

## **Resume**

Horace Scott Norville  
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### **Personal Information**

Born: Toledo, Ohio, on October 21, 1948  
Married: Former Heather Anne Jackson on August 27, 1977  
Three Children: Julie Erin, born January 14, 1980  
Kristin Anne, born March 28, 1983, and  
Sean Alan, born November 21, 1986

### **Education**

Ph.D. in Civil Engineering, Purdue University, 1981  
M.S. in Civil Engineering, Purdue University, 1976  
B.S. in Civil Engineering, University of Toledo, 1974

### **Current Positions at Texas Tech University**

Chair of Civil Engineering, 2004-August 2014  
Interim Chair of Civil Engineering Department, 2003-2004  
Professor of Civil Engineering, 1992-present.  
Director, Glass Research and Testing Laboratory, 1987-present

### **Previous Employment Experience**

Associate Professor of Civil Engineering, Texas Tech University, 1986-1992.  
Assistant Professor of Civil Engineering, Texas Tech University, 1981–1986.  
Graduate Instructor, School of Civil Engineering, Purdue University, 1974-1980.  
Structural Designer, Berger Steel, Lafayette, Indiana, Summer 1978.  
Project Engineer, Division of Engineering and Construction, City of Toledo, Toledo, Ohio,  
Summer 1974 and Summer 1976.  
Engineering Aide, Division of Engineering and Construction, City of Toledo, Toledo, Ohio, 1972 to  
1974.  
Active Duty, U.S. Marine Corps, 1968-1970.

### **Professional Memberships**

American Society of Civil Engineers  
ASTM  
ANSI

### **Registration**

Registered Professional Engineer, State of Texas, No. 59274

### **Honors and Awards**

- 2016 Elected to Inaugural Class of College of Fellows of Façade Tectonics Institute
- 2016 Elected to Fellow, ASCE
- 2014 Named as Fellow, ASTM
- 2014 Award of Merit, ASTM
- 2006: Award of Appreciation, ASTM.
- 2002: President's Excellence in Teaching Award, Texas Tech University.
- 2000: Excellence in Education Award – "Best Teacher Outside Petroleum Engineering," presented by the Student Society of Petroleum Engineering.
- 1999: El Paso Energy Foundation Faculty Achievement Award.
- 1999: Member, Texas Tech University Provost's Teaching Academy.
- 1997: "Excellence in Teaching" awarded by the Halliburton Foundation.
- 1997: Civil Engineering Leadership Scholarship awarded by University Interscholastic League, Region I, Texas.
- 1993: "Excellence in Research" awarded by the Halliburton Foundation.
- 1990: "Excellence in Research" awarded by the Halliburton Foundation.
- 1985: "New Professor: Excellence in Teaching," awarded by the Dads Association, Texas Tech University.
- 1981: "Best Professor Outside of Mechanical Engineering School" awarded by the Student Body in Mechanical Engineering, Purdue University.
- 1980: Vashti L. McGoon Award for Outstanding Instructor in the Schools of Engineering, Purdue University.
- 1979: Purdue University Research Grant for Graduate Instructors.
- 1978: Nellie Munson Award for the Outstanding Teaching Assistant in Civil Engineering, Purdue University.

## Teaching Activities

### *Courses Taught*

Texas Tech University:

CE 2210 - Procedures of Problem Analysis I, Numerical Methods  
CE 2301 – Statics  
CE 3210 - Procedures of Problem Analysis II, Probability and Statistics  
CE 3302 – Dynamics  
CE 3303 - Mechanics of Solids  
CE 3440 – Structural Analysis I  
CE 3441 – Principles of Structural Design  
CE 4340 – Structural Analysis II  
CE 4330 - Design of Engineering Systems  
CE 5311 – Advanced Mechanics of Solids  
CE 5331-Salient Topics in Glass Design  
CE 5346 – Structural Dynamics I  
CE 5347 – Structural Dynamics II

Purdue University:

EG 116 - Graphics I  
EG 120 - Electronic Drafting  
CE 273 – Mechanics of Materials  
CE 371 - Structural Analysis I

### *Short Courses*

2003 “Window Glass Design for Force Protection,” November.  
2003 “Natural Hazard Glass Design Short Course,” with J.E. Minor, August.  
2002 “Engineering design of architectural window glass,” with J.E. Minor, October.  
1999 “Engineering design of architectural glazing systems,” with J.E. Minor, April.

### *Chairman, Doctoral Committees*

Greg Soules (Co-Chair, in progress)  
Kayla Natividad  
Stephen M. Morse  
Paul M. Bove  
Siew H. Liew  
Dudley G. McFarquhar

### *Chairman, M. S. Committees*

Ana Abarca	Ryan Jackson	Kayla Natividad
Vinu Abraham	Diboro C. Kanabolo	Steven Samuels
Scott Bole	Kim King	Darrel L. Sheridan
Paul M. Bove	John Knox	June W. Sligar
Alfred F. Farwagi	C.K. Lai	Jason Swofford
Dennis Haar	Tyler Mackay	Jason Taylor
S.Y. Hsu	Dudley G. McFarquhar	
Y.S. Hwang	Roberto Rodriguez-Mendieta	

### *Supervisor, Post Doctoral Research Associate*

Mostafa M. El-Shami

## **Service Activities**

### *Departmental Service*

2002 – 2003	Member, Search Committee for Director, Wind Engineering Research Center.
2002 – 2003	Member, Civil Engineering Awards Committee.
2001 – 2002	Chairman, Civil Engineering Search Committee for Structures Faculty Member.
2000 – 2001	Member, Civil Engineering Search Committee for Wind Engineering Faculty Member.
1997 - Present	Presenter of Engineering Mechanics Review Sessions for the Engineer-in-Training Examination for the CE 4000 Review Course.
1997 – 1998	Chairman, Civil Engineering Search Committee for Three Faculty Members (One each in Structures, Transportation, and Environmental Engineering).
1997 - 2014	Member, Civil Engineering Curriculum Committee.
1992 – 2005	Faculty Co-Advisor, Murdough Student Chapter ASCE.
1988 – 1989	Member, Search Committee for Civil Engineering Chairman.

### *College of Engineering Service*

2014- Present	Faculty Mentor
2006 - 2007	Chair, Search Committee for Chair of Engineering Technology
2003 - 2004	Chair, Search Committee for Chair of Chemical Engineering
2002 – 2003	Member, College of Engineering Awards Committee.
1998 – 2000	Member, Search Committee for Dean, College of Engineering.
1990	Member, Engineering Technology Chairman Search Committee.
1981 – 1995	Presenter of Engineering Mechanics Review Sessions for the Engineer-in-Training Examination for the Tau Beta Pi National Engineering Honor Society.

### *University Service*

2013	Chair, Physics Graduate Program Review Committee
2012-Present	Member, University Grievance Committee
2000 – 2001	Member, Texas Tech Faculty Senate.
1985 – 1986	Alternate Member of University Discipline Committee.

### *Public Service*

1984 – 2003	Regional Director, Calculator Contest, University Interscholastic League.
1981 – 1987	Judge, South Plains Regional Science Fair.

### *Professional Service*

2015-Present	Vice-Chair, ASTM Subcommittee E06.52 on Use of Glass in Buildings (and a member of all task groups of the subcommittee.)
2012-Present	Vice-Chair, ASTM Committee F12 for Building Security
2012-2014	Member, Department Heads Coordinating Council, American Society of Civil Engineers
As Requested	Reviewer of Papers for Engineering Journals published by the American Society of Civil Engineers
2006-Present	Co-Chair, ASTM Task Group E06.51.13 for Window Glass Strength.
2000 – 2005	Chair, ASTM Committee F12 for Building Security
2004 – 2015	Member of ANSI Z97 Committee on Testing Safety Glazing
1997 – 2013	Member, ISO US Delegation to TC 160 on Window Glass
1993 - Present	Member, ASTM Task Group E06.51.17 for Windborne Missile Impact.
1991 - Present	Chair, ASTM Task Group F12.15 for Development of Blast Testing Standard for Glazing and Glazing Products
1987 – 1990	Chair of Scholarship Committee, South Plains Chapter, TSPE.
1986 - Present	Member, ASTM Task Group E06.51.13 for Window Glass Strength.

