



WARREN

THE WARREN GROUP, INC. FORENSIC ENGINEERS & CONSULTANTS
7805 ST. ANDREWS ROAD | PO BOX 1608 | IRMO, SOUTH CAROLINA 29063
TEL 803.732.6600 FAX 803.732.7576 ↓↓ WARRENF0RENSICS.COM

Aaron L. Duncan II, ACTAR

Senior Collision Reconstructionist

Vehicle Collision Investigation and Reconstruction

Crash Data Retrieval

Motorcycle Collision Reconstruction

Pedestrian/Bicycle Reconstruction

Vehicle Lamp Examination

EDUCATION

- 1994** **Bachelor of Science in Political Science**
Lander University
- 1994** **Law Enforcement Basic**
South Carolina Criminal Justice Academy
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EXPERIENCE

August 2017 to Present The Warren Group, Inc., Irmo, South Carolina. Senior Collision Reconstructionist. Utilizes advanced knowledge and skillsets honed over 24 consecutive years and over 1,000 complex wrecks to reconstruct motor vehicle accidents incorporating forensic mapping and animation through state-of-the-art technology.

Vehicle Accident Reconstruction

Reconciles witness statements with physical evidence from incidents involving heavy trucks, commercial vehicles, automobiles, motorcycles, bicycles, pedestrians, wildlife and human factors.

Compiles and analyzes data to determine time, speed, and distance relationships. Determines coefficient of friction and drag factors for sliding vehicles. Completes conservation of linear momentum and vehicle dynamics calculations. Conducts vehicle crush energy analyses.

Determines principle direction of forces and critical speed yaw. Verifies speed and dynamics involved in spins and rollover. Calculates airborne and projectile trajectories. Evaluates seatbelt and occupant restraint performance, as well as overall highway safety compliance.

Event Data Recorder (EDR)

Recovery, imaging, and analysis of the retrieved data from crash data collectors “i.e., black boxes” in automobiles, light trucks, and sport utility vehicles (SUVs).

Vehicle Systems

Determines brake effectiveness. Evaluates airbag deployment/nondeployment events. Conducts headlight filament analysis (On/Off determination). Analysis of mechanical component malfunctions and failures related to vehicle accidents.

EXPERIENCE (Continued)

- 2016 – 2017** **South Carolina Highway Patrol, Piedmont Region, South Carolina**
Multi-Disciplinary Accident Investigation Team (MAIT)
- Promoted to Sergeant 2016.
 - Responsible for the supervision of the team and all investigations, covering 12 counties of the upstate within two troops (Troop 2 and Troop 3) of the SCHP.
 - Responsible for the review of cases across the state of South Carolina.
 - Responsible for case presentations in court, family meetings, and internal training.
 - Supervised team members at active crash scenes at active call outs and deferred response crashes.
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- 2012 - 2016** **South Carolina Highway Patrol, Piedmont Region, South Carolina**
Multi-Disciplinary Accident Investigation Team (MAIT)
- Executive Officer
 - Lead Investigator
Responsible for the supervision of investigators at crash scenes, and their case work.
 - Team Crash Data Retrieval Technician 1 & 2, and Analyst;
Trained in imaging and analyzing data from vehicle Event Data Recorders
 - Evidence Technician
Responsible for the collection, processing, and storage of evidence.
- 2008 to 2012** **South Carolina Highway Patrol (SCHP), Foothills Region, Multi-County**
Corporal, Team Leader, Multi-Discipline Accident Investigation (MAIT)
Lead investigator for complex accidents and mentored MAIT Team officers with investigations. Assisted, directed, educated and counseled the public in matters consistent with the mission of the SCHP. Cooperated and communicated with other law enforcement agencies in common objectives. Responsible for the collection, processing, and storage of evidence. Started as Evidence Technician and was promoted to Corporal, Team Leader in 2009.
- 2004 to 2008** **South Carolina Highway Patrol (SCHP), Abbeville & Greenwood County,**
Multi-Discipline Accident Investigation Team (MAIT) Associate
Traffic Enforcement, Accident Investigation, and Public Safety. MAIT Associate. Responded to emergencies and disasters with all available resources.

EXPERIENCE (Continued)

- 1997 to 2004** **South Carolina Highway Patrol, Newberry & Laurens County, Multi-Discipline Accident Investigation Team (MAIT) Associate, Advanced Civil Emergency Response Team (ACERT) Member**
- Responded to civil emergencies using specialized training, tactics and equipment, Traffic Enforcement, Accident Investigation, and Public Safety. Active member of the Advanced Civil Emergency Response Team (ACERT). MAIT Associate. Assisted the MAIT Team with investigations and completed advanced investigations. STOP Team. Assistant Public Information Officer / Traffic Accident Victim Assistance Officer
- 1994 to 1997** **South Carolina Highway Patrol (SCHP), Marlboro County, Officer**
- Provided equitable service and protection, upheld the laws of the constitution of the United States and the State of South Carolina, Promoted a safe and secure environment for the public through the enforcement of traffic laws, the investigation of all types of vehicular accidents, and participated in Public Safety events

PROFESSIONAL ORGANIZATIONS & REGISTRATIONS

- Accreditation Commission for Traffic Accident Reconstructionist (ACTAR) #2287
- International Association of Accident Reconstruction Specialists (IAARS) Member
- South Carolina Association of Reconstruction Specialists (SCARS) Member
- Organization Secretary from 2013 to Present
- Blue Knights International Law Enforcement Motorcycle Club, Inc (SC Chapter 7) 2006 to Present
- President from 2009 to 2015, International non-profit, family oriented, fraternal organization consisting of active and retired Law Enforcement Officers.
 - Actively organizes Charity Event Rides to assist SC Area 5 Special Olympics

