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CHALLENGE AHEAD

From time to time across the editor's desk come some statistical material that should give any architect for thought. The paragraph below comes from the introduction to a new book, just on the market, intended to help non-architects learn about the architectural profession. It serves this purpose well, but the quote below reveals much about the status of the profession and indicates a challenge—totally unrelated to brick and mortar—that lies ahead.

"What should make us sit up and take notice are these startling factors:"

• There are only 30,000 registered architects in the United States, compared with 250,000 lawyers, 265,000 doctors, 430,000 accountants, and 975,000 engineers. The number of architectural firms is about 10,000.

• The population of the United States is expected to reach 500,000,000 by the year 2000. To meet the physical demands of this expansion, during the next 32 years, architects will be called upon to design as many facilities as Americans have constructed in the 192 years since the signing of the Declaration of Independence.

• Only one in every 100,000 people is being prepared to participate in the physical shaping of the nation's future. The 63 accredited colleges of architecture conferred 2,025 Bachelor of Architecture degrees, 417 Master of Architecture degrees and only 10 Doctorates—less than 2500 degrees in 1966. A pitifully small annual task force to meet the staggering challenge of the immediate future.

"We are truly the unknown profession, not only because our number is small. To many we are simply the creators of blueprints. Others have absolutely no idea what we really do in order to earn our fees. To nine out of ten clients and prospects, we are indistinguishable from the builders."

"This mystery must be dispelled if Americans wish to uproot the ugliness and visual disorder that now surround us."—BERNARD JOHN GRAD, FAIA

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My Favorite Architectural Project

By William C. Gilmer, AIA

Residence of Dr. and Mrs. Peachy R. Gilmer
421 Drexel Drive, Shreveport, Louisiana

The program for this traditional Georgian type residence of Dr. and Mrs. Peachy R. Gilmer, located at 421 Drexel Drive, Shreveport, Louisiana, built of soft old rosy pink brick on a wooded 200 foot square site, comprised three elements.

First: Complete and comfortable living quarters on the first floor for the owners.

Second: The first floor to be planned for entertaining to accommodate anything from a small informal gathering on the covered patio and terrace to formal dinners and large receptions.

Third: The second floor was to contain a bedroom suite for a university age son, and two guest bedrooms and baths, sewing room and adequate storage for linens, luggage and out of season clothing.

The first floor plan is very simple and was designed so that the flow of traffic would have a minimum of bottlenecks and provide access to the open terrace and covered patio from the main reception rooms.

Family and friends using the garage entrance have direct passage to the family room without encroaching on the activities in the kitchen. The kitchen was located to serve not only the dining room but to be also accessible to the patio and terrace.

The covered patio is equipped with a mammoth wood-burning fireplace and barbecue grill and an adjoining kitchenette.

The garden room is the focal point of the first floor and is used as the family room. It has a semi-circular table in front of the planting box and bow window and is used as the breakfast area. The bookcase at the right of the fireplace has been altered to receive a color TV set. Since the pantry backs up to this bookcase there was no problem in accommodating the thick chassis. Mrs. Gilmer designed and executed a removable cover with false books on it to mask the TV set when not in use.

Throughout the house the exterior walls were opened up with large picture windows to afford magnificent views of the surrounding gardens without sacrificing wall space for proper placement of furniture.

The interior pictures better illustrate traditional detail and furnishings. The interior decoration and development of the gardens are by the owner, Mrs. Gilmer.

This is one of many favorite residential projects, but it has been chosen because it was like planning one's own home. Having made my home for several years with my brother Dr. Peachy R. Gilmer and his family, I already knew how the home had to function. Distinguished house guests and entertaining have made this a home of great charm and hospitality to any one privileged to be a guest.

