

Roger R. Rider, Ph.D.

Crash Reconstruction Consultant -Forensic Reconstruction - Expert Witness

Triple R Investigations, LLC
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Professional Profile

Crash reconstruction consultant, forensic investigator, retired law enforcement corporal and detective, licensed Texas private investigator, and criminal justice educator with more than twenty years of experience in law enforcement investigation, collision reconstruction, scene documentation, forensic mapping, 3D laser scanning, technical reporting, professional instruction, and courtroom testimony. Investigated fatal and serious-injury crashes, prepared investigative and reconstruction reports, created demonstrative exhibits, and testified regarding investigative findings and technical methods.

Core Areas of Expertise

- Collision Reconstruction
- Fatal & Serious-Injury Crash Investigation
- Scene Photography & Measurement
- Forensic Mapping
- 3D Laser Scanning
- Photogrammetry & 360° Documentation
- Trajectory / Spatial Analysis
- Reconstruction Reports
- Demonstrative Exhibits
- Courtroom Testimony

Professional Experience

Founder & Principal Consultant, Triple R Investigations, 2017 to Present

- Lead forensic reconstruction work using 3D scanning, FARO software, and digital forensic methods.
- Train law enforcement professionals and provide expert-witness testimony in court.
- Develop forensic visualization and immersive AR/VR-based training applications.

Detective, Corporal, Traffic Officer, Hurst Police Department, 1999 to 2019

- Investigated fatal and serious-injury crashes and documented complex scenes.
- Conducted scene photography, measurement, forensic mapping, total-station documentation, and laser scanning.
- Used reconstruction software and conducted trajectory or spatial analysis, where applicable.
- Prepared investigative and reconstruction reports, created demonstrative exhibits, and testified regarding findings and technical methods.

Litigation Support & Testimony

- Preparation and review of investigative and reconstruction reports.
- Development of demonstrative exhibits and technical visualizations.
- Explanation of reconstruction findings and technical methods for legal proceedings.

- Courtroom testimony regarding investigative findings and technical methods.
- Expert-witness testimony through Triple R Investigations.
- 3D scanning, forensic mapping, point-cloud, and visualization support for reconstruction work.

Selected Specialized Crash Reconstruction Training

Intermediate Accident Investigation, 40 hrs
Advanced Accident Investigation, 80 hrs
Accident Reconstruction, 80 hrs

Forensic Mapping, 40 hrs
Vehicle Damage & Energy Relationship, 40 hrs
Commercial Vehicle Accident Reconstruction, 40 hrs

Motorcycle Collision Investigation, 40 hrs
Complex Collision Reconstruction, 40 hrs
CRUSH, 24 hrs
Crash Data Retrieval Specialist, 16 hrs

Education

Doctor of Philosophy in Criminal Justice, Tarleton State University, 2025
Master of Criminal Justice, Tarleton State University, 2017
B.S. in Construction Science, Texas A&M University, 1989

Ph.D. Dissertation: *Advancing Law Enforcement Training: Unleashing the Power of Augmented Reality for Effective Policing*
MCJ Thesis: *The Impact of Digital Technology on Crash Reconstruction*

Selected Crash Reconstruction & Forensic Publications

- Schmidt et al. (2025). *Fundamentals of Road Traffic Collision Investigation: Analyzing Road Traffic Collisions – An Introduction*. Lulu Press.
- Liscio, E., Le, Q., Rider, R., & Voitel, T. (2021). Accuracy of Google Maps in FARO Zone 3D for Forensic Reconstruction. *Journal of Crime Scene Reconstruction*.
- Rider, R. R. (2019). Clearing and Documenting Injury and Death Crashes. *FARO Insights*.
- Rider, R. R., Copeland, C., & Dobbs, R. (2018). Officer Perception of New Technology on Crash Reconstructions in Texas. *Law Enforcement Executive Forum*.

Certifications, Licenses & Memberships

Texas Private Investigator, License #AO4168201
FAA Remote Pilot, Part 107
Master Peace Officer, Texas
Certified FARO Scene Instructor
TCOLE Certified Police Instructor
Police Academy Crash Instructor, NCTCOG, 2003–2025

National Association of Professional Accident Reconstruction Specialists (NAPARS)
Texas Association of Accident Reconstructionist (TAARS)
International Association of Forensic and Security Metrology (IAFSM)
Texas Association of Licensed Investigators (TALI)

Crash Reconstruction Methods & Forensic Technology

Crash Scene Investigation & Reconstruction Experience

- Processed and documented crime and crash scenes.
- Conducted scene photography and measurement.
- Prepared sketches and diagrams.
- Collected, packaged, and preserved physical evidence.
- Maintained chain of custody.
- Investigated fatal and serious-injury crashes.
- Conducted trajectory or spatial analysis, where applicable.
- Used total-station, forensic mapping, laser scanning, and reconstruction software.
- Prepared investigative and reconstruction reports.
- Created demonstrative exhibits.
- Testified regarding investigative findings and technical methods.
- Served as a crime scene officer or investigator during law-enforcement service.

