



MICHAEL P. SCHULLER, P.E.

CURRICULUM VITAE

**Education:**

BSCE, University of Colorado, 1987

MSCE, University of Colorado, 1989

Position:

President & Principal, Atkinson-Noland & Associates, Inc., Boulder, Colorado

Professional Registrations:

Registered Professional Engineer, State of Colorado, 1994, No. 29544

Registered Professional Engineer, State of New York, 2013, No. 93125-1

Registered Professional Engineer, State of New Jersey, 2017, No. GE 5339100

Michael P. Schuller is president of Atkinson-Noland & Associates in Boulder, Colorado, a consulting engineering firm specializing in evaluation and strengthening of masonry materials and structures. Experience at Atkinson-Noland includes the design of industrial and residential structures, condition evaluation of structures, expert witness services, masonry repair and strengthening, and research projects involving masonry and concrete. Research projects have included investigations of nondestructive methods for the evaluation of masonry structures, the effect of confinement reinforcement on the behavior of reinforced masonry, the behavior of reinforced concrete frames with masonry infill, and an international project with Italian and Slovenian agencies developing methods for repair and retrofit of existing masonry structures. Mr. Schuller was the Principal Investigator of a research project conducted for the Nuclear Regulatory Commission developing a tomographic imaging technique that is being used for evaluating concrete and masonry materials. He has worked on many commercial building evaluation projects with past clients including the Nuclear Regulatory Commission, U.S. Army Corps of Engineers, University of Georgia, University of Wisconsin, University of Missouri, the Getty Institute, National Park Service, World Monuments Fund, United Nations and private building owners. He taught a course in Masonry Structural Design at the University of Colorado, Boulder, from 2000 through 2008 and in 2016.

Mr. Schuller has over 100 publications relating to evaluation, repair, and structural behavior of concrete and masonry structures and served on the organizational committee of three conferences on nondestructive evaluation of civil structures and materials. He was the organizational chair of the 1996 "Conference on Nondestructive Evaluation of Civil Structures and Materials" and the Technical Chair of

the 2015 "12th North American Masonry Conference." Mr. Schuller is a co-author of a book titled "Nondestructive Evaluation and Testing of Masonry Structures."

Mr. Schuller is a Fellow of the Masonry Society and the Association for Preservation Technology, serves on the Board of Directors of the Rocky Mountain Masonry Institute, and is a member of The Masonry Society, the Association for Preservation Technology, and the International Council on Monuments and Sites. He is active in the development of masonry test standards and training courses with ASTM Committees C-12 and C-15, RILEM Committee TC-MDT, and The Association for Preservation Technology's Training and Education Committee.

Current Positions:

President, Atkinson-Noland & Associates, Inc., Boulder, Colorado, 1995 to present.

Previous Positions:

Lecturer, University of Colorado, 2016

Adjunct, University of Colorado, 2000 to 2008

Owner, Preservation Technology, LLC, 2001 to 2005.

Technical Consultant, Rocky Mountain Masonry Institute, 1995 to 2010.

Technical Consultant, Masonry Construction Magazine, 1998 to 1999.

Engineer, Atkinson-Noland & Associates, Inc., 1989 to 1995.

Research Assistant, Politecnico di Milano, Italy, 3 week assignment, 1994.

Structural Design, J.C. Baur & Associates, Inc., 1989 to 1991.

Research Associate, University of Colorado at Boulder, 1987 to 1989.

Laboratory Assistant, Atkinson-Noland & Associates, Inc., 1986 to 1987.

Assistant to Project Manager, Castle Pines Construction, 1986.

Internship, Engineering & Research Department, U.S. Bureau of Reclamation, 1985.

Geotechnical Engineering Laboratory Assistant, University of Colorado, 1985 to 1986.

Professional Awards

2015: John B. Scalzi Research Award, given by The Masonry Society for outstanding lifetime contributions to masonry research

2009: Fellow, the Association for Preservation Technology International

2007: Fellow, The Masonry Society

2001: Rocky Mountain Masonry Institute Masonry Hero Award

1999: Kansas Preservation Alliance Award for Technical Excellence, restoration and structural stabilization of the Ludington-Thatcher home, Lawrence, Kansas.

1991: Alan H. Yorkdale Memorial Award, from ASTM Committee C 15, for the best paper published in the English language pertaining to masonry during the previous year: Shing, P.B., Schuller, M.P., Hoskere, V.S., Carter, E., "Flexural and Shear Response of Reinforced Masonry Walls", American Concrete Institute Structural Journal, Vol. 87, No. 6, November-December 1990.



1990: Outstanding Conference Paper Award, from The Masonry Society: Shing, P.B., Schuller, M.P., and Hoskere, V.S., "Strength and Ductility of Reinforced Masonry Shear Walls", Proceedings, Fifth North American Masonry Conference, Champaign, Illinois, June, 1990.

Membership in the following organizations:

American Society for Testing and Materials
Association for Preservation Technology International
International Concrete Repair Institute
RILEM
Rocky Mountain Masonry Institute
The Masonry Society
US/ICOMOS, International Council on Monuments and Sites

Active work on the following committees:

American Society for Testing and Materials: Committee C12 on masonry mortars and grouts
American Society for Testing and Materials: Committee C15 on manufactured masonry units
Association for Preservation Technology International: Vice President (2009 – 2013); Co-Chair, Training and Education Committee (2005 – 2013), Board of Directors (2004-2013)
RILEM: Committee TC 257-DHM, Design and Application of Hydraulic Grouts for Repair and Strengthening of Historic Masonry Structures
The Masonry Society: Chair, Committee on Existing Masonry (1998 – 2004), Board of Directors (1996 – 2000, 2011 - 2015)
The Masonry Society: Research Committee

International Professional Experience

Atkinson-Noland has had a long-standing involvement in international research projects and committee work. Mr. Schuller has been involved in consulting work on the Parliament Buildings in Ottawa, Canada, the site of Orongo on Easter Island, the temples of Angkor Wat, Phnom Bakheng, Preah Khan, and Ta Som, Cambodia, the village of Huang Cun, China, Old Fourah Bay College and the Bunce Island fortification, Sierra Leone, and in joint research projects investigating masonry repair procedures with Italian and Slovenian research agencies. He spent three weeks as a visiting researcher at the Polytechnic University of Milan in 1994, investigating nondestructive evaluation techniques and repair procedures on buildings at the University of Pavia. Atkinson-Noland maintains an ongoing professional relationship with Professor Luigia Binda of the Polytechnic University of Milan, who is actively studying historic mortars, masonry deterioration processes, and repair procedures for stone masonry. He served as an engineering expert for the History Channel on programs investigating construction of the Taj Mahal, India, the fortresses and churches constructed in Russia by Ivan the Terrible, and the works of Stalin in and around Moscow, and for the DIY Network on aspects of reinforced concrete masonry and brick masonry construction.

