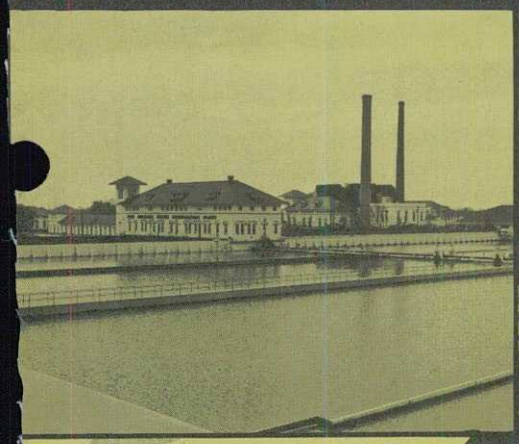
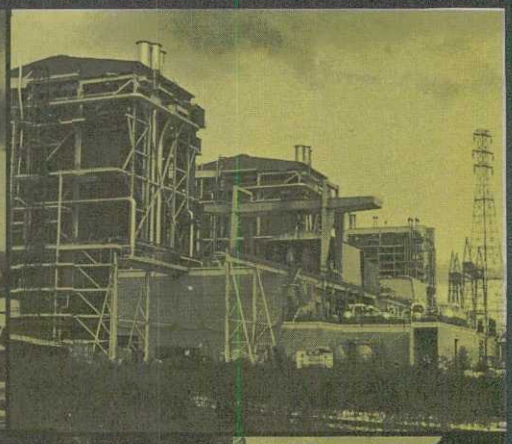
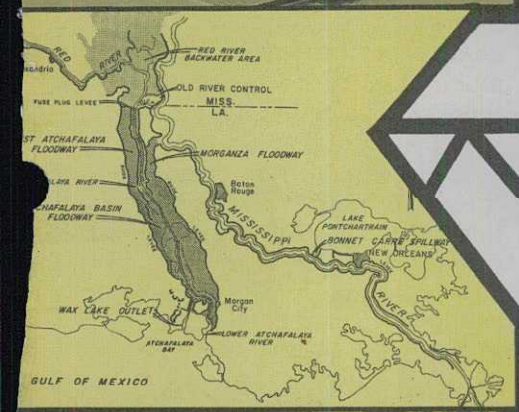
LOUISIANA ENGINEER

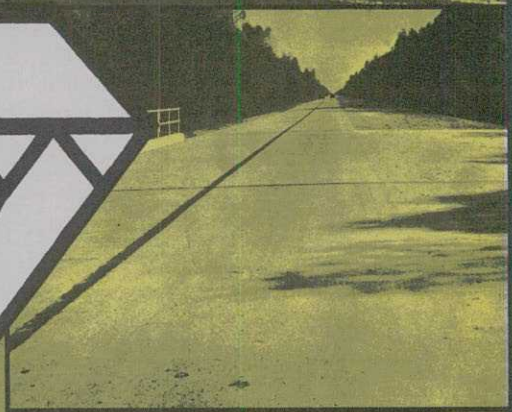
Diamond Jubilee Issue • February, 1973

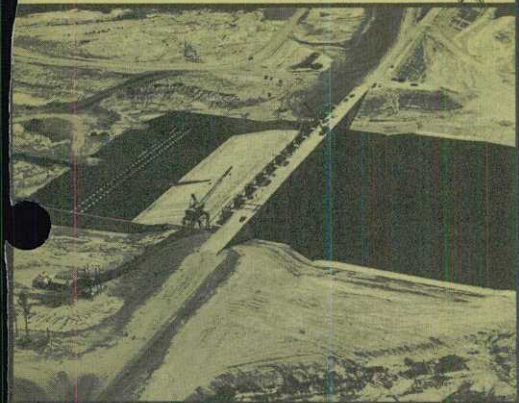
LOUISIANA'S 10 OUTSTANDING ENGINEERING ACHIEVEMENTS

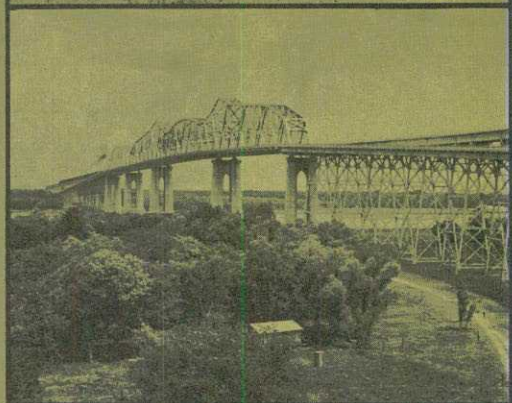


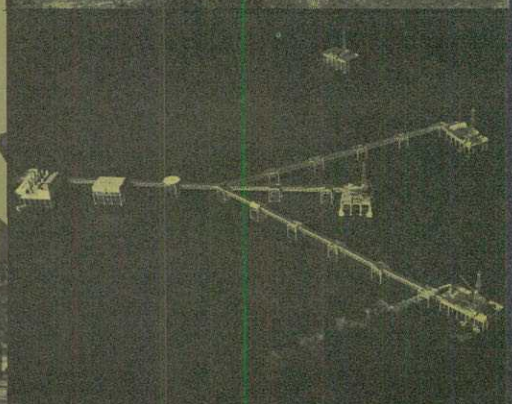












NSPE Named Defendant In Antitrust Action

James F. Shivler, Jr., P.E., President, National Society of Professional Engineers, announced that the Society had been named as defendant of a suit filed by the Department of Justice charging violations of the Sherman Antitrust Law. The suit, filed in the United States District Court for the District of Columbia, seeks to enjoin the 68,000-member Society from continuing provisions in its Code of Ethics and policies declaring competitive bidding for engineering services to be unethical and unprofessional.

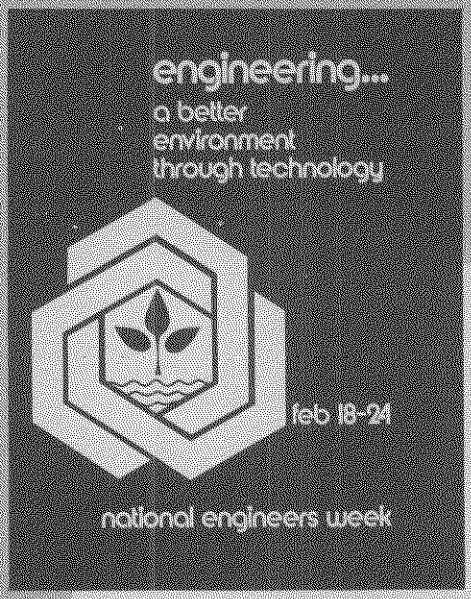
Shivler states that the suit had been anticipated following the service of a Civil Investigative Demand on the Society in March, 1972. The Society had promptly furnished all documents and files to the Department of Justice required by the Civil Investigative Demand, announcing at the time that its position opposing competitive bidding for engineering services was well-known, open and above board. "We had nothing to conceal then, and we have nothing to conceal now," Shivler stated. "The issue is purely a legal one and we intend to uphold and defend the principle that competitive bidding for engineering services is contrary to the public interest and is not a violation of the antitrust law."

The position of the Society that its opposition to competitive bidding for professional engineering services is consistent with achieving the best facilities at the least cost has been bolstered by the recent action of Congress in passing an Architect-Engineer Selection Bill (Public Law 92-582, 92nd Congress) which prescribes a professional selection and negotiation procedure for such services. Shivler noted that the legislative history of the bill, extending over a five-year period, clearly establishes that Congress specifically rejected the concept of price competition for professional services.

During the Senate debate on the bill, for example, Senator John L. McClellan, Chairman of the Senate Appropriations Committee and Senate co-sponsor of the bill with Senator Charles H. Percy of Illinois and Representative Jack Brooks of Texas, Chairman of the House Government Activities Subcommittee, the primary House sponsor, observed that the bill ". . . is designed to avoid pitfalls which accompany other selection methods—such as bidding—where fees sometimes take precedence over quality. In my opinion, the auctioning off of architect and engineer services on the lowest fee basis only paves the way for the lowest quality performance. Failure to make quality of workmanship the basic selection factor could result in higher construction costs, functionally inferior structures and maintenance problems that could plague the Federal Government for years to come. The selection of architects and engineers should be based on ability, not cut-throat bidding, or some other nonquality procurement system."

The Society has retained as special legal counsel for its defense the firm of Hogan & Hartson, Washington, D.C. Lee Loevinger, former Assistant Attorney General in charge of the Antitrust Division, heads the legal defense team.

Prior to the decision of the Society's Board of Directors in July to defend its position, a special Task Force on Competitive Bidding Implications prepared a comprehensive "White Paper" outlining the background of the case and the reasons for the recommendations that the Society stand by and defend the principle involved as essential to the rendition of engineering services in a manner best suited to serve the public welfare.



THE WHITE HOUSE

WASHINGTON

National Engineers Week, 1973

It is with deepest pride that I salute America's engineers on the occasion of National Engineers Week.

Your achievements have been basic to our country's progress and to our development. You have helped to make us the leading technological nation in the world today.

As we face the challenges of the Seventies, your 1973 theme reflects the same sensitivity that has characterized all your past accomplishments. It is indeed fitting that the focus you place on your profession for the coming year is toward "A Better Environment Through Technology." As you know, my own concern for uplifting the quality of life in America led me to establish the Environmental Protection Agency and the Environmental Quality Council. I am hopeful that in the year ahead you will lend your immeasurable efforts to the important work of these organizations, and I am confident that your assistance will be invaluable in solving the serious environmental problems we face.

I wholeheartedly applaud the continuing leadership and direction you provide as individuals and as a profession toward a stronger and more vital society.

Richard Nixon

COVER

This month, the Louisiana Engineering Society celebrates its 75th Anniversary. To commemorate the occasion, Past Presidents of the Society selected the 10 Outstanding Engineering Achievements in Louisiana during the past 75 years. For a complete story, see page 14.

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PRESIDENTIAL PRIVILEGE

Several recent incidents have underlined the special relationship that should exist between Technology, Science, Engineering, and Professionalism. The first three are directly related to seeking, expanding, and applying technical knowledge. The last, "professionalism," is a way of life, an attitude, and has no relationship to the amount of knowledge one may have acquired or how hard it may have been to obtain; professionalism is definitely related to how one applies his knowledge. This is an inescapable fact and is irrelevant to one's title, or the exams he has passed or failed. A true professional does have a real degree of competence in his endeavor, but more importantly, he does not practice beyond his capabilities. He recognizes his limitations and stays within them because he wants to—not because of some restriction of law. He acts for the common good and does not restrict himself to personal privilege and gain.

Unfortunately, we do have a conflict between scientist, the seeker of technical knowledge (technology), and the engineer, the applier of technology. The seeker (physicist, chemist, etc.), when he becomes the finder, is delighted and usually turns his findings over to the world for its use; he can thus begin another romantic venture into the darkness of ignorance. The scientist keeps pushing the curtain of technology aside for better views of the unknown. At that time, he usually has no great personal concern as to how his new knowledge will be used, if at all. He may not even consider it relevant whether his knowledge is usable or has an application. His concern is continually pushing back the curtain of the unknown. This is the scientist's responsibility, and since he usually does it without harm to humanity he considers himself a professional. In fact, it is implied. Have you ever heard of a registered professional physicist or a registered professional chemist, botanist or anthropologist? It is only the appliers of technical knowledge from whom the public must be protected.

Knowledge (technology) is sterile without application. Enter the engineer, with his skills in applying this knowledge. He begins to apply technology, and on his shoulders falls the burden of mankind's technology failures, but few of the successes. How many times have you heard the physicist lament that his knowledge is perverted by misapplication (as with atomic power) or the chemist wring his hands over DDT, or some other abuse of their scientific research over which they no longer have application control? Personally, I'm more secure when the application of knowledge is placed in the hands of responsible, application-oriented engineers. However, this trust may be abused, and not just by unprofessional engineers. Those concerned only with dollars all too frequently have final control. The scientist is too frequently protected by his cloistered academic atmosphere to feel the pressure. He therefore assumes no legal or professional responsibility to the public. Not so the engineer. Here the engineer finally becomes visible to the public.

Unfortunately, we professionals have no copyright on the noun, "engineer." I guess we are fortunate in having protection on the term "Registered Professional Engineer." Certainly the noun "engineers" is abused. Often it is used as a title awarded for physical remuneration, and many times bestowed upon graduates of engineering schools who have not proceeded with their personal growth. As long as one is awarded the title "engineer" and it is on his door and desk plaque and organization chart, why go through the rigors of proving **minimal** technical qualifications, or being judged by his peers as deserving of the title? No—this does not protect the public, but it does encourage legal catastrophes behind the company fence, and will as long as special interest has exemptive protection. It does not protect the public for government agencies to have exempted "engineers" inspecting dams, highways, buildings, boilers, and other machinery, also designed by exempted design "engineers." Certainly the public is not protected when "sales engineers" can knowingly sell misapplied technical equipment to "purchasing engineers" without the obligation of competency.

Then there is the matter of competence and experience in the classroom. Are students in engineering schools getting all they deserve when the engineering faculty are not required to have application engineering experience as a

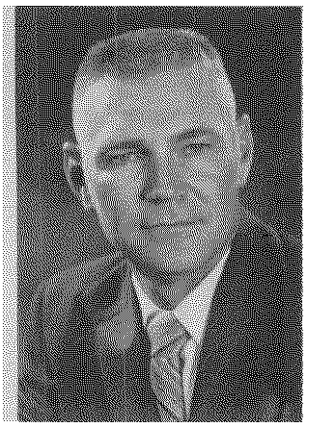
prerequisite to teaching? Should our young engineering students be taught by faculty members who have "never left school" all the way through their Ph.D.'s? Of course, the Ph.D. has to do research and write a thesis, but nothing is ever said about how the research may be put to practical use. Yet the Ph.D. is a status symbol at our engineering colleges—why, I don't know. I've had a Ph.D. teaching at one of our reputable schools tell me he hated teaching but loved research, and the freedom of choosing his own projects—a freedom he could not enjoy in industrial research. A researching professor can fail all of his life to find something considered useful, but still be a venerated gray beard who has become the "world authority" on something or other. I can not accept an engineering faculty member's not being truly professional in his attitude, liking to teach, and indicating pride in his profession by being registered as a member of the appropriate technical and professional societies and selling professional attitudes to his students. However, look at some of the faculties in several of our schools within the state: not registered, not active—not dedicated teachers.

If we are to truly be accepted as professionals, we need much changing within ourselves as individuals and as a professional group. We must not merely wear concern on our sleeves but must really feel concern, not just for ourselves, not just for engineers, but for people—just plain old, everyday people. We don't gain professional status by examination. We don't gain professional status by walking away from a hard fight against unionism just because we were able to gain exempt status, leaving our fellow employees who are still forced by Executive Order to join a union without any election to express their will.

We don't gain professional status by hypocritically guarding individual group titles and interests. We gain it by unifying under a common name and goal where professionalism is an added participation to our technical competence. We do gain it by cooperating together as Consulting Engineers Council, Louisiana Architects Association, and Louisiana Engineering Society are doing on the rewriting of the Fire Marshals State Code. Together we are furnishing over 15 technical consultants to the Governor's Fire Marshals State Code committee. Groups that were bitter in July are now working together for a public good, and for no fees, in addition!

We must stop the bickering prevalent between faculties of engineering technology and professional schools with Ph.D.-oriented, engineering-scientist schools. The Ph.D. group must realize that application of engineering principles can well be better taught by professional engineers without a Ph.D. degree, and the practicing engineers must appreciate that many engineering Ph.D. scientists could make a living "on the outside." The above remarks were all taken from the conversation of a luncheon group that included an attorney, a nuclear engineer and well-known nuclear physicist, now with industry, but formerly head of the Nuclear Engineering Department at a well-known university. The nuclear physicist had made a remark that while he personally had not attempted to register as an engineer, he insisted on his senior class's taking the EIT exam. He felt that it was important for them but not relevant to himself. I disagreed, for I think he is a real pro, within the true meaning of professionalism. I hope he applies for registration. After all, there was no nuclear engineering until physicists like this man started to apply technology and grew to be the country's first nuclear engineers.

Isn't it regrettable that we have been so unprofessional we cannot accept the necessity of recognizing that nuclear engineers and others need to be registered, too? Within our law, would you believe that a registered civil engineer can practice and advertise himself as a nuclear engineer, but this man—a Ph.D. nuclear physicist with a wide "responsible charge of engineering" background, has no branch in which to register. He is further handicapped because he did not graduate from an engineering school. Of course, it is incidental that there were no Nuclear Engineering Schools until men with similar training started them. It is most important to protect the branch registration titles of self interest—certainly we are protecting the public—besides, it's so General Bullmoosely professional.



LES President
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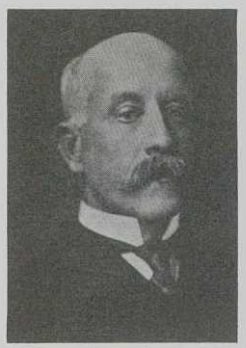


Sidney F. Lewis

J. F. Coleman

LOUISIANA ENGINEERING SOCIETY

75 Years of Accomplishment

By

John P. Fernandez, P.E.

This year we celebrate the Diamond Anniversary of the Louisiana Engineering Society, and as members we can be proud that we belong to the oldest state organization of its kind in the nation. It was conceived in the fall of 1897 by J. F. Coleman, who was then the principal engineer for the city of New Orleans. Mr. Coleman later became a distinguished engineer, the recipient of many honors, who was acclaimed nationally as a professional-minded leader. Believing in the creed that it was the duty of all engineers to keep abreast of new technical developments, and knowing too well the meager earnings of his fellow professionals (at that time his own salary was $135 per month) it occurred to Mr. Coleman that engineers could pool their resources to avail themselves of expensive professional publications. This thirst for knowledge and desire for self-improvement was shared not only by our founding fathers but by many of the old timers. From the Society's very beginning the greater part of membership dues was allocated to the support of a technical library, and one of its first actions was to select a committee to investigate sites for housing the library. Its volumes grew and provided a source of valuable information for engineers until World War II, when its use declined appreciably. In 1955, when the Society moved its headquarters from the St. Charles Hotel to the Engineers Club of New Orleans, the painful decision was made to discontinue the library.

In the Beginning

The first organizational meeting of LES was held on December 22, 1897. On that memorable day fourteen professional-minded engineers met in Room 19 of the old City Hall, now known as Gallier Hall. It was decided that the purpose of the Society would be "for the professional improvement of its members and for the advancement of the engineering profession." Temporary officers were selected and two committees were appointed, but most of the evening was spent in discussing the type of organization the Louisiana Engineering Society was to be so that the Constitution and By-laws Committee could be properly guided.

On January 8, 1898 a Constitution and By-laws were adopted and a motion was passed to incorporate. Notary Public Bussiere Rouen was authorized to prepare a charter. The manner of electing and installing officers was decided and sites recommended by the housing committee were discussed. On January 15th the following officers were elected and installed:

Sidney F. Lewis	President
C. H. Chamberlin	Vice President
J. F. Coleman	Secretary
A. F. Theard	Treasurer
T. L. Raymond	Director for 3 years
A. C. Bell	Director for 2 years
F. T. Llewellyn	Director for 1 year

On January 16th Mr. Rouen advised that the original group of fourteen men could not incorporate as an engineering society, for Louisiana Law required a minimum of twenty-five charter members. Immediately a drive began and by February 3rd fifteen new members were admitted. On that day the charter was recorded, bearing the signatures of twenty-nine members. February 3rd also marked

the selection of the Society's first home, the second floor of 712 Union Street. Until then all meetings had been of an organizational nature, but on February 14th the first regular meeting was held in the Society's headquarters. The President read a technical paper, after which members and guests joined in discussion. Anyone with technical knowledge on the subject was encouraged to comment and young men were urged to ask questions. This audience participation was such a success that it became standard form for all subsequent regular meetings. On March 5th, thirty new members were admitted, including three who resided outside of New Orleans. Thus was taken the first step to make the LES a statewide organization.

Act of 1908

The initial work toward securing passage of a law to regulate the practice of engineering was begun as early as 1898. Our founding fathers were much concerned about engineering incompetency and wished to protect the public from the activities of "dabbers and quacks who had only to hang out a shingle in order to qualify for business." In 1900 and subsequent sessions of the Legislature bills were introduced, but it was not until 1908 that a law was passed. Though we had been the first state to introduce a bill for registration of engineers, ours was the second law of its kind in the nation. Wyoming passed the first in 1907, and it was not until 1917 that Florida became the third state to regulate the practice of engineering.

Magazine

In 1914 it was decided that the Society would publish its own journal, to be titled "Proceedings of the Louisiana Engineering Society." It was to be issued bimonthly and to include papers presented at meetings, minutes of the Board of Direction and other pertinent information of interest to engineers. The first issue appeared in February 1915 with this editorial comment:

"The launching of this publication represents one of the most important steps the Society has ever undertaken . . . . The record shows that the LES, with a comparatively small membership, and consequently with limited resources, has always been an active and going concern. Whatever it has undertaken to do in the past has been well done. This means that the spirit of the Society as manifested in the activity and enthusiasm of its members is one of high ideals and accomplishments. This in itself is the best augury for the success of this our new venture."

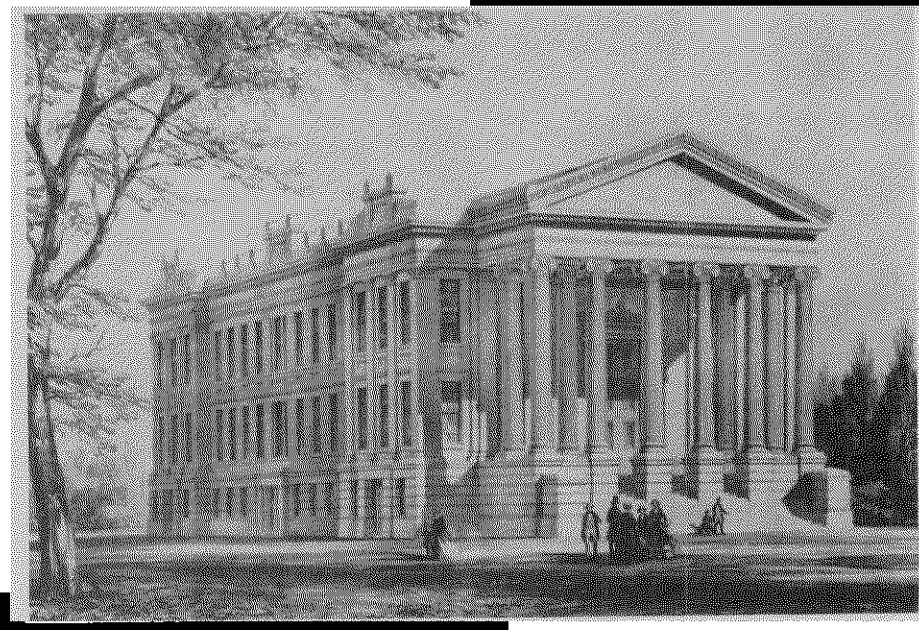
Successful it was—for it never stopped growing. Much credit belongs to Dean Douglas Anderson, James M. Robert and Arthur M. Hill, the editors who piloted the publication through its first forty years.

The Golden Age

In June 1920 the American Council for Federated Engineering Societies was organized. The LES became a charter member of the council and its first president was the Honorable Herbert Hoover. Mr. Hoover was so impressed by our representatives that when he became President of the United States he appointed three LES members to important positions: Ernest Lee Jahcke became Assistant Secretary of the Navy, Marcel Garsaud, Member of the Federal Power Commission, and Professor William B. Gregory, Member of the Advisory Committee for the National Hydraulic Laboratory. Later in his administration President Hoover appointed J. F. Coleman to the Engineers' Advisory Board of the Reconstruction Finance Corporation and A. M. Lockett became local chairman of the Industrial Rehabilitation Committee, a Presidential Committee appointed to study the grave unemployment problems of that time.

Auxiliaries

The depression years marked another big milestone in the Society's growth pattern. In 1932, at the instigation of Mrs. William B. Gregory, a group of engineers' wives and relatives joined in an effort to establish a Student Loan Fund to help needy engineering students to get through college. Thus was born our Woman's Auxiliary, which has grown with us through the years to become a large and valuable asset to our organization. In addition to the original Student Loan Fund that still exists, the New Orleans chapter now supports an engineering fellowship and two scholarships. Younger chapters throughout the state are working to fund additional scholarships and to assist the profession in many other ways.



Gallier Hall, site of the first meeting of the Louisiana Engineering Society.

1935

Each LES president can point with pride to the accomplishments of his administration, but

the tenure of Edward S. Bres was outstanding for several lasting innovations it introduced. In 1935 the first District Contact Representatives were appointed so that the Society could be better managed as a state-wide organization. On May 13th, the first regular meeting to be held outside of New Orleans took place on the LSU campus at Baton Rouge. This set a pattern, and until the establishment of the Baton Rouge Chapter was effected, all subsequent administrations scheduled one meeting at our state capital. The year closed in regal fashion: the society held its first multi-day Annual Meeting, complete with industrial plant tours, and the new officers were installed with the elaborate protocol that became standard procedure for many years thereafter. In civic activities, the Society had been conspicuous in the dedication of engineering structures throughout the state. 1935 was a depression year when the Works Progress Administration was seeking worthwhile projects to pursue. Our Society suggested to the WPA that a comprehensive study be made on the soil conditions around New Orleans. The result was a most authoritative volume titled: "Some Data in Regard to Foundations in New Orleans and Vicinity" and directly below in golden letters "Collected and compiled by the Soil and Foundation Survey as requested by the Louisiana Engineering Society." The value of this work has been recognized throughout the world, for copies of it have been requested from locations as far away as Egypt and India.

The Annual Smoker, January 1916, was a somber affair.

Chapters

As early as 1925, attempts were made to establish a chapter at Baton Rouge but it was not until November 20, 1939 that this was accomplished through the efforts of Prof. Boykin W. Pegues and Dean Leo J. Lassalle of LSU. On November 3, 1947 the Lake Charles Chapter was established under the guidance of F. Tackett Clarke and Ray E. Burgess. Then followed a period of incredible growth. This tremendous increase in membership was due to a group of energetic District Contact Representatives (E. M. Freeman of Shreveport, Roy T. Sessums of Monroe, Hiram Mason of Lafayette, Soule Butler of Alexandria) and the coordinating efforts of two dedicated men: Charles M. Kerr and Hermann L. Lehmann. In rapid succession the following chapters were chartered:

Shreveport	July 3, 1949
Monroe	October 3, 1949
Lafayette	October 10, 1950
Alexandria	February 15, 1951

As a result of the reorganization, New Orleans became a chapter October 12, 1964 and on April 29, 1969 the Bayou Chapter was established.

Act of 1950

The registration act of 1908 provided for the regulation of the practice of Civil Engineering and Land Surveying only. But though it was amended in 1914 and again in 1920 with the society's blessing, no provisions were added to broaden the act to include other branches of engineering. A near success did occur in 1932 when both houses of the Legislature passed an all-inclusive bill, but it failed to become law because of a last-minute veto by the Governor. Then followed a period of dissension among engineers over problems of semantics and special interests. In 1946 a bill considered highly detrimental was introduced without the knowledge of the Society's officers. Most of the bill's objections later were removed and it was enacted.

In the controversy that accompanied the Society's effort to obtain a general registration law, the need for unity in the profession became apparent and the Louisiana Council of Engineers was formed. This council included all engineering organizations in the state, each having one vote. The President and the Secretary-Treasurer of LES served in the same capacities on the Council. Most of the items brought before the council were adaptable to compromise, and unification finally was achieved. In 1948 a general registration bill passed the Senate by a vote of 38 to 2 and the House by a vote of 66 to 0, but once again it was vetoed by the Governor. After this failure President W. Stone Leake said:

> "At least this time we can say that the failure was not due to a difference of opinion among engineers, for all selfish interests were put aside, many compromises were

made; and for once the engineers themselves presented a united front. This united front was brought about to a large extent by the Louisiana Council of Engineers, an organization that was the brainchild of our Past President, Glenn Cappel. This organization spent many hours of tedious work, writing and rewriting, before the final bill was decided upon."

At the following session of the Legislature our present law, Act 73 of 1950 was passed. At last we had a registration law that embraced most branches of engineering. True, the law did not please everyone, for many compromises had been made, and at the last minute the engineer-in-training clause had to be deleted to assure the bill's passage.

1957

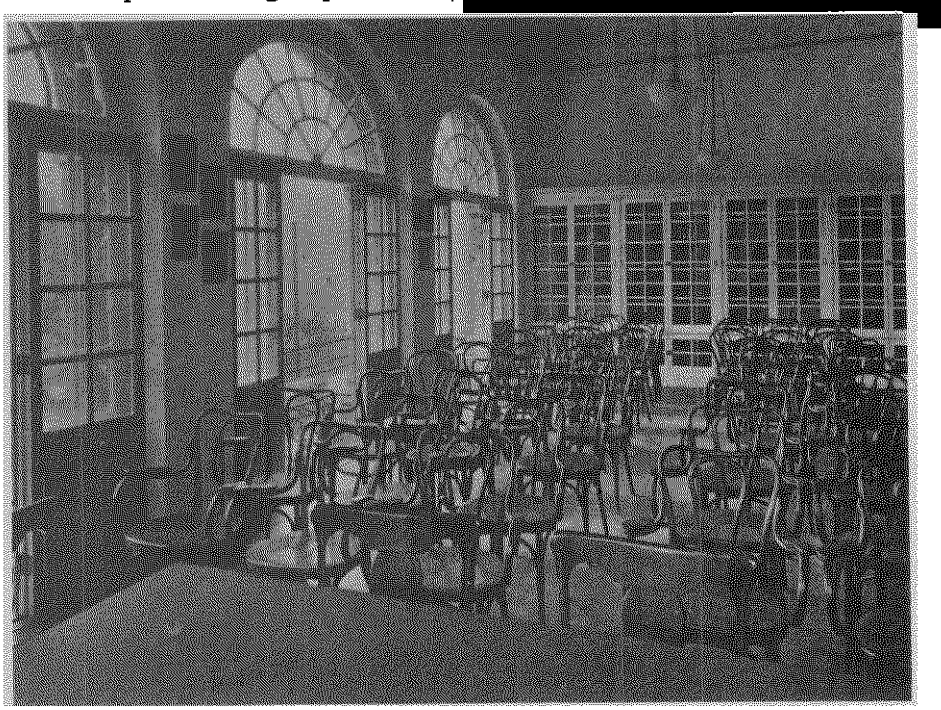
The administration of Waldemar S. Nelson brought another lasting accomplishment: the burning issue of whether or not to affiliate with a national organization was decided. At that time, The Engineers' Council for Professional Development was the acknowledged leader in educational matters, but the National Society of Professional Engineers and Engineers Joint Council were in competition for leadership of the practicing profession. Our membership was divided three ways: to join neither, or to join one or the other. After much study the Board of Direction supported what became known as the Functional Plan. This plan proposed that EJC would coordinate technical matters, ECPD educational matter and NSPE professional matters. The Board recommended that we affiliate with both NSPE and EJC and that an effort be made to bring the two together. After an extensive educational campaign wherein the pros and cons of affiliation were presented and thoroughly discussed, the membership voted to join both organizations. Years later, the Functional Plan was adopted at the national level, which led to the formation of the Board of Engineering Cooperation, which board consists of the presidents and vice-presidents of EJC, NSPE and ECPD.

Also in 1957, through the efforts of Otha E. Barron, the first State Planning Conference was held in Alexandria. This conference had for its objective the improvement of communication between chapter committee personnel. The conference was scheduled at the beginning of the administrative year and all were expected to attend, so that chapter committee personnel appointees could meet their counterparts in other chapters. Each committee met separately, with a Board Member as moderator, to discuss plans for the coming year and solutions to anticipated problems. The conference concluded with a general meeting where a spokesman for each committee reported his group's conclusions. The conference was such a success that it has been held annually ever since.

In 1957 the format and cover of our publication were changed in the hope that a larger income could be derived from advertising, but this was not a success. What did happily survive was the change in title of the journal to "The Louisiana Engineer."

Partners

For years the activities of the Society were brought to the attention of the public sporadically because there was no one to handle our publicity on a continuous basis and the cost of retaining a public relations professional was prohibitive. Another dream was the desire to improve our journal but, as noted, the 1957 change in format was not a monetary success. In 1959 the Louisiana State Board of Registration for Professional Engineers and Land Surveyors joined in our effort to strive for these goals. The LES and the State Board became partners in these two ventures. "The Louisiana Engineer" became the official organ of both organizations and a public relations consultant was engaged. The size of the journal was enlarged from 6"x9" to its present dimensions of 8½"x11".



The LES Library and Assembly Room.

Honors

The Society has always sought to recognize outstanding accomplishment and service performed by engineers. Its purpose is not only to reward, but to inspire and encourage effort toward greater achievement by members of the profession. The earliest form of recognition used by the society was the highly esteemed Honorary Membership award, bestowed only upon per-

sons of acknowledged eminence in engineering. The requirement of "acknowledged eminence" meant just that, as late as the mid-thirties the Constitution still required that candidates for Honorary Membership "shall be elected by unanimous vote of the Society."

The growth of membership eventually forced modification of such rigid requirements, and Honorary Membership now can be awarded with the approval of 75% of the Board of Direction combined with the affirmative vote of 80% of all living past presidents.

Today the Society presents a number of awards designed to recognize and encourage achievement in these specific areas:

Andrew M. Lockett Medal for Civic Activities—for distinguished civic service by an engineer in the public interest, without compensation for such service. Established in 1951.

LES Technological Accomplishment Medal—for distinguished service by an engineer leading to technological progress or discoveries as contributions to the advancement of engineering. Established in 1951.

A. B. Paterson Medal—for distinguished service performed by an engineer in the field of management. Established in 1965.

Charles M. Kerr Public Relations Award—for distinguished service in the promotion of public relations for the engineering profession in Louisiana. Established in 1965.

Louisiana Engineer Award of Merit—given to an engineer not over thirty-five years of age who has demonstrated a high degree of capability in his chosen field of engineering, indicating potential for further advancement and leadership as a professional engineer. Established in 1967.

Leo M. Odom Award for Professional Service—given to a registered Professional Engineer member of LES for distinguished service to the engineering profession in Louisiana. Established in 1972.

Executive Secretary

The office of Secretary-Treasurer requires continuity, and fortunately the LES has had dedicated men to fill that position, many of whom served continuously year after year. But, as the society and its programs grew so did the workload, which eventually reached the point where an "amateur" serving as an extra-curricular Secretary-Treasurer while practicing engineering for a living could not do justice to the office. In October 1964 the state-wide functions were separated from those of the New Orleans area and New Orleans became a chapter to be administered by its own officers. At this time the term of the incumbent state administration was extended to eighteen months, and commencing in July 1965 a full time Executive Secretary and staff were engaged. Since then we have had three Executive Secretaries:

Earl Martin	July 1965 to June 1967
Norman C. Ferachi	August 1967 to June 1969
Gerald A. Simmons	July 1969 to date

The employment of a full-time secretary brought forth new enthusiasm and optimism as did the launching of the society's publication in 1915 and the retention of a professional consultant for public relations in 1959. Now the Society's services to its membership and to the profession could be greatly increased, and so they were.

One of the most arduous duties of the Executive Secretary has been to observe the State Legislature in session and to sound the alert when bills are introduced that could be detrimental to the profession. To aid and improve this facet of the Executive Secretary's job the membership voted in 1967 to relocate the state organization's headquarters in Baton Rouge. The LES continued to work closely with the State Board of Registration, and in 1970 succeeded in passing Act 685 by which the Registration Act of 1950 was amended to separate the registration of Civil Engineers and Land Surveyors.

Another field of expansion for LES activities has been in the development of the Functional Sections—groups organized to deal with the problems of specific work areas. Today we have five such sections operating for the benefit of engineers in Private Practice, Industry, Government, Education and Construction. Many studies, reports, publications, and even extension courses (co-sponsored with LSU) have been the products of these sections, beginning with the "Manual of Practice for the use of Engineers and Clients" prepared in 1964 by the Professional Engineers in Private Practice (PEPP), to "Guidelines for Professional Employment of Engineers" now being prepared by Professional Engineers in Industry (PEI).

Our interprofessional relations have also expanded. In 1965 the LES was host to NSPE's Winter Meeting held at the Jung Hotel in New Orleans, and in recent years we have held a series of highly successful joint meetings with the Mississippi Society of Professional Engineers, with the meeting place alternating between Louisiana and Mississippi. The new Marriott Hotel in New Orleans was the site of the 1972 meeting.

These are a few of the highlights in our Society's history. To list all of LES's accomplishments and give credit to each of its dedicated and resourceful leaders is of course impossible in these few pages. It must be recognized also that the milestone reached in one administration usually has been made possible by the ground work of preceding ones. One thing is certain: our founders built well, and those who followed have been worthy torchbearers. From the tiny nucleus of fourteen pioneers, the Louisiana Engineering Society has grown steadily to its present roll of 2523 members. Each of us can be justly proud to be a part of the Louisiana Engineering Society on its Diamond Anniversary.

LOUISIANA ENGINEERING SOCIETY 1898

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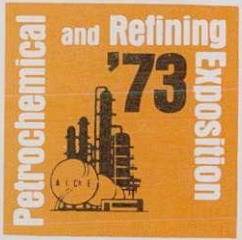

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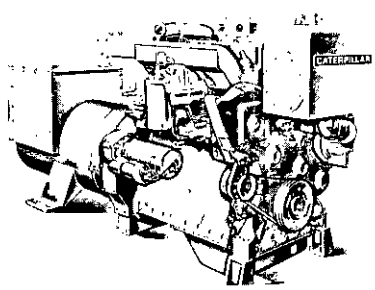

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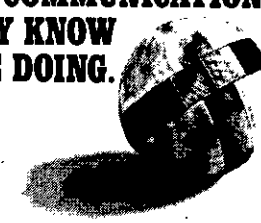

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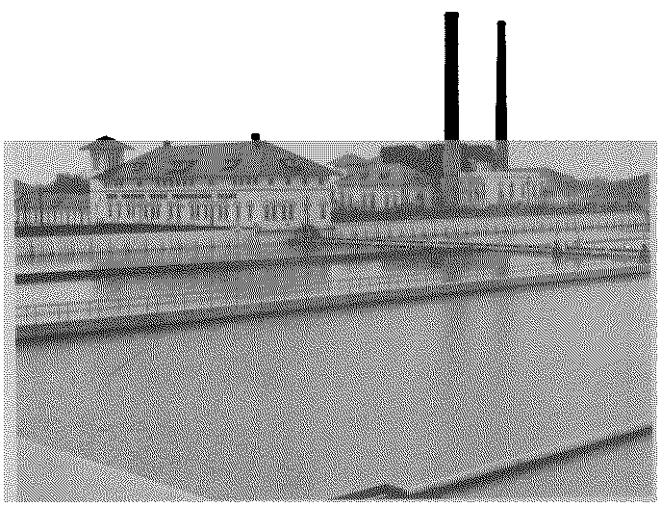
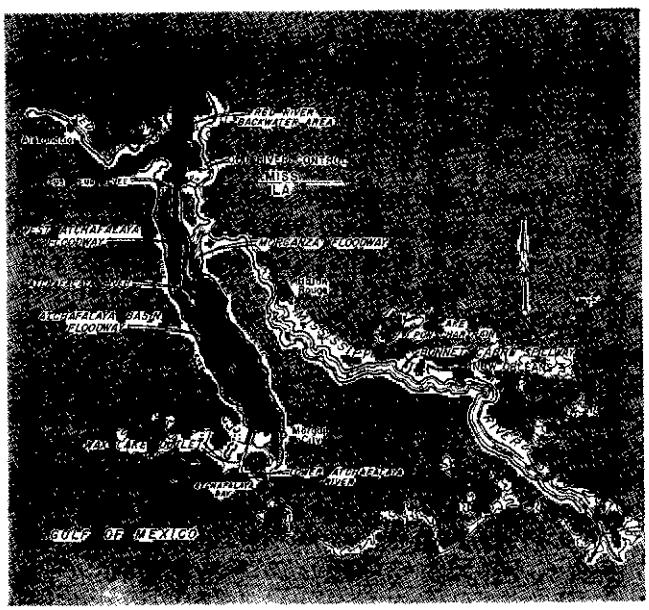
THE 10 OUTSTANDING ENGINEERING ACHIEVEMENTS IN LOUISIANA 1898 - 1973



SEWERAGE, WATER SUPPLY AND DRAINAGE OF THE CITY OF NEW ORLEANS

Among the significant engineering feats was the development of a pumped drainage system and construction of a filtration plant for Mississippi River water and water system to serve the City of New Orleans. These systems, together with a sewerage system, constructed between 1900 and 1908, converted the city from a "pesthole in a swamp" to a healthy, vigorous metropolis, keystone of the economy in Louisiana and the lower Mississippi Valley. The pumps and canals, unique in America, keep large areas of the city lying below sea level safe and dry through all storms; and the water filtration plant, a pioneer design, converts the muddy Mississippi River's flow to clear, safe potable water for drinking and domestic use.

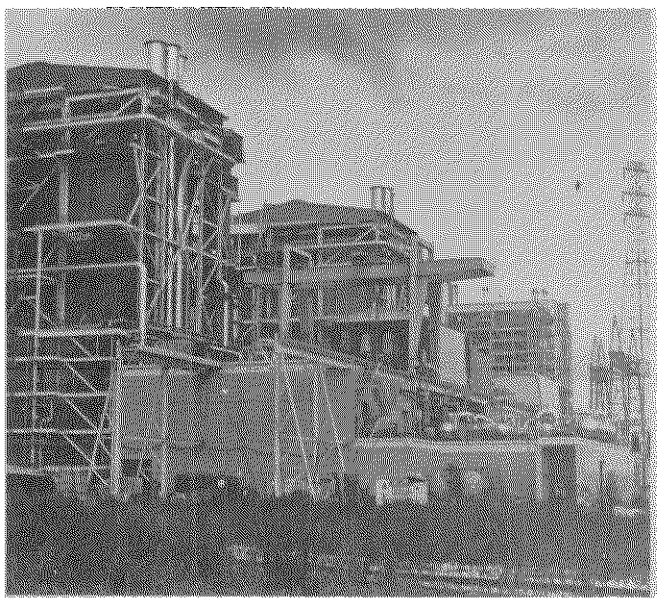


MISSISSIPPI RIVER AND TRIBUTARIES FLOOD CONTROL SYSTEM

This project, still in progress by the Corps of Engineers, Department of the Army, under the provisions of the Flood Control Act of 1928 and subsequent amendments thereto, has been of the greatest importance of any engineering achievement during the period. After the 1927 flood on the Mississippi River and its tributaries, the local efforts at flood control, which had been prosecuted for two hundred years, had been proved to be inadequate and the state had reached its limit in financing. Local agencies were unable even to repair the levees that had been crevassed. On December 1, 1927, the Corps of Engineers, under the leadership of Major General Edgar Jadwin, Chief of Engineers, submitted to Congress a comprehensive plan for "the flood control of the Mississippi River in its Alluvial Valley." This plan was approved, with few revisions, by Congress on May 15, 1928. Work was begun immediately and all major crevasses were repaired and weak levees strengthened with so much speed that the large flood of 1929 passed to the Gulf without any levee breaks, being the largest flood ever to have done so.

