM—12:00 PM

◆ **Session 7: NH Road Records in the NH State Archives (Merrimack Room)**

10:15 AM—11:15 AM

◆ **Session 8: Field-to-Finish Photogrammetry (Capital Room)**

10:15 AM—11:15 AM

◆ **Session 9: NE Surveying Women Roundtable (Pierce Room)**

11:00 AM—12:00 PM

◆ **Session 10: Preparing NHDES Shoreland Permit Applications and Avoiding Common Pitfalls (Concord Room)**

REGISTRATION—PRE-FUNCTION AREA

11:15 AM—12:15 PM

◆ **Session 11: Feature Extraction from Scan Data (Capital Room)**

11:15 AM—12:15 PM

◆ **Session 12: Young Surveyors Roundtable (Pierce Room)**

12:00 PM—2:00 PM

◆ **Session 13: Exclusive Viewing of Exhibit Hall (Salon A/B)**

12:00 PM—1:30 PM

◆ **Lunch Buffet (Salon A/B/C)**

Concord's Favorite: Entrees include roasted free range chicken topped with fresh broccoli and creamy parmesan sauce and roast pork loin with an herb garlic crust and apple cider jus, mixed greens with tomato, cucumber, carrot, vinaigrette and creamy dressing, fresh baked focaccia and country breads, chef's seasonal vegetable and potato or rice, freshly baked cookies, brownies and finger desserts, freshly brewed organic coffee, decaffeinated coffee and a selection of fine teas

Concurrent Sessions Continued

2:00 PM—4:00 PM

◆ **Session 14: Leveraging Online Genealogical Records in Surveying Research (Merrimack Room)**

2:00 PM—4:00 PM

◆ **Session 15: Using and Understanding OPUS (Concord Room)**

3:00 PM—3:15 PM

◆ **All Day Break Package (Exhibit Hall)**
Same as Thursday

2:00 PM—4:00 PM

◆ **Session 16: The Past, Present, and Future of Zoning in NH (Capital Room)**

2:00 PM—4:00 PM

◆ **Session 17: Bring Your Own Device—The Future of Cost Affordable GIS & GNSS (Pierce Room)**

Check out page 12 for
DES and Zoom sessions.

Schedule Subject to Change -
Updates will be posted
in the Bulletin Board

NHLSA 52 nd Annual Workshop Schedule					
Courtyard Marriott Grappone Conference Center - Concord, NH					
REGISTRATION: 7:30 AM		December 16, 2021			Pre-function Area
Salon A	1.0 CEUs	Session 1: The NEW 2021 ALTA/NSPS Land Title Survey Standards			8:00 AM - 12:00 PM
	1.0 CEUs	Session 2: The Art of Retracement			1:00 PM - 4:00 PM
Sign-in/out to receive continuing education units (1/4 ceu will be awarded for each hour session attended) (must attend entire session to receive full credit)					
REGISTRATION: 7:30 AM		December 17, 2021			Pre-function Area
TIMES	Salon C	Merrimack Room	Concord Room	Capital Room	Pierce Room
7:30 AM	Continental Breakfast in Exhibit Hall				Past Presidents Breakfast 7:30 am - 9:00 am
8:00 AM	OPEN FOR LUNCH	Session 3: 8:00 am - 10:00 am Laser Scanning - Which Problem Solving Solution is Right for You?	Session 4: 8:00 am - 11:00 am Subsurface Systems Bureau Update	Session 5: 8:00 am - 10:00 am Computers, Networks, Internet & Security	
8:30 AM					
9:00 AM		Session 6: 9:00 am - 10:00 am NESS Roundtable			
9:30 AM					
10:00 AM		BREAK	BREAK	BREAK	BREAK
10:30 AM	Session 7: 10:15 am - 12:00 pm NH Road Records in the NH State Archives	Session 10: 11:00 am - 12:00 pm Preparing NHDES Shoreland Permit Applications and Avoiding Common Pitfalls	Session 8: 10:15 am - 11:15 am Field-to-Finish Photogrammetry	Session 9: 10:15 am - 11:15 am NE Surveying Women Roundtable	
11:00 AM					
11:30 AM	Session 11: 11:15 am - 12:15 pm Feature Extraction from Scan Data	Session 12: 11:15 am - 12:15 pm Young Surveyors Roundtable			
12:00 PM					
12:30 PM	Lunch 12:00 pm -1:30 pm Salon A/B/C	Session 13: Salon A/B 12:00 pm - 2:00 pm Viewing of Exhibit Hall			
1:00 PM		Session 14: 2:00 pm - 4:00 pm Leveraging Online Genealogical Records in Surveying Research	Session 15: 2:00 pm - 4:00 pm Using and Understanding OPUS	Session 16: 2:00 pm - 4:00 pm The Past, Present and Future of Zoning in NH	Session 17: 2:00 pm - 4:00 pm Bring Your Own Device - The Future of Cost Affordable GIS & GNSS
1:30 PM					
2:00 PM	OPEN FOR LUNCH 3:00 PM BREAK 50/50 Draw Silent Auction Closes				
2:30 PM					
3:00 PM					
3:30 PM					
4:00 PM					
4:30 PM					
5:00 PM	Certificates will be mailed				

SEMINAR ★ THURSDAY, DECEMBER 16th

NHLSA 52nd Annual Meeting & Equipment Show

Thursday's Sponsors



Continental Breakfast

(1) The NEW ALTA/NSPS Land Title Survey Standards

Gary R. Kent, PS

After 2 years of work on the part of the Joint ALTA/NSPS Work Group, the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys were adopted by ALTA and NSPS in October 2020 with an effective date of February 23, 2021. This program will outline the many changes from the 2016 Standards and provide a detailed explanation of the reason for each and how each affects the surveyor. In addition, an overview of the entire set of 2021 Standards will be provided including a detailed explanation of the relationship between Land Title Surveys and title insurance. The program will address some common questions and requests from lenders that arise in the process of performing a Land Title Survey, HUD surveys, and common FAQs.

