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The Sarasota Design Conference was like a breath of fresh air. It’s sole purpose for being was to present a forum for the discussion of design - that illusive entity that often seems to be secondary to the day-to-day mechanics of running an architecture office.

On hand to get everyone excited about design were E. Fay Jones, Hugh Newell Jacobsen and Michael Sorkin. Fay Jones won the AIA Gold Medal last year and despite that fact, he is as soft-spoken and unassuming as Hugh Newell Jacobson is urbane, witty and outspoken. Both of these men have produced a large body of work which has brought them national recognition, but their concerns about the future of architectural practice are seemingly no different than those of the conference attendees. Fay Jones talked about his client Sam Walton, who owned a little dime store in Arkansas and couldn’t borrow $65,000 to build the house Jones designed for him. Michael Sorkin lamented urban plight and some would-be solutions were bantered about. In short, the problems that face architects are timeless.

Most interesting to me as a teacher of architectural history was the fact that both Jones and Jacobsen are clearly architects whose design solutions are frequently tied to historic prototypes. During Jones’ talk, he interspersed slides of his own work with well-known historic buildings from which he derived inspiration. Sam Walton’s Arkansas house is a case in point. Instead of building near a creek on the property, he built over it, citing the French chateau at Blois as a source of inspiration. The most notable and obvious parallel in Jones’ work is between the Gothic cathedral and his masterpiece, Thomcrown Chapel. The importance of the architectural continuum is not wasted on this Arkansas educator.

Faye Jones also talked a lot about his beginnings in the studio of Frank Lloyd Wright. Like his mentor, Jones has never lost his sense of the importance of architecture being one with nature. He speaks with great conviction about organic architecture and he expresses himself almost poetically by saying that an architect should never “embarrass his materials” by using them inappropriately.

Hugh Newell Jacobsen is an architect with a formula that works. He is no less than Fay Jones a man whose designs have obvious historical parallels. His preference for breaking buildings up into small intimate spaces, “pavilions” as he refers to them, creates a fractured image of specific historical prototypes, be they Georgian, Federal or Greek Revival. The end result is irresistible - a recognizable style suited to a contemporary program. Instead of large formal rooms, there are a series of small “familial” spaces.

The Gulf Coast Chapter and Conference Chairman Mark Smith deserve to be applauded. The conference was inspirational, as only a true “design” conference can be. It brought some of the giants of architecture to Florida and made them accessible. It was educational. It was fun. DG
New Members

The following persons have been accepted into membership in the AIA from Florida since May, 1994.

**AIA MEMBERS**

- Leonard Alvarez, AIA, Miami
- Wayne Berenbau, AIA, Boca Raton
- Mark W. Birkebak, AIA, Orlando
- Tim J. Blair, AIA, Tampa
- Mark W. Birkebak, AIA, Orlando
- Wayne Berenbau, AIA, Boca Raton
- James G. Johnston, AIA, Tampa
- John R. Forbes, AIA, Coral Gables
- Todd R. Chase, AIA, Fort Lauderdale
- Mary J. Juckiewicz, AIA, Vero Beach
- Luis H. Jauregui, AIA, Coral Gables
- Roger P. Janssen, AIA, WPB
- Kenneth A. Jacobsen, AIA, WPB
- Rene Basist Hutcheson, AIA, WPB
- Richard C. Thurlby, AIA, Tampa
- Craig Thomson, AIA, St. Augustine
- Richard C. Thurlby, AIA, Tampa
- Eduardo Alberto Vazquez, AIA, Miami
- Roy C. William, AIA, St. Augustine Bch
- Robert C. Walburn, AIA, Jacksonville
- Felicia M. Salazar, AIA, Coral Gables
- Rafael V. Sixto, AIA, Coral Gables
- Michael F. Sofiarelli, Jr., AIA, Clearwater
- Craig Thompson, AIA, St. Augustine
- Richard C. Thurlby, AIA, Tampa
- Eduardo Alberto Vazquez, AIA, Miami
- Roy C. William, AIA, St. Augustine Bch
- Robert C. Walburn, AIA, Jacksonville
- Ignacio Zabaleta, AIA, Miami

**ASSOCIATE AIA MEMBERS**

- Alexander C. Barrett, Associate AIA, Clearwater
- Virgilio Campanera, Associate AIA, Miami Springs
- Juan C. Contin, Associate AIA, Boca Raton
- Craig D. Davison, Associate AIA, Jacksonville
- Adriana B. Guerra, Associate AIA, Miami
- Andrew Scott Kirschner, Associate AIA, Melbourne
- Jean Francis LeJeune, Associate AIA, Coral Gables
- Ira Locks, Associate AIA, Orlando
- Richard H. Talbert, Associate AIA, Miami Beach
- Daniel L. Thom, Associate AIA, Orlando
- Vicki L. Vath Russo, Associate AIA, St. Petersburg
- John M. Vaughan, Associate AIA, Ft. Lauderdale
- Jonathan C. Weiss, Assoc AIA, Sarasota
- Harlan Woodward, Associate AIA, Miami

**ALLIED MEMBERS**

- Michael Cimorelli, Boca Raton
- Russell Meyers, Boca Raton
- Stephen Wilbur, Sarasota

**Jim Anstis, FAIA, and family.**

**Anstis to Receive the Gold**

Newly elected AIA Secretary, James Anstis, FAIA, West Palm Beach, will be presented with the State Association's highest award, the Gold Medal, when members gather October 20-22 for the Fall Conference and Annual Meeting in Orlando.

