



**Keith Lane, P.E., RCDD, NTS, RTPM, LC, LEED AP BD+C**  
**Professional Electrical Engineer, General Electrical Administrator**  
**President/CEO - Chief Engineer – Lane Coburn & Associates, LLC**



**Years of Experience: 26**

**P.E. Licenses**

Washington, Alaska, California, Oregon, Utah, Montana, Idaho, Hawaii, Nevada, Arizona, Pennsylvania, New York, Minnesota, Texas, Iowa, Wyoming & Virginia. – National Certificate Holder of an NCEES record.

**Qualifications**

Keith is a Professional Electrical Engineer licensed in seventeen states (P.E.), a Licensed General Electrical Administrator in Washington State, a Registered Communications Distribution Designer (RCDD) through BICSI, a Network Transport System Specialist (NTS (LAN) Specialist) registered through BICSI, a Registered Telecommunications Project Manager (RTPM) through BICSI, a Lighting Certified Qualified Professional (LC) through the National Council on Qualifications for the Lighting Professional – NCQLP and a LEED Accredited Professional (LEED AP). Keith has active memberships/affiliations in several professional organizations including; NFPA, International Association of Arson Investigators, BICSI, Telecommunication Project Management Association, the 7 x 24 Exchange End to End Reliability, Illuminating Engineering Society, Washington State Society of Healthcare Engineers.

**Work History**

**LANE COBURN & ASSOCIATES, LLC.** **7/07 – Present**  
**President/CEO – Chief Engineer**

**SASCO - Electrical Design/Build Contractor** **12/99 – 7/07**  
**Overall Director / Vice President/ Engineer of Record (P.E.)**

Keith was the Overall Director of Engineering for SASCO, for the largest privately held electrical and data contractor in the nation. In addition, he was the Vice President of Engineering and Engineer of Record for the Northwest and Northern California operations. Keith provided management, engineering/design and construction administration services for a broad range of project including; commercial, industrial, high-tech, high-rise, residential, mix-use, retail, data center, switch facilities, healthcare, historic, school, government, and public utilities. He has proficiencies in various engineering, management, coordination study, CAD and lighting analysis/design programs. He stays current with memberships in several professional organizations.

Keith oversaw, managed and was professionally responsible for the engineering and construction administration of approximately \$85,000,000/year of commercial and industrial electrical construction. Keith played an integral role in the interregional sharing of resources and ideas between SASCO regional offices through weekly video conf. calls and meetings.

Keith is a nationally recognized author and has provided numerous technical articles to leading engineering magazines and has served as an expert panelist on several nationally broadcast web casts. Keith has also served on the Seattle Code Committee, which evaluated the 2005 & 2008 National Electrical Code.

**Gray & Osborne Consulting Engineers** **4/95 – 12/99**  
**Sr. Electrical Engineer/P.E.**

Keith was a Sr. Electrical Engineer and a Professional Electrical Engineer at Gray & Osborne.



Keith provided Professional Electrical Engineering services for projects including City infrastructure, High Voltage Distribution, Industrial, Street Lighting, Wastewater Treatment Facilities, Military Facilities, Schools, Fire Station, City Hall and Pump Stations. In addition to providing professional engineering services for plans and specifications on many diverse projects, Keith was integrally involved as either Sr. Electrical Engineer or Engineer of Record with several Capital Improvement Plans, reports and studies.

**Cochran Electric - Electrical Engineer**

**12/94 – 4/95**

Keith was a Sr. Electrical Engineer at Cochran Electric. Keith provided engineering services for a broad range of projects including; commercial, high-tech, theatre, retail & data centers.

In addition to providing plans and specifications, Keith provided extensive field investigation and documentation throughout the entire design & construction administration process.

**Sparling Consulting Engineers - Electrical Engineer**

**12/93 – 12/94**

Keith was an Electrical Engineer at Sparling. Keith provided engineering services for a broad range of projects including; commercial, high-tech, retail, hospital & data centers. In addition to providing plans and specifications, Keith provided extensive field investigation.

**Veca Electric - Electrical Engineer**

**12/92 – 12/93**

Keith was an Electrical Engineer at Veca. Keith provided engineering services for a broad range of projects including; commercial, high-tech, theatre, retail and data centers. In addition to providing plans and specifications, Keith provided extensive field investigation.

**Professional Certifications, Education & Activities -Professional Electrical Engineering Licenses**

<b>Washington:</b> 1998 (#35731)	<b>Alaska:</b> 2001 (#10332)	<b>California:</b> 2001 (#E16471)
<b>Arizona:</b> 2002 (#38527)	<b>Oregon:</b> 2001 (66879PE)	<b>Utah:</b> 2001 (#4909891)
<b>Montana:</b> 2001 (#14712PE)	<b>Idaho:</b> 2001 (#10104)	<b>Hawaii:</b> 2002 (#10622)
<b>Virginia:</b> 2007 (#046144)	<b>Pennsylvania:</b> 2007 (#PE075498)	<b>New York:</b> 2011 (#089223)
<b>Nevada:</b> 2002 (#015900)	<b>Minnesota:</b> 2013 (#51206)	<b>Texas:</b> 2014 (#118106)
<b>Iowa:</b> 2014 (#22461)	<b>Wyoming:</b> 2014	<b>NCEES Record Holder</b>

**Licensed General Electrical Administrator – Washington State: LANE\*KT943DR**

**Additional Certifications / Accreditations:**

- (RCDD) Registered Communications Distribution Designer – BICSI #07016
- (NTS (LAN) Specialist) Network Transport System Specialist – BICSI #01506
- “LC” Lighting Certified Qualified Professional (NCQLP)
- RTPM – Registered Telecommunications Project Manager through BICSI
- LEED BD+C Accredited Professional (Leadership in Energy & Environmental Design)
- Cold Regions Engineering Certified - U.W. & University of Alaska – Masters Classes
- Advanced project manager training BICSI – PM 125
- International Illumination Design Award (IIDA) 2003 - Section Participant Award