Forensic Technology

3D Measurement, Mapping & Point Clouds

- FARO Focus terrestrial laser scanning, trainer and operator.
- FARO SCENE point-cloud processing, trainer and operator.
- FARO Zone 3D forensic diagramming and reconstruction, trainer and operator.
- Electronic scene measurement and forensic mapping.
- Point-cloud review and quality-control concepts.

Scene Documentation & Visualization

- Photogrammetry and 360-degree scene documentation.
- CSI360 immersive crime scene environments.
- Drone and scanner integration.
- Courtroom and demonstrative visualization.
- Training development using AR and VR environments.

Professional Consulting Practice

Founder & Principal Consultant, Triple R Investigations | 2017–Present

- Lead forensic reconstructions using 3D scanning, FARO software, and digital forensic methods.
- Provide instruction to law enforcement professionals and expert-witness testimony in court.
- Apply immersive AR/VR technology to training and scenario evaluation.

Law Enforcement Reconstruction Experience

Detective, Corporal, Traffic Officer, Hurst Police Department | 1999–2019

- Investigated fatal and serious-injury crashes and documented roadway and scene evidence.
- Used photography, measurement, total-station mapping, forensic mapping, laser scanning, and reconstruction software.
- Prepared investigative and reconstruction reports and created demonstrative exhibits.
- Presented investigative findings and technical methods in court.
- Served in multiple operational and supervisory roles during a twenty-year Hurst Police Department career.

Instructional Authority in Crash Investigation & Forensic Reconstruction

- **Police Academy Crash Instructor, North Central Texas Council of Governments Police Academy**, Basic Crash Investigation, 2003–2025.
- **3D Scanning & FARO Certification Instructor**, Triple R Investigations, 2017–Present.
- **Police Training Officer & Instructor**, Hurst Police Department, Intermediate Crime Scene Investigation, Field Training, and Officer Development, 2003–2019.
- **Adjunct Instructor, Department of Criminal Justice, Tarleton State University**, 2026–Present, including CRIJ 4385, Augmented (Virtual) Reality Crime Scene Reconstruction, and CRIJ 3315, Rules of Criminal Evidence.

Specialized Crash Reconstruction & Forensic Training

Crash Reconstruction Training

2001

Intermediate Accident Investigation, Hurst Police Department, 40 hrs.
Advanced Accident Investigation, Tarrant County College Police Academy, 80 hrs.

2002

Accident Reconstruction, Hurst Police Department, 80 hrs.

2003

Forensic Mapping, Tarrant County College Police Academy, 40 hrs.
Vericom Computers, Inc., Operator, 13 hrs.

2004

Investigation of Intoxication Manslaughter, TDAA, 7 hrs.

2005

Vehicle Damage & Energy Relationship in Collision Reconstruction, Texas A&M Engineering Extension Service, 40 hrs.

2006

Commercial Vehicle Accident Reconstruction, Tarrant County College Police Academy, 40 hrs.

2010

Motorcycle Collision Investigation, Crash Dynamics, 40 hrs.

2011

Reconstruction Update, Crash Dynamics, 40 hrs.
Complex Collision Reconstruction, Crash Dynamics, 40 hrs.

2012

iWitness and Crash Zone Software, NCTCOG Regional Academy, 16 hrs.

2017

CRUSH, John Daily, sponsored by TAARS, 24 hrs.
FARO Scene laser scanner and Scene software, 24 hrs.

2018

Crash Data Retrieval Specialist, Collision Safety Institute, 16 hrs.
FARO Train the Trainer, Focus and Scene, 40 hrs.
Laser Scanner Operator Certificate, IAFSM, 24 hrs.

Continuing Forensic & Reconstruction Development

- Mass Incident Team Training, FARO Technologies, 16 hrs., 2020.
- National Traffic Incident Management Train-the-Trainer, TxDOT, 12 hrs., 2020.
- Drone and Scanner Integration, FARO Technologies, 16 hrs., 2021.
- Forensic Photography Symposium, Ai2-3D Forensics, 20 hrs., 2022.
- WREX 2023, World Reconstruction Exposition, Orlando, 24 hrs., 2023.
- Forensic Photography Symposium, ai2-3D Forensics, 22 hrs., January 2026.
- Crime Scene Reconstruction Conference, ACSR and IAFSM, 18 hrs., February 23–27, 2026.
- Crime Scene Assessment, Tarleton State University, 16 hrs., 2016.
- Death Scene Investigations, Texas Forensic Associates, 16 hrs., 2017.