Mr. Schuller is a member of RILEM Committee TC-MDT on Masonry Durability and On-Site Testing and was a member of RILEM Committee 127 MS on Masonry Nondestructive Testing, which recently



completed its mission. He has attended and lectured at professional conferences and workshops throughout the United States as well as Canada, Italy, Spain, Portugal, Czech Republic, Brazil, Great Britain, Scotland, Cambodia, China, Costa Rica, and the Philippines.

Listing of Publications

1. "Preventing and Handling Masonry Efflorescence," Russian Journal of Cement and Its Applications, Science & Technology and Production Journal, Issue No. 6-2016, November 2016.
2. Proceedings of the 12th North American Masonry Conference (editor, with Fred Rutz and Bret Terry), The Masonry Society, Longmont, Colorado, May 2015.
3. "An Overview on The Use of Flat Jack for Nondestructive Testing," (with Mateus O. Soriani, Eduardo R. Sanches, and Guilherme A. Parsekian), submitted for presentation at the 12th North America Masonry Conference, Denver, May 2015.
4. Assessment and Retrofit of Masonry Structures, (with A.A. Hamid), in publication, The Masonry Society, Longmont, Colorado, 2015.
5. "Experimental and Analytical Studies of a Tapered Anchor System for Masonry Retrofit Applications," (with Carlo Citto, Wayne Ruth, Matthew Ruth, and Ian Murray), 9th International Masonry Conference, Guimaraes, Portugal, July 2014.
6. "Confined Masonry Shear Wall Testing and Analysis", (with Lan Nguyen, G. Camata, and R Corotis). Prepared for journal publication, 2014.
7. "Strengthening of Historic Brick Masonry Foundations at St. Patrick's Church: A Case Study," (with Andrew Geister and Wayne Ruth), 9th Structural Analysis of Historic Construction Conference, October, 2014, Mexico City.
8. "Internal Strengthening of Historic Clay Brick Masonry Pump Houses in New Orleans," (with Donald Harvey Jr. and Wayne Ruth), 12th Canadian Masonry Symposium, Vancouver, British Columbia, June 2013.
9. "Nondestructive Evaluation in a Preservation-Engineering Curriculum," Bulletin of the Association for Preservation Technology, 44: no.1 (2013), 41-46.
10. "Evaluation and Repair of Historic Masonry," (with W. Ruth, C. Yan, and S. Wo), International Conference on Sustainable Building Restoration and Revitalisation, Shanghai, China, September 2013.
11. "Internal Strengthening of Historic Clay Brick Masonry Pump Houses in New Orleans," (with Donald Harvey Jr. and Wayne Ruth), 8th International Conference on Structural Analysis of Historical Constructions, Wroclaw, Poland, October 2012.



12. "Validation of a Newly Developed Standard for Evaluating Mortar for the Repair of Historic Masonry (ASTM C 1713-10)," (with Jennifer E. Tanner, Margaret L. Thomson, and Shan Wo), 11th North American Masonry Conference, Minneapolis, June 2011.
13. "In Situ Evaluation of Masonry Shear Behavior Using Digital Image Analysis," (with Carlo Citto, Kaspar Willam, and Shan Wo), ACI Materials Journal, V. 108, No. 4, p. 413-422, 2011.
14. Nondestructive Evaluation: Masonry, (with D.W. Harvey), Practice Points article, Association for Preservation Technology International, Springfield, IL, August 2010.
15. "Engineering for Heritage Masonry," (with G. Boornazian), Structure Magazine, Volume 17, No. 5, May 2010.
16. "Nondestructive Evaluation, Sensors, and Diagnostics," Colloquium on the Development of Heritage Engineering Curricula, University of Vermont, June 2009.
17. Ground Penetrating Radar (GPR) in Historic Preservation Applications, (with Donald Harvey), Proceedings, American Society for Nondestructive Testing Spring Conference, St. Louis, March 2009.
18. "Estimating Compressive Strength of Historic Unreinforced Masonry Using Flatjack Deformability Tests," (with S. Wo), Conference on Structural Faults & Repairs, Edinburgh, Scotland, 2008.
19. "Nondestructive Testing and Damage Assessment of Masonry Structures," Proceedings, RILEM Workshop on In-situ Evaluation of Historic Wood and Masonry Structures, Prague, Czech Republic, 10-14 July, 2006.
20. "Masonry Cold Weather Requirements," (with David Woodham) Concrete International, American Concrete Institute, 2005.
21. "Modifying Building Response Using Energy Absorbing Diaphragm to Wall Connectors," (with Alan Lockrem and Reginald Locke), Seminar on Structural Analysis of Historic Construction, Padua, Italy, November 2004.
22. "More Than Meets the Eye, Evaluating Masonry with Nondestructive and In Situ Tests," Structure Magazine, May 2004.
23. "Nondestructive Testing and Damage Assessment of Masonry Structures," Invited paper for the Journal of Progress in Structural Engineering and Materials, Vol. 5, No. 4, John Wiley & Sons, 2003.
24. Adhered Natural Stone Veneer Installation Guide, published by the Rocky Mountain Masonry Institute, 2003.
25. "Tomographic Imaging of Concrete Structures," (with K. Streeter and Y.P. Xi), Journal of Engineering Mechanics, ASCE, 117(11), 2609-2622, 2003.
26. "Ultrasonic Attenuation Tomography of Concrete Structures," (with Kelly Streeter and Yunping Xi), 16th Engineering mechanics conference (ASCE), Seattle, USA, July 16-18, 2003.



27. "Development of a Flexible Flatjack for Quantitative Evaluation of Masonry," (with David Woodham), Proceedings of the 9th North American Masonry Conference, Clemson University, June 2003.
28. "Use of Nondestructive Methods to Determine Historic Masonry Construction Means and Techniques at Latrobe's Baltimore Cathedral," (with Wayne T. Ruth and John G. Waite), Proceedings of the 9th North American Masonry Conference, Clemson University, June 2003.
29. "Quality Control of Masonry Mortars in the United States," (with Robert van der Hoeven), Proceedings of RILEM TC177MDT Workshop on Site Control and Nondestructive Evaluation of Masonry Structures and Materials, Mantova, Italy, November 2001.
30. "Flatjack Methods for Diagnosis of Modern Masonry," Proceedings of RILEM TC177MDT Workshop on Site Control and Nondestructive Evaluation of Masonry Structures and Materials, Mantova, Italy, November 2001.
31. "Soil Erosion Issues in the Mata Ngarau Sacred Precinct, Ceremonial Village of Orongo, Easter Island," (with A. Elena Charola), Report to the World Monuments Fund, July 2001.
32. "Modern Masonry Challenges and Solutions; I. Materials," (with A. Elena Charola), Preserving the Recent Past II, Association for Preservation Technology International, Philadelphia, PA, October 2000.
33. "Modern Masonry Challenges and Solutions; II. Assemblages," (with A. Elena Charola), Preserving the Recent Past II, Association for Preservation Technology International, Philadelphia, PA, October 2000.
34. "Why Does Fog Spraying Work?" (with William D. Palmer, Jr., and Bruce Suprenant), Magazine of Masonry Construction, September 2000.
35. "Do Hot Weather Code Requirements Work?" (with William D. Palmer, Jr., and Bruce Suprenant), Magazine of Masonry Construction, August 2000.
36. "In-Place Stabilization of a Stone Masonry Façade," (with Wayne Ruth), 12th International Brick/Block Masonry Conference, Madrid, Spain, June 2000.
37. "Use of the Pendulum Hammer Hardness Test for Mortar Evaluation," (with David J. Transue and Kevin L. Rens), 8th North American Masonry Conference, Austin, Texas, The Masonry Society, Boulder, Colorado, 1999.
38. "Masonry Seismic Stabilization Using Grout Injection Repair," (with R. van der Hoeven, S. Brokken, and W. Ruth), Proceedings of the Eighth International Conference on Structural Faults and Repairs Conference, London, July 1999.
39. "Comparison of Board Life of Portland Cement-Lime Mortars and Lime-Replacement Mortars," (with Robert van der Hoeven and Margaret Thomson), 8th North American Masonry Conference, Austin, Texas, The Masonry Society, Boulder, Colorado, 1999.



