REX J ALEXANDER, FRAeS
CURRICULUM VITAE

PERSONAL DATA



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BIOGRAPHY

Rex Alexander is the Owner, Founder, and President of Five-Alpha (5α) LLC, a U.S.-based aeronautical consultancy specializing in the demanding and highly specialized field of vertical flight infrastructure. Mr. Alexander is a veteran rotary-wing and fixed-wing pilot, airframe and powerplant technician, and aviation entrepreneur with nearly four decades of experience spanning military, general, and commercial aviation. His primary area of expertise focuses on helicopter, eVTOL, Advanced Air Mobility (AAM), and powered-lift infrastructure design, development, and safety, in which he has more than 32 years of direct experience. Mr. Alexander is a highly experienced helicopter pilot with over 40 years in aviation, including 20 years in the Helicopter Air Ambulance (HAA) industry and 11 years of military service—six years on active duty with the U.S. Army and five years with the Indiana Army National Guard. He is recognized as a subject matter expert by the International Civil Aviation Organization (ICAO) and, in 2026, was elected a Fellow of the Royal Aeronautical Society (RAeS) in recognition of his distinguished contributions to the aerospace industry. Since 2019, he has represented the Vertical Flight Society (VFS) as its infrastructure advisor to the broader aviation community. His professional and volunteer service includes serving as Chair of the National Fire Protection Association (NFPA) 418, Standard for Heliports and Vertiports, Technical Committee; member and lead author of ASTM International F38 WK59317, New Specification for Vertiport Design; Co-Chair of the Vertical Flight Society (VFS) Safety Technology Working Group; Co-Chair of Vertical Aviation International (VAI) Vertical Flight Infrastructure (VFI) Industry Advisory Council (IAC); member of the Illuminating Engineering Society (IES) Airport and Heliport Lighting Committee; and member of the Friends and Partners in Aviation Weather (FPAW). Mr. Alexander also serves as a platform instructor for the U.S. Department of Transportation's (DOT) Transportation Safety Institute (TSI) in Oklahoma City, Oklahoma, where he teaches Heliport Evaluation and Rotorcraft Accident Investigation. He is a former board member and past president of both the National EMS Pilots Association (NEMSPA) and the Indiana Association of Air Medical Services (INAAMS). Mr. Alexander holds a Bachelor of Science degree in Aeronautics from Parks College of Aviation & Aerospace Technology at Saint Louis University. He is a former U.S. Army Warrant Officer and "Aeroscout" helicopter pilot, instructor pilot, and standardization instructor pilot, having served on both active duty and in the Indiana Army National Guard.

EDUCATION & CERTIFICATIONS

- 2025: Florida Department of Transportation Advanced Air Mobility Local Government Training Workshop, Tallahassee, FL
- 2022: Safety Management Systems (SMS) and Aviation Safety Program Management, Transportation Safety Institute, U.S. Department of Transportation, Oklahoma City, OK
- 2018: Advanced Rotorcraft Accident Investigation, Transportation Safety Institute, U.S. Department of Transportation, Oklahoma City, OK
- 2015: Recertification, International Standards for Business Aircraft Operations (IS-BAO) Auditing Workshop, Orlando, FL
- 2015: Recertification, International Standards for Business Aircraft Operations (IS-BAO) Fundamentals of IS-BAO Workshop, Orlando, FL
- 2013: Initial, International Standards for Business Aircraft Operations (IS-BAO) Auditing Workshop, Chicago, IL
- 2013: Initial, International Standards for Business Aircraft Operations (IS-BAO) Fundamentals of IS-BAO Workshop, Chicago, IL
- 2010: Transportation Safety Institute (TSI) / Federal Aviation Administration (FAA) Heliport Evaluation (Prototype) Training Course, Oklahoma City, OK
- 2006: Performance Improvement Training for Healthcare, Executive Learning Inc., Dallas, TX
- 2006: Corporate Facilitator Training, Executive Learning Inc., Dallas, TX
- 1990: United States Army Crew Resource Management Instructors Course, Fort Hood, TX
- 1990: United States Army Aeroscout Instructors Course, Fort Rucker, AL
- 1987: United States Army Aeroscout Aviators Course, Fort Rucker, AL
- 1986: United States Army Rotary Wing Basic Course, Fort Rucker, AL
- 1986: United States Army Warrant Officer Course, Fort Rucker, AL
- 1985: B.S. in Aeronautics, Parks College of Aviation & Aerospace Technology, St. Louis University, St. Louis, MO
- 1985: Airframe and Powerplant (A&P) Technician Certification, Parks College of Aviation & Aerospace Technology, St. Louis University, St. Louis, MO

WORK EXPERIENCE

Vertical Flight Society
Jan 2019 – Present: Infrastructure Advisor

- Provide expert advice and representation to the Vertical Flight Society and its members in regard to safety, regulatory compliance, policy, standardization, research, testing, operations, design, development, and integration of infrastructure as it applies to vertical flight aircraft. Provide liaison, interface support, and representation to the Vertical Flight Society in working with foreign

governments, government agencies, industry experts, manufacturers, regulatory bodies, and other public and private entities having an interest or role in the development and/or implementation of Vertical Flight Infrastructure.

Five-Alpha L.L.C.
Feb 2018 – Present: Owner, President & Executive Director

- Infrastructure subject matter expert and aeronautical consultant in the aviation, helicopter, Vertical Takeoff and Landing (VTOL), Advanced Air Mobility (AAM), Powered Lift, and Helicopter Air Ambulance industries. Specializing in infrastructure design, standards development, regulations, advocacy, accident investigation, research and development, flight operations, auditing, risk analysis, safety management systems, training, and education.