The flood control project in Louisiana consists of increased levee grades and sections paralleling the river on the west bank from the Arkansas line to Pointe a la Hache and the East Bank from Baton Rouge to Venice, Louisiana; spillways for diversion of water from the main stream; large floodways in the Atchafalaya Basin; and numerous details in connection with these major features. It has been worked on steadily ever since 1928 and though still incomplete has resulted in forty-six years of freedom from damage by floods from the Mississippi River in Louisiana. Without dependable flood control, industries would not now be lining both banks of the river from Baton Rouge to New Orleans, the prosperous towns in this area would still be sleepy villages and the cities would be stagnant and poor.

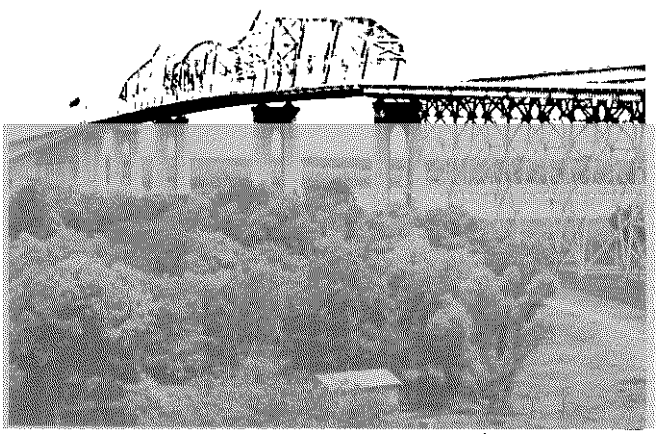
The Louisiana Engineering Society, in observing its Diamond Jubilee, asked each of its living past presidents to list the ten outstanding engineering achievements in Louisiana during the 75 years which have passed since its founding in 1898. From the replies received the following list of ten engineering projects has been compiled.



ELECTRIC POWER INDUSTRY

The development of electric generator units such as those located at Louisiana Power and Light Company's Nine Mile Point Steam Electric Station, New Orleans, has increased Louisiana's production of electric energy from Two Billion Kilowatt hours in 1940 to 40 Billion Kilowatt hours in 1972.

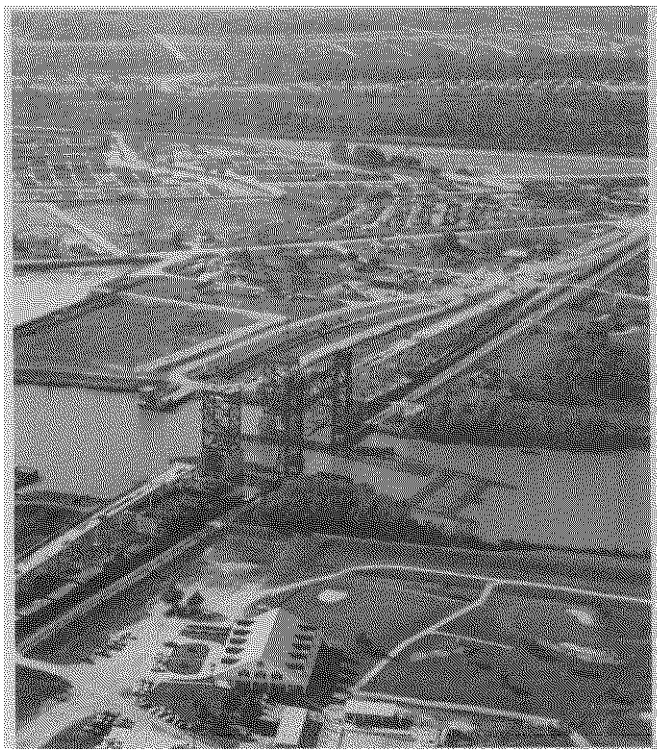
The availability of electrical energy has been a major factor in the excellent industrial programs in the state and a contributor to Louisiana's mineral resources development.



NEW ORLEANS PUBLIC BELT RAILROAD MISSISSIPPI RIVER BRIDGE

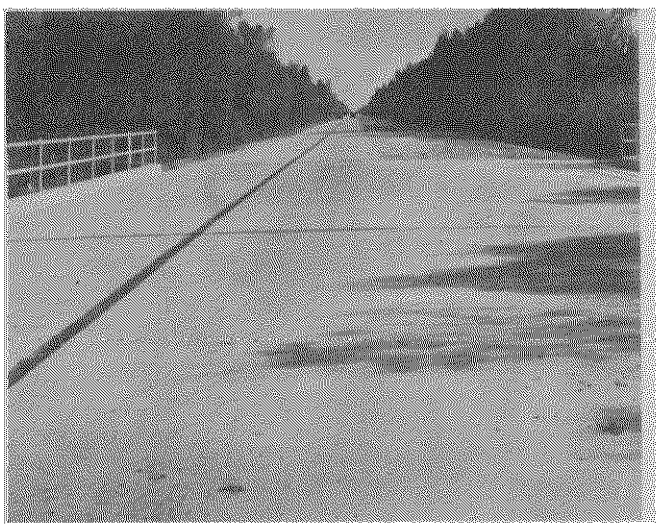
Completed in 1935, the bridge over the Mississippi River at New Orleans, which carried two railroad tracks and four lanes of highway, built under the direction of the New Orleans Public Belt Railroad and later named the Huey P. Long Bridge, was the only railroad crossing of the Mississippi south of Vicksburg, and was the first such bridge to be founded in the clays of the lower Mississippi valley, an engineering feat once thought to be impossible.

THE 10 OUTSTANDING ENGINEERING ACHIEVEMENTS IN LOUISIANA CONTINUED



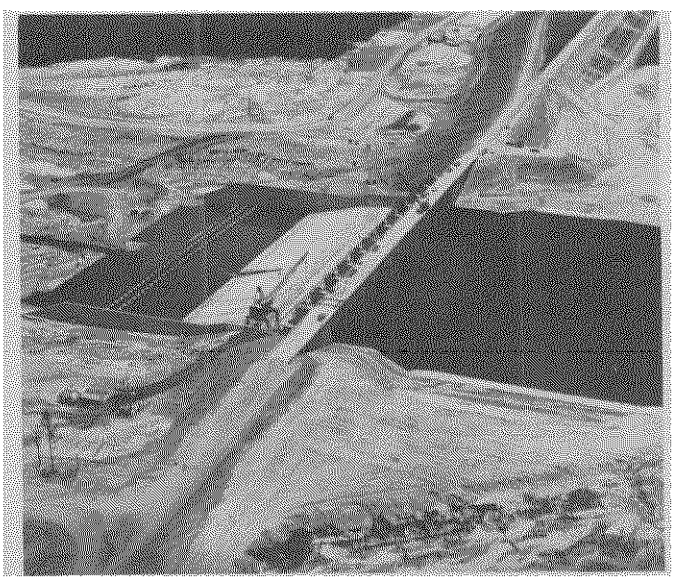
GULF INTRACOASTAL WATERWAY

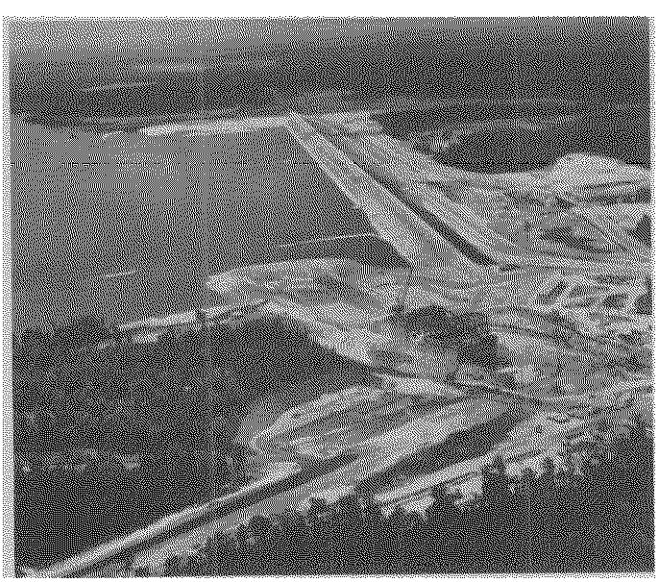
This waterway, stretching from Carrabelle, Florida, to the Rio Grande, affords protected passage for barge and pleasure boat traffic throughout the year. It consists of a canal that crosses the lower ends of the Tennessee-Tombigbee, Mississippi River and Atchafalaya waterways which lead into the interior. It joins the ports of Baton Rouge and New Orleans with Gulf ports all the way from Panama City, Florida, to Brownsville, Texas. The construction of this great canal was justified as a traffic artery, which it has proved to be, carrying tens of millions of tons of cargo annually. It has also served as the major and necessary agency for development of the oil and gas fields in the Louisiana marshes.



AIRLINE HIGHWAY — BATON ROUGE TO NEW ORLEANS

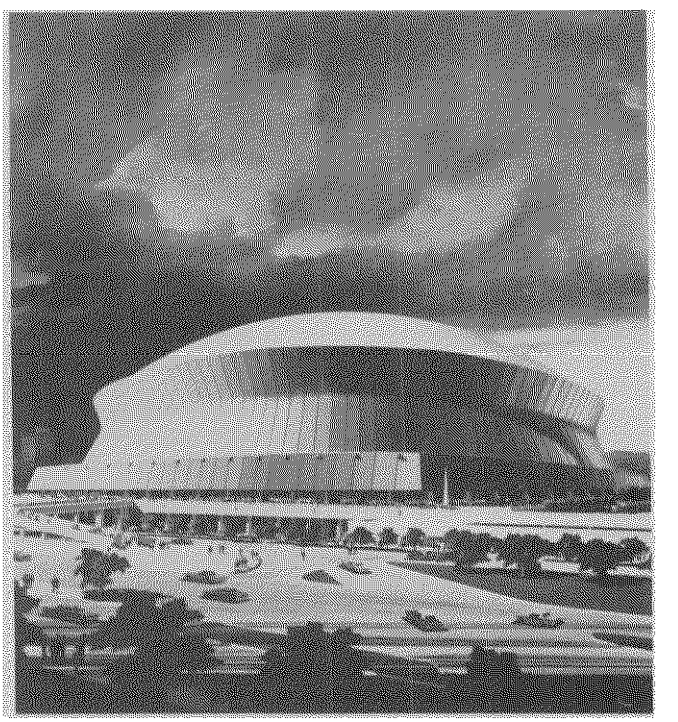
When the Louisiana Engineering Society was founded, automobiles were so rare that Barnum and Bailey's circus displayed one as its main oddity, and short sections of the "River Road" leading from one plantation to the next were the principal highways of the state. The Airline Highway, planned as one of this nation's first four-lane highways, cutting boldly across swamps and bayous, was a major engineering accomplishment. Development of the highway system has paced Louisiana's development for the past 75 years.





TOLEDO BEND DAM PROJECT

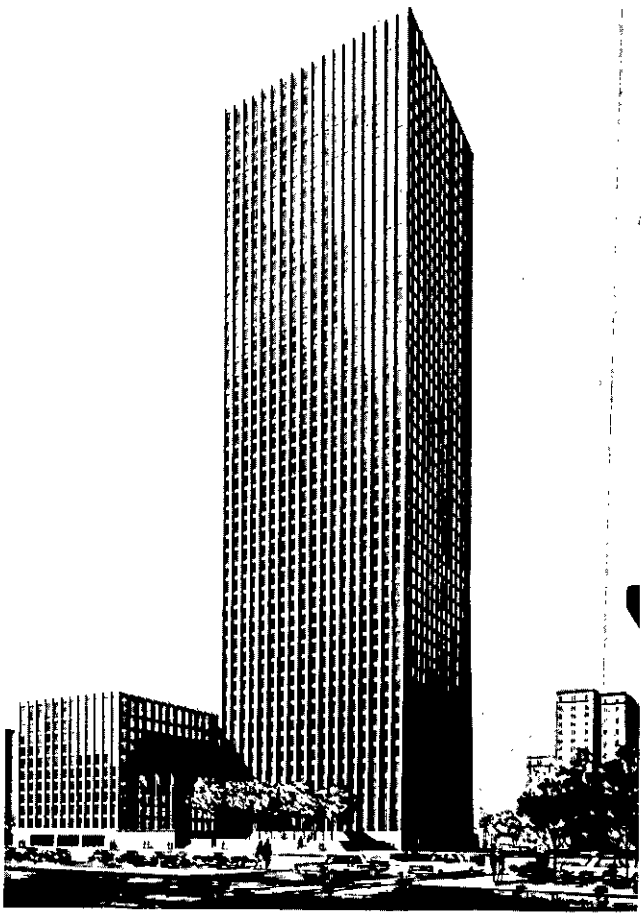
The Toledo Bend Dam Project was the largest public works project ever undertaken without Federal funds. Unique in Louisiana, this project, combining a dam and hydroelectric plant for power generation with a lake for flood control and recreation, has provided water sports and fishing to the hilly western portion of a state already heavily endowed with waterways. Ask the man who has fished there or the family who has camped there if they enjoy this engineering accomplishment.



LOUISIANA DOME STADIUM

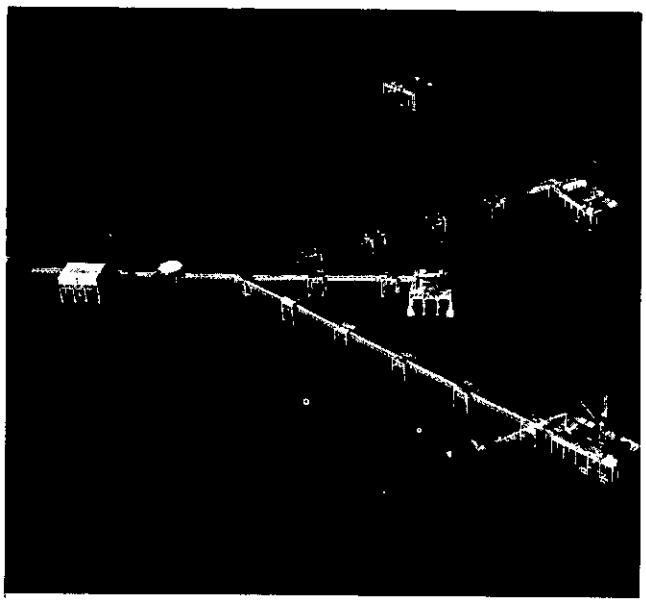
The unusual shape, the huge size and many unique features make the Superdome, now under construction, a real wonder. The foundation is built on pilings of wood and pre-stressed concrete. The dome roof will be 680 feet in diameter and reach a height of 273 feet, completely enclosing the structure. The air conditioning, 9,600 tons of it, is of the chilled water type and heating will be gas fired. The lighting can range from total darkness to 150 foot candles on the arena floor. In addition, a giant television screen, the first in the world, will be used for closed circuit television of events.

THE 10 OUTSTANDING ENGINEERING ACHIEVEMENTS IN LOUISIANA CONTINUED



ONE SHELL SQUARE AND EARLY HIGH-RISE

For many years it was thought to be impossible to build a high-rise building in New Orleans. The Queen & Crescent Building, completed in 1913 at 12 stories, was the first steel and concrete skyscraper in the South. The Hibernia Bank building, completed in 1921 at 25 stories, proved the feasibility of high-rise construction on pile foundations in the clays of the alluvial Mississippi valley; and the One Shell Square Building, being completed in this 75th year of our Society's existence, extends the engineering to 51 stories of clean functional structure.



MINERAL DEVELOPMENT

Throughout the 75-year history of the Louisiana Engineering Society, mineral development has been one of the strongest factors in the State's economy. The production of sulphur at Sulphur, Louisiana in 1900, the discovery of oil at Caddo Lake in 1906, the development of natural gas fields at Monroe in 1916, the drilling of the first off-shore oil well in the Gulf of Mexico in 1947, and the expanded mining of salt from coastal domes have supplied the raw materials for the greatest petro-chemical development in the United States, with refineries and process plants from Baton Rouge to New Orleans to Lake Charles constantly pioneering new engineering achievements for the benefit of mankind.

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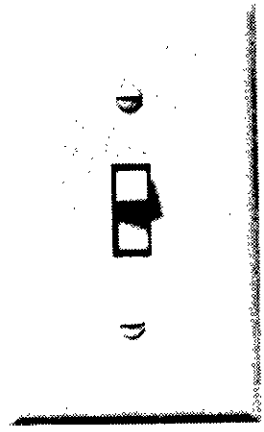

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CORPS OPERATION REOPENS NAVIGATION CANAL

Completed in 18 days

by

Colonel Richard L. Hunt

New Orleans District Engineer
U.S. Army Corps of Engineers

In the late evening hours of April 5th, an event was about to occur that would arouse navigation-minded people throughout much of the nation.

A pair of towboats slowly moving from the Mississippi River had just cleared the gates of the Inner Harbor Navigation Canal Lock in New Orleans and were beginning to pick up speed as they made their way over the Gulf Intracoastal Waterway bound for darkness shrouded destinations east of the city.

The crew stationed on the lock wall barely had time for a breather when a voice crackled over the radio requesting permission for the entrance of the Cyprian freighter GALAXY FAITH. The request was granted and the vessel, together with a helper tug, the ALMA S., approached the canal end of the lock.

Entry of the ship into the lock under her own power after release by the helper tug seemed normal, but once inside the chamber her forward speed appeared to accelerate. Verbal attempts by lock crew members to get the ship's speed reduced produced no visible results. The freighter's forward speed caused a hastily-placed mooring line to fail and moments later, her bow crashed into the closed downstream river gate #2. The impact of the collision forced apart the mitered gates with a resulting flow through the gap.

Following the initial collision, the ship backed off and additional mooring lines were thrown to the lock walls but before they could be secured to wall bits and the slack taken up, the GALAXY FAITH surged ahead under power and again struck Gate #2. This second collision knocked the gate off its hinged connections and it disappeared beneath the bow of the ship.

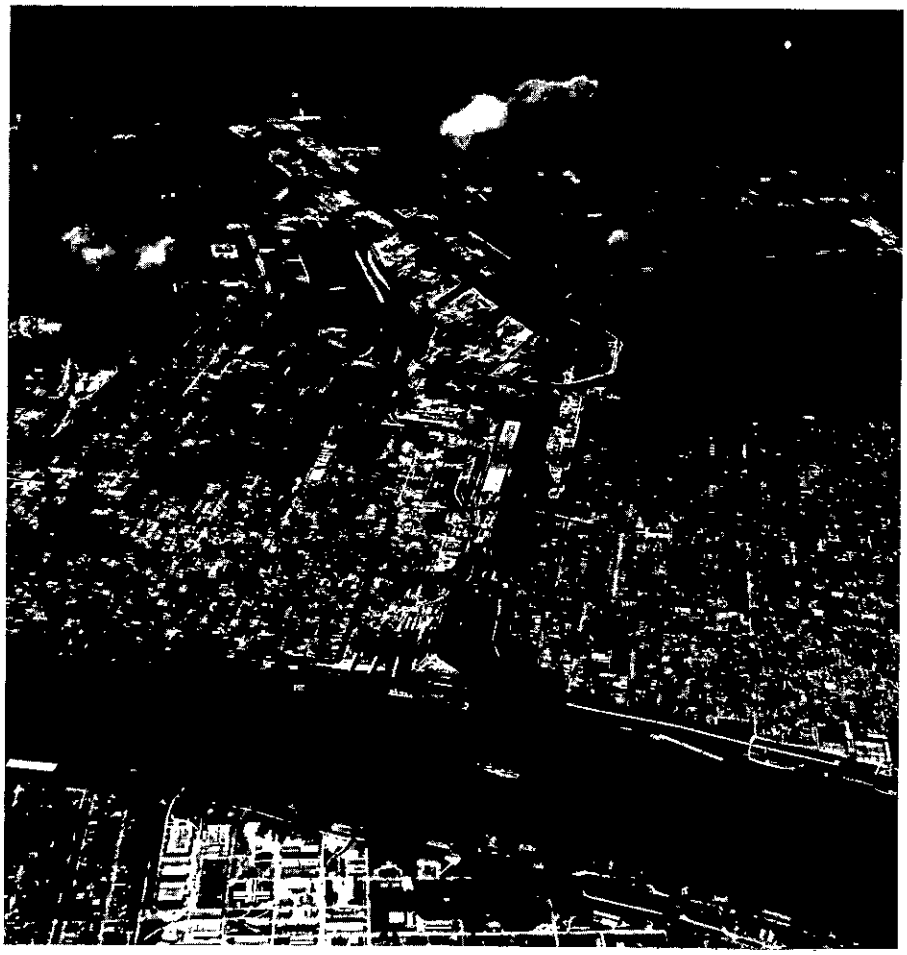
There was about a seven-foot head differential between the Mississippi River and the Inner Harbor Navigation Canal, which made it impossible to close either the canal gates or the spare gates recessed in the lock wall. (Miter gates cannot be operated against any head differential.)

The resulting unchecked flow through the lock was turbulent with a velocity of as much as 10.78 feet per second. This flow got behind one of the recessed gates on the canal end of the lock and slammed it into a closed position.

The situation was critical. As the Inner Harbor Navigation Canal lock provides the only connection for waterway traffic moving east of the Mississippi River south of the Ohio River, all through movement ceased. Port officials forecast marine and related losses of as much as $4 million for every day the lock remained inoperable.

Corps personnel, with the concurrence of the lock owners,* the Board of Commissioners, Port of New Orleans (Dock Board), took the responsibility for restoring the structure to operating condition. An emergency operation team, headed by LTC William E. Lee, Jr., Deputy District Engineer, was formed to

* The Inner Harbor Navigation Canal lock is leased to, and operated by, the Corps of Engineers.



A sky-high view of the Industrial Canal shows that the lock (foreground) is a vital link between the Mississippi River and the Gulf Intracoastal Waterway and the Mississippi River-Gulf Outlet. The Inner Harbor Navigation Canal Lock passed over 23.6 million tons of commerce in 1971.

assess the damages and initiate emergency closure of the lock.

First priority was given to stopping, or at least drastically reducing, the water flow through the lock.

The lock is equipped with an emergency closure feature designed as a stop-log type of emergency dam, featuring eight steel box-girders which are designed to be set one atop the other in lock wall recesses by a swing-span "bridge" type revolving crane mounted on the west lock wall near the river end of the lock. The emergency dam was designed to be placed subsequent to an accident involving loss of one or more river-end gates under the worst possible hydraulic conditions. However, for safety reasons it had never been tested under free flow conditions, nor had it ever been necessary to install the dam because of an accident involving free flow.

With a history of problems with the emergency dam in mind, the Emergency Operations Team was faced with a decision as to how to set the emergency stop-logs and possible alternatives should it prove impossible to set them under free flow conditions. They felt that using the lock crane to lower the stop-logs in place was too risky, and noted that velocities were not of a magnitude which would preclude the positioning of a floating crane in the forebay. If a floating revolving crane of not less than 100 ton capacity could be positioned in the forebay, the lock crane could be used to transfer the stop-logs from their storage racks to the top of the lock wall for rehandling into the wall recesses by the floating rig. If successful, this method would considerably reduce or eliminate the problem of misalignment and possible failure of the flat wire rope. Also eliminated would be the serious problems which would be presented should the lock crane experience difficulty in disengaging from the first or subsequent stop-logs once they had become submerged. If this situation had been experienced the only possible method of disengaging would have been to cut the flat wire ropes, leaving the sinker castings attached to the stop-log and preventing the placement of additional stop-log segments.

After consideration of the possible alternatives it was decided that the proposed method offered the best chance for success; and while it would be considerably slower than direct use of the lock crane, the reduction of the risk factor and the preclusion of the destruction of possible alternatives dictated its adoption. A canvass was initiated immediately of local contractors known to own a 100-ton capacity revolving crane, mounted on a barge not greater than 74′ wide, and immediately available in the vicinity of New Orleans. J. Ray McDermott & Co., Inc. had a rig meeting the specifications at Harvey, La., and a rental price was quickly negotiated.

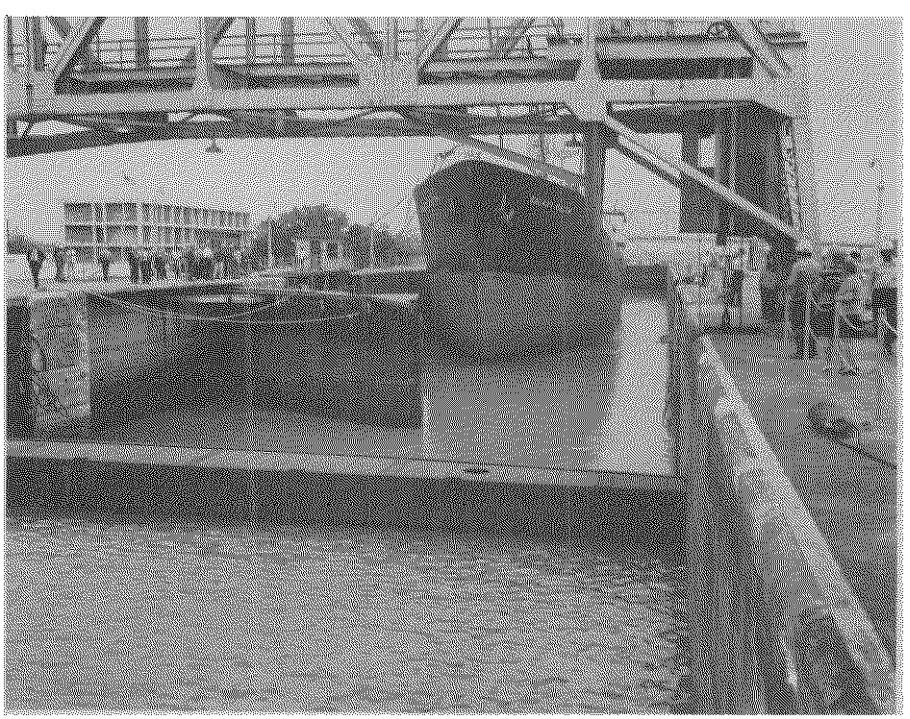
The contractor's crane barge No. 1, with a 4600 Manitowoc diesel crawler crane and a 120′ boom, arrived at the lock at noon on April 6th and began putting out lines to winch the spud barge into position just riverward of the stop-log recesses and in front of Gate No. 1.

By approximately 4 p.m. the first stop-log had been moved from its pedestal to the top of the lock wall. The location of the girder was carefully marked on the top of the wall on each side so that when the stop-logs were replaced atop the wall after removal they would be accurately located for pick up by lock crane.

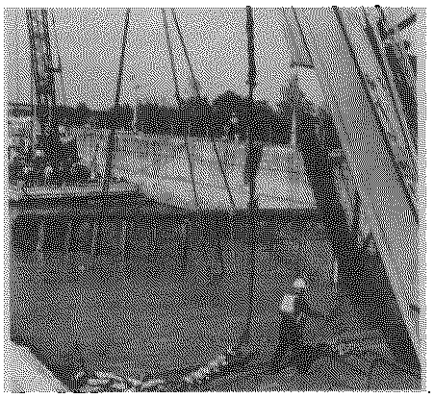
Each stop-log was constructed with a series of three doubler plates totaling 3″ thick at the back side of the lifting pin recess. These plates probably served as a "kicker" for the backside of the sinker casting hook and reduced the chance of tilting the beam during the lowering process. In order to get choker slings on the lifting pins it was necessary to burn this 3″ thickness of plate on a reverse bevel. This method proved successful although time consuming.

Between 4 p.m., April 6th, and 9 a.m., the following day, stop-logs No. 1 through No. 4 were set with relative ease. It was necessary to field fabricate slings and chokers for stop-log No. 5, causing some delay.

Just as stop-log No. 5 was lifted clear of the top of the lock wall, the choker on the west end failed, and that end of the stop-log dropped to the lock wall. The stop-log pivoted on this



Emergency operations began with the placement of seven stop-logs. The logs formed a dam which closed off excess Mississippi River flow so that damage assessment and repairs could be made.



The fallen gate was raised.

point, swinging toward the canal. The east end sling then jumped off of the crane's lifting hook and the stop-log plummeted into the lock chamber. The sudden release of the load on the lifting line caused the boom to rebound, however, the crane operator was able to control the boom. He was not able to control the wildly whipping lifting block, and the heavy block slammed into the center section of the boom, damaging two of the vertical structural members of the center section of the boom and bending three chord braces in the boom heel-section. McDermott noted that a spare boom center section was available at their Harvey Yard and that the crane barge could be towed to Harvey, repaired and returned to the job site by 6 a.m. the next day, April 8, 1972. He was told to proceed with repairs as the crane would be needed to remove the stop-logs even if the Corps were successful in setting the three remaining stop-logs by some other method.

Soundings from the lock wall indicated that the dropped stop-log did not extend into the wall recesses and would not interfere with placing remaining stop-logs.

After consideration of the possible alternatives and associated delays, I made the high-risk decision to attempt the setting of the three remaining stop-logs with the lock crane. As it turned out, stop-log No. 6, an 88-ton segment, and stop-log No. 7, a 39-ton segment, were set with only minor difficulties. Stop-log No. 8 was lowered into the recess at 2 p.m. on April 7, essentially sealing off flow through the lock.

When No. 8 stop-log reached position atop No. 7, an incident occurred which supported our decision to resort to the rehandle method . . . the sinker-casting locking mechanism refused to release.*

Fortunately this mechanical failure occurred on the final stop-log with most of it above the water level. The locking mechanism was released manually with a pry bar. This could not have been done by a diver with flow through the lock.

We were now ready to attempt the closure of the canal-end gates. While the setting of the stop-logs did not completely shut off the flow through the lock, the velocity of the remaining flow was not estimated to be a deterrent to the closing of these gates. Lashings holding the Gate 7 in its wall recess were removed and its operating machinery activated. On the first closure attempt the gate apparently was blocked by debris in the floor recess, and the limit switches on the gate closed and mitered smoothly with Gate 8, which had been slammed shut. Contract divers were then sent down to inspect the underwater miter and recess seat to determine if Gates 7 and 8 could be relied on to hold the head differential when the stop-logs were removed. This inspection indicated that there might be some leakage but that the miter and seal were good.

The crane barge returned to the lock in the pre-dawn hours of April 8th after the completion of repairs to the crane boom. While the crane barge was being positioned in the forebay, several attempts were made to lift stop-log No. 8 with the lock crane. The locking mechanism on the sinker castings simply would not engage on the west end of the stop-log. This difficulty appeared to result from the stop-log being slightly out of level along its transverse axis.

Slings similar to those used on stop-logs No. 1 through No. 4 were attached to the design lifting pin on the top stop-log and the floating crane lifted the stop-log to the top of the lock wall, carefully positioning it on the marks previously painted on the lock wall. When an attempt was made to bring the lock crane to a position over the stop-log it was found that the 3" greater depth of the lighter top stop-log was sufficient to prevent passage of the sinker casting and hook, and as a result there was no way to get the lock crane over stop-logs No. 7 and No. 8 while they were resting on the top of the wall. The contractor made arrangements for a barge to be brought to the forebay for temporary storage of stop-logs No. 7 and No. 8.

During the transfer of stop-log No. 8, several attempts were made to pick up stop-log No. 7 with the lock crane, and again the locking mechanism on the sinker castings failed to engage the lifting hook. Stop-log No. 7 had been set with the lock crane and therefore it had no slings attached. It was now necessary to either perform the difficult plate beveling process, using underwater burning techniques to get slings on the normal lifting pins, or to devise some other pick up scheme which would provide equal assurance that the stop-log would rise vertically in the wall recesses without binding.

After study of the stop-log plans it was decided to attempt to lift the 38-ton No. 7 stop-log high enough to place blocks between it and No. 6, using the above described brackets as lifting points. Since the strength of the old bolts through the brackets was unknown, these bolts were cut out by a diver and were replaced with high-strength bolts of equal size. Four 1½" diameter wire rope slings of equal lengths were then made

* The Board of Commissioners of the Port of New Orleans and the U. S. Army Corps of Engineers are coordinating studies leading to whatever modifications are necessary to the stop-log gantry crane and latch release mechanisms to insure their future operation under emergency conditions.

up and attached to the new high strength bolts with shackles.

The stop-log was then carefully raised and wood blocks placed between No. 7 and No. 6 by a diver. The stop-log was then lowered onto the blocks, and the diver released the slings from the pickup points and converted two of the slings to chokers, threading them through the blocked up space and around the beam near each end. The two remaining slings were then attached to the chokers and the stop-logs lifted out of the recesses.

During the transportation process to the storage barge, attempts were made to engage the lock crane to lift stop-log No. 6, and again the attempt met with failure of the hook to engage. While stop-logs No. 7 and No. 8 weighed 39 tons each, stop-log No. 6, which was to be removed next, and which also had no previously attached slings, weighed 88 tons.

The ability of the side-mounted brackets to support this weight was questionable, however, it was decided to make the attempt. Lift was slowly applied by the crane, and when the crane load indicator reached approximately 65 tons the brackets failed on the east end of the stop-log. Failure on one end only prevented serious rebound of the crane boom, and no damage resulted to the crane. It appeared at this point that the only possible way to lift stop-log No. 6 was to get slings on the design lifting pins, and this would involve extensive underwater burning.

While preparations were being made to begin under-water cutting operations a meeting was held to discuss possible alternatives. A method used in 1952 to raise the stop-log which had been dropped by the lock crane was suggested. It decidedly was worth a try.

Two 5′ lengths of 2½″ diameter steel shaft were cut and the lifting slings were centered on these shafts. The shafts were then worked into the air escape ports atop the stop-logs, centered under structural members, and a strain placed on the lifting lines.

After diver inspection of the hookup, lift was gradually applied by the crane. At approximately 5 a.m., with the crane load indicator reading approximately 80 tons, the two shafts failed simultaneously but gradually. The two shafts were bent into hairpin shapes and pulled through the air escape ports. The gradual failure allowed only minor boom rebound. The failure of the shaft in bending indicated that the load was too great for the material used, but the indications were that the "method" probably would work.

The contractor's superintendent recalled that he had available on the barge some 4′ lengths of 6″ O.D. x 4″ I.D. house-moving rollers which had been used on a previous job. A lift using this material was to be attempted. Previous preparations of the shafts were repeated, and the diver began installation.

Stop-log No. 5 had been dropped in the lock chamber, so the next stop-log to be removed was No. 4, and this stop-log still had the previously placed slings attached. These slings had been tagged and hung on the lock wall. The slings were retrieved, attached to the crane and stop-log No. 4 lifted to the top of the wall. It was then transferred by the lock crane to the pedestal.

Soundings were made to insure that there was sufficient depth of water over the stop-logs remaining in the recess and over the dropped stop-log to insure that the GALAXY FAITH could be safely passed out of the lock over the remaining stop-logs. Depth of water over the high point on the dropped stop-log was found to be 21.7′, and depth over the stop-logs remaining in the recesses was found to be 20.2′. Based on these soundings, I elected to leave the remaining stop-logs* in place, pending a comprehensive inspection of the total damages. This inspection might reveal that dewatering would be necessary and the stop-logs would have to be replaced. I then informed the agents for the GALAXY FAITH that divers could be put in the lock chamber to inspect for underwater damage to the GALAXY FAITH, as previously requested, and that the ship could be towed from the lock chamber as soon as Gate No. 1 was opened and secured in its recess.

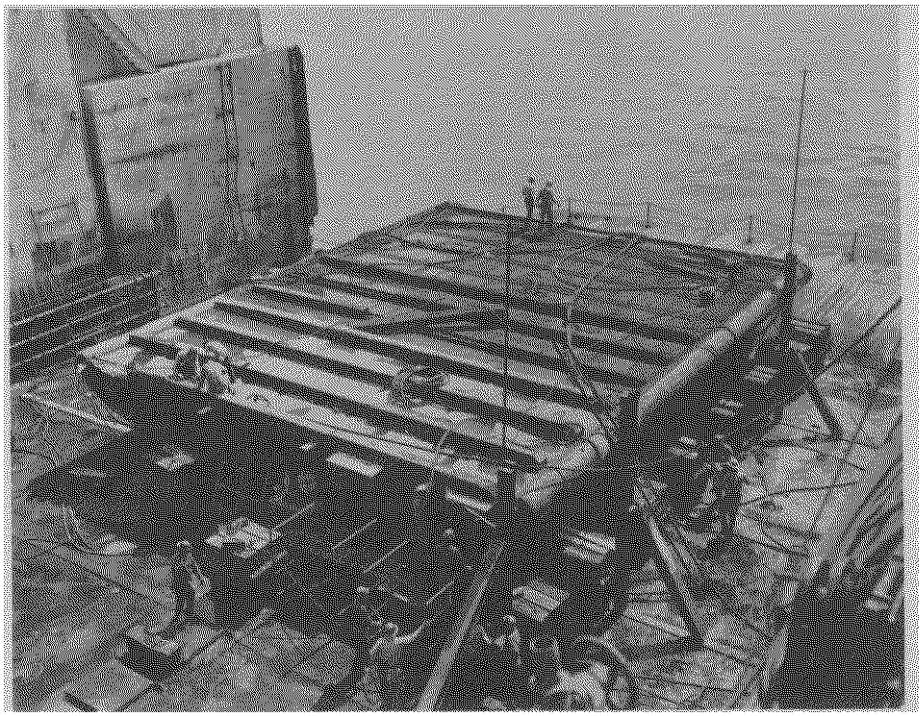
At the time, it was not known that the upper hinge plates of Gate No. 1 had been damaged by the collision, however, no difficulty was experienced in opening the gate. Diver inspection of the GALAXY FAITH was completed, and the vessel was towed from the lock chamber at 9:35 p.m., April 9th, nearly four days to the hour from the time of the collision.

The recovery and repair of Gate No. 2 began with a diver search of the lock chamber on the following day. The gate was located resting on the floor and just to the canal-side of the mid-point of the lock. The pintle point of the gate rested against the west lock wall and approximately 10 to 12 feet above the chamber floor. The fact that the gate did not lie flat on the lock floor eventually made it easier to sling the gate for lifting, but also increased the hazard of diving work, as its stability in this position was unknown.

Working under near zero visibility conditions, it was impossible for the contractor's divers to determine the integrity of the buoyancy chambers of the gate, and therefore plans had to be made to lift the full dry-weight of the gate, which was known to be 245.5 tons. To accomplish this lift, Lane & Co., Inc. of New Orleans, obtained the 300 ton capacity, A-Frame derrick barge, CAIRO.

With assistance from a 599-C barge mounted crane, divers placed two sets of 2″ wire rope slings at predetermined locations. This operation was completed at about noon on April 12th. The diver-placed slings

* Stop-logs 3, 2, 1 and 5 were removed by contractor's derrick barge on April 14-16. A doubled one-inch diameter choker was used on each lifting pin and two 1⅞″ diameter slings utilized for lifting.



The gate was transported to drydock facilities for repairs.

were transferred to the CAIRO and final adjustments were made by the divers. Gate No. 2 was then lifted to the surface with the canal-side of the gate facing up and in an almost flat position. The Salvage-master estimated the lift as being 110 tons, indicating that considerable air had been retained in the buoyancy chambers. While holding the gate in this position, the relative position of buoyancy shifted due to air escaping from some chambers and the gate shifted in the slings to a near vertical position. This shift caused no apparent damage to the gate and no noticeable change in the weight of the load being supported. It was decided at this point to leave the gate in the slings overnight.

During the night the slings on Gate No. 2 were adjusted to prepare the gate for lifting high enough to pass out of the lock over the remaining emergency stop-logs and early the next morning the CAIRO and the gate were shifted out of the lock chamber and moored in the lock forebay. The contractor made arrangements with Todd-Johnson Shipyard to drydock the gate in their No. 7 Drydock on the west side of the Mississippi opposite the lock.

With Gate No. 2 suspended in the slings and secured against the bow, the Derrick Barge CAIRO was slowly towed across the River under U. S. Coast Guard escort and the gate was deposited in the drydock. After dewatering of the drydock, the gate was carefully inspected by engineers from the New Orleans District and the Dock Board and representatives of the prime contractor and the shipyard. This initial inspection indicated that damage to the gates was much lighter than anyone had expected and, unless there were sprung rivets in the water-tight chambers the visible damage could be repaired in five to seven days. Lane was directed to have Todd-Johnson proceed with repairs to Gate No. 2. The repairs to Gate No. 2 were accomplished by Todd-Johnson shipyard under subcontract to Lane & Co.

All shipyard repairs were completed by the evening of April 18, when Gate No. 2 was lifted from the drydock by the 150 ton derrick barge ARTHUR BREAUX, and with a compressor maintaining a positive pressure in the upper and lower compartments, was towed back across the river to the lock. Repairs to the upper hinge anchorage and operating machinery for the gate had reached the point where it could be reset on its pintle the next day.

Earlier on April 6th a district damage survey team made up of structural, mechanical and electrical engineers and observers from the Dock Board had begun a comprehensive survey to list and describe all damages resulting from the accident, preparatory to negotiating a contract for repairs.