Anstis, a Past President of AIA Florida and former Regional Director, was selected for the award by a unanimous vote by the AIA Florida Board of Directors during its meeting in Sarasota based on a nomination made by the Gold Medal Nominating Committee headed by Ted Pappas.

A University of Florida graduate, Anstis has been active in the AIA for more than 25 years and now practices in West Palm Beach under the firm name of Architects 4. The committee cited his prolonged and extended service to the profession and the AIA, at all levels, his continuous involvement in civic affairs, and his advocacy of architects in the public sector over and above that normally expected of any member as reasons for Gold Medal recognition.

The Board also voted unanimously to award the Hilliard T. Smith Silver Medal for Community Service to Sol J. Fleischman, Jr., AIA, for his leadership and community activities, which have been of a direct benefit to the profession and architecture.

The AIA Tampa Board nominated Sol for the focus on historic preservation in Tampa and Hillsborough County which he brought to his involvement in helping to form the Historic Preservation Board, the County Preservation Foundation and the Tampa Architectural Review Commission. "Mr. Fleischman has gladly donated many thousands of hours in the interest of historic preservation movement as a result, his business and personal finances have suffered dire consequences," the Chapter noted.

The Anthony L. Pullara Individual Award will be presented to Rudolph Arsenicos, AIA of the Palm Beach Chapter, for his outstanding service to the profession and AIA, selecting Arsenicos, the Board noted his many years of service to the AIA as an officer, director and member of the Board, his continuous attendance and involvement in the chapter and state AIA activities, all of which exemplify the memory of Anthony Pullara, a Tampa architect, whom the award is named.
Design/Build Under Study

The AIA Florida has formed a Project Delivery Study Task Group to look into the use of design/build and to provide guidance to architectural firms and owners looking for a more acceptable means for designing and constructing a building.

One of the major problems encountered in design/build procedures, according to Liability Update newsletter published by CNA/Schinnerer, has been the requirement that the design/build team competitors submit conceptual drawings which may be up to 30-35 percent complete, with only the final selected team being paid for that initial work. Those proposals are then evaluated on the basis of quality of design, price, and other factors with the selected proposer entering into contract with the owner. The other proposers end up with no money with the architect being the biggest loser having completed a substantial portion of the work for no pay.

The Task Group, under the leadership of Bill Blizzard, AIA, of St. Petersburg, will be looking into the expectations which owners have in utilizing the design/build process and whether those expectations are being realized.

The use of design/build is growing. Several federal agencies have suggested changing the federal procurement reform law to enable agencies to seek qualified proposals without conceptual design and without cost or price information. From the list of proposals, the agency would select three proposers who would each submit designs with cost information. The agency could select on the basis of best design or price but not lowest price.

A recent policy statement by the American Consulting Engineers Council calls for a two-step process in which the owner selects a design professional to prepare design criteria up to 35 percent of design level and project cost estimates. Thereafter, the policy proposes that the owner solicit proposals from design/build teams, including a design professional to be named in the proposal to provide design and related services. The design professional so named would then represent the owner throughout the entire project. Of course, this would be a departure from the basic concept that design/build is normally provides which is a single contract between owner and design/build.

"Can-Struction" event at Sawgrass Mills Mall, in Ft. Lauderdale.

Public Awareness Through "Can-Struction"

Efforts to develop good public awareness programs have produced some successful results. The Ft. Lauderdale community became directly involved with the AIA Ft. Lauderdale chapter, and the popular "Can Struction" event.

Past-president, Stan Schachne, used the event to promote public oriented programs in the Ft. Lauderdale chapter. In 1993, Schachne teamed with a local mall management who endorsed the program and helped organize the event.

Architects, together with a local corporation, and local radio stations requested mall visitors to bring canned goods or other non-perishable foods for donation. The team planned the design of a canned food sculpture that best characterized the theme "Stamp out Hunger." Local grocery stores were searched for types of containers needed to accomplish the design. Once the foods were chosen, a list of food items were targeted for collection. Accumulated food items were transferred to the mall one day prior to the building of the sculptures. The finished sculptures were on display for one week. During that time, the mall visitors could vote for their favorite sculpture by donating a quarter. All monies collected through voting went to the local food bank, whose volunteers manned the voting tables throughout the week. After the competition, all food was donated to the local food bank.