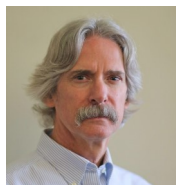
8:00 am—12:00 pm
(Salon A)

1.0 NH LLS CEUs



Morning Break

Gary is a Professional Surveyor with Schneider Geomatics in Indianapolis. After 37 years, he transitioned to part-time status in 2020 and formed Meridian Land Consulting, LLC to provide training, consulting and expert witness services. Gary served as Chair of the Joint ALTA/NSPS Committee responsible for the ALTA/NSPS Standards from 1995 to 2021. He has presented programs on boundary law, the ALTA/NSPS Standards, risk management, safety, easements and rights of way, railroad rights of way, leadership, and other surveying-related topics multiple times in each of the 50 states. Gary has served on the



Indiana State Board of Registration for Professional Surveyors since 2004 and is a past-president of both the American Congress on Surveying and Mapping and the Indiana Society of Professional Land Surveyors.



Lunch

(2) The Art of Retracement

Gary Kent, PS

Every professional surveyor across the United States knows the phrase "Follow in the Footsteps" as it relates to conducting a boundary retracement survey. But what does it really mean and what is the basis for following the footsteps? And exactly whose footsteps are we talking about? Surveyors also know the effect of the statute of frauds is that what is written in the conveyancing document is considered by the courts to be the highest and best expression of the parties' intentions. But what happens when the evidence of the footsteps on the ground conflicts with the written title? What if there are seemingly no footsteps to follow?

In this program we will explore the concept of retracement, how it relates to and is dependent on the document of conveyance, and what controls when conflicts and ambiguities are inevitably encountered. When armed with a full understanding of the concept of retracement, surveyors will be much better equipped to help steer their clients (and their affected neighbors) away from the pain and cost of litigation, and towards an amicable solution based on well-placed confidence and understanding of their respective roles and responsibilities.

1:00 pm—4:00 pm
(Salon A)

1.0 NH LLS CEUs



Afternoon Break

SPECIAL EVENTS ★ THURSDAY, DECEMBER 16th

NHLSA 52nd Annual Meeting & Equipment Show

NHLSA COMMITTEE MEETINGS

I welcome all Committee Chairs the opportunity to meet with your committee members for this brief period before the Annual Business Meeting.

Steven M. Ferguson, LLS
President

Thursday, December 16, 2021
Salon A

3:30 PM - 4:00 PM

NHLSA ANNUAL BUSINESS MEETING, AWARDS, & INSTALLATION CEREMONY

The New Hampshire Land Surveyors Association is wrapping up the year at our 52nd Annual Meeting and Equipment Show. Everyone is invited to attend our Annual Meeting where important agenda topics will be addressed. Business includes an update on the website, proposed bylaw amendment, and the NSPS dues. We look forward to seeing you all there.

Steven M. Ferguson, LLS
President

Salon A

4:00 PM - 6:00 PM

NHLSA RECEPTION WITH HORS D'OEUVRES, CASH BAR, AND NHLSF RAFFLE

Our annual business meeting will install the officers for our 52nd year. If elected, I will be your new President for our 53rd year and invite you to join me for our evening activities. Our reception, with hors d'oeuvres and cash bar, will again feature our 50/50 raffle. Eric Salovitch, Vice President, and I will be canvassing the room selling tickets throughout Thursday and Friday until noon. The winning ticket will be drawn Friday during the afternoon break.

Mitch Cummings, LLS
President-Elect

State Rooms
6:00 PM - 7:00 PM

50/50



Reception

NHLSA AWARDS BANQUET, NHLSF LIVE BENEFIT AUCTION

Now that everyone has warmed up with a casual atmosphere of mingling with colleagues, and hopefully not spending all of your money on raffle tickets and saved some for the possible bidding wars of the NHLSF Live Auction. Terry Eldredge is planning to join us and continue his lively and fun hosting duties.

I invite you to join me for the Awards Banquet, enjoy a good meal, continued conversation with friends, or someone you have yet to meet, and the fun will continue during dessert when the auction begins with the assistance of our generous volunteers.

The New Hampshire Land Surveyors Foundation is accepting donations, small, large, or in between. This year, the proceeds will benefit the Scholarship Fund. We can always expect a wide variety of items that will interest all banquet attendees, members, and guests alike. If you have any items that you would like to donate to the auction, please fill out the enclosed auction form and email it to Barbara ahead of time or drop it off with the item at the registration desk.

And, for the winning Map Contest entries, don't forget to stop by the registration table to claim your drink ticket!



We will end the evening with a door prize. Members who register for two days will receive a ticket during registration, and you must be present to win.

Since the 50/50 raffle extends through two days, you need not be present to win, just write your name on the ticket you drop in the provided fishbowl. The winning ticket holder will receive half of the proceeds with the remaining half donated to the Scholarship Fund.

Eric Salovitch, LLS
Vice President

State Rooms

7:00 PM - 9:00 PM

Silent Auction

The Silent Auction will open during lunchtime on Thursday and close following the Friday afternoon break. When you recycle your badge at the end of the day, check out the list of lucky recipients. If you can't stay for the entire event, please consider making arrangements for picking up your winning item.

If you have an item for the auction but will not be able to attend, please contact Barbara Cormier or Eric Salovitch and they will make sure it gets on the auction block.

Thursday December 16 - Friday, December 17, 2021

PAST PRESIDENTS ASSEMBLY & WORKSHOPS ★ FRIDAY, DECEMBER 17th

NHLSA 52nd Annual Meeting & Equipment Show

Friday's Sponsors



Past Presidents Breakfast

PAST PRESIDENTS BREAKFAST

Steve Ferguson, incoming Chair, welcomes all Past Presidents to attend and partake in the discussion on the following topics:

- ◆ Elect a taker of minutes
- ◆ Report on discretionary fund
- ◆ NSPS News and Views and related benefits of membership
- ◆ Brief discussion on young surveyors groups across the New England region

Please contact President Ferguson prior to December 1st regarding any other topics for discussion at the breakfast.

Pierce Room

7:30 AM - 9:00 AM



Continental Breakfast

(3) Laser Scanning—Which Problem-Solving Solution is Right For You?

Kenneth J. Fronheiser, PLS
Keystone Precision Solutions

This workshop is for professionals looking to enter the field of terrestrial laser scanning. We will discuss the different types of terrestrial laser scanners on the markets, field and office workflows, and what types of deliverables can be created from a terrestrial laser scanner.