*Professional Service (Cont'd.)*

1984 – 1987      Chair of Arrangements Committee, High Plains Branch, Texas  
Section, ASCE

*Consulting Services (Clients)*

Andersen Windows	Lorrion Corporation
Architectural Wall Services, Ltd.	Midwest Curtain Walls
Architectural Glass and Aluminum	Monsanto Company
Bonn Associates	Oldebrecht Construction
Brown Construction Company	Pan Lam, Inc.
Building Technologies	Pilkington
Cadillac Fairview Corporation	Protection Engineering Consultants
CETRA/CRI ARCHITECTURE	Raths, Raths, and Johnson
Custom Window	Royal Insurance Company
Dupont	St. Charles Glass
Dependable Glass	Solutia
Enclos	Star Mountain Research, Inc.
Ford Motor Company, Glass Division	Tampa International Airport
Foster and Partners, Ltd.	UNITECH
Gilsanz.Murray.Stefacek	Vitro Engineering
Glazing Consultants, Inc.	Vornado Property
Hong Kong Airport Authority	Weidlinger and Associates
Hughes, Gill, Cochrane, Inc	Wells Fargo Bank
Innovative Structural Glass, Inc.	Wishner, Inc.
Libbey-Owens-Ford	

*Miscellaneous Professional Involvements*

2016-Present	Member, Lubbock Glazing Test Lab
2013 - Present	Owner, NSS & Associates
1999 – 2013	Member, NSS, LLP.
1998 – Present	Vice-President, Standards Design Group, Inc.
1992 – 2011	Member, Board of Directors, Hurricane Test Laboratory.
1992 – 2013	Member, Board of Directors, BFOL.

**Grants and Research Contracts (Principal or Co-Principal Investigator Responsibility)**

"Bending Tests of Heat Treated Glass with Opaci-Coat," with Stephen Morse, \$33,732 from ICD High Performance Coatings, January 2017.

"Test Method for Determining Shear Modulus of Composite Interlayers," with Stephen Morse, \$45,000 from Eastman Chemical Company, January 2016.

"Tests of HS Glass with Ceramic Frit," \$31,800 from Enclos, February, 2014.

"Non-Factored Load Charts for DG Interlayer", \$18005 from Solutia, September, 2011

"Non-Factored Load Charts for Ionomer Interlayer", \$18005 from Solutia, September, 2011

"Elevated Temperature Tests of Laminated Glass Fabricated with AI and DN Interlayers," with Stephen M. Morse, \$13,989 from Solutia, February 2011.

"Q Interlayer Verification Tests," \$11,938 from Solutia, April 2008.

"Strength of 'Q' Series Laminated Glass," \$25,426 from Solutia, February 2008.

"Vanceva Verification Tests," \$19,119.00 from Solutia, December 2005.

"Development of Non-Factored Load Charts for Laminated Glass with Saflex VSO2 Interlayer," \$55,972 from Solutia, October 2004.

"CAB Glass Load Resistance Charts," \$11,400 from Wilfred Baker Engineering, November 2003.

"Development of Non-Factored Load Charts for Thick Laminated Glass with Saflex HP/DM Interlayer and Standard Saflex," \$19,527 from Solutia, October 2003.

"Development of Design Charts for Laminated Glass with HG/MD Interlayer," \$38,774 from Solutia, August 15, 2002

"Blast Tests of British Embassy Windows," \$62,351 from Custom Window, April 1, 2002.

"Tests of a New Laminated Glass Interlayer," \$31,954 from Solutia, August 29, 2001.

"Behavior Laminated Glass at Elevated Temperatures," \$49,406 from Solutia, December 31, 1999.

"Force Protection Exhibitors Demonstration," \$23,200 from Solutia, January 1, 2001.

"Investigation of Federal Aviation Administration Glass," \$88,952 from the Federal Aviation Administration, May 1, 2000.

"Windstorm Mitigation Initiative," \$1.2 million, Cooperative Agreement with the National Institute of Standards and Technology, (with, K.C. Mehta, J.R. MacDonald, E.W. Kiesling, R.E. Peterson, and D.A. Smith), September 1999.

"Laminated Glass Behavior at Elevated Temperatures," \$49,406 from Solutia, January 2000.

"Force Protection Demonstration," \$40,000 from Solutia, Inc., April 1999.

**Grants and Research Contracts** (Cont'd)

- "Windstorm Mitigation Initiative," \$3.6 million, Cooperative Agreement with the National Institute of Standards and Technology, (with, K.C. Mehta, J.R. MacDonald, E.W. Kiesling, R.E. Peterson, and D.A. Smith), August 1998.
- "Project Omega Blast Test," \$35,227 from Dupont, June 1998.
- "Las Vegas Courthouse No. 1," \$59,700 from Chanen/Sverdrup, January 1998.
- "Expansion of Windas Database," \$15,500 from Southwest Research Institute, November 1997.
- "Federal Government Demonstration Blast," \$30,870 from Monsanto Co., September 1997.
- "Tests of 0.060 in Saflex Interlayer Laminated Glass," \$17,000 from Monsanto Co., September 1996.
- "Tests of 0.030 in Saflex Interlayer Laminated Glass," \$17,000 from Monsanto Co., September 1996.
- "Further Analysis of Oklahoma City Blast Damage," \$40,000 from Dupont and Monsanto Co., September 1996.
- "Demonstration Blast Test," \$22,500 from Monsanto Co., October 1995.
- "Modification of Oklahoma City Report," \$25,000 from U.S. Naval Surface Weapons Laboratory, September 1995.
- "Strength of Laminated Glass Constructions," \$17,000 from Monsanto Co., August 1995.
- "Modification of Government Standards," \$6,000 from U.S. Army Corps of Engineers, July 1995.
- "Additional Missile Impact Tests," \$15,000 from Monsanto Co., January 1994.
- "Missile Impact Test Protocol," \$26,000 from Monsanto Co., July 1993.
- "Strength of Epoxy Laminated Window Glass," \$8,500 from UCB Chemical Co., June 1992.
- "Film Composite Tests," \$30,000 from Dupont, July 1992.
- "Blast Test Performance," \$25,500 from Monsanto Co., May 1992.
- "ANSI Tests of Glass Constructions," \$4,500 from Monsanto Co., January 1992.
- "Cooperative Program in Wind Engineering," \$269,925 from National Science Foundation, (with K.C. Mehta, J. Gregory, J.R. McDonald, R. Tock and R.E. Peterson), 1992.
- "The Strengths of Heat Strengthened and Fully Tempered Laminated Glass Units," \$33,000 from Monsanto Co., March 1991.
- "Cooperative Program in Wind Engineering," \$341,382 from National Science Foundation, (with K.C. Mehta, J. Gregory, J.R. McDonald, R. Tock and R.E. Peterson), 1991.
- "Laminated Glass Beam Tests," \$8,800 from Monsanto Co., December 1990.

