
CURRICULUM VITAE OF ANDREW W. THOMAS

Consultant
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SUMMARY

Andrew W. Thomas is an ACTAR Accredited Traffic Crash Reconstructionist that specializes in the investigation and reconstruction of motor vehicle crashes. Andrew has had more than 1,100 hours of crash investigation and reconstruction training. He serves as an adjunct instructor with the Northwestern University Center for Public Safety, instructing crash investigation and reconstruction courses throughout the United States and Canada. During his 15 years in law enforcement, Andrew led the McHenry County Sheriff's Office (IL) Major Crash Investigation Unit which was responsible for all major injury and fatality crash investigations. He is an Illinois certified Crash Reconstruction Specialist and certified instructor with expertise in Advanced Truck Enforcement. Andrew also spent over 3 years as a full-time Commercial Vehicle Enforcement Officer and 10 years as a motorcycle officer. Andrew is a Crash Data Retrieval technician and analyst and regularly utilizes light vehicle and heavy vehicle collision event data within investigations.

PROFESSIONAL CERTIFICATIONS

ACTAR Accredited Traffic Crash Reconstructionist #2828

SINCE 2015 - Accreditation Commission for Traffic Accident Reconstruction

Crash Reconstruction Specialist #PTB10505

SINCE 2012 - Illinois Law Enforcement Training & Standards Board

Crash Data Retrieval Specialist

SINCE 2013 - Collision Safety Institute

Graduate of Northwestern University's Center for Public Safety

SINCE 2011 - Crash Investigation & Reconstruction Program

National Child Passenger Safety Seat Certified Technician

SINCE 2017 – SafeKids Worldwide

Pix4D Certified User and Photogrammetrist

SINCE 2020 – Pix4D

Certified Instructor – Advanced Truck Enforcement

SINCE 2013 - Illinois Law Enforcement Training & Standards Board

Heavy Vehicle Enforcement Officer & Portable Scale Use

SINCE 2008 - Illinois Law Enforcement Training & Standards Board

Breath Alcohol Operator & Preliminary Breath Test Examiner

SINCE 2008 - State of Illinois Department of State Police

Certified Illinois Law Enforcement Officer

SINCE 2006 - Illinois Law Enforcement Training & Standards Board

EMPLOYMENT HISTORY

05/17 to Present **Collision Analytics LLC** – Consultant / Owner

Collision Analytics LLC serves as a complete crash investigation and reconstruction company providing expert consultation, analysis, and testimony for attorneys and insurers throughout the Midwestern United States. Available for rapid response to collision scenes and involved vehicles, Collision Analytics utilizes the latest proven technology to document and preserve critical physical and electronic evidence. These proven methods lead to a detailed understanding and analysis, allowing its clients to make informed decisions at every stage of their case.

10/16 to Present **Northwestern University Center for Public Safety** – Adjunct Instructor

The Center for Public Safety specializes in the instruction of crash investigation and crash reconstruction topics throughout the United States and abroad. Classroom instruction, hands-on field testing and inspections and case studies are a few of the numerous methods utilized to ensure students develop a thorough understanding of curricula. Andrew has also participated in the development of curriculum for the crash investigation online courses. Classes instructed throughout the United States and Canada include:

- Traffic Crash Investigation 1 – Classroom & Online Learning
- Traffic Crash Investigation 2 – Classroom & Online Learning
- Math and Physics Review
- Vehicle Dynamics – Classroom & Online Learning
- Traffic Crash Reconstruction 1 – Classroom & Online Learning
- Traffic Crash Reconstruction 2 – Classroom & Online Learning
- Traffic Crash Reconstruction 3 – Classroom
- Crash Data Retrieval System Operators Course
- Traffic Crash Reconstruction Refresher
- Pedestrian Crash Reconstruction

