collision reconstruction

MEA Forensic’s Collision Reconstruction group pairs fundamental engineering principles and the newest technologies to reconstruct accidents involving all kinds of vehicles. Using science, our professionals arrive at conclusions that stand up in court; conclusions about accident circumstances, factors that cause crashes and how differences in driver behavior could have prevented them.

Our crash investigations start with detailed documentation of the evidence. This can mean pouring over photographs of an old accident, using 3D scanners to measure crash sites and damage to vehicles, or downloading crash data from cars, heavy trucks, buses, and personal devices.

Once the evidence is collected, it is interpreted and analyzed using scientific methods. Sometimes simple hand calculations will suffice. Sometimes using computer simulation software to match tire marks on the road is the best way to determine how an accident unfolded. Often, we rely on our own peer-reviewed research or use our testing facilities to run full-scale crash tests or reproduce component failures to answer even the toughest forensic questions.

Ultimately, MEA engineers and scientists are prepared to testify in court as expert witnesses. Their goal is to help the trier of fact understand what the evidence says about how a particular event unfolded. Good communication skills, concise writing, high-quality graphics and powerful animations ensure that our conclusions are understood.

Engineers and scientists in the Collision Reconstruction group often collaborate with colleagues in MEA’s other practice groups to understand issues such as nighttime visibility (human factors), seatbelt effectiveness (injury biomechanics) and the causal role of a component fracture (failure analysis).

Our professionals have the knowledge and experience to translate physical and electronic evidence into the information clients need to understand the events at the heart of their case. Let our individual experts or multidisciplinary teams bring the right combination of knowledge, skill and experience to your
Types of Collisions:
- Automobiles
- Bicycles
- Heavy trucks and buses
- Motorcycles
- Pedestrian impacts
- Trailer stability
- Trains
- Watercraft
- All-terrain vehicles
- Snowmobiles

Investigations:
- Collision severity
- Impact location
- Speed and dynamics
- Sequence of events
- Seat belt use
- Crash and event data recorders
- Computer simulations
- Rollovers and roof crush
Driver identification

GPS systems

Headlamp function

Airbag performance

Tire and wheel separations

Mechanical failure