A collection of 16,391 pounds of food and over $846.00 provided approximately 15,700 meals. The event was a tremendous success and had wide media coverage from two newspapers, seven radio stations and three major television networks.
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Interior Design: From Title Act To Practice Act

On July 1, some 3,000 licensed interior designers in Florida came under new regulations which were passed by the Florida Legislature during the 1994 Regular Session. Since 1988, interior designers have been regulated under a "title act", which allowed only certain persons to hold themselves out to the public as "interior designers", but otherwise did not preclude anyone from providing interior design services to the public. The new regulations operates like the architects' practice act, allowing only persons who meet specified educational and experience qualifications to hold themselves out to the public or practice interior design. The introduction of the bill creating the practice act caused quite a furor among the ranks of the architects, interior decorators, and peripheral design groups.

Design professionals should be aware of the new law and understand its impact on the regulation of professional employees, its restrictions on services rendered by non-professionals, and its limitations on persons signing, sealing and submitting documents of service to building officials. The most pertinent provisions of the law are as follows:

Board Membership and Qualifications for Licensure

The membership of the Board of Architecture and Interior Design has been increased from 9 to 11, consisting of 5 architects, 3 interior designers and 3 lay persons. Persons previously licensed under the practice act if they have successfully completed either the NCIDQ, AID or another board-approved examination. Those persons previously licensed who have not successfully completed such an exam must successfully complete the NCIDQ exam section on building and barrier-free codes, before April 1, 1996 in order to retain their licenses. New applicants must be graduates of FIDER-accredited, or other board-approved interior design programs of four or more years. Also, they must have at least 2 years experience with a 4-year degree or 1 year experience with a 5 year degree.

Exceptions and Exemptions

Architects and architectural partnerships and corporations continue to be able to provide interior design services and to hold themselves out as interior designers. However, other persons are now precluded from offering or providing these services with a narrow exception for "interior decorator services" involving selection of surface materials, window treatments, wallcoverings, paint, floor coverings, surface mounted lighting or loose furnishings. The exemption for design of certain building types - one or two family residences, farm buildings, or other buildings costing less than $25,000 is applicable to interior design as well as architecture.

Interior Design Definition and Submission of Documents for Permitting

The definition of interior design has been modified to include contract administration of nonstructural interior design construction and to clarify that interior design does not include design of architectural and engineering interior construction relating to building systems, including structural, plumbing, heating, ventilation, air conditioning and mechanical and electrical systems. Also, the existing statute applicable to signing and sealing of interior design documents and their submission to building officials was modified. The new statute specifically allows interior designers to sign, seal and submit interior design documents (if required by a permitting body.) However, the law was also clarified to specifically prohibit interior designers from submitting documents containing any structural, mechanical, plumbing, heating, air conditioning, ventilating, electrical, or vertical transportation systems or materially affecting life/safety systems pertaining to fire safety protection such as fire-rated separations between interior spaces, fire-rated vertical shafts in multi-story structures, fire-rated protection of structural elements, smoke evacuation and compartmentalization, emergency ingress or egress systems and emergency alarm systems.

Board Rules and Further Legislative Review

It is anticipated that the newly constituted board will adopt rules more specifically implementing some of the new provisions. However, it will probably take some period of time before the new board members are appointed and such rules are published. Meanwhile, we understand that several of the community colleges in the state who have 2 year and 3 year interior design programs are upset that these programs are not sufficient to meet the minimum educational requirements for licensure. NCIDQ or AID examinations will attempt to persuade the legislature to grandfather them as licensees rather than require them to pass any examination for licensure.
Architecture As A Tool For Learning

Littlewood Elementary
School Renovations and
Additions
Gainesville, Florida

Principal-in-Charge: Lewis Brown, Jr., AIA
Project Architect: Jack Ponikvar
Production Coordinator and Contract Administrator: Robert Williams
Civil Contractor: Charles R. Perry Construction
Owner: Alachua County School Board

Through extensive renovations and additions, Littlewood Elementary School received a facelift in 1990 which doubled the size of the facility. It was one of 40 schools designated for capital improvements as part of a $100 million bond issue passed in 1990 for Alachua County Schools.

Originally built in the 1950s, the Littlewood campus, although unobtrusively tucked among the trees, became a community landmark while the city expanded around it. Unattractive temporary structures accumulated at the school site to accommodate the city's growing population into the northwest school zone. Now built out from the trees and situated at a very visible Gainesville intersection, Littlewood administers to 755 children.

Program directives from the Alachua County School Board included using architectural innovation to provide an exciting learning environment and respecting the design diversity of other campuses in the county. With no "re-use" constraints, the architect's parameters centered on budget, educational specifications and regulations and contextual considerations.

In the area of contextual considerations, the school works particularly well. The scale, massing and use of materials are very appropriate to the environs. The use of color and the playful building elements which the architect designed are very empathetic to the children who attend the school.

Similar to the existing structure are the materials, eave height, width and color scheme. Brick, concrete block, stucco and glass were selected for continuity with existing materials and durability and the existing green roof carries over to the new standing seam metal roof. Known for his use of color and natural light, Project Architect Jack Ponikvar incorporated symbolic elementary forms in yellow and red to articulate the simplistic openings in the interconnecting walkways. Blue tile insets and green cupolas further emphasize the building's playful quality.