**Grants and Research Contracts** (Cont'd)

- "Ballistic Photographs of Laminated Window Glass Lite Specimens," \$6,600 from Monsanto Co. (with M.L. Smith), November 1990.
- "Strength of Tempered Window Glass Lites," \$85,000 from U.S. Army Corps of Engineers, September 1990.
- "Tests of European Laminated Glass Lites," \$5,600 from Monsanto Co., May 1990.
- "Cooperative Program in Wind Engineering," \$263,000 from National Science Foundation, (with K.C. Mehta, J. Gregory, T. Maxwell, J. Lawrence, J.R. McDonald and R.E. Peterson), 1990.
- "Strength of AR3 Laminated Glass Lites," \$5,500 from Monsanto Co., February 1990.
- "Pressure System Equipment Grant," \$3,984 from Monsanto Co., January 1990.
- "Additional Work on Blast Resistance of Laminated Glass Lites, \$32,000 from Monsanto Co., December 1989.
- "Shear Resistance of PVB Interlayers," \$14,900 from Monsanto Co., December 1989.
- "Strength of PET Laminated Glass Lites," \$7,000 from Monsanto Co., November 1989.
- "Dynamic Failure Prediction," \$55,000 from Southwest Research Institute (through C.A.R.E.), November 1989.
- "Blast Resistance of Laminated Glass Lites, \$62,000 from Monsanto Co., June 1989.
- "Strength of Laminated Glass Lites," \$14,000 from Dupont, May 1989.
- "Cooperative Program in Wind Engineering," \$159,000 from National Science Foundation, (with K.C. Mehta, J. Gregory, T. Maxwell, J. Lawrence, J.R. McDonald and R.E. Peterson), 1989.
- "Additional Tasks: Window Glass Subjected to Low-Level Blast Waves," \$399,000 from Patrick Air Force Base, (with J.E. Minor, M.L. Smith and W.P. Vann), July 1987.
- "Full-Scale Field Test: Window Glass Subjected to Low-Level Blast Waves," \$250,000 from Patrick Air Force Base, October 1986.
- "Window Glass Failure Predictions at Arnold Engineering Development Center," (continuation), \$3,000 from Lawrence Livermore National Laboratory (with J. E. Minor), September 1986.
- "Analysis of Critical Flaws on the Surface of Window Glass Using a Scanning Electron Microscope," \$29,995 from the National Science Foundation, July 1986.
- "A Proposal for Window Glass Failure and Casualty Predictions, Task 3: Dynamic Failure Prediction in Window Glass," \$63,347 from Patrick Air Force Base, April 1986.
- "Engineering Research Equipment Grant: Shaker and Multi-Channel FFT Analyzer," \$127,134 from National Science Foundation, (with R.A. Ibrahim, J.R. Dunn, and A. Ertas), April 1986.



**Grants and Research Contracts** (Cont'd)

- "Window Glass Failure Predictions at Arnold Engineering Development Center," \$18,000 from Lawrence Livermore National Laboratory (with J.E. Minor), August 1985.
- "500kv Transmission Line Response Data Analysis Phase II," \$59,000 from the Bonneville Power Administration (with K.C. Mehta), July 1985.
- "Evaluations of Fracture Patterns, Fallout Patterns, and Lacerative Hazards Presented by Window Glass Broken by Low-Level Blast Waves, Task 6: Probability of Breakage," \$55,869 from Patrick Air Force Base, September 1984.
- "Evaluations of Fracture Patterns, Fallout Patterns, and Lacerative Hazards Presented by Window Glass Broken by Low-Level Blast Waves, Task 2: Fracture Patterns," \$56,678 from Patrick Air Force Base, September 1984.
- "Concentric Rings Tests on Cardinal IG Specimens," \$2010 from Cardinal IG (with J.E. Minor), July 1984.
- "500kv Transmission Line Response Data Analysis," \$20,000 from the Bonneville Power Administration (with K.C. Mehta), July 1983.
- "Wind Data Analysis Project," \$87,000 from the Electric Power Research Institute (with K.C. Mehta and W.P. Vann), October 1982.
- "Probabilistic Behavior of Elasto-Plastic Columns Due to Horizontal-Vertical Earthquake Loads," (Research Initiation Grant) \$46,683 from the National Science Foundation, May 1982.
- "Investigation of the Character of Surface Flaws on Window Glass Plates," \$7,000 from the National Bureau of Standards (with J.E. Minor), March 1982.

## **Publications**

### *Reviewed Publications*

- McMahon, S., Norville, S., Morse, S. Experimental Investigation of Load Sharing in Insulating Glass Units. *Journal of Architectural Engineering, ASCE*, (in review).
- Natividad, K., Morse, S.M., and Norville, H.S. (2017). "Tests of heat treated glass with full coverage ceramic frit," *Journal of Architectural Engineering, ASCE*.
- Minor, J.E., and Norville, H.S. (2017). "Selection of architectural glazing construction without calculations," *Journal of Architectural Engineering, ASCE* (in press).
- Afolabi, B., Norville, H.S., and Morse, S.M. (2017). "Experimental study of weathered glass plates from the northeastern United States," *Journal of Architectural Engineering, ASCE* (in press).
- Natividad, K., Morse, S.M., and Norville, H.S. (2016). "Fracture origins and maximum principal stresses in rectangular glass lites," *Journal of Architectural Engineering, ASCE*, 22(2).
- Bergers, M., Natividad, K., Morse, S.M., and Norville, H.S. (2016). "Full scale tests of heat strengthened glass with ceramic frit," *Glass Structures and Engineering*, Springer, 1(1): 261-276.
- Morse, S.M. and Norville, H.S. (2016). "Comparison of methods to determine load sharing of insulating glass units for environmental loads," *Glass Structures and Engineering*, Springer, 1(1): 315-329.
- Morse, S. and Norville, H. S. (2014) A Method to determine the probability of failure for window glass loaded with a uniform wind load. *Journal of Architectural Engineering, ASCE*, 20(1): 1-11.
- Morse, S.M. and Norville, H. S. (2012). "A design methodology for determining the load resistance of heat-treated window glass," *Journal of Architectural Engineering, ASCE*, 17(1): 42-51.
- Morse, S.M. and Norville, H.S., (2010). A relationship between probability of breakage to maximum principal stresses in window glass, *Journal of Architectural Engineering, ASCE*, 16(1): 20-28.
- Liu, H., Xu, H., Norville, S., and Bao, Y. (2007). "A virtual differential map matching algorithm with improved accuracy and computational efficiency." *Journal of Navigation*, Vol. 61 (3).
- Norville, H.S. and Conrath, E. (2006). "Blast resistant glazing design," *Journal of Architectural Engineering, ASCE*, 12(3): 129-136.
- Minor, J.E. and Norville, H.S. (2006). "Design of window glass for lateral pressures," *Journal of Architectural Engineering, ASCE*, 12(3): 116-121.
- El-Shami, M.M. and Norville, H.S., (2003). "A computer model for stress analysis of laminated glass plates," *Civil Engineering Research Magazine*, Civil Engineering Department, Faculty of Engineering, Al-Azhar University, 25(2), April [Egypt].
- Norville, H.S., and Conrath, E.J. (2002). "Design procedure for blast resistant laminated glass," *The Use of Glass in Buildings*, ASTM Stock Number 1434, 159-170.

