

Daniel A. Wojnowski, Ph.D., PE

Senior Vice President



Summary

In 2017, Dr. Daniel A. Wojnowski joined Thornton Tomasetti, bringing over 30 years of experience and expertise in forensic investigation of construction and structural related matters. Dan leads Chicago's forensics team and resides in Homer Glen, IL.

Dan's knowledge covers construction engineering, evaluations of distressed and failed structures; including commercial and residential buildings, bridges, shoring, fixed and stationary scaffolding, industrial and agricultural plants, and cranes. Dan has testified as an expert witness on these topics as well as construction site safety, including residential and commercial premises safety. His civil, structural, and metallurgical background allows for all-encompassing investigation skills when structural materials and systems are involved.

Dan authored and presented papers at the ASCE Engineering Forensic Congresses including "Construction Document Effects on Field Issues and Accidents" at the latest congress in 2018.

Areas of Technical Expertise Include

- Forensic Structural Engineering
- Forensic Material Science
- Construction Safety / OSHA Compliance
- Emergency Response

Education

- Ph.D. Metallurgical Engineering, 1994, University of Illinois at Chicago
- M.S. Metallurgical Engineering, 1983, University of Illinois at Urbana-Champaign
- B.S. Civil Engineering, 1981, University of Illinois at Urbana-Champaign

Registrations

- Registered Professional Engineer (Arkansas, Florida, Illinois, Indiana, Kentucky, Louisiana, Missouri, New Jersey, Ohio, Wisconsin)
- OSHA Certification (Fall Protection, Introduction to Safety and Health Management, Occupational Safety and Health Standards for the Construction Industry, Health Hazard Awareness, Confined Space)
- Safety Training - City of Chicago, Scaffold User Training; Aerial Boomlift Operator Certification

Professional Activities

- American Society of Civil Engineers (ASCE)
- Structural Engineering Institute of the American Society of Civil Engineers
- Illinois Society of Professional Engineers (ISPE)
- National Society of Professional Engineers (NSPE)
- International Building Code Council (IBC)

Honors and Awards

- City of New York: Certificate of Appreciation 9-11-2001
- State of Illinois House of Representatives: Recognition of volunteer work at Ground Zero

Select Project Experience

Forensic Structural Engineering

Transmission Tower Collapses, Forensic investigation of guy wire tower collapses. Towers as tall as 2000' have been analyzed to determine the cause of collapse. Analyses included the effects of wind, ice, and/or snow upon tower and guy wire components.

Waste Water Plant, Ohio. Investigation of allegedly defectively designed and constructed plant. Analyzed the design of the pre-cast concrete structure as well as the construction.

Grain Bin Collapse, SunPrairie Grain, Minot, ND.* Forensic investigation of a 100-foot tall by 104-foot diameter, 750,000 bushel steel grain bin that spilled its contents and damaged surrounding structures.

One Technology Center/WILTEL Communications, Tulsa, OK.* Forensic investigation of the failed curtain wall structure, including the finite element modeling and wind tunnel testing.

Forensic Material Science

Airport, Chicago, Illinois. Environmental corrosion of structural support brackets of pedestrian bus shelters and life expectancy determination.

HCl Production Plant, Iowa. Chemical attack of pre-cast concrete piping, reinforced concrete flat work and reinforced concrete tanks due to an accidental HCl acid spill at a chemical plant facility during the commissioning process following construction of plant.

High Rise, Florida. Investigation of structural framing corrosion allegedly due to water intrusion from hurricane.

High Rise, Chicago, Illinois.* Investigation of intergranular/stress corrosion cracking of HVAC copper piping in a residential high rise.

Construction Safety / OSHA Compliance

Construction Site, New Jersey. Investigation of a worker's fall from a water tower during renovation. Opined on the safety responsibilities of the contractors, engineers, and municipality.

* Denotes work performed with previous employer.

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Construction Site, Chicago, IL. Investigation of demolition practices and contractor safety responsibilities involving collapse of wall resulting in death of worker.

Construction Site, Howell, MI.* Investigation of aerial lift tip-over involving a sole proprietor working on a multi-employer construction site.

Construction Sites, Nationally. Investigations of safety responsibilities of the owner, general contractor and sub-contractors on a multi-employer construction site.

Emergency Response

Miller Park Crane Collapse, Milwaukee, WI.* Emergency response to document failed 500-foot-tall crane and conduct failure investigation.

Superdome, New Orleans, LA.* Investigate the extent of damage to the dome as a result of Hurricane Katrina.

The Resort at Pedregal, Cabo San Lucas, Mexico.* Investigate the extent of damage to the resort buildings and seawall after Hurricane Odile.

4th & Race, Cincinnati, OH. Emergency response to investigate failed concrete shoring that collapsed during concrete placement in a multi-story, mixed-use structure.

Typical Sworn Testimony (Complete List Upon Request)

Deposition, Ness v. Cranbrook Homes, Circuit Court for the County of Oakland, Michigan, regarding custom and practice concerning construction safety regulations and responsibilities, 2016.

Deposition and Trial, Circuit Court of Cook County, IL, County Dept, Chancery Division, Edward E. Gillen et al. v F.H. Paschen/ Cabo Joint Venture, et al. regarding damage to a sewer line from pile driving. Determine cause and opine on custom and practice of parties.

Deposition and Trial, Circuit Court of the 12th Judicial Circuit, Will County, Illinois, Justin Cooper v Carlson Brothers, Inc. v. Lenny Szarek, Inc., regarding custom and practice concerning construction safety regulations and responsibilities, 2015, 2016

Deposition, Circuit Court of Cook County, Illinois, Walls v. Waukegan Steel Sales, Inc., regarding custom and practice concerning construction safety regulations and responsibilities, 2014.