**Education**

**Bachelor of Science in Electrical Engineering, Seattle University, 1993**

**Dean’s List, Seattle University, Electrical Engineering Department 1992**

**Dean’s List, University of Washington, Engineering Department 1987, 1988**

**Professional Memberships & Activities**

Member of the Seattle Code Committee Implementation of the NEC – 2005 & 2008  
Technical Advisory Board Member – Mission Critical Magazine – 2013/2014/2015/2016  
Contributing Editor to Consulting Specifying Engineering Magazine – 2004 - 2016  
Advisory Board for Consulting Specifying Engineering 2005 – 2016  
Member of the NFPA – The National Fire Protection Association  
Named one of the “Top 40 Engineers Under 40” by Consulting Specifying Engineering (2008)  
Member of the Illuminating Engineering Society of North America.  
Member of the 7x24 Exchange – Northwest Chapter (End to End Reliability).  
Member of BICSI – A Telecommunications Association.  
Member of the Telecommunication Project Management Association (TPMA)  
Member of the Washington State Society of Healthcare Engineers.

## Client Recommendations

At Lane Coburn & Associates our customers are our primary concern. It is critical that we bring exceptional value to any project. Attached below is a sampling of some of our client's recommendations that we have received since opening our doors in 2007:

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"I hired Mr. Lane as an expert in several lawsuits involving complex electrical engineering issues and theories. Mr. Lane did an excellent job helping the legal team, and the jury, understand the complexities within the issues and theories. Mr. Lane's work was always top-notch -- timely, well written, and thoughtful. He is also very responsive to the needs of the legal team, as well as the needs of the client that we are representing. I highly recommend him."

Service Category: Expert witness, **Testifying Expert** - electrical engineering from 2011 to 2013  
Top Qualities: Great Results, Personable, Expert

[Elizabeth Snyder Poeschl](#) - Partner – Meager & Geer PLLP. Hired Keith as a Expert in electrical engineering, litigation in 2010-2014

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"Mr Lane just testified as an expert in an extremely complex electrical engineering case involving a large Data Center. The jury thought he brought "fire" to the defense case and helped us advance a complex defense in terms lay people could understand. We got an excellent result and feel he played a pivotal role in getting us there. I would definitely hire him again."

Service Category: Expert witness, **Testifying Expert** - electrical engineering from 2011 to 2013  
Top Qualities: Great Results, Expert, High Integrity

[Michael D. Hutchens](#) - Partner – Meager & Geer PLLP. Hired Keith as a Expert in electrical engineering, litigation in 2010-2013

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"Keith Lane was excellent to work with. We had a case where the technical stuff was being "dribbled" to us, so it made our Expert work very difficult. Keith was happy to accommodate the situation and was very easy to work with. He is what my parents used to call a "go-getter" ...he would hop on the job and make some sense out it right away. His trial testimony came under some really difficult circumstances because of negative rulings by the judge; but he Weathered the storm very well and did a good job on the stand. I would hire Keith again. Keith did a great job and went way beyond the call of duty.""

**Mr. Lane testified as an expert witness in Superior Court** on a personal injury case involving an arc flash event in Superior Court in March of 2014. Lane Coburn & Associated worked for Thomas Brown, Partner of Brown Lewis Janhunen & Spencer Law Firm.

Service Category: Expert witness, Testifying Expert - electrical engineering from 2013 to 2014

[Tomas Brown](#) - Partner – Brown Lewis Janhunen & Spencer. Hired Keith as a Expert in electrical engineering, litigation in 2013-2014

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Mr. Lane provided Expert Witness Analysis and an Expert Witness Report and testimony for The Washington State Office of the Attorney General.

After providing his Testimony during deposition and cross examination, Tim Feulner, Assistant Attorney General for The Washington State Office of the Attorney General. sent Keith the following email:

“I just wanted to pass along word that we did receive a favorable decision in Grenning v. Miller-Stout yesterday. Attached is a copy of the Court’s decision. The Court specifically highlights your testimony as persuasive for rebutting their expert. I appreciate all of the work your team did on the case. Let me know if you have questions” *October 6<sup>th</sup>, 2016*

Service Category: Expert witness, Testifying Expert - electrical engineering 2016.

[Tim Feulner](#) - Assistant Attorney General, Washington State Office of the Attorney General  
Corrections Division – Litigation 2016

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“Keith is a great professional. Not only is his knowledge unmatched as an electrical engineer, but his organization skills are something we should all strive to achieve. Keith helped me with a very complex litigation matter, and was able to explain electrical engineering to me, as it related to a very technical environment. Keith is patient, well organized, knowledgeable, efficient, and responsive. Keith also puts together very easy to understand diagrams, and presentations, that can be used for any type of legal matter. I would recommend using Keith if you ever need an electrical engineer.” *May 5, 2012*

**Top qualities:** Great Results, Expert, High Integrity

[Alexander Yoffe](#) – Partner at Yoffe & Cooper, LLP. Hired Keith as a Expert in electrical engineering, litigation in 2011

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Mr. Lane provided Expert Witness Analysis and an Expert Witness Report and testimony for a Data Center Construction defect project in litigation.

After providing his Testimony during deposition and cross examination, Mr. Kennedy, lead council for Taft Stettinius & Hollister sent Keith the following email:

“You were outstanding.” *May 23<sup>rd</sup>, 2015*

Service Category: Expert witness, Testifying Expert - electrical engineering 2015.