## **Publications**

### *Reviewed Publications (Cont'd)*

- Norville, H.S., El-Shami, M.M., Jackson, R., and Johnson, G. (2002). "Wind load resistance of large trapezoidal glass lites," *The Use of Glass in Buildings*, ASTM Stock Number 1434, 69-89.
- El-Shami, M.M., and Norville, H.S. (2002). "Development of design methodology for rectangular glass supported on three sides to resist lateral uniformly distributed loads," *The Use of Glass in Buildings*, ASTM Stock Number 1434, 66-78.
- Norville, H.S. and Morse, S. M. (2001). "New software for designing window glass with ASTM E 1300," *Glass Magazine*, July: 1-6.
- Norville, H.S. and Conrath, E.J. (2001). "Considerations for blast resistant glazing design," *Journal of Architectural Engineering*, ASCE, 7(3): 80-86.
- Norville, H.S. and Minor, J.E. (2000). "A simplified window glass design procedure," *Journal of Architectural Engineering*, ASCE, 6(4): 105-115.
- Norville, H.S., Harvill, N., Conrath, E.J., Shariat, S., Mallonee, S. (1999). "Glass-related injuries in the Oklahoma City bombing," *Journal of Performance of Constructed Facilities*, ASCE, 13(2): 50-56.
- Minor, J.E. and Norville, H.S. (1998). "A simplified window glass design chart," *Journal of Wind Engineering and Industrial Aerodynamics*, 77-78, 197-204.
- Norville, H.S. (1998). "The effect of interlayer thickness on laminated glass strength," *Glass-Technology International*, 4, 158-164.
- Norville, H.S. (1998). "Laminated glass: glazing material for all conditions," *Texas Architect*, 11/12, Continuing Education Supplement.
- Norville, H.S., King, K.W. and Swofford, J.L. (1998). "Behavior and strength of laminated glass," *Journal of Engineering Mechanics*, ASCE, 124(1): 46-53.
- Norville, H.S. (1995). "Smash loss costs by using PVB glass," *A.M. Best*, 61-62, September.
- Norville, H.S., and Beers, P.E. (1994). "Wind does not break window glass," *Progressive Architecture*, 73(4): 148-152.
- Letchford, C.W., and Norville, H.S. (1994). "Wind pressure loading cycles for wall cladding during hurricanes," *Journal of Industrial Aerodynamics and Wind Engineering*, Elsevier Science Publishers, 53: 189-206.
- Norville, H.S., Bove, P.M., Sheridan, D. and Lawrence, S. (1993), "The strength of new heat treated window glass lites and laminated glass units," *Journal of Structural Engineering*, ASCE, 119(3): 891-901.
- Behr, R.A., Minor, J.E. and Norville, H.S. (1993). "The structural behavior of architectural laminated glass," *Journal of Structural Engineering*, ASCE, 119(1): 202-222.
- Beason, W. Lynn and Norville, H.S. (1990). "Development of a new glass thickness selection procedure," *Journal of Wind Engineering and Industrial Aerodynamics*, Elsevier Science Publishers, 36, October, 1135-1144.

## **Publications**

### *Reviewed Publications (Cont'd)*

Liew, S.H. and Norville, H.S. (1990). "Frequency response function of a transmission tower subjected to multiple loadings," *Journal of Wind Engineering and Industrial Aerodynamics*, Elsevier Science Publishers, 36: 439-447.

Norville, H.S. (1987). Review of *Engineering Mechanics: Statics*, 2nd Ed., by Bela I. Sandor and Karen J. Richter, *Applied Mechanics Review*, 40(9).

Norville, H.S. (1985). Discussion of "Glass failure prediction model," authored by W. Lynn Beason and James R. Morgan, *Journal of the Structural Division*, ASCE, 111(9): 2058-2059.

Norville, H.S. and Minor, J.E. (1985). "The strength of weathered window glass," *Bulletin of the American Ceramic Society*, 64(11): 1467-1470.

## **Publications**

### *Proceedings*

Vockler, K.L., Krytenburg, T.P., Norville, H.S., Blanchet, S., Swanson, J.W., Barry, C.J., Carbary, L.D., Hoffman, S.P., Torok, G.R., Fronsoe, C.S., (2017). *Silicone Opacifiers for Spandrel Glass Applications: Risk Mitigation in Thermal Stresses*. Glass Performance Days, Tampere, Finland. June 28-30.

Morse, S., Afolabi, B., Norville, S., Surlis, J. (2016). *A Comparison of Residual Compressive Surface Stress of Weathered Fully Tempered Glass*. Boston, MA: GlassCon Global. July 6-9.

Morse, S., Natividad, K., Norville, S., Cavalcanti Fonseca, J., Erickson, B. (2016). *Bending Test of Heat Treated Glass with Ceramic Frit*. Boston, MA: GlassCon Global. July 6-9.

Morse, S., Yew, G. Z., Norville, S. (2016). *Load Resistance of Internally Point-Supported Monolithic Glass Lites*. Boston, MA: GlassCon Global. July 6-9.

Norville, H.S. and Morse, S. (2013). "Considerations for glass balustrade design," *Proceedings*, Glass Performance Days, Tampere, Finland. June 12-15.

Hauck, J., Cinnamon, A., Norville, H.S., Morse, S. (2013). "Testing of existing annealed glass samples with minor surface blemishes," *Proceedings*, Glass Performance Days, Tampere, Finland. June 12-15.

Norville, H.S., Morse, S., Natividad, K. (2013). "Locations of fracture origins and magnitudes of maximum principal tensile stresses," *Proceedings*, Glass Performance Days, Tampere, Finland. June 12-15.

Morse, S. M. and Norville, H.S. (2011). "An analytical method for determining window glass strength," *Proceedings*, Glass Performance Days 2011. Tampere, Finland. June 18-20.

Norville, H.S. and Morse, S.M. (2011). "Load sharing and load resistance in triple glazed insulating glass units," *Proceedings*, Glass Performance Days 2011. Tampere, Finland. June 18-20.

Norville, H.S. and Morse, S.M. (2011), "Maximum principal stress and probability of breakage for glass in buildings," *Proceedings*, Glass Performance Days 2011. Tampere, Finland. June 18-20.

Morse, S. M. and Norville, H.S. (2011). "Comparison of laminated glass charts to the effective thickness provisions in ASTM E1300," *Proceedings*, Glass Performance Days 2011. Tampere, Finland. June 18-20.

Norville, H.S. and Morse, S.M. (2009): A model to describe the load resistance (strength) of heat treated architectural glass," *Proceedings*, Glass Performance Days, Tampere, Finland, June 12-16.

Morse, S.M. and Norville, H.S. (2009): A relationship between load resistance and maximum principal stress in annealed window glass," *Proceedings*, Glass Performance Days, Tampere, Finland, June 12-16.

El-Shami, M.M., Norville, H.S. (2004). "A mathematical model for glass plates supported at discrete points," *Proceedings of American Society of Civil Engineers, Texas Section, Fall Meeting*, Dallas, TX, October.

## **Publications**

### *Proceedings (Cont'd)*

- Norville, H.S., Johnson, G., and El-Shami, M.M., (2003): "Design methodology for airport traffic control tower cab glass," *Proceedings of Building Integration Solutions, Architectural Engineering 2003 Conference*, ASCE, Austin, TX, September 17-20.
- Norville, H.S., and Conrath, E.J., (2003): "3-Second duration loads to design blast resistant laminated glass," *Proceedings of the 11<sup>th</sup> International Conference on Wind Engineering*, Lubbock, TX, June.
- Letchford, C.W., Norville, H.S. and Bilello, J. (2001). "Cladding performance in the Fort Worth tornado, March 28, 2000," *Proceedings, International Conference on Building Envelope Systems and Technology*, Ottawa, Ontario, Canada, June 27-29, 325-329.
- Norville, H.S. and Conrath, E.J. (2001) "Simplified design procedure for blast resistant glazing," *Proceedings, Glass Processing Days: The 7<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 18-21, 381-384.
- Norville, H.S., El-Shami, M.M., Jackson, R., and Johnson, G. (2001). "Load resistance of trapezoidal window glass," *Proceedings, Glass Processing Days: The 7<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 18-21, 795-798.
- Norville, H.S. and Letchford, C.W. (2001). "Window glass damage in the Fort Worth tornado," *Proceedings, Glass Processing Days: The 7<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 18-21, 378-380.
- Norville, H.S. and Mackay, T. (2001). "Strain measurements in laminated glass," *Proceedings, Glass Processing Days: The 7<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 18-21, 372-376.
- Norville, H.S. (1999). "Injuries caused by window glass in the Oklahoma City bombing," *Proceedings, Glass Processing Days: The 5<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 13-16, 383-387.
- Norville, H.S. (1999). "Strength factor for laminated glass," *Proceedings, Glass Processing Days: The 5<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 13-16, 357-359.
- Norville, H.S. (1997). "The effect of interlayer thickness on laminated glass strength," *Proceedings, Glass Processing Days: The 5<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, Sept. 13-15.
- Minor, J.E. and H.S. Norville (1997). "Securing the building envelope for tropical cyclones," *Proceedings, Asia-Pacific Symposium on Wind Engineering*, Gold Coast, Australia, July 14-16, 263-266.
- Norville, H.S., King, K.W. and Swofford, J.L. (1997). "A theoretical model for laminated glass behavior," *Proceedings, Asia-Pacific Symposium on Wind Engineering*, Gold Coast, Australia, July 14-16, 297-300.
- Minor, J.E. and Norville, H.S. (1997). "A simple window glass design chart," *Proceedings, Eighth U.S. National Conference on Wind Engineering*, Johns Hopkins, Baltimore, MD, June 5-7, 20-21.

