

COLIN DAVIS, P.E.

EDUCATION:

B.S. Civil Engineering (Structural Discipline), Purdue University, West Lafayette, IN, May 2017

REGISTRATIONS:

Mr. Davis is a Registered Professional Engineer in CO, KS, MT, UT, WY
NCEES Record Holder # 17-777-62



EXPERIENCE:

Engineering Manager, Knott Laboratory, LLC, Centennial, Colorado, July 2022 – present
Project Engineer, Collins Engineers, Denver, Colorado & Chicago, Illinois, June 2019 – June 2022
Design Engineer, United Consulting, Indianapolis, Indiana, June 2017 - June 2019

FORENSIC & RECONSTRUCTION ENGINEERING:

Mr. Davis has investigated cases involving property damaged by fire, moisture intrusion, corrosion, foundation failure, structural member failure, vehicular collisions, construction defects, and various deterioration. At Knott Laboratory, Mr. Davis conducts structural evaluations and failure analysis on residential and commercial structures, building envelopes and has experience in destructive and non-destructive testing. Mr. Davis has designed repairs for a variety of residential and commercial structures following the investigation of such structures. This repair design experience includes all building materials including masonry, wood and timber, reinforced concrete, structural steel, and other building materials.

BRIDGE ENGINEERING AND DESIGN:

Mr. Davis has performed design and plan preparation for a variety of projects in the transportation sector including structural and construction engineering using a wide array of structural materials including timber, structural steel, and reinforced concrete. Mr. Davis has collaborated closely with contractors to complete large design-build projects such as interstate highway bridge and urban light-rail structures rehabilitation projects. Designs include construction barriers, temporary shoring towers, temporary footings, temporary and permanent micropile foundations, anchoring systems for temporary construction platforms, and other structural items. Worked with contractors to design erection sequences, coordinate gantry lifting plans and design installation procedure of precast concrete bridge segments. Prepared plans and calculation packages for rehabilitation of interstate bridge and overpass structures. Designs included concrete slab, prestressed concrete beam, steel beam and built-up steel girder bridges. Performed design calculations for jacking bracket to perform the close-out jacking between steel girder segments for a field splice. Designed lifting rig for precast posts for interstate sound wall including design of steel members, bolt, and weld connections. Verified the demolition procedure of a concrete deck on steel beams by analyzing the adequacy of the bridge deck to support demolition equipment during the procedure.

BRIDGE INSPECTION:

Mr. Davis has inspected a variety of bridge structures, moveable bridges, retaining walls and other structures. These inspections include routine, fracture critical, special and element level. Inspections included investigation of all aspects of the structure including substructure, superstructure, deck, wearing surface, utility connections, sidewalks, railings, wingwalls, retaining walls and bridge houses. Inspected City of Chicago DOT bridges including bascule, vertical lift, concrete beam, steel girder, steel truss and a variety of other structures including retaining wall, masonry bridge houses, bridge railings and bridge lifting components. Performed in-depth inspection for Minnesota DOT concrete box girders. Measured crack length and width of all cracks inside of a series of concrete box girders as part of a 20-year in-depth inspection. Performed routine inspection for University of Saint Mary's of the Lake campus bridges, retaining walls and underwater dam structures. Inspection included underwater depth soundings, non-destructive concrete testing, and crack remediation. Performed routine and fracture critical inspections for hundreds of Indiana county bridge inspections including steel truss, railroad flat car, steel girder, concrete beam, concrete slab, and other structure types. Inspections included underwater analysis of scour and stream degradation, vehicle impact, substructure, superstructure, approach roadway, bridge deck, wearing surface, railing, and other bridge components.