Kenneth is a professional licensed land surveyor in the Commonwealth of Pennsylvania with over 17 years of

land surveying experience. During that time, Ken has been responsible for a wide variety of surveying projects to include: Topographical, Boundary, Construction Layout, RTK/GPS, GIS mapping, Bathymetric, and Laser Scanning. Ken has worked for a variety of clients that span from private, public, educational institutions, and government agencies. In July of 2014, Ken joined Keystone Precision Solutions. Since joining KPS, he is responsible for sales and support of the Trimble and Spectra Precision line of products in Southeast and Central Pennsylvania. Ken is a 1999 graduate of the Pennsylvania College of Technology with degrees in Surveying and Civil Engineering. In his spare time, he enjoys being outdoors, coaching baseball and spending time with family.



10:15 AM - 12:00 PM
Merrimack Room

0.50 NH LLS CEUs

(4) Subsurface Systems Bureau Update

Robert A. Tardif, P.E., Administrator
Subsurface Systems Bureau

Besides the discussion on the recent changes to the Subsurface System Bureau's rules. Rob's presentation will also include a discussion on Lot Line Adjustments.

Rob graduated from the State University of New York at Buffalo with a B.S. in Civil Engineering and received his P.E. license in 1999. He started working for the New Hampshire Department of Environmental Services in 1992. Rob initially worked in Hazardous Waste Compliance (compliance work), then Solid Waste Management permitting), and Residuals Management (permitting). Rob started in the Subsurface Systems Bureau in 2002 as the Construction Section supervisor. In June of 2009, Rob took over the duties of Subsurface Systems Bureau administrator.



8:00 AM - 11:00 AM
Concord Room

0.75 NH LLS CEUs

(5) Computers, Networks, Internet & Security

Rick Ladd
CADNET Services, LLP

The intent of this seminar is to go over the workings of computer, software, and devices for securing your network and data. We will look at many tools and procedures to protect your company, employees, and clients from outside intrusion. We will also go over Ransomware and other malware and how to avoid it.

Rick is the owner of CADNET Services, LLP, a CAD and IT consulting firm located in Manchester NH. Rick Ladd has been a member of NHLSA in one



WORKSHOPS ★ FRIDAY, DECEMBER 77th

NHLSA 52nd Annual Meeting & Equipment Show

capacity or another since 1988, and CADNET is

8:00 AM - 10:00 AM
Capital Room

0.50 NH LLS CEUs

(6) North East Surveying Societies (NESS) Roundtable

Mitch Cummings, LLS #1011
Moderator

Join me and other North East State Presidents for an informal NESS meeting to continue our ongoing dialogue and initiatives. Regional issues such as metrics on membership and young surveyor groups are key to the success of all state societies and the NSPS.



We'll discuss the challenges we've overcome during the last two years and how we plan to integrate hybrid participation moving forward as remote participation clearly creates value to our memberships. In addition, we'll touch on perceived challenges moving forward and how they can be overcome by effectively managing large groups of volunteers.

Please feel free to contact me prior to the meeting at mcummings@gm2inc.com.

9:00 AM - 10:00 AM
Pierce Room

0.25 NH LLS CEUs



Morning Break

(7) NH Road Records in the NH State Archives

Brian Nelson Burford, LLS
NH State Archives

This presentation is intended to briefly outline the history of road development in New Hampshire and the sources of records that define (or don't define) the roads. Many of the records are found among various different collections of records at the NH State Archives.

Brian began surveying in New Hampshire in 1972, and was licensed in 1983. He has worked for surveyors, lawyers, and land owners on boundary and title issues. Since 1995, he has worked for the NH State Archives, and since 2010 has been the NH State Archivist. He has been serving as the



Archivist since August 1, 2021. Throughout these decades, his work has been the finding and interpreting primary sources for information about the occupation, use, and conveyance of land in New Hampshire.

8:00 AM - 10:00 AM
Merrimack Room

50 NH LLS CEUs

(8) Field-to-Finish Photogrammetry

Dr. Benjamin Vander Jagt
Todd Carlson
Carlson Software

Join this session to learn about the latest methods for drafting map features from emerging technologies. Whether it's curb and gutter lines from point clouds, or digitizing road infrastructure with photogrammetry, this session will give you tips on how to increase the efficiency of your drone mapping workflow and increase your business's bottom line.

Dr. Benjamin Vander Jagt

has 10 years of experience supporting geomatics research projects, primarily devising innovative photogrammetric solutions, for a variety of commercial and government customers. Currently, most of his time is spent developing and supporting Carlson Photo-Capture, a cloud-based photogrammetry solution that is used in the land surveying, construction, and mining industries by customers all around the world.



Todd Carlson is the Director of Marketing and New England Sales Manager for Carlson Software working out of Carlson's main development office in Watertown, MA. Prior to his current role, Todd worked in technical support, training, and product development for the construction estimating and data prep package Carlson Takeoff.



10:15 AM - 11:15 AM
Capital Room

0.25 NH LLS CEUs

(9) NESW—New England Surveying Women Roundtable

Cynthia Boisvert, LLS
Moderator

Join us as we discuss topics relevant to being a woman in a predominantly male field. This is a group that was formed three years ago in the hopes of getting more of us together in one place from NH and other New England states.

We would like to set some goals this year and formalize a mission for our group, and discuss becoming involved in STEM schools focusing on introducing young women to our profession.

WORKSHOPS ★ FRIDAY, DECEMBER 17th

NHLSA 52nd Annual Meeting & Equipment Show

Cynthia has been a NH Licensed Land Surveyor for 36 years, beginning her survey career in North Conway, NH working for HEB Engineers and Burnell Land Surveying. Since 1980 she has been working in southern NH. Six years as VP of Survey Services at Cuoco & Cormier, Inc. and currently as President of Arago Land Consulting, LLC, located in Amherst NH.



Cynthia has served the NH Land Surveyors Association, as President, Vice President, President Elect, Past President and Publications Director. She has a BS in Environmental Design from the University of Massachusetts, Amherst.

Specific to the topic of Women in surveying, her first day on a field crew was interesting.

"One fall day, I was asked to work in the field. Willing to try anything, I said yes. I did not know that the field crew's intent with newbies, (male or female!) was to break them. Too bad that it was a cool crisp New England day, and we were running levels along the Ellis River in Jackson. At the end of the day, we turned to see a buck strolling down the center of the river. I was hooked."