40. "Nondestructive Method for Hardness Evaluation of Mortars," (with the Rocky Mountain Masonry Institute and University of Colorado at Denver), Project Report for the National Center for Preservation Technology and Training, Grant Agreement No. MT-2210-7-NC-013, Natchitoches, LA, 1998.
41. "Injection Grouting for the Repair of Brick Masonry," (with R.H. Atkinson), Chapter 28, Conservation of Historic Brick Structures, Edited by N.S. Baer, S. Fitz, and R.A. Livingston, Donhead Publishing, 1998.
42. "Development and Application of Acoustic Tomography to Masonry," (with R.H. Atkinson), Chapter 10, Conservation of Historic Brick Structures, Edited by N.S. Baer, S. Fitz, and R.A. Livingston, Donhead Publishing, 1998.
43. "What TCCMAR Taught Us," (with Mark Wallace and Richard Klingner), Magazine of Masonry Construction, Volume 11, No. 10, October 1998.
44. "Comparative Investigation of Bond Properties of Portland Cement-Lime Mortars and Lime Replacement Mortars," (with Margaret L. Thomson and Robert S.K. van der Hoeven), 8th Canadian Masonry Symposium, Jasper, Alberta, Canada, June 1998.
45. "Advanced Concepts for Masonry Reinforcement," (with Robert S.K. van der Hoeven and David B. Woodham), 8th Canadian Masonry Symposium, Jasper, Alberta, Canada, June 1998.
46. "Comparative Investigation of Plastic Properties and Water Permeance of Cement-Lime Mortars and Cement-Lime Replacement Mortars," (with R.S.K. van der Hoeven, and M.L. Thomson), *Water Problems in Building Exterior Walls, STP1352*, Jon M. Boyd, Ed., American Society for Testing and Materials, 1998.
47. "Acoustic Tomographic Imaging of Concrete Structures: History, Interest, and Applications," (with David J. Transue and Kevin L. Rens), American Society of Civil Engineers Journal of Infrastructure Systems, March 1998.
48. "Acoustic Tomography for Evaluation of Unreinforced Masonry," (with M. Berra, R.H. Atkinson and L. Binda), *Construction and Building Materials*, Vol 11., No. 3, pp. 199-204, Elsevier Science Ltd., Kidlington, Oxford, U.K., 1997.
49. "A Study of the Practicality of Acoustic Tomographic Imaging for the NDE of Concrete Structures," (with David J. Transue and Kevin L. Rens), Proceedings, ASCE conference on Infrastructure Condition Assessment, Boston, August, 1997.
50. "Characterization of Concrete Condition Using Acoustic Tomographic Imaging," (with D.B. Woodham), U.S. Nuclear Regulatory Commission NUREG/CR-6518, July 1997.
51. "Repairing Common Masonry Problems by Grout Injection," (with Shawn Albert and Wayne Ruth), Proceedings of the Seventh International Conference on Structural Faults and Repair, Edinburgh, Scotland, July 1997.
52. "Repair and Retrofit of Unreinforced Masonry Structures," (with T. Manzouri, P. Benson Shing, and B. Amadei), *Earthquake Spectra*, Earthquake Engineering Research Institute, Volume 12, No. 4, November 1996.



53. "Masonry Testing," Seminar Notes, The Rocky Mountain Masonry Institute, Denver, CO, November 21, 1996.
54. "Evaluating Structural Damage and Deterioration Using Tomographic Velocity Reconstructions," (with David B. Woodham), Proceedings of a Workshop on Structural Reliability in Bridge Engineering, University of Colorado, Boulder, October 1996.
55. "Masonry Repair by Grout Injection," (with Wayne Ruth), Magazine of Masonry Construction, Volume 9, No. 9, September 1996.
56. Working Group Reports, 3rd Conference on Nondestructive Evaluation of Civil Structures and Materials, (Co-Editor with D. Woodham), Boulder, Colorado, September 1996.
57. Proceedings, 3rd Conference on Nondestructive Evaluation of Civil Structures and Materials, (Co-Editor with D. Woodham), Boulder, Colorado, September 1996.
58. "Material Characterization Using Tomographic Velocity Reconstructions," (with D. Woodham and R.S.K. van der Hoeven, Proceedings, 3rd Conference on Nondestructive Evaluation of Civil Structures and Materials, Boulder, Colorado, September 1996.
59. "Experimental and Numerical Investigation on a Brick Masonry Building Prototype," (with L. Binda, S. Abbaneo, M. Berra, A. Faticcioni, and R.H. Atkinson), Report No. 13, Report on Sonic Pulse Velocity Testing and Tomographic Analysis, Dipartimento di Ingegneria Strutturale, Politecnico di Milano, Italy, September 1996.
60. "Historic Preservation of Masonry, Structural Notes," Seminar Notes, The Rocky Mountain Masonry Institute, Denver, CO, June 12, 1996.
61. "Repair of Unreinforced Masonry Structures with Grout Injection Techniques", (with T. Manzouri, P.B. Shing, and R.H. Atkinson), Proceedings, Seventh North American Masonry Conference, Notre Dame University, Indiana, June 1996.
62. "Masonry Repair by Grout Injection", (with C. T. Grimm), Proceedings, Seventh North American Masonry Conference, Notre Dame University, Indiana, June 1996.
63. "Acoustic Tomography Application to the Study of a Full-Scale Model of a Masonry Building", (with S. Abbaneo, L. Binda, R.H. Atkinson, and M. Berra), Proceedings, Seventh North American Masonry Conference, Notre Dame University, Indiana, June 1996.
64. "Mortar Joints - How Full is Full?" Masonry Tech Memo, Rocky Mountain Masonry Institute Newsletter, Denver, CO, April/May 1996.
65. "Repair and Retrofit of Unreinforced Masonry Walls: Experimental Evaluation and Finite Element Analysis", (with T. Manzouri, P.B. Shing, B. Amadei, and R.H. Atkinson), Report to the National Science Foundation, Report Number CU/SR-95/2, University of Colorado at Boulder, November 1995.
66. "Flashing in the 90's - It's Not What You Think," Seminar Notes, The Rocky Mountain Masonry Institute, Denver, CO, November 8, 1995.



