

# CURRICULUM VITAE

RALPH ARONBERG, P.E.  
President  
Aronberg & Associates Consulting Engineers, Inc.  
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## **RESPONSIBILITIES:** (Since founding firm in 1983)

Traffic accident reconstruction and expert witness service for private parties, insurance companies and governmental agencies. Expert witness services provided in the areas of:

- ◆ Traffic accident reconstruction (cars, trucks, motorcycles and pedestrians).
- ◆ Vehicle occupant kinematics (seatbelts).
- ◆ Biomechanics.
- ◆ Traffic engineering design (geometrics, signing, markings, signals and lighting).
- ◆ Sight distance analysis.
- ◆ Traffic impacts.
- ◆ Hazardous roadway conditions.
- ◆ Work Zone Traffic Control evaluation.
- ◆ Evaluation of roadway curvature.
- ◆ Traffic signal operations.
- ◆ Pedestrian safety (includes slip/trip and fall analysis).
- ◆ Computerized accident reconstruction and simulation.
- ◆ Vehicle “black box” data retrieval (certified).

All avenues of transportation and traffic studies, planning, design and analysis.

Coordination and management of full service land development projects, Development of Regional Impact studies and Traffic Action Plans.

## **PROFESSIONAL REGISTRATION:**

Registered Professional Engineer with the Florida Board of Professional Engineers, PE #33069.  
Firm Certificate of Authorization #7306.

## **PROFESSIONAL MEMBERSHIPS AND ACTIVITIES:**

**National Academy of Forensic Engineers** – (Fellow member) Certified by NAFE as a Diplomat in Forensic Engineering in accordance with the guidelines of the Council of Engineering Specialty Boards (CESB). Serve on Accident Reconstruction Committee.

**Florida Engineering Society** – Past President of Broward Chapter.

**Institute of Transportation Engineers** – (Fellow member) Serve on Expert Witness Counsel.

**Society of Automotive Engineers**

**American Society of Civil Engineers**

**National Society of Professional Engineers**

**Association For the Advancement of Automotive Medicine**

**National Association of Professional Accident Reconstruction Specialists**

**American Society of Testing and Materials** – Serve on Committee on Pedestrian/Walkway Safety and Footwear.

## **AWARDS:**

Young Engineer of The Year award received February 21, 1987 from the Broward Chapter of the Florida Engineering Society.

**PRIOR EXPERIENCE:**

**Traffic Systems Engineer Intern  
September 1981-November 1982**

**Mid South Engineering Company  
Fort Lauderdale, Florida**

Assistant Project Manager for development of the Broward County Computerized Traffic Signal System, which was a \$500,000 contract. Responsible for all related engineering services, including design work and timing plans for 250 traffic signals and master plan development for expansion to 1,500 traffic signals, utilizing all state-of-the-art aspects of Urban Traffic Control Systems (UTCS).

Project Manager for numerous traffic studies, including traffic impact studies, traffic signal justification studies, traffic systems operation studies and various transportation related engineering projects.

Engineer in charge of traffic signal, signing, pavement markings, and roadway lighting plans on many large scale projects.

Expert witness on traffic accident cases.

**Signal Design Engineer  
March 1980 – September 1981**

**Broward County Transportation Dept.  
Fort Lauderdale, Florida**

Responsible for the design of Broward County traffic signals and preparation of construction contracts.

Design and development of timing plans for signal systems.

Review of consultant plans, all facets of traffic engineering.

Meetings with local governments and special interest groups to discuss transportation needs, plans and impacts.

**Engineer II  
November 1978 – March 1980**

**Florida Department of Transportation  
Fort Lauderdale, Florida**

Responsible for conceptual design and justification reports based on accident analysis, capacity analysis and cost benefit studies for transportation improvement and traffic safety projects.

Design of signalization, signing and pavement marking plans.

**EDUCATION:**

**University of Virginia:**

Bachelor of Science, Civil Engineering 1978, with graduate level courses in Traffic Engineering, Traffic Flow Theory and Urban Transportation.

**University of Florida: (1979-1982)**

Post-College Professional Traffic Engineering Enhancement Program, seminars on Traffic Safety Considerations, Traffic Operations Computer Models, Traffic Signal Control Systems, Traffic Signal Workshops and use of the Arterial Analysis Package.

**Nova University: Fort Lauderdale, FL**

Master of Science in Engineering Management, (1984), includes development of a traffic accident reconstruction computer program with graphic features, as part of course work.

**The Traffic Institute, Northwestern University: (1984)**

Roadway Resurfacing, Restoration and Rehabilitation workshop.

**Accident Litigation Seminar: Orlando, FL (1984)**

Forensics, Slip and Fall, Seatbelt Occupant Kinematics, Human Factors.

**Institute of Transportation Engineers Educational Foundation: (1983-1989)**

Seminar on Traffic Control Devices Handbook. Seminar on Trip Generation Manual. Seminar on Access and Site Circulation Design. Seminar on the Engineer as a Court Witness.

**Stapp Car Crash Conference:**

1985 Twenty-Ninth, 1988 Thirty-Second, 1989 Thirty-Third, 1991 Thirty-Fifth, 1994 Thirty-Eighth.

**Workshops on Human Subjects for Biomechanical Research:** (1985, 1988, 1989, 1991, 1994)

**Society of Automotive Engineers International Congresses:** Detroit, MI

Each congress includes one week of seminars on state-of-the-art techniques in accident reconstruction and occupant kinematics. Attended in 1987, 1989, 1990, 1991, 1992, 1995, 1997, 1998, 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, and 2015. Speaker in 1990 and 1992, presenting published papers.