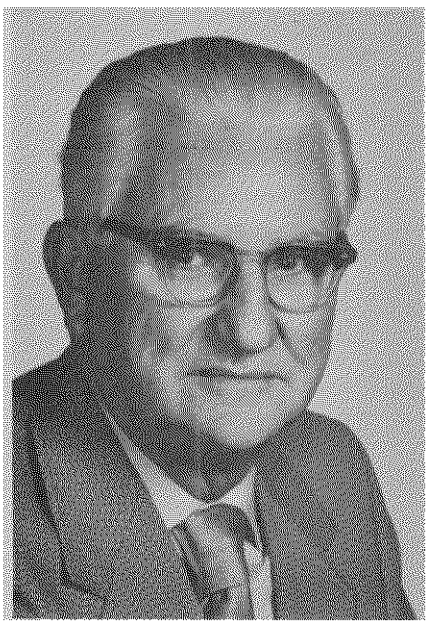
During all phases of the restoration work, close liaison was maintained with the management and engineering staffs of the Board of Commissioners of the Port of New Orleans. The Dock Board requested that their representatives be allowed to observe restoration activities and that the Board be allowed to participate in major decisions affecting the obligation of Dock Board funds pending legal action for reimbursement by owners of the GALAXY FAITH. The terms of this request were strictly adhered to by both parties and resulted in amicable relationships, optimum expedition of restoration work and a minimum of delays for administrative reasons.

Essentially all repair work was completed by the afternoon of April 23rd, and the first navigation to enter the lock since the collision did so at 6:30 p.m.

The impact* of the 18-day lock closure on the Port of New Orleans and the affected industries throughout much of the Gulf South, points up the dire need for an additional connecting link between the Mississippi River and the Mississippi River-Gulf Outlet. Such an additional connection is now authorized and Corps planning for a new lock and connection channels had reached the point where public meetings were held to air the proposals, and to elicit public discussion about them. The meetings were held in Orleans and St. Bernard Parishes on November 29th and December 9th, respectively.

* This impact was lessened somewhat by the emergency dredging of an alternate barge route through Baptiste Collette Bayou, an 8 mile long channel flowing between the Mississippi River and Breton Sound some 80 miles below New Orleans.

ENGINEWS



F. M. Tessier

Francis M. Tessier, Surveyor for Humble Oil and Refining Co., has been appointed Land Surveyor Assistant to the Board of Registration for Professional Engineers and Land Surveyors. Tessier replaces C. J. Tircuit, whose term of office recently expired.

A Baton Rougean, Tessier has been employed at the Humble Refinery for 29 years, serving for the past 19 years as Surveyor. He previously worked in the Acquisition Surveys Division, United States Forest Service, Department of Agriculture, and in the Traffic and Planning Division of the Louisiana State Department of Highways. Prior to this time he served as Combat Engineer at Fort Belvoir, Virginia, during World War II.

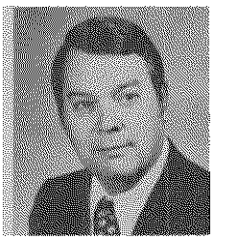
Tessier is a graduate of the Civil Engineering Course with International Correspondence School and is a Registered Land Surveyor in the State of Louisiana. He is currently serving his ninth year as Secretary-Treasurer of the Louisiana Land Surveyors Association, and is a nine-year veteran of the Louisiana Engineering Society as well as A.C.S.M.

ENGINEERS IN THE NEWS

NEW ORLEANS MAN ELECTED TO IEEE BOARD OF DIRECTORS

(San Juan, Puerto Rico)—Seymour Cambias, Jr. has been elected Vice President Regional Activities of the Institute of Electrical and Electronics Engineers, Inc. (IEEE), the largest organization of its kind in the world. The vote was conducted at the IEEE's Annual Assembly. Cambias, who will be a member of the Board of Directors, will serve for one year.

Cambias, a Past Director of IEEE's Southeastern Region, is Manager, Electrical Engineering, New Orleans Public Service, Inc. He is responsible for a department involved in the design and construction of transmission facilities, generating stations and substations, as well as underground corrosion prevention programs. His engineering career has spanned a wide range of experience in electric utility design, operations and management. Cambias is a graduate of Tulane University.



T. C. Heil

C. Z. Breaux

Lamon L. Moody, president of Dyer & Moody, Inc., Consulting Engineers, announced the appointment of Teddy C. Heil to the position of first vice-president of the firm, and C. Z. Breaux, Jr., as vice-president.

Heil, a native Baton Rougean, joined Dyer & Moody in 1967, and was named vice-president in 1970. Prior to his employment with Dyer & Moody, he worked with Burk & Associates in New Orleans, and Barnard & Burk in Baton Rouge. Heil is a past chairman of the American Society of Mechanical Engineers, Baton Rouge Section.

Prior to his employment with Dyer & Moody, Breaux worked with Kaiser Aluminum for 20 years. He joined Dyer & Moody in March, 1972.

MAINTENANCE MANAGEMENT FOR THE PROCESS INDUSTRIES

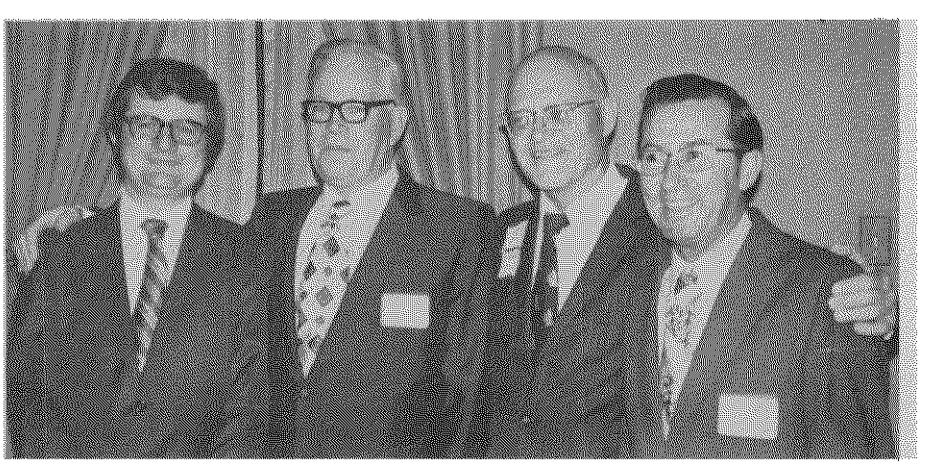
The Department of Mechanical, Aerospace, and Industrial Engineering at Louisiana State University will sponsor a seminar on "Maintenance Management for the Process Industries," from March 20-22, 1973. The program is intended to acquaint all persons interested in maintenance management for the process industries with the newer methods and techniques for controlling maintenance.

Lecturer for the seminar, to be held in Room 130 of Pleasant Hall, is Lawrence Mann, Jr., professor of industrial engineering, LSU. Dr. Mann, whose academic credits include a BS degree in mechanical engineering from LSU and a master's and Ph.D. in industrial engineering from Purdue University, has 10 years' work experience in various facets of engineering, as well as in all phases of maintenance.

Topics to be covered during the three-day session include maintenance organization and systems, preventive maintenance, maintenance planning and scheduling, maintenance work measurement, maintenance labor performance measures, and spare parts and maintenance material.

Registration will be limited to approximately 20 students. Registration fee is $150; textbooks and all materials will be furnished to participants. For additional information regarding registration or housing, write to:

Coordinator, Short Courses & Conferences
Division of Continuing Education
Louisiana State University
Baton Rouge, Louisiana 70803
504 · 388-5276



Honored during the Christmas party of the Engineers Club of New Orleans were, from left to right, Ronnie Cressy, the club's incumbent president; and past presidents Bill Horrell, Jim Janssen, and Jack Groh.

IN MEMORIAM

R. P. LOCKETT, SR.

Robert P. "Bob" Lockett, Sr., a life member of this society, passed away in New Orleans on June 7, 1972, following a brief illness which began in the primitive mountain area of southern Mexico while he was on a visit to his missionary priest son.

It is indeed with a heavy heart and a great sense of personal loss, that all of us who were privileged to know "Bob" during his full and productive lifetime join here together again to record and mourn his passing.

Mr. Lockett was born in Caldwell, Texas on October 3, 1889. He spent his boyhood in Kerrville, Texas where his parents moved shortly after his birth. In those days, this was wild, unspoiled country and it was here along the beautiful Guadalupe River that he developed his lifelong hobby of fishing and hunting.

In 1906 he came to New Orleans to work for A. M. Lockett & Co. Ltd., a firm headed by his first cousin, A. M. Lockett. Bob started as the office boy and by hard work in the firm and by attending night school at Tulane University became quite adept in engineering. His ability to work out mathematical solutions in his head and his quickness with figures often amazed his associates and friends.

His business career at A. M. Lockett & Co. Ltd. was interrupted by World War I when he served in the U. S. Navy for three years.

Following the War, he resumed his association with the Lockett firm, where he served in many capacities as the business grew. He advanced through the positions of Manager of the Supply Department, Manager of the New Orleans Office, General Sales Manager and, finally, to the position of Vice-President, which he held until his retirement in 1957 after more than 50 years of service with the company.

When he was struggling financially to raise and send to college four children, he and his devoted wife, the former Elizabeth "Bess" Gaudet of New Orleans, whom he married in 1914, built, developed and operated a water distribution business in what was then an outlying area, but is now the heart of Metairie.

During his long life in New Orleans, he was a member of many organizations and clubs, including the New Orleans Country Club, Louisiana Club, Stratford Club, Propeller Club, Chamber of Commerce, International House, of which he was a founding member, Cataouatche Club, which he served as Captain for many years, and several Carnival organizations, in addition to his membership in the Louisiana Engineering Society, which he joined in 1931, becoming a life member in 1961.

G. Elmer May
W. Stone Leake
Allan J. Harris

PROFESSIONAL ENGINEERS GRANTED REGISTRATION

NOVEMBER 21, 1972

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

ARORA, MANOHAR LAL
Baton Rouge, La.
Civil

ASKMAN, PHILIP ROSBERG
Boston, Mass.
Civil, Mechanical

BARNETT, ROBERT PAUL
Leeds, Ala.
Civil

BELL, BILLY RAY
Baker, La.
Petroleum

BENNETT, ARMAND IGNATIUS
Chalmette, La.
Electrical

BERGERON, WILLIAM JOSEPH
Lake Charles, La.
Mechanical

BRADLEY, WILLIAM RICHARD
Lake Charles, La.
Chemical

BROOKINS, MICHAEL LEE
Houston, Tex.
Mechanical

BROUSSARD, RICHARD PAUL
Baton Rouge, La.
Civil

BROWNING, JR., CLARENCE LEE
Pensacola, Fla.
Electrical

BURKE, ROBERT DERLE
El Dorado, Ark
Mechanical

BURTON, WILLIAM WADE
Louisville, Ky.
Civil

CLINE, DARWIN E.
Lake Charles, La.
Civil

COLE, GEORGE HAROLD
Lafayette, La.
Petroleum

COLVIN, HARRY J.
Baton Rouge, La.
Civil

CURTIS, RICHARD HARVEY
Lakeland, Fla.
Chemical

DESAI, CHIMANBHAI D.
New Orleans, La.
Civil

DESSELLE, MORRIS JOSEPH
Baton Rouge, La.
Petroleum

DOMZALSKI, LEO JOSEPH
Chicago, Ill.
Chemical

DOTY, FREDERICK JOSEPH
San Bernardino, Calif.
Mechanical

FIGILIS, JACK
Nashville, Tenn.
Civil

FOGARTY, JACK CARL
Gretna, La.
Electrical

FONTENOT, GERALD JOSEPH
Pineville, La.
Mechanical

FORTUNE, WILLIAM ALBERT
Knoxville, Tenn.
Civil

GUERRINI, ALFONSO ROBERT
Sulphur, La.
Mechanical

GUILLORY, MELVIN JOHN
Baton Rouge, La.
Chemical

HARTMAN, TERRY JAMES
Costa Mesa, Calif.
Civil

HASELTON, MARK BARDEN
Tucker, Ga.
Civil

HAWRYLAK, ROBERT LEE
Arlington, Tex.
Civil

HAYS, THOMAS HARDY
Baton Rouge, La.
Electrical

HEBERT, ROY A.
Plaquemine, La.
Civil

HERPIN, CHARLES WADE
Baton Rouge, La.
Mechanical

ISDALE, SR., CHARLES EDWIN
Champaign, Ill.
Chemical

JEFFERIES, JR., ROBERT KENNEDY
Houston, Tex.
Mechanical

KASPER, JR., FRED
Arlington, Tex.
Civil

KELLAR, JAMES ALEXANDER
Norwood, N.J.
Mechanical

KING, III, FRANCIS WILLIAM
Lafayette, La.
Petroleum

KLOS, WILLIAM ANTON
Lafayette, La.
Electrical

KNAUS, WALTER
New Orleans, La.
Mechanical

KRESSE, OSCAR FLORENZ
Metairie, La.
Mechanical

KUNG, WAYNE W. Y.
Daly City, Calif.
Civil

LONG, MARTIN DUANE
Houston, Tex.
Civil

MacLEAN, WALLACE EMERSON
Baton Rouge, La.
Mechanical

MARTIN, JOHN ALBERT
Baton Rouge, La.
Mechanical

MATTHEWS, JOHN HOWARD
Tucker, Ga.
Electrical

MEJIA, PAUL PETER
New Orleans, La.
Mechanical

MIRMIRAN, FRED FEREIDOUN
Towson, Md.
Civil

MONTZ, LESTER ROLAND
Norco, La.
Mechanical

MORRIS, JOHN LANNY
Dayton, Ohio
Electrical

MULLINS, ROBERT RANKIN
Houston, Tex.
Civil

NORMAND, JR., CLIFFORD J.
Springhill, La.
Electrical

OVERTON, HAROLD L.
Houston, Tex.
Petroleum

PAGE, WILLIAM ALBERT
Lafayette, La.
Electrical

PANI, MRUTYUNJAYA
Baton Rouge, La.
Civil

PARKER, RONNY DEAN
New Orleans, La.
Petroleum

PASLEY, JOHN LINGAN
Topeka, Kans.
Civil

PERRIEN, DENNIS JOSEPH
Gretna, La.
Mechanical

PFISCHNER, JR., FREDERICK L.
Acton, Mass.
Civil

PUGH, JOHN BALDWIN
Tampa, Fla.
Civil

REID, COLVIN
Houston, Tex.
Civil

RICHARDSON, DONALD FRANK
Shreveport, La.
Mechanical

ROBERTSON, DOUGLAS A.
Arlington, Tex.
Civil

SANDERS, DONALD EUGENE
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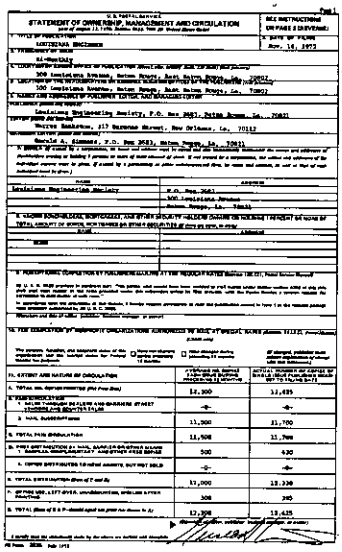

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BOARD OF DIRECTION MEETING

November 9, 1972

Holiday Inn — **Baton Rouge, Louisiana**

MINUTES

Vice President J. J. Thigpen called the meeting to order with the following members present: Roger K. Battle, P.E.; Richard L. Bennett, P.E.; Ronald P. Cressy, P.E.; Fred C. Culpepper, Jr., P.E.; Charles W. Hair, Jr., P.E.; Frank M. Heroy, Jr., P.E.; T. J. Hogue, Jr., P.E.; Malcolm L. Hurstell, P.E.; Frank Miller, P.E.; E. E. "Buddy" Moncla, P.E.; Lamon L. Moody, Jr., P.E.; Waldemar S. Nelson, P.E.; Arthur R. Theis, P.E.; Jack Thigpen, P.E.; and Edward P. Williamson, P.E. Guests were Charles F. Stubbs, P.E.; Cliff DeJean, the C.P.A. who gave the audit report, and Gerald A. Simmons, Executive Secretary.

The minutes of the September 16, 1972 meeting were approved as presented with the following corrections:

Page 1, second paragraph, first sentence, change the order of the maker and seconder of the motion to read as follows: "On a motion by Dr. Thigpen, seconded by Mr. Moody, 'that the Board of Directors reject the P.E.G. resolution recommending that the Board of Directors censure the publication committee and the parties responsible for the editorial that appeared in the LOUISIANA ENGINEER.' "

The motion for approval of the minutes was made by Mr Cressy, seconded by Mr. Hogue and adopted.

Financial Report — The financial report was given by Mr. Hurstell, Secretary-Treasurer for the months of September and October 1972. The report reflects year to date total receipts of $14,531.53 and expenses of $27,113.69.

Motion by Mr. Moody, seconded by Mr. Battle, "that the financial report be accepted as presented." Motion carried.

Mr. Hurstell introduced Mr. Cliff DeJean of the accounting firm of Gus Gonzales, Inc. who presented the annual audit prepared for the Board of Direction of L.E.S.

Mr. DeJean reviewed the financial status of the Society.

Motion by Mr. Hurstell, seconded by Mr. Culpepper, "that the audit of the Society's financial condition be accepted as presented." Motion Carried.

Mr. Hurstell reviewed the list of members by chapter who resigned during the months of September, October and November. He asked each chapter president to review the list and contact any member who may be encouraged to remain in the Society.

Section Reports

P.E.P.P. Report — Mr. Cressy, Chairman of the P.E.P.P. Section, reported that NSPE P.E.P.P. is reviewing its policy on NSPE P.E.P.P. membership. A report will be made at a later date.

A Committee chaired by Mr. Szabo is presently studying possible changes to the Manual of Practice to be reviewed by L.E.S.—C.E.C. The proposed changes will have to be approved by both organizations before the Manual is reprinted.

The remaining sections did not submit reports.

Formation of Engineers in Construction Section — Dr. Thigpen reviewed the action necessary to establish a new functional section with L.E.S. structure.

Motion by Mr. Odom, seconded by Mr. Hogue, "that L.E.S.

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establish a practice section for Professional Engineers in Construction." Motion Carried.

Motion by Mr. Culpepper, seconded by Mr. Nelson, "that the proposed P.E.C. Rules of Operation presented to the Board of Directors be accepted." Motion Carried. (P.E.C. Bylaws are attached to minutes.)

Motion by Mr. Odom, seconded by Mr. Miller, "that the officers nominated by the P.E.C. Section be elected and the chairman begin serving as an L.E.S. Board member at the next board meeting." Motion Carried.

The P.E.C. officers for the remainder of the L.E.S. fiscal year will be as follows:

Ray DesOrmeaux—Chairman
Buddy Moncla—Vice Chairman
Webb Hart—Secretary-Treasurer

Dr. Thigpen congratulated the leaders responsible for the development of the new Section and stated that their delegate to the Board would be notified for the next Board meeting.

N.S.P.E. Dues—Mr. Hurstell informed the Board of a request by N.S.P.E. for action on an N.S.P.E. dues increase. The N.S.P.E. Board will discuss two proposals at the next meeting:

(1) to increase the member dues up to $40.00 as determined by the Board.
(2) to give the N.S.P.E. Board the authority to set N.S.P.E. dues with no limitation.

Mr. Nelson discussed the financial status of N.S.P.E. and requested that the L.E.S. Board give direction to the National Directors.

Motion by Mr. Hair, seconded by Mr. Moody, "that the National Directors be instructed to support a limitation up to $40.00 on N.S.P.E. dues." Motion Carried.

Unionization of Engineers in Government—Mr. Theis, chairman of the P.E.C. Section and Chairman of an Ad Hoc Committee on unionization of Engineers, discussed the possibility of blanket unionization of employees of the Department of Highways by the negotiations between the director and a local of municipal and state employees. Mr. Theis stated that the committee is studying the N.S.P.E. Executive Order Handbook as it pertains to Federal employees in relation to state and municipal governing bodies.

The suggestion was made that N.S.P.E. attorneys be invited to Louisiana to assist. Motion by Mr. Moody, seconded by Mr. Hurstell, "that the President be authorized to appoint legal counsel necessary for action on the problem with a limitation of $1,000.00." Motion Carried.

Motion by Mr. Hogue, seconded by Mr. Hair, "that the President be directed to draft a strong statement opposing unionization of engineers in government and publicity be given to this action." Motion Carried.

Mr. Theis requested that the Board consider a study of the procedure to submit nominees to the L.E.S. Board for submission to the Governor to fill vacancies on the State Board of Registration.

Motion by Mr. Hurstell, seconded by Mr. Williamson, "that the Constitution and Bylaws committee set up procedures for selecting nominees to be submitted to the L.E.S. Board for later consideration by the Governor in appointments to the State Board of Registration." Motion Carried.

N.S.P.E. Regional Designations—Motion by Mr. Hurstell, seconded by Mr. Battle, "that rules be suspended and this matter be considered at this Board meeting." Motion Carried unanimously.

After discussion of the benefits of realigning designations, Mr. Hurstell moved, and Mr. Cressy seconded a motion, "that L.E.S. request N.S.P.E. to evaluate the assignment of state societies as to respective regions with attention to the South and alignment of regions in South with common interests." Motion Carried.

L.E.S. Junior Membership Award—Dr. Thigpen stated that the Dean of Engineering at Louisiana Tech submits the name of Mr. Tommy Gravel for a Graduate Membership Award. The recipients of this award are exempt from dues for three years as specified in the rules of the Society.

Motion by Mr. Culpepper, seconded by Mr. Hurstell, "that Mr. Tommy Gravel of Louisiana Tech be presented the Graduate Membership Award of the Society." Motion Carried.

L.E.S. 75th Anniversary Year Celebration—Mr. Nelson stated that in February of 1973, L.E.S. will be 75 years old and celebrating its diamond jubilee. He suggested an observance of the occasion.

Motion by Mr. Nelson, seconded by Mr. Heroy, "that a committee be formed to plan a suitable observance of the diamond anniversary of L.E.S." Motion Carried.

RULES OF GOVERNMENT AND OPERATION OF PROFESSIONAL ENGINEERS IN CONSTRUCTION

A Functional Section of LES

NAME

1. The name of the Section shall be "Professional Engineers in Construction."

AUTHORIZATION

2. Authorized under LES BYLAW 10—FUNCTIONAL SECTIONS, the section's activities and actions shall comply herewith.

OBJECTIVES

3. The objective of the Section is to concern itself with advancement of the public welfare and matters of mutual welfare of engineers in construction in their service to the public by:
   a. Activities related to development of public policy.
   b. Establishment and maintenance of high standards of competence and ethical conduct.
   c. Strengthening the role of engineers in construction in support of the free enterprise system.

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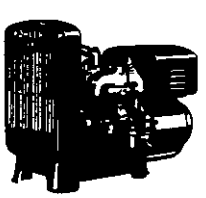

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d. Cultivation of public appreciation of the work of the engineer in construction.
e. Promotion of professional development and economic advancement.
f. Improvement of engineer-management relationships.
g. Encouragement of participation in community and civic affairs.

PROCEDURES

4. Section activities shall provide an effective forum for discussion and united action. Within the broad professional society, it shall also provide the vehicle for communications and discussions with engineers of other types of employment.

   All action shall be based on the premise that professional development of engineers is the responsibility of all engineers working together effectively.

ADMINISTRATION

5. The affairs of the section shall be governed by an Executive Board consisting of the officers of the section and the immediate past chairman.

   At the first meeting of the Executive Board in each administrative year, it shall determine an order of succession should the chairman be unable to perform his duties.

   The administration and fiscal years of the section shall coincide with those of LES.

OFFICERS

6. The officers of the section shall consist of a chairman, immediate past chairman, vice chairman, and a secretary, who shall take office at the beginning of the administrative year and hold office until their successors are duly elected and take office. Vacancies in any elected office during the administrative year shall be filled by the Executive Board.

TERM OF OFFICE

7. Officers of the PEC Section shall be elected for a term of one year.

NOMINATING PROCEDURE

8. There shall be a Nominating Committee consisting of a chairman who shall be a past chairman of the section and four other members appointed by the chairman of the section with the approval of the Executive Board. These appointments shall be made three months prior to the end of the administrative year. In the event that any member of the nominating committee is unable to serve, the section chairman shall appoint a successor. The nominating committee shall prepare a slate of nominees for the ensuing administrative year prior to April 1, and its report shall be published as soon as feasible thereafter for the information of all members.

   Additional nominations shall be placed on the official ballot by petition of 25 members or 25% of the membership. Such petitions must be received by the secretary of the section 45 days prior to the end of the administrative year.

   Ballots shall be mailed by the secretary to all PEC members at least 30 days before the annual meeting. Only ballots returned to the secretary within 20 days of the mailing shall be considered and such date shall be specified on the ballot.

   Election of officers shall be made by a plurality of those members voting.

MEMBERSHIP

9. Membership and participation in the section shall be available on the following basis:
   a. **Member.** Any member in good standing of the Louisiana Engineering Society who is engaged in construction or construction-related activities shall be an eligible member.
   b. **Participants.** A participant of the section shall include any other member of the Louisiana Engineering Society who has a mutual interest in promoting the objectives of this section.
   c. The right to vote or hold office in the section shall be limited to members.

MEETINGS

10. The Executive Board shall meet not less than twice a year for discussion, action, and recommendations to the LES Board of Directors.

    The section shall hold an annual meeting at the time of the annual meeting of LES. Such other meetings may be held as determined by the Executive Board.

MINUTES

11. Minutes shall be kept of all meetings of the section and all meetings of the Executive Board of the section. Minutes shall be available to all members of LES.

REPRESENTATIVE TO LES BOARD

12. The section chairman shall represent the section at meetings of the LES Board of Directors and Executive Committee to present and discuss section business.

FINANCES

13. When considered necessary for the promotion or forwarding of its special objectives, the section may establish a fund for the purpose, the method of securing such fund to be approved by the LES Board of Directors. The treasurer of LES shall be the custodian of the funds of the section, the expenditure of which shall be subject to the approval of the section's Executive Board.

COOPERATION

14. The section shall cooperate with the several LES Practice Sections, committees, officers, and chapters to most effectively advance the interests of the entire profession and of section members.

AMENDMENTS

15. Changes or additions to these rules may be made by the Executive Board subject to approval by the LES Board of Directors.

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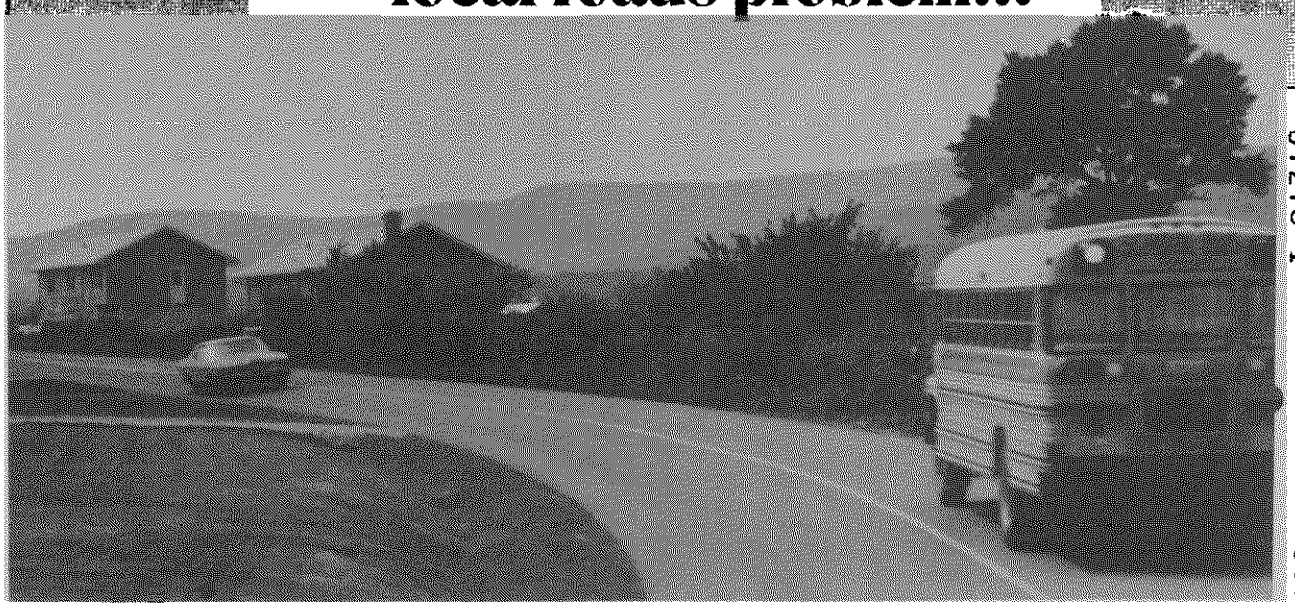

ENRIQUE
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URB VALENCIA
RIO PIEDRAS P R
07276-1
00923

Frederick County implements long-range road upgrading program with Full-Depth (TA) Deep-Strength Asphalt Construction.

Feeling the push of urban development from Baltimore and Washington, D.C., Frederick County had this problem: 500 miles of county roads, built long ago when traffic volumes and weights were relatively light, badly needed upgrading to improve safety and to carry increased traffic loads. Possibilities? Build anew to state specifications for about $150,000 per mile . . . or widen existing roads with limited county funds. The decision: widen and overlay with Asphalt pavement, 15 miles per year, for about $35,000 per mile . . . or $1¾ million less per year than new construction, thereby keeping funds required within manageable limits.

Work began in 1970. Road shoulders were dug out to the required width, and the trenches compacted with a small roller. Four inches of Asphalt concrete were laid directly on the prepared subgrade to bring trench areas up to the existing road level, and a 2-inch Asphalt concrete surface course was then placed over the entire width. In instances where the work could not be completed before winter, the road was surface-treated to seal and protect the pavement. Then the 2-inch surface course was placed the following spring. Such quick construction allowed re-opening of the road without delays. And the completed, modernized roadways—smooth riding, wide and durable—will safely handle growing traffic loads with minimum maintenance for years to come.

TYPICAL FREDERICK COUNTY PROJECT (SUNDAY'S LANE)

LOCATION: From Route 15 to O'Possumtown Pike.
TYPE: Two-lane rural highway, widened from 12′ to 20′ with Full-Depth Asphalt construction, with 2″ Asphalt concrete overlay across full 2-lane width. Width of driving lanes, 10′.
LENGTH OF PROJECT: 2.28 miles.
TERRAIN: Flat to gently rolling.
CLIMATE: Average Temp. Range: 87°F (July), 29.4°F (Feb.)
TRAFFIC: Light to medium.
ROADWAY: Subgrade: CBR value of 4.
BASE: 4″ Asphalt concrete (widened sections).
SURFACE: 2″ Asphalt concrete, placed full width.
ASPHALT: AC 20 for both base and surface.
DRAINAGE: Runoff controlled by grassed drainage ditches.
COMPACTION: Subgrade:
95% of AASHO Method T-180
Asphalt Concrete Base and Surface:
96% laboratory density.

Constructed under supervision of W. S. Fout, County Engineer and the Frederick County Roads Department, this improvement project serves the best interests of taxpayers and motorists alike.
Full-Depth (TA) Deep-Strength Asphalt rehabilitation saves tax dollars and construction time, permits continued traffic flow, and assures smooth, safe riding with a minimum of maintenance. For more information about all the advantages of Full-Depth Asphalt pavement, please contact the Institute office serving your area . . .
or write
The Asphalt Institute,
406 Hancock Building,
New Orleans, La. 70130.

The Asphalt Institute
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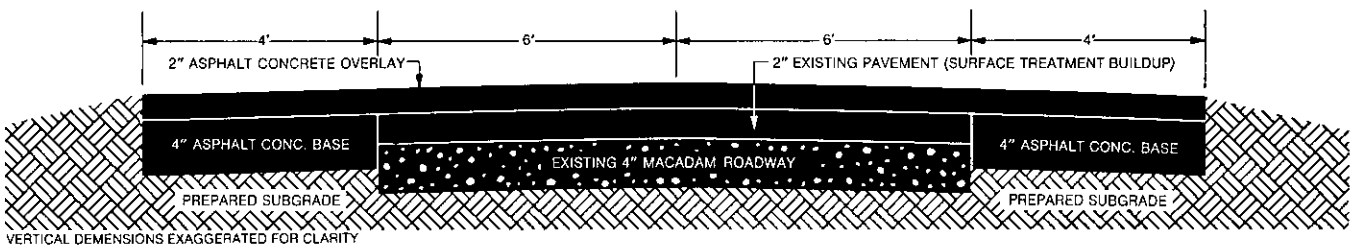
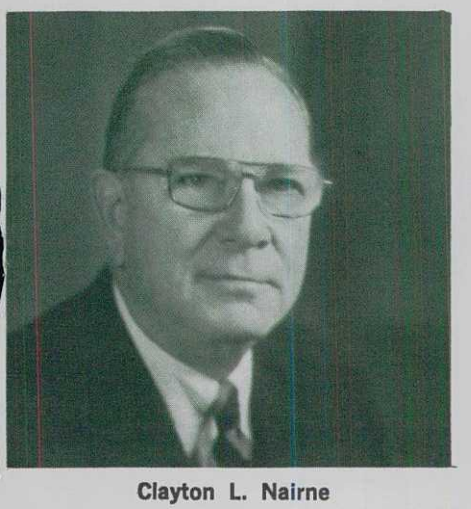


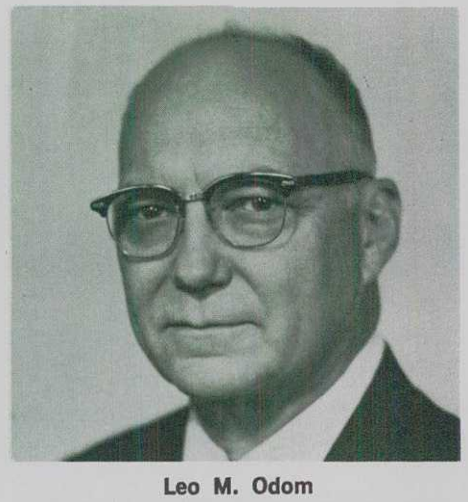
LOUISIANA ENGINEER

April, 1973

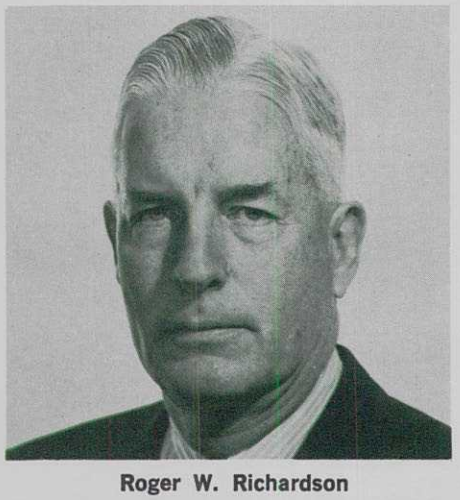
LES AWARDS



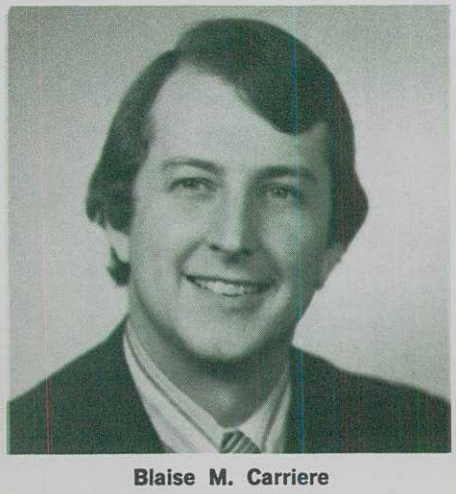
Clayton L. Nairne



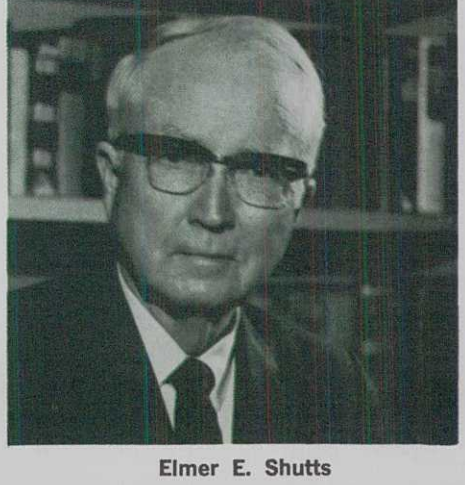
Leo M. Odom



Roger W. Richardson



Blaise M. Carriere



Elmer E. Shutts

George L. Heller

AN INVITATION TO PARTICIPATE

LES

LOUISIANA ENGINEERING SOCIETY

AN INVITATION TO MEMBERSHIP

Membership in the Louisiana Engineering Society is an important part of your personal and professional life. Think of the amount of time and money you have invested in your professional training. You certainly carry insurance on your life and your physical property. But what about your time-and-dollars investment in your profession which is undoubtedly your most valuable asset?

In a society based largely on group relations, the engineer needs to safeguard his professional and economic welfare. He needs protection in the Legislature from those who would damage his status. He needs the benefits of prestige built up through group public relations and a strong voice to stress that he is a professional man. He needs protection against unethical competition and against all influences which might undermine public confidence in his integrity and competence. He needs an instrument for shaping public policy of his profession. These safeguards and needs are realized through membership in the Louisiana Engineering Society.

GRADES OF MEMBERSHIP

Member—Registration as a Professional Engineer in any state, or graduate of approved college, plus experience in a branch of engineering not provided for in Louisiana registration laws, or registered Land Surveyor in La. **Professional Investment $25.**

Junior Member—An EIT certificate from any state, or graduate of approved college, and not less than 20 nor more than 32 years of age . . . **Professional Investment $17.**

Affiliate Member—An engineer or other person whose experience qualifies him to cooperate with engineers in the advancement of professional knowledge and practice . . . **Professional Investment $28.**

Student Member—Pursuit of an engineering degree via full-time engineering curriculum in an approved college . . . **Professional Investment $1.**

Non-resident membership is available to those residing outside of Louisiana and the Professional Investment is approximately 57% of that shown for LES.

LOUISIANA ENGINEERING SOCIETY
APPLICATION FOR MEMBERSHIP

GENTLEMEN:

I hereby apply for admission into the Louisiana Engineering Society as a _____
(grade)
and agree to comply with the Constitution and Bylaws and the Code of Ethics of the Society. I also apply for admission into the National Society of Professional Engineers, if qualified and if I have indicated 'yes' to question No. 6 opposite.

Please assign me to the Chapter checked below:

Alexandria	☐	Baton Rouge	☐	Bayou	☐
Lafayette	☐	Lake Charles	☐	Monroe	☐
New Orleans	☐			Shreveport	☐
Non-Resident	☐	_____			☐

☐ INTRODUCTORY MEMBERSHIP OFFER ACCEPTED

Date _____

Signed: _____

FUNCTIONAL SECTION PREFERENCE
(Check One)

☐ Government ☐ Private Practice
☐ Industry ☐ Education

PLEASE COMPLETE THE FOLLOWING SPACES

1. Name _____ (Last / First / Initial)
2. Home Address _____ (Street / City and State / Zip Code)
3. Business Affiliation _____ Position or Title _____
4. Business Address _____ (Street / City and State / Zip Code)
5. Telephone: Home _____ Office _____ Please Send All Mail to: Home ____ Office ____
6. REGISTRATION: PE ☐ LS ☐ EIT ☐ None ☐
   Branch _____ State _____ Reg. No. _____
7. Are you now affiliated with NSPE? Yes ☐ No ☐ If yes, what state? _____
8. If no, do you want to become a member of NSPE? Yes ☐ No ☐
9. Have you ever been a member of LES? Yes ☐ No ☐ If yes, you must also complete an 'Application for Reinstatement'.
10. Birth date _____ Age _____ Wife's first name _____
11. Education _____ (School / Date Graduated / Degree Obtained)
12. Major engineering discipline _____

NOTE: If you are a PE, EIT or LS only a Sponsor is needed, otherwise please list the names of three LES members as your references. A brief professional experience record must be attached if you are not a PE, EIT or LS.

1. _____
2. _____
3. _____

Mail to LES, P. O. Box 2683, Baton Rouge, La. 70821.

Make plans now to attend

LOUISIANA ENGINEERING SOCIETY
MISSISSIPPI SOCIETY OF PROFESSIONAL ENGINEERS

JOINT MEETING

JULY 19-20-21
BILOXI, MISS.
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RESERVATION APPLICATION

THIS CARD MUST BE RECEIVED 14 DAYS PRIOR TO OPENING OF CONVENTION:

CONVENTION: _____

NAME: _____

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CITY & STATE: _____ TEL. ( ) _____

ARRIVAL DATE _____ ARRIVAL TIME _____ NO. OF NIGHTS _____

ROOMS REQUIRED: _____ ADULTS _____ CHILDREN _____

SHERATON FAMILY PLAN PROVIDES FOR NO CHARGE FOR CHILDREN SHARING PARENT'S ROOM IF NO ADDITIONAL EQUIPMENT IS REQUIRED.

CIRCLE ONE:

SINGLE (1 PERSON)	$15.00	$17.50	$20.00
DOUBLE (2 PERSONS)	$20.00	$22.50	$25.00
ADDITIONAL PERSONS	$ 3.00	Rollaway	$ 3.50

If preference selected is NOT available, next higher rate available will be assigned.

COVER

Pictured on this month's cover are the six recipients of LES annual awards for distinguished service. For the full story, see page 10.

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LOUISIANA ENGINEER

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Petroleum Engineering Scholars—Three Breaux brothers, sons of Mr. and Mrs. Whitney Breaux of Duson, La., all enrolled in Petroleum Engineering at the University of Southwestern Louisiana, are establishing scholastic records at USL. Each has been on the Dean's list each semester he has been at USL. Dr. James W. Reeves, right, dean, College of Engineering, and Dr. Robert Mannon, second from right, department head, are congratulating the young men who are, from left, Allen, Michael and Sidney. Allen and Sidney are Viet Nam veterans.

ENGINEERING CAREER IS SOUGHT BY THREE LOUISIANA BROTHERS

Three brothers from Duson, Allen, Sidney and Michael J. Breaux, sons of Mr. and Mrs. Whitney Breaux, are establishing some kind of record at the University of Southwestern Louisiana.

All are majoring in Petroleum Engineering and each has been on the Dean's list ever since he entered college. Two, Allen and Sidney, are Viet Nam veterans.

Allen, a senior, plans to graduate in December, 1973 and hopes to work in Lafayette and continue his education in Graduate School at USL. A 1967 graduate of Scott High, he was in the U. S. Marine Corps from 1969-71. He made the Dean's list in the Fall of 1971, the Spring of 1972 and the Fall of 1972. His average last semester was 3.57.

