



Robert J. Bitterli is the President and CEO of Ivy Group Consultants, Inc. a corporation formed for the specific purpose of servicing client needs for Building Sciences, Forensic Architecture expert consultant services on claims related projects and legal cases involving building design and construction defects. The firm has grown over the past 23 years of service to the industry under the following names:

Firm History:

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| Bitterli & Associates Architects, Inc. | 1986 - 1999 |
| Ivy Group Consulting (D.B.A.) | 2000 - 2005 |
| Ivy Group Consultants, Inc. | 2005 - Present |

Mr. Bitterli brings a broad range of professional accomplishments, outstanding design work, and 33 years of experience in professional practice. His project experience covers a wide range of building types including: Educational, corporate, governmental, health care, historic preservation, single-family, multi-family, recreational, religious and retail facilities.

Mr. Bitterli's expertise in building forensic investigations, expert witness testimony, LEED/sustainable design/environment/resources, claims resolution, building code issues, accessibility (ADA/ADAAG, FACBC), scheduling, estimating, design detailing, construction materials, roofing, moisture proofing, indoor air quality, engineering systems integration and professional practice are invaluable to clients seeking claims experience. Throughout his career he has provided clients with a personal commitment, delivering expert consultant services in a forthright manner, with both pragmatic and theoretical perspectives in mind.

Mr. Bitterli regularly provides expert witness/forensic services on building defect issues to attorneys, plaintiffs, defendants, insurance companies and building owners throughout the Southeastern United States. He has recently served on several technical advisory committees in the development of the Florida Building Code 2001/2004 editions, and has taught Florida Building Code seminars to licensed architects and engineers throughout Florida and Georgia. Mr. Bitterli has presented multiple courses on the Florida Building Code and Wind Load Design to the American Institute of Architects (local, state, and national), and the American Society of Civil Engineers at the statewide level.

Mr. Bitterli served as a voting member of the Building/Structural Advisory Committee to the Florida Building Commission and represents the Florida American Institute of Architects in matters regarding the Florida Building Code. Mr. Bitterli also serves on the Florida American Institute of Architects Building Code Task Force. He is a member of the International Codes Council (ICC), the National Institute of Building Sciences (NIBS) and the National Fire Protection Association (NFPA). He is currently writing an article on Moisture Problems in Buildings to be published as a white paper by NIBS – National Institute of Building Sciences.

**PROFESSIONAL
QUALIFICATIONS**

- ◆ Registered Architect 1979 - Present
State of Florida Number 8235
National Council of Architectural Registration Boards (NCARB)
Certified, Number 42,542
State of Maryland, Number 9312 (inactive)
State of Indiana, Number 920140 (inactive)
State of Utah, Number 02391-0201-0 (inactive)

TEACHING

- ◆ Lecturer 2001-2003
 - American Institute of Architects
 - American Society of Civil Engineers
 - New Florida Building Code and Wind Load Seminars
- ◆ Adjunct Professor
 - St. Petersburg College 1986-1993
 - Professional Practice and Management 1977-1979
 - Freehand Drawing Graphics 1976-1977
- ◆ Graduate Assistant Professor
 - University of Florida, College of Architecture 1976-1977

EDUCATION

- ◆ University of Florida
 - M.A. Architecture (High Honors) 1977
 - Thesis Publication: Energy, Architecture and Society 1977
 - AIA Silver Medal Award, University of Florida Faculty 1977
 - Gargoyle Honor Society 1975
 - B.S. Design (Honors) 1975
- ◆ St. Petersburg College 1972
- ◆ St. Petersburg Senior High School 1971

