

David R. Connor, SE, PE, MCE

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EMPLOYMENT EXPERIENCE

Associate Structural Engineer

Haines, Gipson, and Associates
Lawrenceville (Atlanta), GA – July 2014 to Present

- 2nd engagement with Haines, Gipson, and Associates as an associate of structural engineering.
- Description of work similar to previous engagement described below.
- Projects for this engagement include structural design for distribution centers, food storage and freezer facilities, retail centers, industrial facilities, and parking decks.
- Design of structures per the governing building codes and material specifications including IBC, ASCE 7, ACI 530, ACI 318, AISC 360, AISC 341, and AISC 358. Use of most current and earlier editions of all codes.
- Design of a retail center located in a high wind speed, hurricane prone region, and design of retail and office buildings that employs the use of special steel moment resisting frames and special reinforced masonry shear walls to meet requirements for Seismic Design Category D.
- Computer Software Used: Revit, AutoCAD, RAM Elements, RAM Steel, STAAD, TiltWerks, Hilti Profis, Enercalc, In-house Excel spreadsheets, Microsoft Office

Structural Engineer III

O'Neal, Inc.
Greenville, SC – April 2011 to July 2014

- Structural engineer for heavy industrial projects. Majority of work involved renovation of existing facilities to facilitate the client's new or improved processes. Work also included expansion of existing facilities that required the construction of new buildings and structures.
- Preparation of project contract documents including structural plans, sections, details, and specifications.
- Structural design using current and earlier editions of building codes and material specifications.
- Structural design of foundations, pits, slabs on grade, walls, elevated floors, roofs, lateral load resisting systems, and crane runways.
- Types of foundations designed – Typically shallow spread footings with occasional support on proprietary products (i.e., helical piles and pin piles). Pits typically constructed using reinforced concrete as required to facilitate process equipment.
- Types of slabs on grade designed – Reinforced concrete slabs usually designed for heavy forklift traffic. Use of conventional reinforcement or synthetic fibrous reinforcement.
- Types of walls designed – Building walls consisting of precast concrete, reinforced masonry, and steel supported architectural siding (wind columns and girts). Walls designed for gravity loads and as elements of lateral load resisting systems.
- Types of elevated floors designed – Typically steel framed floors with reinforced concrete slabs atop composite decking. Composite steel beam and girder design.

- Types of roofs designed – Typically steel framed roofs with metal decking. Joist and joist girder construction along with W beams and girders. Metal roof decking also designed for transfer of lateral diaphragm loads to the lateral force resisting system.
- Lateral load resisting systems designed – Steel braced frames consisting of tension only X-bracing and tension/compression diagonal bracing. Moment frames consisting of W columns and beams. Steel systems designed typically not detailed for seismic resistance ($R=3$). Shear walls consisting of reinforced concrete and masonry. Design of connections and attachments to foundations to resist wind and/or seismic loads. Foundations designed to resist overturning and uplift forces, along with allowable soil capacities.
- Crane runways designed with crane spans ranging from 25 to 65 feet, with crane lifting capacities ranging from 3 tons to 85 tons. Crane runway beams, columns, and lateral bracing designed for crane vertical and lateral loads along with wind and/or seismic when governed.
- Additional experience and duties include the following: FEMA P-361 storm shelter design, pipes racks, cable tray bridges, supports, and platforms for process equipment, verification of rack design and load carrying capacity, verification of existing structures for support of new equipment including dynamic and cyclical equipment loads, retrofit of existing structures deemed necessary to support new and/or heavier loads.
- Coordination with all disciplines during design phase of projects including architectural, mechanical, electrical, and process.
- Coordination with geotechnical engineers supplying specialty foundations and retaining structures (micropiles, soil nail walls, etc.)
- Checking and approval of shop drawings.
- Preparation of scope descriptions for bid packages.
- Site evaluations for production of proposals and man-hour estimates.
- Respond to contractor and fabricator RFIs during construction administration phase of projects. Coordination with contractors and construction managers for resolution of field issues during construction phase of projects.
- Conduct site visits to verify construction is per the contract drawings and specifications.
- Computer Software Used: AutoCAD and Revit, RAM Steel, RAM Elements, CSC Tedds, In-house Excel spreadsheets, Bluebeam, Microsoft Office

Contract Structural Engineer

MJM Engineering, Inc.

Dallas, GA – September 2010 to April 2011

- Briefly worked on a per project contract basis. Performed design calculations and production of contract drawings for commercial, governmental, and residential clients.
- Projects were located in the Atlanta, GA area and included the design of an essential facility (Risk Category IV) for a local municipality. The facility consisted of a fire station that employed the use of special reinforced masonry shear walls as the lateral load resisting system, and an attached public safety building that employed special braced frames as the lateral load resisting system. The elevated floor system for the public safety building was framed using composite steel, and the roof used W girders and joists with metal decking.
- Completed the review of detailed steel connections for gravity framing and lateral load bracing systems for various steel fabricators.

Connection Design Engineer

Owen Steel Company

Columbia, SC – November 2008 to August 2010

- Performed design calculations and provided detail sketches for various steel connections to be fabricated in the shop. Types of connections included shear, moment, and axial connections using bolts and/or welds at beams, columns, braces, truss members, and splices.
- Connections typically designed per AISC Specifications. Calculations performed using in house Excel and MathCAD spreadsheets.
- Completed the design and anticipated costs of expanding the existing shop facility. Design included expansion of a crane bay and retrofitting of the existing foundations and framing for upgraded crane loads, along with typical gravity, wind, and seismic load considerations per the local building codes (IBC, ASCE 7, ACI 318, and AISC 360).

