
CURRICULUM VITAE OF ETHAN PARKER, P.E.

Mr. Parker has more than thirty years of engineering experience and since 1988 has worked extensively in the area of forensic engineering. In 1993, he established his own consulting engineering firm focusing on accident reconstruction and the analysis of mechanical and structural failures. His investigations have involved commercial vehicle accidents; vehicle defects, failures, and fires; product defects; foundation problems; roof collapses; and other types of losses.

The Accreditation Commission for Traffic Accident Reconstruction (ACTAR) has awarded Mr. Parker full accreditation as a traffic accident reconstructionist. As an expert witness, Mr. Parker has testified in federal court, state courts in Ohio and Kentucky, and the Court of Claims in Columbus, Ohio. He is a registered Professional Engineer in the states of Ohio, Kentucky, Indiana, and West Virginia.

WORK HISTORY

1993 to Present: Ethan Parker, P.E.; Self-employed Consulting Engineer specializing in accident reconstruction and the analysis of mechanical and structural failures.

1988 to 1993: Keeler, Webb & Bir; Forensic Engineer in the areas of accident reconstruction, structural failures, design analysis, building code compliance, and the cause and origin of fires.

1981 to 1988: Metallic-Braden; Project Engineer and Assistant Group Leader for a design team of approximately twelve. Designed steel structures, foundations, glazing and roofing systems, conveyance systems, and crane runways. Performed on-site inspections and analyzed structural problems.

1980 to 1981: Kirby Building Systems; Junior Design Engineer. Designed structural systems for all types of metal buildings.

1976 to 1980: Hamilton County Engineer, Traffic Dept.; Engineering technician. Analyzed traffic flow and accident patterns, performed warrant studies for signage and traffic signals, and designed and laid out intersections.

EDUCATION

June 1980: B.S., Civil Engineering, Ohio University, Athens, Ohio.

CURRICULUM VITAE OF ETHAN PARKER, P.E.

CONTINUING EDUCATION

- December 2010: *Building Pathology: Freeze-Thaw Cycling*, Red Vector. (5 hr)
- December 2010: *Building Pathology: Members and Connections*, Red Vector. (4 hr)
- December 2010: *Building Pathology: Site Drainage Problems*, Red Vector. (1 hr)
- December 2010: *Building Pathology: Rising Damp & Salt Decay*, Red Vector. (2 hr)
- November 2010: *Building Pathology: Utilities, Environmental & Protection Systems*, Red Vector. (1 hr)
- November 2010: *Brittle Fracture for Steel Structures*, Red Vector. (1 hr)
- November 2010: *Concrete Fundamentals II – Concrete Slab On Grade*, Red Vector. (1 hr)
- October 2009: *Energy Methods and Damage Analysis in Traffic Crash Reconstruction*, Institute of Police Technology and Management. (40 hr)
- October 2009: *Building Pathology: An Introduction*, Red Vector. (2 hr)
- October 2009: *Building Pathology: Columns and Walls*, Red Vector. (2 hr)
- October 2009: *Building Pathology: Materials Pathology*, Red Vector. (4 hr)
- October 2009: *Building Pathology: Roofs*, Red Vector. (3 hr)
- October 2009: *Building Pathology: Foundations*, Red Vector. (3 hr)
- October 2009: *Building Pathology: Parapets & Decks*, Red Vector. (1 hr)
- October 2008: *Concrete 1: Evaluation and Causes of Damage*, Red Vector. (1 hr)
- October 2008: *Concrete 2: Repair, Planning, and Preparation*, Red Vector. (1 hr)
- October 2008: *Concrete 3: Methods, Materials, and Maintenance*, Red Vector. (2 hr)
- October 2008: *Concrete: Self-Consolidating*, Red Vector. (1 hr)
- October 2008: *Concrete Pavement Rehabilitation – Partial Depth Repair*, Red Vector. (1 hr)
- October 2008: *Concrete Pavement Rehabilitation – Full Depth Repair*, Red Vector. (2 hr)
- October 2008: *Masonry Design: Structural Masonry*, Red Vector. (2 hr)
- October 2008: *Masonry Design: Installation and Workmanship*, Red Vector. (4 hr)

CURRICULUM VITAE OF ETHAN PARKER, P.E.