SIGNIFICANT PROJECTS

- ◆ Georgia Institute of Technology
 - LEED Certification 2009
- ◆ Hartsfield – Jackson Atlanta International Airport
 - Vertical Transportation Study 2009
- ◆ Lee Memorial Health Park South Moisture Investigation 2009
- ◆ CC-Aventura, Condominium Towers & Healthcare Center
 - Building Defects Case 2009
- ◆ Pulte Homes Grand Cay Case 2009
- ◆ Paradiso Condominium Expert Services and Repairs, St. Petersburg, FL 2008
- ◆ Multiple Toll Brothers Condominium Cases 2008
- ◆ Miromar Outlet Mall
 - ADA Improvements 2008
- ◆ Charlotte County Public Schools
 - ◆ CTC Master Plan updates 2004
 - ◆ CTC Medical Sciences Building 2006
 - ◆ CTC Childcare Center 2007
 - ◆ CTC ABC Building 2008
- ◆ New College Residence Halls, Sarasota, FL 2007
- ◆ New Port Richey Recreation & Aquatics Center 2007
- ◆ Georgia Institute of Technology
 - Building Investigation 2007
- ◆ Eckerd College Omega Dorm, St. Petersburg, FL 2006
- ◆ Miromar Outlet Mall Expert Services and Repairs, Estero, FL 2005

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| ◆ Baymont Inn & Suites, Garden City, GA | 2005 |
| ◆ Carlos Finlay Elementary School, Miami, FL | 2005 |
| ◆ Scharlin Residence , Jacksonville, FL | 2005 |
| ◆ USF St. Petersburg Student Housing Complex, St. Petersburg, FL | 2005 |
| Design Criteria Architect – 354 Beds | |
| ◆ USF St. Petersburg Parking Garage, St. Petersburg, FL | 2005 |
| Design Criteria Architect – 950 Spaces | |
| ◆ USF Cypress Hall, 602 Bed Housing Complex, Tampa, FL | 2004 |
| Published in Real Estate & Construction Review - Florida Edition | |
| ◆ USF Tampa Student Housing Complex – 602 Beds, Tampa, FL | 2004 |
| ◆ Disaster “Hardening” of MOSI, Tampa, FL | 2002 |
| Working with FSU, USF and Hillsborough County Government | |
| ◆ Continuing Contracts with Pinellas County, Cities of Tampa, | 2002 |
| St. Petersburg, Clearwater, Indian Rocks Beach | |
| ◆ American Lung Association Corporate Headquarters, St. Pete, FL | 2001 |
| ◆ SPC University Partnership Center, Seminole Campus | 2001 |
| ◆ St. Petersburg Historic City Hall Waterproofing | 2000 |
| ◆ SPC Technology Learning Center, Seminole Campus | 1999 |
| ◆ SPC Seminole Campus Master Plan | 1995 |
| ◆ City Hall, City of Milton, FL | 1996 |
| ◆ Seminole High School Rec. /Science Facilities, Seminole, FL | 1995 |
| ◆ Grace Lutheran Church/School, St. Petersburg, FL | 1994 |
| ◆ Largo High School, Largo, FL | 1992 |
| ◆ Oldsmar City Hall, Oldsmar, FL | 1990 |
| ◆ Skyway Business Center, St. Petersburg, FL | 1988 |
| ◆ Police Communications Center, St. Petersburg, FL | 1987 |

AWARDS

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| ◆ American Schools & University, CTU Medical Sciences Building | 2007 |
| ◆ American Schools & University, Cypress Hall of Tampa | 2005 |
| ◆ American Schools & University, Technology Learning Center | 2000 |
| ◆ Florida Education Facility Planning Assoc., SPC Seminole Campus | 2000 |
| ◆ APA Award of Excellence, Dome District Business Plan | 1998 |
| ◆ SPPI/AIA Historic Preservation Award, Williams House (USF) | 1997 |
| ◆ SPPI/AIA Historic Preservation Award, Grace Lutheran Church | 1995 |
| ◆ SPPI/AIA Historic Preservation Award, Bays Dialysis Clinic | 1995 |
| ◆ PEDC’s Environmental Excellence Award, Micro Mo Electronics | 1991 |
| ◆ AIA State of Florida Chapter Award (while President) | 1991 |
| ◆ AIA State of Florida, Certificate of Appreciation | 1991 |
| ◆ AIA Tampa Bay Pullara Award for Outstanding Service | 1990 |

