



Company History

Founded in 1995, **Engineering Express®** has evolved into a unique specialty structural engineering firm assisting manufacturers, contractors, architects, developers, municipalities, and homeowners with a variety of specialty structural engineering projects, both large and small, in many states throughout the country.

It has been our goal to provide these services with the highest quality standards utilizing the latest technology and a talented, experienced staff to provide prompt, professional work at competitive prices. **Engineering Express®** is the realization of that goal.

The Company utilizes state-of-the-art technology in the form of many innovative tools such as our no-cost Internet tools for clients to pre-design, research, approve, and order engineering services. Over 40 multi-page calculators are available for hundreds of uses. We have the only online document store of its kind to order and pay for pre-engineered plans. Our industry knowledgebase is also available to help navigate the vast number of design and municipality challenges.

Our biggest asset is our easily accessible, uniquely-skilled staff which utilizes their extensive design and field expertise to identify potential design conflicts before they become problems on the jobsite. Their ability to maximize the workflow process allows for immediate value-engineering on any project.

Engineering Express has risen to become the industry leader in Product Evaluations and Building Fenestration such as Commercial and Residential Glazing, Storefront Glazing, and Curtainwall Design. Additionally, our specialty departments include Railings, Fences, Carports, Canopies, Marine Engineering, and Aluminum Structural Design along with New Construction Additions, Alterations and Renovations.



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Select Recent Project History

CityPlace South Tower, West Palm Beach, FL – When Glass Engineering & Installation, Inc. was contracted by Moss & Associates, a privately-held construction company ranked among the nation's top 100 building contractors and second-largest in South Florida with annual revenues topping \$649 million, their first choice for the installation design was ***Engineering Express®***. Our office designed and certified the CityPlace South Tower with detailed storefront shop drawings, grout bed designs, anchor, shim, and steel calculations, and numerous field inspections. The sheer magnitude of the glass and glazing design contained in this South Florida landmark is but a preview of our abilities and is a telling reminder that a qualified engineer can make the difference on any job, large or small.



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Darden Company Headquarters, Orlando, FL – Darden Restaurants is the largest full-service dining restaurant company in the world with \$6.7 billion in annual sales. Our firm was retained by Enclos Corp. and their glazing subcontractors as an expert in the engineering, assembly and erection of curtainwall systems for the Darden Restaurant Corporate Headquarters in Orlando, FL. Complicated yet critical elements such as glass and glazing shop drawings, design calculations, assembly drawings, louver drawings and composite panel cladding designs have also been provided and certified by our office for other restaurants in their chain. Hundreds of hours have been spent consulting, drafting, and designing for a multitude of structural certifications within their corporate family and we continue to design for Darden projects throughout the US.



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Dolphin Stadium Expansion, Miami, FL – Home to the NFL's Miami Dolphins, Dolphin Stadium underwent a multi-year three-phase expansion in 2005 which added over 350,000 square feet of enclosed space to the state-of-the-art venue. Retained by Harmon Incorporated as the Designer of Record for the concourse glazing, then by Ro-Pat General Contractors for impact protection at the concession areas, our office was instrumental in the \$250 million renovation which now offers guests the most inspired and unmatched stadium experience in the world. From design and analysis of the signature football-shaped concourse grilles to the fixed glass protection afforded by our glazing designs, **Engineering Express®** is at the forefront of it all. With architectural spaces inspired by the South Florida lifestyle, ocean hues and nautical themes, the stadium has been transformed into an extraordinary place for incredible experiences.



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Product Evaluations and Site-Specific Engineering

Companies like Ingersoll-Rand (Trane), American Standard, Stanley Doors, ITW Buildex, and Jeld-Wen utilize the expertise of **Engineering Express®** for their product evaluations and custom installations throughout the 26 states we are licensed. In addition to creating hundreds of Product Evaluations for Miami-Dade, the Florida Statewide Approval System, and Texas “DOI” submittals, we have certified thousands of product configurations for these companies and their sub-contractors while coordinating shop drawings, fabrication details, calculation booklets, and on-site inspections. These corporations have quickly realized and adapted the **Engineering Express®** philosophy—that there is no substitute for engineering excellence.



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Key Personnel

Frank L. Bennardo, P.E. Principal & Founder

After receiving his Bachelor of Science Degree in Civil Engineering in May, 1988 from Tulane University in New Orleans, LA, Frank L. Bennardo, P.E. trained with the Florida Department of Transportation in their highly acclaimed Professional Engineer Training Program where he was promoted in July 1992 to the Department's head of the Permits and Contracts departments and sole Broward County expert engineering witness.

