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SCOTT A. NESVOLD, P.E.
PRINCIPAL & SENIOR DIRECTOR

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Scott Nesvold is a Principal for ESi. Mr. Nesvold provides expert consultation in the fields of Structural Engineering and Fire Protection Engineering regarding building design, structural analysis and failure analysis for all building types. In addition, his background in Fire Protection Engineering offers the expertise to evaluate fire protection systems, fire alarm systems and to analyze the effects of fire and explosions and its impact on structural integrity and life safety. Mr. Nesvold specializes in the assessment of damage to structures and their components following catastrophic events, such as explosions and fire. Rope Access allows him to investigate areas that are difficult to access or heavily damaged.

Mr. Nesvold has an extensive background in rehabilitating historic buildings and bridges. He has applied his experience to the design and retrofit of these culturally significant buildings and worked with fire and life safety codes to design and implement unique solutions to improve life safety and to preserve the historic integrity of the buildings.

Mr. Nesvold has investigated damage to structural components related to conditions ranging from serviceability issues to complete collapse. Conditions have included fire and thermal issues, corrosion and material decay, settlement and earth movement, deflections and creep of materials, as well as cracking and overstress. He has been involved in investigating construction accidents and damage resulting from construction operations.

Areas of Specialization

Construction Engineering
Engineering Analysis
Engineering Surveying
Damage Assessment
Failure Analysis
Fire Protection Engineering
Fire/Explosions
Fire Protection Systems
Fire Alarm Systems
Historic Buildings/Rehabilitating
Structural Analysis
Repair and Renovation Design
Rope Access



Education

Master of Engineering, Fire Protection, University of Maryland, College Park, MD, 2009
M.S. Structural Engineering, University of Minnesota, Minneapolis, MN, 2005
B.S. Civil Engineering, South Dakota State University, Brookings, SD, 2003

Licenses/Certifications

State of Arizona P.E. License 54653
State of Florida P.E. License 88175
State of Idaho P.E. License 20102
State of Illinois P.E. License 062.076385
State of Iowa..... P.E. License P25673
State of Louisiana P.E. License PE.0048933
State of Massachusetts..... P.E. License 50327
State of Michigan P.E. License 6201058897
State of Minnesota..... P.E. License 45923
State of Missouri P.E. License 2013008874
State of Montana P.E. License PEL-PE-LIC-90960
State of Nebraska P.E. License E-18586
State of North Dakota P.E. License PE-8725
State of South Dakota P.E. License 11236
State of Texas P.E. License 140384
State of Utah..... P.E. License 13504605-2202
State of Vermont P.E. License 018.0085918
State of Wisconsin P.E. License 44002-6

Professional Affiliations/Honors

Society of Fire Protection Engineers (SFPE)

International and Minnesota Chapter Member

International Association of Arson Investigators (IAAI)

Member

National Fire Protection Association (NFPA):

Technical Committee on Structures, Construction, and Materials (BLD-SCM; NFPA 5000 & 703)

National Association of Subrogation Professionals (NASP)

Member

Defense Research Institute (DRI):

DRI Construction Law SLG Committee Member

DRI Construction Defect Subcommittee Member

American Society of Civil Engineers (ASCE)

Member

American Institute of Steel Construction (AISC)

Member

Positions Held

Engineering Systems Inc., Plymouth, Minnesota

Principal & Senior Director, 2023 – Present

Senior Managing Consultant & Director of Building Sciences, 2019 – 2022

Crane Engineering, Plymouth, Minnesota

Manager, Building Science, Structural/Fire Protection Engineer, 2012 – 2018

Olson & Nesvold Engineers, Bloomington, Minnesota

Vice President/Principal Engineer/Co-Founder, 2009 – 2012

Opus Architects & Engineers, Minnetonka, Minnesota

Structural Engineer, 2006 – 2009

University of Minnesota, Minneapolis, Minnesota

Research Fellow/Assistant, 2004 – 2006

Banner Associates, Inc., Brookings, South Dakota

Structural Engineer, 2003

University of Delaware, Newark, Delaware

Undergraduate Researcher, 2002

Kansas Department of Transportation, Topeka, Kansas

Bridge Construction Inspector and Engineering Technician, 2001

Bolton & Menk, Inc., Sleepy Eye, Minnesota

Engineering Technician I, 2000 – 2001

St. Boni Fire Department, St. Bonifacious, Minnesota

Captain, Safety Officer, 2005 – 2010

Continuing Education

Silent Knight Fire Alarm Systems:

