

Ms. Boenig has been employed as a design engineer with P.E. Structural Consultants, Inc. since July 2000. Since joining P.E. Structural, she has been heavily involved with the design of educational and institutional facilities and major bridge projects, and has become proficient in CADD. Her design experience includes reinforced and prestressed concrete, structural steel, wood, reinforced masonry, and foundation design. Her research work while enrolled in the Master's program in Structural Engineering at the University of Texas at Austin involved prestressed concrete bridge girders and concrete material failures. She has a strong academic background in structural analysis and design, and recently completed her MBA studies while continuing her position with the firm as Senior Engineer and Project Manager. Currently, Ms. Boenig plays a key role business development, marketing, and the management of the firm and its projects.



**LICENSURE** Texas P.E. No. 93891

**EDUCATION** MBA, University of Minnesota Carlson School of Management, 2008  
M.S. Structural Engineering, University of Texas at Austin, 2000  
B.S. Civil Engineering, University of Minnesota, Twin Cities, 1998

**CAREER** **Senior Engineer / Business Manager**, P.E. Structural Consultants, Inc.  
Austin, TX, July 2000 to present  
**Graduate Research Assistant**, Ferguson Structural Engineering Laboratory, UT Austin  
Austin, TX, Jan 1999 to May 2000  
**Research Assistant**, Civil Engineering Department, University of Minnesota  
Minneapolis, MN, Jan 1997 to Dec 1998  
**Teaching Assistant**, Civil Engineering Department, University of Minnesota  
Minneapolis, MN, Jan 1998 to Mar 1998  
**Research Assistant**, College of Engineering, New Mexico State University  
Las Cruces, NM, Oct 1995 to Aug 1996

#### **EXPERIENCE - BRIDGES**

**IH-610 / US290 Interchange Frontage Road Bridges** Houston, Texas  
PESC's project manager for development of bridge layouts and retaining wall layouts for IH 610 SB Frontage Road Hempstead Hwy/UPRR Overpass and connecting Ramp in this highly congested interchange. Coordinated with client to accommodate railroad, railroad spurs, existing highway, dense utilities and Houston Green Ribbon Guidelines in tight site constraints.

**US290E Manor Expressway** Travis County, Texas  
Deputy PM for PESC's effort to provide Aesthetic details of bridge structures, railing, and retaining wall elements.

**US183 / SH71 Interchange** Austin, Texas  
Ms. Boenig was deputy project manager for P.E. Structural's areas of responsibility: structural design for SH71 Mainlane Bridges, East to North Direct Connector and several other overpass bridges that are part of this 4-level interchange.



**RESUME**  
**Anna Boenig, P.E.**  
**Senior Engineer / Business Manager**

**EXPERIENCE – BRIDGES cont'd**

**183A Toll Road Project**

Austin, Texas

Ms. Boenig was a lead designer for several of the 21 bridges that comprise this 11 mile design build toll road project, working on-site in the HCC Design team project office and coordinating directly with the various other disciplines in this fast-paced design-build toll road project.

**NTTA Southwest Parkway Interchange**

Fort Worth, Texas

Ms. Boenig provided both detailed design and QA/QC checking for several of the 12 overpass and ramp bridges within the 27-bridge interchange designed by PESC under prime HDR.

**Llano River Bridges**

Llano and Mason Counties, Texas

Ms. Boenig co-led PESC's design team for two major off-system bridge replacements carrying RM1871 and RM2768 over the Llano River. Long (1050', 840') bridges used Typ C Prestressed concrete beam units on curving alignments with superelevation transitions and involved special design for forces from high-velocity flow in the main channel and phased construction. Bridge design conforms to LRFD Specifications.

**SH161 / SH183 Interchange, Connection D**

Dallas District, Texas

Ms. Boenig designed a curved continuous steel plate girder unit for this 1,677' long, 15-span structure with a 28' overall width and was responsible for geometry calculations.

**SH130 Toll Road**

Austin, Texas

Ms. Boenig was one of PESC's engineers playing a lead role in the project office of this fast-paced design-build project. She focused heavily on prestressed concrete and steel plate girder superstructure design on a number of the 120+ bridges in the 47-mile project. She coordinated directly with the various other disciplines.