October 2008: *Masonry Design: Natural Stone*, Red Vector. (1 hr)

December 2007: *Optics, Lighting and Visibility for the Forensic Investigator*, Clearly Visible Presentations, LLC. (20 hr)

- The Physics of Light • Photometry • Basic Optics: Reflection, Transmission & Absorption
- The Human Vision System • How Light Sources Influence the Scene • Atmospheric Influences • The Object • Shadows • Filters and Polarizers • Retro-reflective Materials
- Fluorescence • Photography & Videography • Sun Angle, Glare • Night Work

December 2006: *Brake Safety Symposium*, Commercial Vehicle Safety Alliance. (19 hr)

- Brake Engineering Design • Vehicle Operation • Brake Inspection & Maintenance • Crash Investigation • Liability Issues • Regulation compliance & enforcement

August 2006: *Acceleration & Vericom Computer Familiarization for Traffic Accident Investigation*, Vericom Computers, Inc. (12 hr)

June 2006: *ADA Course I: Guidelines for Buildings & Facilities and ADA Course II: Specific Questions of Concern*, Titan Continuing Education. (8 hr)

June 2006: *Mold Remediation in Schools & Commercial Buildings*, Titan Continuing Education. (4 hr)

May 2005: SEAoK and SEAoO Joint Conference, Structural Engineers Association.

- ACI 318 Appendix D, Post-Installed Anchor Design • Methods to Determine the Most Accurate Site Class for Seismic Design • ASCE 7-02, 7-05 Wind Loads on Structures Selected Topics • New Detailing Consideration of Preservative Treated Wood Construction • Seismic and Code Issues • The New AISC 2005 Specification for Structural Steel Buildings • Making the Sub-Consultant Role Work for You • Light Gauge Steel Trusses • AWS Steel Fabricator Certification Program • Galvanize It • Mathcad Session: Practical Uses for Practicing Structural Engineers • Hot and Cold Weather Concreting • Chance Anchors; Micro-Pile Case Study at University of Kentucky

July 2003: *Crush and Energy Analysis with Statistical Modeling*, West Chester Police Department, John Daily and Jeremy Daily. (24 hr)

March 2003: *Human Factors for Traffic Crash Reconstruction*, Accident Dynamics Research Center, Jeffrey W. Muttart. (40 hr)

February 2003: *Building the High Performance Home*, Kentucky Division of Energy. (7 hr)

January 2002: *Court and Expert Testimony*, Miami Valley Association of Traffic Collision Investigators and Reconstructionists, Fred Lickert. (3 hr)

July-August 2001: *Recreational Watercraft Crash Investigation and Basic Reconstruction Principles*, Northcoast Polytechnic Institute. (32 hr)

CURRICULUM VITAE OF ETHAN PARKER, P.E.

May 2001: *Vehicle Fire Investigation/Trailer Underride*, West Chester Police Department. (8 hr)

July 2000: *Crush Measuring Techniques*, Miami Valley Association of Traffic Collision Investigators and Reconstructionists. (4 hr)

April 2000: *Grade Crossing Collision Investigation*, Norfolk Southern Police Department/Operation Lifesaver. (24 hr)

- Railroad Incidents • Train Operations, Terminology and Equipment • Signal System Layout and Design • Collision Reporting • General Safety Procedures • Hazmat Procedures • Ohio Law Pertaining to Grade Crossings • Mock Train/Car Collision with Scene Measurements and Data Collection Exercise

April 2000: *Human Factors in Collisions*, Patrick J. Robins, Ph.D. (7 hr)

- Reaction Time • Sight Distance • Perception • Recall • Human Memory

July 1999: *Mechanics of Heavy-Duty Truck Systems*, University of Michigan. (35 hr)

- Basic Properties of Pneumatic-Tired Vehicles • Mechanical Properties of Truck Tires • Modeling the Truck Tire • Truck Frames • Heavy Vehicle Suspensions • Truck Ride Quality • Truck Steering Systems • Mechanical and Thermal Properties of Brakes • Braking Performance for Downhill Speed Control • Antilock Brake Systems • Longitudinal Acceleration • Truck Simulations • Methods of Modeling the Truck Driver • Low Speed Offtracking • Linear and Nonlinear Cornering Analyses • Mechanics of Rollover • Liquid Slosh and Shifting Loads

April 1999: *Advanced Commercial Vehicle Inspection & Collision Reconstruction*, Texas A & M University, Texas Engineering Extension Service. (50 hr)

- Brake System Components • Air Brake System Layout and Valving • Brake Torque and Efficiency • Vehicle Dynamics • Stopping Distances • Motor Carrier Regulations

April 1999: *Braking Performance of Heavy Commercial Vehicles*, SAE International, Richard Radlinski. (13 hr)

- Factors Influencing Heavy Vehicle Braking Performance • ABS • ATC • EBS • Balance • Maintenance • Inspection

November 1998: *The Investigation of Motor Vehicle Fires*, Lee S. Cole & Assoc. (12 hr)

- History of Motor Vehicle Fires • Types of Vehicle Fires • Motor Vehicle Arson • Experiments in Vehicle Burnings • Explosions in Vehicles

October 1998: *Commercial Vehicle Crash Investigation*, Public Utilities Commission of Ohio, Montgomery County Sheriff's Office. (6 hr)

- Crash testing of tractor-trailer, city bus, school bus, medium duty truck, and various automobiles

CURRICULUM VITAE OF ETHAN PARKER, P.E.