10:15 AM - 11:15 AM
Pierce Room

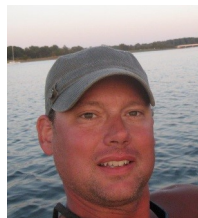
0.25 NH LLS CEUs

(10) Preparing NHDES Shoreland Permit Applications and Avoiding Common Pitfalls

Jay Aube
TFMoran, Inc.

As the former Shoreland Program Outreach Coordinator for the NH Department of Environmental Services (NHDES) Shoreland Program, Jay has twelve years of experience in the public sector. His experience at NHDES also includes Wetlands and Shoreland permitting as well as the enforcement of NH Alteration of Terrain Law, the NH Shoreland Water Quality Protection Act (SWQPA) and NH Wetlands Law. Today, Jay works as an Environmental Permitting Specialist for TFMoran, Inc.

Jay received his Bachelor of Science in Environmental Biology with a minor in Chemistry from Plymouth State University and Jay is a NH Certified Wetlands Scientist (CWS). Jay serves as a member of the City of Dover Conservation Commission and he is the Vice Chair of the Cocheco River Local Advisory Committee. Jay is also a member of the NH Association of Natural Resource Scientists (NHANRS). During his free time, you can find Jay skiing, hiking, biking or sea kayaking.



11:00 AM - 12:00 PM
Concord Room

0.25 NH LLS CEUs

(11) Feature Extraction from Scan Data

David Campbell
Joshua Hickey
Topcon Solutions Store

Join Topcon Solutions as we explore extracting features from scanning data using Autodesk. Scanning is just the first step to produce actionable and deliverable results using pointclouds developed from scanners or drones. Software is needed to reduce and clean up the scanned data, convert it to useable files, and then extract relevant features and information. Autodesk has multiple products to assist with these final steps. In this presentation, we will discuss the process and benefits of using Autodesk InfraWorks to aggregate and extract useable civil and building construction data from scans and present that information to all project stakeholders using Autodesk Construction Cloud.

David Campbell is an Application Specialist who works with clients of many different backgrounds to implement Autodesk Revit, BIM 360, as well as a few other solutions. David is often found teaching our Revit Structure Essentials course, but he is also a certified professional in Structure, Architecture and MEP Mechanical. So, you might occasionally see him teaching some of our other Revit courses. David is very passionate about orchestrating a process to address a company's individual needs fully utilizing the programs of his expertise. He then focuses his attention on instructing the users on implementation to maximize productivity. He looks to be involved with personnel from the field to the office. He has worked with city governmental agencies, architecture firms, contractors, and many other companies to achieve their individualized goals.



Joshua Hickey is an Application Specialist for the Topcon Solutions Store in the Midwest. There, he pulled from over 13 years of experience (e.g. design production and field) across multiple disciplines (Mechanical, Electrical, and Fiber Optic Networks). He has, on two separate occasions, built CAD/GIS design departments from the ground up. From workflows, to templates, and training, Joshua has trained and supervised many CAD and GIS designers.



11:15 AM - 12:15 PM
Capital Room

0.25 NH LLS CEUs

Remember to sign in/out for each session to receive continuing education units (1/4 CEU for each hour session attended). Attendees must attend entire session to receive full credit.

WORKSHOPS ★ FRIDAY, DECEMBER 17th

NHLSA 52nd Annual Meeting & Equipment Show

(12) Young Surveyors Roundtable

Emily Hayes
Young Surveyors Committee Chair

Don't let the term "young" deter you, for we encourage folks from every realm of the surveying profession to join us. Please sit in with us as we plan to connect, develop new ideas, discuss an array of on-going topics and have a little fun all at the same time. Our intent is to build on the strong & motivated head of steam this committee had prior to the pandemic. Come ready to share ideas & advice or plan to just listen in on what is always an interesting get-together.

Emily graduated from the Thompson School of Applied Science in 2003 and is currently employed at the NH Division of Forests & Lands performing survey projects and boundary line maintenance for all the state forests & parks. She lives in Barnstead, NH with her husband and her 7-year old twin boys. During her free time, she enjoys hiking & kayaking with her kids and tending to her multiple veggie and flower gardens. She joined the Young Surveyors Committee in 2019 and is looking forward to strengthening the group's student outreach and getting the profession of land surveying into the minds of as many middle & high school students as possible.



11:15 AM - 12:15 PM
Pierce Room

0.25 NH LLS CEUs

(13) Exclusive Viewing of Exhibit Hall

This is a great opportunity to see some of the latest products and services the vendors have to offer. You will have the opportunity to see demonstrations, ask questions and perhaps make a purchase or two. You just may find that key piece of information, a helpful hint, or some new equipment that you were looking for to help you out with that tough project back at the office.

If you make a point to stop by each booth, the vendors will stamp your vendor card provided at sign in, and you will receive the 0.5 CEU credit for your time spent. See page 13 for a list of reserved exhibitors.

12:00 PM - 2:00 PM
Salon A/B

0.50 NH LLS CEUs

Thank You

2021 Exhibitors



Lunch

(14) Leveraging On-Line Genealogical Records in Surveying Research

A. Richard Vannozzi, PLS

This presentation will focus on how to access and utilize on-line genealogical records in the completion of the boundary research required in our work. Over the last decade or so, vast quantities of original source material has been digitized and made easily available, much for free. This improved access has streamlined the research process and now allows Land Surveyors to more confidently complete their work. Many of the impediments to research such as restricted access to fragile materials, or removal of local/county materials to state archives are no longer an issue as well. The presentation will include an inventory of "deep" research sources for NH practitioners and conclude with the presentation of an ongoing research project that begins in colonial New Hampshire and focuses on a piece of land formerly owned by the *Surveyor General of the Wildland of Maine* and has been owned by the presenter and his family for nearly 100 years.

Mr. Vannozzi is a graduate of the University of Maine where, in 1984, he earned a BS in Forestry and, in 2006, earned an MS in Forestry, both with a surveying emphasis.

Mr. Vannozzi has taught surveying across New England since 2003.

Most recently, Mr. Vannozzi joined the faculty of the Surveying Engineering Technology program at The University of Maine in the Fall of 2019 where he teaches courses across the curriculum both in the traditional classroom and on-line.

He is registered as a Professional Land Surveyor in Massachusetts. He is a Past-President of the Massachusetts Association of Land Surveyors and Civil Engineers (MALSCE) and, in 1998, was recognized as MALSCE's Surveyor of the Year. Mr. Vannozzi was the 2012 recipient of ACSM's Earle J. Fennell Award for distinguished educational contributions to ACSM and the surveying and mapping profession. In 2017, Mr. Vannozzi was elected a Fellow of NSPS.