[John F. Kennedy](#) – Lead Attorney Taft Stettinius & Hollister LLP. Hired Keith as a Expert in electrical engineering, litigation in 2015

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Mr. Lane provided Expert Witness Analysis and an Expert Witness Report for a Data Center Construction defect project in litigation.

After providing his Final Expert Report, Ms. Schaller sent Keith the following email:

“Thank you for your expedient and proficient work on the report.” *April 1, 2015*

Service Category: Expert witness, Testifying Expert - electrical engineering 2015.

[Rachel L. Schaller](#) - Attorney Taft Stettinius & Hollister LLP. Hired Keith as a Expert in electrical engineering, litigation in 2015

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“Lane Coburn & Associates was hired to do the electrical engineering for a large data center project on which I was the owner's representative. Keith took the lead on the project and from the beginning did an excellent job of balancing cost and quality to achieve the highest value of designed systems for the client. Keith consistently considers new and alternative approaches to systems and brings new, creative solutions to the table. He is a leader in his field and I would be pleased to work with him in the future.” *December 9, 2008*

**Top qualities:** Great Results, Expert, High Integrity

[Terry Rennaker](#), Owner of Rennaker Company LLC - Hired Lane Coburn & Associates as an Electrical Engineer in 2008

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“I work with Keith on a very complicated mixed-use Seattle condominium project which included residential, retail and hotel components. Keith was able to take the divergent requirements of each component and weave those requirements in to a cohesive, constructible, cost effective electrical system design. Keith’s attention to detail and finger-tip knowledge of electrical codes made him an invaluable member of the design team. Keith’s innovative approach to electrical system design incorporates new, cutting-edge technology solutions in balance with cost objectives. Keith is a leader in his field and I look forward to future opportunities to work with him.” *February 11, 2009*

[Jim Alekson](#), *President & CEO, Alekson Development Group*

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“Sequoyah Electric has worked with Lane Coburn and Associates on various projects throughout the Seattle, Washington area which have proven to be very successful for all parties involved. The engineering Team that Keith Lane and Scott Coburn developed has proven to be excellent in their knowledge of the Industry and proactive in design creativity along with understanding budget constraints. We feel that the Lane Coburn Team always brings to us their refined skills and insights to a project which eliminates conundrums and positions a project for success. Lane Coburn and Associates will continue to be a instrumental part of our business and future growth throughout the Washington area.” *February 17, 2009*

[Jeff Casino](#), *Sequoyah Electric Pre-construction Manager*



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"I have worked with Keith on several mission critical projects over the past 7-8 years. I first worked with Keith at SASCO and have recently worked with Keith at Lane Coburn & Associates. Keith is an excellent engineer with a strong work ethic. Keith brings an in depth knowledge of the leading edge technologies and design philosophies to ensure a project has the desired amount of reliability and value. Keith has a unique ability to communicate design options in basic terms to the owner and the other design team members. Keith is a leader and I would be pleased to work with him in the future."  
*January 08, 2009*

**Matt Blackburn**, *Owner, Lighthouse Electric Group.*

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"I recently worked with Keith on two data center projects (one in the pre-planning stage and one in construction). He is a very detail oriented electrical engineer who is a pleasure to work with. He is very code savvy and a true team player. I hope to work with Keith again in the near future."  
*December 29, 2008*

**Michael Frank, P.E.**, *Senior Engineer, McKinstry.*

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"Keith's dedication to constant improvement and knowledge growth ensures that his design incorporates all of the latest innovations and ideas."  
*December 16, 2008*

**Top qualities:** Great Results, Expert, High Integrity

**Tom Williams**, Sr. Project Manager SASCO - Hired Lane Coburn & Associates as an Engineer in 2008/2009.

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"Keith is an outstanding engineer and has a very strong work ethic. We worked together for several years for a consulting engineering firm. We have also worked on some of the same projects at my current position. I highly recommend Keith and his firm for all types of electrical engineering."  
*December 14, 2008*

**Gary Mullin, P.E.**, *Electrical Engineer, Port of Seattle.* Worked directly with Keith at Lane Coburn & Associates, LLC.

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"VECA Electric and Technologies would like to say thank you for the dedication and extreme knowledge LCA brings to the table. Your exceptional performance shines through time and time again. We appreciate you as a valuable team member and look forward to many more successful projects together. Thanks again for the great job you do."

**Terry McCabe** - Sr. Project Manager - VECA Electric. - 12/10/10

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"Dear Keith, Tactical Vs. Technical set the tone for the referenced project. It is all too common to rely on the field crews to initiate rigging and cable pulling techniques for a large project. However, LCa staff proved that your firm works beyond just electrical technical knowledge. At my clients request LCa provided "Tactical" calculations for installing over 5000 feet of medium voltage cable weighing 12 pounds per foot. The weight and lengths of these cables required precise cable pulling calculations to assure that ropes, cables and sheaves would meet the tensions and pressures during the installation process. In addition, LCa staff designed "Sheave Placements" for use by the Linemen during the installation.

The engineering work by LCa was incorporated into the "Work Plan" that was written by Salish Group to provide a safe and professional installation of the 15KV cables. Previous work was halted for two months due to three near fatalities occurring in a very short duration prior to Salish Group becoming the construction management team on the project. With Lane Coburn's tactical approach to solving the aforementioned issues the project was completed on time and the client conceded that they were not certain the work could have been completed without proper engineering assistance.

I look forward to working with you again!" *October 26<sup>th</sup>, 2009*

[Jim Long](#), Owner of Salish Group Construction Services - Hired Lane Coburn & Associates for the electrical engineering on the 11.95 KV Switchyard - 15KV Cable Replacements at Grand Coulee Dam.