Editor's Note: This is the first in a series of articles featuring the favorite architectural projects of AIA architects in Louisiana. Guest writers are selected by drawing lots. Mr. Gilmer is a partner in the firm of Annan and Gilmer, Architects in Shreveport, Louisiana.
My Favorite Architectural Project (continued)
By William C. Gilmer, AIA, Architect

Photography, Thurman C. Smith, Shreveport, Louisiana

January, 1969
Industrial Non-Architecture

On the lower Mississippi River—that stretch between Baton Rouge and New Orleans which has been called "America's Ruhr Valley" a heterogeneous collection of industrial plants rises from the fertile sugar growing delta lands. They are in purpose and architectural spirit just the opposite to their neighbors, the quiet old plantation homes.

This building—one of the older industries — the Gramercy plant of Godchaux Sugar Refinery is uninhibited in its sprawling and rising forms. In this age when architecture is being thought of more and more as growth rather than fixed and finite forms, these buildings have a further interest to architects.

Near this building are the powerful forms of Kaiser's bauxite plant, the complex and colorful DuPont Ponchartrain plant — more machine than building. All of these, with their direct and vital pursuit of function, have brought to Louisiana forms of a unique beauty and power.

John Desmond, FAIA
Although Jackson Barracks is perhaps the finest complex of Greek Revival buildings existing in Louisiana, equalled as a group by few in the United States, its quality and character are but little known except to those whose military duties or interests have brought them into contact with these splendid buildings. The plans were prepared in New Orleans in 1833 by Frederick Wilkinson, a young architect then only twenty-one years of age. Assistant Quarter Master, Major J. Clark was sent from Washington and arrived in New Orleans in November 1833 to superintend their erection. According to Gibson’s City Directory of 1838, "Major Clark applied for, and obtained as his assistant, Lieut. F. Wilkinson, 4th infantry, who had drawn the plan of the works."

It was at first intended to build the barracks fairly close to the heart of the city and they were designed for such a location, with “high protecting walls, defended by armed round towers at the angles of the enclosure, the whole being intended to serve as a citadel for the reception and safety of the families of the citizens in case of an insurrection or other casualty…”

A suitable site not being found, the present location was selected and purchased on December 14, 1833 for $31,000. It was the two arpent plantation of Pierre Cotteret which he had bought at a sheriff’s sale in 1825 of the property of the late widow of Dr. William Flood whose splendid plantation house stood until recent years, adjoining the barracks on the lower side. The principal entrance to the barracks was through a sally port at the foot of the levee, but this small building with the front wall and the flanking round towers were removed some fifty or more years ago, probably due to a re-alignment of the levee. According to the 1838 Directory, of which Frederick Wilkinson was a compiler, “The quarters of the commandant occupy the middle of the front, those of the Staff and Company Officers on either flank. The companies are quartered in a hollow square, which is thrown back far enough to give space for a large and handsome parade ground. In the rear of these quarters are the hospitals, storehouse, and corps de garde; and still in rear and beyond the walls is the post magazine, as well as other buildings necessary for the comfort and convenience of the troops. In front of the whole is a commodious wharf for the landing of supplies, etc. The work was begun February 24, 1834, and completed December 31, 1835, at a cost, including the enclosure of the public grounds, of $182,000.”

The buildings for the officers, flanking the parade ground, were gable ended with a two story Doric colonnade and second story gallery across the front. The soldiers’ quarters were hipped roofed with surrounding galleries, some with super-imposed columns and some with taller ones like the officers’ quarters. Their design would seem to be ideal for the New Orleans climate. Such was not the case, however, in the opinion of Colonel George Croghan, inspector general of the army who examined this frontier garrison. On May 6, 1844, he wrote:

“The quarters of both officers and men are in good repair and kept in the nearest possible order. I can not say anything, however, in favor of the plan of the soldiers’ quarters or rather of their arrangement. The houses separately considered are well enough, yet placed as they are around a small square, they so completely interrupt all free circulation of the air and reflect upon each other the scorching mid-day sun that the heat is often times overpowering.”