Uber Technologies
Sep 2017 – Feb 2018: Global Head of Aviation Infrastructure

- *Responsible for the oversight and development of infrastructure concepts, designs, regulations and standards in support of safe sustainable eVTOL transportation networks in high density urban environments for the purpose of fostering Advanced-Air-Mobility (AAM) for the future.*

U.S. D.O.T. Transportation Safety Institute (TSI)
May 2012 – Present: Platform Instructor

- *Assist in the development of classroom courseware and the education programs and the training of aviation professionals attending the TSI Heliport Evaluation Course, Basic Rotorcraft Accident Investigation Course, and the Advanced Rotorcraft Accident Investigation Course.*

HeliExperts International LLC
Jan 2012 – Sep 2017: Co-Founder & Co-Owner

- International consultancy providing services in the aviation, helicopter and air medical industries. Specializing in helicopter & heliport infrastructure safety, design, risk analysis and audits, HEMS operations, IS-BAO Auditing, education, training, litigation support and expert witness testimony.

R.J. Alexander Consulting, L.L.C.
Apr 2004 – Jan 2013: Owner/Operator

- Consultant in the aviation, helicopter and air medical industries specializing in heliport design, operations, training and safety.

Air Methods Corp.
Aug 2011- Apr 2013: Helicopter EMS Lead Pilot

- Lead pilot and air medical helicopter pilot for Air Methods Corp at Lutheran Hospital, Fort Wayne, Indiana.

Omniflight Helicopters Inc.
Nov 2008 – Aug 2011: Regional Operations Manager, Central U.S.

- Oversight of 115 pilots and 28 Part-135 Helicopter Air Ambulance operations throughout the Central United States.
- Primary liaison for operations, safety, maintenance and customer relations for traditional hospital-based operations.
- Lead Project Manager overseeing the development of new startup programs as well as the integration of established programs.
- Primary trainer and educator for base managers, site managers, medical crews, and communication specialists.
- Base auditor and inspector.

Omniflight Helicopters Inc.
Apr 2004 – Nov 2008: Helicopter EMS Base Manager & Lead Pilot

- Base manager and air medical helicopter pilot for Omniflight Helicopters at Lutheran Hospital, Fort Wayne, Indiana.

Omniflight Helicopters Inc.
Jul 1994 – Apr 2004: Helicopter EMS Pilot & Base Safety Manager

- Air medical helicopter pilot at Methodist Hospital in Indianapolis, Indiana.
- Program safety Manager.

Crescent Helicopters
Feb 1994 – Jul 1994: Offshore Helicopter Pilot in the Gulf of Mexico

- Provide transportation to oil field operators, equipment, and supplies throughout the oil field infrastructure of the Gulf of Mexico.

U. S. Army Active Duty & Indiana Army National Guard
Oct 1985 – Mar 1995: Pilot, Instructor Pilot and Standardization Instructor Pilot

- Helicopter pilot in command operating both in the United States and overseas.
- Attached to the following units of operation: General Support Company, Helicopter Cavalry Squadron, Attack Helicopter Battalion, and Target Acquisition and Reconnaissance Platoon.
- School Trained Aeroscout and Aeroscout Instructor Pilot
- Standardization Instructor Pilot
- Specializations: Reconnaissance, Target Acquisition, Close Air Support, Joint Air Attack Coordination and Command and Control. Advanced combat skills instructor for day, night and night vision goggle operations.

McDonald Douglas Corp.
Jan 1985 – Aug 1985: Inspector in Aircraft Manufacturing

- Structural and component inspector specialized in composite, sheet metal and hydraulic fabrication inspection during construction and assembly of:

- F-18 Hornet
- F-15 Eagle
- AV-8B Harrier

CERTIFICATES & LICENSES

- **Commercial Pilot**
  - Rotorcraft-Helicopter
  - Instrument-Helicopter
- **Private Pilot**
  - Airplane Single-Engine Land
- **Maintenance Technician Rating (A&P)**
  - Airframe
  - Powerplant
- **U.S. Military, Army**
  - Certified Aeroscout Pilot
  - Certified Aeroscout Instructor Pilot
  - Standardization Instructor Pilot

FLIGHT EXPERIENCE

Total Flight Time	5,100
Helicopter	5,000
Night	1,240
Cross Country	1,400
No. of Patients Transported	3,130

Pilot-in-Command	4,900
Military Instructor Pilot	427
Night Vision Goggle	310
Helicopter Air Medical	3,230
Instrument	75

AWARDS

- 2026 Elected as a Fellow (FRAeS) to the Royal Aeronautical Society.
- 2024 Helicopter Association International (HAI) Salute to Excellence International Safety Award.
- 2021 Vertical Flight Society Operations Committee Best Whitepaper
- 2007 Association of Air Medical Services (AAMS) President's Award.
- 1991 "Top Scout" Award, 1st Battalion, 5th Aviation Regiment, U.S. Army

INDUSTRY EXPERIENCE & INVOLVEMENT

- Co-Chair, Vertical Flight Society (VFS) Safety Technology Working Group.
- Chair, Vertical Flight Society (VFS) Industry/Regulator Vertical Flight Infrastructure Focus Group.
- Committee Member – Illumination Engineering Society (IES) General Aviation Subcommittee.
- Advisory Council Member, National Center for Atmospheric Research (NCAR) Research Applications Laboratory (RAL).
- Steering Committee Member, Friends and Partners in Aviation Weather (FPAW)
- Infrastructure Advisor, Vertical Flight Society (VFS).
- Committee Member, Vertical Flight Society (VFS) Operations & Infrastructure Technical Committee.
- Member, NASA's Advanced Air Mobility (AAM) Ecosystem Working Groups.
- Committee Member & Chair – National Fire Protection Association (NFPA) 418, Standard for Heliports and Vertiports Technical Committee.
- Member – Vertical Aviation Safety Team (VAST), formerly the International Helicopter Safety Team (IHST), Technology Committee.
- Committee Member – ASTM International, F38 Unmanned Aircraft Systems, Specification for Vertiport Design.
- Member – Vertical Aviation International (VAI), Vertical Flight Infrastructure Industry Advisory Council.
- Committee Member – Illumination Engineering Society (IES) RP37-20 Lighting Airport Outdoor Environments Committee.
- Platform Instructor, U.S. Department of Transportation (DOT), Transportation Safety Institute (TSI)
- Past Member & Co-Chair, U.S. Helicopter Safety Team (USHST) Infrastructure Working Group (IWG).
- Past President and Board Member, National EMS Pilots Association (NEMSPA)
- Past President and Board Member, Indiana Association of Air Medical Services (INAAMS).
- Past Committee Member, U.S. Helicopter Safety Team (USHST) Human Factors Working Group.
- Past Committee Member - Helicopter Association International (HAI) Air Medical Services Committee.
- Past Instructor for the National Association of Air Medical Communication Specialists (NAACS).