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Sequoyah Electric, LLC has had the pleasure of teaming with LCA on several projects including campus wide office buildings and mission critical facilities. As a key team member, their innovation and insightfulness has played a very important role within our collaborative Design-Build team. LCA has a strong track record of going above and beyond to exceed client expectations. Their understanding of construction issues makes them uniquely qualified Electrical Engineers for Design-Build projects. I highly recommend LCA for your next project.

[Mahmood Ghassemi](#), P.E. Vice President of Sequoyah Electric. - August 24<sup>th</sup>, 2010

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"I have worked with Keith and his team at Lane Coburn & Associates on a number of mission critical projects. LCA has always performed at a very high level. Keith and team have a deep grasp of the issues involved in the design and operation of mission critical environments. In addition LCA has assisted CPSI in forensics analysis, failure analysis and peer review of complex existing and critically operating data centers and industrial facilities. I highly recommend LCA on you next mission critical project."

[John Dwyer](#) - President - CPSI - Computer Power & Service - 9/05/10

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"Silent-Aire has worked with Keith Lane and Lane Coburn & Associates on a number of mission critical projects. LCA has always proven to go the extra mile to meet or exceed the expectations of the client. LCA and Silent-Aire work in tandem to provide continued design innovation to ensure the most cost effective and efficient design. LCA has always been a key member of the team, their insight and innovation through the design and construction has helped to ensure successful projects. I highly recommend LCA for your next project."

[Lindsey D. Leckelt P.Eng.](#) - Director of Marketing and Engineering – Silent Aire - Aug. 30, 2010

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"Sabey Construction is working with Keith Lane and Lane Coburn & Associates on a large, complex, very reliable data center in Eastern Washington. This project is also on a very fast track schedule. LCA has proven to go the extra mile to meet or exceed the expectations of the client. LCA understands the complex issues related to the design and build of today's reliable, scalable and efficient data centers. Keith and his team have taken the design to the extra step and is working hand in hand with VECA to create detailed 2D and 3D drawings as well as animated flyovers of the contained hot aisles to ensure proper coordination with all the trades. I highly recommend LCA for your next project."

[Doug Gardner](#) – Sr. Project Manager Sabey Construction Inc. – 8/30/10

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"BergerABAM has worked with Bill Waldrop and his team at Lane Coburn & Associates on several projects with the USACE, providing power and communication design. Bill Waldrop and his team continue to demonstrate knowledge, experience and understanding of customer requirements and regulations. Bill is responsive, detail oriented, thorough and continues to deliver high quality designs that meet clients' needs and expectations."

[Ruba Zumut](#), PE. Senior Project Manager BergerABAM- Aug. 27 2010

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"Rock Electric Inc. has worked with Lane Coburn and Associates on assorted projects throughout the San Diego, California. I have personally known Scott Coburn for over 20 years and he has never failed to exceed my expectations. The Lane Coburn system of engineering produces exceptionally high quality and extremely buildable project documentation saving me

[Rock Conaty](#), President Rock Electric, Inc. – August 17, 2010

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"I have known Keith professionally and personally for many years. The best recommendation I can give is he's never let me down. Keith's knowledge of electrical systems is beyond the ordinary, adding tremendous value to every project he has been a part of for me. I would recommend Keith and LCA without hesitation to anyone looking for a real partner for their project." **Top qualities: Great Results, Expert, High Integrity**

[TJ Porter](#), Sr. Vice President - SASCO Electric - February 4, 2011

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"Lane Coburn and Associates has been a good partner during our initial design and construction phase. Keith and company have been very responsive turning information and designs very quickly. Keith and company are very active in ensuring they work together with the customer, they drive results and chase all components of a design build. I highly recommend using Lane Coburn Associates if you require fast turnaround of solid designs, with good communications with the end customer"

[Oz Morales](#) Director, Data Center Engineering, Amazon.com - Sept. 7, 2010

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"Sabey Corporation was introduced to Keith and the Lane Coburn team by an electrical contractor interviewing on one of our data center projects. Keith's technical skills and familiarity with leading edge data center technology was readily apparent, but even more impressive was Keith's ability to convey his expertise and ideas at the level of the listening audience. Subsequently, we entered into a partnership agreement with Lane Coburn and the results have been a number of successful projects. We consider ourselves to have a distinct advantage over our competition in having Keith, Scott Coburn and the entire Lane-Coburn team contributing to our Design-Build services."

**Top qualities:** Personable, Expert, On Time

[Dale Spencer](#), Director of Construction, Sabey Construction - February 14, 2011

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"I have worked on many commercial projects with Keith since he was the Vice President of engineering at SASCO Electric in the 1990's. Keith is a creative electrical engineer that specializes in understanding the latest trends in data center design, but also has an eye for budget control. He has been a great partner in many design build projects."

[Jack Beaudoin](#), General Manager, Turner Construction - March 31, 2011

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“Keith and I have worked together for about 4 years. During that time, he has been on the editorial advisory board of Consulting-Specifying Engineer, a national publication (in print and online) for mechanical, electrical, plumbing, and fire protection engineers.

Keith has been a valuable resource during this time, and is always willing and able to assist wherever needed. His technical expertise has been invaluable, and he's seen as an expert in the industry.

Through both written and verbal communication (specifically technical feature articles and webinars), Keith has contributed to bringing the publication to a whole new level. He was honored as one of the best and brightest in the engineering industry in the publication's 40 Under 40 program, and that push for excellence continues.

It has been a pleasure to work with Keith, and I look forward to the opportunity to continue working with him.”

