



Laura Powers

Senior Project Manager

Department

Engineering Services

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Locations

Milwaukee, WI

Biography

Laura Powers has over 30 years of experience in detailed microscopical analysis of natural and engineered materials used in constructing the built world. While this work has largely focused on performance and failure investigations of cement-based materials, a substantial portion of Laura's work has included analysis of historic building materials.

Laura has worked closely with engineers, architects, and preservation and conservation professionals. Laura is a member of several professional organizations, including ACI, and is active on ASTM committees C09 Concrete and Aggregates and C12 Mortars and Grouts, where she currently serves as the recording secretary.

Representative Consulting Assignments

- Ebenezer Baptist Church | Atlanta, GA | Investigated condition of interior plaster and exterior masonry to inform restoration and repair campaign of historic structure
- New York Public Library | NYC | Assessed effectiveness of laser cleaning trials on soiled marble
- Princeton University, Whitman College | Princeton, NJ | Field and laboratory analysis of dimension stones to aid in selection of material for new construction
- Indian Community School | Franklin, WI | Investigated exterior stone masonry deterioration and color variation
- Shoal Lake Aqueduct | Manitoba, Canada | Field and laboratory investigation of freeze/thaw distress and sulfate attack in 100-year-old concrete structure
- Interstate 5 Undercrossing Fire | Santa Clarita, CA | Assessed severity and depth of fire damage in concrete cores
- Mosul Dam | Iraq | Coordinated laboratory analysis of grout repairs to damaged structure for USACE subcontractor
- CTA Red Line and Purple Line | Chicago, IL | Evaluated concrete condition to inform engineering evaluation of structures

Professional Experience

- 2022 - Current | Senior Project Manager | YA Engineering Services
- 2017 - 2021 | Principal Petrographer and Materials Scientist | CTL Group
- 2003 - 2017 | Associate Principal | Wiss, Janney, Elstner
- 1990 - 2003 | Petrographer, Principal Microscopist | CTL

Area of Practice

- Condition Assessment
- Failure Analysis
- Historic Preservation
- Litigation Support
- Sustainability

Publications and Presentations

- Effect of Internal Curing on Freeze-Thaw Durability of Dry Cast Concrete Segmental Retaining Wall Units and Solid Interlocking Concrete Paving Units, Walloch, C., Speck, J., and Powers, L., ASTM STP 1577
- Petrographic Analysis of Historic Mortars, Powers, L.J. and Papas, S.M., Masonry Edge/Story Pole, v. 6, n. 2
- Comparison of Field Testing with Laboratory Testing of the Durability of Dimension Stone, Bortz, S.A., Powers, L.J., and Wonneberger, B., ASTM STP 1499
- Microscopical Studies of Mortar Made with Lunar Aggregate, San Francisco, California, Powers, L.J., Proceedings of the 33rd International Conference on Cement Microscopy
- A Discussion of Benefits and Problems of ASTM C1324 for Analyzing Hardened Masonry Mortars, Powers, L., Coleman, A., and Papas, S., Journal of ASTM International, Vol. 4, No. 2
- Cementitious Wasteforms for Immobilization of Low-Activity Radioactive Wastes, editor: J.T. Sentowski, Nova Science Publishers, Inc., Wellman, D.M., Bovaird, C.C., Mattigod, S.V., Parker, K.E., Clayton, L.N., Powers, L.J., and Wood, M.I., Concrete Materials: Properties, Performance, and Applications, Chapter 5
- Building Materials Information Sheet 11, Powers, Laura J., Royal Institution of Chartered Surveyors, London, Early Cements, Built Environment Journal, 62
- The Power of Petrography, Powers, L.J., Structure, Vol. 3, No. 2
- How Clean?, Powers, Laura and Jennings, Victoria, St. Louis, MO, A Methodology to Assess Progress of CCR Removal in Real Time, World of Coal Ash, EPRI 1st Place Poster Award

Education

- University of Saskatchewan - Saskatoon - MS - Geology - Saskatchewan
- University of Massachusetts - BS - Geology - Amherst

Affiliations

- ASTM International
- Society of Concrete Petrographers
- Geological Society of America
- American Concrete Institute