**SH45SE – Structural Quality Review Services**

Austin, Texas

Served as structural design and drawing checker for this design-build effort, providing Quality Review services for 17 of the 25 bridge structures including one Direct Connector with curved steel plate girders and post-tensioned straddle bents. Reviewed geometry, clearance, prestressed concrete I-beam superstructure, and reinforced concrete substructure calculations. Performed independent design checks.

**TXU Mining Haul Road Overpass**

Limestone County, Texas

Provided senior technical review of geometry calculations, superstructure and substructure design, and oversaw production of construction drawings for this new prestressed concrete bridge that spans the TXU Mining Railroad and Haul Road.

**RM12 Bridge Replacement**

Hays County, Texas

Designed aesthetic multicolumn bents and drilled-shaft abutment retaining walls with 3-phased construction for this prestressed concrete slab beam bridge in the Village of Wimberley.

**EXPERIENCE – BUILDINGS**

**New Austin City Hall**

Austin, Texas

New 118,000sf building for civic gathering with unconventional geometry, large cantilevered areas, and roof-supported planters. Developed 3D analysis model of four-level concrete structure; designed two-way flat slab, concrete beams and columns. Provided construction administration services. LEED Gold Rating. National Council of Structural Engineers Associations (NCSEA) Excellence in Structural Engineering Award. Concrete Reinforcing Steel Institute (CRSI) Design Award.



**RESUME**  
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**EXPERIENCE – BUILDINGS cont’d**

**Austin Resource Center for the Homeless** Austin, Texas  
Award-winning 25,400sf, 3-story \$5M facility houses resources for Austin’s homeless population. Unique tilt-up concrete frame system with hollow-core plank floors and steel framed roof over the third level dormitory. Designed reinforced concrete transfer girders, cast-in-place columns, tube steel canopies, concrete retaining wall and CMU walls. LEED Silver Rating. Primary PESC point of contact during construction; personally answered or coordinated response to contractor.

**Gus Garcia Recreation Center** Austin, Texas  
20,000sf new civic center. Designed CMU shear walls and steel bracing. Designed exterior double-wythe masonry cantilever wall and steel-framed canopies for north entry with special structural detailing to complement architectural components featured throughout the building. LEED Gold Rating.

**First Evangelical Free Church – Phase I** Austin, Texas  
Designed concrete tilt-walls for 43,000sf two-story and 30,000sf three-story building. Selected steel roof and floor joists; designed steel beams, columns and concrete piers for both buildings. Designed 100ft long custom exposed tube steel super-trusses to provide clear span in the worship space. Provided construction administration (submittal review, site visits, response to contractor’s questions.)

**Lackland Air Force Base Medical Facilities Addition** Austin, Texas  
Performed investigation and reported on condition of existing Medical Facility. Designed steel structure and straight and belled shaft foundations for two second-floor additions constructed inside the existing building. Designed concrete foundation and MWFRS for 4-level elevator and stair addition.

**Borg Warner Turbo Systems New Laboratory** Asheville, North Carolina  
\$7M facility with 23,000sf of testing laboratories and office space. Designed steel roof joists, beams and columns, load-bearing reinforced masonry walls, concrete footings. Masonry walls designed to contain blast pressures that occur during testing operations.

*Note: The abbreviated list above is representative of Ms. Boenig’s projects. More detailed information regarding any of these projects or additional projects are available.*

**PUBLICATIONS**

“Bridges with Premature Concrete Deterioration: Field Observations and Large-Scale Testing.” Master’s Thesis, May, 2000.

“Structural Assessment of Bridges with Premature Concrete Deterioration due to Expansive Reactions,” ACI Structural Journal, Vol. 106, No. 2, March-April 2009.

**HONORS**

Civil Engineering Citation for Outstanding Undergraduate Performance  
Sommerfeld Scholarship  
Regents’ Scholarship  
Department of Mathematics Scholarship  
Dean’s List  
Tau Beta Pi Engineering Honor Society