[Amara Rozgus](#), Editor in Chief/Content Manager of Consulting-Specifying Engineer, CFE Media - October 19, 2011

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“I had the pleasure of working with Keith during the design and construction of a data center. Keith & Lane Coburn & Associates demonstrated a great level of commitment to the project during all phases from concept through startup. He is a very detail oriented electrical engineer who is a pleasure to work where no question or email never goes unanswered. I would highly recommend Keith and Lane Coburn & Associates.” October 29, 2011

**Top qualities:** Great Results, Personable, Expert

[John Dennehy](#), Critical Systems Infrastructure Manager at BlackRock, October 30, 2011  
Hired Keith as an Engineer in 2010

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“I have had the pleasure to work with Keith on many large projects. He is knowledgeable, competent, professional, tech savvy and fun to work with. I recommend him highly. Dale Kaemingk ENW”

[Dale Kaemingk](#), vice president, Engineers Northwest - October 31, 2011  
worked directly with Keith at Lane Coburn & Associates, LLC

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“As a chief editor for Consulting-Specifying Engineer magazine from 2007-2010, I had the pleasure of having Keith Lane, PE, serving on the Editorial Advisory Board. During my tenure, Keith contributed many highly detailed and instructional technical articles on electrical engineering topics. He also was a frequent speaker on CSE's live webinars, during which Keith expertly presented on mission critical electrical and power systems, and answered the difficult questions that attendees sought answers to after the presentations.

Furthermore, Keith was generous with his time and expertise toward reviewing articles written by others and responding to research inquiries about the construction market and engineering field. In short, Keith was (and currently is) an outstanding member of the Consulting-Specifying Engineer Editorial Advisory Board, who voluntarily contributes a (more than) generous amount of time and expertise to the benefit of the engineering field.

The content of his contributions speak to his impeccable engineering skills, and his commitment to assisting with the continuing education needs of the engineering community speaks the quality of his character.”

**Top qualities:** Great Results, Expert, High Integrity

[Michael Ivanovich](#), Chief Editor of Consulting Specifying Engineering Magazine – November 2, 2011 hired Keith as a Writer/Editor in 2007, and hired Keith more than once

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“I have worked with Keith starting in 2000 on a major project where I was the owner’s rep. Keith's knowledge and professionalism as well as his dedication to quality and attention to details contributed significantly to the success of the project and the facility's success. I have also worked with Keith during my time with Walt Disney on several issues in a data center I inherited. In all cases, Keith was able to provide detailed information that led to solutions. I would highly recommend Keith for any Mission Critical design and implementation project.”

**Top qualities:** Great Results, Expert, Creative

[Bill Hunter](#), Data Center Architect, EIT, Critical Facilities at The Walt Disney Company – January 25, 2012

**Keith Lane, P.E., RCDD/NTS, RTPM, LC, LEED AP BD+C – Forensics Analysis/ Expert  
Witness/Testimony/ Publications / Expert Panelist/ Speaking Engagements**

**Cases/Trial Testimony/Arbitration/Expert Analysis/ Forensics Analysis**

- Client: Undisclosed Client 1999**  
Keith Lane evaluated the root cause of a large electrical fault current on the main service of a large data center facility. Keith evaluated the installation of 4,000 A bus duct, the power quality metering and provided a failure mode analysis for large uninterruptable power supplies (UPS).
- Services: Expert Witness/Forensics Analysis**
- Client: Port of Seattle 1999**  
Keith Lane evaluated the loss of critical load from an incorrect interaction between the Static transfer switch and a UPS. Evaluation included the use of several high end software.
- Services: Expert Witness/Forensics Analysis**
- Client: SASCO Electric 1999**  
Evaluate the light levels at a High School in reference to an injury in areas of low light levels.
- Services: Expert Witness/Appointed Expert/Mediation Testimony**
- Client: Large Software Company in WA 2007**  
Comprehensive forensics analysis for a large 25 MW data center of the failure of generators to hold mission critical loads. Transient analysis with power quality meters were utilized during an extensive testing procedure.
- Services: Expert Witness/Forensics Analysis**
- Client: Westin Building Data Center 2007**  
Evaluated the forensic meter information to determine the cause of the tripping of a main breaker feeding a mission critical environment.
- Services: Expert Witness/Forensics Analysis**
- Client: Coleman Hull & van Vliet 2009-2010**  
LCA performed a Neher-McGrath Heating calculation analysis for a large data center to determine if the electrical distribution system was designed properly. The original design occurred over 10 years ago. The project included significant evaluation of existing data.
- Services: Expert Witness/Forensics Analysis/Appointed Expert**

**Client:** **Salish Construction** **2009**  
Evaluate the pulling Tensions of large Medium Voltage Cable and the cause of the failure of a cable pull.

**Services:** **Expert Witness/Forensics Analysis**

**Client:** **JTM Construction** **2010**  
Evaluate the failure of the backup generators to start within the code required 10 seconds for a large hospital. LCA worked closely with the testing agency and engineer of record and provided our evaluation and recommendations.

**Services:** **Expert Witness/Forensics Analysis**

**Client:** **Wave Broadband** **2010**  
Evaluate the failure a UPS system to pick up critical load. LCA worked closely with the owner and the UPS vendor to provide a custom solution for leading power factor issues.

**Services:** **Expert Witness/Forensics Analysis**

**Client:** **Meagher & Geer. PLLP** **2011**  
LCA performed a Neher-McGrath Heating calculation analysis for a large data center to determine if the electrical distribution system was designed properly. The original design occurred over 10 years ago. The project included significant evaluation of existing data.

**Services:** **Expert Witness/Forensics Analysis/Appointed Expert/Superior Court Testimony**

**Client:** **Benaroya Properties** **2011**  
LCA Performed an evaluation of the Hipot and megger testing at an existing data center to evaluate the failure analysis and recommend next steps for installation.

