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George R. Mulholland

P.E., S.E.
Principal

About George

George Mulholland is a licensed Structural and Professional Engineer with over 34 years of experience specializing in the evaluation, investigation, and repair design of distressed facades, buildings, and structures. His portfolio has encompassed cast-in-place, precast, and post-tensioned concrete, masonry, steel, and timber structures with a specialization in parking garages.

He has managed numerous investigation projects utilizing the latest techniques and testing approaches, ranging from exterior facade and masonry wall evaluations to concrete deterioration, steel corrosion, and other structural performance-related problems and collapses. His investigative responsibilities consist of structural component surveys, structural strength evaluations, nondestructive testing, building code compliance, field testing, and material sampling. Project investigations have included destructive openings; concrete crack and delamination mapping; steel corrosion, waterproofing membrane, and masonry wall evaluations; and exterior wall critical examinations. He has extensive knowledge of remedial design approaches for rehabilitation, durability, and strengthening of structural framing components and connections and historic facade restoration.

Mr. Mulholland has performed structural analysis, finite element modeling, nonlinear analysis, and structural peer reviews on a range of building types.

With his extensive knowledge of structural and facade assessments and repair, he has provided litigation support and served as an expert witness on related failures.

Education

Master of Science in Structural Engineering, 1988
University of Illinois at Urbana-Champaign

Bachelor of Science in Civil Engineering, 1986
Iowa State University

Licensure

Structural Engineer IL
Professional Engineer AZ, IL, IA, MO, OH, SC

Professional Affiliations

American Society of Civil Engineers (ASCE)
Structural Condition Assessment and Rehabilitation of Buildings Committee, Chairman
Structural Condition Assessment of Existing Structures Subcommittee, Chairman
Precast/Prestressed Concrete Institute (PCI)
Building Code Committee, Member
Structural Engineers Association of Illinois (SEAOI)
American Institute of Steel Construction (AISC)
International Concrete Repair Institute (ICRI)
Chicago Chapter, President



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Publications

"Design Considerations for Building Movements Caused by Volume Change," *The Construction Specifier*, G.R. Mulholland and D. E. Boatwright, November, 2020

"Communication and Concrete Slabs, Balancing Owner Expectations with Construction and Design Realities," *The Construction Specifier*, G.R. Mulholland and W.J. Macicak, August, 2017

"Grain Elevator Collapse," *RRJ Insight* Issue No. 30, K.R. Hoigard and G.R. Mulholland, August 2013

"Terra Cotta Facade Repairs on Two Mellon Center," Proceedings of the Tenth North American Masonry Conference, St. Louis, MO, R.C. Haukoil, G.R. Mulholland, and K.R. Hoigard, June 2007

"Terra Cotta Facades," *Building Facade Maintenance, Repair, and Inspection*, ASTM STP 1444, J.L. Erdly and T. A. Schwartz, Eds., ASTM International, West Conshohocken, PA, pp. 75-90, K.R. Hoigard, G.R. Mulholland, and R.C. Haukoil, 2004

"Detecting Mild Steel Hairpin Anchors in Stone Cladding," *Stone World*, K.R. Hoigard and G.R. Mulholland, March 2003

"Two Mellon Bank Center Terra Cotta Restoration," *RRJ Insight* Issue No. 15, K.R. Hoigard and G.R. Mulholland, September 2000

"Evaluation of Stone Cladding Anchorages on Precast Concrete Building Panels," Proceedings, Degradation of Natural Building Stone, American Society of Civil Engineers, Minneapolis, MN, K.R. Hoigard and G.R. Mulholland, October 1997

"Structural Analysis of Stone Clad Precast Concrete Building Panels," Proceedings of the 34th U.S. Symposium on Rock Mechanics, Madison, WI, K.R. Hoigard, R.W. Kritzler, and G.R. Mulholland, June 1993

"Non-Loadbearing Precast Concrete Panel Shear Wall-Type Behavior," Proceedings, Architectural Precast Concrete Cladding - Its Contribution to Lateral Resistance of Buildings, Prestressed Concrete Institute, Chicago, IL, C.H. Raths and G.R. Mulholland, November 1989

Presentations

"Enclosure Building Blocks," Suburban Building Officials Conference, Chapter 7, Chicago, IL, virtual, March 2021

"Sticks & Bricks: Concrete," American Bar Association, Forum on Construction Law, 2019 Regional Program, Chicago, IL, September 20, 2019

"Restoration of Masonry," International Masonry Institute, Chicago Chapter Workshop, Addison, IL, November 6, 2017

"Retrofit Subgrade Waterproofing Options and Pitfalls," International Concrete Repair Institute, Fall Convention, Ft. Worth, TX, W.J. Macicak and G.R. Mulholland, October 2015

"Terra Cotta Facades," Symposium on Building Facade Maintenance, Repair, and Inspection, ASTM STP 1444, ASTM International, Norfolk, VA, K.R. Hoigard, G.R. Mulholland, and R.C. Haukoil, 2002

"Repair Methods for Stone Facades," *Dimension Stone Cladding: Design, Construction, Evaluation, and Repair*, ASTM STP 1394, Hoigard, K. R., Ed., ASTM International, West Conshohocken, PA, K.R. Hoigard and G.R. Mulholland, 2000

"Investigation and Repair of Terra Cotta Facades," American Society of Civil Engineers, Illinois Section Structures Group, K.R. Hoigard and G.R. Mulholland, February 17, 1999