June 1998: *The Vehicle Damage & Energy Relationship*, Texas A & M University, Texas Engineering Extension Service. (40 hr)

- Damage Measuring Protocol • Special Measurement Considerations • “Crush” Theory, History, Applications & Common Errors • Force Deflection (Stiffness) Coefficients • Coefficient of Restitution • Collision Deformation Classification (CDC) Profiling • Barrier Equivalent Velocity • Delta-V Relative to Residual Damage • System Based Speed Calculations

May 1998: *Motorcycle Accident Investigation*, University of North Florida, Institute of Police Technology and Management. (40 hr)

- Motorcycle Identification • Braking and Turning Accidents • Modes of Stability • Roadway Evidence • Motorcycle Tires • Helmets

June 1997: *Truck Accident Litigation in a Nutshell*, David N. Nissenberg, Esq. (3 hr)

April-May 1997: *Traffic Accident Reconstruction*, University of North Florida, Institute of Police Technology and Management. (80 hr)

- Vehicle Dynamics • Motorcycle Accident Investigation • Vector Analysis • Field Tests • Roadway Evidence • Conservation of Momentum: Arithmetic and Graphical Analyses • Airborne and Critical Speed Equations • Commercial Vehicle Investigations • Weight Shift • Multiple Departure Momentum

March 1997: *Conference on Reconstruction and Safety on the Highway*, Texas A & M University, Texas Engineering Extension Service. (36 hr)

- Commercial Vehicle Underride Collisions • Commercial Vehicle Collision Investigations • System-based Energy & Momentum • Human Subject Testing & Response to Low Level Accelerations • Nighttime Vision & Reaction Time • When the Coefficient of Restitution Approaches “1” • Demonstrative Evidence • Commercial Motor Vehicle Driver Fatigue & Alertness Study • Forensic Animation Computer Based Training

May 1996: *From Crash to Verdict*, Rudolf Limpert, P.E., Ph.D. (14 hr)

- Accident Factors • Which Design is Best? • Low Impact Speeds • Velocity-Time Diagrams • Rear End Crash • Brake Factor-Lever Factor • Frontal Side Swipe • Collision Analysis Using Force • 5 Keys to a Good Case • Computer vs. Hand Calculations

June 1995: *Commercial Vehicle Accident Investigation and Reconstruction*, Arkansas State University. (40 hr)

- Vehicle Dynamics • Jackknife • Trailer Swing • Rollover • Inspection of Air Brake Systems • Stopping Distances • Truck Tire Friction • Braking Efficiency

May 1994: *NPDES Storm Water Permit Compliance*, American Society of Civil Engineers. (6 hr)

March 1994: *Application of the Americans with Disabilities Act*, Ohio Society of Professional Engineers, Christopher P. Finney, Esq. (2 hr)

CURRICULUM VITAE OF ETHAN PARKER, P.E.

1992 to 1998: United States Power Squadron Full Certificate, N. (330 hr)

• *Seamanship* • *Piloting* • *Advanced Piloting* • *Junior Navigation* • *Navigation* • *Cruise Planning* • *Engine Maintenance* • *Sail* • *Marine Electronics* • *Instructor Qualification*

March 1992: *Tort Liability*, Ohio Transportation Technology Transfer Center, Ohio State University Department of Civil Engineering. (6 hr)

• Reducing Tort Liability Exposure for Local Highway Agencies

October 1990: *Advanced Boating Accident Investigation*, United States Coast Guard and UL, Marine Division. (30 hr)

• Collisions • Explosions • Fires • Drowning • Electrocutions • Electrical Faulting • Lightning Strikes • Corrosion • Electrolysis

November 1989: *Evidentiary Analysis of Traffic Accidents*, Kent State University. (12 hr)

• Basic Physics and Laws of Motion in Vehicular Accident Analysis • Coefficients of Friction • Stopping Distance • Critical Speed Calculations

September 1989: *Application of the 530 Masonry Standards*, American Society of Civil Engineers. (6 hr)

TEACHING/SPEAKING ENGAGEMENTS

March 2001: *The Misinterpretation of Evidence from the Vehicle Dynamics of Heavy Trucks*, Miami Valley Association of Traffic Collision Investigators and Reconstructionists.

April 1999: *Physical Evidence in Accident Reconstruction (The Identification, Documentation & Preservation of Physical Evidence)*, Northern Kentucky Claims Association.

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers

Miami Valley Association of Traffic Collision Investigators and Reconstructionists

National Society of Professional Engineers

Ohio Society of Professional Engineers

Society of Automotive Engineers