**Services:** **Expert Witness/Forensics Analysis**

**Client:** **Undisclosed Client** **2011/2012**  
LCA is evaluating the cause of a large number of power supplies failing. We are evaluating the data from power quality meters to determine if any surges are exceeding the ITI curve and the server parameters.

**Services:** **Expert Witness/Forensics Analysis/Appointed Expert**

**Client:** **Add2Net** **2011/2012**  
LCA is evaluating the effects of high temperatures and server failures in a large data center in California.

**Services:** **Expert Witness/Forensics Analysis/Appointed Expert**

**Client:** **Undisclosed Client** **2011/2012/2013**  
LCA is evaluating static transfer switch failures across several large data centers.

**Services:** **Expert Witness/Forensics Analysis/Appointed Expert**



- Client: Silver Springs Networks 2012/2013**  
LCA is working for the law firm Latham & Watkins LLP for Silver Springs Networks on a case involving the replacement of electromagnetic meters with digital electric meters for a large utility in California.
- Services: Expert Witness/Forensics Analysis**
- Client: Undisclosed Client 2012/2013**  
LCA is working for the law firm BOORNAZIAN, JENSEN & GARTHE LLP for a large data center project involving numerous design and construction issues.
- Services: Expert Witness/Forensics Analysis/Appointed Expert**
- Client: Undisclosed Client 2013**  
LCA is working for a large Data Center end user regarding large underground feeder ratings.
- Services: Expert Witness/Forensics Analysis/Appointed Expert**
- Client: Green & Hall APC - Law Firm 2013/2014**  
LCA is working for Green & Hall APC providing forensics analysis for a large Hospital in San Antonio Texas.
- Services: Expert Witness/Forensics Analysis/ Mediation Testimony**
- Client: Hart Wagner - Law Firm 2013/2014**  
LCA is working for Hart Wagner providing forensics analysis and expert witness services for a case involving personal injury (electrocution).
- Services: Expert Witness/Forensics Analysis/Appointed Expert**
- Client: Brown Lewis Janhunen & Spencer - Law Firm 2013/2014**  
LCA is working for Brown Lewis Janhunen & Spencer providing forensics analysis and expert witness services for a case involving personal injury (electrocution).
- Services: Expert Witness/Forensics Analysis/Appointed Expert/ Superior Court Testimony**
- Client: Greensfelder, Hemker & Gale, P.C.- Law Firm 2013/2014**  
LCA is working for Greensfelder, Hemker & Gale, P.C. in a construction defect project for a large data center.
- Services: Expert Witness/Forensics Analysis/ Expert Court Testimony**
- Client: Legacy Telecommunications - 2013/2014**  
LCA is working for Legacy Telecommunication on a confidential project
- Services: Expert Witness/Forensics Analysis**

**Client:** Dewitt Algorri & Algorri Lawyers – Law Firm - 2013/2014  
LCA is working for Dewitt Algorri & Algorri Lawyers providing forensics analysis and expert witness services for a case involving personal injury (electrocution).

**Services:** Expert Witness/Forensics Analysis/Appointed Expert

**Client:** Malek Schiffrin, LLP – Law Firm - 2013/2014  
LCA is working for Malek Schiffrin, LLP providing analysis and expert witness services for a case involving a patent.

**Services:** Expert Witness/Forensics Analysis

**Client:** Meagher & Geer. PLLP 2014/2015  
LCA performed a Neher-McGrath Heating calculation analysis for a large data center (12 MW) to determine if the electrical distribution system was designed properly. The original design occurred in 2004. The project included significant evaluation of existing data.

**Services:** Expert Witness/Forensics Analysis/Appointed Expert

**Client:** Wong Fleming PLLP 2014/2015  
LCA performed as the expert witness in a personal injury case involving the malfunction of a wheel chair.

**Services:** Expert Witness/Forensics Analysis/Appointed Expert

**Client:** Taft Stettinius & Hollister LLP 2015  
LCA performed as the expert witness and provided an expert report for a construction defect case involving a data center.

**Services:** Expert Witness/Forensics Analysis/Appointed Expert/**Expert Court Testimony**

**Client:** Office of Utility Consumer Counselor 2015  
LCA performed as the expert witness and provided an expert report for power utility related issues. LCA worked for the Office of Utility Consumer Counselor in Chicago, IL.

**Services:** Expert Witness/Forensics Analysis/Appointed Expert

**Client:** Stoel Rives, LLP 2015/2016  
LCA performed as the expert witness and provided an expert report for the Ebay Data center.

**Services:** Expert Witness/Forensics Analysis/Appointed Expert.

**Client:** 170 Broadway NYC LP 2016/2017  
LCA performed an expert analysis and expert report for metering issues the client had with Con Edison in NY, NY

**Services:** Expert Witness/Forensics Analysis/Appointed Expert.

**Client:** Washington State Corrections 2016/2017  
LCA performed an expert analysis and expert report and was the Appointed Expert for Washington State Corrections. The Case involved a lawsuit from an inmate to the State of Washington pertaining to violation of rights. LCA expert analysis and testimony was in regard to lighting, light levels, codes/standards, lighting calculations and analysis.

**Services:** Expert Witness/Forensics Analysis/Appointed Expert/ **Expert Testimony Washington State District Court.**

**Client:** Hensel Phelps Medical Facility 2016  
LCA performed an expert analysis and expert report and was the Appointed Expert for a Medical Facility for the client Hensel Phelps

**Services:** Expert Witness/Forensics Analysis/Appointed Expert.

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## Speaking Engagements

The following list of speaking contributions and published articles to industry leading publications illustrates Keith's extensive knowledge and dedication as an industry leader. Please visit our website to download any of these articles.