SPECIALTIES

- Vertical Flight Infrastructure Concept Design and Development
- Vertical Flight Infrastructure Research

- Vertical Flight Infrastructure Master Planning
- Vertical Flight Infrastructure Federal, State, and Local Compliance
- Vertical Flight Infrastructure Standards Development
- Vertical Flight Infrastructure Risk Analysis
- Vertical Flight Infrastructure Safety Management Systems (SMS)
- Helicopter Air Ambulance Operations, Safety and Program Oversight
- Emergency Action Plan Development and Evaluation
- Helicopter/Heliport Accident Investigative and Research
- Government Representation, Liaison and Consensus Building
- Public Speaker, Lecturer & Educator

LECTURES & SEMINARS DEVELOPED & PRESENTED

- Heliport Litigation Workshop (VAI, Verticon)
- Airport AAM Masterclass (Rome, Italy)
- Vertical Flight Infrastructure Safety Management System Implementation (VAI, Verticon)
- Implementing SMS and Risk Analysis at Vertical Flight Infrastructure (FAA Info-share)
- Advanced Air Mobility, a New Ecosystem (HAI, HeliExpo)
- Weather Pain Points in Low Altitude Aviation (FAA WX COI)
- Heliport Airspace / Classifying Obstacles, Obstructions and Hazards
- Vertical Flight infrastructure and Hydrogen Power
- Heliports 101: What Pilots are Responsible for but NEVER Taught (HAI)
- Sustainable Aviation Infrastructure / How Green is Your Green? (OSU)
- A Cultural Acceptance of Risk in Infrastructure (HAI)
- Vertical-Lift Infrastructure and the Normalization of Deviance (FAA)
- eVTOL Infrastructure Considerations for AAM an Online Short Course (AIAA)
- AAM Infrastructure Regulations & Codes (NASAO)
- Public vs. Private, A Use-Case Conundrum for AAM (NASA)
- AAM Infrastructure / Turbulence & Vehicle Response (NASA)
- The Electric & Autonomous VTOL Revolution (Helishow Dubai)
- Navigating The Infrastructure Maze of UAM (SAE)
- Helicopter Air Ambulance Ops & The 911 Dispatcher (State of Mississippi)
- Aircraft Performance and Its Impact on Infrastructure (National Academies)
- Innovation in Regulation & Airspace Integration (Varon Vehicles)
- Heliport and Vertiport Integration Strategies (NASAO)
- Airports, Heliport & Vertiports OH-MY! (FAA)
- AAM-101 / Fundamentals of AAM Vertiport Requirements (CAMI)
- Viability of Heliports and Vertiports as a Municipality Asset
- NFPA-418 / Standard for Heliports Application to Hospitals (Joint Commission)

- Aviation Weather Challenges in Urban Environments
- UAM and Vertiport Integration Constraints
- The Future of Urban Air Mobility & UberAIR (NASAO)
- Repairing Todays Infrastructure for Tomorrows Advancement
- The HEMS Weather Tool, the best kept aviation weather secret
- Heliport Accident Prevention: What you don't know can kill you!
- The Future of Air Mobility and UAM
- Putting Professionalism back into Pilot Decision Making and the Top-10 most undesirable attitudes in Air Medical Transport
- Are You a Human Factors Disaster? Normalization of Deviance in Pilot Decision Making.
- Pilot Error Truth or Dare: Accidents at heliports blamed on pilots where poor infrastructure was a major contributing factor.
- Preemptive Accident Investigation Techniques from the FAA and NTSB
- Haiti Aviation Infrastructure Design / Concepts for a Growing Country
- Helicopter Infrastructure Safety Concepts from the IHST/JHSIT/IWG
- HEMS Weather Reporting and Safety Issues
- HEMS Infrastructure And Accident Review
- Customer Service and Safety / Promises That Should Never Be Made
- Artificially Induced Heliport Turbulence / Causes, Effects and Prevention
- Magnetic Hazards at Heliports
- Heliport Paint Schemes for Night Vision Goggle Operations
- Creating a Compatible Night Vision System Infrastructure
- Aviation Weather and EMS Operations
- Air Medical Helicopter Scene Operations and Safety
- Emergency Action Plans and Good Practices
- First Responder Training for Air Medical Helicopter Operations
- Navigation and Map Reading
- Flight Following
- Radio Operations for EMS and Air Medicine
- Hazardous Materials and Helicopter Operations
- Aviation Operational Control in Air Medicine
- Federal Aviation Regulations
- Jet Fuel System design, Installation & Management
- Air Medical Personal Protective Equipment
- Hospital Staff Helicopter and Heliport Safety
- Heliport Design, Safety and Education
- Quality Communications Skills
- Setting Up and Running a Safety Committee
- Positive Habit Transfer in Aviation and EMS
- Air Medical Contracts 101
- HEMS Accident Intangibles