One of the first one-story schools built in Alachua County, the Littlewood campus radiated out from a 350-foot central sidewalk that is similar to a "main street" in a community. During preliminary stages, the design team named this sidewalk "Littlewood Lane" and incorporated this basic community layout into the new additions.

Littlewood Lane was extended 270 feet and it now intersects with a new main sidewalk, Cake Walk, which the students named after school principal Jacque Cake. This crosswalk, complete with official street signs, marks the juncture of the old and new facilities and serves as a landmark for the children, staff and visitors.

The project consisted of approximately 40,000 sq. ft. of new construction and 27,500 sq. ft. of...
renovation. With total construction cost of $5.4 million, the major components included a new food service building, a new administrative suite, new Head Start classrooms, new classrooms for pre-kindergarten students with learning disabilities and physical and emotional handicaps and a new music suite.

Renovation work included asbestos removal, roof replacement and several classroom expansions. The library was also gutted to accommodate more natural light, storage areas and a production room to house a student-run news broadcast. The existing cafeteria was converted to an acoustically-sound multi-purpose room which lends itself to special programs and events which include parents.

The school originally had a direct expansion air conditioning system with electrical heat strips. The engineer converted the renovated spaces and all the new construction to multiple air-cooled chillers with air handlers and VAV boxes.

Top, interior of library, street side view, below left, Pre-Kindergarten classroom looking east, lower right, courtyard looking north to east/southeast classrooms. Photos by George Cott.
A Creative Learning Environment

Pine View School For The Gifted, Sarasota, Florida

Architect: Carl Abbott FAIA
Architects/Planners PA Sarasota, Florida
Architect of Record: W.R. Frizzell, Inc. Owner: Sarasota County
School Board Construction Representative: Carol Woodson

The new Pine View school is uniquely suited to both the specific educational programs which it administers and to the tropical environment in which it is located. The first permanent campus for the Sarasota County School Board's innovative gifted program, this project combined programmatic elements of independence and a sense of community into an architectural form that relates to the tropical environment.

The architectural team sought to insure a feeling of openness and independence in the siting and orientation of the 150,000 sq. ft., 47-acre-school. The horseshoe-shaped masterplan for Pine View takes its direction from Thomas Jefferson's plan for the University of Virginia. This school, however, has a tropical central green which focuses on a view of native Florida wetlands and pines. The Media Center serves as a focal point for the school, recalling UVA's Rotunda in its curved form. Exterior walkways and courtyards connect the 14 independent buildings on the campus and shape the exterior courtyard/classrooms.

Pine View serves 1,200 students in grades two through 12, a wide range of social developmental stages that the architects addressed through careful control of scale in the masterplan of the campus. The classrooms are color-coded, organized by subject being taught and arranged beneath a series of...
bright blue canopies which line walkways all around the school. A towering OSHA-yellow mall canopy provides shade and a meeting area for students adjacent to the cafeteria and auditorium, both of which are brightly colored. The gymnasium, with its bold colors and exposed structural ceiling is a straightforward expression of both volume and form while the sloped-ceiling Media Center's window wall offers a view of a pine hammock.

Very much a tropical school, the campus preserves its natural surroundings by careful siting of the buildings. A large wetland serves as focal point for the central green. Pine View is a “green school” in other ways, as well. Classrooms can be opened to allow for cross-ventilation, non-4-PCH formaldehyde-free carpeting has been used to minimize indoor air pollution and energy-saving tinted glass was used on the south side of the buildings to minimize heat load.

The architects worked closely with school administration, teachers and students during the design process and were careful to address the unique range of developmental stages and educational missions of the school’s program while meeting budgetary constraints.

By combining the skills of design-oriented professionals with educational facility-oriented firms, the architectural team created a synergy of talents well-suited to the project. The new Pine View school seems to have kindled Sarasota County’s desire for quality designs that began in the 1950s with Paul Rudolph’s Sarasota High School.
Elementary Additions

Lake Forest Elementary School, Additions and Renovations, Gainesville, Fl

Architect: Flad & Associates
Gainesville, Florida
Principal-in-Charge: John Blassick, AIA
Consulting Engineer: Affiliated Engineers SE, Inc.
Landscape Architect: Flad & Associates
Interior Designer: Flad & Associates
Project Team: Michael Vascellaro, AIA, Fred Robbert, Joe Cearcia, AIA, Phyllis Brumfield, IBO, Casey Upshaw, AIA, Bill Bethke, PA, Paul Hagel, RA, Ken Blassick
Contractor: Bradley Construction
Owner: Alachua County School Board
The design concept for additions to Lake Forest Elementary School evolved from the idea of developing images of the "little old school house" rather than planning one large single complex.

The existing school was built in 1954 as a "finger plan" which pens classrooms onto covered walkways interconnected with common use facilities. The extensive additions designed by Flad & associates were defined by planning small building clusters like individual school houses creating courtyards that function as exterior rooms. The additions resulted in a strong image transformation.