**CSE Magazine** (Consulting Specifying Engineer), April, 2016  
Expert Panelist on "Data Centers" Roundtable

**CSE Magazine** (Consulting Specifying Engineer), February, 2015  
Expert Panelist on "Driving data center design: Sustainability, energy efficiency" Roundtable

**CSE Magazine** (Consulting Specifying Engineer), January, 2015  
Expert Panelist on "Driving data center design: Codes and Standards" Roundtable

**CSE Magazine** (Consulting Specifying Engineer), January/February, 2014  
Expert Panelist on "Data Center Design" Roundtable

**CSE Magazine** (Consulting Specifying Engineer), January, 2013  
Expert Panelist on "The Challenges of Designing and Implementing Reliable and Efficient Mission Critical Facilities" Roundtable

**Mission Critical Magazine**, July, 2012  
Expert Panelist on "Data Center Infrastructure Management for Mission Critical Facilities." Webcast

**CSE Magazine** (Consulting Specifying Engineer), November, 2011  
Expert Panelist on "Critical Issues for Multi-Use Commercial Buildings" Webcast

**CSE Magazine** (Consulting Specifying Engineer), October, 2011  
Expert Panelist on "Data Center Selective Coordination Studies" Webcast

**CSE Magazine** (Consulting Specifying Engineer), October, 2011  
Expert Panelist on "Electrical System Software" Roundtable

**CSE Magazine** (Consulting Specifying Engineer), June, 2011  
Expert Panelist on "Office Design: Raising the Standards" Webcast

**CSE Magazine** (Consulting Specifying Engineer), August, 2010  
Expert Panelist on "Specifying Generators for Mission Critical Facilities" Webcast

**AFCOM** – Association for Computer Operations Managers – Spring Conference – 5/20/10  
Speaker - South Hill Data Center Presentation

**7x24 Exchange**– Northwest Chapter – Fall Conference – 3/20/10  
Speaker - South Hill Data Center Presentation

**CSE Magazine** (Consulting Specifying Engineer), November, 2009  
Expert Panelist on “Top Tips from Top Designers of Mission Critical” Webcast

**CSE Magazine** (Consulting Specifying Engineer), October, 2009  
Expert Panelist on “Uptime All the Time, No Matter What” Webcast

**CSE Magazine** (Consulting Specifying Engineer), October 2008  
Expert Panelist on “Emergency Power Systems for Hospitals”

**CSE Magazine** (Consulting Specifying Engineer), May 2008  
Expert Panelist on “Grounding & Bonding Electrical Distribution Systems”

**CSE Magazine** (Consulting Specifying Engineer), May 2007  
Expert Panelist on “UPS, Design and Specification Consideration” Roundtable

**CSE Magazine** (Consulting Specifying Engineer), September 2006  
Expert Panelist on “Data Center and Critical Environments Design & Construction” Webcast

**CSE Magazine** (Consulting Specifying Engineer), March 2006  
Expert Panelist on “ASHREA/IESNA 90.1 Good Engineering Practice” Webcast

**CSE Magazine** (Consulting Specifying Engineer), June 2004  
Expert Panelist on “Building Automation Systems at a Crossroads” Webcast

**CSE Magazine** (Consulting Specifying Engineer), Ongoing 2004 - Present  
Consulting Editor and Member of the Advisory Board – CSE Magazine  
Recognized as one of the Top 40 Engineers under 40 in 2008.

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## **Publications**

### **CSE (Consulting Specifying Engineering) Magazine**

**CSE Magazine** (Consulting Specifying Engineer), November, 2015  
Author of “Selective Coordination Studies in Mission Critical Environments” article

**CSE Magazine** (Consulting Specifying Engineer), August, 2014  
Author of “Intergate Ashburn Data Center Analysis” article

**CSE Magazine** (Consulting Specifying Engineer), June, 2013  
Author of “Selective Coordination in Mission Critical Facilities” article

**CSE Magazine** (Consulting Specifying Engineer), March, 2012  
Author of “Design Collaboration & Innovation for Multiple Large Data Center Build outs” article

**CSE Magazine** (Consulting Specifying Engineer), February, 2010  
Author of “The Nitty Gritty of Gensets” article

**CSE Magazine** (Consulting Specifying Engineer), December, 2009  
Author of “Redefining the Role of Electrical Engineers” article

**CSE Magazine** (Consulting Specifying Engineer), March, 2009  
Author of “Data Center Discussion Roundtable” Roundtable

**CSE Magazine** (Consulting Specifying Engineer), February, 2009  
Author of “Harmonics & VFD Roundtable” Roundtable

**CSE Magazine** (Consulting Specifying Engineer), May 2007  
Part of Roundtable article, “UPS Design, Specification Considerations” article

**CSE Magazine** (Consulting Specifying Engineer), February 2007  
Author of “Modeling Electrical Distribution Systems in 3D CAD” article

**CSE Magazine** (Consulting Specifying Engineer), January 2007  
Author of “EPO or No – A consideration of NEC Article 645.10 and 685” article

**CSE Magazine** (Consulting Specifying Engineer), July 2006  
Author of “Washing Away Electrical Costs” article

**CSE Magazine** (Consulting Specifying Engineer), February 2006  
Author of “Safe Parking” article

**CSE Magazine** (Consulting Specifying Engineer), August 2005  
Author of “2005 NEC Changes Could Significantly Affect the Design & Installations of Emergency Distribution Systems” article

**CSE Magazine** (Consulting Specifying Engineer), July 2005  
Author of “2005 NEC Changes Could Significantly Affect the Design & Installations of Emergency Distribution Systems” article