Additional Professional Training

- Basic Peace Officer, Fort Worth Police Academy, 469 hrs., 1997.
- Intermediate Peace Officer, Tarrant County College Police Academy, 112 hrs., 2000.
- Field Training Officer, NCTCOG Regional Police Academy, 40 hrs., 2003.
- National Academy of Police Driving, Tactical Police Driving, 24 hrs., 2003.
- Basic Police Instructor, Tarrant County College Police Academy, 40 hrs., 2004.
- Instructor Proficiency, 2004.
- School of Police Supervision, Institute for Law Enforcement Administration, 160 hrs., 2018.
- Crime Prevention Through Environmental Design, Arlington Police Department, 24 hrs., 2008.
- Police Training Officer, Hurst Police Department, 32 hrs., 2008.
- Mental Health Peace Officer, Hurst Police Department, 40 hrs., 2011.
- New Supervisor Course, NCTCOG Regional Academy, 40 hrs., 2011.
- Reid Technique of Interviewing and Interrogation, 18 hrs., 2016.
- Advanced Reid Technique, 6 hrs., 2016.

Education, Research & Professional Credentials

Education

Doctor of Philosophy in Criminal Justice, 2025

Tarleton State University, Fort Worth, Texas

Dissertation: *Advancing Law Enforcement Training: Unleashing the Power of Augmented Reality for Effective Policing*

Master of Criminal Justice, 2017

Tarleton State University, Fort Worth, Texas

Thesis: *The Impact of Digital Technology on Crash Reconstruction*

B.S. in Construction Science, 1989

Texas A&M University, College Station, Texas

Research & Publications

- Schmidt et al. (2025). *Fundamentals of Road Traffic Collision Investigation: Analyzing Road Traffic Collisions – An Introduction*. Lulu Press.
- Rider, R. R., Dobbs, R., Eichenberg, G., & Wang, S. K. (2025). *Advancing law enforcement training: Unleashing the power of augmented reality for effective policing*. Tarleton State University.
- Rider, R. R. (2017). *The Impact of New Technology on Crash Reconstruction*. Master's Thesis.
- Rider, R. R., Copeland, C., & Dobbs, R. (2018). Officer Perception of New Technology on Crash Reconstructions in Texas. *Law Enforcement Executive Forum*.
- Rider, R. R. (2019). 3D Scanners in Investigations. *PI Magazine*.
- Rider, R. R. (2019). Clearing and Documenting Injury and Death Crashes. *FARO Insights*.
- Liscio, E., Le, Q., Rider, R., & Voitel, T. (2021). Accuracy of Google Maps in FARO Zone 3D for Forensic Reconstruction. *Journal of Crime Scene Reconstruction*.

Presentations

- Dealing Cannabis in the Age of the Dark Web, Tarleton State University / Academy of Criminal Justice Sciences Annual Meeting, 2022.
- Advancing Law Enforcement Training: Unleashing the Power of Augmented Reality for Effective Policing, Tarleton State University, 2025.
- 360 Imaging in Forensics, International Association of Forensic and Security Metrology, 2026.

Certifications & Qualifications

- Master Peace Officer, Texas
- FAA Remote Pilot, Part 107
- Certified FARO Scene Instructor
- TCOLE Certified Police Instructor
- Crime-Free Multi-Housing Instructor
- CPTED Specialist
- Mental Health Peace Officer
- Collision Reconstruction, motorcycle, pedestrian, CRUSH
- Tactical Driving & Advanced Interview Techniques

Professional Organizations

- Texas Association of Licensed Investigators, TALI
- National Association of Professional Accident Reconstruction Specialists, NAPARS
- International Association of Forensic and Security Metrology, IAFSM
- Texas Association of Accident Reconstructionist, TAARS

Licenses

- Texas Private Investigator, License #AO4168201
- FAA Part 107 Remote Pilot

Selected Teaching & Instructional Experience

- Adjunct Instructor, Department of Criminal Justice, Tarleton State University**, 2026–Present. Instructor of record for CRIJ 4385, Augmented (Virtual) Reality Crime Scene Reconstruction, and CRIJ 3315, Rules of Criminal Evidence.
- Adjunct Instructor, Tarleton State University at RELIS**, CRIJ 4303, Crime, Justice, and Social Diversity, Fall 2022.
- Instructor & Training Specialist, Triple R Investigations**, including 3D Scanning & FARO Certification Instructor, 2017–Present.
- Police Academy Crash Instructor, NCTCOG Police Academy**, Basic Crash Investigation, 2003–2025.
- Police Training Officer & Instructor, Hurst Police Department**, Intermediate Crime Scene Investigation, Field Training, and Officer Development, 2003–2019.