Programming and Installation, 2021

ASCE 59-11 Blast Protection of Buildings:

Blast-resistant Design of Systems, and Components, 2016

Fire-Lite Fire Alarm Systems:

Programming and Installation, 2015

Firefighter II, National Board of Fire Service Professional Qualifications

Firefighter I, National Board of Fire Service Professional Qualifications

Fundamentals of Fire Investigation, IAAI, Sayreville, NJ, 2013

NFPA workshop on ITM Frequencies, Quincy, MA, 2012

National Fire Academy Course, Arson Detection for the First Responder

United States Fire Administration, St. Cloud, MN, 2009

Publications/Presentations

“Friction Characterization and Mitigation in Large-Scale 6DOF Multi-Axial Hybrid Simulation”, **S.A. Nesvold**, Earthquake Engineering & Structural Dynamics published by John Wiley & Sons Ltd, 2025

“Structural Condition Assessment – Is That Building Safe?”, **S.A. Nesvold**, presented at Wyoming IAAI Chapter 2024 Conference, Laramie, WY, 2024

“Unique Case Studies Involving Construction Defects on Complex Claims”, **S.A. Nesvold**, presented at 2023 Construction Super Conference, Hollywood, FL, 2023

“Fire Protection Systems and Common Failures”, **S.A. Nesvold**, presented at Secura Insurance, Bloomington, MN, 2023

“Fire Protection Systems and Common Failures”, **S.A. Nesvold**, presented at Travelers Insurance, St. Paul, MN, 2023

“Multi-Story Wood Construction: Issues That Can Arise from Innovative Wood Products”, **S.A. Nesvold**, presented at the Construction Law Essentials (Special 2-Day Program): Sticks & Bricks PLUS Fundamentals, ABA Regional Seattle, Seattle, WA, 2021

“From Uptown to Downtown: Issues Regarding Mixed-Use Multi-Level Construction”, **S.A. Nesvold**, presented at the North Dakota Defense Lawyers Association (NDDLA) – 2018 Annual Meeting and Seminar, Bismarck, ND, 2018

“Technology You Need When Investigating a Loss”, **S.A. Nesvold**, presented at DRI’s Construction Law Committee, Nashville, TN, 2018

“Don’t Let Your Sprinkler System Drain You”, **S.A. Nesvold**, presented at the Minnesota Chapter, Society of Fire Protection Engineers, Roseville, MN, 2018

- “Structural Condition Assessment – Is That Building Safe?”, **S.A. Nesvold**, presented at Colorado IAAI Annual Training Conference, Vail, CO, 2017
- “The Future has Arrived: New Construction Methods and Materials That Are Changing the Industry”, **S.A. Nesvold**, presented at Fox Valley Adjusters Association, Appleton, WI, 2017
- “Steer Your Experts in the Right Direction”, **S.A. Nesvold**, presented at the Defense Research Institute, Young Lawyers Conference, Austin, TX, 2017
- “Structural Condition Assessment – Knowing the Hazards of a Hazard”, **S.A. Nesvold**, presented at the Bureau of Alcohol, Tobacco, Firearms and Explosives – National Response Team Training, Redstone Arsenal, Huntsville, AL, 2017, Instructor
- “Effects of Fire on Structures – Is That Building Safe?”, **S.A. Nesvold**, presented at the Minnesota Structural Engineers Association (MNSEA), Golden Valley, MN, 2017
- “Structural Condition Assessment – Is That Building Safe?”, **S.A. Nesvold**, presented at the Minnesota Chapter International Association of Arson Investigators (IAAI), New Brighton, MN, 2016
- “Structural Condition Assessment – A Safety Course in the Effects of Fire and Explosions on Buildings”, **S. A. Nesvold**, presented at the Bureau of Alcohol, Tobacco, Firearms and Explosives – National Response Team, Huntsville, AL, 2016, Instructor
- “Trending Use of Experts in Product Liability Cases”, **S.A. Nesvold**, presented at the National Association of Subrogation Professionals Lit Skills Conference, Fort Lauderdale, FL, 2016
- “Commercial Property: Inspecting Hard to Reach Areas Quickly and Inexpensively”, **S.A. Nesvold**, Claims Journal, 2016
- “Bracing for Failure: A Case Study of Wood Truss Failures and the Responsibility of the Designers, Manufacturers and Installers”, **S.A. Nesvold**, presented at the North Dakota Defense Lawyers Association, 2015 Annual Meeting and Fall Seminar, Bismarck, ND, 2015
- “2015 Minnesota Codes & Historic Buildings”, **S.A. Nesvold**, presented at the Minnesota Historical Society, Minnesota History Center, St. Paul, MN, 2015
- “Incident Site Management – Managing and Documenting an Incident Scene”, **S.A. Nesvold**, presented at the ASCE Forensic Engineering 7th Congress, Miami, FL, 2015
- “Bracing for Failure: A Case Study of Wood Truss Failures and the Responsibility of the Designers, Manufacturers, and Installers”, **S.A. Nesvold**, presented at the North Dakota Defense Lawyers Association (NDDLA) – 2015 Annual Meeting and Seminar, Bismarck, ND, 2015
- “Structural Shoring Short Course”, **S. A. Nesvold**, presented at the Bureau of Alcohol, Tobacco, Firearms & Explosives (ATF), Fire Research Laboratory, Ammendale, MD, 2015