**SEMINARS /
CONFERENCES
PRESENTED**

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| ◆ Charlotte County Public Schools | 2006 |
| Cost of Construction, Board Workshop | |
| ◆ Wind Load Design for Buildings | 2003 |
| American Institute of Architects | |
| American Society of Civil Engineers | |
| ◆ New Florida Building Code Course | 2002 |

West Palm Beach, FL; Atlanta, GA; Jacksonville, FL; Tampa/

St. Petersburg, FL; Miami/Coral Gables, FL; Ft. Lauderdale, FL; Palm Beach, FL

- ◆ SMPS Design/Build Seminar – St. Petersburg, FL 2001
- ◆ AIA A201 General Conditions Seminar – Tampa, FL 1998
- ◆ Conference Facilitator (3-Part Series)
 AIA National, Environmental Vide Teleconference 1993
- ◆ Seminar Presenter
 AIA Tampa Bay, Environmental Building Design Seminar 1992
- ◆ Seminar Presenter
 AIA Tampa Bay, Practice and Management Seminar 1989
- ◆ Chairman
 AIA Tampa Bay, Smart Buildings Trade Show and Seminars 1989

**PROFESSIONAL
 AFFILIATIONS**

- ◆ AIA NATIONAL 1978-Present
 Committee on the Environment (COTE) 1992-1996
- ◆ AIA FLORIDA 1978-Present
 Director 1989-1992
- ◆ AIA TAMPA BAY 1986-Present
 Director 1989-1992
 President 1991
 Environmental Committee Chairman 1992-1996
- ◆ AIA ST. PETERSBURG 1986-Present
 President 1988
- ◆ Southern Standard Building Code Congress 1992-2002
- ◆ ICC–International Code Council 2002–Present
- ◆ Florida Education Facility Planners Assoc. (FEFPA) 1992–Present
- ◆ St. Petersburg Preservation, Inc. 1994–Present
- ◆ USGBC–United States Green Building Council 2007–Present
- ◆ NIBS–National Institute for Building Sciences 2008–Present
- ◆ NFPA–National Fire Protection Association 2008–Present

**APPOINTMENTS AND
 BOARDS**

- ◆ Florida Association–American Institute of Architects (AIA),
 Building Codes Committee 2000–Present
- ◆ Florida Gulf Coast USGBC Membership Committee and
 Co-Chair Regionalization Task Force 2008–Present
- ◆ Review and creation of a New Model Code for Florida
 Monthly Florida Building Commission meetings, and
 Technical Advisory Committee meetings, reviewing
 relevant code provisions and providing input to the
 Commission on behalf of the Florida Association of the
 American Institute of Architects. 1998–2006
- ◆ Member:
 Building/Structural Technical Advisory Committee 1998–2006
 Building/Fire Technical Advisory Committee 1998–1999
 Admin/Code Enforcement Tech. Advisory Committee 1998–1999
- ◆ Planning and Historic Preservation Commission
 Chairman 2002

