

Mark A. Churpek, PE | Senior Principal Engineer – Large/Complex Loss

Cleveland, Ohio

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Professional Summary:

Mr. Churpek is structural engineer with nineteen years of experience that includes design of new structures and structural repairs, evaluations of existing facilities, and failure investigations for a wide variety of structural systems and construction materials.

Mr. Churpek holds bachelor's and master's degrees in engineering and spent his first three years of practice performing engineering work related to bridge structures, including the design of new bridges and the inspection and rehabilitation design of existing bridges. For the past seventeen years, his practice has been primarily involved with evaluation of existing structures. This includes investigations to determine the cause, origin, and extent of damage to distressed buildings affected by tornadoes, hurricanes, snow/ice, fires, vehicle impacts, construction defects, deterioration, and other factors. Mr. Churpek also has experience with the design of stabilization and repairs to damaged structures.

Mr. Churpek's areas of expertise include, but are not limited to:

- Failure/Collapse Investigations
- Construction Defect Evaluations
- Structural Evaluation and Repair
- Shoring/Stabilization Design
- Building Code Analysis

Licenses and Certifications:

Professional Engineer

- Alabama, #40156-E
- Arizona, 75936
- California (Civil), #93607
- Colorado, #PE.0060638
- Florida, #91597
- Georgia, #PE047089
- Indiana, #PE12100273
- Kentucky, #36563
- Louisiana, #45558
- Maryland, #57554
- Massachusetts, #56478
- Michigan, #6201309827
- Missouri, #PE-2022001707
- Minnesota, #59188
- Mississippi, #31871
- New Jersey, 24GE05845600
- New York, #102324
- North Carolina, #052084
- New York, #102324
- Ohio, #PE.71874
- Pennsylvania, #PE077694
- South Carolina, #39028
- Tennessee, #125173
- Texas, #141262
- Virginia, #0402063647
- Washington D.C., PE40000038
- West Virginia, #18398
- Wisconsin, #48501

Other

- Remote Pilot Certificate, USA Federal Aviation Administration, Certificate #4392869

Project Experience:

Failure/Damage Investigation

- City of Dayton, OH: assessment of more than 100 City owned facilities following EF-4 tornado
- Confidential Client, OH: investigation of collapse of pre-engineered metal building during construction
- K-12 School – Brookfield, OH: investigation of various construction claims, including expansive soils, shingle deformation, water infiltration, and CMU reinforcement
- Brickyard Restaurant – Niagara Falls, NY: evaluation to determine extent of fire damage
- OSU Aquatic Center – Columbus, OH: investigation to determine cause of loss of adhesion of ceramic tile lined pools
- Ethanol Plant, Fostoria, OH: investigation of cracking in concrete silo
- Blue Racer Plant – Natrium, WV: investigation of fire damage to concrete foundations
- Reiger Place – Sandusky, OH: roof collapse investigation
- CALU Vulcan Parking Structure – California, Pennsylvania. investigation of partial failure of precast concrete double-tee parking structure
- Commerce Place – Middleburgh Heights, OH: investigation of foundation movement and related building distress
- MTD Warehouse – Shelby, OH: investigation of partial collapse of warehouse floor
- Cornerstone Garage – Cincinnati, OH. investigation of connector-related distress of precast double tee parking garage
- Horseshoe Casino Garage – Cleveland, OH: investigation of partial collapse of concrete structure during construction
- ONU Hotel – Ada, OH: investigation of wood structure deficiencies
- CBEC Building – Columbus, OH: investigation of cracking and deflections of two-way reinforced concrete floor slab
- Hurricane Damage Assessment – FL, AL, LA, MS, NY. Post-hurricane assessment of various facilities following named storms Katrina – 2005, Sally – 2020, Laura – 2020, Ida – 2021
- Petrochemical Vessel Loading Dock – Houston, TX: assessment of damage to dock following vessel collision
- Memorial Park West – Houston, TX: investigation of brick cladding
- Delaware River Turnpike Bridge – Bristol Township, PA: Structural analysis of steel truss bridge following chord failure
- Louis Dreyfus Plant – Claypool, IN: assessment of metal building structure following tank explosion
- Aurella Cary Garden – Cary, NC: investigation of fire damage to wood-framed apartment building
- St. Anthony of Padua School – Parma, OH: evaluation to determine extent of fire damage
- Confidential Hotel, New York, NY – investigation of excessive moisture in exterior walls of thirty-story hotel
- Mizner Park – Boca Raton, FL: investigation of water infiltration
- Louis Dreyfus Plant – Claypool, IN: assessment of building and exhaust stack following boiler explosion
- The Luckman Apartments – Cleveland, OH: investigation of water supply pipe failure
- IMTT – St. Rose, LA: investigation of damage to liquid storage tanks and buildings following Hurricane Ida
- Cypress Bay Marina – Buchanan, TN: investigation of wind damage to floating docks
- MARS Horsecare – Dalton, OH: evaluate extent of damage to steel bin structures and concrete roof following a fire

Condition Assessment

- Central Artery Tunnel (Big Dig) – Boston, MA: inspection/safety audit of precast bridge structures
- David L. Lawrence Convention Center: structural evaluation of building following partial collapse at loading dock
- St. Joseph Church – Tiffin, OH: Structural condition assessment of distressed masonry steeple
- Warehouse – Columbus, OH: Assessment and structural analysis of ~100-year-old reinforced concrete framed building for re-development
- Municipal Court Building – Columbus, OH. Assessment of limestone facade

Repair/Stabilization Design

- StoreExpress – Pittsburgh, PA: design stabilization of steel framed structure following a fire to facilitate fire cause and origin investigation
- Metzenbaum U.S. Courthouse – Cleveland, OH: investigation and repair recommendations for water infiltration and concrete deterioration of sidewalk vault
- Courtyard Condominiums – Westlake, Ohio: evaluation of extent of damage to wood-framed structure due to fire and design of shoring to facilitate access to fire investigators
- Growmark fertilizer plant – East Liverpool, OH: evaluation and repair design for fire damage concrete, CMU and wood structure
- Huntington Park Garage – Cleveland, OH: evaluation and repair design for prestressed concrete garage structure with approximately \$6M in concrete repair work
- St. Luke's Hospital – Cleveland, OH: evaluation and stabilization design for movement/distress to mass masonry walls and chimney
- US Air Force Base – Pittsburgh, PA: evaluation and design of repairs for damaged split-ring connected wood roof trusses
- Memorial Hospital – Greene, OH: investigation of partial collapse of brick cladding and stabilization design for remaining facade
- Nationwide Retailer – Various, United States: perform structural evaluations and design repairs for various conditions in "big box" stores constructed primarily of metal deck, open-web steel joist, and concrete masonry unit walls
- Weyerhaeuser Plant – Heaters, WV: design repairs for steel structure following a fire

Professional Experience:

EFI Global, Inc., Principal/Senior Principal Engineer – Large/Complex Loss, 2021-present
Wiss, Janney, Elstner Associates, Inc., Associate Principal, 2019-2021
Wiss, Janney, Elstner Associates, Inc., Cleveland Unit Manager, 2015-2019
Wiss, Janney, Elstner Associates, Inc., Associate/Senior Associate, 2005-2014
URS Corporation, Project Engineer, 2002-2005

Education:

Master of Engineering (Structures/Management Specialization), University of Akron, Akron, OH, 2006
Bachelor of Science, Civil Engineering, Ohio Northern University, Ada, OH, 2002

Affiliations:

Structural Engineers Association of Ohio (SEAoO), past-President (2015)
American Society of Civil Engineers (ASCE), member