Associate Structural Engineer

Haines, Gipson, and Associates

Lawrenceville (Atlanta), GA – June 1997 to November 2008

- First engagement with Haines, Gipson, and Associates. Began career with Haines, Gipson, and Associates as a project structural engineer and was promoted to associate structural engineer.
- Typical project duties included structural design and production of construction documents using AutoCAD/Softdesk drafting software. Coordination with architects, general contractors, and engineering consultants during all phases of construction. Shop drawing approval, cost estimating, and on-site observation and reporting during construction.
- Design of structures across the United States including areas prone to hurricanes with high wind loads (Florida), and locations susceptible to seismic activity (Charleston, SC and California).

- Projects included new construction and renovation of retail centers, schools, car dealerships, office buildings, parking decks, and bridges. Worked for various project owners including Carmax, Lowes, YMCA, school districts, governmental agencies, and real estate development firms. Gained experience with IBC, AISC, ACI, NDS, and AASHTO codes.
- Structural steel design – Roof and floor framed systems employing beams, girders, joists, and columns. Façade and brick veneer support. Lateral load resisting systems including braced frames and moment frames. Use of systems detailed for seismic resistance where required.
- Light gauge steel design - Metal decking for support of elevated concrete slabs, roofs, and transfer of lateral loads to lateral force resisting systems. Light gauge metal stud wall, roof, and floor framing.
- Reinforced concrete design – Tilt up gravity and shear walls, cast-in-place gravity and shear walls, retaining walls and foundations, spread footing column foundations, pile caps, grade beams, and bridge piers.
- Prestressed concrete design – Design of a bridge using prestressed concrete longitudinal AASHTO girders, and a parking deck using precast prestressed concrete components in which the design was coordinated with the precast concrete supplier.
- Masonry design – Design of reinforced masonry gravity walls and shear walls including intermediate and special reinforced masonry shear walls where required.
- Timber – Design of roof framing systems using engineered wood trusses and 2X rafters. Design of plywood roof diaphragms and shear walls.
- Foundations – Spread footings, auger cast and steel piles and pile caps, drilled caissons, helical piles, and micropiles. Retaining wall footings designed for overturning, sliding, and soil bearing capacity. Foundations for pre-engineered metal buildings using loads provided by building manufacturer.
- Anchorage – Design of anchoring systems using steel anchor bolts, epoxy adhesive systems (Hilti, Simpson, etc.), headed studs with embed plates, timber hold-downs, etc.
- Additional duties include shop drawing approval, answering field RFIs and providing solutions for field problems when necessary, preparation of proposals and man-hour estimates for fee determination, on-site observations and report production during construction phases.
- Computer Software Used: AutoCAD, STAAD, RAM Steel, Enercalc, RC Pier and Conspan LA, In-house Excel spreadsheets, Microsoft Office

EDUCATION

University of South Carolina, Columbia, SC – 2005 to 2009

- Master of Civil Engineering
- Structural and Geotechnical Emphasis
- Courses taken covered graduate level topics including Matrix Structural Analysis, Structural Vibrations and Dynamics, Finite Element Analysis, Advanced Steel, Reinforced Concrete, and Prestressed Concrete Design, Advanced Soil Mechanics and Foundation Design, and Ground Improvement Techniques
- GPA = 4.0

Georgia Institute of Technology, Atlanta, GA – 1993 to 1997

- Bachelor of Civil Engineering
- Curriculum covered all areas of civil engineering, however major electives emphasized structural engineering
- Nominated to Chi Epsilon Civil Engineering Honor Society
- GPA = 3.3, CE GPA = 3.7

EXAMINATIONS

- Fundamentals of Engineering (EIT) – Passed 9/1997
- Professional Engineer (PE) Civil with Structural Emphasis – Passed 1/2002
- Structural Engineer (SE) Lateral Buildings Component – Passed 12/2013
- Structural Engineer (SE) Vertical Buildings Component – Passed 6/2014

LICENSURE

- Illinois – Structural Engineer – Issued 2/2015
- Oklahoma – Professional Engineer – Issued 6/2012
- Indiana – Professional Engineer (Inactive) – Issued 5/2012
- New York – Professional Engineer (Inactive) – Issued 11/2009
- Delaware – Professional Engineer (Inactive) – Issued 10/2009
- Alabama – Professional Engineer – Issued 10/2009
- Florida – Professional Engineer – Issued 10/2009
- Tennessee – Professional Engineer (Inactive) – Issued 9/2009
- Mississippi – Professional Engineer – Issued 7/2009
- North Carolina – Professional Engineer – Issued 7/2009
- South Carolina – Professional Engineer – Issued 7/2006
- Georgia – Professional Engineer – Issued 1/2002
- LEED Accredited Professional (Inactive) – Issued 5/2006
- NCEES Record Maintained

AUTHORSHIP / PUBLICATIONS

- Authored and published a study guide for Structural Engineering (SE) examinees titled "Bridge Problems for the Structural Engineering (SE) Exam". Date of publication - March 2016. Now on 3rd Edition.

TEACHING

- Taught Structural Engineering (SE) Exam review course for Professional Publications, Inc. (PPI) in preparation for the October 2016 examination. Curriculum covered reinforced concrete and bridge design.