Mr. Vannozzi maintains a small consulting practice that specializes in complex boundary, title and zoning matters for select clients including attorneys and other Professional Land Surveyors.



2:00 PM - 4:00 PM
Merrimack Room

0.50 NH LLS CEUs

WORKSHOPS ★ FRIDAY, DECEMBER 17th

NHLSA 52nd Annual Meeting & Equipment Show

(15) Using and Understanding OPUS

Dan Martin, LS
National Geodetic Survey

The National Geodetic Survey's (NGS's) Online Positioning User Service (OPUS) provides free, easy access to the National Spatial Reference System (NSRS), by allowing users to upload their GPS data to the NGS to be processed by NGS computers. To use OPUS successfully, it is critical that users understand both the requirements for data input as well as the processing output. This course will describe the steps involved in processing data with OPUS and will explain the output so that users can better interpret and have confidence in the results. We will also go through the steps to "Share" your OPUS solution and will discuss the benefits of doing so.

Dan Martin has worked for the National Geodetic Survey since 2003, and has been the Northeast Regional Geodetic Advisor since 2015. As the Regional Advisor, he instructs local surveyors, state and municipal agencies, and the geospatial community at large, on how to use and preserve the National Spatial Reference System, and provides liaison between the National Geodetic Survey and the States of ME, NH, VT, MA, CT, RI, NY, and NJ, as well as other federal agencies. Prior to that he worked in the Route Survey and Geodetic Survey sections of the Vermont Agency of Transportation from 1988 through 2003, and held the position of Geodetic Program Supervisor for the Agency from 1999 through 2003. Dan is a Past President and Fellow Member of the American Association for Geodetic Surveying (AAGS), an Honorary Member of the Vermont Society of Land Surveyors and a member of the New Hampshire Land Surveyors Association.



2:00 PM - 4:00 PM
Concord Room

0.50 NH LLS CEUs

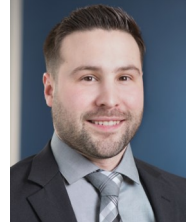


Afternoon Break

(16) The Past, Present & Future of Zoning in NH

Brett Allard, Esq.
Bernstein, Shur, Sawyer & Nelson, P.A.

Brett primarily advises developers in land planning, zoning, and real estate development matters, helping them navigate through the maze of local, state, and federal permitting. He is well-versed in handling all types of development projects; from basic lot line adjustments to large complex residential subdivisions, commercial projects, and planned unit developments. Brett also assists clients in residential and commercial transactions, including acquisitions, dispositions, leasing, and financing, and has substantial experience representing clients in easement, boundary, and title disputes, and in various roadway and access rights matters.



2:00 PM - 4:00 PM
Capital Room

0.50 NH LLS CEUs

(17) Bring Your Own Device—The Future of Cost Affordable GIS & GNSS

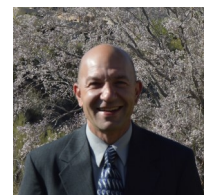
Dr. Nikolas Smilovsky
Larry Fox
Bad Elf

This presentation teaches users how to leverage free Geographic Information Systems (GIS) in conjunction with low-cost, alternative GNSS solutions. The world is changing and mapping is changing with it. A new term "bring your own device" (BYOD) has emerged in the GNSS data collection industry. No longer are expensive data collection hardware devices and software necessary to complete high-accuracy mapping and surveying. Leveraging a personal smart device of choice, with either free or low-cost software is a new market model. Come learn how you can harness this new technological power without breaking the bank.

Dr. Smilovsky is the GIS Solutions Director for Bad Elf, a GNSS technologies company. Additionally he is a faculty member and instructor at Arizona State University. Dr. S is a certified Geographic Information Systems Professional, a certified Arborist, and a Part 107 certified UAV pilot. As a geospatial evangelist, custom geospatial solutions provider, and geographic researcher - Dr S. is widely versed in all things geodetic.



Larry Fox is VP of Marketing and Business Development at Bad Elf, LLC. He has over twenty years of experience as a product visionary, business development, and technology strategist. He is an innovator with the ability to identify, design and launch complex hardware



WORKSHOPS ★ FRIDAY, DECEMBER 17th

NHLSA 52nd Annual Meeting & Equipment Show

and software solutions. Mr. Fox has leadership experience with diverse and highly dynamic teams from startups to Fortune 500 companies. Throughout his career, he has patented expertise in GNSS/GPS technologies, mobile applications, web development, and wireless communication solutions.

2:00 PM - 4:00 PM
Pierce Room

0.50 NH LLS CEUs

DEPARTMENT OF ENVIRONMENTAL SERVICES

DES has approved credits for the following sessions, for septic designers & installers.

Session 1 & 2 — 3 credit hours

Sessions 3, 4, 7, 10, 11, 16, 17
Credit hours = seat time
(length of workshop)

Reminder: Permitted Sewage Disposal System Designers & Installers and Natural Scientists—to receive credit, you must note your license number on the sign in/out sheets.

Note: Natural Scientists credits are not pre-approved, use your best judgement when choosing your sessions.

We're pleased to announce that session 8 (Field to Finish Photogrammetry) and session 15 (Using and Understanding OPUS) will be held virtually via Zoom. Although the Annual Meeting is primarily an in-person event, if you're unable to attend, but are interested in attending these sessions for a collective 0.75 CEU's we will be happy to accommodate. The registration fee for both virtual sessions is \$60. Please contact Barb directly for registration to our virtual seminars at info@nhlsa.org.

Check out page 16 for just some of the TSAS items that will be auctioned off.



Thank You
to our Sponsors!

- ◆ Thursday Continental Breakfast
Keystone Precision Solutions
- ◆ Thursday Morning Break
Maine Technical Source
- ◆ Thursday Lunch
VHB, Inc.
- ◆ Thursday Afternoon Break
Maine Technical Source
- ◆ Thursday Reception
Keystone Precision Solutions
- ◆ Past Presidents' Breakfast
Ambit Engineering, Inc.
- ◆ Friday Continental Breakfast
Keystone Precision Solutions
- ◆ Friday Morning Break
Northam Survey, LLC
- ◆ Friday Lunch
Doucet Survey, LLC
- ◆ Friday Afternoon Break
TFMoran, Inc.
- ◆ Souvenir Calendar
Horizons Engineering, Inc.