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| | Architect/Professional Member, City of St. Petersburg | 1998-2004 |
| ◆ | St. Petersburg College - Department of Architectural Technology Chairperson, Advisory Committee | 1992-2002 |
| | Member, Advisory Committee | 1986-2002 |
| | Advocates for Shelter Action/Policy (ASAP) Advisory Board Member | 1991-2000 |
| | Pinellas County Economic Development Council Judge, Environmental Excellence Award | 1991 |
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| CIVIC / RECREATIONAL AFFILIATIONS | ◆ Member, Northeast Exchange Club (Ribfest Promoter) | 1986-Present |
| | ◆ Member, St. Paul's Catholic Church | 1971-Present |
| | ◆ Member, Forerunners Track Club | 1992-1994 |
| | ◆ Member, St. Pete Mad Dogs Triathlon Club | 1993-Present |
| | ◆ Coach, St. Pete Raiders Soccer Association | 1994-1998 |
| | ◆ Referee, FYSA Soccer | 1995-1998 |
| EXPERT WITNESS SERVICES | ◆ Cases Represented as Expert: | 85 cases |
| | ◆ Active Cases 2009: | 12 cases |
| | ◆ ADA Accessibility Consulting | 13 cases |
| | ◆ ADA Accessible Projects Designed | 125 + Buildings |
| | ◆ Construction Claims, Expert Witness Services currently Account for approximately 80% of Mr. Bitterli's time. | |
| | ◆ Court/Arbitration Expert Witness Testimony (under oath) | 14 cases |
| | ◆ Mediation Expert Witness Testimony | 26 cases |
| | ◆ Consulting Work Breakdown: | |
| | ◆ Moisture Consulting | 46 claims |
| | ◆ Repairs Consulting | 54 claims |
| | ◆ Accessibility Consulting | 13 cases |
| | ◆ Roof Consulting | 31 claims |
| | ◆ LEED certification & sustainable design | 4 projects |
| | ◆ Codes / Standards | 80 claims |
| | ◆ Fire / Flood loss / Insurance claims | 17 claims |
| | ◆ Malpractice / Standard of care | 36 cases |
| | ◆ Copy write infringement | 2 cases |
| | ◆ Personal injury | 12 cases |
| | ◆ Cost estimates / Scheduling | 31 cases |
| | ◆ Inspection reporting | 49 cases |
| | ◆ Other services | 8 cases |
| CONTINUING EDUCATION | ◆ Code Course, 2007 FBC Course | 2009 |
| | ◆ Trends in Waterproofing Tile/Stone Seminar | 2009 |
| | ◆ LEED EB operations & maintenance course | 2008 |
| | ◆ LEED Webinar case study | 2008 |
| | ◆ ECO-Block ICF Seminar | 2008 |
| | ◆ LEEDing Internationally Seminar | 2008 |
| | ◆ Regenerative Hospitals Seminar | 2008 |

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| ◆ LEED Boston Office Tours | 2008 |
| ◆ Navigating Green Labels Seminar | 2008 |
| ◆ BURS! Roof Seminar | 2007 |
| ◆ LEED NC Course | 2007 |
| ◆ Indoor Air Pollution Seminar | 2007 |
| ◆ Classroom Acoustics Seminar | 2007 |
| ◆ Going Green LEEDing the way Seminar | 2007 |
| ◆ Economic Forecast, Fishkind Seminar | 2007 |
| ◆ Building Pathology Series Courses (Multiple Courses) | 2007 |
| ◆ Florida Schools Construction Costs | 2006 |
| ◆ 2004 Florida Building Code Update | 2006 |
| ◆ Florida Accessibility Code Seminar | 2006 |
| ◆ Mold Certification Course | 2004 |
| ◆ OSHA Coursework | 2004 |
| ◆ FEPPA – E-Commerce Project / Miami-Dade Co. Public Schools | 2002 |
| ◆ FEPPA – Technology for Classrooms | 2002 |
| ◆ FEPPA – Facility Audit and Long Range Planning | 2002 |
| ◆ ASCE 7-98 Wind Load Course | |
| ◆ New Florida Building Code, Building/Structural Course | 2001 |
| ◆ New Florida Building Code, Building/Fire Course | 2001 |
| ◆ Florida Building Commission, Unified Code Development & Technical Advisory Committee Meetings | 1999-2000 |
| ◆ University of Florida Energy Efficient Affordable Housing | 2000 |
| ◆ Florida Education Facilities Planners Association (FEPPA): | |
| State Conference | 1992, 1993, 2000, 2001 |
| Workshops (FEPPA): | |
| Greed Design & Architecture | 2000 |
| Working With the Media | 2000 |
| Building Construction Industry Advisory Committee | 2000 |
| Designing Safe and Secure Facilities | 2000 |
| ◆ Quality Assurance/Control Seminar | January, 1999 |
| ◆ Standard for Hurricane Resistant Construction Seminar | January, 1999 |
| ◆ Independent Indoor Air Quality (IAQ) Study | February, 1999 |
| ◆ Florida Real Estate Course Exam, License | 1998 |
| ◆ Moisture Proofing Slabs in Buildings | 1998 |
| ◆ Planning Commission Seminar | 1998 |
| ◆ Learning Shock 2000: “The Changing Frontier in Education” | 1994 |
| ◆ AIA National Committee on the Environment | 1992, 1993 |
| ◆ AIA National Design Convention | |
| Washington, Boston, Chicago | 1991, 1992, 1993 |
| ◆ AIA ADA Video Conference (3-Part Series) | 1992, 1993 |
| ◆ Aosept, Sick Building Seminar | 1992 |
| ◆ Roofing and Waterproofing Seminar | 1989 |
| ◆ AIA Managing Design Practice | 1989 |
| ◆ Florida Trend Seminar, Issues and Strategies | 1989 |
| ◆ AIA Grassroots, Washington, D.C. | 1989, 1990 |