- HEMS Advanced Accident Investigation
- How To Be an Air Medical Base Manager
- Helicopter Ground Handling Safety
- Flight Physiology for Air Medical Crews
- Top-10 Killer Attitudes
- Air Medical Accident Review for Communication Specialists
- Safety & Shift Flight Briefings and Debriefings

SPEAKING & LECTURE ENGAGEMENTS

American Institute of Aeronautics and Astronautics (AIAA)
- 2024 – Las Vegas, Nevada
- 2022 – Virtual Workshop

Aviation Law Symposium, La Verne University
- 2020 – La Verne, California

Cape May UAS Symposium
- 2019 – Capy May, New Jersey

China e-Flight Forum
- 2022 – China (Virtual)
- 2021 – Hubei Province, China (Virtual)
- 2020 – China (Virtual)

Dubai HeliShow
- 2021 – Virtual Conference

Experimental Aircraft Association (EAA) AirVenture Air Show
- 2019 – Oshkosh, Wisconsin CAFÉ Foundation Electric Aircraft Symposium
- 2017 – Oshkosh, Wisconsin (FAASTeam Instructor)
- 2016 – Oshkosh, Wisconsin (FAASTeam Instructor)

Electric Aircraft Symposium (EAS)
- 2025 – Oshkosh, Wisconsin
- 2024 – Oshkosh, Wisconsin
- 2023 – Oshkosh, Wisconsin
- 2022 – Oshkosh, Wisconsin
- 2021 – Virtual
- 2020 – Virtual
- 2019 – Oshkosh, Wisconsin

FAA Aviation Safety Info-Share Conference
- 2024 – Kansas City, Missouri
- 2023 – Baltimore, Maryland
- 2021 – Pittsburgh, Pennsylvania

FAA/VAST International Rotorcraft Safety Conference
- 2022 – Hurst, Texas
- 2018 – Hurst, Texas
- 2016 – Hurst, Texas

Friends and Partners of Aviation Weather (FPAW) Conference
- 2024 – Dallas, Texas (Spring Conference)
- 2019 – Las Vegas, Nevada (Fall NBAA Conference)
- 2019 – Washington, D.C. (Spring NTSB Conference)
- 2014 – Orlando, Florida (Fall NBAA Conference)

General Aviation Manufactures Association (GAMA)
- 2019 – Washington, DC (UAM Conference)

HeliShow Dubai
- January 2021 (Virtual)

Indiana Emergency Response Conference (IERC)
- 2014 – Indianapolis, Indiana (INAAMS Midwest HEMS Conference)
- 2011 – Indianapolis, Indiana
- 2007 – Indianapolis, Indiana
- 2006 – Indianapolis, Indiana
- 2005 – Indianapolis, Indiana

Indiana Hazardous Material Conference
- 2006 – Helicopters and HAZMAT situations, Greenwood, Indiana

The Joint Commission *(accreditation authority for healthcare)*
- 2019 – Auditor Webinar / NFPA-101 & 418 impact on hospital heliports

Korean American Energy Association (KAEA)
- 2023 – International Vertiport Symposium, Los Angeles, California

National Academies of Sciences, Engineering & Medicine
- 2019 – Washington, DC

National Air Medical Transport Conference (AMTC)
- 2023 – Columbus, Ohio

- 2020 – (Virtual)
- 2017 – Fort Worth, Texas
- 2016 – Charlotte, North Carolina
- 2014 – Nashville, Tennessee
- 2013 – Virginia Beach, Virginia
- 2010 – Fort Lauderdale, Florida
- 2009 – San Jose, California
- 2008 – Minneapolis, Minnesota
- 2007 – Tampa, Florida
- 2005 – Austin, Texas

National Association of State Aviation Officers (NASAO)
- 2021 – Annual Convention, Colorado
- 2020 – Annual Convention (Virtual)
- 2018 – Washington, DC (Legislative Conference)

National Business Aviation Association (NBAA)
- 2019 – Las Vegas, NV

National Fire Protection Association (NFPA)
- 2018 – Las Vegas, Nevada (National Conference)

North Carolina D.O.T. Division of Aviation, State Helicopter Safety Conference
- 2008 – Lowes Motor Speedway, Concord, North Carolina

Ohio Air Mobility Symposium / The Ohio State University
- 2024 – Columbus, Ohio
- 2023 – Columbus, Ohio
- 2020 – Columbus, Ohio

Ohio Transportation Engineering Conference
- 2018 – Columbus, Ohio

Rotors & Ribs Fly-In & FAASTeam Event
- 2024 – Goshen, Indiana
- 2016 – Goshen, Indiana
- 2015 – Goshen, Indiana

SAE International
- 2019 – Novi, Michigan

Sustainable Aviation Forum, The Ohio State University
- 2023 – Columbus, Ohio

Uber Elevate Summit

- 2018 – Los Angeles, California
- 2017 – Dallas, Texas

Vertical Aviation International (VAI) Verticon Conference

- 2026 – Atlanta, Georgia
- 2025 – Dallas, Texas
- 2024 – Anaheim, California
- 2023 – Atlanta, Georgia
- 2022 – Dallas, Texas
- 2020 – Anaheim, California
- 2019 – Atlanta, Georgia
- 2017 – Dallas, Texas
- 2016 – Louisville, Kentucky
- 2015 – Orlando, Florida
- 2014 – Anaheim, California
- 2013 – Las Vegas, Nevada
- 2012 – Dallas, Texas
- 2010 – Orlando, Florida

Vertical Flight Society

- 2026 – San Jose, California
- 2025 – Virginia Beach, Virgina
- 2024 – Montreal, Canada
- 2023 – Cape May, New Jersey
- 2022 – Springfield, Ohio
- 2022 – San Jose, California
- 2020 – San Jose, California
- 2019 – Washington, D.C.
- 2019 – Mesa, Arizona

Xelevate Conference

- 2022 – Leesburg, Virginia

PUBLICATIONS, PAPERS, ARTICLES AND VIDEOS

- Rex J. Alexander, The Indianapolis Downtown Heliport – A Case Study for Retaining and Repurposing (February 20, 2026).