## **Publications**

### *Proceedings (Cont'd)*

- Norville, H.S., King, K.W. and Minor, J.E. (1997). "Laminated glass beam behavior," *Proceedings*, Eighth U.S. National Conference on Wind Engineering, Johns Hopkins, Baltimore, MD, June 5-7, 158-160.
- Norville, H.S., and Sheridan, D.L. (1993). "Fatigue behavior of structural silicone sealant," *Proceedings*, Seventh U.S. National Conference on Wind Engineering, UCLA, Los Angeles, CA, June 27-30.
- Norville, H.S., Bove, P.M. and Massa, R. (1991). "The resistance of architectural glazing to small bomb blasts," *Proceedings*, Ninth ASCE Structures Congress, Indianapolis, IN, April 29-May 1, 354-357.
- Beason, W.L. and Norville, H.S. (1989). "Development of a new glass thickness selection procedure," *Proceedings*, Sixth U.S. National Conference on Wind Engineering, University of Houston, Houston, TX, March 8-10, A-8-1 through A-8-16.
- Liew, S.H. and Norville, H.S. (1989). "Frequency response function of a transmission tower subjected to multiple loadings," *Proceedings*, Sixth U.S. National Conference on Wind Engineering, University of Houston, Houston, TX, March 8-10, B-3-27 through B-3-35.
- Norville, H.S., Minor, J.E., Vann, W.P., McDonald, J.R. and Smith, M.L. (1987). "Results of misty picture window glass experiment," *Proceedings*, Misty Picture Results Symposium, Dec. 7-9.
- Mehta, K.C., Norville, H.S. and Kempner, Jr., L., (1986). "Electrical transmission structure response to wind," *Proceedings*, International Symposium on Probabilistic Methods Applied to Electric Power Systems, Toronto, Ontario, Canada, June 11-13, 495-500.
- Norville, H.S., Mehta, K.C. and Vann, W.P. (1986). "Wind load data for reliability based transmission line design," *Proceedings*, International Symposium on Probabilistic Methods Applied to Electric Power Systems, Toronto, Canada, June 11-13, 393-397.
- Mehta, K.C. and Norville, H.S. (1985). "Electrical transmission structure response to wind," *Proceedings*, Asia Pacific Symposium on Wind Engineering, Roorkee, India, December 5-7, 1985, 59-64.
- Norville, H.S., Mehta, K.C., and Vann, W.P. (1985). "Analysis and interpretation of field data of wind and response of transmission line," *Proceedings*, Fifth U.S. National Conference on Wind Engineering, Lubbock, TX, November 6-8, 3B-33 through 3B-40.
- Minor, J.E., Norville, H.S. and Walker, G.R. (1984). "Window glass and cladding in tall buildings," *Proceedings*, Third International Conference on Tall Buildings, Hong Kong, December 10-15, 515-521.
- Norville, H.S. and Liew, S.H. (1984). "Response of yielding columns to random base motion," *Proceedings*, Fifth Engineering Mechanics Specialty Conference, ASCE, August 1-3, 1157-1160.
- Norville, H.S. and Minor, J.E. (1984). "Glass strength evaluation using ring-on-ring tests," *Proceedings*, Fifth Engineering Mechanics Specialty Conference, ASCE, August 1-3, 1437-1440.

**Publications**

*Proceedings (Cont'd)*

Norville, H.S., Vann, W.P., Mehta, K.C., and Farwagi, A.F. (1984). "Full scale wind and structural response data," *Proceedings*, Fifth Engineering Mechanics Specialty Conference, ASCE, August 1-3, 611-614.

Norville, H.S. (1984). "Column response due to random base excitation," *Proceedings*, Fourth ASCE Specialty Conference, ASCE, Jan. 11-13, 397-400.

Vann, W.P., Mehta K.C. and Norville, H.S. (1984). "Wind effects in reliability design of power lines," *Proceedings*, Fourth ASCE Specialty Conference, ASCE, Jan. 11-13, 296-299.

Norville, H.S., Mehta, K.C. and Vann, W.P. (1983). "Reliability based design of transmission lines for wind," *Proceedings*, Fourth Engineering Mechanics Specialty Conference, ASCE, Vol. II, May 23-25, 887-890.

Norville, H.S. and Minor, J.E. (1983). "A failure theory for window glass plates," *Proceedings*, Fourth Engineering Mechanics Specialty Conference, ASCE, Vol. II, May 23-25, 1001-1004.



## **Publications**

### *Presentations*

- Afolabi, B. (Presenter & Author), Morse, S. (Author Only), Norville, S. (Author Only), Surlis, J., GlassCon Global 2016, Boston, MA, "A comparison of residual compressive surface stress of weathered fully tempered glass," International, peer-reviewed/refereed, published in proceedings. (July 8, 2016).
- Natividad, K. (Presenter & Author), Morse, S. (Author Only), Norville, S. (Author Only), Cavalcanti Fonseca, J. (Author Only), Erickson, B. (Author Only), GlassCon Global 2016, Boston, MA, "Bending tests of heat treated glass with ceramic frit," International, peer-reviewed/refereed, published in proceedings. (July 8, 2016).
- Yew, G. Z. (Presenter & Author), Morse, S. (Author Only), Norville, S. (Author Only), GlassCon Global 2016, Boston, MA, "Load resistance of internally point-supported monolithic glass lites," International, peer-reviewed/refereed, published in proceedings. (July 8, 2016).
- Morse, S. (Presenter & Author), Norville, S. (Author Only), Challenging Glass Conference 5, Ghent University, Ghent, Belgium, "Comparison of methods to determine load sharing of insulating glass units for environmental loads," International, peer-reviewed/refereed, published elsewhere. (June 17, 2016).
- Norville, S. (Presenter & Author), Morse, S. (Author Only), Natividad, K., Bergers, M. (Author Only), Challenging Glass Conference 5, Ghent University, Ghent, Belgium, "Full Scale tests of heat treated glass with ceramic frit," International, peer-reviewed/refereed, published elsewhere. (June 17, 2016).
- Bergers, M., Natividad, K., Morse, S.M., and Norville, H.S. (2016). "Full scale tests of heat strengthened glass with ceramic frit," *Challenging Glass 5, Ghent, Belgium, June 16-17*.
- Norville, H.S. and Morse, S. (2013). *Considerations for glass balustrade design*, Glass Performance Days, Tampere, Finland. June 12-15.
- Norville, H.S. and Morse, S.M. (2011). "Load sharing and load resistance in triple glazed insulating glass units," Glass Performance Days 2011. Tampere, Finland. June 18-20.
- Norville, H.S. and Morse, S.M. (2011), "Maximum principal stress and probability of breakage for glass in buildings," Glass Performance Days 2011. Tampere, Finland. June 18-20.
- Norville, H.S. and Morse, S.M. (2009): A model to describe the load resistance (strength) of heat treated architectural glass," Glass Performance Days, Tampere, Finland, June 12-16.
- Norville, H.S., (2007): "Glazing for extreme conditions," Invited Presentation at Engineered Transparency, Columbia University, New York, NY, September 27-28.
- Liu, H., Xu, H., Norville, S., and Bao, Y. "A virtual differential map matching algorithm with improved accuracy and computational efficiency." Presented at IEEE 10<sup>th</sup> World Conference on Intelligent Transportation Systems, Seattle, WA, June 2007.
- Norville, H.S. (2005). "Blast resistant glazing design," Far East Division of the U.S. Army Corps of Engineers, Seoul, Korea, May 17, 2005.