- ◆ Marketing for the Small Business 1986
- ◆ Interior Products Seminar, Armstrong World Industries 1986
- ◆ Productivity in the Workplace, Westinghouse Corporation 1985
- ◆ Quality of Life Seminar 1984
- ◆ Systems Drafting and Design 1984
- ◆ Land Development for Architects, AIA 1984
- ◆ Interfaith Forum on Religion and Architecture Conference 1983
- ◆ Energy in Design: Techniques, AIA 1981
- ◆ The Passive Energy Studio, PDR 1980

VOLUME OF WORK

- ◆ Directly responsible for the following quantities (MOL) of Design and Construction Administration Services:

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| Architectural/Engineering Fees | \$ 50 million |
| Construction Value | \$600 million |
| Square Footage of Construction | 8.0 million square feet |
| Roofing Design | |
| Built-up/Single Ply Membrane | 3.0 million square feet |
| Sloped Roofing (Metal, Tile, Shingle) | 2.5 million square feet |
| Waterproofing/Restoration/Repair Projects: | |
| Multi-family Housing | 12 projects |
| Commercial/Educational | 50 projects |
| Range of Project Sizes/Values: | |
| Commercial/Educational | \$ 50,000 - \$40.0 million |
| Multi-family | \$250,000 - \$40.0 million |
| Single Family | \$ 30,000 - \$5.0 million |

**STRUCTURAL DESIGN /
 ENGINEERING
 COORDINATION**

- Masters Degree Emphasis Area: Building Structural Design
- ◆ 27 additional credit hours of Masters work in structural design, covering concrete, steel, wood, foundation, and other structural design analysis
 - ◆ Performed Architectural and Structural design of approximately 75 single-family residential projects, additions and alterations.
 - ◆ Coordinated the civil, structural, mechanical, electrical, plumbing and fire protection engineering, utilizing Florida license engineers employed under the direct supervision of Mr. Bitterli's architectural firm (and previous employing firms)
 - ◆ Offered amendments affecting 20 pages of text regarding simplification of Chapter 16 – Structural Design, now incorporated into the Florida Building Code.
 - ◆ Serve as an appointed voting member on the Building / Structural Technical Advisory Committee to the Florida Building Commission. Committee analyzes all structural and building code amendments, provisions and declaratory statements.

**COST ESTIMATING
 EXPERIENCE**

- ◆ Mr. Bitterli has performed estimating work on more than 100 projects ranging from small residential projects (\$60,000) to large Commercial/Educational projects (\$25 million)
- ◆ Estimating database is developed using R.S. Means, Dodge and Marshall Swift Cost Data Bases as well as professional experience.