04/06 to 06/21 **McHenry County Sheriff's Police** – Merited Sergeant

Following his promotion to Sergeant in 2015, Andrew oversaw a team of 6 reconstructionists and 7 investigators responsible for the investigation of all traffic related fatalities and major injury crashes within unincorporated McHenry County. He progressively worked to raise the bar through investigative thoroughness; the use and continual development of new technology; the utilization of quality peer and expert training, and attentiveness to victims and their families. During his tenure as a crash investigator and reconstructionist, he served as lead investigator for over 80 major crashes and participated in the investigation of over 180 major incidents involving nearly 400 persons, and over 250 vehicles (including light vehicles, motorcycles, heavy vehicles, off road vehicles, farming implements, and trains). Andrew served as a motorcycle officer and a heavy vehicle enforcement officer where he specialized in the enforcement of heavy vehicle laws and developed and instructed heavy vehicle enforcement curriculum. During his tenure, Andrew also imaged and reviewed cellular phone and cellular carrier data, performing Cell Site Analyses on over 60 cellular devices involved in a myriad of major investigations.

02/13 TO 09/15 **Dynamic Safety, LLC** – As-Needed Technician

Duties included assisting Dynamic Safety Partners with passenger vehicle and commercial vehicle inspections; operation of total stations and 3D point cloud surveying equipment; imaging vehicle electronic data recorders; location and documentation of exemplar vehicles; creating diagrams, photograph logs, deposition abstracts, and duty log analyses.

FORMAL EDUCATION

09/04 TO 12/09 [Western Illinois University](#) – B.A. degree – Board of Trustees Major
09/03 TO 06/04 [Iowa State University](#) – Architecture Major – Accepted to 4-year program in August 2004

EXPERT TESTIMONY

[Expertise in Traffic Crash Reconstruction](#)

McHenry County (IL) 22nd Judicial Circuit: April 2014, September 2018
Kane County (IL) 16th Judicial Circuit: August 2019
Dane County (WI) Circuit Court: September 2020
Cook County (IL) Circuit Court: December 2020, March 2021

[Expertise in Cellular Site Analysis](#)

McHenry County (IL) 22nd Judicial Circuit: March 2019, April 2019, August 2020

LICENSES

[Illinois Department of Professional Regulation](#)

Licensed Private Detective Agency 117.001857 (SINCE 2020)
Licensed Private Detective 115.002578 (SINCE 2018)
Permanent Employee Registration 129.371321 (SINCE 2013)

[Illinois Driver's License](#)

Class B-CDL Permit (2015-2016) - Class M (SINCE 2006) - Class D (SINCE 2001)

[Federal Aviation Administration](#)

Small Unmanned Aircraft System (SINCE 2017)

PROFESSIONAL ASSOCIATIONS

JULY 2021 [SAE International](#)
NOVEMBER 2017 [National Association of Professional Accident Reconstruction Specialists](#)
SEPTEMBER 2012 [Illinois Association of Technical Accident Investigators](#)
AUGUST 2012 [Illinois Truck Enforcement Association](#)

AWARDS & COMMENDATIONS

JANUARY 2015 [Glenn Strebel Award](#) – Illinois Truck Enforcement Association
AUGUST 2006 [Ervin H. Warren Award](#) – Police Training Institute – University of Illinois
TENURE [2 Letters of Commendation](#) – McHenry County Sheriff's Office
 [1 Letter of Commendation](#) – Northwestern University Center for Public Safety

CONTINUING EDUCATION – CRASH INVESTIGATION & RECONSTRUCTION

MARCH 2021 [Commercial Vehicle Law Symposium](#) – 8 Hours – Fried Goldberg LLC, Webinar
FEBRUARY 2021 [IDRR \(Interactive Driver Response Research\) User Forum](#) – 28 Hours – Crash Safety Solutions, Webinar
FEBRUARY 2021 [Child Passenger Safety Continuing Education](#) – 6 Hours – National Child Passenger Safety Board, Webinar on crash injuries to children, pediatric anatomy, basic and advanced use of Latch Manual, and manufacturer update