- Co-contributor and co-author, Illuminating Engineering Society ANSI/IES RP-37-25 – Recommended Practice: Lighting Airport Outdoor Environments, An American National Standard (March 3, 2025).

- Rex J. Alexander, Indianapolis Downtown Heliport (8A4), Indianapolis, Indiana, Heliport Assessment Report (June 6, 2024).

- Nick Lappos, Herb Schlickenmaier, Mike Borfitz, James Grimsley, and Rex Alexander, (AIAA Whitepaper) “Challenges to the Commercialization of Advanced Air Mobility”, (January 2025).

- Rex J. Alexander and Cliff Johnson, (Whitepaper) “Vertical Flight Infrastructure Data Quality Shortcomings”, Vertical Flight Society Forum 70, Montreal Canada (May 2024).

- Architect Technology Corp (ATCorp) and Five-Alpha, (Research Paper) “Vertiport Traffic Automation System”, NASA SBIR Project Phase-II., (July 2023).

- Nancy Mendoca, James R. Murphy, Michael D. Patterson, Rex Alexander, Gabriela Juarez, and Clint Harper (NASA Whitepaper), “Advanced Air Mobility Vertiport Considerations: A List and Overview”, AIAA Conference, (June 2022).

- NUAIR, Boeing, Deloitte, Mosaic ATM, Crown, and Five-Alpha, (Research Paper), “High-Density Automated Vertiport Concept of Operations” (Part-II) NASA Technical Report, (May 2021).

- Rex J. Alexander, Raymond A. Syms, Cliff Johnson, and John Roberts, (Whitepaper) “A Retrospective & Historical Analysis of Vertical Lift infrastructure Accidents for the Purpose of Operational Risk Identification and Accident Prevention”, Vertical Flight Society Forum 77, (May 2021).

- NUAIR, Boeing, Deloitte, Mosaic ATM, Crown, and Five-Alpha, (Research Paper), “High-Density Automated Vertiport Concept of Operations” (Part-I) NASA Technical Report, (March 2021).

- Rex J. Alexander (Video), “Making Your Helicopter, eVTOL and UAS Infrastructure relevant”, Air Medical Transport Conference (AMTC) (March 2021).

- Rex J. Alexander and Jonathan Daniels, (Whitepaper) "Developing Sustainable Advanced Air Mobility Infrastructure that is Efficient, Safe and Regulatory Compliant", Vertical Flight Society Forum 76, Virtual, (Oct 2020).

- Rex J. Alexander, (Article) "Answering the question: Do eVTOL air taxis have a place in sustainable cities?" eVTOL.com, (April 2020).

- Rex J. Alexander, (Article) "Hospital Heliport Hazard", The Joint Commission, Environment of Care® News, (July 2019), Volume 22, Issue 7.

- National Air Transportation Association (NATA) and Five-Alpha (Whitepaper), "Urban Air Mobility: Considerations for Vertiport Operations", (June 2019).

- Rex J. Alexander, Kenny Keller, and Gary Cleveland, FAASTeam video webinar, *"One of the best kept weather secrets in Aviation"* The HEMS Weather Tool (October 2018).

- Rex J. Alexander, Kenny Keller, and Gary Cleveland, FAASTeam video webinar, *"Heliport Accident Prevention, what you don't know can kill you!"* (September 2018).

- Robert C. Matthews, Rex J. Alexander, and Richard B. Stone, (Whitepaper) *"Helicopter Accident Trends in 8 ISASI Countries and How We Might Improve the Fatal Accident Rate Even Further"* (August 2017) International Society of Air Safety Investigators (ISASI).

- Rex J. Alexander & Raymond A. Syms, (Article) *"How to Protect Your Airspace"* Rotor & Wing Magazine (March 2017); What heliport owners need to know and do to protect their airspace.

- Rex J. Alexander & Raymond A. Syms, (Article) *"You Think Your Airspace is Protected"* Rotor and Wing Magazine (February 2017); How Avoiding FAA Recommended Practices Could Lead to High Risk and Potentially Disastrous Airspace.

- Rex J. Alexander, *"Deadly Data"*, (Article) Rotor and Wing Magazine (June 2016); An overview of the FAA Airport Master Record database inaccuracies and its effect on flight planning, GPS navigation and UAS operations.

- Rex J. Alexander & Larry Mattiello, (Article) *"Heliport Insurance"*, Rotor and Wing Magazine (February 2016); Proper and appropriate insurance assessment and coverages for heliport owners.

- Rex J. Alexander, (Article) *"The Hangman Cometh?"*, Rotor and Wing Magazine (October 2015); How the improper wear of NVG helmet mounted devices may cause injury, paralysis or death in an otherwise survivable accident.

- Rex J. Alexander, (Article) *"Tangled Web"*, Rotor and Wing Magazine (July 2015); The interrelationship of international, federal, state and local regulations and codes on heliport design, construction and operation.

- Rex J. Alexander, (Article) *"Are Your Heliports Killing Your Patients?",* Waypoint AirMed & Rescue Magazine (August 2104); Impact that hospital heliport design can have on patient morbidity and mortality.

- Rex J. Alexander, (Article) *"Magnetic Hazards at Heliports",* Waypoint AirMed & Rescue Magazine (Issue 44 / March 2013); Magnetic hazards at heliports and risk mitigation strategies to avoid them.

- Rex J. Alexander*, (Article) "Defeating the Survivor Syndrome"*, Air Medical Journal, Presidents Forum, (March/April 2012); Avoiding the destructive us versus them syndrome.

- Rex J. Alexander*, (Article) "Making Opinions Count"*, Air Medical Journal, Presidents Forum, (January/February 2012); An overview of NEMSPA's heliport safety survey results.

