

# Gary Spicer Jr., P.E.

Structural Engineer



## Registrations:

Florida P.E. # 78491 (2014)

## Education:

University of South Florida  
M.S. Degree in Structural  
Engineering (Honors)

## Experience:

10 years with 4 years at SBC

## Memberships:

FES, ACEC-FL, ASCE, ASHE,  
AISC, USF Honors College,  
and Engineers without Borders

## Design Specifications:

AASHTO, FDOT Structures  
Design Guidelines, LRFD LTS,  
AISC, ACI, AWS, and NDS

## Professional Profile:

Mr. Spicer has 10 years of structural engineering experience in bridge design and miscellaneous structures within the state of Florida. He has worked on projects for several Florida Department of Transportation Districts, Florida's Turnpike Enterprise, the City of Tallahassee, contractors and several counties. His work includes bridge design, miscellaneous structures, bridge load ratings, plans preparation, project management, shop drawing review, economic analysis and bridge development reports. Mr. Spicer was previously the technical lead for GAI Consultants in Orlando where his primary responsibilities were managing projects, checking designs and plans production. He started Spicer Bridge Consultants 4 years ago and is currently the head of structures for the firm.

## Design Experience:

- 30+ Bridges (Prestressed Concrete, CIP Concrete, Steel, Timber, Pedestrian)
- Bridge Load Ratings (Leap Bridge, FDOT Software, DESCUS, Midas, MDX)
- Prestressed Concrete (Prestressed Beams, Piles, Strain Poles)
- Concrete Design (Slabs, Beams, Columns, Footings, Traffic Railings, Aesthetic Panels)
- Steel Design (Plate I-Girders, Rolled I-Girders, Tub Girders, Cross Frames)
- Timber Design (Bridges, Boardwalks, Observation Decks, Temporary Structures)
- Signal Design (Mast Arms, Trusses, Span Wire Assemblies, Hanging Box)
- Box Culvert Design (New Culverts, Extensions, Load Ratings, Customized Drainage Boxes)
- Sign Structures (Cantilever, Overhead, DMS, Ground, Solar, Customized Temporary Signs)
- Retaining Walls (Sheet Pile, Soldier Pile, Gravity, CIP Cantilever, MSE)
- Post Design (Temporary Bracing, Temporary Walls, EARs, Shop Drawings)

## Project Experience:

### Weems Road over Weems Pond Outfall in Tallahassee, Florida (06/16 – 04/19)

The project involved a 3-span cast-in-place flat slab bridge and 2 cast-in-place cantilever retaining walls. The bridge had 2 lanes, a raised sidewalk and a water main mounted to the back side of the traffic railing. Steel piles with large spacing were used to span over two large existing utility pipes running parallel under the bridge. As Engineer of Record, Gary was responsible for coordination, checking designs and producing plans.

### Old Lake Wilson Rd and Fairfax Dr Interchange for Osceola County, Florida (07/18 – 02/19)

The project involved the design of four new mast arms assemblies in accordance with the FY 2018-19 Standard Plans (all single arm). As Engineer of Record, Gary was responsible for producing designs and plans.

### Beachline Widening from I-4 to Turnpike in Orange County, Florida (08/16 – 12/18)

Spicer Bridge Consultants was contracted by both United Signs and Signals and Hubbard Construction as a Specialty Engineer for this project. For United Signs and Signal, engineering analysis reports (EAR) were performed for 9 sign structures, 6 high mast light poles, and 4 mast arms. EARs included drilled shaft analysis with reduced diameters and lengths, FB-Pier models to compare gantry deflections, adaptor spools, and replacement of a drilled shaft with a spread footing. For Hubbard Construction, we provided structural engineering services for 45 tasks. Tasks included redesign of walls for dead man anchors, design of overhead protection systems, analysis of out-of-tolerance piles, temporary beam bracing and design of precast bent caps. As Specialty Engineer, Gary was responsible for designs, shop drawings and writing EARs.

### CR 532 and Reunion Blvd Intersection for Oseola County, Florida (04/17 – 09/17)

The project involved the design of two new mast arm uprights and foundations for existing mast arms. The mast arm assembly plans involved custom uprights with construction notes to utilize the existing arm. As Engineer of Record, Gary was responsible for the field reviews, design and plans.

