



EDUCATION

- Virginia Tech
 - Bachelor of Science, Civil Engineering, 2021
 - Master of Science, Civil Engineering (Structural Engineering and Materials), 2022

PRACTICE AREAS

- Concrete
- Pavement Investigation
- Flooring and Underlayments
- Structural Analysis
- Repair and Rehabilitation
- Plazas and Terraces
- Failure/Damage Investigation

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Society of Civil Engineers
- International Concrete Repair Institute

CONTACT

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EXPERIENCE

Jessica Viehman is a structural engineering consultant with experience in concrete materials, structural design, and construction administration. Ms. Viehman provides professional services for projects involving distressed concrete structures and pavement, condition assessments, failure/damage investigations, and repair/rehabilitation design.

While studying at Virginia Tech, Ms. Viehman investigated the performance of normal and lightweight concrete featuring supplementary cementitious materials.

REPRESENTATIVE PROJECTS

Concrete

- Gateway Towers Garage - Pittsburgh, PA: Structural concrete repair design
- Kansas Department of Transportation Box Culverts - Nemaha: Evaluation of decreased service life claims associated with high air content
- David L. Lawrence Convention Center - Pittsburgh, PA: Evaluation of sulfuric acid staining and repair recommendations
- High Five Interchange - Dallas, TX: Non-destructive evaluation of internal post tensioned tendons

Pavement Investigation

- West Huron Road - Cleveland, OH: Analysis of microsilica overlay failure
- Hopkins - Cleveland, OH: Investigation of doweled pavement distress
- Drag Strip Race Surface - Great Bend, KS: Evaluation of pavement surface distress
- Liberal Kenworth - Liberal, KS: Examination of industrial pavement distress
- Murphy Tractor - Brunswick, OH: Evaluation of code requirements for industrial pavement

Flooring and Underlayments

- Twin Valley Behavioral Healthcare Hospital - Columbus, OH: Evaluation of distressed, resilient, and resinous flooring
- Bulldog Activity Center - Canton, OH: Evaluation of blistered sports flooring
- Bridgestone Arena - Nashville, TN: Examination of terrazzo distress
- Rockwell Terrazzo - Kent, OH: Investigation of distressed terrazzo tile

Structural Analysis

- Centre Plaza Garage - Pittsburgh, PA: Repair design of deteriorated precast hollowcore plank and design of new steel traffic barrier
- PNC Park - Pittsburgh, PA: Evaluation of precast seating tub bearing distress
- Bridgeville Towers - Bridgeville, PA: Design of steel framing to support chute opening in precast hollowcore planks
- University of Pittsburgh, Heinz Chapel - PA: Analysis of components and cladding wind pressures on lead-coated copper fleche
- Forbes Hall - Pittsburgh, PA: Evaluation of existing structural system for new green roof and construction loading
- West Side Market - Cleveland, OH: Evaluation of structural capacity of scaffolding
- Fairfax Apartments - Pittsburgh, PA: Design of steel support structure at PTAC openings

Repair and Rehabilitation

- Centre Plaza Garage - Pittsburgh, PA: Structural repair design and construction administration services
- Fairfax Apartments - Pittsburgh, PA: Construction administration for brick and limestone masonry repairs

Plazas and Terraces

- David L. Lawrence Convention Center - Pittsburgh, PA: Construction administration services for green roof installation
- Forbes Hall Pavilion - Pittsburgh, PA: Investigation of deteriorated green roof system, conceptual design recommendations, and construction administration
- The Towers - State College, PA: Design development of new waterproofing system

Failure/Damage Investigation

- Edge Garage - Pittsburgh, PA: Investigation and repair design of failed double-tee flange-to-flange connectors
- EBY Brown - West Mifflin, PA: Analysis of heaving slabs-on-grade; inspection of open web steel joists and connections
- Beaver Valley - Pittsburgh, PA: Evaluation of freeze-thaw damaged concrete elements