Thank You
for
Attending!

EXHIBITORS

NHLSA 52nd Annual Meeting & Equipment Show

SALON A/B/C

NHLSA Annual Meeting and Equipment Show
December 16th and 17th, 2021

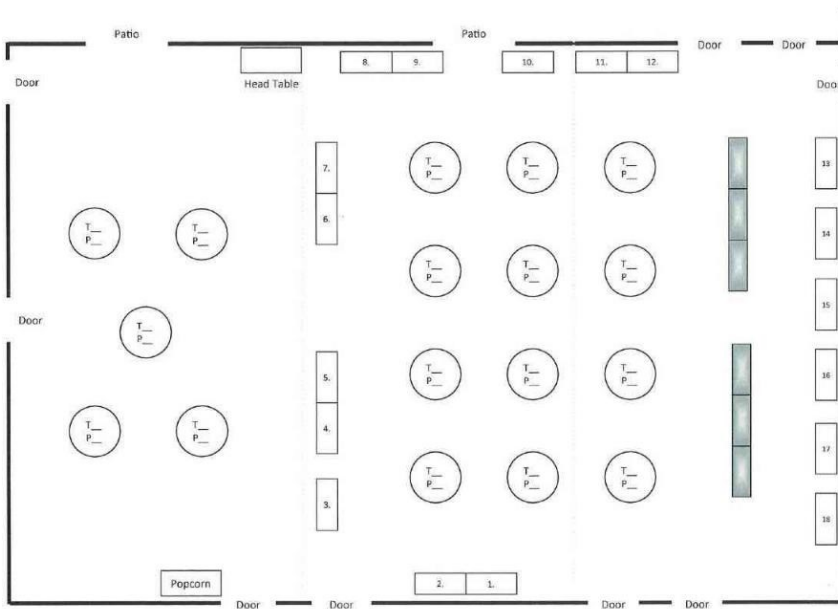


Exhibit Hours Set-Up

Installation

Thursday, December 16
9:00 PM - 11:00 PM

Friday, December 17
6:00 AM - 8:00 AM

Dismantle

Friday, December 17
3:30 PM - 4:00 PM

Booth: Exhibitor

- ◆ 1 & 2: Topcon Solutions Store
- ◆ 3: Bluesky Geospatial Ltd.
- ◆ 4 & 5: Maine Technical Source
- ◆ 6 & 7: Spiller's
- ◆ 8 & 9: Keystone Precision Solutions
- ◆ 10: Eastpoint Lasers LLC
- ◆ 11: WSP
- ◆ 12: Bad Elf
- ◆ 13: Blue Marble Geographics
- ◆ 14: Javad GNSS
- ◆ 15: CADNET Services
- ◆ 16: National Society of Professional Surveyors
- ◆ 17: AirWorks
- ◆ 18: New England Laser Transit

Exhibit Hall Activity

Continental Breakfast
Friday
7:30 AM

Morning Break
Friday
10:00 AM

Ahhh— The smell of fresh popcorn!

Lunch w/Exhibitors

**Session 13:
Exclusive Viewing
of Exhibits**

12:00 PM - 2:00 PM

Afternoon Break
Friday
3:00 PM

HOTEL INFORMATION

NHLSA 52nd Annual Meeting & Equipment Show

The Courtyard Marriott & Grappone Conference Center, 70 Constitution Avenue, Concord, NH 03301. Phone: 603-225-0303, Fax: 603-225-8916. **Room Rate \$129.00+tax/night.**

ROOM RESERVATION DEADLINE:

Reservations must be received on or before **November 23, 2021**. At this date, the hotel will review reservation pick up for the event and release the unreserved rooms for general sale.

OVERNIGHT RESERVATION OF ROOMS:

1. A block of guestrooms is reserved for use of the NHLSA Meeting/Show at group rates.
2. Individuals are responsible for securing their own reservations from this group

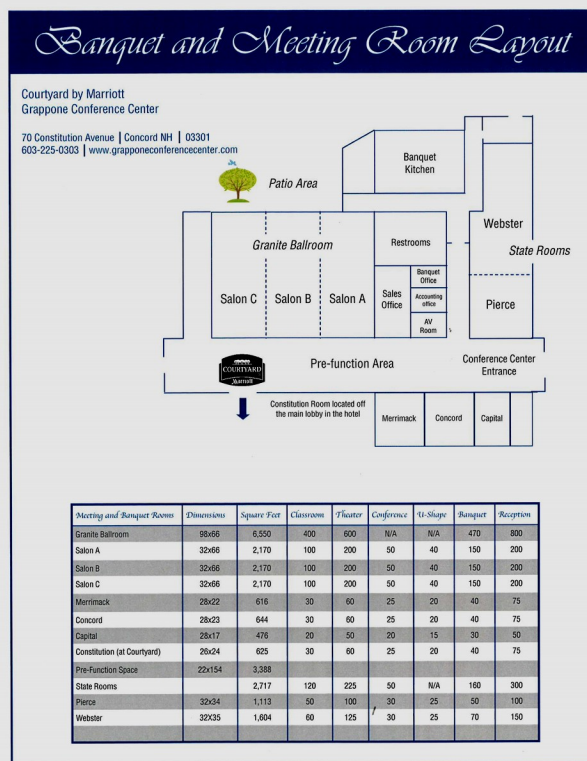
Identify yourself as attendees of the NHLSA Group in order to receive the discount.

1. Check in is at 3:00 pm and check out is 12:00 noon.
2. Cancellation, late arrival or special arrangements should be made directly with the Courtyard Marriott.
3. Complimentary on-site parking.

Directions to Hotel: Hotel is located off Rte. 93, Exit 15W. Turn right at the first stoplight onto Commercial Street. Follow Commercial Street 1/4 mile to Constitution Avenue.