Continuing Education (continued)

FEBRUARY 2021	Advanced Crash Reconstruction Utilizing Human Factors Research – 40 Hours – Crash Safety Solutions, Webinar
JANUARY 2021	PhotoModeler Photogrammetry Tutorials – 8 Hours – Photomodeler Technologies, Online
DECEMBER 2020	Advanced Reconstruction with CDR Applications – 40 Hours – Northwestern University Center for Public Safety & Accident Analysis and Reconstruction, Woodstock, IL
OCTOBER 2020	Chip Level Data Recovery from Event Data Recorders – 2 Hours – NAPARS Joint Virtual Conference by Matt DiSogra, Webinar
OCTOBER 2020	Perception Response Time at Various Crash Types – 2 Hours – NAPARS Joint Virtual Conference by Crash Safety Solutions, Webinar
APRIL 2020	Pix4Dmapper Fundamentals & Pix4Dmapper Essentials Certification Exam – 16 Hours – Pix4D, Online
MARCH 2020	vCRASH Environments – 16 Hours – Virtual Crash Software, Online
FEBRUARY 2020	vCRASH Simulation Basics – 16 Hours – Virtual Crash Software, Online
MAY 2019	Accessing & Interpreting Heavy Vehicle Event Data Recorders – 28 Hours – SAE International, Appleton, WI
APRIL 2019	Tire Forensics & Fleet Technician Clinic – 16 Hours – Tennent & Associates, Lockport, IL
APRIL 2019	Illinois Child Seat Technician Skill Builder – 6 Hours – IDOT, Sycamore, IL
MARCH 2019	Investigating Insurance Fraud and Staged Vehicle Crashes – 16 Hours – National Insurance Crime Bureau, Woodstock & Elgin, IL
DECEMBER 2018	How to use the Bosch Crash Data Retrieval Tool – 4 Hours – Crash Data Group's Crash Academy, Online
NOVEMBER 2018	Pedestrian & Bicycle Crash Reconstruction – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
OCTOBER 2018	sUAS Crash Investigation Remote Pilot & Crash Investigation Aerial Photogrammetrist – 32 Hours – Aerial Metrics, Woodstock, IL
OCTOBER 2018	Event Data Recorder Use in Traffic Crash Reconstruction-Level 1 – 40 Hours – Institute of Police Technology and Management, Houston, TX
AUGUST 2018	Fundamental Techniques of Crash Investigation – 6 Hours – Institute of Police Technology and Management, Online
MARCH 2018	Event Data Recorder Summit – 20 Hours – Crash Data Group & Texas Association of Accident Reconstruction Specialists, Houston, TX.
NOVEMBER 2017	Nation Child Passenger Safety Seat Technician Certification –26 Hours – Safe Kids Worldwide, Advocate Condell Hospital, Libertyville, IL.
MARCH 2017	Traffic Crash Reconstruction 3 – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
SEPTEMBER 2016	Illinois Association of Technical Accident Investigators Conference – 3 Days – Peoria, IL
MARCH 2016	Biomechanical Engineering Application to Crash Investigations – 12 Hours – Dr. Sean Shimada
NOVEMBER 2014	Vericom Familiarization for Crash Reconstruction – 24 Hours – Vericom Computers, Lake Zurich, IL
SEPTEMBER 2014	Crash Data Retrieval System – Backpowering/Imaging Practice – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
SEPTEMBER 2014	Illinois Association of Technical Accident Investigators Conference – 3 Days – Peoria, IL

Continuing Education (continued)