67. "Acoustic Tomography for Evaluation of Unreinforced Masonry," (with M. Berra, R.H. Atkinson and L. Binda), Structural Faults & Repairs Conference, London, July 1995
68. "Acoustic Tomographic Studies of Reinforced Concrete", (with R.H. Atkinson and D.A. Frank), Structural Faults & Repairs Conference, London, July 1995.
69. "Acoustic Tomography for Evaluation of Unreinforced Masonry," (with M. Berra, R.H. Atkinson and L. Binda), RILEM 127 MS Workshop on Evaluation and Strengthening Existing Masonry Structures, Padova, Italy, June 1995.
70. "Structural Evaluation of Historic Masonry Buildings", (with R.H. Atkinson and J.L. Noland), Association for Preservation Technology Bulletin, Vol. XXVI, No. 2-3, 1995.
71. "Nondestructive Evaluation of Masonry Structures -- Standardization and Current Practice", (with R.H. Atkinson and G.R. Kingsley), Proceedings, First National Conference and Workshop on Research Into Practice, University of Maryland, College Park, MD, June 1995.
72. "Injection Grouting for Repair of Masonry: Research into Practice", (with R.H. Atkinson and P.B. Shing), Proceedings, First National Conference and Workshop on Research Into Practice, University of Maryland, College Park, MD, June 1995.
73. Nondestructive Evaluation and Testing of Masonry Structures, (with B. A. Suprenant), The Aberdeen Group, Addison, Illinois, 1994.
74. "Performance of Masonry-Infilled R/C Frames Under In-Plane Lateral Loads", (with A.B. Mehrabi, P.B. Shing, and J.L. Noland), National Science Foundation Report, University of Colorado Research Series No. CU/SR-94/6, Boulder, Colorado, 1994.
75. "Masonry Research for Limit-States Design", (with Michael I. Hammons, Richard H. Atkinson, and Paul J. Tikalsky), Construction Productivity Advancement Research (CPAR) Program, U.S. Army Corps of Engineers Report CPAR-SL-94-1, Waterways Experiment Station, Vicksburg, MS, October 1994.
76. "Evaluation of Concrete Using Acoustic Tomography", (with Richard H. Atkinson), Proceedings, Review of Progress in Quantitative Nondestructive Evaluation, Snowmass, Colorado, August, 1994.
77. "Experimental Evaluation of Masonry-Infilled R/C Frames", (with A. Mehrabi, P. Shing, and J. Noland), Submitted to The American Society of Civil Engineers Structural Journal, 1994.
78. "Use of Tomography for Diagnosis and Control of Masonry Repairs", (with M. Berra, A. Fatticioni, R. Atkinson, and L. Binda), Proceedings, 10th International Brick/Block Masonry Conference, Calgary, Alberta, July 1994.
79. "Injection Grouting for Repair and Retrofit of Unreinforced Masonry", (with R. Atkinson and J. Borgsmiller), Proceedings, 10th International Brick/Block Masonry Conference, Calgary, Alberta, July 1994.
80. "Characterization of Concrete Condition Using Acoustic Tomographic Imaging", Phase I SBIR Report, U.S. Nuclear Regulatory Commission Contract No. NRC-04-93-094, April 1994.



81. "Performance of Masonry Infilled R/C Frames Under In-Plane Lateral Loads: Experiments", (with A. Mehrabi, J. Noland, and B. Shing), Proceedings from the NCEER Workshop on Seismic Response of Masonry Infills, San Francisco, 1994.
82. "Development and Application of Acoustic Tomography to Masonry", (with R.H. Atkinson), NATO Meeting, Venice, Italy, November 1993.
83. "Evaluation of Grout Injection Techniques for Unreinforced Masonry Structures", (with P.B. Shing, T. Manzouri, R.H. Atkinson, M.P. Schuller, B. Amadei), Fifth U.S. National Conference on Earthquake Engineering, Chicago, IL, July 1994.
84. "Experimental Evaluation and Finite Element Analysis of Masonry-Infilled R/C Frames", (with P.B. Shing, A.B. Mehrabi, and J.L. Noland), American Society of Civil Engineers Structures Congress, Atlanta, Georgia, 1994.
85. "Evaluation of a Hollow Clay Tile Industrial Building for Continued Use," (with R.H. Atkinson and J.L. Noland), Proceedings, Structural Faults and Repairs, Edinburgh, U.K., 1993.
86. "Evaluation of Injectable Cementitious Grouts for Repair and Retrofit of Masonry," (with R.H. Atkinson), Masonry: Design and Construction, Problems and Repair, ASTM STP 1180, John M. Melander and Lynn R. Lauersdorf, Eds., American Society for Testing and Materials, Philadelphia, 1993.
87. "Interim Report on a Study to Determine Lap Splice Requirements for Reinforced Masonry," (with M.I. Hammons and R.H. Atkinson), Masonry: Design and Construction, Problems and Repair, ASTM STP 1180, John M. Melander and Lynn R. Lauersdorf, Eds., American Society for Testing and Materials, Philadelphia, 1993.
88. Proceedings, Conference on Nondestructive Evaluation of Civil Structures and Materials, (Co-Editor with B. Suprenant and J.L. Noland), Boulder, Colorado, May 1992.
89. "Development of Injectable Grouts for the Repair of Unreinforced Masonry", (with R.H. Atkinson), Workshop on Effectiveness of Injection Techniques for Retrofitting of Stone and Brick Masonry Walls in Seismic Areas, Department of Structural Engineering, Politecnico di Milano, Milan, Italy, March 1992.
90. "The Effect of Slenderness and End Restraint on the Behavior of Masonry Prisms - A Literature Review," (with G.R. Kingsley and J.L. Noland), The Masonry Society Journal, Vol. 10, No. 2, February 1992.
91. "Nondestructive Test Methods Applied to Historic Masonry Structures," (with R.H. Atkinson and J.L. Noland), Proceedings - The Seismic Retrofit of Historic Buildings Conference, San Francisco, 1991.
92. Response of Single-Story Reinforced Masonry Shear Walls to In-Plane Lateral Loads, (with P.B. Shing, J.L. Noland, H.P. Spaeh, and E.W. Klammer), TCCMAR Report No. 3.1(a)-1, January 1991.
93. Nondestructive Evaluation of Masonry Structures, (with J.L. Noland, R.H. Atkinson, and G.R. Kingsley), National Science Foundation Research Report, 1991.