- ◆ Experience in estimating projects, combined with an in-depth understanding of the relative costs associated with phasing, general conditions and overhead/profit factors has allowed Mr. Bitterli's clients to enjoy a high confidence level in their project costs.
- ◆ Typically, project bids submitted by General Contractors range from 20% to 30% from high-to-low, which is representative of the industry.
- ◆ Mr. Bitterli's goal – and generally contractual obligation – is to predict within a margin of 5% the lowest qualified bid price on each project estimated.
- ◆ The firm consistently predicts the lowest qualified bid price in both residential and commercial/educational/municipal projects.
- ◆ Estimates of Probable Construction Costs performed:
 1986 – 2009 Approximately 100 projects estimated.

**SAMPLE COST
 ESTIMATING
 PROJECTS**

- ◆ SPC ADA Transitional Plan Estimate, Pinellas County, FL 1993
 54 Permanent Campus Buildings
 29 Portable Buildings
 8 Campus /Facility Locations
 \$6.9 million in remodeling/repairs
- ◆ Seminole High School Remodeling/Additions, Seminole, FL 1994
 \$7.6 million in improvements of 200,000 sq.ft. of High School covering
 15 buildings in multiple phases while fully occupied over a three year period
- ◆ SPC New Phase I Seminole Campus, Seminole, FL 1996
 \$3.6 million in Phase I improvements for entrance road, site and
 infrastructure and 24,500 sq. ft. Technology Learning Center Building.
 Building bids came in approximately \$400,000 below estimates.
- ◆ Milton City Hall, Milton, FL 1997
 A \$2.1 million, 12,000 sq. ft. city hall building with standing seam metal
 roofing system, brick façade and hurricane shutters. Architect reduced
 construction costs by \$200,000 through extensive value analysis services
 working with the apparent low bidder.
- ◆ 31st Street South Sports Complex, St. Petersburg, FL 1999
 \$1.9 million sports complex on a 17-acre site. Low bid was within ¼ of
 once percent of Architect's estimate. During design, Architect conducted
 a preliminary bid with two are General Contractors to fine-tune program
 and budget.
- ◆ SPC Phase II Seminole Campus, Seminole, FL 2000
 \$11.5 million University Partnership Center and Physical Plant Building.
 Low bids using the Construction Management form of contracting were
 approximately 1% below estimates and budget. Extensive value
 analysis performed by Mr. Bitterli assured programmed cost objectives
 were met.

- ◆ American Lung Association Headquarters, St. Petersburg, FL 2001
(ALA of Gulf Coast Florida) \$2.2 million corporate headquarters building consisting of 12.00 sq. ft. of healthy office environment. Architect reduced construction costs by \$150,000 through extensive value analysis services working with the construction manager while providing 3,000 sq. ft. of expansion space within the building.
- ◆ USF St. Petersburg Campus - Student Housing, St. Petersburg, FL 2004
Estimating services for a \$15 million, 356-bed student apartment building complex as a part of an 850 student, three-phase Master Plan. Mr. Bitterli serve as Master Planning, Programming, and Design Criteria Architect for USF St. Petersburg on the eight-story project.
- ◆ USF St. Petersburg Campus – Parking Garage, St. Petersburg, FL 2004
Estimating services on an \$8 million, 850-space, seven-story, pre-cast parking garage with 15,000 square feet of multi-use tenant spaces on the ground and second floor levels. Mr. Bitterli serves as Master Plan and Design Criteria Architect, assisted the University with the development of the Design Criteria Program and Request for Qualifications Package, and produced the Schematic Design for the project.
- ◆ National Institute of Building Sciences (NIBS)
“Moisture Investigations and claims in Buildings” 2009 (underway)
- ◆ Legal Cases & Claims 31 Cases

PUBLICATION

- ◆ Publisher, "The Facility Report" 1999-2000
A quarterly newsletter covering facility and construction trends cost information and other items of interest to the facility professional.



- ◆ National Institute of Building Sciences (NIBS)
"Moisture Investigations and Claims in Buildings" (underway at this time)