Colonel Croghan was perhaps a bit prejudiced against the New Orleans barracks, for in his same report he admitted that, “I was from the first opposed to the erection of these barracks because I could never perceive a necessity for the stationing of troops either in or about New Orleans, and I challenge anyone to prove that such necessity does exist.” The Colonel not withstanding, the barracks have remained in use, and although given up by the Federal government to the state of Louisiana in 1921, they are still in use by the Louisiana National Guard. The name “Jackson” was given officially to them in 1866 according to Gen. Erbon Wise, former State Adjutant General who has made a study of the old structures and initiated many recent improvements to them. The exterior plaster has been removed from the brickwork to expose its original color but the white painted screens which detract so much from the appearance of the buildings, have been allowed to remain because of the mosquito problem in the area.

In 1848 a second tract of land adjacent to the upper side of the barracks and equal in size to the original site, was purchased for a federal hospital. Three large two story buildings with galleries, somewhat similar to the barracks, were built in the form of an open ended quadrangle by W. F. Kel-sey. In the center of the court was a domed, temple-like structure for admissions and administration. The hospital designed for Mexican War soldiers, was one of the nation’s first veterans’ hospitals. Its plot plan, together with that of the barracks, appears in Robinson’s Atlas of 1883. The hospital was probably demolished not long after that.

Jackson Barracks was one of the first of several important works of its young architect, Frederick Wilkinson who in 1839-40 designed the Cypress Grove Cemetery with its monumental Egyptian entrance pylons. He was deputy City Surveyor for the Faubourg St. Mary and later deputy United States Surveyor. In September his wife, a native of New York, died of yellow fever and was buried in the Girod Cemetery with the poignant inscription “Poor Caroline.” Less than two years later his promising career ended on March 22, 1841, at the age of twenty-nine and he was buried beside his young wife, with the following epitaph:

Poor Frederick the lot was thine
Full soon to follow Caroline,
Poor Caroline, thy husband sleeps
Beside thee, and no longer weeps
Receive, receive O Power Divine
Poor Frederick and Caroline.

Samuel Wilson, Jr., F.A.I.A.

Editor’s Note: This is the first in a series of articles on Louisiana’s great architectural heritage. The author, Samuel Wilson, Jr., FAIA, was elected a fellow of the American Institute of Architects in 1955 for Design, Education and Literature. He is considered by many as the foremost authority on Louisiana’s architectural history and is the author of numerous papers and books on this subject. Mr. Wilson is a partner in the firm of Koch and Wilson, Architects in New Orleans.
(1) Commandant's quarters over the sally port. Engraved view from Gibson's New Orleans Directory of 1838.

(2) View of the military hospital adjacent to Jackson Barracks, 1848. Engraving from the author's collection.

(3) Officers' quarters, Jackson Barracks. Old photograph in the author's collection.

(4) View of the soldiers' quarters through the sally port. Old photograph in the author's collection.


(6) One of the Jackson Barracks buildings. Old photograph in the author's collection.

(7) One of the officers' quarters, Jackson Barracks. Photograph by the author.
Cost analysis is designing or planning with money. Regardless of who the client might be or what the ultimate purpose for which it can be used, any project must be designed in terms of dollars and cents before it can be feasibly translated to other trades of industry because the dollar is our economic medium of exchange.

Like any other planner, it is necessary that we utilize the tools that are available. If only a verbal description of the project is available, that becomes our basic equipment and we then design the project from the means at hand. If preliminary plans are available, then we utilize them or if final detail plans are available and the scope of the project is thoroughly tied down, then we work from that. Regardless of what the tools are, it is a cost analyst responsibility to arrive at a feasible dollar design. Naturally, the more complete the tools are, the more complete our design will be.

There are always three basic steps in the cost analysis service, but we, as professionals, are not necessarily engaged in all three. These steps are:

- **Budget Estimates**: The budget estimate can be prepared at any time from verbal information or precise drawings for the purpose of proper design of a project to a given or predetermined price. In order that the Budget Estimate be effective, it is necessary that these figures on given amounts of materials be turned over to the designers to be used as a guide in controlling working drawings and specifications.