His extra-curricular activities include membership in the Veterans' Club; the student chapter of the Society of Petroleum Engineers; Sigma Gamma Epsilon, honor fraternity; and Post 77 of the American Legion in Rayne. This summer he will work for Amerada Hess Corporation of Lafayette as assistant engineer.

Michael J. Breaux is a sophomore and plans to graduate in May, 1975. A graduate of Acadiana High, he has been on the Dean's list at USL for the past three semesters. Last semester he had a 4.0 grade point average. This past summer he was employed in the Venice Field by Getty Oil Company and is seeking summer employment at the present time. Following graduation he hopes to work in Lafayette. He is a member of the Student Society of Petroleum Engineers.

Sidney is also a sophomore. He is a veteran of the U. S. Army and served from Oct. 28, 1969 to Aug. 18, 1972 with one year in Viet Nam, returning last August.

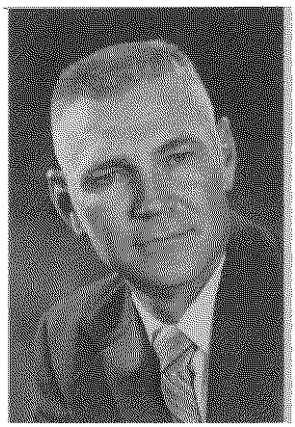
His future plans are to work in Lafayette and continue his education in Graduate School. This summer he will work for Conoco through its Lafayette office. Last summer he was employed by Getty Oil Co. in its Houma Gas Plant doing roustabout work.

He has been on the Dean's list for the last three semesters and had a 4.0 grade point average last semester. His extra-curricular activities include membership in the Veterans' Club; the American Legion Post 77 in Rayne; and the Student Society of Petroleum Engineers.

A fourth brother, Richard, the eldest, is attending USL's University College this semester at night. He is a sophomore in electrical engineering.

Hats off to the Breaux family, for a significant contribution in manpower (and mindpower) to the profession of engineering.

PRESIDENTIAL PRIVILEGE



LES President
Hoyt W. Brown, Jr.

It is with sincere regret that I announce the resignation of our Executive Secretary, Gerald Simmons. He will be leaving his position with the Society effective May 1, 1973. I thought it might be appropriate to have him express some of his thoughts on the operation of the Society and allow him to reflect over the past four years he has been with us.

Hoyt W. Brown, Jr.
President
Louisiana Engineering Society

It is with mixed emotions that I leave my work with the Louisiana Engineering Society to accept the position of Executive Manager of the Louisiana Dairy Products Association. The past years have been most gratifying. I owe to you, all engineers of the state, a sincere "thank you" for your cooperation and assistance during my tenure.

Engineers of Louisiana are very fortunate to have a society through which they can speak as an organized group. No organization can work for you, but you, through your organization, can accomplish many things. I know, with the leadership of the Society, that the organization will grow and prosper.

I would hope the profession continues its efforts in the field of Engineering Education. The Society has received compliments from many areas on the outstanding job that has been done in this field. We have, however, only scratched the surface. It will take many hours of time and many dollars to complete the job of making Louisiana the outstanding leader in Engineering Education.

The legislative program of the Society will continue to be of paramount importance. The regular session of 1974 will be a turning point in Louisiana history. The new Constitution will be before the people. If adopted, all statutes now in law will have to be re-enacted. It will be imperative that the whole engineering profession work together to insure that the profession speaks for engineers. I feel confident this will happen.

The L.E.S. may want to consider the formation of a delegate body to govern the Society. This concept is not new at all; a number of organizations operate in this fashion. Delegates are elected by the chapters, apportioned according to membership, and formulate policy for the organization. This method involves more of the members of an organization and helps to develop the leadership that is the lifeline of all organizations.

The many active committees in L.E.S. are exceptional as organizations go. I am continually impressed by the efforts of the leaders and their willingness to give of their time and energies working for the Society. I am not an engineer and had to rely on the leaders to provide the expertise in representing the Society. This has been an asset to me. Rather than my spending time and effort developing ideas and policies for the organization, this has been done by the volunteer leaders, freeing the staff to implement these ideas. After all, who knows more about the problems of engineers than engineers themselves?

The officers of L.E.S. and officers of all chapters are to be commended for their untiring efforts representing their members. These men have been exceptional and the membership owes them a vote of thanks.

Keep in mind that the L.E.S. office is your office. You are fortunate in having excellent secretaries working for you. They appreciate your coming by to discuss problems. Don't hesitate to use your office in time of need.

I know you will all support your new Executive Secretary and the entire staff as you have in past years. With your support and the continued active leadership exhibited by the members, L.E.S. will reach new heights.

Gerald A. Simmons
Executive Secretary

Effective May 1, the Louisiana Engineering

Society will be at a new location:

723 Main Street

P. O. Box 2683

Baton Rouge, La. 70821

Phone number will be the same:

(504) 344-4318

If you were going to write down the name of the one company who could give you the most help with a business telephone problem, who would it be?

_____

[NAME OF COMPANY]

Now, who would you call?

Call the South Central Bell communications consultants. They know what they're doing and they can do it for you.

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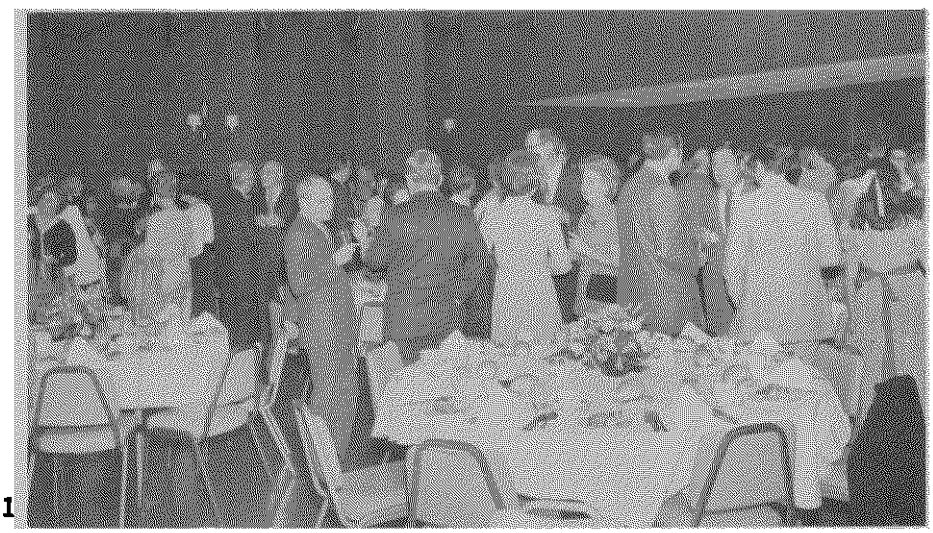
LOUISIANA ENGINEERING SOCIETY

75TH ANNIVERSARY CELEBRATION

FEBRUARY 3, 1973



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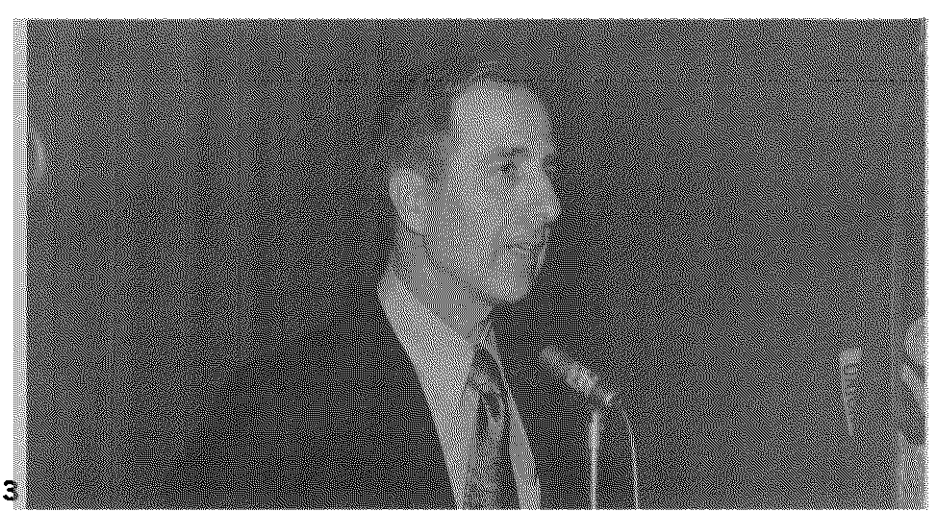

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1
Several hundred people attended LES's 75th Anniversary Celebration held in February. Pictured here is a partial view of the crowd.

2
A view of the head tables which featured current LES officers and wives and Past Presidents of the Society with their spouses.

3
Maj. Gen. Charles C. Noble, president of the Mississippi River Commission, was guest speaker for the evening.

1

2

3

1
John P. Fernandez (right), considered "Mr. Louisiana Engineering Society," receives special recognition of his many years of dedicated service to the Society from Waldemar S. Nelson, master of ceremonies for the evening.

2
Alvin Fromherz makes his thank-you remarks after receiving a certificate marking his 58 years as a member of the Louisiana Engineering Society.

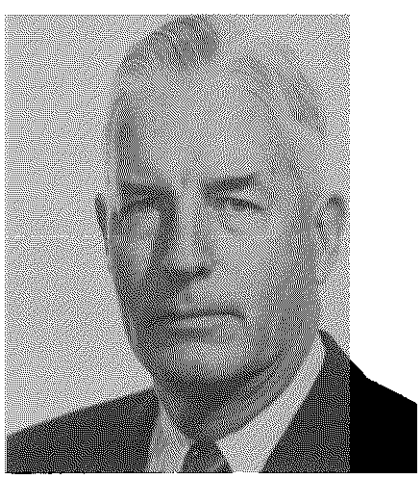
3
Joseph B. Guidry (right), a 1930 recipient of a scholarship from the Ladies Auxiliary of the Louisiana Engineering Society, received special recognition during the Anniversary celebration. Here he receives a certificate from Waldemar S. Nelson.

Louisiana Engineering Society Gives Recognition to Outstanding Members

March 23, 1973
Lafayette, La.

Leo M. Odom Award for Professional Services

The Leo M. Odom Professional Service Award is a new award, given for the first time in 1972. It will be awarded for distinguished service to the engineering profession in Louisiana by a registered professional engineer member of the Louisiana Engineering Society.



Roger W. Richardson

Roger W. Richardson received his education in chemical engineering at Louisiana State University, where he received a B.S. in 1927. In 1928, he attended Iowa State University, where he received a master's degree, continuing to further his education and culminating in a Ph.D. from Iowa State, in 1930.

His employment experience reflects his wide range of capabilities and interests. Beginning in 1927, he was a junior and assistant scientist with the U.S. Bureau of Standards in Washington, D.C. In 1930 he worked as a chemical engineer for E. I. DuPont, and from 1933 to 1965 he has served in various capacities as an employee of Esso Research and Engineering Company. Working his way up from the research and development department of Standard Oil of Louisiana in Baton Rouge, he became manager of Scientific and Government Liaison of Esso Research and Engineering Co. in Linden, New Jersey in 1954. He left Esso in 1965 to expand his educational experience through serving as Dean of the College of Engineering at Louisiana State University in Baton Rouge, where he continues to guide students interested in the profession of engineering.

Dr. Richardson's professional and technical society memberships include the American Ordnance Association, of which he is Director, the American Chemical Society, the American Institute of Chemical Engineers, and the American Association for the Advancement of Science. Indicative also of his wide professional interests is his membership in the American Society for Engineering Education, the Society for Chemical Industry, Alpha Chi Sigma, and the National Society of Professional Engineers. In addition, Dr. Richardson is also a member of the Louisiana Engineering Society.

Dr. Richardson's service to the Engineering Profession goes far beyond the contribution he, as Dean of the College of Engineering, is making to the education of future generations of engineers. His performance in this position has provided both leadership in the evaluation of the needs of society for professional engineering talents and the enthusiastic support necessary to develop academic programs to meet these needs. During his tenure as Dean, LSU's College of Engineering has established Industrial and Aerospace Engineering as separate curricula, new undergraduate curricula options in the Department of Engineering Science and additional Ph.D. and M.S. programs in other departments. Plans for new programs in Environmental, Systems, Ocean and Bio-engineering have been developed and will be instituted as soon as the approvals have been obtained. Dr. Richardson has been an active participant in the planning that went into each of these. At the same time he has been a leader in developing the CEBA concept and in conducting a fund-raising drive to provide the facilities this requires.

A. B. Paterson Medal for an Engineer in Management

The A. B. Paterson Medal is awarded for distinguished service in management by an engineer.

Clayton L. Nairne

Clayton L. Nairne attended high school at Rugby Academy and continued his education at Tulane University, where he received a Bachelor of Engineering in 1924. Immediately following his graduation, he joined New Orleans Public Service Inc. as a student engineer and remained with the Company until 1926, when he left to become a

betterment engineer with Florida Power & Light Company. He returned to Public Service in 1928 as a draftsman and combustion engineer in the Gas Department. In this department he became, successively, assistant chief engineer, superintendent of distribution, general superintendent of distribution, and finally general superintendent of the department.

In 1943 he was named assistant to the vice-president in charge of operations and from that time advanced steadily, to his present position as Chairman of the Board. Public Service, one of four operating companies comprising the Middle South Utilities System, has over 3,000 persons, and provides electric, gas, and transit service to the greater part of Orleans Parish.

Registered as a mechanical engineer in Louisiana, Mr. Nairne was the 1961 recipient of the L.E.S. Andrew M. Lockett Award, and is an honorary member of Loyola University Blue Key national leadership fraternity, as well as several other honorary fraternities.

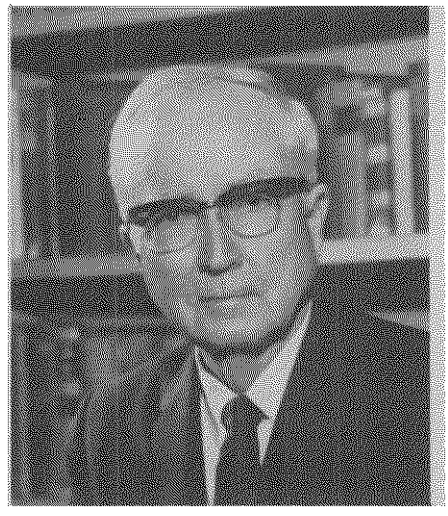
He is currently president of the Southeastern Electric Exchange, president of the New Orleans Tidewater Development Association, senior vice-president of the Council for A Better Louisiana, a trustee of the Public Affairs Research Council, and a director of the Metropolitan Area Committee. In addition, he is a member of the board of administrators of Tulane University and the board of regents of Loyola University, and is president of the Audubon Park Commission. A member of Governor McKeithen's Domed Stadium Advisory Committee, Mr. Nairne also serves as a director of the Cultural Attractions Fund, International Trade Mart, Sara Mayo Hospital and the New Orleans Chapter of the American Red Cross.

In 1961 and 1962 Clayton Nairne was chairman of the Tulane University Associates program, a fund-raising activity of the University's development council, and was one of three New Orleans businessmen who directed Tulane's successful $24.4 million expansion program which was conducted throughout the U.S. from 1965-67.

Mr. Nairne served his company, New Orleans Public Service, Inc., as Chief Executive Officer during a period of great expansion and attendant pressures of rising costs; yet, through his leadership, New Orleans Public Service, Inc., maintained a recognized extremely high quality of electric, gas, and transit service, while keeping the costs of such services to its customers among the lowest in the country. Clayton Nairne is indeed an inspiration to others as well as an exemplary figure in the field of Business Management.

Andrew M. Lockett Medal for Civic Activities

The Andrew M. Lockett medal is awarded for distinguished civic service by an engineer, in the public interest, without compensation for those services.



Elmer E. Shutts

Elmer E. Shutts is a native of Lake Charles, Louisiana, having attended Lake Charles City Schools during his childhood. The Georgia School of Technology was his choice of colleges, and Rice University rounded out his academic career when he graduated there in 1916. But his education has never ceased, though 1916 marked his last formal schooling. His social education continued in the form of participation in public activities and civic organizations, and his activities in this area have brought an added distinction to his work.

As a partner in the firm of F. Shutts' Sons, his civic obligation as he considered it encompassed a wide variety of services. Mr. Shutts served as Engineer for the Port of Lake Charles from 1925 until 1967, and was a member of the National Defense Council for the State of Louisiana during World War II. He served in the Army in 1918, and became a special representative of the State of Louisiana on a goodwill and trade trip through Europe in 1954. He became a member of the Council for a Better Louisiana in 1962, and served as a member of the State Board of Commerce and Industry from 1948 through 1956. Through these various public bodies, with which he served in an appointive or elective capacity, he continued to expand his personal aim of serving the community while performing a multitude of worthwhile civic tasks.

Elmer Shutts has made many trips to Washington regarding the Ship Channel and widening of the Channel, and has worked to attract industry to Southwest Louisiana. In addition to his help in bringing in many industries to the state, he has helped the Civitan Club with building the school at Chennault, and has raised funds and worked with building Boys' Village since its beginning. Boys' Village, a home for young boys who find themselves alone in the world and who need proper help and guidance in attaining manhood, owes a great debt to Mr. Shutts, who has been a prime mover in this work and who has served on its Board as President, and is now Chairman of the Board of Trustees.

In addition to his contributions to the field of engineering, Elmer Shutts' accomplishments in other activities are indicative of his selflessness in the pursuit of betterment of his community. He serves on the Board of Directors of Calcasieu Marine National Bank and Calcasieu

Savings and Loan Association, and is secretary-treasurer of the Lake Charles Public Library. As an extension of his work on the local level, he is a past president of the Southwest Louisiana Historical Society, as well as a past president of the Lake Charles Community Chest, the Lake Charles Association, and the Lake Charles Golf and Country Club. He is also a past commodore of the Lake Charles Boat Club and past commander of the United States Power Squadron. Formerly assistant treasurer of the Episcopal Church of the Good Shepherd, he is now on the Board of Vestry.

Technological Accomplishment Medal

Awarded for technological advancement or discoveries as contributions to the advancement of engineering.

George L. Heller

George L. Heller is the Director of the Development Center, Petrochemicals, of Cities Service Company, in Monroe, Louisiana. He received his education at Rensselaer Polytechnic Institute, where he attained the degree of Master of Chemical Engineering; in addition, he has attended the American Management Executive Development Courses.

Registered in Louisiana in chemical engineering, Mr. Heller served as Bridge Engineer for D&H Railroad Company from 1924 to 1930. From 1930 to 1932 he was air conditioning and heating engineer for M. W. Company, Industrial Division. The General Atlas Carbon Company employed him from 1933 to 1941 as a research director, and his present employment with Cities Service Company began in 1941.

Mr. Heller has not allowed his constant and involved participation in engineering affairs to limit his activities in various professional societies, to the benefit of both. He is a member of the Louisiana Engineering Society, the National Society of Professional Engineers, the American Institute of Chemical Engineers, the American Chemical Society, and the Southern Rubber Group, as well as Sigma Xi Fraternity.

The technological advancements and discoveries of George Heller have resulted in 34 U. S. Patents. He is a recipient of the Cities Service Award for Outstanding Creativity for one of his patents, "Vortex Reactor for Carbon Black Manufacture."

One of his most significant achievements within his field was the work done under his direction which resulted in a process known as Latex Masterbatching. The process developed is still in use in the synthetic rubber industry for incorporation of carbon black and extender oil in Styrene-Butadiene rubber.

His pioneering work to introduce a furnace process in the manufacture of carbon black and later conversion to the present worldwide use of high velocity oil process, which produces over 95 percent of the nearly four billion pounds per year of the world's supply, was a truly outstanding accomplishment in the field of chemical engineering. This work introduced high velocity combustion processes at rates ten times those which were then known, plus the use of exotic refractory construction and the chemistry of conversions in the process which led to modern usage of aromatic concentrates for raw materials.

Overall, the efficiency was raised from three or four percent on the channel process to modern levels ranging from 50 to 80 percent, and rates of production of more than 400 times by volume of input raw material vapor.

Charles M. Kerr Public Relations Award

Awarded for distinguished service in promotion of public relations for the engineering profession in Louisiana.

Leo M. Odom

Leo M. Odom, a principal in the firm of Pyburn and Odom, received his formal education at Louisiana State University, where he graduated with a B.S. in Civil Engineering in 1927. His professional experience includes employment with the Louisiana Department of Highways, the Corps of Engineers, the Louisiana Department of Public Works, and now his own firm, Pyburn and Odom. He has been a member of the Louisiana State Board of Professional Engineering and Land Surveyors for more than 25 years, indicating the dedication he feels to maintaining the high standards of his profession.

Mr. Odom's activities within the profession of engineering include membership in the American Society of Civil Engineers, whose Louisiana Section he has formerly served as its President; he has also served in the capacity of President of the Louisiana Engineering Society, as well as a member of the Southern District of the National Council of State Boards of Engineering Examiners.

His efforts on behalf of the profession of engineering have resulted in a citation as the recipient of the Leo M. Odom

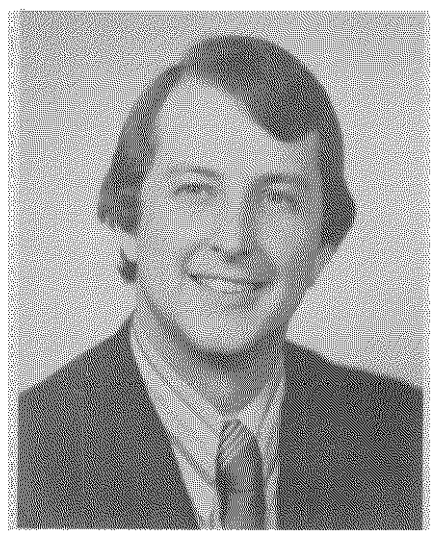
Award for Professional Services, conferred by the Louisiana Engineering Society; he is also an honorary member of Louisiana Land Surveyors.

Without fanfare or public acclaim, Mr. Odom has helped influence state and local government on professionalism in the engineering field, and has been instrumental in helping establish the Gulf South Research Institute. He has also been involved in the attempt to upgrade Land Surveyors to a professional standpoint, and has recognized the need for new Engineering facilities at LSU. In addition to these contributions to the engineering profession, he has served as past president of Louisiana State University Engineering Alumni, a member of the Board of Governors of the PEP section of NSPE, as well as the Chairman of the Southwest Region of that section. He is a member of the Louisiana Engineering Society Composite committee on separation of laws governing licensing of Engineers and Land Surveyors; he is also a member of the East Baton Rouge Parish Water Conservation Commission, and the Louisiana Engineering Society Representative of Water Resources Study Commission.

Mr. Odom goes about the business of publicizing professional engineering quietly and mostly by personal contact, as well as through his involvement in many public relations programs involving the field of engineering. He has assisted engineering students, trained young engineers, given oral examinations to engineering registration applicants, helped develop registration laws and ethics for engineers, given guidance to practicing engineers, and has promoted professional engineering through contacts with state and local governments, National government agencies, private companies, engineering colleges, and National Societies. He is also well known and respected by engineers and businessmen in other states as well as Louisiana.

Louisiana Engineer Award of Merit

This award is given to an engineer not over 35 years of age who has demonstrated to a high degree capabilities in his chosen field, thereby indicating potential for further advancement and leadership as a professional engineer.



Blaise M. Carriere

Blaise M. Carriere was educated in the New Orleans public schools and at Jesuit High School during his primary and secondary education; Louisiana State University provided the setting for his attainment of a B.S. in Civil Engineering in 1960, and was also the instrument for his attainment of a master's degree in 1963.

He is presently the Director of the Department of Streets for the City of New Orleans, and has been elected Secretary of the Metropolitan New Orleans Chapter of the American Public Works Association for 1973. He is also the 1972-73 New Orleans Chapter of ASCE second vice-president.

Mr. Carriere's interest and dedication to his profession have evidenced themselves through his membership in many professional and technical societies in the field of engineering. He is a member of the American Society of Civil Engineers, the National Society of Professional Engineers, the Louisiana Engineering Society, the American Public Works Association, the American Welding Society, and Delgado College Architectural and Civil Engineering Technology Advisory Committee.

Beginning with employment under the Louisiana Department of Highways Design Office in Baton Rouge in 1960, Blaise M. Carriere's job experience has been varied and broadening. He became a research associate at Louisiana State University, Division of Engineering Research. He became a design engineer with E. E. Evans & Associates from September 1963 to September 1964, and was associated with Waldemar S. Nelson & Company, Inc., as a principal engineer until 1969. He has risen from the position of Deputy Director of the Department of Streets in New Orleans to his present status with the Department through his obvious dedication to his profession.

Mr. Carriere was instrumental in getting work under the "Off System" street improvement program for the State of Louisiana underway. This program will provide for off system street improvements in New Orleans. He was also involved with getting the TOPICS program, to provide street improvements over a two-year period, started. He has worked with the Community Improvement Agency and the Model Cities program in developing their street program, and has also worked closely with the Louisiana Stadium Commission in planning the roadways for the Domed Stadium.

The Louisiana Engineering Society young engineer award has as its stated aim a desire to recognize an engineer not over thirty-five years of age who has demonstrated to a high degree capabilities in his chosen field of engineering, thereby indicating potential for further advancement and leadership as a professional engineer. Blaise M. Carriere has shown consistently through his work that the qualities he demonstrates are consistent with the qualifications sought by the committee which selects this award.

N.S.P.E. MEETS IN SALT LAKE CITY

By Jim Janssen

In spite of the weather (five degrees below zero in Salt Lake City, ice storms from north Louisiana to Atlanta and snow in New Orleans) the January 8-13, 1973 National Society of Professional Engineers Winter Meeting was a huge success. Held in one of the few remaining truly gracious old hotels of the last century, the Hotel Utah in downtown Salt Lake City adjacent to the Mormon Temple Square was ideal for the meeting. The opening sessions were meetings of the Executive Boards and Boards of Governors of the various functional sections or practice divisions as they are now called. The newest of these groups, the Professional Engineers in Construction, is already in full swing under the able chairmanship of genial George Hightower of Atlanta.

The "NSPE Professional Meeting" attended by the National Officers and by the National Directors from every state (each of whom has a single vote) started at 9:00 P.M. Wednesday after the "State of the Society" dinner and went on until noon Saturday. In his State of the Society address, President Jim Shivler emphasized the validity of the Society's plan to increase its membership, pointing out that since the institution and rapid growth of the NSPE-technical societies liaison movement, NSPE is more and more being recognized as the major representative of the profession, in non-technical and professional objectives. Matters discussed or acted on by the Board of Directors were Collective Bargaining versus Collective Action, Professional Schools of Engineering, Involvement of Young Engineers, the eagerly awaited Guidelines for Professional Engineering Employment Pension Activities, status of the defense against the charges of anti-trust violations and other topics. For more information on these activities, see the *Professional Engineer* magazine for February and for March 1973.

Social events were so arranged as not to interfere with the work program and included a moonlit, frost-bit trip to a tremendous open pit copper mine, several dinners and luncheons with technical speakers and the traditional Regional Breakfasts. The Southwestern table presided over by Vice President Del Schmand was well filled and brought old and new friends together. An "Order of the Engineer" Ring Ceremony (of which you will be hearing more) was held.

The Ladies Auxiliary of the Utah Society of Professional Engineers, assisted by wives of other delegates, went all out to make the visiting ladies welcome and happy. Their program included tours, luncheons, a boat ride on the Great Salt Lake, and a bus trip to a ski resort. It afforded a wonderful opportunity for the ladies to compare and discuss the programs of their various independent state auxiliaries. Mostly their efforts center around aid to engineering students, quite a few of these groups having achieved an enviable record in this respect. We will have to make a strenuous effort to uphold the tradition of southern hospitality at the forthcoming regional and national meetings in New Orleans and Biloxi.

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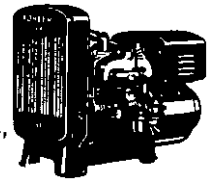

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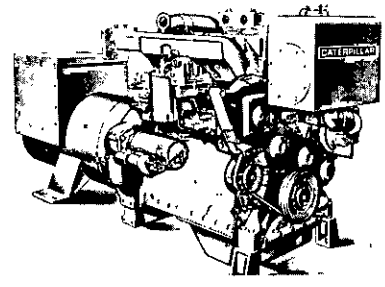

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1972 ANNUAL REPORT STATE OF LOUISIANA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS

The regular meetings of the Board were held in January, February, April, May, June, July, October and November.

The following is a tabulation of the applicants considered during the year:

PROFESSIONAL ENGINEER

Applicants considered	728
Applicants approved on the basis of:	
Graduation plus Experience	331
Long Established Practice	15
Reciprocity	167
Experience plus Examination	8
Applicants disapproved	15
Applications withdrawn	11
Applications being processed	181

LAND SURVEYORS

Applicants considered	18
Applicants approved	8
Applicants disapproved	4
Applications withdrawn	1
Applications being processed	5

The following is a tabulation of the total number of Professional Engineers, Land Surveyors and Professional Engineers (Public Employees) and Engineers-in-Training holding registration on December 31, 1972:

Professional Engineers	10,016
Professional Engineers (Public Employees)	105
Land Surveyors	3,353
Engineers-in-Training	1,293

Below is a tabulation, by branches, of the Professional Engineers who were registered as of December 31, 1972:

Agricultural	134
Chemical	835
Civil	3,900
Civil/Industrial	2
Electrical	1,620
Industrial	34
Mechanical	2,769
Mechanical/Industrial	59
Metallurgical	24
Mining	28
Petroleum	932
Petroleum/Industrial	1

Examinations in fundamental engineering subjects were given on April 22 and December 9, 1972 in each of four cities in Louisiana: New Orleans, Baton Rouge, Lafayette and Ruston. A total of 582 applicants took these examinations.

Examinations in the branches of engineering and in land surveying were given in New Orleans on March 18, September 16 and December 9, 1972. The Board used examinations prepared by the National Council of Engineering Examiners to examine applicants in Civil, Chemical and Electrical and Mechanical engineering for the December examination.

Mr. Roy T. Sessums was elected President of the National Council of Engineering Examiners in August 1972. Mr. Sessums is the second person from Louisiana to become President. Marcel Garsaud was the first President of the Council and served during the years 1920-21.

In October 1972 Governor Edwin Edwards appointed Mr. Larkin B. Agnew of Alexandria, Louisiana to replace Mr. A. D. Jackson as a member of the Board. Mr. Agnew is State Conservation Engineer for the United States Department of Agriculture Soil Conservation Service and is responsible for the technical quality of all engineering work for the Service in Louisiana.

Mr. A. D. Jackson had been a member of the Board since its creation in 1950. During this period he served with distinction and held every office including Chairman of the Board in 1967.

In August 1972 Mr. F. M. Tes-

sier was appointed Land Surveying Assistant to the Board to replace Mr. C. J. Tircuit. During the past four years Mr. Tircuit attended every meeting of the Board and contributed greatly to the improvement of the procedures for registering Land Surveyors.

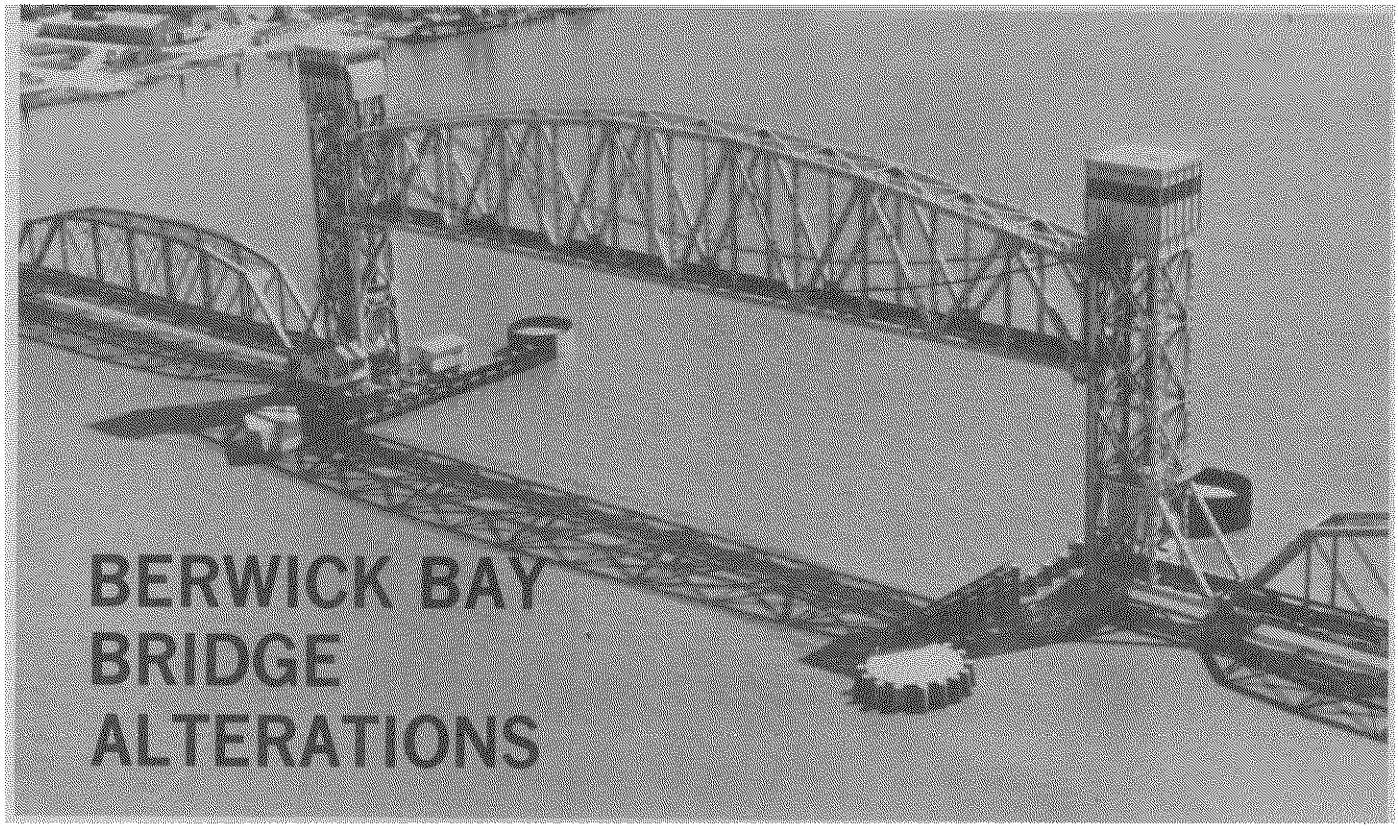
The Board investigated 228 cases involving possible violations of the registration law with regard to the practice of engineering and land surveying. Of these, 170 were settled without litigation. The balance are still under investigation.

A list of the firms that have complied with the regulations of the Board that govern engineering and land surveying firms is published in the YEARBOOK. These regulations, also published in the YEARBOOK, require each qualifying firm to list principals and full-time employees who are registered in Louisiana. A new list must be submitted before July 1 of each even numbered year.

During the year the Board began a comprehensive study of the statutes providing for the registration of Professional Engineers and Land Surveyors. A copy of these statutes, La. R.S. 37:681 et seq. has been published in the YEARBOOK. In making its study the Board will consult and counsel with all parties expressing interest and will have its office staff compile and correlate the information received. The Board will be prepared to advise interested parties of the probable effect of proposed changes based on the Board's experience and study.

Standing, left to right, are the newly elected officers of the Louisiana State Board of Registration for Professional Engineers and Land Surveyors. They are Larkin B. Agnew, Secretary; Ben T. Bogard, Chairman; and Andrew M. Moore, Vice-Chairman.

Pictured together is the entire Louisiana State Board of Registration for Professional Engineers and Land Surveyors. Standing, from left, are Calvin T. Watts, Roy T. Sessums, Waldemar S. Nelson, Leo M. Odom, Jesse Coates, Dan Vleet, and F. W. zurBurg. Seated in front are the new officers, Larkin B. Agnew, Ben T. Bogard, and Andrew M. Moore.



BERWICK BAY BRIDGE ALTERATIONS

By

D. F. Sorgenfrei, P.E.
Project Engineer
Modjeski and Masters

The Atchafalaya River, from its beginning at the confluence of the Red River and Old River north of Simmesport, Louisiana, to its outlet in the Gulf of Mexico south of Morgan City, Louisiana, has for many years been an impediment to railroad and highway transportation from New Orleans to the west. It is notorious for swift current, great depth, unpredictable scour and hazardous construction conditions.

The Southern Pacific Transportation Company's main line railroad from New Orleans to Houston has crossed the Atchafalaya River at Morgan City since 1885 on a bridge connecting Morgan City to Berwick. The original structure on timber pile bents was constructed in 1880 and was replaced by the present existing structure in 1907. The 1907 bridge consisted of six fixed truss spans, each 232 ft. long, and a swing span with twin 110 ft. navigation openings, all on masonry piers.

Because of the location of the original navigation openings in close proximity to the west (Berwick) bank of the River, and with greatly increased marine traffic generated by the offshore oil industry and the opening of the Old River and Port Allen locks, the bridge in the 1950's began to suffer numerous collisions from marine traffic. These collisions often forced its closing to both marine and rail traffic, necessitating expensive and time consuming repairs.

On April 26, 1966, the Secretary of the Army declared the bridge an obstruction to free navigation, thus making it possible to alter the bridge under the terms of the Truman-Hobbs Act. A plan was devised calling for the construction of a new 366 ft. lift span in the existing bridge, with the new span to be located in the approximate center of the river, aligned with the navigation opening of the existing upstream highway bridge. The alteration plan, with the new navigation span and flanking lifting towers replacing two existing through trusses, was adopted, and construction began on April 15, 1968.

Since the bridge is on the Southern Pacific Transportation Company's transcontinental route connecting New Orleans with the west coast, construction interference with rail traffic had to be minimized. Substructure requirements called for each tower to be supported by two piers, one existing pier and one new pier. The back legs of the towers, which have light reactions, were positioned on that portion of Pier 4 and Pier 6 that was occupied by former thru trusses. New piers, Pier 5 West and Pier 5 East, were constructed to support the heavy front tower reactions. The existing bridge provides a low level river crossing with the bottom of the trusses at elevation +13.1 ft. Since there was not sufficient room to construct a new pier directly under the existing trusses without interfering with rail traffic, it was decided to support the front tower legs on a concrete strut between twin pier shafts adjacent to the existing bridge. The pier shafts are each supported on an open-dredged tremie sealed caisson. The caissons are 66 ft. center to center and are 50 ft.-6 in. forward of the existing piers.

Caisson foundations were used rather than pile foundations for

supporting the pier shafts since there was concern that the driving of piles near the existing piers could induce settlement which could not be tolerated by rail traffic. The caissons are 36 ft. square in plan with four dredgewells each 12 ft.-6 in. in diameter. Caisson heights were 72 ft. and 87 ft. high respectively for Piers 5W and 5E.

The proximity of the new piers to existing piers prompted the decision to use willow mattresses to prevent scour around the existing piers and also to prevent scour under the new caissons prior to the caissons penetrating the river bottom. To provide this protection, it was necessary to make two mattresses for each location. One rectangular mattress 108 ft. by 284 ft. long was placed covering the new caisson areas with one edge of the mattress against the existing pier. A U-shaped 76 ft. by 140 ft. long mattress was placed around the other three sides of the existing piers, overlapping the first mattress by 20 ft. The willow mattresses were constructed from 16 in. diameter fascines composed of willow brush two inches to six inches in diameter lashed together with non-corrosive wires and cables. Pole cribbing was attached to the top of the mattresses for holding 10# to 100# ballast stone for sinking the mattresses. The floating mattresses were constructed at Old River, Louisiana and towed about 120 miles to the site.

Following the clearing and leveling of the river area to be occupied by mattresses, the contractor drove H-beam slide piles at the upstream end of the mattress area. A mattress was floated into position and attached to sliding devices for riding the pile flanges to the river bottom. To further aid in controlling the mattress sinking, barges were anchored around the periphery of the mattress and cables run from barge cleats to the mattress. When sufficient sinking stone had been uniformly cast over the mattress area to create a negative bouyancy, the mattress was lowered by cables to the river bottom, in five-foot increments. After landing the mattresses, two feet of 50# to 250# limestone riprap was placed over the areas.

To get proper placement of riprap on the river bottom, the drift of the riprap due to the river current had to be measured. By casting a heavy rock into the river with a line attached, and then plumbing the rock's line when it reached the river bottom, the drift was meaured. A five foot grid system was established along the bridge axis and transversely on the riprap barges. Placement of riprap into each grid square was made by a small front end loader from the riprap barge. A check for proper coverage was made by calculating from the change in barge draft the volume of riprap used and dividing it by the square footage covered.

In April, 1962, a tow missed the near west bank swing span opening and pushed an existing 232 ft. simple span directly west of Pier 4 into the river. Before the west willow mattresses could be placed, it was necessary for the contractor to remove part of the sunken span. First, an attempt was made to swing the interfering end of the sunken span out of the way by attaching large cables to the span and using heavy barge mounted oil field winches to lift and swing the span. After this attempt failed, the contractor employed divers to burn through interfering span members and hoist them to the surface. It took approximately two weeks to remove two panels of the span.

A further complication was found while clearing the river bottom on the upstream side of the west mattress area. Timber piles 80 ft. long were found on the river bottom which were apparently piles from the original bridge built 50 ft. upstream from the existing bridge in the 1880's. Broken tip sections of piles were uncovered in the river bed and plotted with the aid of divers. Since the broken pile tips were in the river bottom area to be occupied by a caisson, the obstructions had to be removed specially with the proposed use of dredgewell plugs in the bottom of the caisson. To remove these piles a vibratory extractor with jaws modified for grasping large diameter piles was used. The apparent pile tip elevation of these piles was elevation −110 ft.

The removal of the piles had barely been completed when a loaded chemical barge broke loose from a tow, ruptured and sank in the north Pier 5W caisson area. Eight months later the barge was removed, the river bottom area releveled and mattresses sunk. Due to the many delays, the west willow mattresses, then sixteen months old, became waterlogged. To refloat parts of the mattresses and keep them buoyant, it was necessary to tie 55 gallon drums and barges to the mattresses until they could be positioned for sinking. There was, however, no mattress deterioration due to the long delay. During the numerous construction delays on the west side of the bridge, the Pier 5E caissons were constructed, sunk, and the pier completed prior to the sinking of the west mattresses.