94. "Flexural and Shear Response of Reinforced Masonry Walls", (with P.B. Shing, V.S. Hoskere, and E. Carter), American Concrete Institute Structural Journal, Vol. 87, No. 6, November-December 1990.
 95. "A Review of the Flatjack Method for Nondestructive Evaluation", (with J.L. Noland and R.H. Atkinson), Proceedings, Conference on Nondestructive Evaluation of Civil Structures and Materials, Boulder, Colorado, October 1990.
 96. Proceedings, Conference on Nondestructive Evaluation of Civil Structures and Materials, (Co-Editor with S. Sture, B. Suprenant, and J.L. Noland), Boulder, Colorado, October 1990.
 97. "Strength and Ductility of Reinforced Masonry Shear Walls", (with P.B. Shing and V.S. Hoskere), Proceedings, Fifth North American Masonry Conference, Champaign, Illinois, June, 1990.
 98. "In-Plane Resistance of Reinforced Masonry Shear Walls", (with P.B. Shing and V.S. Hoskere), American Society of Civil Engineers Structural Journal, Vol. 116, No. 3, March 1990.
 99. Flexural Behavior of Reinforced Masonry Shear Walls, M.S. Thesis, University of Colorado, 1989.
 100. "Design and Analysis of Reinforced Masonry Shear Walls", (with P.B. Shing, E. Klamerus, V.S. Hoskere, and J.L. Noland), Proceedings, 5th Canadian Masonry Symposium, Vancouver, 1989.
 101. "Behavior of Single-Story Reinforced Masonry Shear Walls Under In-Plane Cyclic Lateral Loads", (with P.B. Shing, J.L. Noland, and E. Klamerus), Proceedings of the Fourth Meeting of the Joint Technical Coordinating Committee on Masonry Research, San Diego, October 1988.
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Listing of Forensic Experience

1. Happy Hearts Children Center v. Quality Stone Veneer, et al.
For a third party defendant (masonry subcontractor) for claims related to installation of adhered stone veneer. Conducted site visit.
November 2015 to present.
2. The Timbers Condominiums of Fort Collins v. Environmental Stoneworks, et al.
For a third party defendant (masonry subcontractor) for claims related to installation of adhered stone veneer.
May 2015 to present.
3. Barrington Heights Townhome Association, Inc., v. Barrington Heights, LLC., v. CC Communities, LLC, et al.
El Paso County District Court Case No. 2014 CV340863
For a third party defendant (masonry subcontractor) for claims related to installation of masonry veneer. Conducted site visit.
May 2015 to present.
4. Beazer Homes Holding Corp. v. Mortar, Inc., et al.
Adams County District Court Case No. 2013CV30784
For a third party defendant (masonry subcontractor) for claims related to installation of brick masonry veneer. Defendant dismissed from claim.



April 2015 to July 2015.

5. Highlands at Stonegate North Condominium Association v. C&A Construction, Inc., L&M Masonry, et al.
For a third party defendant (masonry subcontractor) for claims related to installation of adhered stone veneer.
December 2014 to present.
6. KB Home Colorado, Inc., v. Environmental Materials et. al
Denver County District Court Case No. 2014 CV 032453
Prairie Meadows development. For a third party defendant (manufactured stone manufacturer and supplier) for claims related to installation of adhered stone veneer. Conducted site visit, prepared expert report. Case settled out of court.
September 2014 to December 2015.
7. Vallagio at Inverness v. Torres Masonry
For a third party defendant (masonry subcontractor) for claims related to installation of brick masonry veneer.
August 2014 to present.
8. Village West at Centennial Owners Association v. KB Home Colorado v. Edler's Mountain Masonry et. al
Arapahoe County District Court Case No. 2013 CV 31232
For a third party defendant (mason contractor) for claims related to installation of anchored brick veneer and adhered thin brick veneer. Conducted site visit, prepared expert report, and gave a deposition.
August 2014 to present.
9. Maple Leaf Condominium Association v. D.R. Horton, et al.
Jefferson County District Court Case No. 2013 CV 31849
For a third party defendant (manufactured stone manufacturer and supplier) for claims related to installation of adhered stone veneer. Conducted site visit.
May 2014 to January 2016.
10. Sierra Ridge v. Centex Homes, et al.
Arapahoe County District Court Case No. 2013 CV 605
For a third party defendant (manufactured stone manufacturer and supplier) for claims related to installation of adhered stone veneer. Conducted site visit and prepared expert report. Case settled out of court.
April 2014 to August 2014.
11. Cornerstone Townhomes Homeowners Association v. Himmelman Builders, LLC, et al.
Adams County District Court Case No. 14 CV 30501
For a third party defendant (manufactured stone manufacturer and supplier) for claims related to installation of adhered stone veneer.
April 2014 to July 2016.
12. Balterra Condominium Association v. D. R. Horton et al.
AAA Case No. 77443 E 00385 13



For a third party defendant (masonry subcontractor) for claims related to installation of brick masonry veneer. Conducted site visit, prepared expert report, testified at arbitration. September 2013 to September 2016.

13. Bluffs at Spring Creek Community Association, Inc., V. KB Home Colorado, Inc.
JAG No. 20130597A
For a third party defendant (masonry subcontractor) for claims related to installation of brick masonry veneer and adhered manufactured stone veneer. Conducted site visit, reviewed case file, prepared expert report.
July 2013 to 2014.
14. John Mahoney and Ellen Mahoney v. Koelbel and Company, et al.
District Court, County of Arapahoe, State of Colorado, Case No. 2012 cv 1278
For a third party defendant (masonry subcontractor) for claims related to structural movement and cracks in an adhered natural stone veneer system. Conducted site visit and prepared expert report.
January 2013 to 2014.
15. The Mansion Homes at Stapleton Condominium Association, Inc., v. D.R. Horton, Inc.
City and County of Denver District Court, Case No. 2012 CV 4558
For a defendant (masonry subcontractor) for claims related to water infiltration at adhered masonry veneer.
December 2012 to June 2015.
16. Westwoods Townhomes, Colorado Springs, Colorado
El Paso County District Court Division 2, Case No. 2012 CV 845
For a defendant (masonry subcontractor) for claims related to brick and concrete masonry veneer construction. Wrote expert report, gave deposition testimony, testified in court.
November 2012 to June 2014.
17. Thorncreek Village Condominiums v. D.R. Horton, Inc.
Adams County District Court Case No. 2011 CV 1463
For the defendant (masonry subcontractor) for claims related to exterior brick masonry and adhered masonry veneer. Made site visits, reviewed case file, provided expert report.
October 2012 to 2014.
18. City of Milwaukee v. Simpson Gumpertz & Heger, et al.
County of Milwaukee Circuit Court, Case No. 12cv004989
For the defendant (architect/engineer) for claims related to replacement terra cotta used on a historic preservation project. Case settled out of court.
August 2012 to December 2013.
19. Sawgrass Townhomes
CC Communities V. A-1 Superior Painting & Wallcovering, LLC, et al.
Douglas County District Court Case No. 11CV 2187
For the defendant (masonry subcontractor) for claims related to exterior adhered stone veneer installations. Conducted site visit, reviewed case file, provided expert report.



July 2012 to 2013.