## **Publications**

### *Presentations (Cont'd)*

- Norville, H.S., Johnson, G., and El-Shami, M.M., (2003). "Design methodology for airport traffic control tower cab glass," *Building Integration Solutions, Architectural Engineering 2003 Conference*, ASCE, Austin, TX, September 17-20.
- Norville, H.S., and Conrath, E.J., (2003): "3-Second duration loads to design blast resistant laminated glass," *The 11<sup>th</sup> International Conference on Wind Engineering*, Lubbock, TX, June.
- El-Shami, M.M., and Norville, H.S. (2002). "Development of design methodology for rectangular glass supported on three sides to resist lateral uniformly distributed loads," Symposium on *The Use of Glass in Buildings*, Pittsburgh, PA, April 14.
- Norville, H.S., El-Shami, M.M., Jackson, R., and Johnson, G. (2002). "Wind load resistance of large trapezoidal glass lites," Symposium on *The Use of Glass in Buildings*, Pittsburgh, PA, April 14.
- Norville, H.S. and Mackay, T. (2001). "Strain measurements in laminated glass," *Glass Processing Days: The 7<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 18-21.
- Norville, H.S. (2000). "Window glass design for windstorms," US Army Corps of Engineers Tornado Damage Symposium, Ft. Worth, TX, December 4-5.
- Norville, H.S. (1999). "Injuries caused by window glass in the Oklahoma City bombing," *Glass Processing Days: The 5<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 13-16.
- Norville, H.S. (1999). "Strength factor for laminated glass," *Glass Processing Days: The 5<sup>th</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, June 13-16.
- Norville, H.S. (1998). "Injuries from the Oklahoma City bombing," ASCE Anti-Terrorism Conference, Washington, D.C, November.
- Norville, H.S. (1997). "The effect of interlayer thickness on laminated glass strength," *Glass Processing Days: The 3<sup>d</sup> International Conference on Architectural and Automotive Glass*, Tampere, Finland, Sept. 13-15.
- Minor, J.E. and Norville, H.S. (1997). "Securing the building envelope for tropical cyclones," Fourth Asia/Pacific Symposium on Wind Engineering, Gold Coast, Australia, July 14-16.
- Norville, H.S., King, K.W. and Swofford, J.L. (1997). "A theoretical model for laminated glass behavior," Fourth Asia/Pacific Symposium on Wind Engineering, Gold Coast, Australia, July 14-16.
- Norville, H.S. (1995). "Windows, blasts, and protective glazing materials," ASCE Workshop on Protective Glazing, New York, NY, November 3.
- Minor, J.E., and Norville, H.S. (1995). "Impact load requirements and their place in safe-guarding the building envelope," Annual Convention and Exposition, ASCE, San Diego, CA, October 25.

## **Publications**

### *Presentations (Cont'd)*

- Norville, H.S. (1995). "A walk through downtown Oklahoma City," NIST, Gaithersburg, MD, August 22.
- Norville, H.S. (1995). "Glass damage from the Oklahoma City bombing," Chief and Staff of the General Services Administration, Washington, D.C., July 25.
- Norville, H.S. (1994). "Conducting blast tests in an arena," European Symposium of CEN Standards, Paris France, November 17
- Norville, H.S. (1991). "Additional tests of laminated glass units and monolithic lites," LSGA Fall Meeting, Denver, CO, October 2-4.
- Norville, H. Scott, Bove, Paul M. and Massa, R.J. (1991). "The resistance of architectural glazing to small bomb blasts," Ninth ASCE Structures Congress, Indianapolis, IN, April 29-May 1.
- Norville, H.S. (1991). "Dynamic failure prediction for window glass lites," U.S. Committee on Security Glazing, Washington, D.C., January 13-15.
- Norville, H.S., Bove, P.M. and Sheridan, D.L. (1991). "The strength of thermally tempered window glass lites," U.S. Committee on Security Glazing, Washington, D.C., January 13-15.
- Norville, H.S., Bove, P.M. and Massa, R.J. (1990). "Blast test program for window glass lites," ASTM Workshop on Security Glazing, San Antonio, TX, October 30-31.
- Norville, H.S., Bove, P.M. and Sheridan, D.L. (1990). "Dynamic failure prediction for window glass lites," ASTM Workshop on Security Glazing, San Antonio, TX, October 30-31.
- Norville, H.S. (1990). "Breakage tests of Dupont laminated glass lites," LSGA Fall Meeting, Denver, CO, October 2-4.
- Norville, H.S. (1987). "Window glass fractured under low-level blast waves," D+60 Misty Picture Event Symposium, Albuquerque, NM, August 10-12.
- Norville, H.S., Mehta, K.C. and Vann, W.P. (1986). "Wind load data for reliability based transmission line design," International Symposium on Probabilistic Methods Applied to Electric Power Systems, Toronto, Canada, June 11-13.
- Norville, H.S., Mehta, K.C. and Vann, W.P. (1985). "Analysis and interpretation of field data of wind and response of transmission lines," Fifth U.S. National Conference on Wind Engineering, Lubbock, TX, November 7.
- Norville, H.S. and Knox, J. (1985). "Experimental determination of stresses in concentric rings tests," Fall Meeting of the Texas Section of the American Society of Civil Engineers, El Paso, TX, September 27.
- Vallabhan, C.V.G. and Minor, J.E. (1984). "Experimentally verified theoretical analysis of thin glass plates," International Conference of Computational Methods and Experimental Measurements, Southampton, England, June 29.
- Norville, H.S. (1984). "Column response due to random base excitation," Fourth ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, Berkeley, CA, January 13.

**Publications**

*Presentations (Cont'd)*

Norville, H.S., Mehta, K.C. and Vann, W.P. (1983). "Reliability based design of transmission lines for wind," Fourth Engineering Mechanics Specialty Conference, American Society of Civil Engineers, West Lafayette, IN, May 25.

Norville, H.S. and Minor, J.E. (1983). "A failure theory for window glass plates," Fourth Engineering Mechanics Specialty Conference, American Society of Civil Engineers, West Lafayette, IN, May 24.

Norville, H.S. and Minor, J.E. (1982). "The strength of weathered window glass," Fall Meeting of the Glass Division, American Ceramic Society, Bedford, PA, October 1.

## **Publications**

### *Posters*

Afolabi, B. (Presenter & Author), Morse, S. (Author Only), Norville, S. (Author Only), Surlles, J. (Author Only), 15th Annual Graduate School Poster Competition, Texas Tech University, Lubbock, TX, "A comparison of residual compressive surface stress of weathered fully tempered glass," Local. (March 25, 2016).

Yew, G. Z. (Presenter & Author), Morse, S. (Author Only), Norville, S. (Author Only), 15th Annual Graduate School Poster Competition, Texas Tech University, Lubbock, TX, "Load resistance of internally point-supported monolithic glass lites," Local. (March 25, 2016).

Natividad, K. (Presenter & Author), Morse, S. (Author Only), Norville, S. (Author Only), Bergers, M. (Author Only), 15th Annual Graduate School Poster Competition, Texas Tech University, Lubbock, TX, "Tests of heat strengthened glass with ceramic frit," Local. (March 25, 2016).

## **Publications**

### *Reports*

Morse, S., Norville, S. (2011). "Strain measurements of uniformly loaded laminated samples with DG and SOIIO Interlayers," Glass Research and Testing Laboratory, August.

Norville, H.S. (2010): "Non-factored load charts for Saflex™ 'Q' series interlayer," Glass Research and Testing Laboratory, March.

Norville, H.S. (2006): "Non-factored load charts for Saflex™ VSO2 interlayer," Glass Research and Testing Laboratory, July.

Norville, H.S. (2005): "Load resistance charts for CAB glass," Glass Research and Testing Laboratory, April.

Norville, H.S. (2004): "Non-factored load charts for thick laminated glass with Saflex™ HP/DM interlayer and standard Saflex™", Glass Research and Testing Laboratory, December.

