

Timothy Borchers

Light Rail & Transit Systems Expert Witness

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PROFESSIONAL SUMMARY

A successful international public transportation professional with deep management, operational, technical, and regulatory experience in the public and private sectors.

Longevity in the industry and a solid regulatory background have led to his selection to complete the safety certification of major and often problematic projects.

More than forty-one years' experience managing operating and maintenance staff in public sector environments as well as consultant teams of technical experts.

AREAS OF EXPERTISE

• All Aspects of Light Rail Systems	• Safety and Regulatory Compliance
• System Safety Certification	• Risk Assessment and Management
• Accident Investigation and Reconstruction	• Federal Transit Administration Regulations and Processes
• Operations and Maintenance	• Bus System Operations and Management
• Standard Operating Procedure (SOP) Development	• Automated People Mover (APM) Systems

EXPERT WITNESS ENGAGEMENTS

Jurisdiction	Matter & System	Role
Cincinnati, OH	Streetcar system — bicycle tire caught in embedded rail flangeway resulting in fall and injury. Representing operators and manufacturers.	Defense
Dallas, TX	Streetcar failed to stop at intersection, colliding with two motor vehicles. Representing motor vehicle occupants claiming damages.	Plaintiff
Oklahoma City, OK	Streetcar system — electric scooter wheels caught in embedded track resulting in accident and injury. Representing operators, manufacturers and system builders.	Defense
Utah	Light rail system — passenger caught in bi-folding door closure suffering injuries. Representing state and transit agency.	Defense
San Diego, CA	Light rail system — passenger fall during emergency braking resulting in injury. Representing defendant.	Defense
Atlanta, GA (Multiple)	Hartsfield-Jackson Airport Plane Train (APM) — jerky propulsion and braking operation resulting in falls and injuries to passengers. Multiple cases.	Plaintiff

A full list of prior testimony is available upon request.

PROFESSIONAL EXPERIENCE

Principal, National Transit Services, Tampa, FL March 2018 – Present

- Provides specialized transit consultancy services.
- **Conduct a Quadrennial Performance Review of the Corpus Christi Regional Transportation Authority, ensuring compliance with the Texas Transportation Code and other applicable state laws.** Corpus Christi, TX:

- **Technical, operations, and regulatory support for the Bee-Line Bus System, handling over 29 million passengers annually.**Westchester County, NY:
- **Providing expert witness services in civil litigation matters related to transit system incidents, with focus on regulatory compliance, safety certification, hazard management, and industry standard of care.**Legal Expert Witness, Multiple Jurisdictions:
- **Interim Chief Operating Officer and Special Projects Director for 18 months. Assisted in recruiting permanent executive positions and enhancing operational strategies for 130-bus agency.**Toledo Area Regional Transit Authority (TARTA), Toledo, OH:
- **Investigated reasons for closure of the Memphis light rail heritage trolley system including safety, operational and maintenance matters. Identified actions necessary to return the system to revenue service and assessed associated costs and timelines. (2018 onwards)**Memphis Area Transit Authority (MATA), Memphis, TN:
- **Delivered subject matter expertise on design, vehicle suitability, operations, maintenance, and federal compliance.**City of Tampa's Streetcar Modernization Project, Tampa, FL:

Principal Consultant — SNC-Lavalin Rail & Transit Inc., USA/Canada *May 2015 – February 2018*

- Project Manager for transit systems, operations methodology, and APTA support.
- **Managed design changes, safety certification, and entry into revenue service for the D.C. Streetcar.**District Department of Transportation (DDOT), Washington DC:
- **Managed design changes, safety certification, and entry into revenue service for the Memphis Trolley.**Memphis Area Transit Authority (MATA), Memphis, TN:
- Supported APTA Rail Transit Vehicle (VIM) Inspection and Maintenance Working Group with technical assistance and standards development.

Deputy Commissioner Public Works / Executive Director Atlanta Streetcar, Atlanta, GA *2013 – 2015*

- Created a start-up transit agency to construct, safety certify, and operate the Atlanta Streetcar with a \$100M capital budget.
- Developed a specialized transit team to manage federal compliance, including procurement, safety, and regulatory compliance.
- Engaged by the Mayor's office to conduct a comprehensive operational and compatibility assessment of the Hartsfield–Jackson Atlanta International Airport Automated People Mover system ("Plane Train"). Assessment encompassed evaluation of operational protocols, safety management framework, and engineering standards compliance. Written reports delivered directly to the Mayor's office.

Director and Principal — City Rail Solutions LLC, USA *2010 – 2013*

- Provided specialized transit consultancy services.
- Managed the St. Louis Delmar Loop Trolley project (heritage light rail), overseeing regulatory compliance, procurement, and engineering design.
- Guided the design of the new "Liberty" series articulated light rail vehicle for Brookville Equipment Corporation.