20. D.R. Horton v. Canyon Creek Condominium Association, et al.
JAG Arb. No. 09-1722A, Denver
For the defendant (masonry and stucco subcontractor) for claims related to clay brick veneer, manufactured stone veneer, thin brick adhered veneer, and exterior cement plaster at a multi-building condominium development in Douglas County, Colorado. Reviewed case file, made site visits, wrote expert report. Settled out of court.
July 2012 to January 2014.
21. Timbers Club v. The Weitz Company
Pitkin County, Colorado.
For the defendant (general contractor) regarding concrete masonry and adhered masonry veneer at exterior applications. Claims were made regarding excessive efflorescence, cracking, and deterioration. Reviewed project design documents, made site visit.
May 2012 to April 2013. Settled out of court.
22. Elliot B. Maisel v. Erickson Construction, Inc., et al.
U.S. District Court, District of Colorado, Civil Action No. 11-CV-00555 REB-KLM
For a defendant (general contractor) for claims related to anchored stone veneer on a single-family residence in Steamboat Springs, Colorado. Reviewed project reports, generated expert reports, gave deposition testimony.
January 2012 to August 2012. Settled out of court.
23. Byron Riggs v. Copperleaf Construction
Adams County, Colorado, mediation.
For the plaintiff (private homeowner) for claims related to brick veneer and concrete construction at a residential addition. Conducted site visit, wrote expert report, and testified at mediation.
January 2012 to November 2013.
24. Ranch Creek Villas Homeowners Association, Inc., ve. Ranch Creek Villas, LLC, et al.
Adams County District Court Case Number 2011CV985
For a defendant (masonry subcontractor) for claims related to adhered stone veneer on a multi-unit residential project in Colorado. Reviewed project reports.
November 2011 to December 2013.
25. County of Monmouth v. R.M. Shoemaker Co. et al.
Monmouth County Court No MON-L-1204-04.
For a defendant (general contractor) for claims related to structural reinforced concrete masonry and masonry veneer on a prison project in New Jersey. Reviewed project reports, generated expert report, gave deposition. Case settled in arbitration.
November 2011 to November 2015.
26. Stonybridge Villas Townhome Association, Inc., v. Century Communities Colorado, LLC, et al.



Judicial Arbiter Group File No. 2011-0484A

For a defendant (masonry subcontractor) for claims related to adhered stone veneer on a multi-unit residential project in Brighton, Colorado. Conducted site visit, reviewed project reports, wrote expert report. Settled out of court.

August 2011 to December 2013.

27. Fair Wind Condominiums Homeowners Associatin, Inc. v. L&M Masonry, et al.
Broomfield District Court Case No. 2011CV35
For a defendant (masonry subcontractor) for claims related to adhered stone veneer on a multi-unit residential project in Broomfield, Colorado. Conducted site visits, provided expert report. Settled out of court.
July 2011 to December 2013.
28. Cook Residence
Mesa County District Court Case No. 10-CV-4184
For the defendant (masonry subcontractor) for claims related to stone masonry at the building interior and exterior. Reviewed project case file. No expert report written; case settled out of court.
August 2011 to December 2012.
29. Stapleton VIII Mansion Park
D.R. Horton, Inc., v. Torres Masonry Experts, LP, et al.
American Arbitration Association Case No. 77 421 E 00425 10 MOMA
For a defendant (masonry subcontractor) for claims related to brick and adhered stone veneer on a multi-unit residential project in Colorado. Conducted site visit, reviewed project reports, wrote expert report.
July 2011 to October 2012.
30. Pulte Home Corporation v. Rhineharts Masonry, Inc., et al.
Adams County District Court Case No. 2010CV689
For a defendant (masonry subcontractor) for claims related to adhered stone veneer on a multi-unit residential project in Brighton, Colorado. Conducted site visit, reviewed project reports, wrote expert report. Settled out of court.
April 2011 to February 2012.
31. Rivergate Lofts Condominium Owners Association v. Rivergate Lofts Partners, LLC, et al.
La Plata County District Court
Cause No. 10CV19
For a defendant (masonry subcontractor) for claims related to brick veneer, concrete masonry veneer, and precast concrete elements on a mixed-use commercial and residential project in Durango, Colorado. Conducted site visit, reviewed project reports, prepared an expert report and rebuttal report. Settled out of court.
April 2011 to March 2012.
32. Tower Ridge II Townhome Homeowners Association, Inc., v. Tower Ridge II, LLC, et al.
Arapahoe County District Court Case Number 2008CV2203
For a defendant (masonry subcontractor) for claims related to brick veneer on a multi-unit residential project in Colorado. Conducted site visit, reviewed project reports, generated expert report, gave deposition testimony.



March 2011 to 2013.

33. Montarbor Townhomes
Pulte Home Corporation v. Sundance Masonry, LLC, et al.
El Paso County District Court Case Number 2011-CV-3836
For a defendant (masonry subcontractor) for claims related to adhered stone masonry veneer on a multi-unit residential project in Colorado Springs, Colorado. Conducted site visit, reviewed project reports.
March 2011 to 2013.
34. Penterra Plaza
Denver County District Court Case No. 11CV 1023
Condominium Association for the Residences at Penterra Plaza, Inc., v. SHLP Union Plaza, LLC, et al.
For the defendant (developer) for claims related to exterior brick masonry and precast concrete construction. Reviewed case file, conducted site visits and investigations, wrote expert report.
February 2011 to October 2012.
35. The Landing At Cherry Creek Condominium Association, Inc., v. D.R. Horton, Inc.
Arapahoe County District Court Case Number 2010CV2043
For a defendant (masonry subcontractor) for claims related to brick veneer on a multi-unit residential project in Colorado. Conducted site visit, reviewed project reports, generated expert reports, gave deposition testimony.
December 2010 to 2013.
36. Concept LLC, Robert Bruce, v. Ray Stewart
Las Animas County Court, Case Number 09553
For the plaintiff (building owner) regarding the appearance and quality of mortar joint repointing on an historic school in Trinidad, Colorado. Reviewed project conditions and gave expert testimony by telephone during court proceedings.
October 2009.
37. McMurray v. Rich and Krusen Design, Inc., et al.
Eagle County District Court, Case No. 08CV441
For the defendant (design build team) regarding anchored stone veneer construction on a multi-million dollar home outside Eagle, Colorado. Reviewed project details, conducted a site visit, and prepared an expert report. Settled out of court.
2009 to 2010.
38. Platt T. Hubbell and Kelley S. Hubbell v. T.J. Construction Co., Inc., et al.
Garfield County District Court Civil Action No. 05-cv-00026-CMA-KLM
Acted as an expert for the defendant regarding reinforced concrete wall and slab construction. Conducted a site visit to evaluate in-place reinforcement using microwave radar, determine concrete strength using rebound hardness, and identify condition. Prepared an expert report describing aspects of the reinforced concrete construction. Settled out of court.



July 2009 to 2011.

