

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

Cleveland, Ohio

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Professional Summary:

Mark Churpek is structural engineer with twenty-one years of experience including the design of new structures and structural repairs, condition assessments of existing facilities, and failure investigations for a variety of structural systems and construction materials.

Mr. Churpek holds bachelor's and master's degrees in engineering. His first three years of practice involved the design and evaluation of bridges. For the past eighteen years, his practice has focused on evaluation of existing structures. This includes investigations to determine the cause, origin, and extent of damage to distressed structures affected by tornadoes, hurricanes, snow, 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

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| • Alabama, #40156-E | • Minnesota, #59188 |
| • Arizona, #75936 | • Mississippi, #31871 |
| • Arkansas, #21780 | • New Jersey, #24GE05845600 |
| • California (Civil), #93607 | • New York, #102324 |
| • Colorado, #PE.0060638 | • North Carolina, #052084 |
| • Florida, #91597 | • Ohio, #PE.71874 |
| • Georgia, #PE047089 | • Pennsylvania, #PE077694 |
| • Indiana, #PE12100273 | • South Carolina, #39028 |
| • Iowa, #P28121 | • Tennessee, #125173 |
| • Kentucky, #36563 | • Texas, #141262 |
| • Louisiana, #45558 | • Virginia, #0402063647 |
| • Maryland, #57554 | • Washington D.C., #PE40000038 |
| • Massachusetts, #56478 | • West Virginia, #18398 |
| • Michigan, #6201309827 | • Wisconsin, #48501 |
| • Missouri, #PE-2022001707 | • Puerto Rico, #28840 |

Other

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

Project Experience:

Storm Damage Assessment

- Hurricane Damage Assessments – FL, AL, LA, MS, NY. Post-hurricane structural and building enclosure assessments of various facilities following storms Katrina – 2005, Sally – 2020, Laura – 2020, Ida – 2021, Ian 2022. Includes evaluation of wind damage, storm surge, and water infiltration
- City of Dayton, OH: assessment of more than 100 City owned facilities following EF-4 tornado
- 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
- The Pines Resort – Bass Lake, CA: evaluation of damage to wood-framed structures following snow event
- Pfizer – Rocky Mount, NC: evaluation of pharmaceutical office, research, and warehouse buildings following tornado
- Mastronardi Produce – Wapakoneta, OH: investigation of collapse of 19-acre greenhouse following tornado
- Pueblo County Schools, Pueblo, CO: hail damage investigation of various low-slope and steep roofing coverings, including asphalt shingles, metal panels, TPO, EPDM, and BURs.

Structural Evaluation Following Fire/Explosion

- Blue Racer Plant – Natrium, WV: investigation of fire damage to concrete foundations at natural gas plant
- Aurella Cary Garden – Cary, NC: investigation of fire damage to wood-framed apartments
- St. Anthony of Padua School – Parma, OH: evaluation to determine extent of fire damage in concrete, masonry and steel structure
- Louis Dreyfus Plant – Claypool, IN: assessment of metal building and exhaust stack following boiler explosion
- MARS Horsecare – Dalton, OH: evaluate extent of damage to steel grain bin structures and concrete roof following a fire inside bin
- Distribution Center – Riverside, CA: evaluation of precast concrete tilt-up wall panels and concrete pavement following fire
- Waste Management – Elizabeth, NJ: evaluation of metal building and concrete slab-on-ground following fire
- Hussey Copper – Leetsdale, PA: evaluation of structure following molten copper release

Distress/Collapse/Defect Investigations

- 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
- OSU Aquatic Center – Columbus, OH: investigation to determine cause of loss of adhesion of ceramic tile lined pools
- Reiger Place – Sandusky, OH: roof collapse investigation
- CALU Vulcan Parking Structure – California, Pennsylvania: investigation of partial failure of precast concrete double-tee parking structure
- Ethanol Plant, Fostoria, OH: investigation of cracking in concrete silo
- 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
- Petrochemical Vessel Loading Dock – Houston, TX: assessment of damage to dock following vessel collision
- Memorial Park West – Houston, TX: investigation of brick cladding distress
- Delaware River Turnpike Bridge – Bristol Township, PA: Structural analysis of steel truss bridge following chord failure
- 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 in outdoor shopping center
- Covanta – Indianapolis, IN: investigation of collapse of lime storage silo
- Morton Salt – Fairport Harbor, OH: evaluation of loading dock arm following vessel collision
- Shoregate Towers Garage – Eastlake, OH: investigation of collapse of precast concrete and steel framed parking structure
- Apartment Building, Van Nuys, CA: investigation of water infiltration in modular construction apartment building during construction
- NFTA Seawall – Buffalo, NY: investigation of collapse of reinforced concrete seawall along Buffalo River
- Springhill Suites – Independence, OH: investigation of suspended ceiling collapse of indoor swimming pool
- Apartment Building – Shakopee, MN: investigation of CPVC sprinkler line failures
- Fairway Apartments – Hayward, CA: investigation of water infiltration during re-roofing project
- Gavin Power Plant – Cheshire, OH: investigation of steel hopper collapse

Condition Assessment

- Central Artery Tunnel (Big Dig) – Boston, MA: inspection/safety audit of precast bridge structures
- David L. Lawrence Convention Center – Pittsburgh, PA: structural evaluation of building following partial collapse at loading dock
- St. Joseph Church – Tiffin, OH: 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 for fire investigation
- 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 distressed prestressed concrete garage structure
- St. Luke's Hospital – Cleveland, OH: evaluation and stabilization design for movement/distress to mass brick 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: structural evaluation and repair design of “big box” stores constructed primarily of metal deck, open-web steel joists, and concrete masonry unit walls
- Weyerhaeuser Plant – Heaters, WV: design repairs for steel equipment support 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 (SEAO), past-President (2015)
American Society of Civil Engineers (ASCE), member