**Jork Road over Little Pottsburg Creek in Jacksonville, Florida (06/16 – 12/16)**

The project involved a single span Florida Slab Beam bridge and 2 sheet pile walls. The bridge had a water main mounted to the back side of the traffic railing and utilized an integral end bent and sheet pile wall to eliminate anchors in the wall. As Engineer of Record, Gary was responsible for coordination, checking designs and producing plans.

**SR 482 Widening from Universal to John Young Parkway in Orange County, Florida (08/09 – 01/16)**

The project involved 4 bridge widenings, 1 multi-phase bridge replacement, permanent steel sheet piling with concrete facing, temporary sheet piling, concrete box culvert, 3 overhead signs, and 9 mast arms. Bridges range from 3 to 6 spans with spans lengths between 34' to 100' utilizing FIB 36 beams, AASHTO Type II beams, and modified AASHTO Type II beams. As technical lead, Gary was responsible for checking designs and plans production.

**SR 600 / US 92 Pedestrian Improvements in Volusia County, Florida (07/14 – 06/15)**

The project is currently open to the public of International Speedway which includes a pedestrian bridge consisting of a 182' steel truss supported with 8 levels of switchback ramps. The pedestrian bridge needed to meet ADA requirements, have attachments for lighting and speakers, drainage conduit, and 50' aesthetic wings on either side of the main span. Extensive coordination was required to manage the International Speedway, FDOT, truss fabricators, a future extension into a shopping plaza, lighting and speaker conduits, and the utilities in this highly developed area. As technical lead, Gary's responsibilities included developing proposal concepts, proposal design calculations, proposal quantities, producing or checking all the design calculations, producing plans, post design services, attending meetings with FDOT and contractors, along with coordinating utilities, drainage, lighting, and geotech.

**I-95 Widening from North of SR 44 to North of US 92 in Volusia County, Florida (09/14 – 12/16)**

The project included 20 Florida I-Beam bridges with wrap around MSE Wall. As technical lead, Gary was responsible for proposal concepts, proposal quantities, plans production and checking calculations for 9 bridges with spans ranging between 75' to 150' and 5 roadway walls. 6 of the bridges had complex geometry using large skews (> 40 deg), horizontal curves, and variable beam lengths. Miscellaneous structures included 13 box culverts, 17 cantilever signs, 12 overhead signs, 5 dynamic messaging signs, and 4 bridge mounted signs. As technical lead, Gary was responsible for checking designs and plans for cantilever signs and catwalk.

**SR 589 Widening from Sugarwood Toll to Van Dyke Rd in Hillsborough, Florida (10/14 – Present)**

The project for The Florida Turnpike Enterprise involved 8 bridge widenings with FIBs and AASHTO beams along with roadway MSE walls. 4 of the bridges had complex geometry using large skews, horizontal curves, and proposed bridge deck over existing bridge. As technical lead, Gary was responsible for proposal concept plans, design, quantities and plans production.

**CR 210 Bridge over US 1 and FEC Railroad in St. Johns County (11/12 – 08/14)**

This project completed for the FDOT District 2 received the 2015 FDOT Best in Construction award. The project involved a two span (201' and 169') continuous steel plate girder bridge. As technical lead, Gary was responsible for the superstructure quality control and post design services. He reviewed the designs for geometry, splices, transverse stiffeners, bearing stiffeners, diaphragms, cross-frames, and bearing plates performed by others. For post design, he reviewed shop drawings, performed stability analysis for girder lifts, reviewed girder erection plans, and checked bracing stability during construction. He was also responsible for detailing various steel superstructure components and coordinating with the CAD design.

**SR 123 over SR 85 in Okaloosa County (11/11 – 03/13)**

The Design-Bid-Build project for District 3 was taken from BDR to 90% with Gary serving as a Bridge Designer and Plans Reviewer. While writing the BDR, Gary designed and compared costs for 7 bridge alternatives which included 78" Steel Plate Girders, 84" Steel Plate Girders, and Steel Box Girders. 84" Steel Plate Girders were selected to support the two-span continuous bridge (193' spans) over SR 85. Mr. Spicer was responsible for designing the geometry, steel girders, bearing pads, sole plates, deck, piers, footings, and end bents. Software used for design included MDX, STAAD, FB-Pier, GA Skew, RC-Pier, and MathCAD. He was also responsible for coordinating with the CAD designer and checking plans.