- Rex J. Alexander (Co Author), "EMS Pilots Credo", National EMS Pilots Association (NEMSPA), standards of excellence for professional medical pilots, 2012.

- Rex J. Alexander, (Article) "*Professionalism*", Air Medical Journal, Presidents Forum, (November/December 2011); Introduction of the NEMSPA "Air Medical Pilots Credo in response to the NTSB naming professionalism to their Top-10 list.

- Rex J. Alexander*, (Article) "Just Do the Right Thing"*, Air Medical Journal, Presidents Forum, (September/October 2011); A breakdown of NEMSPA's philosophy, history and goals.

- Rex J. Alexander, (Article) "*Who is NEMSPA*", Waypoint AirMed & Rescue Magazine, (August 2011); An overview of who and what NEMSPA is, does and has accomplished.

- Rex J. Alexander, (Article) "*Breaking the Cycle*", Air Medical Journal, Presidents Forum, (July/August 2011); Avoiding the repetitive cycle of failure due to leadership change.

- Rex J. Alexander*, (Article) "Heli-Expo 2011"*, Air Medical Journal, Presidents Forum, (May/June 2011); An overview of current and ongoing NEMSPA industry initiatives.

- Rex J. Alexander*, (Article) "Adding the Salt"*, Air Medical Journal, Presidents Forum, (March/April 2011); An overview of NEMSPA's position paper on the FAA NPRM regarding rule making for part 135 and 91 helicopter operations.

- Rex J. Alexander*, (Article) "Putting the Air Back In"*, Air Medical Journal, Presidents Forum, (November December 2010); An overview of the need to encourage programs to involve their pilots in the air medical industry.

- Rex J. Alexander (Article) *"Here's Your Sign!"*, National EMS Pilots Associations AIRNET (April 2010), Warning and caution signs that every heliport should have to enhance safety and reduce liability.

- Rex J. Alexander, (Article) "*The Hot Load, Time Saver or Time Waster?"*, National EMS Pilots Associations AIRNET (January 2009) Risk benefit evaluation associated with hot loading versus cold loading patients into a helicopter.

- Rex J. Alexander (Co Author Paper), "An Opportunity to Improve - Addendum", Follow on Statements from the National EMS Pilots Association, provided to the NTSB for consideration for the 2009 Helicopter EMS Safety Hearings.

- Rex J. Alexander (Co Author Paper), *"An Opportunity to Improve*", Statements from the National EMS Pilots Association, provided to the NTSB for consideration for the 2009 Helicopter EMS Safety Hearings.

- Rex J. Alexander, (Article) "*Air Medical Launch Times and Influencing Factors"*, National EMS Pilots Association AIRNET (January 2008) Review of influencing factors that dictate what a reasonable safe launch time standard should be and the consequences of not paying attention to real world data and variables.

- Rex J. Alexander, (Education Course) "*Hospital Helipads: Safety, Liability, and Regulatory Issues Hospitals Must Know and consider",* National EMS Pilots Associations (September 2008) Web based presentation covering heliport design, safety, regulations, fire protection, risk assessment and liability considerations.

- Rex J. Alexander*, (Article) "Helicopter Shopping: What Hospitals & First Responders Need to Know"*, (January 2008) Discussing the challenges and hidden dangers of coordinating flight requests across multiple hospital and first responder systems.

- Rex J. Alexander, (Article) "*The Option Play",* National EMS Pilots Associations AIRNET (January 2007) Commenting on the pilot's role in risk management for HEMS operations.

- Rex J. Alexander, (Article) "*The Illusive Silver Bullet",* National EMS Pilots Associations AIRNET (January 2007) Emphasizing a comprehensive common-sense approach based on culture not technology to reducing HEMS accidents.

AVIATION INDUSTRY INITIATIVES PARTICIPATED IN

- Coordinator for AAM Vertical Flight Infrastructure Forum, Vertical Aviation International, Verticon, (March 9, 2026) Atlanta, Georgia.

- Coordinator and Presenter, Downwash and Outwash Workshop, Vertical Flight Society, Forum 81 (May 19, 2025) Virginia Beach, Virgina.

- Instructor U.S. DOT Transportation Safety Institute, Advanced Rotorcraft Accident Investigation Course, Oklahoma City, Oklahoma (May 6 – 8, 2025).

- Coordinator for UK CAA Downwash/Outwash Online Webinar, Vertical Flight Society (April 29, 2025) Virtual.

- Presenter Friends and Partners in Aviation Weather Workshop, Embry Riddle Daytona, Florida (April 1-3, 2025).

- Presenter U.S. Congressional Briefing, Washington, D.C. U.S. Leadership of Workforce Development in Advanced Air Mobility (March 20, 2025).

- Instructor U.S. DOT Transportation Safety Institute Helicopter Evaluation Course, Dallas, Texas (VAI Verticon) (March 7- 9, 2025).

- Participant in United States US-Saudi Business Council Advanced Air Mobility Mission to the Kingdom of Saudi Arabia (KSA) (February 2-8, 2025).

- Instructor U.S. DOT Transportation Safety Institute, Advanced Rotorcraft Accident Investigation Course, Oklahoma City, Oklahoma (Dec 3 – 5, 2025).

- Lead Lecturer, SMS and Risk Management in Vertical Flight Infrastructure, FAA Aviation Safety Info-Share Conference (Nov 13-15, 2024) Kansas City, Missouri.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 8 on Advanced Air Mobility (AAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (Sept. 17-18, 2024) Washington, D.C.

- Instructor U.S. DOT Transportation Safety Institute, Advanced Rotorcraft Accident Investigation Course, Oklahoma City, Oklahoma (Jul 15 – 17, 2024).