For constructing each caisson, a lowering frame consisting of a beam frame supported on top of four corner guide piles was built at the caisson locations and X-braced with cables. The lowering frame was used to position and hold the caisson during construction and to aid in sinking the caisson. At each corner of the lowering frame was mounted a pair of winches operated either manually by handwheels or by electric drills. Twelve part lines running between the lowering frame winches and the cutting edge section controlled the elevation and level of the caisson until detachment after sufficient penetration into the river bottom.

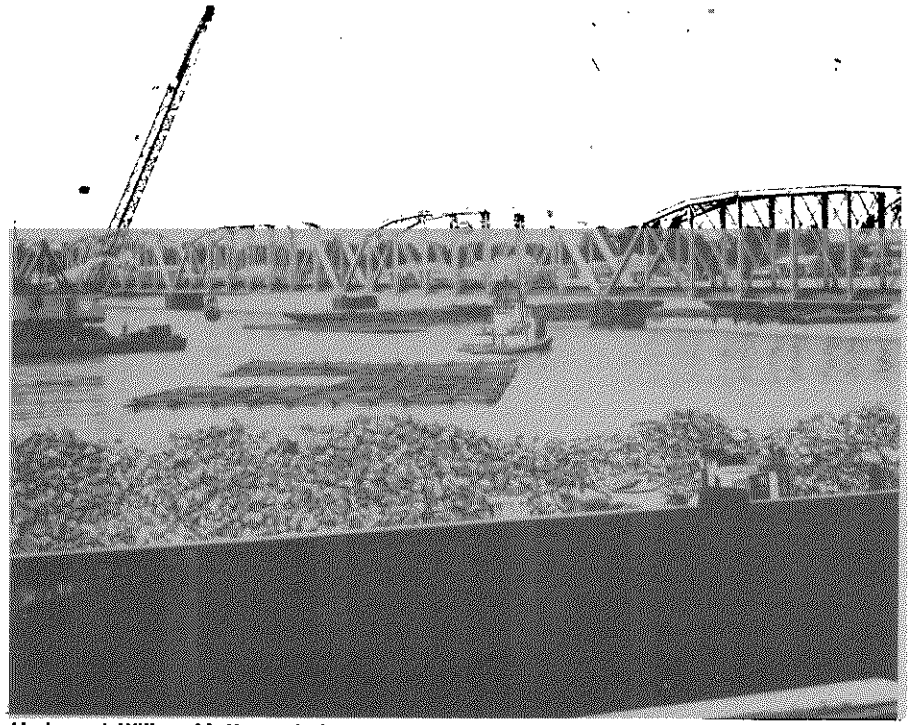
The caisson's steel cutting edge sections, 36 ft. square and 20 ft. high, were made in Vicksburg, Mississippi and barged to the site where they were fitted with composite timber and concrete dredgewell plugs. The plugged dredgewells increase caisson flotation and allow initial caisson construction "in the dry." The cutting edge sections were placed

in the river, towed to the caisson site and positioned in the guide stall with guide tongues riding between the cutting edge sides and the guide piles of the lowering frame. Twelve part lines from the lowering frame were attached to the cutting edge section near the guide tongues.

Instead of using conventional caisson forming, where the forms become a permanent part of the caisson, the contractor slipformed the caissons. On top of the floating cutting edge section, a 16 ft. high 36 ft. square slipform was placed. Through the use of a special rubber gasket a watertight seal was made between the form and the concrete at the form's bottom. The contractor designed the slipform to withstand the water pressure at the bottom of the river along with the required slipform corner jacking pressures. As the caisson and slipform were lowered by cables into the river during each concrete pour, circular follower cofferdam sections were bolted to the slipform top as required, keeping the interior of the caisson dry. The circular cofferdam sections as well as the slipform did not require any internal bracing.

The caissons were constructed in 10-foot lifts. starting with the placement of preassembled reinforcing steel wall panels inside the slipform. The form walls were then greased to aid in jacking the slipform while four circular dredgewell forms were positioned. Caisson concrete was batched at a local plant about four blocks from the site. Trucks mixed and delivered the concrete to the contractor's dock and chuted it into six 2-cubic yard buckets on each of two pontoons. While one pontoon was being loaded at the dock, a crane unloaded concrete from the other pontoon into the caisson. An approximate pour rate of 50 to 60 yards per hour was achieved using this method. A typical 10-foot lift of concrete contained approximately 300 cubic yards of Class B concrete.

Following a short concrete curing period, a pair of 150 ton hydraulic jacks were positioned



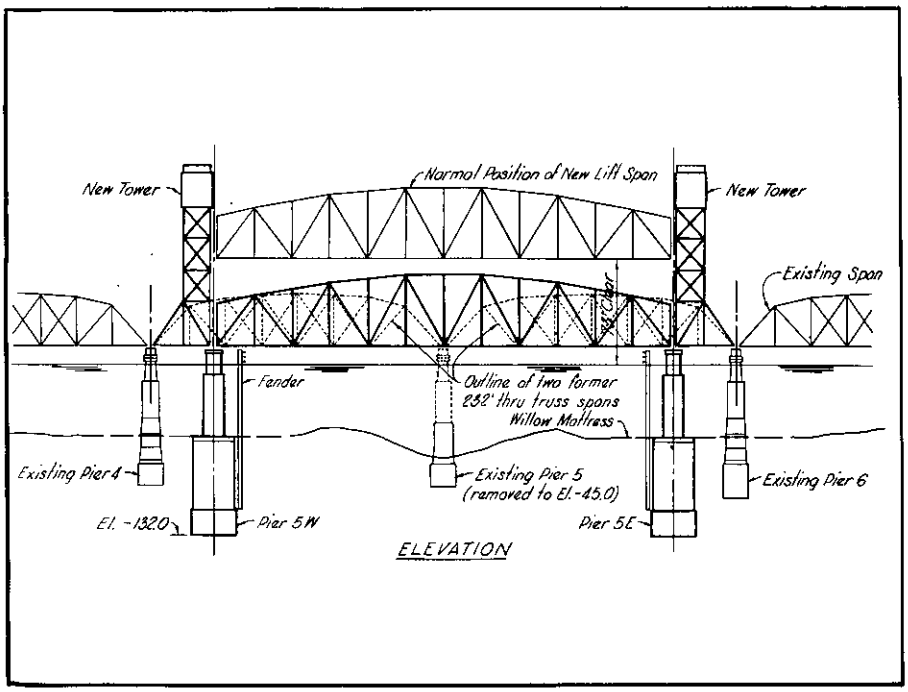
U-shaped Willow Mattress being towed to pier site. Note riprap in the foreground. The two center existing spans were replaced by the new lift span.

in each corner of the caisson and connected to a central jacking console. The console pumped equal amounts of fluid into each of the eight jacks, thereby raising the slipform uniformly. To break the bond between the slipform and the newly placed concrete, an initial moderate jacking force was required. As the raising of the form progressed, the required force diminished. Jacking was done against the stout corner roof area provided in the form transition from a square slipform to the circular cofferdam. After reaching a twenty-inch height (the height of the jack ram), pressure was released from four jacks, one in each corner, so that ram extension sections could be placed on the jack heads. Extension sections were then added to the other four jacks, and all eight jacks were activated, raising the slipform another 20 inches. This process was repeated until a typical lift of 10 feet had been reached. In the raised position, the slipform overlapped the previously poured caisson concrete by one foot and was held in the raised position by bearing on lugs welded to corner sounding well pipes in the caisson. The jacks were removed, caisson concrete surface cleaned and reinforcing panels placed for the start of another 10 foot lift. At first each operation required considerable time, but with the repetitive work involved in each lift. a lift cycle of four days was achieved in constructing the western two caissons.

By the time 52 feet of the 72 foot high caisson had been constructed, the caisson had touched the river bottom. Prior to landing on the river bottom, a chopping beam was used to cut the willow mattress. The dredgewell plugs were allowed to stay in place while the caisson penetrated through the river bed and the caissons became somewhat stable.

In preparing to sink each caisson, the caisson-slipform-follower cofferdam combination was flooded, equalizing pressure inside and outside the caisson.

Twelve part lines from the lowering frame attached to the cutting edge section were detached one at a time so that long links could be added. This prevented the lower blocks of the twelve part lines from being buried in the river bottom and allowed further control of the caisson through some of the upper soft gray clay strata. After the cutting edge section had about 25 feet of penetration into



General View — Berwick Bay Railroad Bridge selected as A.I.S.C. Prize Bridge 1972/Movable Span.

the river bed, the lines were detached from the caisson. The dredgewell plugs were then removed by dropping a chisel pointed chopping beam on the plugs until the timbers were split and floated to the surface.

To sink each caisson, river bottom material was removed through each of the four dredgewells. Settlement of the caisson occurred when the caisson load per square foot of exterior caisson surface exceeded the cohesive strength of the soil. The material removed from each caisson was cast into the river and carried away from the site by the current. Caisson sinking was stopped when the cutting edge reached a dense to very dense gray silty sand at elevation −132 feet. The bottom interior area of the cutting edge section known as the "working chamber" was cleaned of all clay by using a right angle water jet to loosen the material and an air lift to remove the material. After the working chamber was inspected by a diver, and after soundings indicated that the contour of the founding material in relation to the cutting edge elevation was satisfactory, the caisson bottom was sealed with a 15 foot thick tremie seal.

Water was removed from the combined cofferdam-slipform sections until the top of the caisson was exposed. Following the cleaning of the caisson concrete surface, dredgewell covers were placed and a five foot thick reinforced concrete distribution block was poured, sealing the top of the caisson. The pier shafts were poured in 12 foot lifts inside the follower cofferdam to elevation −seven feet. A nose section form of the pier strut was positioned and bolted to inserts in the pier shaft top before the cofferdams and slipform were flooded and removed. After completing both pier shafts, a U-shaped form section for the center of the pier strut was placed in the river, submerged and brought up underneath the existing truss span and positioned between the two strut nose forms. The center section of the strut form engaged overlapping form plates, making a watertight seal. The form was dewatered, three 13 ft. deep steel trusses were erected between the pier shafts inside the 16 ft. deep by 12 ft. wide strut form, grillage bearing plates and anchor bolts were positioned, and the strut was concreted, thereby completing the new pier. Clearance between the top of the newly constructed pier and the bottom of the old existing truss was 3.8 ft.

While the pier work neared completion, the superstructure subcontractor started erecting the lift span near the east bank of the river, supported by two falsework bents each positioned on a 39 ft. wide by 173 ft. long barge with struts between the barges to keep them in proper alignment. The span is a 12 panel curved top chord Warren Truss carrying a single track and is designed for a Cooper E-72 loading. The trusses are 20 ft. center to center and are composed of shop riveted box sections, with field bolted connections. The erection of the span was slowed somewhat by having to keep the erection load balanced on the floating falsework bents. The base sections of the two towers were cantilevered from the ends of the span so that the entire assembly could be floated into position in the bridge in one operation. Ties and continuous welded rails were completed in place on the new span to aid in reducing the total time required to interrupt rail traffic during the changing of spans. The two existing spans were readied for removal by welding stay plates between key eyebar diagonal members.

On September 3, 1970, at 5:00 a.m., the bridge was closed to rail traffic. The rail and railroad signal cables were cut by railroad personnel prior to the contractor starting work at 6:00 a.m. Partially submerged barges, that had been positioned with falsework bents under the existing spans the previous day, had water pumped from their holds until the spans cleared the piers. The first span was towed from the site at 7:45 a.m. and the second 232 ft. span left at 8:55 a.m. At 9:55 a.m., movement of the lift span with the cantilevered tower base section weighing 1360 tons and 470 ft. wide, was started. The movement was accomplished by winching the span upstream on cables attached to the piers.

By 11:30 a.m. the lift and tower spans were in position and by 6:10 p.m. the spans had been lowered over the 80 required anchor bolts. While the erection barges were being removed, rail

gangs joined the new rails to the existing rails and rail signals were re-established. At 8:08 p.m., the first train crossed the span, some fifteen hours after the start of changing spans.

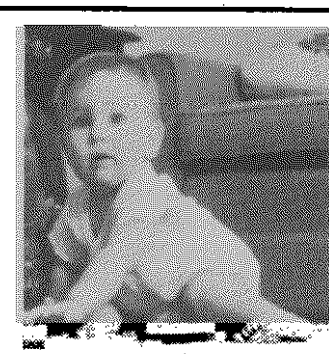
After the new lift span had been secured, the two towers were erected to the machinery floor level at elevation +135 ft. In both towers, two 42 ton, 14 ft.-3 in. pitch diameter sheaves, supported by self-aligning roller bearings, were positioned on top of heavy girders before erecting the machinery houses. Counterweight jacking frames were installed at the lower machinery floor level with eyebars reaching down to temporarily support the counterweight box. The jacking frame allows the holding of the counterweight box while installing the counterweight ropes and allows for the possible changing of ropes in the future. The counterweight boxes were filled with heavy concrete weighing 250 pounds per cubic foot obtained by substituting steel punchings for coarse aggregate. Forty 2⅜ in. diameter, 6 x 19, improved plow steel cables with hard fiber cores, 10 per span corner, were attached to the counterweight, draped over the sheaves, and attached to the lift span. The eyebar counterweight supports were then removed, putting the entire counterweight load on the cables.

The span is powered by a 40 horsepower A-C motor in each tower coupled to a gear reducer, clutches, drive shafts and a pinion gear engaging a ring gear on each sheave. Span movement is accomplished through the frictional contact of the counterweight ropes passing over the sheave. The rate of ascent of the lift is about one foot per second. Control of the span motors is provided by silicon rectifier controls and synchronized selsyn devices maintain the bridge in a level position. The normal power source is the Morgan City Electric Department, which supplies 440 volt three phase 60 cycle power at the east end of the bridge. Emergency power for operating the bridge is provided by a natural gas powered 170 KW engine generator set located in a generator house on the downstream side of Pier 5E. A gas powered 30 KW engine generator set is also provided for maintaining lighting automatically during the loss of City supplied power. On the upstream side of Pier 5E the control house is built at track level. It houses the bridge tender, control console, many of the electrical components, and the necessary communication systems.

Normal position for the lift span is the raised position since marine traffic exceeds rail traffic. When in the raised position, the span is in equal balance with the counterweights. When the span is down, the span is 10,000 lb. heavier than the counterweights. Balance chains between the counterweight boxes and the

Continued on Page 26

This year's $228,553,000 blanket expenditure



will keep him warm next winter.

At your Louisiana Investor-Owned Electric Companies, we can't afford to stop planning and building ahead for your future electric needs.

That's one reason why we've budgeted over $228 million for new construction in Louisiana in 1972. This blanket expenditure will cover the cost of building additional generating facilities, adding new lines and improving our present system.

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ENGINEERS WEEK

Baton Rouge

Engineers Week activities began Monday, February 19 with the signing of an Engineers Week proclamation by the Mayor at 10:00 A.M. and by the Governor at 11:00 A.M. Throughout the week, local engineers appeared on radio programs, television presentations and as speakers at various civic clubs throughout the Baton Rouge area, to discuss Engineers Week.

In addition, canned spot announcements were distributed to radio and television stations for use throughout the week. The activities culminated in a banquet held February 22. The banquet, which featured Dr. John J. McKetta, a Chemical Engineer from the University of Texas, as its main speaker, provided a forum for the presentation of an award to the Louisiana Department of Highways, for two bridges designed and constructed under its supervision. The award was presented by the American Institute of Steel Construction.

Lafayette

Engineers Week began in Lafayette on February 14, with a live television announcement explaining the purpose of the week and the planned activities. During the following week, several Lafayette engineers participated in television interviews concerning various aspects of the profession of engineering.

The highlight of the week's observance was the engineering banquet on Friday, February 23, at which Lt. Governor James E. Fitzmorris, Jr. gave an address, "Builder or Wrecker." He urged for more citizen participation in government because the apathy of the average citizen in this state and country is "absolutely appalling" and the permissive society of today makes it difficult for a public servant to do his job. Also at the banquet, several awards and a scholarship were presented. Coverage of the week's activities was fully presented in local and area newspapers.

Lake Charles

Lake Charles celebrated Engineers Week by holding a gala banquet at the Sheraton Chateau Charles. Dr. James Kirk, general manager of research and development for Continental Oil Company, was the guest speaker. Awarded at the banquet were honors for the outstanding senior and junior McNeese Engineering students, both of whom received $150.00 from the Lake Charles Chapter of L.E.S.

Activities this year in addition to the banquet included proc-

Governor Edwards declares February 19-24, 1973, as "Engineers Week" in Louisiana. Shown signing the proclamation are, left to right, Hoyt W. Brown, Jr., P.E., President of L.E.S.; Governor Edwards; Charles Hair, P.E., President of Baton Rouge Chapter; Larry McKee, P.E., Chairman of Engineers Week.

lamations by local mayors, displays of scale models of area engineering achievements, Engineers' Week posters, newspaper articles, and an Open House at McNeese University School of Engineering. The McNeese Engineering Society dance was held February 24, and the queen was selected by L.E.S. and L.E.S.A. presidents and past presidents.

Monroe

An official proclamation honoring the engineering profession by Mayor Ralph Troy of Monroe and Mayor W. B. Hatten of West Monroe opened the festivities during Engineers Week, February 19-23. Publicity for the activities was covered by local newspapers, radio and various signs and marquees throughout the area.

Five high school students in the Monroe vicinity were honored as "Engineers for a Day" at their respective schools. Mr. William Glasscock, President of the Louisiana Tech University Student Engineers Association, was the speaker for the occasion, a luncheon held in the students' honor.

The annual Engineers Week banquet was held Tuesday night, February 20. Featured speaker for the meeting was Mr. Joe Herring, Chief of the Wildlife and Fisheries Game Management Division. In addition, seven past presidents of the Monroe Chapter were introduced, receiving a rousing round of applause.

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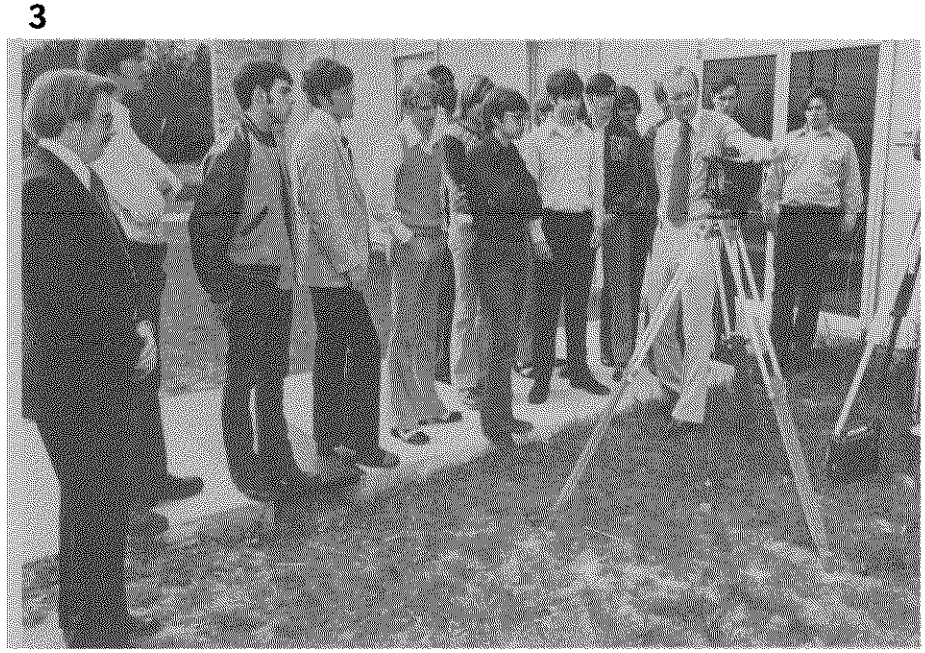


1

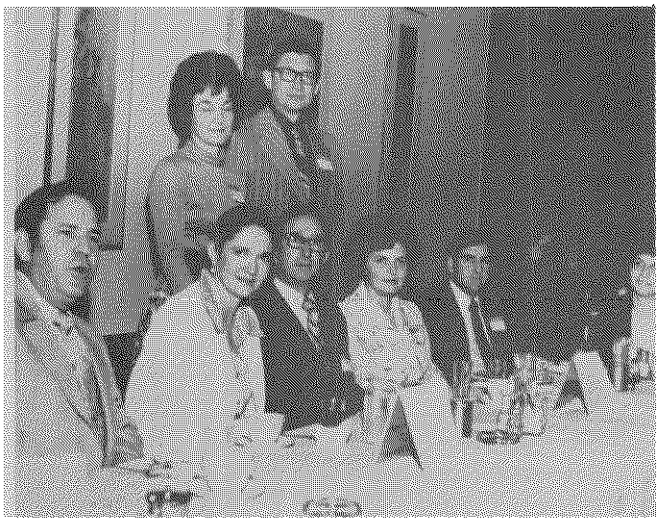
Mr. Otto Curry, extreme left, of the Monroe Utilities Commission conducts students on a tour through the Commission's electrical generating plant.

2

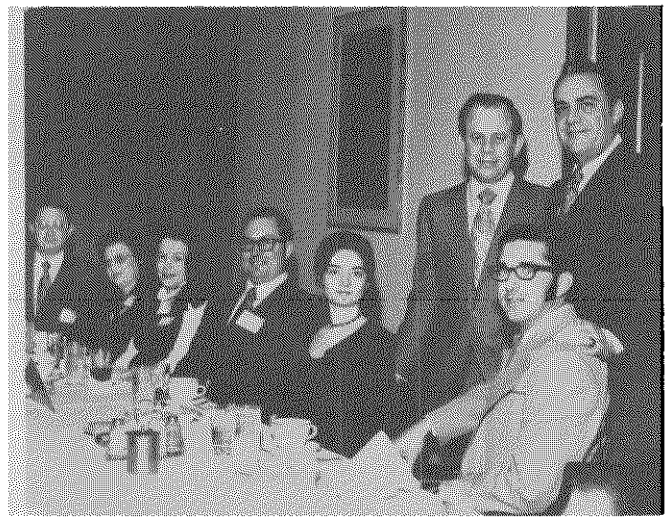
Signing the proclamation for Engineers Week for the cities of Monroe and West Monroe are, left to right, Mayor Ralph Troy (Monroe), Mayor Bert Hatten (West Monroe), Charlie Stubbs and E. E. "Buddy" Moncla.

3

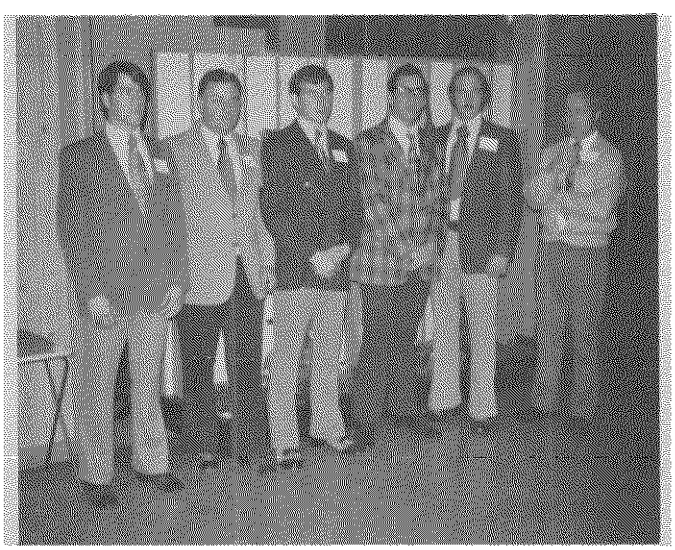
Don Hardin, closest to transit, and Richard Johnson, extreme left, conduct a tour of facilities at Ford, Bacon & Davis Construction Corporation in Monroe.



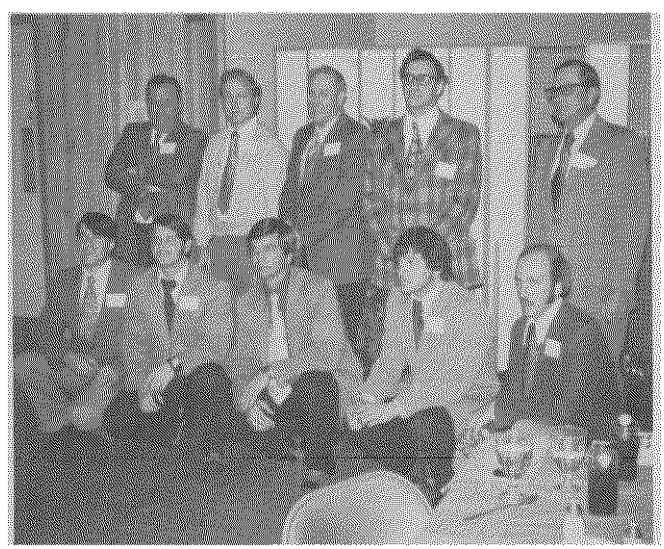
Head table attendees during Lafayette Chapter ceremonies seated, from left to right, are Mayor Kenneth Bowen and wife, Mr. and Mrs. Irving Manuel, Mr. and Mrs. Jerry Artigue and, standing, Mr. and Mrs. Jesse Odom.



Other head table attendees in Lafayette seated, left to right, are Mr. and Mrs. A. Roy Riley, Mrs. and Mr. Harold P. LeRay, Mrs. and Mr. Malcolm Huval and, standing, Senator Edgar Mouton and Lt. Governor James Fitzmorris.



Standing, left to right, are Roy Robichaux, president and speaker, Nicholls Engineering Society; Tom Petermann, LES speaker; Earl Champagne, NES speaker; Herb Pourciau, president, Bayou Chapter; Antoine Gautreaux, NES speaker; and Gene Weber, LES speaker.



Standing, in the usual order, are the Bayou Chapter Officers: George Bergeron, first vice-president; Gene Weber, third vice-president; Tom Cox, secretary-treasurer; Herb Pourciau, president; Hubert Sneed, second vice-president. Kneeling, in the same order, are Roy Robichaux, president of the Nicholls Engineering Society, with the other officers: Nerc Mabile, vice-president; Terry Dantin, faculty adviser; Ralph Roger, secretary; Antoine Gautreaux, Jr., treasurer.

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Berwick Bridge

Continued from Page 22

towers and the position of the counterweight ropes cause the change in balance. When the span is in the down position it is locked in position with span locks. Each of the four span locking units consists of an oscillating jaw, rotated by means of a system of links and a rack, to engage a lock seat casting on the bottom chord ends of the lift span truss, near the centerline of the pier. The driving mechanism is capable of exerting a force large enough to deflect a span corner and seat its bearing shoe. In the locked position, the lock is capable of resisting uplift that may be developed by the maximum design wind. Guide rollers, which engage a guide flange on the main tower columns, are provided to hold the span in position as it is raised or lowered. Transverse guidance is provided by rollers positioned at the four upper and lower corners of the span. Longitudinal guidance is provided by rollers at the two lower corners at Pier 5W.

On April 5, 1971 a tow missed the existing swing span opening and displaced the existing swing span's west rest pier, halting rail traffic and forcing the closure of the channel to marine traffic. The first boat through the opening following emergency repairs further damaged the pier, resulting in additional emergency repairs. By April 9, rail traffic had been restored but the swing span remained closed to marine traffic. During this time period the electrical subcontractor was instructed to rush completion of the electrical system. On April 14, the new lift span became operational and was opened to marine traffic, using two 5 horsepower temporary motors coupled to the drive shafts and using manual stop and start switches to raise and lower the span in about fifteen minutes each way. The remaining electrical work was completed, and on May 27, 1971, the span became fully operational.

Existing pier 5, left in the middle of the new channel, was demolished by blasting. An air curtain was placed around the pier, powered by three 600 cfm air compressors, to reduce shock. Recording devices showed that the shock level at the new structure was lower than that required to crack plaster.

A fender system consisting of 36 in. diameter pipe piles was driven along the channel face of the new piers. Steel wales with rubbing timbers were welded to the piles and dolphins were provided upstream and downstream from the new piers.

Following the permanent closure of the existing west bank swing span, formal acceptance of the structure was made in January, 1972.

QUANTITIES

Willow Mattresses	84,600 sq. ft.
Sinking Stone and Riprap	9,600 tons
Mass Volume in Caisson	13,277 cu. yd.
Concrete	4,400 cu. yd.
Reinforcing Steel	399,000 lb.
Structural Metalwork	3,945,700 lb.
Metalwork in sheaves, shafts and bearings	400,400 lb.

The Berwick Bay Bridge is owned by the Southern Pacific Transportation Company. Modjeski and Masters, Consulting Engineers, designed the bridge alterations and provided field engineering services. The general contractor was Massman Construction Company with J. F. Beasley Construction Company the superstructure subcontractor and Hunt Engine & Equipment Company the electrical subcontractor. Structural steelwork was fabricated by Vincennes Steel Corporation, Division of Novo Corporation.

Each year, the American Institute of Steel Construction conducts a national contest to select the most beautiful steel bridges opened to traffic during the preceding year. On July 6, 1972, the Berwick Bay Bridge was selected as the "Prize Bridge" in the movable span category for 1971.

ENGINEWS

ENGINEERS IN THE NEWS

Mr. H. E. Bovay, Jr., P.E., President of Bovay Engineers, Inc., with offices in Houston, Texas, Spokane, Washington, and Baton Rouge, Louisiana, is pleased to announce the election of Jack H. Clabaugh, P.E., Manager of the Baton Rouge office, as a Vice President. In addition, Keith Dutton has been elected Treasurer, with Hayes A. Chapin, P.E., of Houston, elected an Associate. Robert A. Smith, P.E., of Spokane, Washington, has also been elected as an Associate of the firm.

OCEAN AND COASTAL ENGINEERING

Place: Louisiana State University-New Orleans

Objective: To provide a fundamental background in the analysis and design problems of ocean and coastal engineering. The course is intended for practicing engineers involved in coastal problems, harbor design, environmental considerations and offshore structure design. In particular the course will cover such subjects as linear and non-linear wave theory, wave and wind generation and prediction, hurricane surge, forces on structures, coastal processes, tidal phenomena, environmental aspects and foundations.

Lecturers: C. L. Bretschneider, L. W. Canter, R. G. Dean, B. LeMehaute, B. McClelland, E. Russo.

Dates: April 16-19.
Fee: $250.

Contact: Dr. E. P. Russo, Department of Engineering Sciences, Louisiana State University in New Orleans, New Orleans, Louisiana 70122.

IN MEMORIAM

JOSEPH R. PEZOLD

Died February 10, 1973

Joseph R. "Joe" Pezold, a member of this society, passed away in Metairie, Louisiana, on February 10, 1973, following a brief illness.

Joe was a highway engineer, but, more than that, Joe was a human engineer with a jovial and friendly disposition which brightened the world around him and buoyed those with whom he came in contact. He was small of physical stature, but his heart was large, his smile was broad and his friends were many. Those of us who knew him well have suffered a deep personal loss and the Louisiana Engineering Society and the Engineering Profession have lost a dedicated and a productive member. Therefore, we join here together to record and mourn his passing.

Mr. Pezold was born February 11, 1926. He was a native of Metairie, Louisiana, and was a resident of Metairie at the time of his passing.

In 1950, he graduated from Louisiana State University in Baton Rouge, Louisiana, with a Bachelor of Science degree in Civil Engineering. Subsequent to graduation, and for the majority of his dedicated service to his profession, he specialized in the field of highway engineering.

He worked with the Department of Highways of the State of Louisiana, with Fromherz Engineers, with de Laureal Engineers and with J. J. Krebs and Sons, Inc., as a highway engineer. During World War II, he served in the United States Navy.

Joe is survived by his devoted wife, Betty, and by two sons, Joseph, Jr., and Harry Pezold.

In addition to his membership in the Louisiana Engineering Society, Joe held memberships in the American Society of Civil Engineers and the Society of American Military Engineers.

PROFESSIONAL ENGINEERS GRANTED REGISTRATION

JANUARY 19, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

AKLY, ISSAM SALEH
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Civil

BELLOTT, ALBERT IRWIN
Bogalusa, La.
Mechanical

BERNARD, WILLIAM JOHN
Baton Rouge, La.
Petroleum

BOWMAN, JR., EUGENE CLAUDE
Garland, Texas
Electrical

BROWN, FREDERICK RUSSELL
Sherman Oaks, Calif.
Electrical

BROWN, HERMAN R.
Lafayette, La.
Petroleum

BRUMBY, BIRTO RALSTON
Houston, Texas
Petroleum

CALK, GLENN LAMAR
Monroe, La.
Mechanical

CHALAS, JOHN GEORGE
Arlington, Mass.
Civil

CHILDERS, MARK ALAN
New Orleans, La.
Civil

CLOUSE, WAYNE HOPE
Houston, Texas
Civil

CONKEY, DAVID ROLLAND
Minneapolis, Minn.
Civil, Mechanical

CONKLIN, CHARLES RUSSELL
Baltimore, Md.
Mechanical

EVANS, SHERWOOD LEE
Williamsburg, Va.
Civil

FINK, ERIC GEORGE
Gretna, La.
Mechanical

FORD, WILBURN KENT
Metairie, La.
Petroleum

FOURNIER, CHARLES DENIS
Cincinnati, Ohio
Chemical

GREEN, ROBERT STEPHEN
Monroe, La.
Mechanical

HAGEMEIER, CHARLES EDWARD
New Orleans, La.
Chemical, Petroleum

HARGIS, LOUIS LANE
Dallas, Texas
Civil

HASKINS, DAVID EMERSON
Baton Rouge, La.
Chemical

HENDRYX, JOHN W.
Shreveport, La.
Mechanical

HUANG, ANDREW TZE-AN
Baton Rouge, La.
Civil

JAMESON, JOHN DALLAS
Harvey, La.
Civil

MACEACHERN, JACK POTTER
Covington, La.
Petroleum

MACKIE, JOHN CURRIE
Warrenton, Va.
Civil

PALOTTA, JOHN CHARLES
Metairie, La.
Electrical

PETTY, JR., SCOTT
San Antonio, Texas
Petroleum

REIMER, CHARLES MAX
Gretna, La.
Electrical

ROBERTS, WILLIAM C.
Baton Rouge, La.
Mechanical

SCHAEJBE, FREDERICK WILLIAM
Sugar Land, Texas
Civil

SCHUERMAN, JR., WILLIAM AUGUSTUS
Walnut Creek, Calif.
Civil

SCHUTTE, LAWRENCE EDWARD
Baton Rouge, La.
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SCHWAB, RAYMOND WILLIAM
Peace Dale, R. I.
Civil

SIEBOLD, EUGENE RAY
St. Louis, Mo.
Civil

SMITH, JAMES EDWARDS
Baton Rouge, La.
Petroleum

SOLANAS, DONALD WARING
Covington, La.
Petroleum

SORRELL, WILLIAM ELLIOTT
Birmingham, Ala.
Civil

SPITZ, FREDERICK J.
Oklahoma City, Okla.
Civil

TUCKER, RALPH RICHARD
New Orleans, La.
Mechanical

WATSON, GEORGE E.
Monroe, La.
Petroleum

WATTS, ROBERT GLEN
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Mechanical

WILLS, DAVID RICHARD
Friendswood, Texas
Mechanical

WYATT, JAMES EDWARD
Gretna, La.
Civil

FEBRUARY 7, 1973

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Electrical

BRADLEY, ALAN STUART
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Mechanical

CORNELIUS, WILLIAM PASCAL
Slidell, La.
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Mechanical

GRESENS, GLENN FRANK
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Mechanical

HANSEN, TORBEN BERNHARD
Evanston, Ill.
Electrical

HAMMETT, LEWIS DRAYTON
Lafayette, La.
Mechanical

HESTON, LARRY ROGER
Gretna, La.
Civil

HICKEY, PAUL THOMAS
Metairie, La.
Civil

HUBBLE, ELMO GENE
Lafayette, La.
Petroleum

KENDRICK, III, WILLIAM B.
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Mechanical

KUENZ, ROBERT LAWRENCE
New Orleans, La.
Electrical

LEMMONS, MARVIN LEE
Tioga, La.
Mechanical

MARTIN, JAMES CLAIBORNE
New Orleans, La.
Civil

LURIE, HENRY ALBERT
Cincinnati, Ohio
Mechanical

MOORES, CHARLES WASHINGTON
Boston, Mass.
Civil

NIELSON, CHRISTIAN TAGE
Baton Rouge, La.
Chemical

O'KELLEY, JOHN STEPHEN
Fort Worth, Texas
Electrical

OWEN, LOUIS WALTER
Houston, Texas
Chemical

SALADRIGAS, ENRIQUE CARLOS
New Orleans, La.
Civil

SCOGIN, JAMES VERNON
New Orleans, La.
Mechanical

SETZE, THOMAS HAZLEHURST
Baton Rouge, La.
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BOARD OF DIRECTION MEETING

January 5, 1973

Rodeway Inn **Baton Rouge, La.**

MINUTES

President Hoyt Brown called the meeting to order with the following members present: Roger K. Battle, P.E.; Richard L. Bennett, P.E.; Hoyt W. Brown, Jr., P.E.; Fred C. Culpepper, P.E.; E. Raymond Desormeaux, P.E.; Marshall B. Ewing, P.E.; Charles W. Hair, Jr., P.E.; George L. Heller, P.E.; Frank M. Heroy, Jr., P.E.; T. J. Hogue, Jr., P.E.; Malcolm L. Hurstell, P.E.; James L. Meyer, P.E.; Frank Miller, P.E.; E. E. Moncla, P.E.; Lamon L. Moody, Jr., P.E.; Jesse C. Odom, P.E.; Herb Pourciau, P.E.; Jack Thigpen, P.E. and E. P. Williamson, P.E. Guests were Louis Soulier and Gerald A. Simmons, Executive Secretary.

The mintues of the November 9, 1972 meeting were approved as presented. The motion for approval was made by Mr. Heller, seconded by Mr. Williams and adopted.

Financial Report—The financial report was given by Mr. Hurstell, Secretary-Treasurer for the months of November and December 1972. The report reflects year to date total receipts of $62,456.42 and expenses of $60,319.80.

Motion by Mr. Culpepper, seconded by Mr. Battle, "that the financial report be accepted, subject to the usual audit." Motion Carried.

Mr. Hurstell reviewed the list of resignations from the Society.

Mr. Hurstell requested authority to write a letter to NSPE authorizing Mr. Jim Janssen to serve as alternate NSPE director in place of Mr. Waldemar Nelson for the Salt Lake City Meeting.

Motion by Mr. Heller, seconded by Mr. Williamson, "that

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MINUTES (Continued)

Mr. Janssen be named alternate director for the meeting." Motion Carried.

Mr. Brown called for Section reports.

Mr. Heller submitted the following report for the PEI section:

Mr. James S. Janssen assumed duties as Southwest Regional Vice President of NSPE at the Denver meeting and conducted the Southwest Regional meeting at Oklahoma City. The LES-PEI was represented at both meetings and planned attendance at Salt Lake City, Jan. 9-10, 1973.

All chapters were contacted for the Professional Award and Mr. R. E. Driscoll will assume the task of contacting them for action. This is based on the same basis as NSPE and can be submitted for the National Entry.

PEI is cooperating with PEE and the Education Committee to implement the Engineering Education Study. Messrs. Brown and Heller represent LES as liaison members on the Council of Deans. The next annual meeting will feature this theme under the direction of Mr. Fred Culpepper, the program chairman.

Plans to activate PEI Guidelines and Workshop programs have not been finalized pending the Salt Lake City discussions and demonstrations. Thereafter, it will be necessary to contact industry throughout the state for participation.

Dues for PEI were requested on the state mailing and response is not known at this time.

Mr. Desormeaux, chairman of P.E.C., was introduced to the Board as the new chairman. He reported briefly to the Board plans of the new section.

75th L.E.S. Anniversary Celebration—President Brown reviewed prior action of the Board regarding the anniversary celebration.

Motion by Mr. Culpepper, seconded by Mr. Desormeaux, "that the next L.E.S. Board meeting be Saturday, February 3rd in New Orleans." Motion Carried.

Motion by Mr. Culpepper, seconded by Mr. Williamson, "that the Board accept Mr. Nelson's invitation to serve as chairman of the committee and make arrangements for a banquet on February 3rd in New Orleans." Motion Carried.

Mailing Labels for A.I.Ch.E.—Motion by Mr. Moody, seconded by Mr. Heller, "that the Society authorize A.I.Ch.E. to use one set of mailing labels at no cost to the Society." Motion Carried.

Mailing Labels for L.S.U.—Dept. of Highways Seminar—Motion by Mr. Ewing, seconded by Mr. Culpepper, "that the Society authorize L.S.U. and the La. Dept. of Highways to use one set of mailing labels to announce a seminar on concrete." Motion Carried.

Report on Unionization of Highway Dept. Employees—Mr. Simmons reported briefly on action to date. A decision is to be made by the Highway Dept. Board on the proposed agreement between the AFL-CIO and its employees at the next meeting of the Board in February.

Report on L.E.S. Spring Annual Meeting—Mr. Culpepper reviewed tentative plans for the Spring Meeting. The Board agreed to hold the meeting in Lafayette, April 13 and 14, 1973, provided facilities are available.

E.J.C. Meeting—President Brown discussed E.J.C. activities and read a letter inviting L.E.S. to the next E.J.C. Meeting.

Motion by Mr. Culpepper, seconded by Mr. Hogue, "that President Brown be authorized to represent L.E.S. at this E.J.C. Meeting." Motion Carried.

Discussion of Board Meeting Procedures—The Board discussed proposed procedures forwarded prior to the meeting.

Motion by Mr. Hogue, seconded by Mr. Odom, "that the procedures outlined be adopted."

Substitute motion by Mr. Heroy, seconded by Mr. Culpepper, "that the matter be tabled until the next Board meeting." Substitute motion carried.

President Brown appointed an Ad Hoc Committee of Mr. Culpepper, Chairman, Mr. Heroy and Mr. Hair to further study the matter and report to the Board.

L.E.S. Insurance Program—Mr. Miltenberger of Gilsbar Inc. appeared before the Board and reported that the proposed group auto insurance program for L.E.S. can now be implemented. He requested that each chapter give his company an opportunity to appear before the chapter membership to discuss the program.

Chapter Resolution on Engineering Profession—Motion by Mr. Bennett, seconded by Mr. Battle, "that the resolution be withdrawn at the request of the chapter involved." Motion Carried.

N.S.P.E.-L.E.S. Membership Requirements—President Brown read a letter from N.S.P.E. stating that the N.S.P.E. constitution required that all members of a state society be members of N.S.P.E.

Motion by Mr. Heller, seconded by Mr. Heroy, "that the matter be taken under consideration and a committee be appointed to study the current situation." Motion Carried.