If you need further information, check out the hotel website at:

<http://www.marriott.com/hotels/travel/mhtcn-courtyard-concord/>



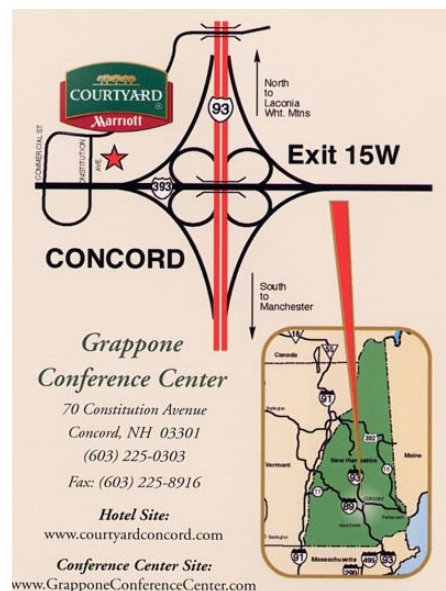
Spouses & Guests

Shopping: Downtown Concord is the place to be. They revitalized Main Street a handful of years ago & it's lined with variety of shops & places to eat.

Other area attractions include the State Capitol, located at 107 North Main Street. Concord is the state capital and is home to the oldest state capitol building in the United States.

The McAuliffe-Shepard Discovery Center is a lively science center featuring 21st century interactive exhibits on aviation, astronomy, Earth and space sciences, a state-of-the-art planetarium and a variety of science and engineering programs. The Discovery Center is open seven days a week. For show times, topics and reservations call 603-271-7827 or check out www.starhop.com.

The Museum of New Hampshire History is located at 6 Eagle Square and is open Thursday, Friday, and Saturday from 9:30am thru 5pm. Admission is \$7.00 for adults. Children under age 18 are admitted free of charge. Full-time students and active military personnel and their families also are admitted free of charge with a valid ID. This Museum features exhibits on everything from Native American remains to the Concord stagecoach. An interesting trip through this scenic state's history. Check out their website at: <http://www.americanheritage.com/content/museum-new-hampshire-history>



NHLSA BOOKSTORE ~ NHLSF BENEFIT AUCTION

NHLSA 52nd Annual Meeting & Equipment Show

NHLSA BOOKSTORE

Don't forget to stop by the traveling NHLSA Bookstore during the breaks and free time. This is the perfect time to save that 20% shipping & handling charge. Barbara and our devoted volunteers will have a mini bookstore set up in the pre-function area and will be selling all of the books and merchandise that you can normally purchase on the NHLSA website. With the end of the year right around the corner, books and reference material may also be good tax deduction business expenses for you, and if you are an aspiring surveyor, some of these books will be invaluable to you in preparing for your exam!

In addition to the reference books we've also got items like brass discs, lapel pins, and belt buckles. The belt buckles (with proceeds going towards the Scholarship Fund) are numbered sequentially, so if your license number falls between 194-513, you may be able to get a buckle with your license number on it.



Please drop off
your item and form
at the
registration table.

Thank You for your Support!!

Please help in our recordkeeping by using the form below
when donating an auction item, door prize, or raffle prize.
Thank you for your cooperation and generosity!

BENEFIT AUCTION DONATION PLEDGE FORM

Don't miss the Fun, Food and Action at the NHLSA Benefit Auction!

Live Auction Thursday 8:00 - 9:00 PM (beginning during banquet dessert)

Silent Auction ends Friday afternoon (winners announced end of day)

Use this form to make a donation to our Benefit Auction. Please complete the information below and return via fax, email or mail to **NHLSA** Office:603-386-6856; info@nhlsa.org; PO Box 689, Raymond, NH 03077-0689.

Name / Company		Phone ()	
Address		Fax ()	
City	State	Zip	
Item	Fair Market Value \$		

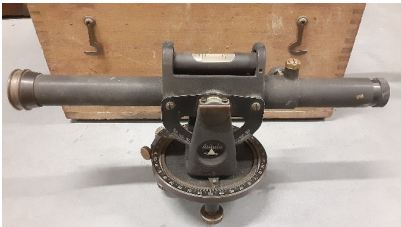
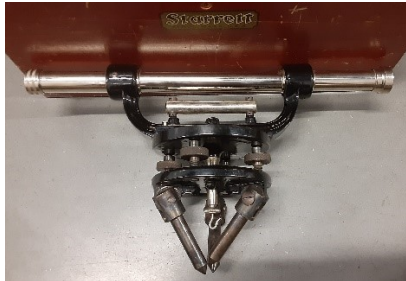
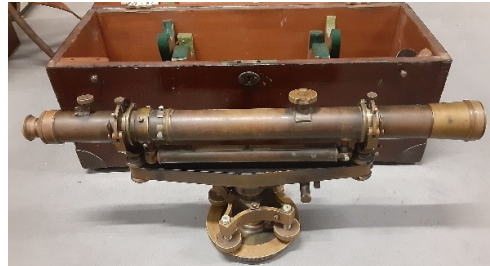
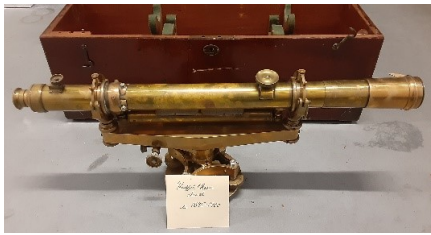
Please include a brief description of the item (s) to be used by auctioneer. [List additional items on separate piece of paper.](#)

DOOR PRIZE DONATION:

RAFFLE DONATIONS

Small items welcome for mini-affle, drawing during Friday afternoon break.
50/50 raffle held throughout both days, closes at 2:00pm Friday, drawing during afternoon break

BENEFIT AUCTION ★ FRIDAY, DECEMBER 17th
NHLSA 52nd Annual Meeting & Equipment Show



From 1920 on, the University of New Hampshire has trained generations of Surveyors and Civil Engineers. These instruments were part of the training for these students and now these pieces of history could be yours. The proceeds from the sale of this equipment will fund the Robert G. Moynihan Education Fund, a Fund created to ensure a path forward for the next generations of surveyors through means beyond that of typical scholarships. We look forward to your participation in the upcoming auction!