- Lead Organizer FAA/Industry infrastructure Forum, Vertical Flight Infrastructure Data Specification on Performance-Based Standards, HeliExpo, (Feb 26, 2024) Anaheim, California.

- Speaker Chair, Advanced Air Mobility and Regional Air Mobility: The Future of the Skies, HYSKY Society, Hydrogen in Aviation Conference (Oct 10-11, 2023) Grand Forks, North Dakota.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 7 on Advanced Air Mobility (AAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (Sept. 25-27, 2023) Cape May, New Jersey.

- Lecturer, Heliport and Vertiport infrastructure data considerations, FAA Aviation Safety Info-Share Conference (March 28-30, 2023) Baltimore, Maryland.

- Lead organizer and co-chair in the USHST 2023 Government/Industry Infrastructure Summit #8 (In Person), (Feb 7-8, 2023) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, and Airspace & Low Altitude IFR.

- Developer and Lead Instructor, eVTOL Infrastructure Considerations for Advanced Air Mobility, American Institute of Aeronautics and Astronautics (AIAA) (November 1-10, 2022) virtual workshop.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 6 on Advanced Air Mobility (AAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (Sept. 20-22, 2022) Dayton, Ohio.

- Lead organizer and cochair in the USHST 2022 Government/Industry Infrastructure Summit #8 (In Person), (April 5-6, 2022) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, and Airspace & Low Altitude IFR.

- Lead Organizer FAA/Industry Advanced Air Mobility Infrastructure Industry Day, Development of Engineering Brief No. 105 Vertiport Design, HeliExpo, March 7, 2022, Dallas, Texas.

- Lead panelist and presenter, Vertical Lift Infrastructure Data Integrity, FAA Aviation Safety Info-Share Conference (Nov 2-4, 2021) Pittsburgh Pennsylvania.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 5 on Advanced Air Mobility (AAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (Sept. 20-21, 2021) Virtual.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 4 on Advanced Air Mobility (AAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (March 2-4, 2021) Virtual.

- Lead organizer and cochair in the USHST 2021 Government/Industry Infrastructure Summit #7 (Virtual), (Feb 23-24, 2021) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, and Airspace & Low Altitude IFR.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 3 on Advanced Air Mobility (AAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (Sept. 1-3, 2020) Virtual.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 2 on Urban Air Mobility (UAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (March 17-18, 2020) Virtual.

- Lead organizer and cochair in the USHST 2020 Government/Industry Infrastructure Summit #6 in Washington, DC (March 12-13, 2020) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, Airspace & Low Altitude IFR.

- Lecturer, "The Viability of Heliports and Vertiports", Aviation Law Symposium, (January 23-24, 2020) University of La Verne, College of Law, Ontario, California.

- Panel organizer for a discussion on Weather for Emerging Modes of Transportation for the Friends and Partners of Aviation Weather (FPAW) October 22-24, 2019, Fall meeting at the NBAA Conference in Las Vegas, Nevada.

- Organizer, panel lead and speaker for the Vertical Flight Society's Workshop No. 1 on Urban Air Mobility (UAM) and Electric Vertical Takeoff and Landing (eVTOL) Infrastructure (Sept. 10-12, 2019) in Washington, D.C.

- Panel leader for Advancements in the HEMS Weather Tool at the Friends and Partners of Aviation Weather (FPAW) April 15-17, 2019, spring conference at the NTSB conference center in Washington, D.C.

- Lead organizer and cochair in the USHST 2019 Government/Industry Infrastructure Summit #5 in Washington, DC (Feb 7-8, 2019) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, Airspace & Low Altitude IFR.

- Lead organizer, participant, and industry liaison for the USHST/FAA heliport design guide review, 2018 ad-hoc committee efforts to develop recommendations for the next revision of FAA Heliport Design Guide AC 150/5390.

- Lead organizer, participant, and industry liaison for the USHST/FAA 5010 Airport Master Record 2018 ad-hoc committee efforts to develop a Heliport/Vertiport specific 5010 airport master record.

- Lead organizer and cochair in the USHST 2018 Government/Industry Infrastructure Summit #4 in Washington, DC (Feb 16-17) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, Airspace & Low Altitude IFR.

- Lead organizer and participant in the USHST 2017 Government/Industry Infrastructure Summit #3 in Washington, DC (Feb 16-17) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, Airspace & Low Altitude IFR

- Chair and panelist, Low-Level Infrastructure Discussion Group, 2016 Rotorcraft Technology Summit held by Rotor and Wing International, Dallas, Texas.

- Participant in the development of the Aviators Model Code of Conduct (AMCC) Flight Safety in the Drone Age safety guidance and technical paper.

- Lead organizer and participant in the USHST 2016 Government/Industry Infrastructure Summit #2 in Washington, DC (Feb 11-12) to discuss; Low Altitude Weather Reporting, Heliport Design and Safety, Airspace & Low Altitude IFR

- Participant in National Business Aviation Association (NBAA) Light Emitting Diode (LED) Airport/Heliport Lighting Task Group.

- Lead coordinator and participant in FAA Helicopter Emergency Medical Services (HEMS) Safety Risk Management Panel (SRMP) for furthering the HEMS Weather Tool, Washington D.C., 2014.

- Participant in Friends and Partners of Aviation Weather (FPAW) at NBAA meeting in Orlando, Florida.

- Lead coordinator and participant for USHST Government/Industry HEMS Weather/Infrastructure Summit #1, Washington, DC, December 2013, in collaboration with the FAA, NCAR, UCAR, NOAA, NWS and AWC.

- Participated with industry professionals in the design and writing of the Helicopter Pilots Model Code of Conduct (HMCC).

- Primary author and architect of the International Online Heliport Risk and Liability Assessment Toolkit.

- Lead author of the National EMS Pilots Association (NEMSPA) National Heliport Safety Survey.

- Committee member and contributor on the Model Air Medical State Guidelines Task Force (MASGIT).