Norville, H.S., (2004): "Non-factored load charts for laminated glass with Saflex™ HP/DM interlayer", Glass Research and Testing Laboratory, September

Norville, H.S. (2002). "Results of British Embassy blast tests," Glass Research and Testing Laboratory, December.

Norville, H.S. and Mackay, T., (2001). "Strain measurements in laminated glass," Glass Research and Testing Laboratory Report, September.

Letchford, C.W., Norville, H.S., and Bilello, J., (2000). "Damage survey of the Fort Worth and Arlington tornadoes," WISE Report, Texas Tech University, March.

Letchford, C.W., and Norville, H.S., (1999). "Post Hurricane Floyd damage investigation in North and South Carolina," Glass Research and Testing Laboratory, September.

Norville, H.S. (1999). "Final report concerning the window glass at Hong Kong International Airport," NSS & Associates, August.

Norville, H.S. (1999). "Blast test of dupont SENTRYGLAS™ PLUS with omega interlayer," Submitted to Du Pont, Glass Research and Testing Laboratory, July 1999.

Norville, H.S. (1998). "Expansion of windas database," submitted to SW Research Institute, Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, April.

Norville, H.S. (1998). "Tests of 0.030 in Saflex interlayer laminated glass," submitted to Solutia, Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, May.

Norville, H.S. (1998). "Tests of 0.060 in Saflex interlayer laminated glass," submitted to Solutia, Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, May.

Norville, H.S. (1998). "Las Vegas Courthouse No. 1," submitted to Chanen/Sverdrup Corporation, Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, April.

King, K.W. and Norville, H.S. (1997). "The effect of interlayer thickness on laminated glass strength," submitted to Solutia, Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, February.

## **Publications**

### *Reports (Cont'd.)*

- Norville, H.S. (1995). "Tests of blast resistant windows with dupont SpallShield™ Composite," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, August.
- Norville, H.S., Smith, M.L., and King, K.W. (1995). "Survey of window glass broken by the Oklahoma City bomb on April 19, 1995," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, May.
- Norville, H.S., Wright, Richard CB and Lawrence, Stacey L. (1991). "Shear tests of polyvinyl butyral laminates," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, May.
- Norville, H.S., Bove, P.M. and Sheridan, D. (1991). "Strength of thermally tempered window glass lites," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, February.
- Norville, H.S., (1990). "Dynamic failure prediction for annealed window glass lites," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, December.
- Norville, H.S. (1990). "Breakage tests of dupont laminated glass lites," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, August.
- Vann, W.P., Lo, A-L., and Norville, H.S., (1989). "Field measurements of the response of window glass to low-level blast waves," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, April.
- GRTL (1987). "Misty picture data: window glass experiment, final data report," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, December 1987.
- GRTL (1987). "Additional tasks: window glass subjected to low-level blast waves," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, September.
- GRTL (1987). "Evaluations of window glass response to low-level blast waves, final test report," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, September.
- Norville, H.S. and Minor, J.E. (1987). "Glass failure prediction for Arnold Engineering Development Center," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, August.
- Norville, H.S. (1987). "Window glass fractured under low level blast waves," *Misty Picture D+60 Report*, Field Command Defense Nuclear Agency, July 14-15.
- Nagalla, S.R., Vallabhan, C.V.G., Minor, J.E. and Norville, H.S. (1985). "Stresses in layered glass units and monolithic glass plates," Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, October.
- Collins, J.D., McDonald, J.R., Norville, H.S., Smith, M.L., Vann, W.P., Vallabhan, C.V.G., and Wray, W.K. (1985). "Evaluations of fracture patterns, fallout patterns, and lacerative hazards by window glass broken by low level blast waves, final test report," 2 Vols., Glass Research and Testing Laboratory, Texas Tech University, Lubbock, TX, September.

**Publications**

*Reports (Cont'd)*

Kanabolo, D.C. and Norville, H.S. (1984). "The strength of new window glass plates using surface characteristics," Institute for Disaster Research, Texas Tech University, Lubbock, TX, September.

Norville, H.S., Mehta, K.C. and Farwagi, A.F. (1984). "Wind and transmission tower response data Analysis," Institute for Disaster Research, Texas Tech University, Lubbock, TX, September.

Norville, H.S. and Minor, J.E. (1984). "Concentric rings test on Cardinal IG specimens," prepared for Cardinal IG, August.

COWGR (1984). "A basis for the design of window glass under wind pressure," Committee on Window Glass Research, published by Texas Tech University, Lubbock, TX.

Norville, H.S. (1983). "Probabilistic behavior of elasto-plastic columns due to horizontal-vertical earthquake load," an interim progress report presented to the National Science Foundation, August.

Norville, H.S. (1983). "Orientation of surface flaws on glass plates relative to planes of fracture mirrors," prepared for the Center for Building Technology, National Bureau of Standards, April.

McDonald, J.R., Norville, H.S., and Marshall, T.P. (1981). "Damage survey of the Binger, OK, tornado of May 22, 1981," Institute for Disaster Research, Texas Tech University, Lubbock, TX, May.



### **Publications**

*ASTM Standards* (for which H. Scott Norville served as a major contributor or author)

- E 1300-16: Standard practice for determining load resistance of glass in buildings
- E 1300-12: Standard practice for determining load resistance of glass in buildings
- E 1300-09: Standard practice for determining load resistance of glass in buildings
- E 1300-07: Standard practice for determining load resistance of glass in buildings
- E 1300-04: Standard practice for determining load resistance of glass in buildings
- E 1300-03: Standard practice for determining load resistance of glass in buildings
- E 1300-02: Standard practice for determining load resistance of glass in buildings
- E 1300-00: Standard practice for determining load resistance of glass in buildings
- E 1300-98: Standard practice for determining load resistance of glass in buildings
- E 1886-02: Standard test method for performance of exterior windows, curtain walls, doors, and storm shutters impacted by missiles and exposed to cyclic pressure differentials
- E 1996-02: Standard specification for performance of exterior windows, curtain walls, doors and storm shutters impacted by windborne debris in hurricanes
- F 1642-04: Standard test method for glazing and glazing systems subject to airblast loading
- F 1642-03: Standard test method for glazing and glazing systems subject to airblast loading
- F 2248-12: Standard method to determine 3-second duration equivalent loadings for blast resistant glazing fabricated with laminated glass.
- F 2248-04: Standard method to determine 3-second duration equivalent loadings for blast resistant glazing fabricated with laminated glass.
- F 2248-03: Standard method to determine 3-second duration equivalent loadings for blast resistant glazing fabricated with laminated glass.

**Publications**

*Design Manuals*

Massa, R.J. and Norville, H.S. (1990). *Security glazing design guide*, published by Monsanto Company, St. Louis, MO.

Minor, J.E. Vallabhan, C.V.G., Behr, R.A., Norville, H.S. Linden, M.P., and Nagalla, S. (1988). *Structural performance: a guide to the structural performance of laminated architectural glass with Saflex plastic interlayer*, published by Monsanto Company, St. Louis, MO.

## **Publications**

### *Design Software*

- Norville, H. S., Morse, S.M., and Gurley, A. (2010). "Window glass design 2005," published by Standards Design Group, Lubbock, TX.
- Norville, H. S., Morse, S.M., and Gurley, A. (2009). "Atmospheric Pressure Effects on Insulating Glass Units," published by Standards Design Group, Lubbock, TX.
- Norville, H. S., Morse, S.M., and Samuels, S. (2004). "Window glass design 2004," published by Standards Design Group, Lubbock, TX.
- Norville, H. S. and Morse, S.M. (2003). "Blast resistant glazing design - 2003," published by Standards Design Group, Lubbock, TX.
- Norville, H.S., Morse, S.M., Mehta, K.C., McDonald, J.R., and Smith, D.L. (2003). "Wind loads on structures-2002," published by Standards Design Group, Lubbock, TX.
- Norville, H. S. and Morse, S.M. (2001). "Blast resistant glazing design," published by Standards Design Group, Lubbock, TX.
- Norville, H. S. and Morse, S.M. (2000). "Comprehensive window glass design PLUS," published by Standards Design Group, Lubbock, TX.
- Norville, H. S. and Morse, S.M. (1999). "Comprehensive window glass design," published by Standards Design Group, Lubbock, TX.
- Norville, H.S., Morse, S.M., Mehta, K.C., McDonald, J.R., and Smith, D.L. (1999). "Wind loads on structures according to ASCE 7," published by Standards Design Group, Lubbock, TX, 1999.
- Norville, H.S. and Morse, S.M. (1997). "Design program to the structural performance of laminated architectural glass with Saflex plastic interlayer," published by Solutia, St. Louis, MO.
- Norville, H.S. and Bove, P.M. (1990). "Design program to the structural performance of laminated architectural glass with Saflex plastic interlayer," published by Monsanto Company, St. Louis, MO.