- “Incident Site Management – Managing and Documenting an Incident Scene”, **S.A. Nesvold**, J.R. Panko, Proceedings of the 7th Congress and Forensic Engineering, American Society of Civil Engineers, Reston, VA, pp. 589-599, 2015
- “MN Conservation Code (IEBC) 2015 & Historic Buildings”, **S.A. Nesvold**, presented at the AIA Minnesota – 80th Annual Convention, Minneapolis, MN, 2014
- “Historic Buildings – IFC, IBC, IEBC, 2014”, **S.A. Nesvold**, presented at the 2014 State Fire Marshal’s Conference, Minneapolis, MN, 2014.
- “Incident Site Management and 3D Laser Scanning Applications”, **S.A. Nesvold**, presented at the Associated General Contractors (AGC) Technology and New Product Fair, St. Louis Park, MN, 2014
- “Incident Site Management: The Importance of Managing and Documenting an Incident Scene”, **S.A. Nesvold**, Claims Journal, 2014
- “Incident Scene Documentation”, **S.A. Nesvold**, presented at the Twin Cities Claims Association (TCCA) Winter Conference, Bloomington, MN, 2014
- “The Value of a Multidisciplinary Approach to Complex Facility and Product Liability Cases”, **S.A. Nesvold**, presented at the Larson King, Saint Paul, MN, 2013
- “Incident Site Management”, **S.A. Nesvold**, presented at the Associated General Contractors (AGC) Safety Committee, Saint Paul, MN, 2013
- “Incident Site Management”, **S.A. Nesvold**, presented at the North Dakota Defense League (NDDLA), Bismarck, ND, 2013
- “Forensic Engineering & Architecture”, **S.A. Nesvold**, presented at the University of Minnesota, Minneapolis, MN, 2013
- “Historic Preservation and Life Safety”, **S.A. Nesvold**, presented at the AIA Minnesota – 78th Annual Convention, Minneapolis, MN, 2012
- “Detecting and Confirming the Presence of Road Flare Residue in Fire Investigations”, **S.A. Nesvold**, K.L. Pacholke, Proceedings of the 5th International Symposium on Fire Investigation Science and Technology, National Association of Fire Investigators, International, Sarasota, FL, pp. 495-506, 2012
- “Detecting and Confirming the Presence of Road Flare Residue in Fire Investigations”, **S.A. Nesvold**, presented at the International Symposium of Fire Investigators, NAFI, University of Maryland-College Park, MD, 2012
- “Fire Protection Systems: How to Manage the Risk”, **S.A. Nesvold**, presented at the Collier’s College, Minnetonka, MN, 2012

“What is Fire Protection Engineering?”, **S.A. Nesvold**, presented at the Hennepin County Government Center, Minneapolis, MN, 2011

“What is Structural Engineering?”, **S.A. Nesvold**, presented at the University of Minnesota, CE1101, Minneapolis, MN, 2010

“Multi-Axial Subassemblage Testing (MAST) System,” C. E. French, C. K. Shield, J. F. Hajjar, A. E. Schultz, P. M. Bergson, D. J. Daugherty, C. P. Wan, D. W. Ernie, D. H. C. Du, **S.A. Nesvold**, University of Minnesota, Minneapolis, MN, USA, 2005