**CSE Magazine** (Consulting Specifying Engineer), June 2005  
Author of “2005 NEC Changes Could Significantly Affect the Design & Installations of Emergency Distribution Systems” article

**CSE Magazine** (Consulting Specifying Engineer), May 2005  
Author of “Efficient Lighting Systems for LEED Certified Projects” article

**CSE Magazine** (Consulting Specifying Engineer), March 2005  
Author of “IBC Code Changes that Effect Electrical Design” article

**CSE Magazine** (Consulting Specifying Engineer), March 2005  
Author of “Elevating Emergency Power Requirements for Elevators” article

**CSE Magazine** (Consulting Specifying Engineer), January 2005  
Author of “The Electrical Impacts of the IBC code on Fire Pumps” article

**CSE Magazine** (Consulting Specifying Engineer), November 2004  
Author of “Comparison of a Series Rated and Fully Rated Electrical Systems” article

**CSE Magazine** (Consulting Specifying Engineer), October 2004  
Author of “IBC & Emergency Lighting” article

**CSE Magazine** (Consulting Specifying Engineer), July 2004  
Contributed to “Killing Kilowatt hours” article.



### **Mission Critical Magazine**

**Mission Critical Magazine**, March, 2013

Author of “Mission Critical Facility Design Issues and Legal Ramifications” article

**Mission Critical Magazine**, March, 2012

Author of “Design Collaboration for a Fully Integrated Data Center” article

**Mission Critical Magazine**, August, 2012

Author of “LEED and the Mission Critical Engineer” article

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### **Data Center Dynamics Magazine**

**Data Center Dynamics**, June 2011

Contributing Author on Automatic for Data Center

**Data Center Dynamics**, August 2010

Contributing Author on Electrical SCADA systems in Mission Critical Facilities

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### **ECM (Electrical Design, Construction & Maintenance) Magazine**

**EC&M Magazine** (Electrical Design, Construction & Maintenance) June 2007

Author of “The Basics of Large Dry-Type Transformers” article

**EC&M Magazine** (Electrical Design, Construction & Maintenance) June 2007

Author of “When Lightning Strikes” article

**EC&M Magazine** (Electrical Design, Construction & Maintenance) August 2006

Author of “3D CAD Drawings for the Electrical Contractor” article

**EC&M Magazine** (Electrical Design, Construction & Maintenance) November 2005

Author of “LEED and the Electrical Contractor” article

**EC&M Magazine** (Electrical Design, Construction & Maintenance) December 2004

Author of “Countering Heating Effects from Troublesome Harmonics” article

**EC&M Magazine** (Electrical Design, Construction & Maintenance) September 2004

Author of “Beware of Simplistic Fault Current Calculations” article

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### **BICSI (Building Industries Consulting Services International) Magazine**

**BICSI News** (Building Industries Consulting Services International) Jan/Feb, 2012

Author of “LEED & the Electrical & Telecommunications Engineer”

**BICSI News** (Building Industries Consulting Services International) Jan/Feb, 2008

Author of “Determining the Appropriate Separation of Data and Power Cables”

**BICSI News** (Building Industries Consulting Services International) Nov/Dec, 2005

Author of “Reliable Electrical Systems for Critical Data Systems”

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**BICSI News** (Building Industries Consulting Services International) Nov/Dec, 2005  
Author of “A Knowledgeable and Experienced Data Contractor Can LEED the Way to Project Certification”

**BICSI News** (Building Industries Consulting Services International) Jan/Feb, 2005  
Smart Buildings in 10 years – Building Category Winner for BICSI 30<sup>th</sup> Anniversary Contest

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### **Pure Power Magazine**

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Fall 2011  
Author of “Electrical Engineering Software” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Spring 2011  
Author of “Specifying Generators for Mission Critical Magazines” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), March 2008  
Author of “Heating Calculation for Large Electrical Duct Banks” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Spring 2008  
Author of “Paralleled Generator System Considerations” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), June 2006  
Author of “Be Cautious and Aware of Proper Transformer and Static Switch Location in Critical Environments #2” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), May 2006  
Author of “Power Factor Correction Capacitors Part 2” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), April 2006  
Author of “Power Factor Correction Capacitors Part 1” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Spring 2006  
Author of “UPS on the Power Quality Frontline #2” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Spring 2006  
Author of “UPS on the Power Quality Frontline” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Winter 2005  
Author of “Lightning Protection: Optional or Recommended” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Fall 2005  
Author of “Sizing Neutrals for transformers” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), August 2005  
Author of “Power Quality - Generator Size & Code Issues #10” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), July 2005  
Author of “Power Quality - Generator Size & Code Issues #9” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), Summer 2005  
Author of “Be Cautious and Aware of Proper Transformer and Static Switch Location in Critical Environments” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), June 2005  
Author of “Power Quality - Generator Size & Code Issues #8” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), May 2005  
Author of “Power Quality - Generator Size & Code Issues #7” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), April 2005  
Author of “Power Quality - Generator Size & Code Issues #6” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), March 2005  
Author of “Coordinated Protection for Critical Environments” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), March 2005  
Author of “Power Quality - Generator Size & Code Issues #5” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), February 2005  
Author of “Power Quality - Generator Size & Code Issues #4” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), January 2005  
Author of “Power Quality - Generator Size & Code Issues #3” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), December 2004  
Author of “Power Quality - Generator Size & Code Issues #2 ” article

**Pure Power – Power Quality Magazine** (Consulting Specifying Engineer), November 2004  
Author of “Power Quality - Generator Size & Code Issues #1 ” article

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**USGBC News (United States Green Building Council)**

**USGBC News** (U.S Green Building Council) February 2006, Author of “Safe Parking” article.

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