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Registration
Licensed Professional Engineer, State of Texas # 96268
Licensed Professional Engineer, Commonwealth of Virginia #29807
National Council of Examiners for Engineering and Surveying Record # 20450

Experience

Aug 2005 – Present	Assistant Professor, Texas Tech University, Lubbock, Texas Tech University
Aug 2002 – July 2005	Research Assistant, Virginia Tech, Blacksburg, Virginia
Jan 1994 – July 2002	Consulting Structural Engineer, MMM Design Group, Norfolk, Virginia
May 1992 – Dec 1994	Research Assistant, Virginia Tech, Blacksburg, Virginia

Education

Ph.D.	Civil Engineering	2005	Virginia Tech, Blacksburg, Virginia
M.S.	Civil Engineering	1993	Virginia Tech, Blacksburg, Virginia
B.S.	Civil Engineering	1992	Virginia Tech, Blacksburg, Virginia

Current Research Projects
None.

Past Research Projects
"Development of Optimized Continuity Diaphragm for New PCTGirders", 2002-2005, $140,000., (Performed at Virginia Tech). The objective of the research study was to test full depth PCBT girders made continuous with different continuity connections and to create a state standard for the connection for the Virginia Department of Transportation (VDOT). Girders were instrumented at the fabricator and both full scale static loading and cyclic loading testing was performed on specimens weighing over 18 tons. For more information, see the Dissertation at http://scholar.lib.vt.edu/theses/ under the name Charles Newhouse.
"Concrete Bridge Protection, Repair, and Rehabilitation Relative to Reinforcement Corrosion – A Methods Application Manual", 1991-1993, $2,700,000., (Performed at Virginia Tech). The objective of the research study was to evaluate different methods of determining the current and predicted condition of reinforced concrete decks. Deck surveys were performed on over 30 structures throughout the Midwest, collecting data on cover depths, deck cracking, delaminations, spalls, half-cell potential readings, chloride ion contents, and corrosion rates.
"Investigation of Long-Term Prestress Losses in Pretensioned High Performance Concrete Girders", (Assisted other researchers at Virginia Tech). Assisted in installing and monitoring gages to determine the instantaneous elastic deformation and long term creep of AASHTO girders during construction and initial service.
"Characterization of Punching Shear Capacity of Thin UHPC Plates", (Assisted other researchers at Virginia Tech). Assisted in the laboratory testing of thin ultra high performance concrete (23-33 ksi compressive strength) slab specimens to differentiate between flexural and punching shear failures.
"Ultimate Strength of the Local Zone in Load Transfer Tests", (Assisted other researchers at Virginia Tech). Assisted in the fabrication and testing of 199 specimens used to evaluate the prediction of ultimate strength of the local zone in load transfer tests.
"Performance of a Bridge Deck with Glass Fiber Reinforced Polymer (GFRP) Bars as the Top Mat of Reinforcement", (Assisted other researchers at Virginia Tech). Assisted in the field testing of a bridge deck using fully loaded dump trucks to evaluate the performance of GFRP bars used as the top mat of reinforcing.
"Determination of Modulus of Elasticity of Glass Fiber Reinforced Polymer (GFRP) Bars", (Assisted other researchers at Virginia Tech). Set up a tensile testing procedure to pull and monitor GFRP bars in order to determine bar properties.

Honors and Awards

Via Doctoral Fellowship, Virginia Tech, August 2002 – August 2005
Davenport Doctoral Fellowship, Virginia Tech, August 2002 – August 2005
Chief Structural Engineer, Associate, Bridge Inspector Coordinator, MMM Design Group
Competent Toastmaster, Morgan Martin Toastmaster Club No. 686, Norfolk, Virginia
Via Scholarship, Virginia Tech, August 1992 – August 1993
Outstanding Senior Civil Engineer, Virginia Tech, 1992
Kiewitt Eastern Company Scholarship, Junior and Senior Years at Virginia Tech
Engineering Summer Abroad Program, Oxford, England, Summer 1989

Peer Reviewed Conference Proceedings

Newhouse, C.D., Roberts-Wollmann, C.L., and Cousins, T.E., "Influences of Design Methods and Assumptions on Continuity Moments in Multi-Girder Bridges", PCI National Bridge Conference, October 17-20, 2004.

Newhouse, C.D. and Weyers, R.E., "Time to Corrosion Cracking," Techniques to Assess the Corrosion Activity of Steel Reinforced Structures, ASTM STP 1276, Neal S. Berke, Edward Escalante, Charles K. Nmai, and David Whiting, EDS., American Society for Testing and Materials, Philadelphia, PA, 1995.

Peer Reviewed Reports/Articles

Newhouse, C.D., Roberts-Wollmann, C.L., Cousins, T.E., September 2005 "Development of Optimized Continuity Diaphragm for New PCBT Girders – Final Contract Report – VTRC 06-CR3", Virginia Transportation Research Council.

Newhouse, C.D., October 27, 2005, "Preparing for your First Academic Position – A Graduate Student's Perspective," **submitted** to *American Society for Engineering Education's Prism*.

Newhouse, C.D., Roberts-Wollmann, C.L., Cousins, T.E., Davis, R.T., December 16, 2005, "Strands versus Bars for Positive Moment Connection of PCBT Girders," **submitted** to the *PCI Journal.*

Weyers, R.E., Prowell, B.D., Sprinkel, M.M., Vorster, M., "Concrete Bridge Protection, Repair, and Rehabilitation Relative to Reinforcement Corrosion: A Methods Application Manual", Strategic Highway Research Program, SHRP–S–336, (Contributed to final document at Virginia Tech).

Other Writing Experience

Newhouse, C.D., "Design and Behavior of Precast, Prestressed Girders Made Continuous – An Analytical and Experimental Study", Dissertation, Virginia Tech, May 2005.

Newhouse, C.D., Over 280 NBIS and Pontis Bridge Inspection Reports, Cities of Virginia Beach, Newport News, and Hampton, Virginia.

Newhouse, C.D., "Corrosion Rates and the Time to Cracking of Chloride Contaminated Bridge Components", Thesis, Virginia Tech, December 1993.

Consulting Experience

Positions

Chief Structural Engineer, Bridge Inspection Coordinator

Design Types

New Bridge (AASHTO girders, voided slabs, box beams, plate girders, rolled beams)
Bridge Rehabilitation (complete superstructure replacement, Type A structures)
Temporary Excavation Support Systems (circular concrete ring wale, soldier piles, multi-level braced)
Buildings (concrete masonry, steel moment frames)
Over 280 NBIS and Pontis Bridge Inspection Reports

Professional Affiliations

American Society of Civil Engineers
Precast/Prestressed Concrete Institute
American Society of Engineering Education
Structural Engineering Institute