The scope of the project included the creation of new Kindergarten, Administration Suite, Art, Music and Media Centers, and a Multi-Purpose building which included Cafeteria and Auditorium. Pre-school ESE and Exceptional Education Resource Suites, four general classrooms and the remodeling of existing resource rooms were also part of the project.

The extensive nature of these additions allowed for a complete image change for the school. In addition to separate brick buildings with courtyards and covered walks, each building and exterior space is clearly and functionally identified, and each has its own character. The design for the portico of each building allowed for the definition of a particular identity while the covered walkways that thread through the school gave the project a cohesive quality.

Lake Forest Elementary received the 1994 City Beautification Award for Gainesville, in the Institutional/ Facilities category.

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Analogy To The Written Word

Evanston Public Library
Proposal
Evanston, Illinois

Architect: Urbanform Design Group, Inc. Fort Lauderdale, Fl.
Design Team: Kaizer Talib, AIA, Principal; Fabrice Cloutaud, Design/Drawings; Thierry Kawczynski, AIA Intern, Design/Drawings; Voytek Szczepanski, Renderings/Photos; Christine Harris, Interior Design Consultant

The following is excerpted from a project proposal entitled "Concept: Analogy To The Written Word/Books Within Books/the Library As A Stack of Books."

Literature transcends human experiences. Books are a product of such experiences. From the days of the fables told by one person to another to the published words of our time in books or on laser recordings, books are loved by one and all and they continue to be part of us.

In an attempt to reflect the functional aspects of a library and thus "books," the subjects attempt to become the object. The building begins to honor its contents and in turn it infuses and invigorates it with forms and textures that intrinsically reflect its character. This analogy is carried further to make legitimate claims to its forms and details, thus making the library spiritually part of its primary reason for being - LITERATURE WITHIN LITERATURE - BOOKS WITHIN BOOKS. The building begins to metamorphose itself in almost Kafka-like manner and it emerges from its structural sounds to "become" a STACK OF BOOKS.

While the base reflects how strongly the building is built in a rigid structural pattern, the first floor and the mezzanine present a visually dynamic space. The entrance is covered with booklike forms made of steel and fiberglass sculptures. It allows the user to enter the building by symbolically immersing himself in books. Once inside, as one moves around, he knows that the spirit of literature - the book - is becoming part of the spirit of the user. He leaves the outside world to enter the fascinating realm of books which transcends the physical world and where literature becomes an enlightening link devoid of the realities of life.
All The World's A Stage

University of Florida
Center for the Performing Arts, Gainesville, Florida

Architect: Flad & Associates
Gainesville, Florida
Consulting Engineer: Affiliated Engineers SE, Inc.
Interior Designer: Flad & Associates
 Principal in Charge: John Blassick, AIA
Project Team: Wendell Adell, RA, Bilal Ajami, William Bethke, RA, Ken Blassick, Phyllis Brumfield, IBO, Bob Filippi, RA, Joe Garcia, AIA, Paul Hagel, RA, James McGinley, AIA, Fred Robbert, Robert Taylor, RA, Casey Upshaw, AIA
Contractor: The Auchter Co.
Owner: Board of Regents, State University System
Theater Consultant: Robert A. Lorrelli & Assoc., Amityville, NY

The Performing Arts Center is one of three key components forming the nucleus of a cultural complex located at the perimeter of the University of Florida campus. The central design challenge was to provide a state-of-the-art theater experience within the parameters of an extremely limited budget. This facility, constructed for under $9 million, approaches less than one-half of the cost of similar structures. The reduction in cost is probably attributable to the decision to use a larger portion of the budget on state-of-the-art sound systems, lights and other technical enhancements rather than "marble floors and brass handrails."

The 60,000 square foot facility is handled like a black box theater with traditional proscenium, dual stage lifts and full fly gallery features. The theater provides orchestra seating for 1,000 and mezzanine or balcony seating for 800, including 72 box seats in two levels. The "Shoe Box" design was
selected to achieve the required box seating while maintaining optimal sight and acoustical design lines. There is an acoustically-designed mechanical system using large volume underground return air ducts for sound abatement.

Also included in the design are formal lobbies, restrooms and concessions, administrative offices, a full range of private and chorus dressing facilities, loading, working and storage spaces and technical support functions. The siting along a formal axis, exterior detailing and the exterior lighting of the Center were designed to create a sense of arrival and enhance the theater experience as one approaches the facility.

Construction material is stucco over concrete block with custom-designed metal work. The auditorium uses bow trusses with long span acoustical metal deck. The main facade of the theater has a very formal presence and is obviously inspired by historicist motifs. The curving roofline with central pavilion and bracketed cornice gives a formal feeling to the facade and clearly defines the entry.
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"Value Engineering": A Tool To Help Cut Costs Without Sacrificing Project Goals

By William C. Mignogna, P.E.