Deposition, Ward County, District Ct., Northwest Judicial Circuit, ND, CHS, Inc. v. Walt Johnson Construction, Inc., et al., ND, regarding design deficiencies and construction defects, 2013.

Deposition, Estate of Adilson Vozniak v. Township of Denville, Complete Scaffolding, Hatch Mott MacDonald MRS-L-1640-17 (Superior Court New Jersey Law Division - Morris County).

Deposition, The Peninsula at St. Johns Center v. Sterling Dula/ Sterling Dula v. Rice Engineer, 2013-CA-6582 & 2013-CA-7176 (In the Circuit Court of the 4th Judicial Circuit, Duval County, FL Civil Division).

Deposition, Francisco Jara v. Power Construction Company, et. al, 2015-L-5694 (In the Circuit Court of Cook County, IL, County Dept, Law Division).

Deposition, Northstar Residential Development, et al. v. Mack Industries, et. al., 15-CV010592 (In the Court of Common Pleas of Franklin County, Ohio).

Deposition, Sentry Select Insurance a/s/o The Crumland Company LLC v. Eaglespan, Inc. d/b/a Haynes and Company, and Conlee Construction, LLC, D-504-CV-2016-00252 (State of New Mexico, County of Chaves, Fifth District Court).

Alternative Dispute Resolution

Arbitration, Mary Geraghty v. Park Ridge Plaza, LLC, regarding building code and property maintenance violations, 2014.

Papers, Publications and Presentations

"Construction Documents Effects on Field Issues and Accidents," ASCE 8th Congress on Forensic Engineering, Austin, TX, November 30, 2019 (Co-Author and Presenter)

"Analysis of Design Codes for Agricultural Storage Bins," ASCE 7th Congress on Forensic Engineering, Miami, Florida, November 17, 2015 (Co-presenter and Co-Author)

"Collapse of Agricultural Grain Bins," SEI Day 2014, St. Louis Chapter of Structural Engineering Institute, Masonry Institute of St. Louis, St. Louis, MO, October 3, 2014 (Presenter)

"When are Old Buildings in Violation of New Codes?," Guest Speaker, Western Loss Spring Seminar, Western Loss Association (WLA), Lombard, IL, April 2014 (Presenter)

"Construction and Industrial Slips, Trips and Falls," Guest Speaker, Construction Site and Construction Safety Class, Department of Civil and Architectural Engineering, Illinois Institute of Technology, Chicago, IL, February 2014 (Presenter)

"WiTel Technology Curtain Wall Framing Failure Investigation," Conference Proceedings of the 6th Congress on Forensic Engineering, San Francisco, California, October-November 1, 2012 (Author and Presenter)

"Current Construction Issues: 1) Expansive Soils, and 2) Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines," Seminar at the Colorado Defense Lawyers Association (CDLA) Blockbuster CLE Conference, Denver, Colorado, April 2010 (Co-presenter)

"Structural Roof Failure Due to Snow: The Implications of the Use of Minimum Design Criteria," Third International Conference on Forensic Engineering: Diagnosing Failures and Solving Problems, Institute of Civil Engineers, November 2005 (Co-author and Presenter)

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"Analysis of a Hybrid Plate Girder Bridge During Erection: Collapse of Tennessee Highway 69 Bridge," Progress in Structural Engineering and Materials, Vol. 4 No. 1, John Wiley & Sons, Ltd., January-March 2002 (Co-author)

"World Trade Center Disaster: Examining Structural and Geotechnical Damages and Perturbation to Our Local Community," National Science Foundation Earthquake Engineering Research Center, Urbana, IL, November 2001 (Presenter)

"Winter Property Damage," Northern Illinois Adjusters Association, January 2001 (Presenter)

"Temporary & Permanent Bracing of Structures," Western Loss Association Fall Meeting, September 1997 (Presenter)

"Keeping a Building Water Tight," ESI Marketing Presentation to the Insurance Claims Industry, March 1996 (Presenter)

"Fire Damage Evaluation of a Steel Structural Steel Building," ASM International Materials Week, Chicago, October 1994 (Presenter)

"Welding of CrMoV Rotor Steels," Welding and Repair Technology for Fossil Power Plants, Electric Power Research Institute, Williamsburg, Virginia, March 23, 1994 (Presenter)

"Interactions with Structural Materials," Western Loss Association Winter Meeting, February 18, 1994 (Presenter)

"Weldment Evaluation of High Pressure Steam Rotors," Journal of Engineering for Industry, ASME, February 1994 (Co-author)

"Carbide Development in the Temper Zone of a CrMoV Submerged Arc Weldment," Ph.D. Dissertation, University of Illinois at Chicago, 1994

"Snow, Wind, Fire: Effects on Structures," ESI Marketing Presentation to the Insurance Claims Industry, February 1993 (Presenter)

"HAZ Tempering Phenomena of Multipass Welds in Bainitic HP Rotor Steels," International Trends in Welding Science and Technology, International Conference Proceedings, ASM International, June 1992 (Co-author and Co-presenter)

"Interactions with Structural Materials," ESI Sponsored Seminar, 1991 (Presenter)

"Weldability of CrMoV Rotor Steels," 72nd Steelmaking Conference, Chicago, Illinois, April 4, 1989 (Presenter)

"Fatigue Fracture in Spot Weldments," M.S. Thesis, University of Illinois at Urbana-Champaign, 1983

Contact

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