39. Prairie Ridge v. D.R. Horton v. Torres Masonry, et al.
Judicial Arbitrator Group
JAG NO. 2010-0544A Court
Denver
Conducted site visits and recorded conditions, for the defendant, on issues related to masonry veneer construction. Prepared an expert report describing masonry construction and rebutting plaintiff's expert. Provided testimony during arbitration.
January 2009 to 2011.
40. Silver Mesa Homeowners Association v. Silver Mesa at Palomino Park et al.
Denver County District Court Case No. 2007CV9559
Conducted site visits and observed probe openings, for the defendant, on issues related to masonry veneer construction. Settled out of court.
January 2009 to 2010.
41. SFI LTD. Partnership 47 vs. Sioux City Brick and Tile Company
Douglas County District Court, Nebraska
Conducted site visit, wrote expert report, and gave deposition for the plaintiff on a case involving masonry efflorescence and brick properties in a multi-building apartment complex in Lincoln, Nebraska.
January 2009 to April 2012.
42. Mountain Vista Estates Condominium Association, Inc., v Fairfield Homes at Mountain Vista, LLC
Case No. 07CV2046, Jefferson County District Court 1st JD, Colorado
Supported installer of adhered manufactured stone veneer (Marquez Masonry) as an expert witness. Claims were made against Marquez Masonry regarding the installation of the adhered veneer, its ability to resist moisture infiltration, and placement of control joints to accommodate movement.
2008.
43. Smith Precision Masonry, Inc., v. Vic Reichenbach, et al.
Case No. DV 07-0498, Montana Thirteenth Judicial District Court, Yellowstone County
Testified at deposition for the plaintiff in a case involving poor jobsite testing of masonry mortar. Settled during courtroom proceedings
October 2008 to 2010.
44. Cherry Grove East II Condominium Association v. D.R. Horton et al.
Case Number 2005CV4459, Arapahoe County District Court, Colorado
Conducted a series of site visits acting as an expert witness for the mason contractor Aspen Contractors, Inc. The development included a series of 12 multi-family condominium buildings and 11 garage structures with brick and concrete block veneer. The case included claims related to masonry construction, the cavity weep system, and the ability of brick column caps to resist moisture penetration. Settled out of court.



May 2007 to 2009.

45. J.E. Dunn Construction Company v. Great Northern Drywall Company, et al.
Case No. 2007CV1449, Division 3, Denver District Court, Colorado
Acting as expert witness for the mason contractor Central Masonry, Inc on two multi-story condominium complexes. The claim involved issues with the brick veneer, cavity wall drainage, flashing installation, and water penetration. Included review of repair designs, observations of water spray tests, observations during trial repairs, preparation of expert reports and deposition testimony. Settled out of court.
April 2006 to 2009.
46. GJR Management Holdings, L.P. et al., v. Jack Raus Inc. et al.
Cause No. 2000-39204, Houston
Conducted a series of investigations for the builder on a series of reinforced concrete masonry buildings throughout Texas and Alabama to investigate construction quality. Testing was conducted to identify the presence of vertical reinforcement, horizontal reinforcement, reinforced bond beams, grout, cracks, and grout strength throughout each building. This case settled out of court.
August 2005 to January 2007.
47. Byron Riggs v. U.S. Home Corporation
Adams County District Court Case No. 06CV 1513
For the plaintiff (private homeowner) for claims related to brick veneer construction. Conducted site visit, wrote expert report, gave deposition testimony, and testified at mediation.
July 2005 to August 2008.
48. The Legacy Apartments v. Pinkard Construction Company, et al.
Case No. 03 CV 703, Longmont, Colorado
Developed an expert report, gave deposition testimony, and provided courtroom testimony for the plaintiff on a case involving deficiencies in a masonry veneer on a multi-unit residential development. Issues included workmanship, mortar quality, and construction detailing. The case settled during jury deliberations.
2001 to 2010.
49. Grand Prix Motor Sports, Inc., vs. Interwest Development Group, Inc.; and Timothy Youngpeter, Littleton, Colorado
Provided site investigation services, an expert report, and rebuttal report for the plaintiff in a case involving missing reinforcement, missing grout, and poor aesthetics for a concrete masonry office/showroom building.
September 2004 to 2008.
50. Behan Residence Stone Paving
Steamboat Springs, Colorado, no case yet filed
August 2004 to September 2005



Provided an expert report and repair recommendations for a 13,300 square foot stone paving installation experiencing deterioration of stone and mortar. Visited the site, evaluated the as-built and current condition of stone, mortar, and setting bed. Provided recommended details and materials for pavement reconstruction.

51. Lazy H Ranch Stone Paving
Larkspur, Colorado, no case filed
July to September 2004
Evaluated a stone paving installation for the general contractor. The mortar in joints between stones and setting bed mortar were deteriorating and some stones becoming detached. Directed a series of cores to be removed from the installation and conducted a condition survey throughout the paving. Provided an expert report including recommendations for correct installation of stone paving.
52. Carey High School
Blaine County School District v. Brett Sullivan Construction Company
Carey, Idaho
March 2004 to May 2007
Retained as an expert witness for the plaintiff to evaluate a masonry school under construction in Carey, Idaho. A site visit was conducted and report generated providing opinions on the appearance of the brick and block, ability of the exterior building envelope to resist weather, and ongoing function of brick expansion joints. A list of recommended repairs was provided.
53. Lakewood Vista Brick Veneer
Lakewood Vista at Green Mountain Ranch Association v. Foxpointe Vista Phase I, Ltd.
Case No. 03CV790
Jefferson County District Court, Colorado
September to November 2004
Hired as an expert witness for the mason contractor (Keith Tusay Masonry) to evaluate masonry veneer construction on a series of wood-framed townhomes. Generated an expert report regarding the appearance of the masonry and construction of details such as flashing, sills, and wall penetrations.
The case settled out of court.
54. Carriage Row Homeowners Association v. Casson Building Corporation, et al., v. Joey Lambert Masonry, et al.
Case No. 2001CV2984, Courtroom 7
Denver, Colorado
2003
Acted as an expert witness for the mason contractor, Joey Lambert Masonry, to evaluate masonry veneer construction on a series of three-story townhomes. Conducted a site visit to evaluate the masonry construction and observe water spray tests conducted by others. Generated an expert report.
55. Kenneth W. Ready and Linda M. Ready v. Craig A. Turner and Michael J. Veruchi d/b/a Turner Veruchi Homes, et al.
Case No. 01-CV-117



Lone Tree, Colorado

2002

Hired as an expert for the mason contractor for masonry veneer construction on a private residence. Conducted site visit to evaluate in-place construction and generated an expert report discussing the masonry appearance, cracking, veneer moisture management system, and other masonry details such as veneer ties and brick sills.

56. Riverbend at Mill Village Condominium Association v. Parkside Homes, LLC

Case No. 2003-CV-717

Boulder County District Court

Longmont, Colorado

2005

Visited the site and evaluated masonry veneer construction on a series of townhomes, condominiums, and garages. Issues included slope of brick sills, veneer water management system, and brick ties. The case settled out of court.

57. National Church Residences of Sheldon Road v. DeMaria Building Co., et al.

Case No. 01-141666-CK

State of Michigan, Wayne County Circuit Court

March 2001 to July 2004

Retained as an expert witness for the defendant to evaluate a newly constructed 6-story concrete masonry building. Services included evaluation of construction quality, location of reinforcement and grout, evaluation of water penetration, development of a report, and deposition. Hired a sub-consultant to conduct seismic analysis of building as constructed. Settled out of court in July 2004.