Mr. Ewing asked if an item may be considered at this time concerning the Louisiana Constitutional Convention and its deliberations on education. There was objection, therefore the matter will be placed on the agenda for the next meeting.

Request for copies of the LOUISIANA ENGINEER—Mr. Hurstell read a copy of a letter from the U.S.S.R. requesting a copy of the LOUISIANA ENGINEER.

Motion by Dr. Thigpen, seconded by Mr. Hogue, "that a copy of the publication be mailed to the U.S.S.R. Library." Motion Carried.

The next meeting of the L.E.S. Board will be held in New Orleans at the Monteleone Hotel on Saturday, February 3, 1973.

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LENGTH OF PROJECT: 2.28 miles.
TERRAIN: Flat to gently rolling.
CLIMATE: Average Temp. Range: 87°F (July), 29.4°F (Feb.)
TRAFFIC: Light to medium.
ROADWAY: Subgrade: CBR value of 4.
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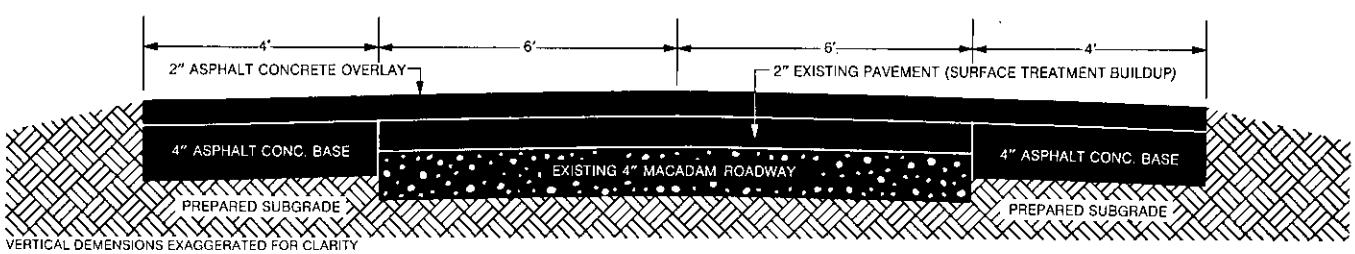

VERTICAL DEMENSIONS EXAGGERATED FOR CLARITY

LOUISIANA ENGINEER

June, 1973

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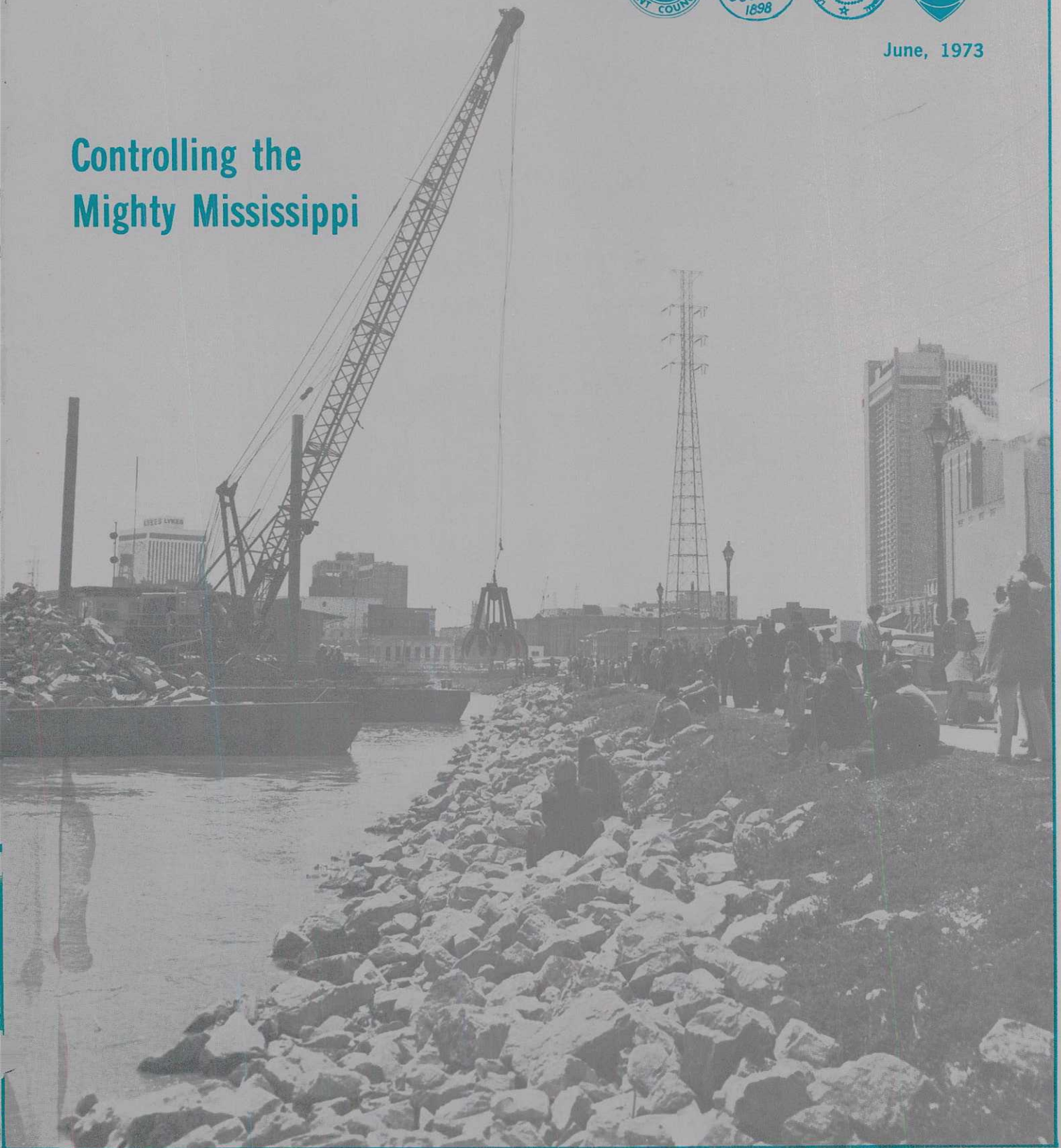

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TYPE... Full-Depth Asphalt paved four-lane, arterial street. Approximate length: 5,600 feet.

TERRAIN... Flat coastal plain 16 to 18 feet above sea level.

CLIMATE... Average minimum temperature 32°F... average maximum 86°F. Annual precipitation 43.37 inches.

TRAFFIC... 8,000 VPD (10% trucks).

ROADWAY... **Subgrade:** Unstable silt-clay. **Base:** 8" asphaltic concrete (5½" and 2½" lifts) Virginia Type B-3 (1½" maximum aggregate). **Surface:** 1" Asphaltic concrete Virginia Type S-5.

ASPHALT... 85-100 penetration for all mixtures.

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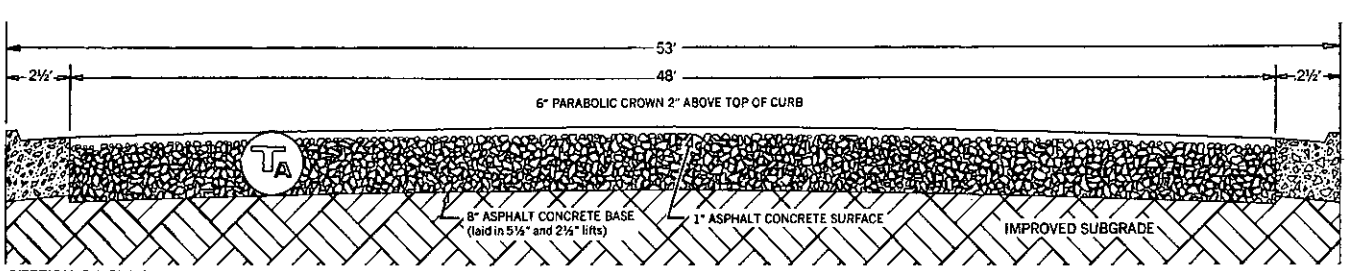

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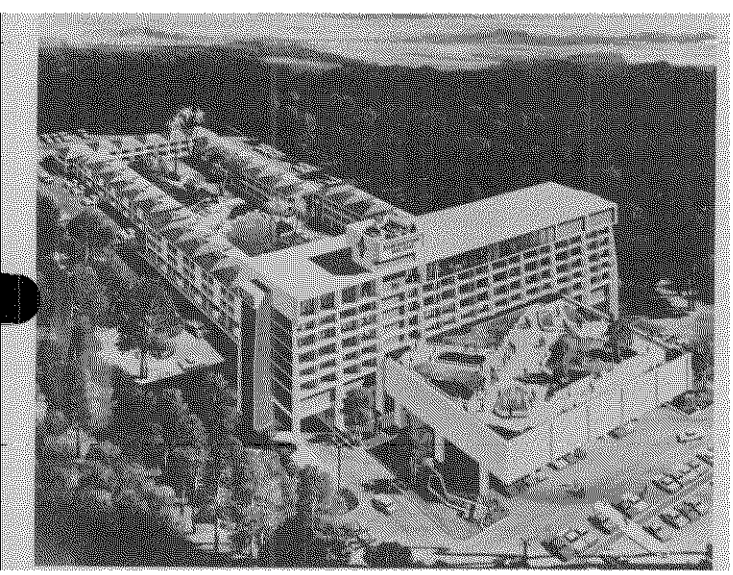

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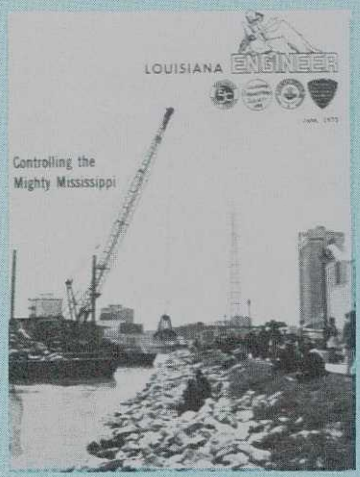

COVER

A Corps of Engineers' dragline places large rip rap stones on the river side of the Mississippi River levee directly in front of Jackson Square in New Orleans on April 5, 1973. Unprotected sections of the levee were subject to wave wash erosion and presented a potentially dangerous situation. For a story on Mississippi River Flood Control by Major General Charles Noble, see page 8.

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HEADQUARTERS, SOUTHERN REGION
Memphis, TN 38166

May 3, 1973

Mr. Daniel H. Vliet, Executive Secretary
Louisiana State Board of Registration for
Professional Engineers and Land Surveyors
1055 Saint Charles Avenue, Suite 415
New Orleans, LA 70125

Dear Mr. Vliet:

The Southern Region, United States Postal Service, is compiling a computer listing of Architectural and Engineering firms interested in designing postal facilities in our eleven-state area. It is requested that you assist us in this matter by contacting all registered architects and engineers in the State of Louisiana and suggesting that they submit completed Forms SF-251 (U. S. Government Architect/Engineer Questionnaire) to the following address. This form may be secured from the General Services Administration--either local or regional office.

Director, Engineering Division
Headquarters, Southern Region
United States Postal Service
Memphis, TN 38166

The procurement of architectural and engineering services for postal facilities has been performed during the past two years by the United States Army, Corps of Engineers. This policy has now changed, and the United States Postal Service has this responsibility.

Your assistance in this matter will be greatly appreciated.

Sincerely,

C. Quinton Ferguson
Director, Engineering Division

PRESIDENTIAL PRIVILEGE

This is my final opportunity to take advantage of "Presidential Privilege," state my thoughts and hope that you read them. While I understand a few of you do, it is hard for me to give up, so here goes.

For me this last year has always been interesting—always—with moments of pleasure from accomplishment and frustration from failure. It's about in the same category as coaching a pre-Little League baseball team. I'm grateful for several things: one, the coaching didn't start until about the time my responsibilities here were phasing out; two, that there was no Legislative Session; three, not a single ethics case all year long was brought to the Board's attention. Regarding the ethics situation, I don't quite know how to interpret this. One, since we revamped the code maybe nothing is wrong anymore; two, maybe we all became good guys; three, our "pussy footing" two years ago discouraged sincere complaints.

Regarding the Legislative situation, I'm sure a new program will be placed before the Legislature next year. There are too many inequities in the existing law and they should be corrected. Along this line, our last Board meeting rescinded a previous position and I am now allowed to explore cooperative efforts with other engineering organizations for unified action on ALL matters of common interest. I can't help but wonder why some opposed this effort in the first place.

I guess the last frustration is membership. We haven't grown as fast as I had hoped in spite of Al Badeau and his Membership Committee. Maybe we need another controversy and a "Reflections," as these brought in over 100 new members. Mitigating circumstance was the transfer of 38 Shreveport members by United Gas out of the state. This was a big unavoidable loss.

On the bright side — our Education Committee involvement has shown good results. The Council of Deans has become very active, and the Coordinating Council for Higher Education continues to ask for L.E.S. opinions. We, along with CEC and LAA, have been of great assistance to the State Fire Marshal and the Governor's Committee in rewriting the State Fire Code. More work is involved here.

Since the recent action of the Board, mentioned above, moves have now been started to form a Council of Engineering Organizations within the state to cope with mutual problems. This could be an extremely important direction

for us to participate in and hopefully to provide leadership for. Carl Thomas has been a big help here, as well as all during the year, with his Inter-Society activities.

While I'm passing out compliments, George Heller should get accolades and medals for all of his efforts, particularly in Engineering Education, with much-needed assistance from Roger Battle. I owe much to the many sacrifices of Lamon Moody, the courage and stabilizing influence of Brook Ewing, the guidance of Jim Meyer, Buddy Moncla, T. J. Hogue and John Vogt. I have leaned on them many times.

I regret the resignation of Gerald Simmons. His efforts, as well as those of Prudence and Diane, have been well beyond all we have the right to hope for. We are fortunate to get "Doc" Spears with his experience.

Waldemar Nelson gets all of my gratitude for the publication of the LOUISIANA ENGINEER, and of course, the excellent Diamond Jubilee celebration.

Of course, one should expect the fine job done by Fred Culpepper and Jack Thigpen and they did not disappoint us; I'm sure they will represent you and the Society equally as well in the future.

I've saved Mac Hurstell until last. For two years he has had more work and responsibility than any other member of this Society and he has performed always with enthusiasm, devotion and ability beyond anything I've ever seen. He has responded before Legislative Sessions and the departure of Gerald Simmons without once complaining. Where he found the time, only his family and Johnny Vogt know. In addition, his personal guidance in keeping me calm enough to keep sight on the goal I had become frustrated in trying to reach, is most appreciated.

I think we are still on the upward organization Ascendancy Slope. With the ability and devotion of the officers you have selected, we cannot help but continue to go up WITH YOUR HELP.

I thank you, the rewards have been many and will be remembered, the frustrations are already forgotten.

Hoyt W. Brown, Jr.
President

Mississippi River Flood Control

By Major General Charles C. Noble, Division Engineer, Lower Mississippi Valley Division, and President, Mississippi River Commission.

One of the main events of the year for the State of Louisiana has been, and is, the 1973 flood. Combatting a major flood is a complex task. Our overall flood control plan for the Lower Mississippi Valley involved preliminary actions when we began to see the probability of a major flood, and our actions as the flood developed. Handling the mighty river when it threatens to go on a rampage is quite a job!

The Lower Mississippi River is the spout of a watershed funnel which drains 41 percent of the contiguous 48 states plus parts of two Canadian provinces. Every drop of runoff in this one-and-a-quarter-million square-mile area winds up in the nation's largest river on its journey to the Gulf of Mexico.

The Mississippi River and Tributaries flood control plan is designed to control the "project flood," which is the result of the combination of the most severe storms that have ever occurred in the Valley and the positions in which they occurred, which produced the worst possible runoff conditions. To control this great volume of water, we have designed an integrated system of time-tested flood control features, which — when completed — will protect a large part of the alluvial valley from the "project flood."

Four major elements of the plan are: levees, floodways, channel improvements, and major tributary improvements.

The main stem levee system includes almost 2,200 miles of levees and floodwalls. An important adjunct of this work—particularly south of Baton Rouge—is foreshore protection to protect levees against wave wash.

The second element is the floodway system. We have four floodways in the Mississippi River and Tributaries project (hereafter referred to as MR&T), one in Missouri and three in Louisiana.

Also in the plan is channel improvement, to stabilize the alignment of the channel and improve the flood-carrying capacity of the channel. The articulated concrete revetment extends to the deepest part of the channel to protect the riverbank from currents, while dikes direct the flow into desired alignments.

The fourth element is major tributary basin drainage and flood control improvements.

Even though the MR&T project is only half finished, it has done a marvelous job, paying for itself almost five times during the past two months alone.

The 1973 flood is the result of many complex factors. Over a period of eight months, the Mississippi Valley has experienced heavy rainfall, often torrential in nature, over a wide area. Almost all tributary basins were involved, and we missed our low-water period completely last fall.

That's when it all began—last summer and early fall. As a result of the incessant rainfall, flood control reservoirs along our tributary streams began to fill. Fields became saturated, ponding areas filled, and more rain could no longer be absorbed. Most of what fell became runoff.

Before long an ominous pattern began to take shape in the hydrograph readings at Cairo, Illinois, the head of the alluvial valley. By December, the river was assuming a typical pre-flood pattern somewhat ahead of the stage developments which preceded the great flood of 1927. As the river readings and general hydraulic conditions continued to follow the 1927 pattern, we began to prepare for a major high water, in accordance with the adopted plan for the control of floods in the lower valley.

First, a realistic, comprehensive flood fight exercise was ordered to be held as soon as possible in 1973. The regular biannual test which was scheduled for later in Calendar Year 1973 was moved to February 1973.

Next we looked to our floodways, to ensure that all was in readiness for their use if required. Operation of gates was checked at Bonnet Carre, Morganza, and the overbank structure at Old River.

We also began dredging the forebays of the Bonnet Carre Spillway just north of New Orleans and the Morganza Control Structure, to provide a more efficient entrance for floodwaters. The Bonnet Carre Spillway had not been used since 1950, and subsequent high waters had left a substantial amount of silt in the entrance channel.

As an additional readiness measure, we raised to authorized grade, low areas in the 11-mile long upper fuse plug section of the Birds Point-New Madrid Floodway on an emergency basis. This provided authorized protection for more than 100,000 acres of rich farmland in eastern Missouri against a stage of 60 feet at Cairo.

As the water continued to creep upward, local levee boards and other agencies began closing gates in floodwalls, sealing man-hole covers, and embarking on other preparatory actions.

We also began to warn those with interests in floodways to be prepared to evacuate if it became necessary to use the floodways, and we kept them abreast of the situation as the likelihood of use became more imminent.

There are many behind-the-scenes activities involved in handling a flood of these proportions. One of our major tools is the rainfall forecast issued by the National Weather Service.

Unfortunately, meteorology is not an exact science, and weather does not always go according to predictions. The Weather Service forecasting and predictions are absolutely essential to a flood fight, but as with so many other aspects of a flood, we use the words "prediction" and "unpredictable" almost in the same breath. This explains why we have had to change river stage forecasts throughout the flood

Steel sheet piling has been driven into the crown of the East Atchafalaya Basin Protection Levee by the New Orleans District of the U. S. Army Corps of Engineers. The sheet pile was a precautionary measure to raise and strengthen levee protection in the Atchafalaya Basin.

period and why we have had to alter our announced plans on short notice. For these reasons, we have consistently tried to have more protection available than might seem to be immediately necessary.

Another phenomenon experienced on our nation's great river is the phenomenon which we call the rating curve loop. This is the result of a falling river requiring a higher stage to pass a given volume of water than does a rising river.

In an actual situation, at Vicksburg in February, the river passed 1,200,000 cubic feet per second, which required a stage of 39 feet. The river wavered again in mid-April, and we had three different stages for a flow of 1,750,000 cubic feet per second . . . stages ranging from about 48 feet to 50.4 feet. This two-foot difference resulted in much additional flooding in the Yazoo Backwater area, so you can see how serious this rating curve loop is and how it complicated our predictions.

Also, the rainfall throughout the basin has to travel to the lower part of the river. This means that once water gets into one of the tributaries or the main stem, it has to be contended with for a considerable period until it is led safely out to the Gulf. This travel time can also be critical, depending on how the contributions from each basin combine as they course their way down toward the Gulf. Two or more crests coming together on the main stem give higher stages than if they follow one another. By manipulating discharges from dams on tributary streams, we can regulate the flows to prevent major surges on various tributaries from concentrating in the Lower Mississippi at the same time.

Spacing these tributary contributions correctly can greatly reduce the stages. For example, when crests coming down the Arkansas threatened to combine with a crest coming down from Cairo, General Parfitt, in charge of the Southwestern Division, interrupted the flow on the Arkansas for a few days so that we could spread the crests. We had very little flood storage remaining, but that little bit did a lot of good. Rain may also occur at a number of places throughout the valley at this time, necessitating a further change in predictions.

Travel time also permits anticipatory actions to be taken to prepare for that water which is

1937, 1945, 1950, and now, 1973 . . . . .
Bonnet Carre Spillway, some 33 river miles above New Orleans, was opened on April 8, 1973 to relieve the highest stages on the Mississippi River in 23 years.

known to be on its way. This accounts for some anticipatory action which was taken, the reason for which was not immediately obvious in the immediate vicinity at the time. Thus the shrimp fisherman on Lake Pontchartrain, looking at the 18.3 gage reading in New Orleans, gave his view that we really didn't have to open Bonnet Carre when we did. What he did not know is, had we not acted, the river stages would have gone above 20 feet, posing a serious threat to New Orleans and downstream areas.

Now let's go downstream with the flood of 1973 and review what occurred.

The Mississippi went into flood at St. Louis on March 11, and in succeeding weeks, 39 non-Federal levees north of that city were breached or overtopped, inundating thousands of acres of farmland. Unprotected communities such as Grafton, Illinois, were also flooded. South St. Louis areas along River des Peres were hard hit, and 300 buildings in historic St. Genevieve, Mo.—the oldest town west of the Mississippi River — were heavily damaged.

But the city of St. Louis itself, protected by a floodwall, escaped damage from the greatest flood ever experienced in the middle Mississippi River.

Extensive tributary flooding has occurred in Arkansas and Tennessee, and in Mississippi, the city of Greenwood was hit by a 10-inch rainstorm on March 15, causing extensive flooding of outlying subdivisions.

This storm, with the additional rainfall that the area has experienced, filled the four reservoirs in the Yazoo River Basin, and water is flowing over the spillways of these dams. It will take many months to lower levels in these reservoirs, and the Yazoo River will remain at near bankful stages into 1974.

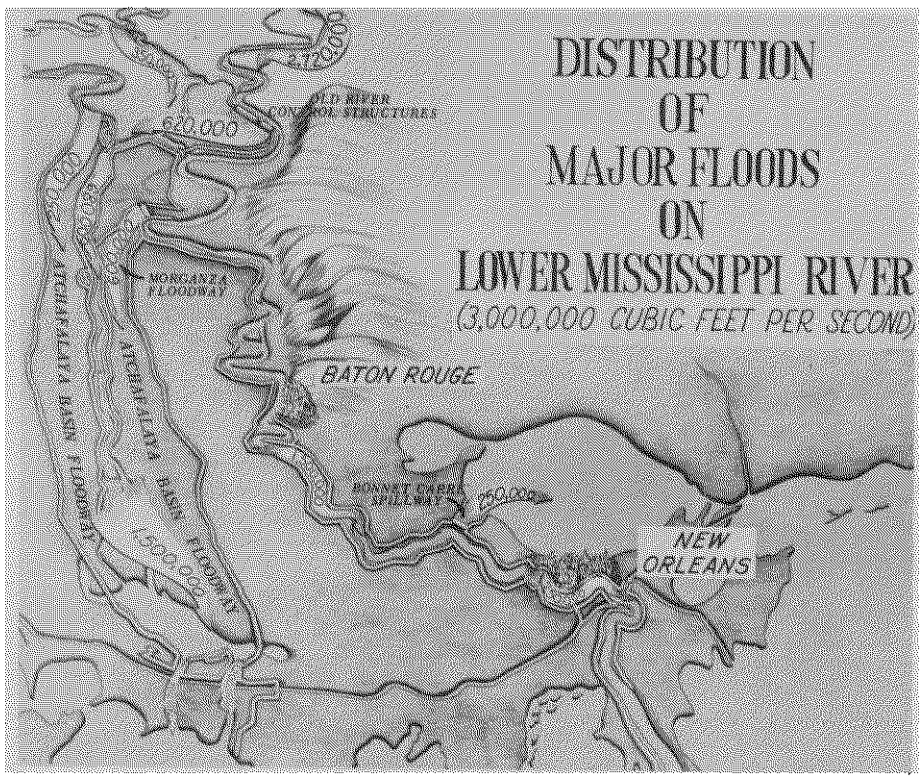
More than 2.3 million acres of the Yazoo Basin have been flooded, either from Yazoo River headwater or by the Mississippi River backwater.

Backwater flooding has been experienced in the unprotected portions of Catahoula Parish of Louisiana, in what is designated as the Red River backwater area. This water eventually overtopped a Louisiana Department of Public Works levee near Jonesville, despite a valiant flood fight effort to save it by the Tensas Levee Board, with state and federal assistance. An untimely wind whipped up a large wave action, which undermined the efforts to raise the crown above the creeping water level.

However, an emergency ring levee was built by the levee board to protect the hospital, the airport, business firms, and nearby homes located outside the Federally-constructed levee around the city.

Additionally, the backwater levee protecting Concordia Parish has kept more than 10-12 feet of water out of that area. We have temporarily raised the fuse plug portion of that levee to prevent overtopping by wave wash.

We have had to raise 168 miles of main line Mississippi River levees after we determined that the flow line for the project flood, if it came this year, would be higher than indicated by flood experiences in previous years. This problem was precipitated by the changing river, the hydraulic peculiarities of the 1973 floods, the rating curve loop, the subsidence of levees in several places, and the fact that some main line levees had not yet been brought up to authorized grade. It also emphasizes a generally overlooked factor—the lower Mississippi Valley is a dynamic hydraulic system still being changed by continuing physical processes.

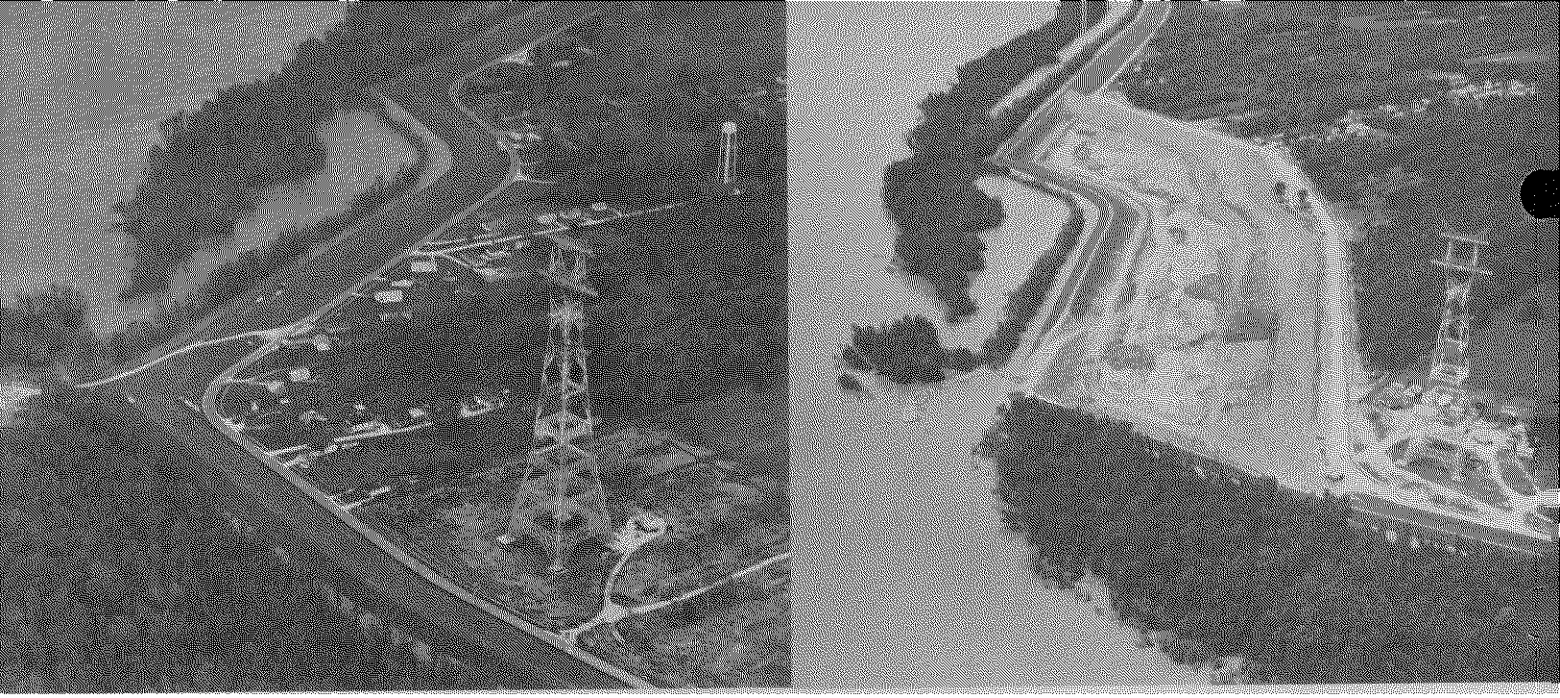


On April 8, we opened Bonnet Carre Spillway, which we expect will have a long-range benefit in improved fishing in Lake Pontchartrain and the Gulf of Mexico.

One critical problem we have had to live with throughout this flood came on Thursday, April 12, when a wing wall at the Old River Low Sill Structure collapsed. A troubling eddy pattern was set up by the disturbed flow pattern of the water at the entrance to the structure.

A failure of the structure would have given us an uncontrolled discharge into the Atchafalaya Basin and would have threatened the integrity of the flood control system.

To reduce velocities through the Low Sill Structure and to raise the tailwater behind it, we



The community of Montz, La., just upriver of the Bonnet Carre Spillway, is shown here (left) on March 28, 1973. The integrity of the levee was being undermined due to a serious erosion problem which developed just above the point where the road crosses the levee in this photo. The solution to the problem came with the construction of an emergency levee setback. The photograph on the right shows the emergency setback at Montz as it nears completion on May 14th. The 44 families who were relocated are being compensated for all expenses, land and property involved in the setback under the Uniform Relocation Act of 1970.

opened the Overbank Structure at Old River.

We also started building a rock dike to break up the eddy pattern. These actions were designed to reduce the attack of the river on the structure. On April 17, to further protect the Low Sill Structure, we opened the Morganza Floodway.

We had to briefly close Morganza later in the day to allow more time for wildlife to find sanctuary and to give local interests time to repair and close a jammed gate in the Pointe Coupee Levee drainage structure.

We reopened 10 bays at Morganza and recently began opening some additional bays because the rising river was seriously interfering with our remedial work at the Old River Low Sill Control Structure.

We could not close the Low Sill Structure itself for several reasons. First, we had no place to send the half-million cubic feet per second of water that was flowing through the structure. Second, closing it temporarily and reopening it later would be more of a hazard to the structure than leaving it open.

Because of the eddy pattern, powerful currents dug a deep scour hole just upstream of the structure. We had to stop this attack by means of the rock dike and by dumping rock in the scour hole.

Prior to opening Morganza, we had begun to raise low sections of levees in the Atchafalaya Basin and the floodwalls in the Morgan City-Berwick area. As stated earlier, our flood control project is only half finished, and we wanted the protection works to be high enough to handle the project flood, if it came this year.

Although areas around Morgan City outside the protected areas were flooded by a torrential rain and high tides, the major part of the city was protected. Elements of the Louisiana National Guard, under command of Major General O. J. Daigle, spent about two weeks in the Morgan City area, evacuating people, raising local levees, sandbagging, and accomplishing other vital missions.

To provide additional skilled manpower and heavy equipment, the Fifth U. S. Army sent two reinforced companies of the 62d Engineer Battalion, Fort Hood, Texas. These soldiers worked on the wall and in the water to shore up the protection for that area.

The work was a community project, and young people were always there to do their part. A good bit of the work has also been accomplished by contract.

We also scoured the country to obtain sheet piling to drive into the levees throughout the Atchafalaya Basin where foundation conditions are so weak that earthworks could not be used. This work has proceeded very rapidly.

We have also experienced several Mississippi River bank failures in Louisiana, which are not unusual for a major flood. The first of these occurred at Montz, near Bonnet Carre, where currents and eddies eroded a sand layer beneath the bank and 600 feet of bank slid into the river. It was necessary to relocate 44 families in order to set back the levee to a safe alignment.

The next major problem developed at Nairn, in the downstream part of Plaquemines Parish. Again a sand layer was eroded, and a 200-foot section of levee extending into the crown sloughed off into the river. An immediate setback was required, and it was completed in three days.

The latest major trouble spot developed three miles below the city of Plaquemine. This was another bank erosion problem, requiring a levee setback, and this work is underway.

The Mississippi River flood has also had a serious effect on navigation. The strong, tricky currents forced many operators to reduce or stop operations, and

traffic is reported to be 50 to 80 percent below normal. Operators have tied barges in slackwater areas all along the river as they wait for safer conditions.

Our locks on the middle Mississippi have been flooded, making it necessary to close the river to traffic north of Cairo. However, the river was recently reopened north of St. Louis.

More serious is the effect of the extended flood on agriculture. This will be a late planting season, with substantial reduction in such cash crops as cotton, soybeans, sugar cane, rice, and tobacco.

The losses, while very serious, were largely in unprotected areas. Had the MR&T project failed, the losses would have been catastrophic. The flooded areas comprise approximately 13 million acres in seven states. At this time, we estimate damages at $420 million. More than 10 million additional acres would have been flooded, had our flood control works not been in place, including just about all the major population and industrial centers in the lower valley. Losses would have easily exceeded $7.7 billion, dwarfing the 1927 disaster by comparison.

No one element in the integrated flood control system works independently. All elements interplay, and all these elements have to be considered in a continuous decision-making process. We have to get the facts on all existing conditions, bring in the predictions, consider the effects, each alternative, the various elements, reach a decision, and then start all over again. It is a never-ending process.

Throughout this trying period, the Mississippi River Basin Model at Clinton, Mississippi, has been an invaluable tool in this decision-making process. We have been using it around-the-clock.

This has been a tremendous flood, one of the greatest ones in the Mississippi River's history. To give you an idea of the magnitude of the amount of water in the river, the maximum flow was about 15 million gallons a second. This is enough to provide the city of New Orleans with its daily water supply in less than 10 seconds.

Combatting the flood has required efforts of equal magnitude. In the Corps of Engineers alone, almost 7,000 men and women of the Lower Mississippi Valley Division have been working full time on the flood and sometimes almost around the clock. We have been augmented by more than 200 employees from other Corps Divisions and by more than 400 active Army troops. We have strengthened or raised more than 500 miles of Federal levees along the Mississippi and its tributaries. We have issued more than 10 million sandbags, loaned hundreds of pumps to local communities, and assisted local flood fighting efforts throughout our seven-state area.

In addition, by the time the fight is over, we will have granted more than 400 contracts for work to implement that of Government agencies.

Also the work by state governments, levee boards, local governments, police agencies, the National Guard, volunteer organizations and the thousands of volunteer workers, has proven again the American tradition of toiling together in times of adversity. In addition, the members of the press and electronic media associates have done a great job in keeping the public informed of the tremendous events affecting their lives.

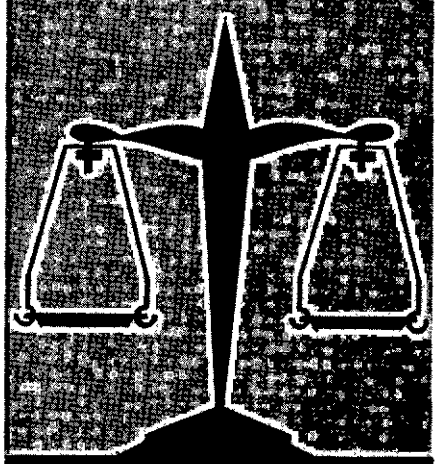
There's been a great financial cost, also, in this flood fight. We currently estimate that our direct flood fight expenses will be on the order of $50 million, and we estimate that repairs to Federal Projects when all this is over will require another $50 to $60 million.

In conclusion, the Mississippi River and Tributaries Project has more than met every demand and expectation this year. Its completed features have functioned as designed, and they have prevented a catastrophe. Essential elements of its incompleted features were bolstered by emergency works in order to be able to stave off this flood. But our experience has emphasized the need to push on with the work yet to be completed and to consider possible modification and expansion of the project plan to provide protection to areas not included under the project now.

Lumber mudboxes were constructed on top of the Morgan City and Berwick floodwalls by the Corps of Engineers to provide an additional four feet of protection from Atchafalaya River flood flows.

Registration Law Study

A Progress Report



By

Waldemar S. Nelson, Chairman*

Registration Law Study Committee
Louisiana State Board of Registration for Professional Engineers and Land Surveyors

The Louisiana State Board of Registration for Professional Engineers and Land Surveyors has completed the first phase of its study of the statutes of the State of Louisiana regulating the practices of engineering and land surveying, and is well advanced on the second phase of its study. It is awaiting further input from professional and technical societies, governmental agencies, industries, utilities, construction firms, and educators before initiating the third phase of its study. Although the Board sent out many letters informing these parties of its study and requesting suggestions and comments, few substantive replies have been received.

In reporting progress made in the study of the law, it will be helpful first to review the history and content of the present law, the composition and operation of the Board of Registration for Professional Engineers and Land Surveyors, and the characteristics of the body of professional engineers registered in Louisiana.

The Louisiana Engineering Society was founded in 1898, and during early years of its life devoted much effort toward enactment of a law "to safeguard life, health and property, and to promote the public welfare" by requiring evidence of qualification to practice, and the registration of, any person practicing or offering to practice engineering or land surveying in the State of Louisiana. This effort succeeded with the passage, in 1908, of a law regulating the practice of Civil Engineering and Land Surveying, Louisiana being the second state in the Union to have such a law.

Although many believed this law was intended to regulate the civil, or civilian practice of engineering, as contrasted to military, or governmental engineering, it was interpreted by the early registration board to apply to the practice of what is known in French as the "engineering of roads and bridges," or that branch now known as civil engineering. About five hundred engineers were registered under its provisions over the 25 years following its passage.

Sentiment for the general engineering registration law persisted, and efforts were made toward passage of such a law from 1932 through 1940. In 1940 a law was passed by the Legislature only to be vetoed by the Governor. During the next decade, bills for a general engineering registration law were introduced and defeated, first by action of the civil engineers, then by action of engineers in public employment, and later by action of the Rural Electrification Administration Co-ops. Finally in 1950, under the brilliant leadership of Lionel J. Cucullu, President of the Louisiana Engineering Society, a law was passed that was satisfactory to the majority of the engineering interests in the State. This law, Act 73 of 1950, is essentially the law in effect today, it having been amended to specify composition of the Board in 1968 and to provide for separate registration of land surveyors in 1970. Like many good laws in a democracy, it is a compromise adjusting to a common means the diverse interests and wishes of many segments of the population.

The law provides for a Board of nine professional engineers, each serving nine-year terms on a staggered basis, so that stability and continuity of Board operation are assured. The members of the Board are appointed by the Governor from among nominees recommended by the Louisiana Engineering Society, five nominations being made for each appointment required. Historically the Board has usually had broad representation from different areas of the State from the major branches of the profession and from various fields of employment.

The Board is domiciled by law in New Orleans, where it has its office and records and employs an Executive Secretary and three full time assistants. It conducts about ten meetings a

* Mr. Nelson is a Past President of the Louisiana Engineering Society.

year and in a typical recent year's work (1972) accomplished the following:

Applications considered	746
Professional engineers registered	10,016
Public employees registered	105
Land surveyors registered	3,353
Engineers-in-training	1,293
Firms in compliance with regulations	485
Possible violations investigated	228
Settled without litigation (balance pending further action)	170
Examinations given in fundamentals of engineering	528
Examinations given in practice of engineering and in surveying March 18, Sept. 16, Dec. 9, 1972	75

The professional engineers registered as of December 31, 1972 were distributed by branches as follows:

Civil	3,900
Mechanical	2,769
Electrical	1,620
Petroleum	932
Chemical	835
Other	282

Annual fees charged for registration are:

Professional Engineers	$7.50
Land Surveyors	5.00
Engineers-in-training	2.00
Public employees	2.00

Report of the Board's activities, including a financial statement by a certified public accountant, is prepared annually and submitted to the Governor as required by statute. During the past two years, this report has also been published in the LOUISIANA ENGINEER.

The Board is a member of the National Council of Engineering Examiners. This organization has as its members similar boards from the 50 states and 5 possessions or territories of the United States. Col. Marcel Garsaud, an early member of the Board and past-president of the Louisiana Engineering Society, was first president of this organization in 1921, and Major General Roy Sessums, member of the present board and past-president of the Louisiana Engineering Society, is the current President of the National Council.

The Louisiana law presently provides for registration of professional engineers on four bases:

a) Graduation plus experience
b) Experience plus examination
c) Long established practice
d) Interstate registration

It provides for registration of land surveyors on the following bases:

a) Graduation plus experience
b) Education, experience and examination
c) Long established practice plus examination
d) Comity or endorsement and examination
e) Graduation plus engineering registration.

The present Louisiana law provides exemptions from registration requirements for the following persons or classes of work:

Sub-professional work under supervision.
Residential and farm work.
Industrial operations (except C.E.'s and L.S.'s).
Canals and irrigation on own land.
Surveying within own property.
Contracting or supervision of construction.
Government employment.
REA cooperative employment.
Public utilities (except C.E.'s and L.S.'s).

The Board normally conducts its operations through twelve standing committees. By resolution June 13, 1972 it appointed an ad hoc committee to study the statutes of the State of Louisiana regulating the practice of professional engineering and land surveying. The Board made public announcement of the intended study in the August, 1972 issue of the LOUISIANA ENGINEER and in the annual report for 1972 made to the Governor and published in its yearbook, stating, "In making its study the Board will consult and counsel with all parties expressing interest and will have its office staff compile and correlate the information received. The Board will be prepared to advise interested parties of the probable effect of proposed changes based on the Board's experience and study."