Value engineering is a concept which emerged almost by accident during World War II when widespread shortages of labor and materials forced a search for alternatives in the manufacture of everything from electricity to shoelaces.

Today, the concept is more relevant than ever, especially as a tool to enhance cost-efficiency in the design and construction of both public and private sector projects.

Essentially, value engineering is an organized process of investigation and analysis. Each major element of a proposed project is systematically reviewed in terms of its function, its cost, alternatives which could be used, and the cost of those alternatives.

A structural engineer can perform a value analysis for the architect at the outset of project design (before formal presentation to the client) or later, to meet revised budget parameters set by the client.

Here are three “real life” examples of how value engineering was used in three very different project scenarios:

• CASE #1—a new elementary school. The School Board Advised the architects that they were seeking presentations at $56/s.f. To build at that modest price level, we suggested to our architect client that pre-engineered, manufactured metal (structural steel plate girders) be used instead of a structural steel building frame (beams, columns, joists).

However, in return for cost savings, there are compromises which must be considered. The pre-engineered components are usually used with standing seam metal roofs which, if not installed properly, could have leakage problems, thus boosting life cycle costs. Reroofing is a problem, too. A new roof can be installed over a standard metal deck and membrane roof without disrupting use inside the building. If a standing seam roof leaks or its purlins deteriorate, it may have to be removed, rendering the building unusable until a new roof is in place.

Using pre-engineered metal also makes a building less flexible in terms of future add-ons, such as additional loading for lighting or air conditioning units.

However, in this case, the need for more classroom space right now, at an affordable price, outweighed concerns about future building flexibility.

We also recommended use of bare block for perimeter walls; architectural block for the exterior face with no stucco, and painted block with no drywall on the inside. It would have been slightly less expensive to build an exterior wall system using metal studs with stucco and gypsum sheathing, but that system would not have been as durable as block. For interior walls which are less susceptible to damage from schoolyard play, we recommended metal studs with drywall.

Additional value engineering recommendations included minimal landscaping (soil with no irrigation system), elimination of cosmetic treatments such as canopies, towers and covered walkways.

• CASE #2—a resort facility. The building features a parking garage at ground level, a lobby level above, and three stories of guest room. The building is 355’ long and 110’ wide.

Original plans called for 8’ post-tensioned slab for the top three floors, 22’ post-tensioned transfer slab over the lobby, and a series of over 100 post-tensioned transfer beams, 7’ to 12’ wide and 26’ to 42’ deep, over the parking level. Support columns did not line up, resulting in these two transfer levels.

Changes included lining up the support columns from roof to foundation. Where it was necessary to move a column out of line for space utilization purposes, a beam was used to spread the load.

Plan revisions involved lining up most columns on the lobby and guest levels. As a result, most of the second floor was changed from 22’ to 8’ slab.

Lining up the columns saved almost 1,200 cubic yards of concrete, or 130 truckloads. It also saved weight (almost 2,500 tons), which reduced foundation costs. The parking level was changed to a solid 24” slab with no beams. This produced substantial savings in terms of forming and steel costs, while completely maintaining structural integrity.

• CASE #3—structural repairs to a 15-year-old parking garage. The facility is a one-story, parking garage with parking on ground level and on an uncovered deck above.

Cracks on the upper deck were caused by rainwater and crack sealing materials which were problematic to an undercover parking area. Leakage became so severe, the deck was described as a “sieve.” There was concern that the leakage might also be rusting steel reinforcing bars in the concrete slab.

The owner wanted a solution which would stop the leakage at the very lowest possible cost. Had budget restrictions not been so severe, we would have recommended using a membrane coating on the deck to waterproof it. This coating typically lasts about five years. The bare bone alternative was a water sealant which was cheaper to apply but will have to be reapplied every year.

The owner understood the tradeoff.

To close deck cracks which had been caused by normal expansion and contraction due to thermal conditions, we originally recommended epoxy injections. However, since the budget would not support that approach an alternative was to apply heavy waterprooﬁng paint over existing stuco walls.

The low-cost alternative approaches that were utilized were not provide the long-term solutions we prefer to achieve for our clients. However, they did give the building owner the structurally safe, very low-cost solution he wanted at this time. Cost savings from original recommendations were approximately $75,000.

As construction costs continue to rise, value engineering is certain to become an ever more commonplace and crucial element the preliminary design process.
For the design team, there are marketing ramifications as well. Engineers and architects who initiate value engineering activities send a clear signal that they are sensitive to the client’s needs and willing to make every effort to satisfy those needs.

William C. Mignogna, P.E., is President of O’Donnell, Naccarato & Mignogna, a structural engineering firm based in West Palm Beach. The firm provides structural design and inspection services throughout the Southeast.

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So You Want To Design Schools...
By Janet McIlvaine

Your energy mission...should you choose to accept it...
“We want to save energy, but we need to keep construction costs down.” We’ve all heard that before. “It’s up to you”...“you decide”...“I trust your judgement”...“I’m sure you know what’s best.” The school board believes that you, the professional, will act in its best interest when it comes to saving energy for new facilities. Whether you consider yourself an expert or not, the tough decisions will be up to you.