58. Fitzgerald v. Shuman, et al.

Case No. CV OC 00-01740B

Pocatello, Idaho

August 2001

For the plaintiff regarding poor workmanship on a newly constructed single-family residence. Issues included improper cleaning, chloride contamination of mortar, corrosion of steel shelf angles, and appearance of exterior brick masonry. Services included a site visit and report.

59. Windy Point Rock Cut

Morrison, Colorado, no case filed.

June 2001

A facing of manufactured stone was applied to a rock cut along a highway project. Some sections of the facing were showing deterioration and staining after 1 year weather exposure and the installer has hired Atkinson-Noland to conduct an ongoing program to monitor deterioration on site. Laboratory testing was conducted to determine characteristic properties of the manufactured stone product including absorption and freeze-thaw durability.

60. Christopher M. Fort v. Kelli K. Whitehall

Case No. 2000-CV-5527

May 2001

Denver, Colorado

For the plaintiff in a case involving an historic 1890-era carriage house, which had been converted to a single-family residence. The structural stability and condition of the original house, various



additions, and temporary foundation shoring were the main issues of the case. The project included two site visits, engineering analysis, a report, and testimony in court.

61. Mark Crossen v. Vaughn Paul Construction
Arbitration
Boulder, Colorado
May 2001
For the plaintiff regarding deterioration and cracking of cast stone elements on a large single-family home. Included site visit, laboratory evaluation, report, and testimony at arbitration.
62. Landscape Edging of Colorado, Inc., v. Fine Homes, Inc.
Larimer County District Court, Case No. 99 CV 945
Fort Collins, Colorado
January, 2000
For the plaintiff on a claim for payment related to installation of a manufactured stone veneer on a single family home. Visited the site to review installation related to mortar color variations and stone staining.
63. Environmental Materials, Inc., v. Showcase Builders et al.
Boulder County District Court, Case No. 99-CV-1070
Lafayette, Colorado
December 1999
Services provided for the defendant in a case involving installation procedures of a manufactured stone veneer on a single family home. Visited the site to review installation and observe existing damage.
64. R.F. Building Company, LLP v. Sprung Construction, Inc., et al.
Jefferson County District Court, Civil Action No. 99-CV-1143, Division 2.
Arvada, Colorado
July 1999
Acting for the defendant to define repair approaches to address water penetration in a single-wythe concrete masonry wall. Included testing of units, on-site water spray testing, development of a repair scheme, development of a report, and deposition. Settled in arbitration for \$160,000.
65. City of Westminster v. Rothberg, Tamburini, & Winsor, Inc., et al.
Westminster, Colorado
December 1998
Acted for the masonry contractor, a third-party defendant, in this case involving structural design and construction issues for a reinforced concrete masonry structure at a city water pump station. Services included review of construction documents, evaluation of on-site conditions and construction observation during rebuilding. Provided expert witness services including generation of a report and deposition. Case thrown out during court proceedings.
66. Paul C. Miller v. Robert Borne, et al.
Beaver Creek, Colorado
February 1998
Homeowner sued contractor for \$40,000 claiming defective installation of stone veneer siding and flagstone paving. Atkinson-Noland & Associates, Inc., was retained by the insurance company, Maryland Casualty, as an expert witness for masonry construction. The case involved a site visit to document conditions on site related to stone adhesion, detached stones, and moisture infiltration. The case was settled out of court for \$5,000.



67. American Siding Corporation Building Collapse
Denver, Colorado
January to May, 1998
A masonry building under construction collapsed due to inadequate wind bracing. Atkinson-Noland & Associates, Inc. was retained to record and investigate the building failure in addition to preparing an opinion report. During the investigation, major errors in construction and building design were identified, leading to the remaining portions of the building being demolished and rebuilt in its entirety. This case was settled in court.
68. Cobad, et al., vs. Rossi, et al.
Miami, Florida
October 1997 to October 1999
Atkinson-Noland & Associates, Inc., was retained by the defendant as an expert witness in a case involving design deficiencies of a University building, constructed with a natural stone veneer. The case involved issues related to moisture penetration and installation of stone work. A report was generated and deposition testimony was given. The case was settled out of court.
69. Wyoming Schools vs. Westates Construction
Pine Bluffs and Burns, Wyoming, resolved by defendant
June 1997 to February 1999
Two masonry schools under construction were investigated for structural and architectural deficiencies including aesthetic issues, misplaced reinforcing steel and missing grout. Atkinson-Noland & Associates, Inc., served as consultant for the defendant to investigate the situation, prepared forensic reports, specified necessary repairs, and directed the repair effort.
70. City of Greenwood Village vs. Masonry Designs
Greenwood Village, Colorado, no case filed
March to May 1997
Case involves construction deficiencies causing steel corrosion and structural inadequacy. Services to date include on-site evaluation and representation of the City in arbitration meetings.
71. Midland Independent School District vs. RWC Construction, et. al
142nd Judicial District Court, State of Texas, County of Midland
January 1997 to October 1997
For the plaintiff on a claim regarding moisture penetration, design error, and structural construction deficiencies on 3 newly constructed elementary schools. Services included evaluation of the situation, forensic report, deposition, and development of repair schemes. These buildings have been repaired.
72. St. Stephens's Church vs. Centeri Construction
Longmont, Colorado
August 1996 to June 1997
Atkinson-Noland & Associates, Inc. has been retained by the plaintiff as an expert witness in the case involving construction deficiencies related to cracking, missing reinforcement, and moisture penetration. This case was settled out of court.
73. Regional Transportation District vs. Luna Construction
Denver, Colorado
August 1996 to May 1998



For the plaintiff on a claim regarding aesthetics of a newly constructed masonry entry gate, including masonry efflorescence, brick and mortar color mismatch, irregular mortar joint thickness, and poor grouting of internal spaces. Services included building evaluation, a forensic report, and expert witness services during arbitration. A settlement was reached through judicial arbitration.

74. John Niforos Residence

Ft. Collins, Colorado

April 1996 to April 1999

For the plaintiff to investigate issues related to construction tolerances and aesthetics of a masonry home. A forensic report was generated and Mr. Schuller testified in court.

75. University of Missouri vs. McCarthy Brothers Construction, et. al

Columbia, Missouri

March 1995 to November 2000

For the plaintiff on a claim regarding moisture penetration, design errors, and construction deficiencies on a newly constructed University building. Services include ongoing monitoring of building performance, forensic reports, development of repair schemes, expert witness services, deposition testimony, and assistance during mediation. This case was settled during mediation for \$1.7 million.

76. Midland Independent School District vs. RWC Construction, et. al

142nd Judicial District Court, State of Texas, County of Midland

June 1995 to October 1995.

For the plaintiff on a claim regarding moisture penetration, design error, and structural construction deficiencies on 3 newly constructed elementary schools. Services included development and implementation of repair schemes. These buildings have been repaired

