



## Reen Foley

MSCE, PE

### Senior Managing Engineer

#### Department

Engineering Services

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#### Locations

Jacksonville, FL

## Biography

Reen Foley is a licensed Professional Engineer who enhanced the success of 3 start-up companies. She has 17 years of structural engineering experience and ten years of project team cultivation and supervising. Ms. Foley has structurally analyzed and designed residential, commercial, city, state, and federal buildings and bridges in Florida, Georgia, New York, and Australia, as well as international marine ports in Florida and Texas.

Ms. Foley has investigated the cause and origin of structural failures and/or damage, including vehicular impact, environmental catastrophes, storms, and manufacture or installation defect. She establishes rapport with clients and produces straightforward, objective reports that effectively explain findings and conclusions – focused on factual reality.

## Credentials

- MSCE | Master of Science in Civil Engineering
- PE | Professional Engineer

## Representative Consulting Assignments

- St. Johns River Ferry Access Bridges - Mayport and Fort George | Florida | City of Jacksonville (COJ) 2018 As extensive damage to the Fort George bulkhead was apparent, full removal of the bridge was required to assess the details of damage and prepare repair design for the bulkhead. Complete replacement of both bridges was planned. Tactical timing of crane location and transportation enabled overlapping schedules, minimizing downtime for both bridges and decreasing labor. The 69.5-foot and 67.25-foot movable, counterweighted bridges are steel girders with cross beams and stringers.
- Deerwood Park Boulevard Bridge | Florida | Florida DOT District 2 2019 Designed under approval of FDOT Office of Design's Innovative Design Department and utilized new Florida Slab Beams (FSB) Developmental Design Standards. A new bridge needed to aesthetically replicate a parallel 30-year-old bridge. The existing bridge was constructed with pre-cast voided slabs that are no longer available. The innovative FSBs utilize a steel reinforcement design for skews up to 30 degrees. Minimal additional calculation was applied for the 33-degree skew of this bridge.
- District Wide Scour Analysis and Database Development | Florida | Florida DOT 2016 Programmed an accessible, real-time database that prioritizes bridge vulnerability based on scour, the first in Florida. FDOT plans to implement it statewide. Managed collection and conversion of FDOT's records on 433 water crossing bridges. Designed expansion of previous evaluation to include scour as input to Access Database translated to a SQL Database for report outputs. The reports display elements in multi-level, interactive Power BI charts to prioritize needed bridge repair. Structural and Scour Analysis of the Lem Turner Bridge over the Ribault River
- Bridge | Florida | Florida DOT District 2 2015 Contributed to the design of two 3-span bridges and two approach ramps over the CSX rails; 700 feet of new culverts and a double barrel culvert to link two pre-existing culverts

into a single underground system; programmed calcs to output the four corner elevations of over a hundred bearing plates.

- Tappan Zee Bridge Replacement's Maintenance Pier | Florida | New York State DOT 2014 The new Tappan Zee Bridge needed a maintenance pier that is over 3,000 feet long. It is utilized by the Coast Guard to oversee traffic on the Hudson River. It took over 100 PEs to design the bridge. It took myself, 2 PEs, and a CAD tech to design that pier in 1/3 the time.

## Professional Experience

- 2022 - Current | Senior Managing Engineer | YA Engineering Services
- 2017 - Current | President | Reengineer, Inc. (previously Foley & Sharp Inc.)
- 2014 - 2017 | Senior Bridge Engineer | Landmark Engineering, Inc.
- 2014 - 2014 | Bridge Engineer | Wood Research and Development
- 2012 - 2014 | Ports and Marine Structural Engineer | HDR
- 2009 - 2012 | EIT | City of Woodstock, Georgia
- 2006 - 2009 | Fellowship at Georgia Tech | National Science Foundation

## Area of Practice

- Bridge Engineering
- Building Code Upgrade Review
- Building Envelope
- Condition Assessment
- Construction Administration
- Damage Assessment
- Failure Analysis
- Historic Preservation
- Litigation Support
- Marine Structures
- Non-Destructive Testing
- Repair and Rehabilitation Design
- Repair Cost Estimating
- Roofing
- Structural Analysis
- Water Leakage Testing and Analysis

## Education

- Georgia Institute of Technology - MSCE - Structural Engineering - Atlanta - Georgia
- Georgia Institute of Technology - MSA - High Performance Architecture - Atlanta - Georgia
- University of North Florida - BS - Civil/Structural Engineering - Jacksonville - Florida

## Licenses

- 81372 - Florida - Professional Engineer