In February 1993, he became licensed as a Florida Professional Engineer and in July 1994 as a Florida General Contractor, designing and constructing residential additions and renovations. In 1996, he took on the structural design of large housing developments in South Florida, and excelled as a proficient structural designer and field inspector.

This work introduced him to the expeditious need for proper, accurate, and professional specialty designs for structures such as commercial storefront & curtainwall, windows, doors, and storm protection, their related product approvals, marine and wood docks and decks, specialty structures for schools and government municipalities, field inspection and expert witness testimony. Work in these areas led to licensure in 26 states in the U.S., spawning nationwide attention to their resources and abilities. Specialty work has now grown to full primary structure engineering for new constructions, custom renovations and additions.

His focus then evolved to developing his engineering company to meet these evolving and growing engineering needs of contractors, manufacturers, homeowners, architects, and developers nationwide utilizing state-of-the-art technology, cutting-edge industry resources, and a highly skilled staff. *Engineering Express®* is the realization of that dream, a revolutionary and patent pending concept aimed at utilizing the latest in technology-based interactive services, and accomplishing in engineering what The Home Depot did for hardware—providing these smaller yet widely-needed engineering services to manufacturers, contractors, architects, and homeowners in a systemized fashion with rapid deployment and unparalleled accuracy in a manner never before imagined.

Areas of Expertise:

- Substantial design and field knowledge of and diverse experience in residential and commercial new construction, additions, and renovations
- Extensive design and field experience in aluminum and light metal structures, storefront and curtainwall glazing applications, and marine engineering
- Hundreds of Metro Dade County , SBCCI, ICC, AAMA, ASTM, and Florida Building Code Product Approval engineering package evaluations, validations, & certifications
- Specialty work and substantial working knowledge in custom computer applications and resources to facilitate next-generation engineering utilizing the latest technologies available
- Recent Significant Hurricane Damage Evaluation Expert Witness Cases:
 - Vantage View Condominium, Pompano Beach, FL –Federal Grand Jury Trial (2007)
 - King Cole Apartments, Miami Beach, FL (2008)



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(Frank L. Bennardo, P.E. continued)

- Vision One Condominium, Palm Beach Gardens, FL (2008)
- Plantation Fashion Mall, Broward County, FL (2009)
- Portofino Apartments, West Palm Beach, FL (2009)
- Maringate Shopping Center, Houston, TX (2009)
- Timball Shopping Center, Houston, TX (2009)
- Peck Plaza, Daytona, FL (2009)
- University of Phoenix, TX (2010)
- Chase Building, TX (2010)

Career Summary:

- Graduate of Tulane University, New Orleans, LA, B.S.C.E., 1988
- Licensed Florida General Contractor (1994-1998, now inactive)
- Licensed Florida Professional Engineer, 1993
- Licensed as a Professional Engineer in the following 26 states:

Alabama, Connecticut, Delaware, Florida, Georgia, Idaho, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, Vermont and Virginia.

Industry Affiliations:

- International Hurricane Protection Association - Board of Directors, 2006-Present and Guest Lecturer for continuing education credit for members
- Florida Structural Engineers Association - Certified in the practice of Structural Engineering by SECB – Board Member 2011-2012
- Florida Atlantic University Engineering Advisory Board - Board Chair, 2011-2012
- Tulane University School of Science and Engineering Board Of Advisors - Board Member
- Guest & Keynote Speaker for Tulane University Forums & ASCE New Orleans on topics of Wind Design & related hurricane preparation topics
- Guest speaker for the Broward County Building Officials and Inspectors Education Association
- American Society of Civil Engineers
- Florida Engineering Society - Past President, Broward Chapter
- American Concrete Institute
- Glass Association of North America
- National Society of Professional Engineers
- American Association for Wind Engineering



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Key Personnel

Troy Bishop, E.I., G.C. Vice President of Operations, Department Manager

Troy Bishop is an exemplary Engineer-Intern with growing responsibilities in preparation for his professional certification. He also holds an active General Contractor's License. This diverse experience has given him a great balance of responsibility, quickly propelling him to a leadership position at Engineering Express.