- Participant in the Federal Aviation Administration's (FAA) Aviation Weather Research Program (AWRP) National Ceiling and Visibility Analysis (NCV) Product Development Team (PDT), Ceiling and Visibility Analysis (CVA) Preliminary Hazards Assessment (PHA) of an algorithm program for automated real-time analysis of current ceiling and visibility conditions across the contiguous United States (CONUS).

- Co-Author National EMS Pilots Association White Paper "Utilization of an Independent Industry Task Force for the Review and Rewrite of the FAA/DOT Heliport Advisory Circular".

- Co-Author of the National EMS Pilots Association (NEMSPA) review and comments on the Federal Aviation Association HEMS NPRM on HEMS and Part 135 and Part 91 helicopter operations.

- Co-Contributor on National EMS Pilots Association (NEMSPA) En-route Decision Point Program.

- Co-Contributor on National EMS Pilots Association (NEMSPA) No Pressure Initiative/CHAMPS (Cultural Health Assessment and Mitigation Program for Safety.

- Participant in the Federal Aviation Administration (FAA) and Transportation Safety Institute (TSI) course creation, "Heliport Evaluation Course" for FAA and DOT field inspectors.

- Lead designer of the National EMS Pilots Association (NEMSPA) Heliport Safety Sign Campaign.

- Member of the Association of Air Medical Services (AAMS) Safety Management Training Academies planning committee and curriculum development group.

- Participant in the Federal Aviation Administration and Helicopter Association International A021 Operational Specifications Rewrite Efforts.

- National EMS Pilots Association (NEMSPA) board member participant and party member participant in the NTSB four-day hearing on Helicopter EMS operations and accident prevention, Washington, D.C.

- Co-Coordinator of Indiana Association of Air Medical Service (INAAMS) statewide education program on the "Dangers of Helicopter Shopping" in the helicopter air ambulance industry.

CLIENT LIST

The following client list represents the broad spectrum of clients that have used the services of Five-Alpha LLC. Due to certain Non-Disclosure Agreements in place some clients are not represented.

- 710 Edge, LLC
- AeroAuto Global Inc.
- Aero-News Network
- Air Medical Transport Conference (AMTC)
- AlphaSights Ltd
- American Institute of Aeronautics and Astronautics (AIAA)
- Androscoggin Valley Hospital
- Archer Aviation Inc.
- Architecture Technology Corp. (ATCORP)
- Association of Air Medical Services (AAMS)
- Auto Aero Global
- Birdman Real Estate Development
- BRD Real Estate Development
- Cameron High Grove LLC
- City of Indianapolis, Office of Mayor Joe Hogsett
- Commission on Accreditation of Medical Transport Systems (CAMTS)
- Cresthill Preservation Group LLC
- Crown Consulting Inc.
- DIFCO Inc.
- Erlanger Health Inc.
- DKPA Heli
- EIT, Inc.
- Erlanger Health Systems
- eVTOL.com
- Federal Aviation Administration (FAA)
- Federal Aviation Administration (FAA) William J. Hughes Technical Center
- ForensisGroup
- General Aviation Manufactures Association (GAMA)
- George Mason University
- Georgia Institute of Technology
- Global Network of Companies (GNC)
- Gresham, Smith and Partners
- Hard Rock Motor Speedway
- Hard Rock Hotel
- Helicopter Association International (HAI)

- Helicopter Online Ground School
- HeliExperts International
- Hillwood Properties
- Hughes Aerospace Corporation
- International Civil Aviation Organization (ICAO)
- Illuminating Engineering Society
- Indiana Association of Air Medical Services (INAAMS)
- Indiana Department of Transportation Aeronautics Division
- Indiana Fire Inspectors Association
- Indiana University Medical Center Indianapolis, IN
- Integris Healthcare
- JDS Development Group
- Jeff Bianchi
- JT, Poslovno Svetovanje in Vodenje Projektov
- Jump Aero Incorporated
- Kearny Heliport of Kearny, NJ
- Lessing Stern
- Lily Helipads
- LifeFlight of Maine
- Lutheran Hospital of Fort Wayne, IN
- Lurie Children's Hospital
- LZControl
- Maine Medical Center
- McKinsey & Company
- McLaren Hospital, Lansing, MI
- Mississippi Center for Emergency Services
- MSKTD & Associates, Inc
- National Association of Air Medical Communication Specialists (NAACS)
- National Aeronautics and Space Administration (NASA)
- National Air Transportation Association (NATA)
- National Center for Atmospheric Research (NCAR)
- National EMS Pilots Association (NEMSPA)
- National Fire Protection Association (NFPA)
- National Oceanic and Atmospheric Administration (NOAA) Aviation Weather Center
- NEXA Capital Partners, LLC
- Northeast UAS Airspace Integration Research Alliance, Inc.
- Northwestern Memorial Healthcare
- Oliver Wyman Group
- One Thousand Museum
- P3 Tech Consulting
- Panzica Building Corporation

- Performance Software
- Praxis Aerospace Concepts International, Inc.
- Protean LLC
- PS&S
- Radius Capital
- Reid Hospital & Health Care Services, Inc.
- Riverview Westfield Hospital
- Russell Acoustics, LLC
- Rotor & Wing Magazine
- S4K Aviation, LLC
- Shaw Electric Company
- Silverleaf Baptist Health System
- Skyryse
- SmithAmundsen Aerospace
- SMRT Architects and Engineers
- Surack Enterprises Corp.
- The Joint Commission
- Transportation Safety Institute (TSI)
- TruWeather Solutions
- Uber Elevate/Aviation
- UC Berkley
- U.S. Department Of Transportation (DOT)
- Varon Vehicles
- Vertical Aviation International (VAI)
- Vertical Flight Society (VFS)
- Vports
- Woolpert Inc.
- XTI Aircraft Company