The registration law study committee outlined a procedure for conducting its review of the law by phases and decided to use the Board's staff and counsel as needed in the course of its investigations. Dr. Francis Taylor, who conducts many of the Board's investigations into alleged violations of the law, was retained to assist in the work. The first phase of study consisted in making contact with all parties known to be interested in, or who might have interest in, the registration law for professional engineers and land surveyors. In addition to the public notices mentioned above, individual letters were addressed to professional and technical societies; federal, state, and parish and municipal agencies; utility companies and REA cooperatives; industries and manufacturers known to employ engineers or who had more than a specified number of total employees; and various other engineering interests, a total of approximately 500 communications in all. These potential interests were notified of the Board's intention to review the law and were asked for comments or suggestions. Replies to these inquiries have been coming in, although there have been no suggestions to date from some of the major professional and technical societies who have been most active in the past with respect to engineering legislation.

Some of the replies have been most interesting. Col. Richard L. Hunt, District Engineer, New Orleans District, Corps of Engineers, replied that:

> "The registration of engineers in the Corps of Engineers is strongly encouraged and supported by all echelons. The Chief of Engineers and our Division Engineer periodically reaffirm this encouragement in writing and urge support of efforts and assistance

to engineers in achieving registration.

"At this level, my predecessors and I have encouraged and supported our engineers in achieving registration. For example, our district has sponsored several off-duty-hours Engineering Fundamentals Refresher Courses which help to prepare engineers for the Engineer in Training examination. In addition, we have enrolled several engineers in similar courses presented at LSUNO.

"We believe this positive encouragement and support have produced excellent results and upgraded the professional status and capability of our engineering work force. We are proud that the New Orleans District ranks first among the four districts of the Lower Mississippi Valley Division with 85.3 percent of our engineers and architects having either Professional Engineer or Engineer in Training certification. This percentage ranks this district second among the 38 districts worldwide.

"The following comments and suggestions are offered:

a. Section 12 (37:692) para A (1)(a). It is suggested that the length of experience should be spelled out in the same manner as in the subsequent paragraphs.

b. Section 12 (37:692) para A (1)(c). It is suggested that the method of qualifying for registration as a professional engineer through long-established practice be eliminated or phased out with a definite cutoff date."

Mr. Ray W. Burgess, Director, City of Baton Rouge and Parish of East Baton Rouge, Department of Public Works, noted that:

"Mayor Dumas has asked that I write to you concerning your request for comments on the present registration law for Civil Engineers and Land Surveyors. Thank you for permitting us to express our desires and to outline the experiences of the City-Parish Government of East Baton Rouge Parish in this matter.

"The City-Parish Government is vitally concerned with the registration of professional engineers and heartily endorses proper registration and high standards of professional qualifications. This government employs professional engineers directly and also utilizes consulting engineers very extensively. Registration is required of all of these key personnel. It also reviews plans submitted for private work and plans submitted for permits. Registration is required of all engineers doing engineering work in this Parish, as will be outlined below.

"In the employment of engineers for the City-Parish staff we require that they be registered before their application is accepted. If they are registered as Civil Engineers, their application is processed without further examination, because municipal public works is considered part of the civil engineering profession. If they are registered in another branch, their application will be accepted, however, they are required to take an examination, administered by our Personnel Board, to determine their familiarity with civil engineering and specifically with municipal public works engineering. For these reasons this government desires that branch registration be maintained. In the event it is not, we would request that when an engineer is registered, the published record show which branch he qualified in. If this is not done, it will be necessary for our Personnel Board to test all applicants and we would prefer that this testing and qualification be done by the Board of Registration for Professional Engineers as it is presently constituted in Louisiana."

Similarly, strong support for the concept of engineering registration was expressed by other government agencies.

The Board has received essentially the same comment from several sources, among them the Sewerage & Water Board of New Orleans, the Louisiana Highway Engineers Association, the Association of Louisiana Electric Cooperatives, Inc., and Southwestern Electric Power Company. These sources have expressed the feeling that, even though not required by law, professional registration of engineers and land surveyors is encouraged; they also indicate that they feel the present law is satisfactory without revision.

As a second phase of its study of the engineering law, the study committee proposed a systematic review of the present statutes to determine any inconsistencies, archaic language, and material no longer applicable. The law as enacted in 1950 contained certain provisions to be effective for a period of one year thereafter and such provisions are no longer of any consequence or effect. Similarly, when the law was amended in 1970 to provide separate registration of land surveyors, certain provisions were left open to August 31, 1971 for persons professionally registered as civil engineers which permitted their registration as land surveyors, but such provisions ended on that date in 1971. Also, certain details of procedural matters that have occasionally caused administrative problems in the past are being reviewed. This work has been progressing with the staff and Dr. Taylor assembling material for the Committee's review.

The third phase of the study will consist in tabulating, correlating, and analyzing the suggestions with respect to the law made by various interested parties and the assembly of this material into a comprehensive report. This work cannot effectively proceed until the majority of suggestions and comments have been received, and all interested parties are urged to reply to the Committee's inquiry as soon as possible. Second requests for suggestions and comments are being sent to the major organizations believed to be interested who have not yet replied.

Compendium of Louisiana Laws Relating to Land Surveying

Published by the

Louisiana State Board of Registration for Professional Engineers and Land Surveyors

Price $2.00

This publication was prepared in order to fulfill the need for a resume of the elementary laws governing Land Surveys and Surveying in Louisiana. It is not intended to provide enough information and education to make a lawyer out of a Land Surveyor, but to guide him in the field and the drafting room in making and plotting surveys for boundaries about which there are no serious questions.

Send orders to: **State Board of Registration**
1055 St. Charles Ave.
New Orleans, La. 70130

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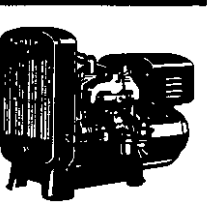

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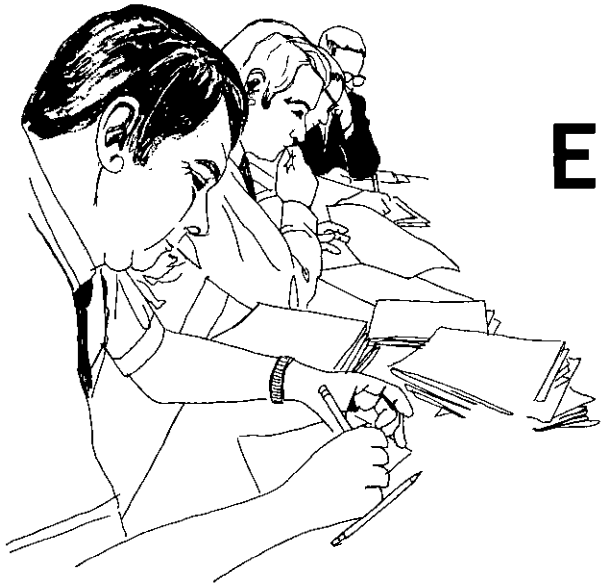


Engineer Management Course

co-sponsored by

College of Business Administration
College of Engineering, LSU
Louisiana Engineering Society

DIVISION OF CONTINUING EDUCATION

Department of Extramural Teaching

OBJECTIVES

The program is designed to provide study in modern concepts of engineering management for members of the engineering profession. It is co-sponsored by the Louisiana Engineering Society, but all practicing engineers are invited to participate. The overall objective is to up-date the professional management competence and practice of Louisiana engineers.

SCOPE

The program, at present, consists of six courses, each of which extends over a University semester. To complete the requirement for the certificate a participant must take Course A, Course C, plus any two of the remaining four courses. This allows for some program flexibility. Each of the courses meets fifteen times during evenings and lasts two and one-half hours. Thus, a student could complete the entire sequence by attending the classes for four consecutive semesters. No courses are offered during the summer term. It is anticipated that the series will be repeated; thus, one could enter the program after the first course offering and complete the series of four courses. The courses can be taken in any order.

ADDITIONAL OFFERINGS

The objective of this program is the continuing of education of engineers in industry. The Engineering Management program coordinator will be happy at any time to schedule a special offering for any group of 20 or more people. Such offerings may be on any engineering or management related subject. (Special offerings will not normally apply toward the certificate unless they represent comparable material.) Persons interested in special offerings should contact the program coordinator for details (see attached form).

FACULTY

The courses will be taught by regular faculty members of the Colleges of Business Administration and Engineering or by able, qualified professors from other universities in the State.

CERTIFICATE

Upon completion of four acceptable courses the participant will be awarded a CERTIFICATE IN ENGINEERING MANAGEMENT by the Division of Continuing Education. Under certain conditions college credit also may be earned for the courses.

COST

The registration fee per participant is **$95** for each course, including the cost of textbooks. The Program is fully self-supporting.

REGISTRATION

To insure that each student will have an opportunity to participate in discussion, enrollment in each section will be limited to thirty students.

Class sessions will be held in the University Medical Center at New Orleans, on the Baton Rouge Campus, and in other cities throughout the state where there is adequate demand. To pre-register for the classes complete the attached form and return with $10 pre-registration fee. Fee is applicable toward the $95 total registration fee and will be refunded if class chosen is not offered.

PROGRAM OUTLINE

Course A—Concepts of Modern Management

1. Understanding an organization
2. The individual in an organization
3. Organizational objectives
4. Function of managers
   a. Creating b. Communicating c. Planning
   d. Motivating e. Organizing f. Controlling

5. Management thought in perspective
6. Principles of management
7. Improving productivity in your organization

Course B—Economics for Engineering

1. Economic systems and functions
2. National income determination
3. Price Theory
   a. Demand
   b. Cost
   c. Market structures
4. Income distribution
   a. Wage theory
   b. Interest and rent
   c. Profits
5. The money and banking system
6. Economic policy

Course C—Engineering Economy

1. Interest, the time value of money and the concept of equivalence
2. Interest formulas
3. Methods of evaluating alternatives
   a. Present worth
   a. Annual Cost
   c. Rate-of-return
   d. Capitalized cost
4. Benefit-cost ratio
5. Depreciation methods
6. Analysis of multiple alternatives
7. Income tax effects on investments
8. Replacement theory

Course D—Financial Decision Making

1. Money markets
   a. Money, credit, and banking
   b. US government obligations
   c. Interest rates
2. Financial management
   a. Form of organization
   b. Financial planning
   c. Working capital
   d. Fixed capital
   e. Bond financing and borrowing
   f. Corporate stock
   g. Dividends and surplus
3. Personnel investment planning
   a. Savings institutions
   b. Security markets
   c. Financial reports and analysis
   d. Security analysis

Course E—Operations Research for Engineers

1. Allocation theory
   a. Linear programming
   b. Transportation problems
   c. Assignment problems
   d. Branch and bound techniques
2. Queueing theory
   Finite and infinite population models with single and multiple channels
3. Inventory theory
   Finite and infinite shortage cost models (Probalistic and deterministic)
4. Learning curves

Course F—Basic Engineering Statistics

1. Probability
2. Probability distributions
   a. Normal
   b. Binomial
   c. Hypergeometric
   d. Poisson
3. Density functions
4. Data treatment
5. Statistical inference
   a. Inferences concerning means
   b. Inferences concerning variances
6. Curve fitting and regression
7. Analysis of variance
8. Factorial experiments
9. Sampling theory

ENGINEERING MANAGEMENT PRE-REGISTRATION FORM

Please complete the following form and return it with the $10 fee to the address below if you are interested in the Fall 1973 Program. (Classes will begin during the week of Sept. 10, 1973.)

Name _____

Address _____ **Phone** _____

City & State _____ **Zip** _____

MAIL FORM TO: Dr. Thomas G. Ray
Mechanical, Aerospace & Ind. Engineering Dept.
Louisiana State University
Baton Rouge, Louisiana 70803

I wish to pre-register for the course indicated. (Please show your first shoice with a **1**, second with a **2**, etc. Show a single location choice only.) I understand if my first choice is not offered, I can request a refund of the $10 pre-registration fee. This condition also applies if the class is scheduled on a night I cannot attend.

Courses Offered	Locations
_____ Management	_____ Baton Rouge
_____ Economics	_____ New Orleans
_____ Engineering Economy	_____ Lake Charles
_____ Finance	_____ Lafayette
_____ Operations Research	_____ Shreveport
_____ Engineering Statistics	_____ Alexandria
	_____ Monroe
	_____ Houma

I cannot meet on the following nights:
M_____ T_____ W_____ Th_____

Code of Ethics for Engineers

At its March 1973 meeting, the Board of Direction of the Louisiana Engineering Society formally adopted a revised Code of Ethics for engineers. Copies of the Code will soon be available upon request from the L.E.S. Headquarters, P. O. Box 2683, Baton Rouge, La. 70821.

Preamble

The Engineer, to uphold and advance the honor and dignity of the engineering profession and in keeping with high standards of ethical conduct:

- *Will be honest and impartial, and will serve with devotion his employer, his clients, and the public;*
- *Will strive to increase the competence and prestige of the engineering profession;*
- *Will use his knowledge and skill for the advancement of human welfare.*

Section 1—The Engineer will be guided in all his professional relations by the highest standards of integrity, and will act in professional matters for each client or employer as a faithful agent or trustee.

a. He will be realistic and honest in all estimates, reports, statements, and testimony.

b. He will admit and accept his own errors when proven obviously wrong and refrain from distorting or altering the facts in an attempt to justify his decision.

c. He will advise his client or employer when he believes a project will not be successful.

d. He will not accept outside employment to the detriment of his regular work or interests, or without the consent of his employer.

e. He will not attempt to attract an engineer from another employer by unfair methods.

f. He will not actively participate in strikes, picket lines, or other collective coercive action.

g. He will not use his professional affiliations or public office to secure personal advantage and will avoid any act tending to promote his own interest at the expense of the dignity and integrity of the profession.

Section 2—The Engineer will have proper regard for the safety, health, and welfare of the public in the performance of his professional duties. If his engineering judgment is overruled by non-technical authority, he will clearly point out the consequences. He will notify the proper authority of any observed conditions which endanger public safety and health.

a. He will regard his duty to the public welfare as paramount.

b. He shall seek opportunities to be of constructive service in civic affairs and work for the advancement of the safety, health and well-being of his community.

c. He will not complete, sign, or seal plans and/or specifications that are not of a design safe to the public health and welfare and in conformity with accepted engineering standards. If the client or employer insists on such unprofessional conduct, he shall notify the proper authorities and withdraw from further service on the project.

Section 3—The Engineer will not advertise his work or merit in a self-laudatory manner, and will avoid all conduct or practice likely to discredit or unfavorably reflect upon the dignity or honor of the profession.

a. Circumspect advertising may be properly employed by the Engineer to announce his practice and availability under the following conditions:

(1) Professional cards in recognized, dignified publications, and listings in rosters or directories published by responsible organizations are acceptable forms, provided that the cards or listings are consistent in size and content, not in excess of one-quarter page, and are in a section of the publication regularly devoted to such professional cards. Information given must be restricted to firm name, address, telephone number, names of principal participants, and the fields of practice in which the firm is qualified. A dignified symbol or art work representative of the firm's practice may be used.

(2) Identification of the firm name, address and telephone number on vehicles and equipment together with services related thereto.

(3) Brochures and other factual representations of experience, facilities, personnel and capacity to render service, providing they are not misleading with respect to the Engineer's direct participation in the projects described.

(4) A statement of his name or the name of his firm and statement of his type of ser-

vice may be posted on projects for which he renders service.

b. An Engineer may prepare descriptive articles for the lay or technical press which are factual, dignified and free from ostentations or laudatory implications. Such articles shall not imply other than his direct participation in the work described unless credit is given to others for their share of the work.

c. Permission may be given by an Engineer for his name to be used in commercial advertisements, such as may be published by contractors, material suppliers, etc., only by means of a modest dignified notation acknowledging the engineer's participation and the scope thereof in the project described.

d. Telephone listings shall be limited to name, address and telephone number either under or with each branch listing in which he qualifies.

e. He will not allow himself to be listed for employment using exaggerated statements of his qualifications.

f. He will not use his professional affiliations or public office to secure personal advantage and will avoid any act tending to promote his own interest at the expense of the dignity and standing of the profession.

Section 4—The Engineer will endeavor to extend public knowledge and appreciation of engineering and its achievements and to protect the engineering profession from misrepresentation and misunderstanding.

a. He shall not issue statements, criticisms, or arguments on matters connected with public policy which are inspired or paid for by private interests, unless he indicates on whose behalf he is making the statement.

Section 5—The Engineer will express an opinion of an engineering subject only when founded on adequate knowledge and honest conviction.

a. The Engineer will insist on the use of facts in reference to an engineering project in a group discussion, public forum or publication of articles.

Section 6—The Engineer will undertake engineering assignments for which he will be responsible only when qualified by training or experience; and he will engage, or advise engaging, experts and specialists whenever the client's or employer's interests are best served by such service.

Section 7—The Engineer will not disclose confidential information concerning the business affairs or technical processes of any present or former client or employer without his consent.

a. While in the employ of others, he will not enter promotional efforts or negotiations for work or make arrangements for other employment as a principal or to practice in connection with a specific project for which he has gained particular and specialized knowledge without the consent of all interested parties.

Section 8—The Engineer will endeavor to avoid a conflict of interest with his employer or client, but when unavoidable, the Engineer shall fully disclose the circumstances to his employer or client.

a. The Engineer will inform his client or employer of any business connections, interests, or circumstances which may be deemed as influencing his judgment or the quality of his services to his client or employer.

b. When in public service as a member, advisor, or employee of a governmental body or department, an Engineer shall not participate in considerations or actions with respect to services provided by him or his organization in private engineering practice.

c. An Engineer shall not solicit or accept an engineering contract from a governmental body on which a principal or officer of his organization serves as a member.

Section 9—The Engineer will uphold the principle of appropriate and adequate compensation for those engaged in engineering work.

a. He will not undertake or agree to perform any engineering service on a free basis, except for civic, charitable, religious, or eleemosynary nonprofit organizations when the professional services are advisory in nature.

b. He will not undertake work at a fee or salary below the accepted standards of the profession in the area.

c. He will not accept remuneration from either an employee or employment agency for giving employment.

d. When hiring other engineers, he shall offer a salary according to the engineer's qualifications and the recognized standards in the particular geographical area.

e. If in sales employ, he will not offer, or give engineering consultation, or designs, or advice other than specifically applying to the equipment being sold.

Section 10—The Engineer will not accept compensation, financial or otherwise, from more than one interested party for the same service, or for services pertaining to the same work, unless there is full disclosure to and consent of all interested parties.

a. He will not accept financial or other considerations, including free engineering designs, from material or equipment suppliers for specifying their product.

b. He will not accept commissions or allowances, directly or indirectly, from contractors or other parties dealing with his clients or employer in connection with work for which he is responsible.

Section 11—The Engineer will not compete unfairly with another engineer by attempting to obtain employment or advancement or professional engagements by competitive bidding, by taking

advantage of a salaried position, by criticizing other engineers, or by other improper or questionable methods.

a. The Engineer will not attempt to supplant another engineer in a particular employment after becoming aware that definite steps have been taken toward the other's employment.

b. He will not offer to pay, either directly or indirectly, any commission, political contribution, or a gift, or other consideration in order to secure work, exclusive of securing salaried positions through employment agencies.

c. He shall not solicit or submit engineering proposals on the basis of competitive bidding. Competitive bidding for professional engineering services is defined as the formal or informal submission, or receipt, of verbal or written estimates of cost or proposals in terms of dollars, man days of work required, percentage of construction cost, or any other measure of compensation whereby the prospective client may compare engineering services on a price basis prior to the time that one engineer, or one engineering organization, has been selected for negotiations. The disclosure of recommended fee schedules prepared by various engineering societies is not considered to constitute competitive bidding. An Engineer requested to submit a fee proposal or bid prior to the selection of an engineer or firm subject to the negotiation of a satisfactory contract, shall attempt to have the procedure changed to conform to ethical practices, but if not successful he shall withdraw from consideration for the proposed work. These principles shall be applied by the Engineer in obtaining the services of other professionals.

d. Contingency provisions for professional engineering services are not recommended. When a contingency provision must be accepted, however, in order for the Engineer to make available the technical expertise necessary to secure funding for a project for a public body, such acceptance shall not be considered unethical if the engineering agreement assures the engineer of his continued employment once funding arrangements are completed, or full payment be made for his preliminary services (quantum), should his employment be terminated. When a professional commission must be accepted on a contingency basis, an engineer shall not permit his professional judgment to be compromised in order to assure funding of the project.

e. While in a salaried position, he will accept part-time engineering work only at a salary or fee not less than that recognized as standard in the area.

f. An Engineer will not use equipment, supplies, laboratory, or office facilities of his employer to carry on outside private practice without consent.

g. An Engineer will not undertake professional engagements for public work on a "turn-key" and/or design/construct basis except for the very smallest projects where little or no design or inspection is required. (As used here "turn-key" refers to a project where the design, inspection, supervision and construction are all performed by the same party.) "Turn-key" and/or design/construct projects are acceptable for private work only where the client is in a position to provide overall verification of design or inspection of construction by the use of his own employed staff.

Section 12—The Engineer will not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice or employment of another engineer, nor will he indiscriminately criticize another engineer's work in public. If he believes that another engineer is guilty of unethical or illegal practice, he shall present such information to the proper authority for action.

a. An Engineer in private practice will not review the work of another engineer for the same client, except with the knowledge of such engineer, or unless the connection of such engineer with the work has been terminated.

b. An Engineer in governmental, industrial or educational employ is entitled to review and evaluate the work of other engineers when so required by his employment duties.

c. An Engineer in sales or industrial employ is entitled to make engineering comparisons of his products with products by other suppliers.

Section 13—The Engineer will not associate with or allow the use of his name by an enterprise of questionable character, nor will he become professionally associated with engineers who do not conform to ethical practices, or with persons not legally qualified to render the professional services for which the association is intended.

a. He will conform with registration laws in his practice of engineering.

b. He will not use association with a nonengineer, a corporation, or partnership, as a "cloak" for unethical acts, but must accept personal responsibility for his professional acts.

Section 14—The Engineer will give credit for engineering work to those to whom credit is due, and will recognize the proprietary interests of others.

a. Whenever possible, he will name the person or persons who may be individually responsible for designs, inventions, writings, or other accomplishments.

b. When an Engineer uses designs supplied to him by a client, the designs remain the property of the client and should not be duplicated by the Engineer for others without express permission.

c. Before undertaking work for others in connection with which he may make improvements, plans, designs, inventions, or other records which may justify copyrights or patents, the Engineer

Continued on Page 24

AN INVITATION TO PARTICIPATE

LES

LOUISIANA ENGINEERING SOCIETY

AN INVITATION TO MEMBERSHIP

Membership in the Louisiana Engineering Society is an important part of your personal and professional life. Think of the amount of time and money you have invested in your professional training. You certainly carry insurance on your life and your physical property. But what about your time-and-dollars investment in your profession which is undoubtedly your most valuable asset?

In a society based largely on group relations, the engineer needs to safeguard his professional and economic welfare. He needs protection in the Legislature from those who would damage his status. He needs the benefits of prestige built up through group public relations and a strong voice to stress that he is a professional man. He needs protection against unethical competition and against all influences which might undermine public confidence in his integrity and competence. He needs an instrument for shaping public policy of his profession. These safeguards and needs are realized through membership in the Louisiana Engineering Society.

GRADES OF MEMBERSHIP

Member—Registration as a Professional Engineer in any state, or graduate of approved college, plus experience in a branch of engineering not provided for in Louisiana registration laws, or registered Land Surveyor in La. **Professional Investment $25.**

Junior Member—An EIT certificate from any state, or graduate of approved college, and not less than 20 nor more than 32 years of age . . . **Professional Investment $17.**

Affiliate Member—An engineer or other person whose experience qualifies him to cooperate with engineers in the advancement of professional knowledge and practice . . . **Professional Investment $28.**

Student Member—Pursuit of an engineering degree via full-time engineering curriculum in an approved college . . . **Professional Investment $1.**

Non-resident membership is available to those residing outside of Louisiana and the Professional Investment is approximately 57% of that shown for LES.

LOUISIANA ENGINEERING SOCIETY
APPLICATION FOR MEMBERSHIP

GENTLEMEN:

I hereby apply for admission into the Louisiana Engineering Society as a _____ (grade) and agree to comply with the Constitution and Bylaws and the Code of Ethics of the Society. I also apply for admission into the National Society of Professional Engineers, if qualified and if I have indicated 'yes' to question No. 6 opposite.

Please assign me to the Chapter checked below:

Alexandria	☐	Baton Rouge	☐	Bayou	☐
Lafayette	☐	Lake Charles	☐	Monroe	☐
New Orleans	☐			Shreveport	☐
Non-Resident	☐	_____			☐

☐ INTRODUCTORY MEMBERSHIP OFFER ACCEPTED

Date _____

Signed: _____

FUNCTIONAL SECTION PREFERENCE
(Check One)

☐ Government ☐ Private Practice
☐ Industry ☐ Education

PLEASE COMPLETE THE FOLLOWING SPACES

1. Name _____ (Last) (First) (Initial)
2. Home Address _____ (Street) (City and State) (Zip Code)
3. Business Affiliation _____ Position or Title _____
4. Business Address _____ (Street) (City and State) (Zip Code)
5. Telephone: Home _____ Office _____ Please Send All Mail to: Home ___ Office ___
6. REGISTRATION: PE ☐ LS ☐ EIT ☐ None ☐
   Branch _____ State _____ Reg. No. _____
7. Are you now affiliated with NSPE? Yes ☐ No ☐ If yes, what state? _____
8. If no, do you want to become a member of NSPE? Yes ☐ No ☐
9. Have you ever been a member of LES? Yes ☐ No ☐ If yes, you must also complete an 'Application for Reinstatement'.
10. Birth date _____ Age _____ Wife's first name _____
11. Education _____ (School) (Date Graduated) (Degree Obtained)
12. Major engineering discipline _____

NOTE: If you are a PE, EIT or LS only a Sponsor is needed, otherwise please list the names of three LES members as your references. A brief professional experience record must be attached if you are not a PE, EIT or LS.

1. _____
2. _____
3. _____

Mail to LES, P. O. Box 2683, Baton Rouge, La. 70821.

Continued from Page 22

should enter into a positive agreement regarding the ownership.

d. Designs, data, records, and notes made by an engineer and referring exclusively to his employer's work are his employer's property.

Section 15—The Engineer will cooperate in extending the effectiveness of the profession by interchanging information and experience with other engineers and students, and will endeavor to provide opportunity for the professional development and advancement of engineers under his supervision.

a. He will encourage his engineering employees' efforts to improve their education.

b. He will encourage engineering employees to attend and present papers at professional and technical society meetings.

c. He will urge his engineering employees to become registered at the earliest possible date.

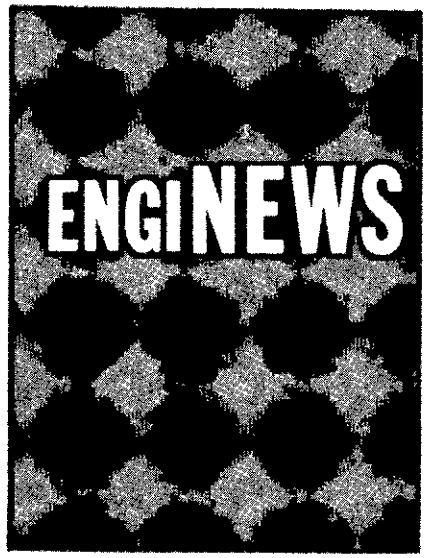
d. He will assign a professional engineer duties of a nature to utilize his full training and experience, insofar as possible, and delegate lesser functions to subprofessionals or to technicians.

e. He will provide a prospective engineering employee with complete information on working conditions and his proposed status of employment, and after employment will keep him informed of any changes in them.

Note:

In regard to the question of application of the Code to corporations vis-a-vis real persons, business form or type should neither negate nor influence conformance of individuals to the Code. The Code deals with professional services, which services must be performed by real persons. Real persons in turn establish and implement policies within business structures. The Code is clearly written to apply to the Engineer and it is incumbent on a member of L.E.S. to endeavor to live up to its provisions. This applies to all pertinent sections of the Code.

Publication No. 1102 As Revised, By LES, April 1973



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APRIL 3, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

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Lake Charles, La.
Chemical

BACCI, JOSE D.
Baton Rouge, La.
Petroleum

BAILEY, BRUCE KENNETH
Gretna, La.
Civil

BOOTH, KENNETH CHARLES
Bettendorf, Iowa
Electrical/Mechanical

BRODERICK, JAMES RICHARD
Houston, Texas
Civil

BUTTERFIELD, PEARCE ROBERT
Houston, Texas
Civil

CAPE, JR., JAMES ALFRED
Norcross, Ga.
Civil

CLAPP, THOMAS WILLIAM
Gretna, La.
Civil

CLINEBELL, PAUL WILLIAM
Mahomet, Ill.
Civil

CLOYD, GEORGE M.
Arlington, Texas
Mechanical

DENNER, FREDERICK DAVID
Marshall, Texas
Mechanical

FAIRLEY, JAMES ARCHIE
Biloxi, Miss.
Civil

FAULK, KENNETH HILL
Lake Charles, La.
Chemical

FORT, MICHAEL DAVID
Surrey, England
Civil

FREELAND, MARTIN CLARK
Bluff City, Tenn.
Civil

GOODRICH, CHARLES S.
Shreveport, La.
Mechanical

GOSS, THOMAS RICHARD
Cleveland, Tenn.
Mechanical

GREENWOOD, DAVID FRANCIS
Norwood, Mass.
Civil

HART, JAMES FRANKLIN
New Orleans, La.
Mechanical

HENRY, RICHARD ANDREW
Villa Park, Ill.
Civil

HUFFMAN, JAMES GERALD
Metairie, La.
Electrical

JAMES, LEO ELBERT
Seabrook, Texas
Electrical

JORNS, JOHN WILLIAM
Houston, Texas
Mechanical

JUDGE, CHARLES AUGUSTINE
Needham, Mass.
Chemical

KEJARIWAL, RAJENDRA PRASAD
Westwego, La.
Mechanical

KIPPER, GEORGE JAMES
Seattle, Wash.
Mechanical

LAMB, JAMES RILEY
Metairie, La.
Civil

LEE, JR., LT. COL. WILLIAM E.
Metairie, La.
Civil/Electrical

LITTLE, ANDREW DUNCAN
New Orleans, La.
Civil

LONG, KARL PARKER
Florence, Miss.
Civil

LYLES, HIRAM RAY
Maplewood, La.
Chemical

MARTIN, WILLIAM PAUL
Baldwin, N. Y.
Chemical

MATHEWS, JR., EMMETT LEE
Alexandria, La.
Civil

MORRIS, JR., WILLIAM CLAUD
Shreveport, La.
Electrical

MOUER, III, SIMON REVERE
New Orleans, La.
Civil

O'CALLAGHAN III, DANIEL IGNATIUS
Lafayette, La.
Civil

RANDICH, GENE MARTIN
Oak Lawn, Ill.
Civil

RICHARDSON, ALVIN THOMAS
Sorrento, La.
Mechanical

RILEY, KENNETH LLOYD
Baton Rouge, La.
Chemical

SEAVER III, GEORGE ARTHUR
New Orleans, La.
Civil

SMITH, DONALD RUSSELL
Baton Rouge, La.
Chemical

SMITH, KENNETH WOODROW
Lafayette, La.
Petroleum

SNELLGROVE, ROBERT ROYCE
Baton Rouge, La.
Civil

SPARGER, WILLIAM HARRY
Hackensack, N. J.
Civil

STONECIPHER, ROBERT THOMAS
Houston, Texas
Mechanical

WEBER, ARTHUR HERMAN
Baton Rouge, La.
Civil

WHITESIDE, DR. JAMES BROOKS
Huntington, N. Y.
Mechanical

MAY 1, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

CALCOTE, JR., LLOYD LESLIE
Lake Charles, La.
Mechanical

CANTWELL, DAVID ALLEN
Morgan City, La.
Petroleum

CHEZEM, CURTIS GORDON
New Orleans, La.
Electrical

CLARK, LEE WILLIAM
Monroe, La.
Mechanical

COLACO, JOSEPH PHILLIP
Houston, Texas
Civil

DERRICK, ROBERT PARKER
Decatur, Ga.
Electrical

DIEDRICH III, GEORGE HERMAN
New Orleans, La.
Industrial

FITTS, LARRY GERALD
Shreveport, La.
Mechanical

GARRISON, JR., ROBERT DENNIS
Columbia, S. C.
Civil

GOODING, JAMES GRANT
New Orleans, La.
Mechanical

HALLEY, ALEXANDER BELL
Metairie, La.
Civil

HARPER, GEORGE MICHAEL
Dallas, Texas
Petroleum

HELMSING, JOSEPH MICHAEL
Mobile, Ala.
Civil

HOLTKAMP, CLARENCE JULES
San Angelo, Texas
Electrical

HUNTER, JR., WILLIAM WINFIELD
Verona, Pa.
Mechanical

KAUPP, JR., HENRY JOSEPH GEORGE
Houston, Texas
Electrical

LANDRY, PAUL LORAINE
Slidell, La.
Mechanical

LIPSCOMB, JR., JOHN WILSON
Lake Charles, La.
Electrical/Mechanical

MONROE, WILLIAM CHARLES
Baton Rouge, La.
Mechanical

OLIVIER, KENNETH J.
Gretna, La.
Mechanical

PRATT, OLIVER LAURENS
Houston, Texas
Mechanical

RAYNER, JAMES FRANCIS
Alexandria, La.
Electrical

REID, JAMES DEAN
Metairie, La.
Civil

SCHEXNAYDER, JR., CLIFFORD JOSEPH
Covington, La.
Civil

SIMPSON, JOHN WELLS
Atlanta, Ga.
Electrical

TANDY, TERRY FRANCIS
Donaldsonville, La.
Mechanical

WILDER, CARLTON SPENCER
Plantation, Fla.
Civil

YERDON, ROBERT S.
Metairie, La.
Mechanical

YOUNG, JR., SAMUEL LESLIE
Baton Rouge, La.
Industrial

BOARD OF DIRECTION MEETING

February 3, 1973

Monteleone Hotel **New Orleans, La.**

MINUTES

President Hoyt Brown called the meeting to order with the following members present: Roger K. Battle, P.E.; Richard L. Bennett, P.E.; Hoyt W. Brown, Jr., P.E.; Fred C. Culpepper, P.E.; Marshall B. Ewing, P.E.; Charles W. Hair, Jr., P.E.; Frank M. Heroy, Jr., P.E.; T. J. Hogue, Jr., P.E.; Malcolm L. Hurstell, P.E.; James L. Meyer, P.E.; Frank Miller, P.E.; E. E. "Buddy" Moncla, P.E.; Lamon L. Moody, P.E.; Waldemar S. Nelson, P.E.; Jesse C. Odom, P.E.; Herby Pourciau, P.E.; Arthur R. Theis, P.E.; J. J. Thigpen, P.E.; and Edward P. Williamson. Also present were Gerald A. Simmons, Executive Secretary; Charlie Stokes, P.E.; Leo M. Odom, P.E., and Charles Stubbs, P.E.

The minutes of the January 5, 1973 meeting were approved as presented. The motion for approval was made by Mr. Moody, seconded by Mr. Moncla and adopted.

Financial Report—The financial report was given by Mr. Hurstell, Secretary-Treasurer, for the month of January 1973. The report reflects year to date total receipts of $71,278.97 and expenses of $63,093.62.

Motion by Mr. Nelson, seconded by Dr. Thigpen, "that the financial report be accepted subject to the usual audit." Motion Carried.

Mr. Hurstell reported on funds collected for practice section activities and the legislative fund. A copy of the report was attached to the financial statement.

Section Reports

Professional Engineers in Government—Chairman Arthur Theis reported that the Highway Board was meeting February 3rd. To date no action has been taken on the attempt to unionize all employees of the Highway Department. A number of organizations, including L.E.S., are actively opposing any attempt to unionize engineers.

Professional Engineers in Industry—Mr. Hurstell reported on P.E.I. activities in the absence of the Chairman. The report is attached.

Professional Engineers in Private Practice—Mr. Moody reported in the absence of the Chairman. There was no report on statewide activity, but Mr. Moody discussed a request of the A.G.C. to assist in solving a problem of prevailing wage rates in areas where public work is being done.

At present, the U.S. Labor Department, in areas were federal grants are made to a municipality, makes a determination of wages to be paid on projects at the request of E.P.A. In some of these cases the wage rate is inflated compared to prevailing rates of the area. This has caused problems. A.G.C. would like the cooperation of L.E.S. in correcting the situation.

President Brown appointed an Ad Hoc Committee of Mr. Moody, Mr. Cressy and Mr. DesOrmeaux to study and report back to the Board for action.

Honors & Awards Committee Report—Mr. Szabo, chairman of the Honors and Awards Committee, reported that the committee had met and nominates the following candidates for awards:

Charles M. Kerr Award—Leo M. Odom
A. M. Lockett Award—Elmer Shutts
A. B. Paterson Award—Clayton Nairne
Leo M. Odom Award—Roger Richardson
Technology Accomplishment Medal—George Heller
Young Engineer Award—Blaise Carriere

Motion by Mr. Heroy, seconded by Mr. Hogue, "that the recommendations of the committee be accepted and the awards be presented." Motion Carried.

Land Surveyors Request for Registration Law Study Committee—President Brown read a letter from the Louisiana Land Surveyors Association requesting the formation of a committee to study the registration law. He read another letter from C.E.C. requesting attendance at a meeting to discuss methods of formation of a committee to study the registration law.

After considerable discussion, a motion by Mr. Hogue, seconded by Mr. Moody, "that the President appoint an Ad Hoc Committee of four members to meet and detail action that should be taken to: (1) save the existing registration law by assuring that no changes are made by the drafters of the new constitution; and (2) deal with problems presented by the President relative to possible changes to the registration law."

Substitute motion by Dr. Thigpen, seconded by Mr. Culpepper, "that the officers of the Society serve as a committee to contact the proper people to make known the wishes of the Society in regard to the registration law." Substitute motion carried.

Motion by Mr. Moody, seconded by Mr. Meyer, "that the President immediately write letters to all interested professional engineering societies, technical societies and Louisiana Land Surveyors and ask that they participate as a joint committee to study the registration law and this joint committee be asked to make recommendations for changes to the registration law with first priority being the formation of a philosophy that they would propose in approaching the Constitutional Convention to save the authority for the registration board." Motion Failed.

President Brown stated that he construed the action to mean that he was not to meet with other societies to study changes to the registration law.

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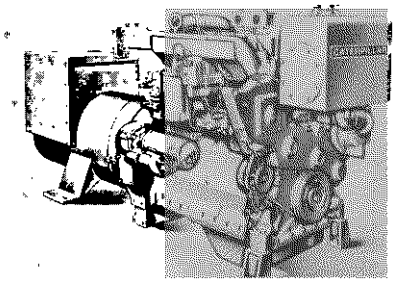

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Mr. Moody resigned as Board sponsor to the Legislative Committee. President Brown appointed Mr. Culpepper to the position.

L.E.S. Recommendation on Education to Constitutional Convention—Motion by Mr. Ewing, seconded by Mr. Battle, "that L.E.S. support the concept of a 'super board' for higher education in Louisiana." Motion Carried.

The next meeting of the L.E.S. Board was held in Lafayette, Louisiana at the Rowntowner Motor Inn, March 31, 1973 in conjunction with the Annual Spring Meeting.

Report to the L.E.S. Board on PEI Activities at the Annual Winter Meeting Held in Salt Lake City on January 8-13, 1973—The PEI Executive Board met on January 8 and the PEI Board of Governors met on January 9 and 10. The rest of the week was devoted to the NSPE professional meetings, attended by the officers and the national directors of the various states.

The PEI Board of Governors heard reports from the state PEI Sections and from the six regional PEI groups. At this time, four new state sections were recognized; namely Oklahoma, which is in our Southwestern Region, as well as Connecticut, New Hampshire and Utah. There was a report from R. C. Spears dealing with the PEERS Program, which continues to be very successful. About 20 percent of the engineers submitting resumés of their experience, ability, etc., credit the PEERS Program with their new employment which they have received. A recommendation to expand the PEERS Program to include employed engineers seeking to make a change in their employment was not approved by the Executive Committee, finances being given as the reason.

There was considerable unhappiness among the PEIs relative to the fact that they feel that they are not getting their pro rata share. While it is recognized that the budget cannot be divided exactly according to the number of members in each practice section, nevertheless, there was a strong feeling that the PEI Section should receive a larger percentage than they do. The PEI passed a motion asking that the NSPE staff be required to identify all members of the NSPE by their area of practice by July of 1973.

There was a feeling among certain members that regional meetings are looked upon favorably and are growing in importance as well as attendance. It is possible that this growth will continue and that these meetings will be strengthened.

It was recommended that there be established a PEI Distinguished Service Award to be given annually, if appropriate, to an individual who has made a contribution to PEI activities. This award would be made at the July annual NSPE meeting.

There was considerable discussion about the idea of giving a regional award to runners-up for the national award for Industrial Professional Development. This seemed to be looked upon favorably and was referred to the Awards Committee for development of rules to establish such an award. It was brought out that since the organization of the section for Professional Engineers in Construction, construction companies should no longer be eligible for the IPDA award. It was decided that they will be eligible in 1973, but not thereafter.

It was announced that the Guidelines for Professional Employment have been finalized and have been sent to the various engineering organizations for approval. You will recall that this project was initiated by the PEI Section and that it outlines the rights and obligations of employers and of employed engineers. These were due back by February 28th so that they could be promulgated during the month of March. They were to be presented to employers at the Pheasant Run No. 2 meeting on May 1st. Assuming that the majority of the engineering societies and the employers look favorably on these guidelines, we, as well as the other states, may proceed to set up workshops to discuss and to set up these guidelines.

The accreditation program, which correlates with the guidelines, is being held up at this time. It seems that there has been considerable opposition of employers on this and some lack of enthusiasm among engineers as to its practicability.

There was a great deal of interest at this meeting in the registration laws of the various states. The No. 1 topic seemed to be the elimination of the exemption of engineers employed in industry. Several states have started or propose to start campaigns to have this exemption stricken from the registration law.

It was of interest to note that we were informed that the Texas State Registration Board plans to put ethics into its registration law. This Board claims that it has this power. A controversial issue that it plans to include is the banning of all "turn-key" jobs.

There was a discussion of PEI projects for the coming year and priorities were assigned to these.