Mr. Bishop began his career in the construction industry in 2006 while designing, managing, and building pre-engineered steel architectural domes and radius steel projects known throughout South Florida, soon thereafter receiving his General Contractor's license in 2007 and Engineer Intern certification. He has broad experience in numerous aspects of physical design and approvals, technology implementation, and design efficiency. His direct familiarity with contractors, architects, manufacturers, and building officials has given him skill not only as a forward-thinking engineer, but as a consultant who can understand and work through the complications of building in South Florida. Mr. Bishop currently specializes in designs and inspections ranging from entire building envelope systems to various types of specialty pre-engineered structures including the spectrum of railing, staircase, and sunroom installations throughout Florida. Mr. Bishop has been instrumental in the continuance of Engineering Express: he currently serves as Vice President of Operations, managing an average of 600 'express' and significant projects per year while sustaining his own departments' long-term goals.

Areas of Expertise:

- Licensed General Contractor (CGC#1514456)
- Florida Certified Engineer-In-Training (E.I.)
- Building envelope, window, door, and build-out remediation, inspection, and design
- Field inspection and modifications for masonry and steel structures
- Calculations, designs, and inspections for build-out and as-built structures
- Aluminum and glass railing safeguard systems
- Value- and reverse-engineering applications
- Manufacturer consulting for rooftop equipment applications
- Software and technology systems design and implementation

Selected Project Highlights:

- Designed and installed architectural copper and steel radius features for the following:
 - The Meridian at One North Ocean, Boca Raton, FL
 - 12th Avenue Bascule Bridge House, Miami, FL
- Provided complete building envelope systems engineering, inspection, and design including:
 - North Broward Medical Center Elevator Tower, Pompano Beach, FL
 - MD Anderson Parking Facility Aluminum Louvered Screen, Houston, TX
- Full-scale commercial interior/exterior improvements (storefront design and engineering, build-outs, canopies, trellis and shade systems) including:
 - Mystic Pointe Storefront Replacement, Aventura, FL
 - Tornino Lamborghini Restaurant Interior Build-out, Hallandale Beach, FL
 - Trulucks Restaurant Exterior Radius Canopies, Miami, FL
 - Alhambra Building Rooftop Trellis and Rails, Coral Gables, FL



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Key Personnel

Andrew Piedra Department Manager

Andrew Piedra started his lifetime of experience in the window and door industry as a very young man. His father worked for Security Windows and Mr. Piedra grew up 'in the business'. In 1989 he owned and operated his own glass and glazing business by subcontracting to industry leaders such as Traco Windows & Doors, RC Aluminum, and Prime Miller Corporation while attending college. He received his Associates in Engineering Technology from Miami-Dade Community College and an Associates degree in Science and Technical Drafting. While operating as a sub-contractor, he attended the University of Florida for Structural Engineering.

In 2000, Mr. Piedra was employed as a project manager for Gold Coast Windows & Doors. His experience encompassed the commercial high-rise industry as well as residential projects across South Florida. Mr. Piedra joined Engineering Express in 2006 and has contributed to a host of notable projects.

Areas of Expertise:

- Curtainwall & Storefront consultation, design, analysis, and inspection
- Commercial & Residential window and door applications
- Wind load calculation assistance
- Field consulting
- Value engineering and project management
- Site assessment design

Selected Project Highlights:

- Assisted in the design, engineering, and inspection of curtainwall systems, steel host structures for notable projects such as:
 - Dolphin Stadium in Miami, FL
 - Darden Restaurant master chain hub in Florida
 - The Peninsula Condominium in Jacksonville, FL
 - Retrix Airport in Sarasota, FL
 - NASA Service Center at the Stennis Space Center in Mississippi
 - MD Anderson Cancer Center, Houston, TX
 - SOHO Beach Club, Miami Beach, FL
 - Ft. Lauderdale Grande Resort, Ft. Lauderdale, FL
 - City Place at South Tower in Palm Beach, FL
 - The Peninsula Condominium in Jacksonville, FL
 - Interior glass and glazing systems for the FAU Student Support Services, School of Nursing, and library expansion buildings
- Consultant to Manufacturers such as:
 - Vistawall (OldCastle)
 - Smith Mountain (SMI Systems)
 - Crawford Tracey Corporation
 - Trainor Glass
 - Kawneer
 - Elco Tapcon
 - ITW Buildex



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Key Personnel

Keith Lorinos, E.I. Department Manager

Keith Lorinos brings his experience and education in Mechanical Engineering to provide our Product Evaluation Department with a diversity of resources. Working alongside some of the most highly trained and experienced engineers in this field, Mr. Lorinos has honed his skills to provide the firm with the leadership to manage the largest and most complex assortment of Product Approvals in the industry.

Mr. Lorinos is also credited with training and implementing systems for Aluminum Design to our many other EI's and project technicians to allow the firm to provide efficient, cost-effective, and code-compliant aluminum structures throughout the country. Our Aluminum Design Department handles projects ranging from School Board walkway covers to the largest and most complex awnings, railings, and patio designs.