Your client respects your advice, but you may get some looks of doubt when you inform your building committee that you advocate a special glazing that costs $3 per square foot more than plain clear glazing. The most effective way to overcome skepticism is with cold hard numbers on the expected payback. This is a regular component of energy design review process for commercial buildings at the Building Design Assistance Center (BDAC) at the Florida Solar Energy Center.

Electronic ballasts or energy efficient magnetic ballasts? Single or double pane glazing? Skylights? Occupancy sensors? Increased ventilation? Landscaping? Tough decisions. A new resource, Energy Efficient Design for Florida Educational Facilities, will soon be available from the Florida Department of Education, Office of Educational Facilities (DOE/OEF) to assist design teams with energy conservation decisions. The training manual summarizes a year’s worth of research on efficient design for new schools in three main sections that should sound familiar: Schematic Design, Design Development, and System Design. Several energy design strategies are discussed in each section. For each strategy, the simulated annual energy savings, annual energy cost savings, net lifecycle savings, and simple payback are presented for several different Energy Conservation Measures (ECMs). In all, approximately 40 different ECMs were evaluated, each falling into one of the following strategies:

- Strategies for Schematic Design Orientation
- Spatial Configurations
- Strategies for Design Development Glazing Selection Window Shading Enhanced Envelope
- Strategies for Systems Design Efficient Lighting Efficient HVAC

To compare 40 different options and choose the right ones may seem like an overwhelming task and it certainly can be. But energy design, like any other design skill gets easier and more intuitive with practice. Don’t let the vast array of ECMs prevent you from learning to design a more energy efficient project.

Getting started. Begin by making a commitment to select ECMs that will save your client operating funds. Before you can do that, you need to know how your school is likely to use energy. Energy use in educational facilities varies widely from residential energy use, so even if you have been successful at residential energy conservation, you’ll do well to consider how energy is used in Florida schools (see figure).

The philosophy of the DOE/OEF manual is aimed at the big targets: lighting and air conditioning. Lighting not only consumes electricity (about 30% of the total), but also produces heat (about 15% of the peak load). This is obviously a good place to take a swing at energy consumption. Obtain BDAC’s publication “Side-by-Side Testing of Commercial Lighting Systems” for detailed information on the performance of approximately 40 different lighting assemblies. Target the HVAC system by minimizing internal heat gains (see chart below) wherever possible and by selecting efficient system components.

Step 1: To begin with, make sure that whatever HVAC and lighting systems you have specified are actually installed and operated according to spec. Building commissioning to ensure proper installation and operation is very important, particularly with energy saving measures, such as occupancy sensors, whose successful operation depends on calibration and adjustment.

Step 2: Browse the pages of the new DOE/OEF training manual, ask around for other energy coordinators’ experiences, and then se-

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<thead>
<tr>
<th>Type of Load</th>
<th>Component of Load</th>
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<tr>
<td>Internally generated heat and moisture</td>
<td>Occupants</td>
<td>29</td>
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<td>Lights</td>
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<td></td>
<td>Equipment</td>
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<tr>
<td>Externally gained heat and moisture</td>
<td>Walls</td>
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<td>Underground surfaces</td>
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<td>Infiltration/ Ventilation</td>
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Typical Annual Energy Use in Florida Educational Facilities

select one or two cost effective ECMs to incorporate into a single building or facility design. Call on BDAC if you need assistance making the choice. After the design grows into a building, evaluate the performance of each ECM. Did it behave as expected? Are the clients and users of the building satisfied with its performance? Question the outcome of the experience before making an ECM a standard design procedure.

I encourage this conservative approach to allow designers, engineers, facilities planners, building users, administrators and operations staff a chance to warm up to new building features. Obviously, this process makes more sense with a new technology or an ECM that is affected by the use patterns of the building rather than with an accepted technology like compact fluorescent lamps.

Step 3 Drop me a note to let me know how it all worked out. We'll get the word out to others.

Step 4 Repeat Step 2 incorporating ECMs as you go. It may take many rounds of energy design practice to get to an optimal energy design process.

The process in fast forward. In writing the new training manual, we had the luxury of being able to simulate all the possibilities and then pick the one that produced the greatest net lifecycle savings (the lifecycle savings minus the lifecycle cost). For classroom buildings, each ECM turned out to be spectrally selective glazing, an advanced lighting fixture, a very low shading coefficient, optimal orientation (long axis of each building aligned with the east-west axis), or an electronic ballast lighting system with T8 lamps. None of these measures rely on other building characteristics to save energy; they are non-interactive ECMs. Other non-interactive ECMs include reflective exterior finishes (solar infrared reflectivity of 0.5 or greater) and LED exit signs.

