Education, Design and Practice – Understanding skills in a Complex World (New York)

• Paper / Proposal Title:
Undergraduate Value Engineering Collaboration with Industry Partner

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• University or Company Affiliation:
Kansas State University, GE Johnson Department of Architectural Engineering and Construction Science

• Abstract (300 words):
Successful business enterprises must never be content to operate without consideration for implementing refinements that support continued improvement in customer experience that leads to growth and increased profitability. Freddy’s Frozen Custard & Steakburgers franchise, headquartered in Wichita, Kansas, has achieved a consistent pattern of success in both franchise growth and profitability due to continued evolution of their restaurant format and business operations. Despite their proven track record, Freddy’s management recognized that their own ability to internally identify further improvements might be enhanced through the involvement of outside collaborators who could provide fresh insights into the current design and construction programs. To accomplish this, Freddy’s engaged three of Kansas State University’s Construction Science and Management (CNSM) faculty and five undergraduate construction students from the GE Johnson Department of Architectural Engineering and Construction Science to undertake a creative inquiry (CI) effort which would be tasked with reviewing both the current design and construction program as well as reviewing two new prototype restaurant concepts. The CI team was challenged with the objective of identifying a realistic list of value engineering topics that could be further-researched by the client to determine their value, feasibility and
monetary impact related to improving the Freddy's brand and customer experience while supporting lower first costs and/or lower life cycle costs of ownership.

• Author(s) Biography (200 words each):

Shannon Casebeer, Kansas State University

Shannon Casebeer is an Assistant Professor in the GE Johnson Dept. of Architectural Engineering and Construction Science in the Carl R. Ice College of Engineering at Kansas State University. Shannon currently holds the Jim and Carolyn Grier Construction Science Chair. He is also a LEED Green Assoc. and Associate DBIA. Shannon received his Bachelors of Science in Construction Science and Management from Kansas State University in 1992. He earned a Master of Construction Management from North Dakota State University in 2016. Before joining the faculty at K-State in 2013, he worked for 20 years in industry as an estimator, superintendent and project manager, engaged in various commercial building construction projects, heavy civil construction projects and railroad construction projects. He is a member of AGC, ASPE, USGBC, and DBIA. At K-State, he teaches courses in the construction curriculum including: Construction Materials; Computer Applications for Engineering & Construction; Construction Estimating; Construction Management; Preconstruction Services & Design-Build and Construction Financial Management. He is also a faculty advisor for the AGC Student Chapter, USGBC Student Chapter and Sigma Lambda Chi Honoray. He is involved in multiple undergraduate research creative-inquiry projects and serves as a coach for two student construction competition teams.

Mrs. Katie Loughmiller, Kansas State University

Katie Loughmiller is an Assistant Professor in the GE Johnson Department of Architectural Engineering and Construction Science in the Carl R. Ice College of Engineering at Kansas State University. Katie currently holds the Martin K. Eby Distinguished Professorship. Her specific areas of interest include construction scheduling, construction finance, and retention and recruitment in STEM fields. Katie Loughmiller received her Bachelor’s Degree in Construction Science in Management from Kansas State University. As a professional, she worked as a Project Engineer and Project Manager in Austin, Texas. In this role, she was responsible for the management of construction projects ranging from $5-70 million. After spending 12 years in industry, Katie accepted a faculty position with the Department of Architectural Engineering and Construction Science at Kansas State University in Manhattan, KS. She received her Master’s degree in Construction Management (2015) from North Dakota State University. Katie is very involved in the Construction Industry though the National Association of
Women in Construction (NAWIC), where she serves on the Board of Trustees for the NAWIC Education Foundation. She is also actively involved in the Associated Schools of Construction and currently serves as the Director of ASC Region 4.

Ray Buyle, DBIA, Kansas State University

Ray Buyle is Department Head and Associate Professor in the GE Johnson Department of Architectural Engineering and Construction Science in the Carl R. Ice College of Engineering at Kansas State University. Ray currently holds the Tointon Construction Management Chair. He is in his 12th year of teaching at K-State following a 23-year career in the construction industry. His Education includes a B.S. in Construction Science from Kansas State University in 1984. He later earned his M.S. of Curriculum and Instruction at Kansas State University in 2010. Ray also earned designation as Design-Build Professional by the Design-Build Institute of America in 2012. His academic experience includes serving as Department Head, starting August 2017- present. Before that he served as Interim Department Head from March 2017-August 2017. He became an Associate Professor with tenure in 2015. Before that he served as Assistant Professor from 2010-2015 and as an Instructor from 2007-2010. His non-academic experience includes working for McPherson Contractors, Inc., Topeka, Kansas as a Project Manager (1993-2007); S/S Builders, Inc., Topeka, Kansas as Vice President for Project Management (1986-1993) and The Law Company, Wichita, Kansas as Project Controller and Assistant Superintendent (1985-1986).