Areas of Expertise:

- Product Approval Evaluations:
 - Hurricane Shutters (panels, accordion, roll up, fabric, specialty)
 - Window and Storefront (flush glazed, curtainwall, fixed, casement, specialty)
 - Door (sliding, wood, composite, glass, automatic entrance)
 - Component approvals (locks, hinges, handles)
 - Air Conditioning units, mounts, specialty installations
- Steel and Aluminum Structural designs
- Awning and Canopy designs

Selected Project Highlights:

- Testing review and preparation of calculations, installation instructions, and other evaluation documents for product approvals (Miami-Dade Notices of Acceptance, Florida Product Approvals, Texas Dept. of Insurance Product Evaluations) for notable manufacturers such as:
 - Jeld-Wen Windows and Doors
 - ASSA Abloy door component evaluations
 - Traco Windows and Doors
 - Stanley Access Technologies
 - ITW Buildex Anchors
 - Town and Country Industries
 - Stanley Automatic Entrance Doors
 - Trane Air Conditioners (Ingersoll Rand)
- Railing systems consultation and design including projects such as:
 - Omni Hotel in Fort Worth, TX
 - Signature Place Condominium in St. Petersburg, FL
- Awnings and canopies for various government and commercial sites:
 - Tampa General Hospital, Tampa, FL
 - Schools throughout the Palm Beach, Broward, Miami-Dade, and Martin County school districts
 - Plum Island Animal Disease Center, Plum Island, NY
 - Kennedy Space Center, FL
- Design of combination screen, rail, and shutter systems:
 - Esperia South at Bonita Bay Condominium in Bonita Springs, FL
 - Tavira at Bonita Bay Condominium in Bonita Springs, FL



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Key Personnel

Chen Leow, E.I. Project Manager

Chen Leow began his engineering journey as a Civil Engineering student at the University of Central Florida. As a student, Mr. Leow developed a strong passion for structural engineering. In 2007 he pursued an engineering internship while completing his final undergraduate year at university. During this year Mr. Leow was certified as a Florida E.I. paving the way to his future as a Professional Engineer. Upon graduation in 2007 Mr. Leow began his career as an E.I. with his former internship company, Engineering Technologies. Mr. Leow was involved with numerous large-scale environmental projects. This included design and drafting of municipal water/waste water treatment facilities. His experience with that firm developed the fundamental “real world” skills that would become his foundation to structural design and the engineering industry. In 2009 Mr. Leow began taking part-time graduate coursework with UCF’s Structural Engineering Master’s Program.

In 2010 Mr. Leow began the next chapter of his career as an E.I. with Engineering Express. Mr. Leow currently specializes in engineering designs including awnings/canopies, building envelope systems, aluminum specialty projects, and product approvals. Mr. Leow also conducts field inspections for site-specific projects. Mr. Leow works in various departments throughout the office and is part of the Technology Advisory Board responsible for technology implementation and efficiency for our many online services. Mr. Leow is becoming a vital part of the Engineering Express team and on the path to becoming a Professional Engineer with the firm.

Areas of Expertise:

- Specialty projects involving aluminum member design
- Design, drafting, and preparation of Product Evaluations
- Client consulting for mechanical equipment used in rooftop applications
- Design calculations and drafting for building envelope systems in build-out and as-built structures.
- Modification and field inspections of existing structures constructed with concrete, masonry, wood, and steel elements

Selected Project Highlights:

- Structural design and drafting of large scale municipal projects such as:
 - Tampa Bay Water, Surface Water Treatment Plant Expansion, City of Tampa Bay, FL
- Provided research and engineering design consultation to clients seeking solutions for various site-specific conditions:
 - Ritz-Carlton, Ft. Lauderdale, FL- Design Analysis of Proposed above ground Cooling Tower Aluminum Canopy
 - Museum Park, Miami, FL- Architectural Light Pole Structural Aluminum Analysis
- Provided complete building envelope systems engineering for aluminum specialty projects, revise design plans to current International Building Codes as well as earthquake/seismic design:
 - Oyster Bay Manor Rooftop All-Glass Sunroom, Oyster Bay, NY
 - Elite Aluminum Corporation, Various Master Plan Sheets
- Field inspection and engineering consultation for projects such as:
 - Rocco’s Tacos, Half-ton Overhanging Chandelier Support and Connections, Ft. Lauderdale, FL
 - North Broward Medical Center exterior cladding, Pompano Beach, FL



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