Interactive ECMs require more thoughtful consideration because they may be affected by building or occupant use characteristics. These include dimming lighting controls, window shades, occupancy sensors, and HVAC systems. For example, a daylighting system is affected by spatial configuration of the building as well as orientation, window shading, and glass type. In preparing the manual we found that some ECMs, such as daylighting, are more complex but have big energy payoffs. The manual will assist you in coordinating the components.

Optimal Integration of ECMs into Classroom Building

Hints for Step 2 For your first try at incorporating an ECM, select an advanced glass (one with a very low shading coefficient), optimal orientation (long axis of each building aligned with the east-west axis), or an electronic ballast lighting system with T8 lamps. None of these measures rely on other building characteristics to save energy; they are non-interactive ECMs. Other non-interactive ECMs include reflective exterior finishes (solar infrared reflectivity of 0.5 or greater) and LED exit signs.

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The future. The DOE, Office of Educational Facilities will soon be announcing a series of workshops on energy efficient design for educational facilities. These free workshops will use the new manual, Energy Efficient Design for Florida Educational Facilities as a basis for bringing you up to date on the latest information while providing a forum for the exchange of ideas.

As you begin your energy design adventure, remember that BDAC provides free energy analysis through its commercial building design reviews. This service provides design teams with recommendations on proper energy de-
New Workers’ Comp Rules

The Florida Legislature recently changed the Workers’ Compensation Act to narrow the definition of compensable injuries. Employers can now deny claims for injuries not directly caused by job duties, but be aware that doing so may open the door to civil suits and wide-ranging liability.

Previously the Act defined a compensable injury as “arising out of” the claimant’s occupation. Courts consistently interpreted that language broadly. Essentially, they held that an employee suffering an accident at work — such as a fall while walking to the plant’s restroom — was entitled to Workers’ Compensation benefits. Under the new definition, an injury is compensable only when the employee’s work is a “major contributing cause.” That means the slip-and-fall on the way to the restroom isn’t compensable; an injury sustained as the employee worked on the production line would be.

While employers may be quick to deny some claims under this new definition, in many cases a wiser alternative is accepting the Workers’ Compensation claim. Here’s why: Once an employer agrees that an injury is compensable, the Workers’ Compensation Act bars the claimant from proceeding with any civil lawsuits. Further, the Board of Industrial Claims has strict formulas regulating how much compensation an employee can receive. The employer’s liability exposure is fixed, and the company knows exactly much must be paid.

On the other hand, if the employer denies the claim, the employee can sue in circuit court or county court. Here, depending on the injury’s severity, the pain-and-suffering damages a jury or judge could award are potentially unlimited. Furthermore, the employer may have to pay 100 percent of lost wages until the claimant turns 65. Under Workers’ Compensation, the employer is responsible only for a certain percentage of the salary, calculated by standard formulas. The employer is responsible for all current medical expenses and sometimes future medical expenses. These are just some of the additional exposures the employer could face in a common law suit.

Rather than automatically rejecting Workers’ Compensation claims that don’t meet the definition, employers are well-advised to quickly and thoroughly investigate these claims.

ED. NOTE: This information was provided by, and is the opinion of, Richard D. Heller and Paul O. Lopez of the law firm, Tripp, Scott, Conklin & Smith in Ft. Lauderdale.

Classified Ads

Architect - Researches, plans, designs, administers and prepares building design concepts, presentations, specifications, books and detailed construction drawings for engineering and building purposes according to South Florida building codes, zoning laws, life safety code and ADA requirements, using computer aided design technology for building urban centers and entire communities. Advises in selection of building sites, prepares cost and site analysis studies, Consults with clients to determine functional and spatial requirements of new structures, renovation, preservation and remodeling. Requires knowledge of DataCAD, ArcCAD-Arcinfo, AutoCAD, Windows Workgroup (Networking) Upfront, Photosyler, Access, 3-D Studio and Animator-Pro. Requires Master’s Degree in Architecture. 40 hrs/wk 8-5, $23,950/yr Send resume and copy of ad to Job Service of Florida, 701 SW 27th Ave. Rm 47, Miami, FL 33135-3014. Re: Job Order #FL-1063876.

Architectural Project Manager needed to prepare design concepts and detail drawings for engineering and building purposes, prepare sketches, renderings, models, and 3D computer modeling to illustrate realistic architectural designs, from preliminary design concepts, prepare renderings of well-developed site plans, considering functional layout and environmental constraints, coordinate with engineer consultants and contractors to carry designs into construction documents, confirm compliance with building codes and prepare construction documents. Requires Bachelor’s degree in Architecture and six years experience 40 hrs/wk 8am to 5pm $622/wk Send resume and copy of ad to Job Service of Florida, 701 SW 27th Ave. Rm 47, Miami, FL 33135-3014. Ref: Job Order #FL-1077487.
...What a windbag. Reminds me of the guy at the bank this morning talking retirement plans for my firm. 401Ks, SEPs—he had more abbreviations than the IRS. I've got a simpler retirement plan. Win the lottery, say adios to all this, and take a full-time job working on a tan and a Mai Tai in Cancun. SEP. Wasn't he one of the Three Stooges?...

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