Consultant Streetcar Specialist — TranSystems, USA *2008 – 2010*

- Conducted risk and hazard analysis for the Tucson streetcar line and developed corrective measures.
- Developed operational, maintenance, regulatory, and compliant design criteria for the Lowell streetcar system expansion.

Manager Streetcar Services — Hillsborough Transit Authority (HART), Tampa, FL *2002 – 2008*

- Managed startup, operations, and maintenance of a 2.5-mile, 11-car streetcar system.
- Organized safety and regulatory compliance documentation, planning, and engineering for capital projects.

Manager Bendigo Tramways — The Bendigo Trust, Bendigo, Vic, Australia *1999 – 2002*

- Directed operations and maintenance of a 33-tram (streetcar) and four-bus system.
- Prepared Rail Safety Management System and Bus Safety Management System in compliance with Australian regulations.

Director/Owner — London Bus Company, Bendigo & Ballarat, Vic, Australia *1996 – 1999*

- Owned and operated London-style double-deck buses for fixed route services and charters.
- Developed a Bus Safety Management Plan compliant with Australian standards.

Supervisor a/g — MetBus Division, Metropolitan Transit Authority, Melbourne, Vic, Australia *1994 – 1996*

- Assisted Depot Manager with bus fleet operations and maintenance, leading teams of 25 on shift.

Principal — Tervelka PTY LTD, Tramway and Light Rail Contracting, Victoria, Australia 1987 – 1994

- Managed infrastructure construction, rehabilitation, and repair of passenger rolling stock.
- Authored maintenance and operations manuals and SOPs.
- Reserve staff for operations support.

EDUCATION & CERTIFICATIONS

- Bachelor of Business Administration with a major in management, assessed by James Foley, Ph.D., Associate Dean School of Business Administration, University of Miami, 2002 (through Joseph Silny and Associates)
- Certificate IV in Transport Management (Bus and Coach Operations), Monash University, Melbourne, Australia, 2002
- Introduction to Transit Operations Planning, National Transit Institute, USA, 2003
- Light Rail Facilities System Design Program, Portland State University, USA, 2004
- Quality Assurance Control in Transit Projects, National Transit Institute, USA, 2005
- Management of Transit Construction Projects, National Transit Institute, USA, 2007
- Transit Bus System Safety, Transportation Safety Institute, USA, 2016
- Transit Rail System Safety, Transportation Safety Institute, USA, 2016
- Transit System Security, Transportation Safety Institute, USA, 2016
- Transit Safety and Security Audit Course, Transportation Safety Institute, USA, 2016
- Transit Rail Incident Investigation, Transportation Safety Institute, USA, 2017

KEY PRESENTATIONS & PUBLICATIONS

- New Streetcar Systems: From Plans to Revenue Operations — D.C. Streetcar Lessons Learned, American Public Transportation Association (APTA) 2016 Rail Conference, Phoenix, Arizona
- Laying the Tracks for a Better Future in Transportation, American Public Works Association (APWA) 2014 International Public Works Congress & Exposition, Toronto, Ontario
- Hybrid/wireless streetcar technologies and vehicles available to the market, APTA 2011 Rail Conference, Boston, Massachusetts
- Current development of hybrid/wireless streetcar technologies and how these may apply locally, D.C. Surface Transit Streetcar Summit, Washington, District of Columbia, 2010
- STREET SMART — Streetcars and Cities in the Twenty-First Century, published by APTA and Community Streetcar Coalition, 2009
- APTA Standard for Vintage / Heritage Trolley Vehicle Equipment (APTA SS-HT-001-05), 2005
- APTA Modern Streetcar Vehicle Guidelines (APTA RT-ST-GL-001-13), 2013

INDUSTRY ENGAGEMENT & PROFESSIONAL MEMBERSHIPS

- American Society of Civil Engineers (ASCE) — Florida Section, West Coast Branch
- Transportation Research Board (TRB), Light Rail Committee
- American Public Transportation Association (APTA) — Rail Transit Committee
- APTA Light Rail Transit Technical Forum
- APTA Rolling Stock Equipment Technical Forum
- APTA Streetcar Subcommittee — Chair (2017–2019), Vice-Chair (2016–2017), past Secretary
- APTA Embedded Track Working Group
- APTA Shared Use Working Group
- APTA Application of Modern Streetcar Vehicles in North America Working Group
- Credited Participant: Vintage and Heritage Trolley Vehicle Equipment Standard APTA RT-SCS-S-001-05 Rev 1
- Credited Participant: Modern Streetcar Vehicle Guideline APTA RT-ST-GL-001-13