**Annual Conferences of the Association for the Advancement of Automotive Medicine:** 1987 Thirty-First, 1989 Thirty-Third, 1997 Forty-First, 1998 Forty-Second.

**Florida Department of Transportation:**

Project Managers Conference (1987).

Site Impact Handbook Workshop (1998).

**Symposium on Head Injury Mechanisms, An Angular Acceleration Criterion:** Washington, DC (1989)

**60th Annual Meeting of Institute of Transportation Engineers:** (1990)

Featured speaker on Geometric Design, Traffic Safety Engineering.

**Institute of Police Technology and Management:** Jacksonville, FL

1990, 1992 (as speaker), and 2002 annual updates of "Special Problems in Traffic Accident Reconstruction".

1993 "Concept of Night Visibility for Traffic Accident Investigators".

1998 "Inspection/Investigation of Commercial Vehicle Accidents".

2014 "Advanced Event Data Recorder Use in Traffic Crash Reconstruction".

2015 "Motorcycle Crash Investigation".

**Florida Institute of Consulting Engineers:** (1990)

Work Zone Traffic Control.

**University of California, San Diego:** (1991)

Accidental Injury: Biomechanics & Prevention.

**Society of Automotive Engineers:**

Vehicle Rollovers Workshop (Phoenix, AZ, 1992).

Low Speed Rear Impact Collision Workshop (Los Angeles, CA, 1994).

Applied Vehicle Dynamics (BeaverRun Motorsports Complex, PA, 2006).

Highway Event Data Recorder Symposium (Washington, D.C., 2007).

**Bob Bondurant School of High Performance Driving:** Phoenix, AZ (1992)

Advanced Highway Driving.

**Association for the Advancement of Automotive Medicine:** Philadelphia, PA (1994)

Biomechanics of Impact and Current Occupant Restraint Issues.

**Transportation Research Center, Inc.:** East Liberty, OH (1995)

Pole side Impact Testing.

Heavy Vehicle Braking Performance Seminar.

Truck and Bus Emergency Braking Testing.

**Association for the Advancement of Automotive Medicine and University of Miami School of Medicine William Lehman Injury Research Center:** Miami, FL (2000)

Car Crashes and Occupant Injuries: A Team Approach to Crash Investigation.

**World Reconstruction Exposition, WREX 2000:** College Station, TX (2000)

Instrumented and documented crashes of 17 motorcycles; sponsor and contributor.

**Vericom Computers, Inc.:** Miramar, FL (2001)

Acceleration and VC2000 familiarization.

VC2000PC Advanced training.

**Steensland Center for Professional Development:** (2003)  
Americans with Disabilities Act (ADA): Impact on Design Professionals.

**Collision Safety Institute:**  
Crash Data Retrieval System Operator's Certification Course (2004)  
CDR Users Conference (2008).

**Macinnis Engineering Associates:**  
PC Crash Training Workshop (2004).  
PC Crash Expert Skills Workshop (2012).

**Florida State University** (online): (2005)  
Florida Building Code Core Course.

**National Academy of Forensic Engineers:**  
Featured speaker on Truck Accident Simulation and Animation (Orlando, FL 2010).  
Forensic Engineering Seminar (Hollywood, FL 2015).

**National Crash Analysis Center; Federal Outdoor Impact Laboratory:** George Washington Univ., VA (2010)  
High Speed Instrumented Testing. Advanced Topics in Automotive Safety and Accident Reconstruction.

**Aras 360 Technologies Inc.:** (2011)  
Advanced 3D Computer Diagramming.

**New York Statewide Traffic Accident Reconstruction Society & National Association of Professional Accident Reconstruction Specialists, Inc.:**  
Investigating Motorcycle Collisions (Fishkill, NY, 2012).  
Advanced Topics in Collision Investigation and Reconstruction (Portland, ME, 2014).

**Clearly Visible Presentations, LLC:** Portland, ME (2014)  
Motor Vehicle Headlamp Performance and Mapping.

**PUBLICATIONS:**

Served for Society of Automotive Engineers as peer reviewer for publication of **Accident Reconstruction** 1993, 1995, 2004, 2008, 2010, 2013, 2014 & 2015.

Served for National Academy of Forensic Engineers as peer reviewer for automotive biomechanics paper (2014).

“**Seventeen Motorcycle Crash Tests into Vehicles and a Barrier**”, Society of Automotive Engineers Technical Paper #2002-01-0551, contained within **Accident Reconstruction 2002.**

“**Reconstruction of Automobile/Pedestrian Accidents Using CATAPULT**”, Society of Automotive Engineers Technical Paper #940924, contained within **Accident Reconstruction: Technology and Animation IV.**

“**PC Based Accident Reconstruction Animation using Autodesk 3D Studio**”, Society of Automotive Engineers Technical Paper #920756, contained within **Accident Reconstruction: Technology and Animation II.**

“**Airborne Trajectory Analysis Derivation for use in Accident Reconstruction**”, Society of Automotive Engineers Technology Paper #900367, contained within **Accident Reconstruction: Human, Vehicle and Environmental Factors.**

“**Motivating and Managing Engineers**”, American Society of Civil Engineers, **Journal of Professional Issues In Engineering**, January, 1985.

**OTHER FIRM ACTIVITIES:**

3-D Computer Animations.  
Computer-aided Design, preparation of trial exhibit graphics.  
Coordination of aerial photography.  
Coordination of land surveying.  
Nighttime photography.  
Video photography.  
Illumination evaluation and analysis.  
Vehicular mechanical systems analysis.