SEPTEMBER 2014	Crash Investigation Workshop Crash Team – 24 Hours – Lake County Major Crash Assistance Team, Grayslake, IL
AUGUST 2014	Grade Crossing Collision Investigation – 8 Hours – Canadian National and Metra Railroad, Woodstock, IL
JULY 2014	Racelogic Video VBOX Pro/Software Training Seminar – 5 Hours – Racelogic USA, Farmington Hills, MI
JUNE 2014	Bendix Brake Training School – 24 Hours – Bendix Spicer Foundation Brake LLC, Lisle, IL
MAY 2014	Advanced Crash Reconstruction Utilizing Human Factors Research – 40 Hours – Northwestern University Center for Public Safety, Crash Safety Solutions, Evanston, IL
MAY 2014	Heavy Vehicle Crash Reconstruction – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
FEBRUARY 2014	Refresher Training – Major Accident Investigation Team – 8 Hours – McHenry County Sheriff’s Office, Woodstock, IL
NOVEMBER 2013	Crash Data Retrieval Data Analyst – 40 Hours – Northwestern University Center for Public Safety – Collision Safety Institute, Evanston, IL
OCTOBER 2013	Crash Data Retrieval Technician – 16 Hours – Northwestern University Center for Public Safety – Collision Safety Institute, Evanston, IL
SEPTEMBER 2012	Illinois Association of Technical Accident Investigators Conference – 3 Days – Peoria, IL
MAY 2011	Traffic Crash Reconstruction II – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
APRIL 2011	Traffic Crash Reconstruction I – 80 Hours – Northwestern University Center for Public Safety, Evanston, IL
APRIL 2011	Vehicle Dynamics – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL
SEPTEMBER 2008	Basic & Advanced CadZone – 16 Hours – Vehicle Crash Consulting, LLC, Woodstock, IL
SEPTEMBER 2008	Accident Investigation II – Online: 80 Hours – Northwestern University Center for Public Safety, Evanston, IL
JUNE 2008	TopCon Total Station Operation – 8 Hours – Positioning Solutions Company, Woodstock, IL
MARCH 2008	Accident Investigation I – 80 Hours – Northwestern University Center for Public Safety, Evanston, IL

CONTINUING EDUCATION – HEAVY VEHICLES

MARCH 2021	Commercial Vehicle Law Symposium – 8 Hours – Fried Goldberg LLC, Webinar
MARCH 2020	ITEA Annual Truck Conference – 8 Hours – Illinois Truck Enforcement Association, Naperville, IL
MAY 2019	Accessing & Interpreting Heavy Vehicle Event Data Recorders – 28 Hours – SAE International, Appleton, WI
MARCH 2019	ITEA Annual Truck Conference – 8 Hours – Illinois Truck Enforcement Association, Naperville, IL
MARCH 2016	ITEA Annual Truck Conference – 8 Hours – Illinois Truck Enforcement Association, Naperville, IL
JANUARY 2015	ITEA Annual Truck Conference – 8 Hours – Illinois Truck Enforcement Association, Glen Ellyn, IL
JUNE 2014	Bendix Brake Training School – 24 Hours – Bendix Spicer Foundation Brake LLC, Lisle, IL
MAY 2014	Heavy Vehicle Crash Reconstruction – 40 Hours – Northwestern University Center for Public Safety, Evanston, IL

Continuing Education (continued)

AUGUST 2012	Truck Enforcement Officer Certification – 8 Hours – Illinois Truck Enforcement Association, St. Charles, IL
APRIL 2011	Traffic Crash Reconstruction I – 80 Hours – Northwestern University Center for Public Safety, Evanston, IL
NOVEMBER 2009	Truck Weight Law Refresher – 8 Hours – North East Multi-Regional Training, Woodstock, IL
OCTOBER 2009	Commercial Vehicle Safety Inspection – 40 Hours – North East Multi-Regional Training, IL
APRIL 2008	Basic Truck Enforcement & Portable Scale Certification – 40 Hours – North East Multi-Regional Training, Genoa, IL