- **Preliminary Estimates**: The preliminary estimate is a periodic check of design details during the working drawing phase to assure adequacy of budget and to make any adjustments for the final phase. This estimate is usually prepared from plans which are 40 to 50 percent complete.

- **Pre-Bid Estimates**: The pre-bid estimate is to determine actual construction cost and provide a detailed check of all bid documents to afford a means of adjustment without using costly alternates. This can also be used for a check of progress reports and negotiation of extras or deletions.

If we are engaged in all three, then we are committed to see that the final scope of the project is within the funds. If we are not engaged in all three, then another type of service entitled “Value Engineering” must be utilized to reorganize the design to bring it within funds. This service is above and beyond cost engineering service and constitutes a combination usage of cost knowledge and design knowledge.

The fundamental difference between the professional cost engineer and the average general contractor who has been commonly used in the past as the ultimate criteria for all cost knowledge, is the fact that a cost engineer must know the intricacies of every sub-contractor and be able to price a sub-bid intelligently. The secret of success in any cost evaluation job is not close knowledge of general contractors, but close knowledge of the various operations of the various sub-contractors and being maintained current on their pricing structures in the given locality at the given time. The trades actually produced by the general contractor are very common and relatively insignificant as are the amount of overhead, profit and supervision that may be added to the combination of sub-bids which he collects. A cost analyst must translate verbal, written, or detailed ideas into a complete monetary entity.

**COMPUTER VS. HUMAN BEINGS**

We are asked every day about computerized estimating and our answers to this question can best be summed up in the following way:

We put together a cost estimating computer program and after many hours of painstaking study and trial, error and (Continued on Page 15)
corrections, we found that a computer program could not work economically enough or complete enough to compete with Standard Cost Estimating practices.

I would like to quote from an Associated Press interview with Dr. Anthony G. Ottinger, Harvard University Mathematics Professor. Dr. Ottinger, Chairman of a computer, science and engineering board of the National Academy of Sciences said, "people who use computers realize they are only tools and that humans are behind them.

"Any notion that computers can take over decision making is dangerous. They can act only on the information fed to them and the information may be inadequate or even false. "Policy makers are playing with fire if they think they can rely solely on data analysis by computers. There are factors which cannot be reduced to computer language."

WHY DOES AN ARCHITECT NEED COST ANALYSIS?

George E. Kassabaum, AIA President says, "if we are the top professionals in the building industry, why shouldn't an owner expect us to have his project completed within a prescribed budget and on time."

We should all realize what George Kassabaum means when he made the above statement.

Cost estimating and time and motion studies are professional services, not sidelines. They require special experience and special sources of information.

The days of Square Foot Cost Estimating are gone forever, and everyone should realize that no two cost estimates are alike unless they are the same basic structures, built by the same contractor, in one place and within a given time period, and even then the contractor's cost will vary. If you think this statement is out of reason, just ask any contractor who has built the same building twice.

Estimates by professional estimators should be slightly over the low bidder on any project. An owner has never been unhappy to find out that something is going to cost him a little less than what he had made up his mind to spend.

Our record to date on our estimates as compared to the low bidders on the respective projects are very close on all our projects. The closest is 20/100 of 1% over and the largest in 3.6% over. The 20/100 of 1% was on a $25 million project and the 3.6% was on a $16 million project. The owners were so satisfied that the contract was awarded at the bid opening rather than 30 days later as the bidders had expected.

The best judges of professional cost estimators are the architects and clients for whom they've worked. A good estimator will proudly furnish a prospective client with the names of several references.

Material for this article was furnished by Mr. Bob Wilkerson, Partner and General Manager of Construction Cost Analysis, 6248 Camp Bowie, Fort Worth, Texas 76116.
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