## **Publications**

### *Textbooks*

- Engineering Mechanics: Statics, by H.S. Norville and A. Gurley, 2014, Great River Technologies, Dubuque, IA (Electronic, Approximately 500 pages).

## **Major Accomplishments as Chair**

### *ABET (2 Accreditation Visits)*

Department achieved full accreditation for the BSCE and MEnvE Programs in both cycles. Achieved buy-in from the faculty in the assessment process. Department received second accreditation despite state mandated program credit reduction from 137 +/- to 127 hours.

### *Faculty Hires (Assistant Professors unless Otherwise Noted)*

Sang-Wook Bae  
Xinzhong Chen  
Theodore (Ted) Cleveland (Hired as Associate Professor with Tenure)  
Annette Hernandez  
William (Bill) Lawson  
Hongchao Liu  
Stephen Morse  
Kayleigh Millerick  
Chuck Newhouse – Departed – Personal Reasons  
Jennifer Rice – Departed – Personal Reasons  
Hoyoung Seo  
Lianfa Song (Hired as Associate Professor with Tenure)  
Moon Won (Hired as Associate Professor without Tenure)  
Venkatesh (Venki) Uddameri (Hired as Professor with Tenure)  
Weile Yan  
DeLong Zuo

### *Tenure and Promotion*

Xinzhong Chen: Tenure and Promotion to Associate Professor  
Xinzhong Chen: Promotion to Professor  
Annette Hernandez: Tenure and Promotion to Associate Professor  
W. Andrew Jackson: Tenure and Promotion to Associate Professor  
W. Andrew Jackson: Promotion to Professor  
William (Bill) Lawson: Tenure and Promotion to Associate Professor  
Hongchao Liu: Tenure and Promotion to Associate Professor  
Hongchao Liu: Promotion to Associate Professor  
Audra Morse: Tenure and Promotion to Associate Professor  
Audra Morse: Promotion to Professor  
Sanjaya Senadheera: Tenure and Promotion to Associate Professor  
Lianfa Song: Promotion to Professor  
Moon Won: Tenure and Promotion to Professor  
DeLong Zuo: Tenure and Promotion to Associate Professor

### *Staff Hires*

Shannon Hutchison: Unit Manager for Structures Laboratory  
Sonie Pinkert: Senior Business Assistant

### *Fundraising*

Facilitated Civil and Environmental Engineering Academy in raising a \$200,000 endowed scholarship fund.

### *Student Enrollment*

Student enrollment increased by 50% over the last 8 years (but got reduced by introduction of Foundational Engineering).

### *Research Funding*

Oversaw increased *competitive* research awards by approximately 29% from 2003 to Present.

### *Departmental Name Change*

Changed Name from Department of Civil Engineering to Department of Civil and Environmental Engineering.

### *Teaching Loads*

Reduced teaching loads from 3/2 to mostly 2/1 for research active faculty.

*Successful Faculty Award Nominations*

<b>Sang Wook Bae</b>	2010	Excellence in Civil Engineering (ExCEEEd) Fellowship, American Society of Civil Engineers <sup>1</sup>
	2013	Dr. Charles L. Burford Faculty Award for Excellence in Undergraduate Teaching <sup>2</sup>
<b>Xinzhong Chen</b>	2008	Whitacre Research Award, Whitacre College of Engineering <sup>2</sup>
<b>Annette Hernandez</b>	2009	Excellence in Civil Engineering (ExCEEEd) Fellowship, American Society of Civil Engineers <sup>1</sup>
<b>W. Andrew Jackson</b>	2004	Civil and Environmental Engineering Researcher of the Year <sup>3</sup>
	2005	Civil and Environmental Engineering Researcher of the Year <sup>3</sup>
	2005	Category by the Department of Defense Strategic Environmental Development Program <sup>1</sup>
	2006	Civil and Environmental Engineering Researcher of the Year <sup>3</sup>
	2007-2010	Whitacre Faculty Research Fellow <sup>2</sup> (First in College)
	2007	Project of the Year in the Environmental Restoration Environmental Science Paper of the Year, <i>Environment Science and Technology</i> <sup>1</sup>
	2013	President's Excellence in Teaching Award <sup>2,5</sup>
<b>Hongchao Liu</b>	2009	Civil and Environmental Engineering Teacher of the Year <sup>3</sup>
<b>Lawson William</b>	2009	Teacher of the Year, Civil & Environmental Engineering Department <sup>3</sup>
	2010	New Faculty Award, Texas Tech Alumni Association <sup>2,5</sup>
	2011	Election to the Texas Tech University Teaching Academy <sup>5</sup>
	2011	Engineering Education Excellence Award, National Society of Professional Engineers/Professional Engineers in Higher Education <sup>1</sup>
	2012	Engineer of the Year, South Plains Chapter Texas Society of Professional Engineers <sup>4</sup>
	2012	George T. and Gladys Abell-Hanger Faculty Award <sup>2</sup>
<b>Audra Morse</b>	2013	President's Excellence in Teaching Award <sup>2,5</sup>
	2006	Texas Tech Alumni Association's New Faculty Award <sup>2,5</sup>
	2006	Hemphill Wells New Professor Excellence in Teaching Award <sup>2,5</sup>
	2006	ASCE ExCEEEd New Faculty Excellence in Teaching Award <sup>1</sup>
	2007	ASCE Region 6 Faculty Advisor of the Year <sup>4</sup>
	2009	Whitacre Excellence in Research Award <sup>2</sup>
	2009	ASCE Texas Section - Professional Service to Students Award <sup>1</sup>
	2009	Outstanding Educator, TTU TECHspy Awards <sup>2</sup>
	2010	President's Excellence in Teaching Award <sup>2,5</sup>
	2010	Chi Epsilon Excellence in Teaching Award <sup>1</sup>
<b>Stephen Morse</b>	2010	Outstanding Educator, TTU TECHspy Awards <sup>5</sup>
	2010	ASCE Region 6 Faculty Advisor of the Year <sup>4</sup>
	2011	Chancellor's Council Distinguished Teaching Award <sup>5</sup>
	2012	Excellence in Civil Engineering (ExCEEEd) Fellowship, American Society of Civil Engineers <sup>5</sup>
	2013	Texas Tech University Association New Faculty Award <sup>5</sup>
<b>Kenneth Rainwater</b>	2010	Whitacre College of Engineering Researcher of the Year <sup>2</sup>
<b>Sanjaya Senadheera</b>	2005	Civil and Environmental Engineering Researcher of the Year <sup>3</sup>
	2012	Election to the Texas Tech University Teaching Academy <sup>5</sup>
<b>Moon Won</b>	2008	George T. and Gladys Abell-Hanger Faculty Award <sup>2,5</sup>
	2011	Whitacre Research Award <sup>2</sup>
<b>Delong Zuo</b>	2010	Civil and Environmental Engineering Researcher of the Year <sup>3</sup>

<sup>1</sup>National Award <sup>2</sup>College Award <sup>3</sup>Departmental Award <sup>4</sup>Local/Regional Award <sup>5</sup>University Award