CONTINUING EDUCATION – CELLULAR SITE & PHONE TECHNOLOGY

OCTOBER 2019	Basic Historical Cell Site Analysis – 20 Hours – Federal Bureau of Investigation’s Cellular Analysis Survey Team (CAST), Flint, MI
AUGUST 2019	Using Microsoft Excel for Cell Site Analysis – 2 Hours – Federal Bureau of Investigation, Online
APRIL 2018	Advanced Cell Phone Investigations – 24 Hours – Geocell LLC, Franklin, MA
APRIL 2018	Introduction to Cell Phone Investigations – 16 Hours – Geocell LLC, Franklin, MA
MAY 2015	Properly Preserving Cell Phone and Mobile Device Evidence in a Traffic Crash – 2 Hours – Traffic Safety Resource Prosecutor webinar
JANUARY 2011	Cell Phone Investigations – 16 Hours – Geocell LLC, Kankakee, IL

CONTINUING EDUCATION – LAW ENFORCEMENT PATROL FUNCTIONS

FEBRUARY 2021	Standardized Field Sobriety Testing Refresher – 8 Hour – McHenry County Sheriff’s Office Training Division, Woodstock, IL
NOVEMBER 2019	DUI Summit – 16 Hours – Illinois Truck Enforcement Association, Naperville, IL
MAY 2019	Advanced Roadside Impaired Driving Enforcement (ARIDE) – 16 Hours – North East Multi-Regional Training, Woodstock, IL
JANUARY 2019	THC DUI / Medical Marijuana in Illinois – 4 Hours – McHenry County Sheriff’s Office Training Division, Woodstock, IL
DECEMBER 2018	Drugged Driving Investigations & the Use of Drug Recognition Experts – 8 Hours – DuPage County Accident Reconstruction Team, Carol Stream, IL
SEPTEMBER 2018	Emergency Vehicle Operator Course – 8 Hours – McHenry County Sheriff’s Office, Woodstock, IL
SEPTEMBER 2018	Focus Group on Emergency Response Interactions with Autonomous Vehicles – 2 Hours – Virginia Tech Transportation Institute, Online Meeting
SEPTEMBER 2018	Standardized Field Sobriety Testing Refresher – 4 Hours – McHenry County Sheriff’s Office Training Division, Woodstock, IL
MAY 2018	Laser Speed Measurement – 4 Hours – McHenry County Sheriff’s Office, Woodstock, IL
DECEMBER 2017	UAV Pilot Flight School – 8 Hours – Aerovista Innovations, Northeastern Illinois Public Safety Training Academy, Glenview, IL.
NOVEMBER 2017	UAV Pilot Ground School – 8 Hours – Aerovista Innovations, Northeastern Illinois Public Safety Training Academy, Glenview, IL.
NOVEMBER 2017	Implementing a UAV Program – 4 Hours – Aerovista Innovations, Northeastern Illinois Public Safety Training Academy, Glenview, IL.

Continuing Education (continued)

