

## JACOB W. ARNOLD, P.E.

Manager of Testing Services



### ✚CONTACT

Raths, Raths & Johnson, Inc.  
 500 Joliet Road, Suite 200  
 Willowbrook, IL 60527  
 Mobile 708.528.8755  
 Phone 630.325.6160  
 Email [jwarnold@rrj.com](mailto:jwarnold@rrj.com)

Jacob Arnold manages RRJ's field and laboratory testing services offered across the firm's forensic architectural and structural engineering practice. He is responsible for the day-to-day operations including purchasing, test program design, equipment calibrations, data recording instrumentation, and implementation of test programs.

He has over five years of experience in both laboratory and in situ testing of building materials, on-site quality control testing, and development of monitoring programs to investigate the effects of environmental conditions and the performance of building components. He has designed and conducted mechanical tests for research and strength testing of coatings, adhesives, cementitious materials, and stone anchorages.

His investigative experience includes field testing, material sampling, sounding, condition survey documentation, and report writing to evaluate insulating glass units, extract and analyze sealants, and determine water penetration through masonry wall surfaces.

Prior to RRJ, Jake interned with a civil engineering firm gaining experience in water resources and stormwater management and design development drawings of retention, grading, drainage, and pavement plans. While working on his Master's degree at the University of Illinois, Urbana-Champaign, he was a teaching assistant for courses in engineering graphics/design, destructive instrumentation, and laboratory testing, and studied nondestructive testing of construction materials, specifically sustainable asphalt pavements.

### ■ EDUCATION

Master of Science in Industrial Engineering, 2014  
 Concentration in Civil and Environmental Engineering  
 University of Illinois at Urbana-Champaign

Bachelor of Science in General Engineering, 2011  
 University of Illinois at Urbana-Champaign

### ■ REGISTRATIONS | CERTIFICATIONS

Licensed Professional Engineer in Illinois

Construction Documents Technologist (CDT)

### ■ PROFESSIONAL AFFILIATIONS

ASTM International  
 Committee D01 on Paint and Related Coatings,  
 Materials, and Applications, Member

### ■ PUBLICATIONS | PRESENTATIONS

"Specification Strategies for Field Testing Services,"  
 RCI, Inc. 2018 Symposium on Building Envelope  
 Technology, Nashville, TN, P.E. Reicher and J.W.  
 Arnold, November 16, 2018

"Specification Strategies for Field Testing Success,"  
*Proceedings of the RCI 2018 Building Envelope  
 Technology Symposium*, Nashville, TN, P.E. Reicher  
 and J.W. Arnold, November 17, 2018.

"Quantitative Evaluation of Rejuvenators to Restore  
 Embrittlement Temperatures in Oxidized Asphalt  
 Mixtures Using Acoustic Emission," *Proceedings of  
 SPIE, the International Society for Optical Engineering  
 Vol. 9438, Health Monitoring of Structural and  
 Biological Systems 2015, DOI 10.1117/12.2082573*,  
 Zhe Sun, N. Farace, J.W. Arnold, B. Behnia, W.G.  
 Buttler, and H. Reis, March, 23, 2015

"Quantitative Evaluation of Low-Temperature  
 Performance of Sustainable Asphalt Pavements  
 Containing Recycled Asphalt Shingles (RAS)," *Journal  
 of Construction and Building Materials, Vol. 58*, J.W.  
 Arnold, B. Behnia, M.E. McGovern, B. Hill, W.G.  
 Buttler, and H. Reis, May 15, 2014