CONTINUING EDUCATION

Collision Reconstruction Specific:

- Advanced Accident Investigation and Reconstruction (120Hrs) 10/1998
- Forensic Mapping Technology (40Hrs) 03/1999
- At-Scene Traffic Collision Investigation (80Hrs) 07/2002
- Advanced Collision Investigation (80Hrs) 08/2002
- Traffic Collision Reconstruction (80Hrs) 10/2002
- Computerized Collision Diagramming (40Hrs) 10/2002
- Collision Forensic Investigative Techniques (40Hrs) 11/2002

CONTINUING EDUCATION (Continued)

Collision Reconstruction Specific:

- Forensic Mapping Technology (40Hrs) 11/2002
- Interviewing and Interrogation (24Hrs) 12/2002
- Grade Crossing Collision Management Course (8Hrs) 05/2007
- Crash Data Retrieval System Technician (8 hours each): 2008, 2009, 2011, 2012, 2013, 2014, 2016
- Deoxyribonucleic Acid (DNA) Evidence: Investigators and Evidence Technicians
- Deoxyribonucleic Acid (DNA) Evidence: First Responding Officers
- Advanced Crime Scene Photography Techniques (16Hrs) 10/2008
- Latent Print Development 08/2009
- Traffic Crash Reconstruction at Traffic Signals (16Hrs) 08/2009, 12/2015
- Collecting Deoxyribonucleic Acid (DNA) Evidence at Property Crime Scenes 10/2009
- Interviewing and Body Language Techniques (8Hrs) 11/2009
- Federal Bureau of Investigation (FBI): Interview, Interrogation and Statement Analysis (16Hrs) 12/2009
- SmartRoads Computer Assisted Drawing (8Hrs) 02/2010
- Grade Crossing Collision Investigation Class 06/2010
- Motorcycle Collision Reconstruction (40Hrs) 09/2010
- Human Factors for Traffic Crash Reconstruction 01/2011
- Commercial Vehicle Post Crash Inspection (40Hrs) 04/2011
- Pedestrian / Bicycle Reconstruction (40Hrs) 05/2011
- Occupant Kinematics for the Traffic Crash Reconstructionist (40Hrs) 06/2011
- Vehicle Nomenclature / Tire Examination (8Hrs) 07/2011
- Energy Methods and Damage Analysis in Traffic Crash Reconstruction (40Hrs) 04/2012
- Advanced Pedestrian / Bicycle Crash Investigation (40Hrs) 06/2012
- Basic Detective (40Hrs) 02/2013
- MFX Mapping and EdgeFX Animation Class (20Hrs) 04/2013
- Interviews and Interrogations, CDR Update, and Hit and Run Investigations (8Hrs) 03/2013
- Advanced Motorcycle Crash Analysis (40Hrs) 04/2014
- Behavioral Assessment and Kinesics Interviewing (6CEH) 04/2014
- Tennessee Highway Patrol Tire Failure Analysis Class (4 Hrs) 05/2014
- Tennessee Highway Patrol Commercial Vehicle Foundation Brakes Class (4Hrs) 05/2014
- Crash Data Retrieval (CDR) Specialist Training (40Hrs) 03/2015
- Tire Technology Clinic (8Hrs) 04/2015
- Advanced Collision Reconstruction with CDR Applications (40Hrs) 04/2015
- Vehicle Lamp Examination for Traffic Crash Investigators (16hrs) 08/2015
- Crash Data Retrieval (CDR) Technician, Train the Trainer Certification 01/2016
- Momentum, Principle Direction of Force, and Crash Data Retrieval (24hrs) 01/2017
- Using Excel in Accident Investigations (40Hrs) 5/2017

CONTINUING EDUCATION (Continued)

Leadership Focused:

- First Line Supervision (40Hrs) 11/2009
- Emergency Management Institute's Incident Command System (ICS) 300 11/2009
- Professional Presentation Skills (.6 CEUS) 03/2011
- Business Writing 6.0 (.6 CEUS) 03/2011
- SC Department of Public Safety (SCDPS) Law Enforcement Leadership Series 03/2011
- Cultural Professionalism and Conflict Resolution (4Hrs) 03/2015

General Training:

- South Carolina Highway Patrol Basic Law Enforcement 08/1994
- Police Radar – Speed Measuring Devices 06/1995 thru 2009
- Basic Public Information Course (24Hrs) 01/2003
- Basic Instructor 07/2007
- Background Investigation (8Hrs) 09/2010
- BMW Performance Driving School 12/2014

TRAINING CONFERENCES ATTENDED

Southeastern Collision Reconstruction Conference: 2008, 2010, 2013, 2014, 2015, and 2017

Pennsylvania State Police Collision Reconstruction Seminar: 2009, 2011, and 2014

Tennessee Traffic Crash Investigation and Safety Symposium: 2013, 2014, 2015, and 2017

Crash Data Retrieval User's Summit: 2015, 2016, and 2017

South Carolina Insurance Fraud Investigators Conference and Seminar: 2017

Institute of Police Technology and Management (IPTM) Symposium on Traffic Safety: 2018