OCTOBER 2017	Breath Alcohol Operator & Preliminary Breath Test Examiner Recertification – Online 1.5 Hours – Illinois State Police
MARCH 2017	Standardized Field Sobriety Testing Refresher – 8 Hour – McHenry County Sheriff's Office Training Division, Woodstock, IL
SEPTEMBER 2016	Emergency Vehicle Operator Course – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
MAY 2015	Decision Making for Critical Incident Response – 8 Hours – Woodstock, IL
DECEMBER 2014	Breath Alcohol Operator & Preliminary Breath Test Examiner Recertification – Online 1.5 Hours – Illinois State Police
JANUARY 2014	Advanced Roadside Impaired Driving Enforcement (ARIDE) – 16 Hours – North East Multi-Regional Training, Woodstock, IL
JUNE 2013	Reid Interviews & Interrogations: Basic & Advanced – 32 Hours – Reid & Associates, Woodstock, IL
DECEMBER 2012	Basic Evidence Technician Program – 40 hours – North East Multi-Regional Training, Lake in the Hills, IL
JANUARY 2012	Fraudulent Documentation Identification – 1 Hour – Illinois Secretary of State, Woodstock, IL
DECEMBER 2011	Breath Alcohol Operator & Preliminary Breath Test Examiner Recertification – Online 1.5 Hours – Illinois State Police
SEPTEMBER 2011	Emergency Vehicle Operator Course – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
SEPTEMBER 2011	Mock Crime Scene – 8 Hours – McHenry County Sheriff's Office Investigations, Woodstock, IL
MAY 2011	Police Motorcycle Operator – 80 Hours – Midwest Police Motorcycle Training, Troy, MI
MAY 2011	Responding to Utility Emergencies – 3 Hours – RTUE Online
APRIL 2011	Testifying in a DUI Trial – 8 Hours – North East Multi-Regional Training, Woodstock, IL
OCTOBER 2010	Laser Speed Measurement – 4 Hours – McHenry County Sheriff's Office, Woodstock, IL
FEBRUARY 2010	Radar Speed Measurement – 4 Hours – McHenry County Sheriff's Office, Woodstock, IL
SEPTEMBER 2009	Advanced Vehicle Contraband Concealment – 16 Hours – Midwest Counterdrug Training Center, Johnston, IA
JULY 2009	Roadside Interviews – 32 Hours – Midwest Counterdrug Training Center, Johnston, IA
MAY 2009	Emergency Vehicle Operator Course – 8 Hours – McHenry County Sheriff's Office, Woodstock, IL
DECEMBER 2008	Breath Alcohol Operator & Preliminary Breath Test Examiner – 32 Hours – Illinois State Police, Woodstock, IL
NOVEMBER 2008	Standardized Field Sobriety Testing Refresher – 8 Hour – North East Multi-Regional Training, Woodstock, IL
NOVEMBER 2008	Understanding Felony Review and License Abstracts – 1 Hour – McHenry County State's Attorney, Woodstock, IL
JUNE 2008	Reid Interviews & Interrogations: Basic & Advanced – 32 Hours – Reid & Associates, Woodstock, IL
APRIL-JULY 2006	Basic Law Enforcement – 480 Hours – University of Illinois Police Training Institute, Champaign, IL

PRESENTATIONS

OCTOBER 2020	Asociación de Peritos en Investigación de Accidentes de Tránsito A.P.I.A.T. – Webinar 4A – Topic: Use of Photogrammetry in the Investigation of Traffic Accidents – 1.25 Hours – Webinar presentation to countries throughout South America
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Presentations (continued)

2014 - 2021

McHenry County Sheriff's Office Major Crash Investigation Unit – During his tenure on the Major Crash Investigation Unit, Andrew has developed curriculum and instructed on the following topics:

- Mock crash scene training
- DUI protocol
- Investigative methods
- Total station operations
- Vehicle inspections
- Motorcycle inspections
- Reconstruction methods & refresher
- Part 107 FAA Test Preparation
- UAV Remote Pilot Training
- UAV photography for crash investigations
- Nighttime UAV photography of crash/crime scenes
- Search warrants and subpoenas
- Cell phone investigations
- Vehicle skid testing
- The Crash Zone software
- Crash Data Retrieval refresher
- Event data recorder preservation
- Lamp inspection and preservation

Andrew also provides educational presentations to heavy trucking companies on the following topics:

- Commercial Driver's License policy
- CDL licensing laws
- Effects of violations on CDL licenses
- Safe driving habits
- Incident reporting
- Vehicle weight laws
- Load securement & equipment laws
- Trailer braking systems
- Pre-trip inspections
- Farm trucking laws

2013 - 2021

Illinois Truck Enforcement Association – While maintaining membership and certification through the Illinois Truck Enforcement Association, Andrew developed curriculum in cooperation with the Illinois Department of Transportation, Illinois Secretary of State, and Illinois State Police. Classes presented throughout Illinois include:

- Basic Truck Enforcement
- Advanced Truck Enforcement
- Truck Enforcement Officer Certification