2021 NHLSA CONVENTION REGISTRATION

BEST VALUE

NHLSA 52nd Annual Meeting & Equipment Show

Early Bird Full Registration
Before November 26th—\$330/\$440;
If received after the December 6th
Final Deadline, add \$50

(✓) () LS () Associate () Affiliate () Student () Non-Member				
Name		Guest Name		
Company		Phone ()		Fax ()
Address		Email Address		
City	State	Zip	Name on Badge	
Member* (✓) () NHLSA () CALS () MALSCE () MSLS () RISPLS () VSLS () NYSAPLS *Member includes all Northeast State Societies (If member in multiple states, check home state)				
#	REGISTRATION	Member	Non-member	TOTAL
	Early Bird Full Registration—before Nov. 26th	\$330.00	\$440.00	\$
	Full Registration—after Nov. 26th	\$385.00	\$495.00	\$
	Thu All Day (see below)	\$250.00	\$350.00	\$
	Thu Seminar Only (includes breaks & lunch)	\$220.00	\$300.00	\$
	Fri Only (see below)	\$220.00	\$300.00	\$
	Friday Special Offer - Affiliate & Student Members - First ten (10) registration forms received (two per company limit)		N/C	\$
	Banquet & Benefit Auction Only or Additional Tickets		\$65.00	\$
BANQUET CHOICE () Prime Rib () New England Baked Haddock () N/A				
	Thu or Fri Lunch Ticket (includes breakfast & breaks)		\$55.00	\$
	Equipment Show Only (lunch ticket & CEUs not included)		N/C	\$ N/C
	Annual Meeting		N/C	\$ N/C
	Past Presidents' Breakfast		N/C	\$ N/C
Thursday All Day —includes workshops, continental breakfast, breaks, lunch, banquet & benefit auction Friday Only —includes workshops, continental breakfast, breaks, lunch, & equipment show			Total Payment Due \$	
Receive 20%* off for five (5) or more members or employees from the same company *20% discount only applies to Full Registration, or One-Day Only Registration			Included in Full Registration ◆ Two Days of Workshops with Continuing Education Units ◆ Continental Breakfast (2) ◆ Morning & Afternoon Breaks (2) ◆ Lunch (2) ◆ Banquet & Benefit Auction ◆ Equipment Show	
Method of Payment			Cancellation Policy Written cancellation request must be postmarked 20 days in advance for 100% refund.	
Hotel Reservation Deadline Courtyard Marriott Grappone Conference Center 70 Constitution Avenue Concord, NH 03301 603-225-0303 November 23, 2021 Identify Affiliation with NHLSA				
Check (payable to NHLSA) () CHECK # VISA () MASTERCARD () AMERICAN EXPRESS () DISCOVER ()				
Credit Card Number ____/____/____/____/____/____/____/____/____/____/____/____/____/____/____/____			Exp. Date ____/____	
Name Appearing on Card		Address if different from above		
Signature			Today's Date ____/____/____	
CARDMEMBER ACKNOWLEDGES RECEIPT OF GOODS AND SERVICES IN THE AMOUNT OF THE TOTAL SHOWN HEREON AND AGREES TO PERFORM THE OBLIGATIONS SET FORTH BY THE CARDHOLDERS AGREEMENT WITH THE ISSUER.			Auth # Office Only	
◆ All registrations must be accompanied with payment ◆ Reservations cannot be taken by phone. ◆ Send both pages ◆ Only one person and guest per registration form ◆ Make copies if needed			Mail or FAX Form (do not email credit card info) New Hampshire Land Surveyors Association (NHLSA) PO Box 689 Raymond, NH 03077-0689 Phone: 603-895-4822 Fax: 603-386-6856 Email for inquiries: info@nhlsa.org Website for brochure or to register: www.nhlsa.org	

WORKSHOP SELECTION

NHLSA 52nd Annual Meeting & Equipment Show

WORKSHOPS

Thursday, December 16, 2021		
✓	#	Title · Room · Times · Continuing Education Units
	1	The NEW ALTA/NSPS Land Title Survey Standards · Salon A · 8:00 AM - 12:00 PM · 1.0 NH CEUs
	2	The Art of Retracement · Salon A · 1:00 PM - 4:00 PM · 1.0 NH CEUs
Friday, December 17, 2021		
	3	Laser Scanning · Merrimack Room · 8:00 AM - 10:00 AM · 0.50 NH CEUs
	4	Subsurface Systems Bureau Update · Concord Room · 8:00 AM - 11:00 AM · 0.75 NH CEUs
	5	Computers, Networks, Internet & Security · Capital Room · 8:00 AM - 10:00 AM · 0.50 NH CEUs
	6	Northeast Surveying Societies (NESS) Roundtable · Pierce Room · 9:00 AM - 10:00 AM · 0.25 NH CEUs
	7	NH Road Records in the NH State Archives · Merrimack Room · 10:15 AM - 12:00 PM · 0.50 NH CEUs
	8	Field-to-Finish Photogrammetry · Capital Room · 10:15 AM - 11:15 AM · 0.25 NH CEUs
	9	New England Surveying Women (NESW) Roundtable · Pierce Room · 10:15 AM - 11:15 AM · 0.25 NH CEUs
	10	Preparing NHDES Shoreland Permit Applications · Concord Room · 11:00 AM - 12:00 PM · 0.25 NH CEUs
	11	Feature Extraction from Scan Data · Capital Room · 11:15 AM - 12:15 PM · 0.25 NH CEUs
	12	Young Surveyors Roundtable · Pierce Room · 11:15 AM - 12:15 PM · 0.25 NH CEUs
	13	Exclusive Viewing of Exhibit Hall · Salon A/B · 12:00 PM - 2:00 PM · 0.50 NH CEUs
	14	Leveraging Online Genealogical Records · Merrimack Room · 2:00 PM - 4:00 PM · 0.50 NH CEUs
	15	Using and Understanding OPUS · Concord Room · 2:00 PM - 4:00 PM · 0.50 NH CEUs
	16	The Past, Present, and Future of Zoning in NH · Capital Room · 2:00 PM - 4:00 PM · 0.50 NH CEUs
	17	The Future Cost of Affordable GIS & GNSS · Pierce Room · 2:00 PM - 4:00 PM · 0.50 NH CEUs
Reminder: Badge & meal tickets required for all events!		

How do you prefer your 52nd Annual Meeting Booklet?

DIGITAL

☐

HARDCOPY

☐

Would you like a 2022 Souvenir Calendar?

YES

☐

NO

☐

CONVENTION REGISTRATION

IMPORTANT—Please help our speakers plan their handout material by filling out which workshops you plan to attend.

Please fill out both sides of the two-page registration form completely, and mail with payment to NHLSA. If paying by credit card, fax both sides, or register on the website.

EARLY BIRD FULL REGISTRATION—Save \$50 by registering before November 26th!

Thank You 2021 Presenters