Unfortunately, Louisiana was not very well represented at this meeting. This was due partially to sickness among our representatives and partly due to the untimely ice storm that prevented others from leaving the state.

James S. Janssen, Vice Chairman
NSPE-PEI Southwestern Region

Desire for Continuation of Independent Board of Registration—The Louisiana Engineering Society, founded in 1898 and designated under Louisiana Law enacted in 1908 as the professional organization recommending nominees to the Governor for appointment as members of the Louisiana State Board of Registration for Professional Engineers and Land Surveyors, supports the concept of a State Board of Registration for Professional Engineers and Land Surveyors. The Board as it is now functioning, provides for registration of engineeers and land surveyors so that the public may be protected. This purpose can best be served through a Board of Registration administered by the profession. Any consolidation of its function or grouping with other boards would endanger life, health and property and be to the detriment of the public welfare. It is our desire that the Louisiana Constitution continue to provide for an independent board of registration for professional engineers and land surveyors.

March 31, 1973

Rowntowner Motor Inn — Lafayette, La.

MINUTES

President Brown called the meeting to order with the following members present: Roger Battle, P.E.; Ronnie Cressy, P.E.; Fred Culpepper, P.E.; Ray DesOrmeaux, P.E.; Brook Ewing, P.E.; Charles Hair, P.E.; Malcolm Hurstell, P.E.; T. J. Hogue, P.E.; Jim Meyer, P.E.; Frank Miller, P.E.; Buddy Moncla, P.E.; Lamon Moody, P.E.; Jesse Odom, P.E.; Herb Pourciau, P.E.; Richard See, P.E.; A. R. Theis, P.E.; J. J. Thigpen, P.E.; and Ed Williamson, P.E.

Guests present were: Blaise Carriere, P.E.; Charles Edwards, P.E.; Webb Hart, P.E.; Lee Hill, P.E.; Albert McKee, P.E.; Mr. Miltenberger, Insurance Representative; Leo M. Odom, P.E.; Mr. Provosky, Insurance Representative; Bill Rentrop, P.E.; Jack Roach, P.E.; Francis Roy, P.E.; and Regis Trumps, P.E.

The minutes of the February 3, 1973 meeting were approved as corrected. The corrections are as follows: Page 2, 5th paragraph under "Land Surveyors request for Registration Law Study Committee," add "(2) to organize a Council of Engineering Societies throughout the State.

Motion for approval was made by Mr. Battle and seconded by Mr. Culpepper and adopted.

Financial Report—The financial report was given by Mr. Hurstell, Secretary-Treasurer, for the month of February 1973. The report reflects year to date total receipts of $77,839.82 and expenses of $75,566.01.

Motion by Mr. Culpepper, seconded by Mr. Odom, "that the financial report be accepted, subject to the usual audit." Motion Carried.

Mr. Hurstell requested that a committee be appointed to select a new Executive Secretary for the Society to replace Mr. Simmons who has resigned to accept employment with another organization. President Brown appointed the following: Mr. Hurstell, Mr. Culpepper, Mr. Moody and Dr. Thigpen.

Mr. Hurstell reported that the L.E.S. office would occupy new quarters effective May 1, 1973. The new address will be 723 Main Street, Baton Rouge, La.

Section Reports

Professional Engineers in Construction—Chairman Ray DesOrmeaux submitted the attached report. (See Attachment.)

Motion by Mr. Battle, seconded by Mr. Miller "that the P.E.C. Section be authorized to collect $2.00 voluntary contribution per P.E.C. member for P.E.C. programs." Motion Carried.

Motion by Mr. Ewing, seconded by Mr. DesOrmeaux, "that the following officers be elected for the next administrative year: Chairman—E. E. Moncla; Vice Chairman—A. Webb Hart; and Secretary-Treasurer—Herb Pourciau." Motion Carried.

Professional Engineers in Education—Mr. Williamson reported that the section approved two resolutions and requested action at the next L.E.S. Board Meeting.

(1) L.E.S. urges that, in view of predicted shortage of engineers, there not be a dissolution of the college-university preparatory program in public schools of the state.

(2) L.E.S. supports a program designed to make high school counsellors better informed about the various programs of engineering education, technician training, and technologist education so they can better guide their students.

Professional Engineers in Government—Mr. Theis reported the section discussed:

(1) Unionization of La. Dept. of Highways
(2) N.S.P.E. white paper on Unionization
(3) Civil Service pay plan
(4) La. State Board of Registration policy.

The section asked for action on the following resolution:

P.E.G. requests that the L.E.S. Board request the Louisiana State Board of Registration to review present procedures of issuing E.I.T. certificates to graduates of engineering curriculum not related to a particular field.

Motion by Mr. Theis, seconded by Mr. Moody, "that the above resolution be adopted." Motion Carried.

Professional Engineers in Private Practice—Mr. Cressy gave the P.E.P.P. report, which is attached. Without objection, the following motion was considered: "Motion by Mr. Cressy, seconded by Mr. Meyer 'that L.E.S. establish a committee to work with C.E.C. with regard to change orders.' " Motion Carried.

Mr. Brown appointed the following committee: Mr. Cressy, Chairman, Mr. Moncla, Mr. Theis, Mr. McKee and Mr. Thomas.

Professional Engineers in Industry—Mr. Hill reported in the absence of Mr. Heller. The P.E.I. Section requested action at the next Board meeting on the following resolution:

"That the L.E.S. Board be urged to reconsider its action directing the cessation of activities by L.E.S. relating to changes in the registration law and that the Board be requested to have L.E.S. spearhead a coordinated effort by all professional engineering societies, including the State Board of Registration, to jointly develop proposed changes to the Registration Law."

P.E.I. Section asked for a report on the status of N.S.P.E. proposed policy regarding the exporting of U.S. Technology to other nations through private or governmental channels. The section also requested that N.S.P.E. hire its own economist.

The nomination for P.E.I. Officers are as follows: Chairman—Mr. George Heller; Vice Chairman—Mr. Lee Hill; and Secretary—Mr. Regis Trumps.

Committee Reports

Ethics and Professional Conduct—Mr. Meyer submitted the attached report. (See attachment.)

Legislative Committee—Mr. McKee submitted the attached resolution for consideration at the next Meeting. (See attachment.)

There was no objection to considering the question of an additional 8-hour examination.

Motion by Mr. Ewing, seconded by Mr. Cressy, "that the State Board of Registration be requested to make the second 8-hour examination mandatory." Motion Carried.

Engineering Technology Committee—The attached report was forwarded by Chairman Carroll. (See attachment.)

Vocational Guidance—The committee stressed that the Society should exhibit an interest in the new proposal for career education in the state.

Education Committee—Mr. Trammell submitted the attached report. (See attachment.)

Report on Constitutional Convention—Mr. Culpepper reported that the Chairman of the Executive Department Committee, Mr. Tom Stagg, had been contacted in regard to L.E.S. position on the Registration Law for Professional Engineers and Land Surveyors. The committee will report progress after meetings with Mr. Stagg and the Constitutional Convention Committee.

L.E.S. Insurance Program—Mr. Cressy reported on activities by the Insurance Committee. He recommended that the second phase of the program be implemented.

Motion by Mr. Cressy, seconded by Mr. Battle, "that the Insurance Consultants, Gilsbar, Inc., be authorized to proceed with the establishment of a major medical, hospitalization and life insurance program." Motion Carried.

N.S.P.E. Policy on Engineering Technicians—Motion by Mr. Battle, seconded by Mr. Culpepper, "that the subject be tabled." Motion Carried.

L.E.S. Nominating Committee—Mr. Brown suggested that the three immediate past presidents be the Board's representatives on the Nominating Committee.

Motion by Mr. Hurstell, seconded by Mr. Moncla, "that the President appoint Mr. Hogue, Mr. Szabo and Mr. Vogt to serve on the nominating committee." Motion Carried.

N.S.P.E. Southwestern Region Officers—Mr. Brown requested Dr. Thigpen to check into the status of nominations and report to the Board.

Board Meeting Procedure—Motion by Mr. Culpepper, seconded by Mr. Hair, "that motions acted upon be included in the minutes and all reports of committees be attachments." Motion Carried.

Revised Code of Ethics—Mr. Meyer reviewed the new proposed Code of Ethics. Mr. Meyer moved for approval to have 10,000 copies of the Code of Ethics printed and distribute a copy to each member; that forms be made available to new members; and that the Code be published in the LOUISIANA ENGINEER. Further, that under Section 11G the words "design construct" be added behind the words "turn key." The motion was seconded by Mr. Pourciau.

Substitute motion by Mr. Battle, seconded by Mr. Pourciau, that the N.S.P.E. seal be removed from the Code of Ethics and change the last paragraph to eliminate reference to N.S.P.E. and insert L.E.S. Substitute motion passed.

Mr. Brown called for a vote on the original motion as amended. Original motion as amended passed.

Engineering Education Information—Mr. Brown called to the attention of the Board the information distributed on Engineering Education in Louisiana.

Motion by Mr. Cressy, seconded by Mr. Ewing, "that L.E.S. extend its thanks and appreciation to those who assembled the information." Motion Carried.

Mr. Cressy requested, due to the time factor, that item No. 6 of the P.E.P.P. report be considered at this meeting. There were no objections.

Motion by Mr. Cressy, seconded by Mr. Meyer, "that L.E.S. oppose E.P.A. guidelines of Feb. 28, 1973 as Act 92-500 to provide for Design-Construction of Turn-Key contracts for Public Works." Motion Carried.

The next meeting of the Board of Direction was to be held May 11, 1973 in Baton Rouge.

Professional Engineers in Construction Report

Professional Engineers in Construction Functional Section of the Louisiana Engineering Society in their meeting of March 31, 1973 make the following recommendations to the State Board of Direction of the Louisiana Engineering Society:

(1) That the State Board consider a voluntary contribution of $2.00 for each member of the P.E.C. Section, said contribution to be placed on the dues notice to the membership as a voluntary contribution.

(2) That the following named individuals are nominated as functional section officers for the coming L.E.S. fiscal year:

Chairman—E. E. "Buddy" Moncla
Vice Chairman—A. Webb Hart
Secretary-Treasurer—Herb Pourciau

Professional Engineers in Private Practice Report

(1) L.E.S.-P.E.P.P. passed a motion requesting that the Board of Direction of L.E.S. encourage members to implement the salary scale contained in the L.E.S. Salary Survey Report as a minimum.

(2) In response to a request by C.E.C., L.E.S.-P.E.P.P. committee reviewed proposed revisions to the Manual of Practice. L.E.S.-P.E.P.P. passed a motion approving the proposed new wording, and publishing these changes as an erratic sheet.

The committee will be enlarged to include various disciplines, and will continue to study the manual in an effort to rewrite it. At that time new publishing will be done.

(3) L.E.S.-P.E.P.P. approved establishing a committee to work with C.E.C. in an effort to revise the State Law regarding change orders.

L.E.S.-P.E.P.P. requests L.E.S. president to appoint such a committee with representatives from L.E.S.-P.E.P.P., L.E.S.-P.E.G. and L.E.S.-P.E.C.

(4) L.E.S.-P.E.P.P passed a motion opposing the adoption by the State of Louisiana of a State Safety Code at this time.

(5) L.E.S.-P.E.P.P. voted to contribute $200.00 from its fund to the N.S.P.E. Antitrust Defense Fund.

(6) L.E.S.-P.E.P.P. passed a motion requesting the Board of Direction of L.E.S. to pass a resolution expressing opposition to E.P.A. Guidelines of Feb. 28, 1973 on Act 92-500 to provide for Design-Construction or Turn-key contracts for Public Works.

(7) L.E.S.-P.E.P.P. adopted as a project an N.S.P.E.-P.E.P.P. Private Practice Committee Pilot workshop, and appointed the Baton Rouge Chapter of P.E.P.P. to handle on behalf of L.E.S.-P.E.P.P. L.E.S.-P.E.P.P. appropriated $200 toward this project. L.E.S.-P.E.P.P. requests that the Board of Directors appropriate $200 toward this project also, from the committee's expense budget. The money will be used to carry out the project and publish the results.

(8) L.E.S.-P.E.P.P. passed a motion requesting the L.E.S. Board of Directors to approve authorizing the L.E.S. President to write to the Governor and to the heads of various state agencies, and to elected federal officials to give more consideration to Louisiana firms for projects that are within the state. Letter should contain reference to recent work on Atchafalaya basin in which no Louisiana firm was among the five selected to be considered for the work.

Ethics & Professional Conduct Committee Report

The Ethics Committee met with five chapters represented. The committee recommends to the Board:

(1) that the revised Code of Ethics, incorporating 1972 Ad Hoc committee changes, be published in a quantity of 10,000 and distributed to each L.E.S. member of present record, and provided each new member of the Society. It was also recommended that the phrase "Design/Construct" be included in the prohibition concerning "turn-key."

(2) that the Board of Direction formally request the State Board of Registration to incorporate (and enforce) a Code of Ethics in the administration of the registration law, and offer the assistance of the Society in achieving this goal.

Legislative Committee Report

The Legislative Committee by resolution concurs in the proposed amendments to Section 23 and Section 305 of the Louisiana Corporation Act as requested by the Louisiana State Board of Registration and recommends that the L.E.S. Executive Board take the necessary steps to have these amendments introduced at the 1974 session of the Louisiana Legislature.

Education Committee Report

The meeting was called to order by Grover J. Trammell, Vice Chairman. Chairman George Heller was unable to attend due to illness. Topics discussed included: the professional school concept, registration of graduates with a B.S. in Technology, career education in the secondary schools, and physics and mathematics in the engineering curriculum. At 5:00 p.m. Mr. Eugene Gouaux and Mr. W. J. Wefelice, members of the Coordinating Council for Higher Education, joined the meeting. A lively and very informative discussion followed. Mr. Gouaux and Mr. Wefelice praised the L.E.S. Engineering Education Study and said that it had been of great value to the Council. They told of the recommendation of the Council for the establishment of a Superboard to handle higher education with the Board of Education handling secondary education and trade schools. They also assured us that each member of the Council was working for the betterment of education in the State and not for any particular school or locality. The Council members answered all questions freely and their presence was greatly appreciated by the Committee.

Engineering Technicians Committee Report

1. The group proposed that the committee prepare a program on just what is engineering technology and what does a technologist or technician do and disseminate it to the L.E.S. membership. The group felt that the membership in general is not familiar with engineering technologists and technicians.
2. Industry hiring engineering technicians should thoroughly investigate the applicant's background because some applicants are claiming they have had technician training in school when they have not had the necessary schooling.
3. The group proposed that the committee should work very closely with the State Department of Education.
4. Some industrial organizations have been working very closely with the Boy Scouts "Explorers" in terms of familiarizing them with various aspects of engineering. The committee should look into this as a possible project.
5. High school teachers should have some sort of industrial experience in order to better guide high school students.
6. ASCET student organizations should be encouraged. Students should be encouraged to join. More motivation should be provided. The committee should take the lead in this area.
7. Industry should be contacted to emphasize certification amongst its technicians and provide an incentive for their people to become certified.
8. It appears there is much work to be done in acquainting high school students, parents, high school teachers, and people in industry with the education and work of the engineering technologist and technician.
9. The group felt that the 1973-74 Engineering Technicians Committee of L.E.S. should formulate some objectives and goals for the coming year and develop the necessary plans to effectively reach those goals.

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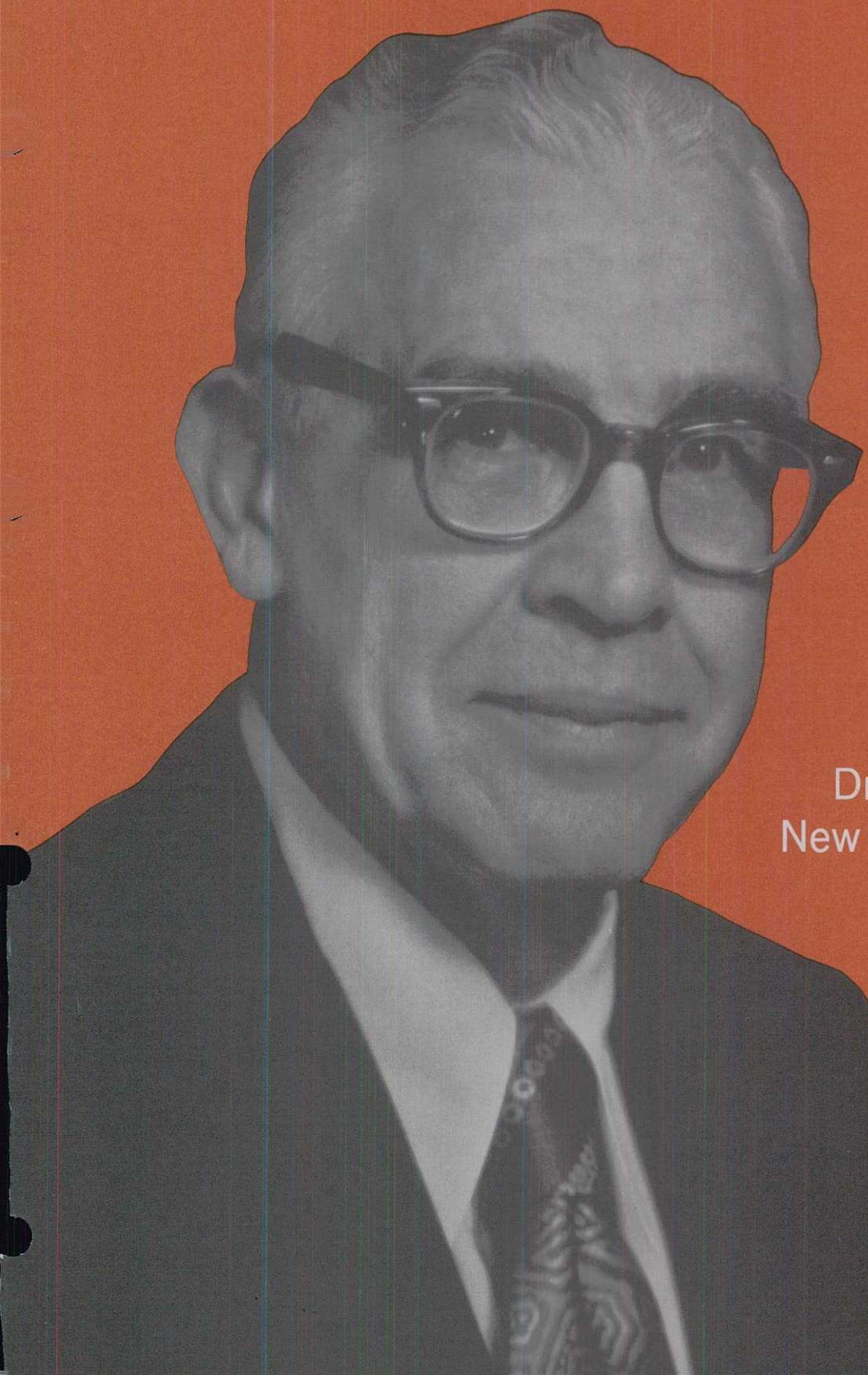
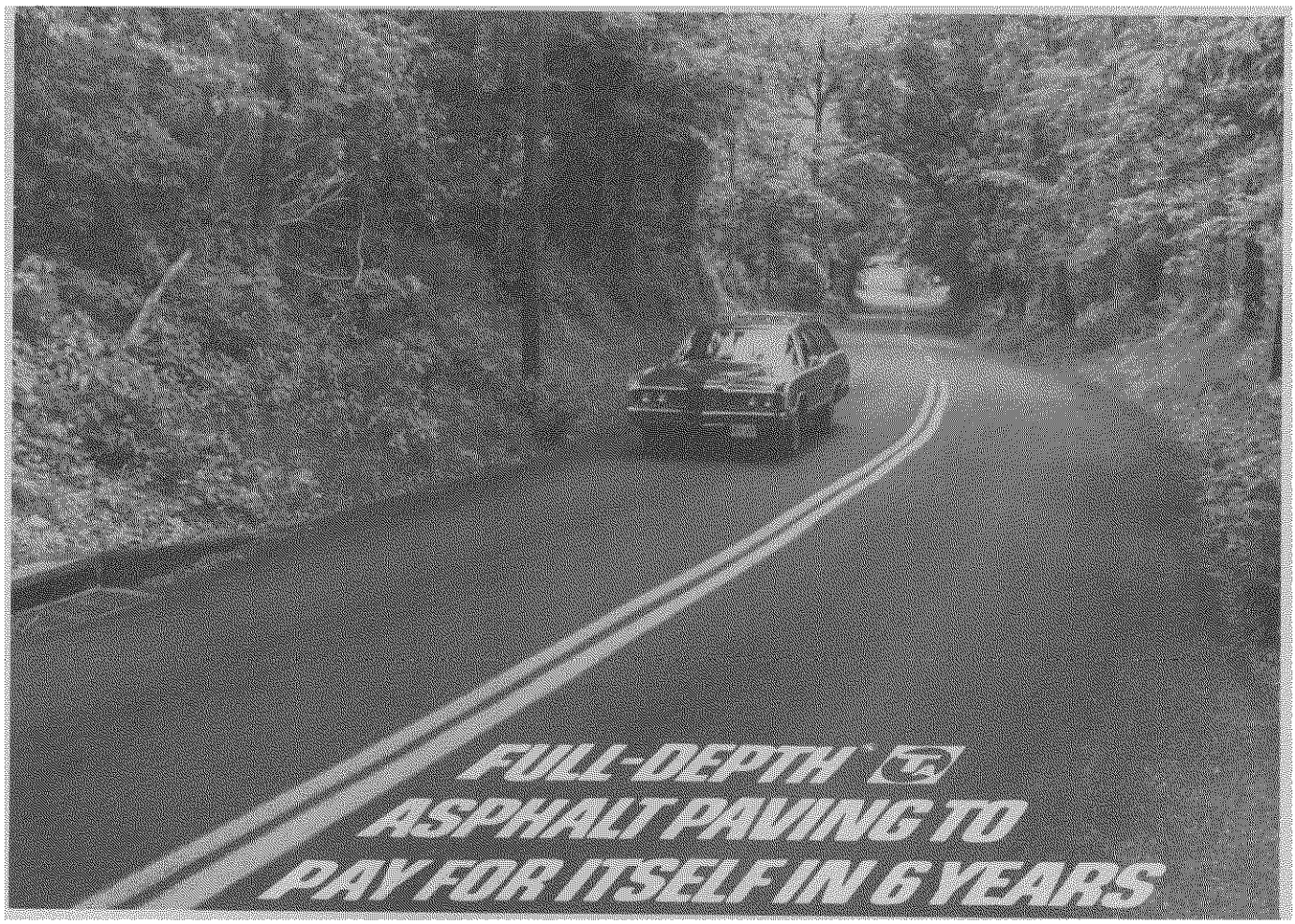
August, 1973



Dr. J. J. Thigpen
New President of LES



Unpaved New Jersey rural roads modernized for less than the cost of upkeep

In Mendham Township, Morris County, N.J., unpaved rural roads were a problem. Because these roads were sometimes impassable, school buses were rerouted, garbage trucks broke down and mail trucks could not always get through. Road dust during dry periods was equally serious and required continuous control. Then, a study by the Township Committee indicated that in six years the bond amortization costs for Full Depth construction would be less than the cost of dirt and gravel road maintenance costs.

With that, in compliance with the State of New Jersey strict requirements for municipal bonds, a special bond issue was authorized to finance Full Depth Asphalt pavements to replace outmoded dirt and gravel roads.

By decreasing the road crown, widening the road bed to a minimum of 20 feet, and paving with Asphalt, the new roads were made easier and safer to drive, less costly to maintain and free of bad weather traffic delays. From an ecological standpoint, this new construction also ended silt and dirt runoff to numerous nearby streams. Moreover, trees were not harmed or removed in upgrading township roads.

THE MENDHAM TOWNSHIP ROADS PROJECT

LOCATION: Several within the township.

TYPE: Existing dirt and gravel roads from 18-20′ wide, having a crown of 4″ to 6″, widened to 20′ with Full Depth Asphalt construction in a 4″ single layer. Filling and widening with soil aggregate was placed at the sides to bring the crown to 3½″.

TERRAIN: Rugged & rocky—an upland region of rolling gneissic hills and prominent gneissic & quartzitic ridges.

LENGTH OF PROJECT: 7.59 miles.

DRAINAGE: Natural fall to numerous streams; storm drains to handle surface runoff.

CLIMATE: Average temperature range—29°F (Feb.) to 68°F (July).

WEATHER: 46″ average rainfall per year.

TRAFFIC: Light to medium DTN = 5.

ROADWAY: Subgrade: CBR = 15.

BASE AND SURFACE: Single layer of 4″ compacted Asphalt concrete (N.J. Mix #4) Asphalt—AC-20 (5.3 by total weight of mix).

COMPACTION: Subgrade: 95% of AASHO Method T-180 4″ Asphalt pavement—98% Density.

Construction was under the supervision of Robert H. Fox, P.E., Mendham Township Engineer. Mr. Fox stresses that placement of the Asphalt in one lift saved 50% in labor costs alone and was the secret of the success of the Asphalt pavement. He adds that this was the single most outstanding public works project that Mendham Township has ever had. It's another example of the savings of Full-Depth Deep-Strength® Asphalt for both new construction and rehabilitation. For more information, please contact the Institute office serving your area . . . or write:

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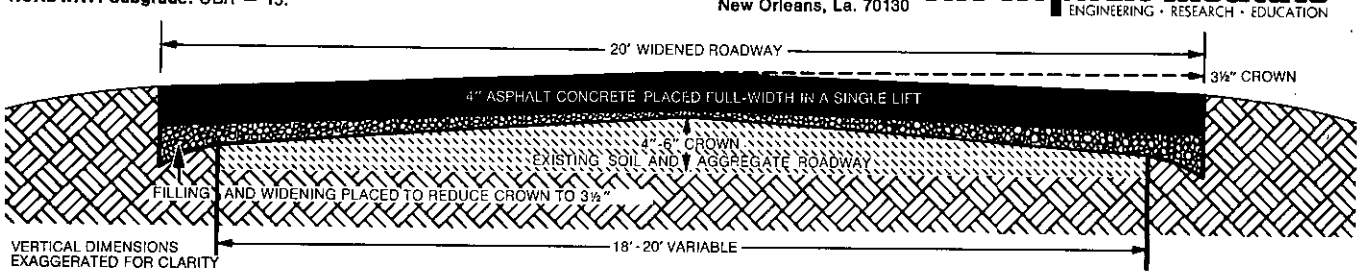

N.S.P.E. Southwestern Meeting To Be Held in New Orleans Oct. 11-13

The Monteleone Hotel in New Orleans' French Quarter will be the site of the NSPE Southwestern Regional Meeting, October 11-12-13, 1973. The theme of the meeting is "Our Professional Society—The Vehicle for Improving the Engineering Profession," and major business sessions will discuss the management and operation of the professional engineering society, working with other engineering societies, and meeting current challenges of the profession.

Thursday, October 11, the first day of the convention, will be devoted to practice area discussions, and interesting programs have been planned by engineers in private practice, industry, construction, education and government. During Thursday afternoon, executive directors of state societies will meet to discuss matters of mutual concern.

The schedule Friday, October 12, calls for welcoming addresses by the Honorable James E. Fitzmorris, Lt. Governor of the State of Louisiana, and Dr. J. J. Thigpen, P.E., President of the Louisiana Engineering Society, followed by introductory remarks by D. A. Schmand, P.E., Vice-President, Southwestern Region, NSPE. Business sessions will continue throughout the day Friday and until noon Saturday, October 13, when the meeting will adjourn.

The NSPE Southwestern Region includes engineers from:

Arkansas
Canal Zone
Colorado
Louisiana
New Mexico
Oklahoma
Texas
Wyoming

New Orleans, an interesting city with good plane connections and excellent food, should draw a good attendance for the convention.

The Louisiana Engineering Society, which celebrated its 75th anniversary early this year, is host for the event, and substantial attendance by engineers and their wives from throughout the state is expected.

An active ladies' program is planned, including breakfast at Brennan's and a walking tour of the French Quarter on Thursday, with a business meeting on Friday morning followed by a tour of the Garden District in the afternoon. A report of the Ladies Auxiliary will be made Saturday morning.

Luncheons Thursday and Friday, and a banquet Friday night, will give members, wives and guests an opportunity to visit and discuss matters of mutual interest in an informal atmosphere. Thursday and Saturday nights, Saturday afternoon and Sunday have been left open so that visitors may enjoy New Orleans' many other attractions. The local committee has arranged for guest privileges to be extended by the Engineers' Club of New Orleans to engineers attending the convention.

The New Orleans meeting should be an interesting step in the continuing development of regional meetings, and NSPE members from all parts of the Southwestern Region are invited to attend.

CLIP AND MAIL TO:

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Yes! I am interested in attending, please send me advance information.

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COVER

Dr. Joseph Jackson Thigpen is the new President of the Louisiana Engineering Society.

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R. C. (Doc) Spears Is New LES Executive Secretary

R. C. (Doc) Spears has been named Executive Secretary of the Louisiana Engineering Society. He assumed his duties August 1, replacing Gerald R. Simmons who held that position for four years.

Spears came to LES from Washington, D.C., where he served five years as staff director for the Professional Engineers in Industry section of the National Society of Professional Engineers. In his capacity as staff director he held overall responsibility for carrying through NSPE programs affecting engineers in industry and maintained close working ties with government agencies in all engineer-related matters.

In addition to these and other tasks, he edited a monthly national newsletter, prepared brochures and wrote for the *Professional Engineer* magazine.

Doc also brings to the LES his vast experiences gained in 22 years association with the U.S. Navy. In 1940, following college graduation in his native Arkansas, he entered the Navy as an aviation cadet. His WWII patrols in the slow, reliable Catalina flying boat ranged from dodging Zero's during the December 7 attack on Pearl Harbor to anti-submarine patrol and dodging German Ju 88's in the Bay of Biscay off England in 1943-44. He "retired" from service as Lieutenant USNR in 1945. The stint in civilian life was brief, however. After a year as high school coach and physical education instructor at Dermott High School in Dermott, Arkansas, Spears rejoined the Navy, this time continuing his distinguished naval career uninterrupted until 1962.

As Lieutenant Commander and then Commander in the U.S. Navy, Spears performed pilot duties as well as administrative and personnel tasks, and carried heavy responsibilities of command. Accompanied by his wife and two children he saw many areas of the world in his various duty assignments.

When he retired from naval duty in 1962, Doc's high qualifications insured him an immediate position as Operations Control Analyst with Aerojet General Corporation, Nuclear Rocket Operations and Minutemen Manufacturing Division, in Sacramento, California where he worked until his appointment to the NSPE staff in Washington in 1968.

Doc, born in Holly Grove, Arkansas, is a graduate of Arkansas A&M College, now University of Arkansas at Monticello. His major studies there encompassed economics, psychology, English and physical education. Additional post-graduate work, done at the Navy General Line School in Monterrey, California, added the subjects of physics, mathematics, engineering and humanities to his education. Doc's avid "spare-time" pursuits include tennis and bowling, both of which he competes in with more than passing skills.

Although not a degreed engineer, Doc has spent a large portion of his professional life working with and for engineers. LES can only benefit from his varied experiences. We are fortunate to have Doc Spears in command as Executive Secretary.

LES President
Dr. J. J. Thigpen

PRESIDENTIAL PRIVILEGE

First, let me express my appreciation to the membership of the Louisiana Engineering Society for the confidence you have shown in me by giving me the opportunity to serve as your President. This is a great honor and I hope that at the end of the year you will feel that your confidence has not been misplaced.

If there is any way to describe what I hope will be the activities of the Society for the coming year, it would be that of "Service to the Engineering Profession." Our constitution very clearly states that two of the objectives of the Society are the "professional improvement of its members" and the "advancement of Engineering." These are lofty objectives, and I hope that during the year we will keep them foremost in our minds.

To accomplish these objectives and to be effective we must have a strong Society. I think no one will question the fact that our leadership in the past has been strong and that today our Society has stature and a good reputation among those who know us. To be strong, we must have an alert, interested, and active membership.

The point where the Society touches the membership is at the chapter level. The chapters are the foundation of the Society, and we look to them for the grass roots work that is to be done. In return, the Society at the state level must render strong support to the chapters. In recent years, the Practice Divisions have become a stronger and a more important part of our Society. Though they do not reach the membership in as intimate a way as do the chapters, they represent members with special interests in a very important manner. These, too, deserve strong support.

In our program for the coming year, there are several areas where I think we must place special emphasis.

As always, membership is a primary concern. In addition to emphasizing enlisting new members, we must also work on the retention of present members. In the past, the membership program has been the responsibility of the chapters. I hope that this year the Practice Divisions will become involved in this very vital function. Membership is the business of every member.

With a regular session of the legislature coming up, a legislative program which advances the profession and which has the support of the engineers of our state is vital. I feel sure this will become a reality. At this time it appears that the Constitutional Convention will leave our engineering registration law intact. This is an important area of concern, and we must be on the alert for any adverse change.

In recent years the Society has shown a much greater interest in Engineering Education. This area is essential to the future of our profession. We have good engineering schools in Louisiana—make no mistake about this—and I hope that we can provide the support they need for continued growth and advancement.

I think all will agree that public relations is one of our greatest weaknesses and is an area in which we should double our efforts. We must let the public

know about our activities and contributions to society so that we gain their confidence and their support for our programs. We must be sure that high school students look on our profession with respect and that good students will consider Engineering for their vocation.

A final area in which I think we should place emphasis is in our relationships with other societies. Approximately two years ago, Carl Heck, Jr., the then Chairman of the Legislative Committee, proposed, and the Society supported, an integrated engineering society for Louisiana similar to the Louisiana Bar Association. A single society in which all engineers are members is a goal toward which I think we should all work. It would strengthen our profession and make it possible for engineers to provide greater service to society. The Louisiana Engineering Society is the logical organization to bring this about.

As I begin this year, I must admit that I have butterflies in my stomach. However, with the support and encouragement that the members of LES always give, I feel confident that this year will be a good one.

Joseph Jackson Thigpen

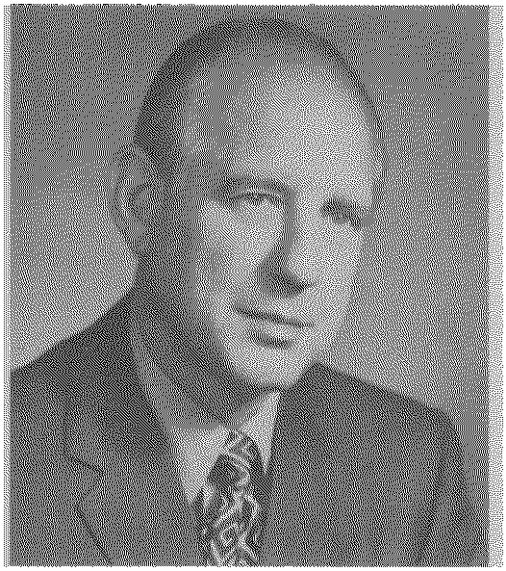
Jack Thigpen was born in Ruston, Louisiana, on February 4, 1917. He attended school in his home town, graduating from Louisiana Tech with a B.S. degree in Mechanical Engineering in May, 1936.

After graduation he worked for one year with Seismic Explorations, Inc., of Houston, Texas, and then entered the United States Military Academy. He graduated from the Military Academy in June of 1941, and was commissioned a Second Lieutenant in the Corps of Engineers. He served as an officer in the Regular Army for approximately six years. This service included 26 months in the Southwest Pacific Theater in the early part of World War II and three years as an instructor in Military History at the Military Academy. He resigned his commission in the Army in June, 1947, and in September of that year became a member of the faculty of the School of Engineering at Louisiana Tech.

Except for periods of leave his service as a faculty member has been continuous since 1947. He was granted academic leave for one year on two occasions to do graduate work at the University of Texas where he earned his M.S. and Ph.D. degrees in Mechanical Engineering. He took military leave for two years during the Korean War when he again taught at the United States Military Academy.

He was appointed to his present position, Head of the Department of Mechanical Engineering, in June of 1953.

He is married to the former Ruth Ensley of Alexandria, Louisiana. They have two children; Jack Thigpen, Jr., who coaches and teaches at Summerfield High School, and Sally Thigpen Henry who lives in Monroe.



Industry and The University: An Uncertain Alliance

By Robert M. Drake, Jr., Vice President
Research and Development, Combustion Engineering, Inc.

The United States is today beset with several major problems, the complexity and magnitude of which have no precedent in recorded history. And which from the most pessimistic view will, if not solved, destroy the nation — or from the optimistic view will change measurably and irreversibly our way of life and standard of living.

Of these several major problems facing the nation, those associated with the availability of adequate, clean energy resources have received the most public attention. The dimensions of the energy problem, called by some a crisis, have been explored in what is rapidly becoming the largest body of literature in the popular and technical press in recent history. Whether there is a state of crisis or not may be a question of semantics, but there is no doubt in the minds of informed observers that the problem of an adequate energy supply for the nation is serious indeed.

The other major technosocietal problems, mass urban transportation, urban redevelopment, air-, water- and solid waste management, health services, reduction of poverty and others, have solutions predicated upon the existence of an ensured, long-range supply of energy.

There is, however, another problem facing our technological society, which is of major import but which has been afforded little understanding and is receiving even less attention. I speak of our technical manpower resource.

Since the early 1940's the United States has led the world in technological developments. Evidence abounds on all sides of these technological achievements. Not so visible are the intellectual achievements that made the technological achievements possible. We are presently losing our position of technological supremacy in the world to Europe and the East, because of our indifference or outright neglect of our technical manpower resource, the result of a national disenchantment with science and engineering. This indifference and neglect pervades the general populace and is reflected in weak or nonexistent federal and state policies in this regard. In spite of the public and government attitude there continues the necessity for research and development, design and manufacture in many areas of interest.

A specific, but by no means isolated instance of the magnitude of the development necessary within the next 30 years is that of the electric utility industry, which by year 2000 is to produce about one-quarter of the total energy available for use. To do that, the electric utility industry must increase its capacity by an estimated 2.8 million megawatts, which will require an expenditure in excess of $1.4 trillion 1970 dollars, and will require 19 billion engineering and construction man-hours, exclusive of the manpower required for research, development, design and manufacture of power equipment, and the man-hours required for transmission and distribution systems.

The present combined, available work force knowledgeable of the utility industry could produce 130 million man-hours per year against the projected growth of 222 million man-hours in 1975; 590 million in 1985; and, 1,690 million by 2000. The education and training of this expanded work force to meet the manpower demand without over- or undersupply in the several categories (engineers, engineering technicians, construction personnel, etc.) requires

careful planning and even more careful implementation of those plans than we have heretofore demonstrated. The electric utilities industry is just one example. Other industries will have similar demands on the resource of technical manpower.

It is the contemplation of the technical manpower resource, its creation, maintenance and effective usage that leads me into the subject I was asked to explore today: university-industry relationships—an uncertain alliance.

Divergence in Interest

As one who has spent one-half of my career in three rather different industries, and the other half in three just as different universities, I am distressed by what I perceive to be the growing divergences in interest and philosophy between the academy and industry when each has so much to offer the other; when **together** both hold much of the promise for the future of our technological society; where without either we will surely fail in our quest for future well being and progress.

I believe there exists a mutual, if unfortunate, disenchantment between industry and the universities, and I believe each in its own way bears a responsibility for the disenchantment—that each should endeavor to consider the situation in a serious way to heal the breach and learn to work together. It will not be easy.

Industry **must** rely upon the graduates of the universities, particularly the professional schools, as the source of new personnel and new ideas, and should therefore take more than a casual interest in the educational and training programs afforded the students.

The universities, again particularly the professional schools, need a close association and knowledge of the problems of industry as a source of ideas and direction, and should therefore take more than a casual interest in industry.

I believe it safe to say that no engineering school has ever been particularly successful without an intimate association with industry. And I would venture the observation that no industry has been long successful without continuous injection of new talent from the universities. Why then the current state of affairs? I offer some observations.

From the time of the creation of the first truly professional school of engineering in 1833 until World War II, the engineering schools were closely associated with industrial progress. During this period technical innovations came in series, with relatively long periods of development. The engineering schools with their resources of the day were able to participate in all, and to lead in many of these developments. Every college of engineering in existence can refer to examples of pioneering work of their faculties in close cooperation with engineering practitioners resulting in the creation of new technologies upon which were built new industries. From the fascinating correspondence of that period it appears that the universities and industry were in rapport.

Because of, and following World War II, technical innovations came not in series but in parallel: aerospace, electronics, nuclear, and computer technologies are examples. Not only did these developments require engineers with a more sophisticated education, they required enormous financial and physical plant resources to ensure reasonable progress. Federal funding came into vogue and the existing equilibrium was upset.

For the first time in their history the universities had access to financial resources for research and development programs with essentially a free choice of project identification and direction. The faculties quickly developed allegiances to the several federal funding agencies, abandoning at the same time their ties to industry except for those few industries of special interest to the federal funding agencies.

Engineering schools, reacting to the demand for graduates, expanded rapidly, becoming at the same time more diversified. Educational programs were modified **correctly** to include a larger component of science and mathematics, and **incorrectly** to eliminate courses in design and experimental laboratories. One result was the production of a more theoretically sophisticated, but probably overall less competent graduate.

Engineering faculties, comfortable with support from federal agencies sought little and received less from industry; they sought neither experience in, nor exposure to industry. The gulf in mutual interest and understanding between industry and the university widened. The situation was improved not at all by the recent period of introspection in which the universities engaged in a search for relevance in an evolving climate of disenchantment with science and engineering. The self-studies produced little except an overall degradation of quality and reduced standards of performance.

Schools of engineering, functioning under the aegis of the university proper, have elected to conform to lower standards, standards appropriate perhaps for programs in the liberal arts, but not at all for the professional schools. Over the years, much of what was the essence of engineering has disappeared from the programs of the engineering schools. Industry, the major market-place for the graduates of engineering schools, in observation of this trend, became increasingly critical of the academy, and tended to deal with the universities more at arm's length.

Other Side

But what of the other side of the coin? Industry differs sharply from the academy in that it is not particularly democratic, has relatively monolithic goals, and is unabashedly dedicated to making profit. Most industry is organized in a structure of profit centers, each center with responsibility for profit or loss. This very organization with the resulting preoccupation with the bottom line of the balance sheet

leads to lack of concern for the more distant future, and inhibits longer range research and development. As a result, there is undertaken little research and development work of the type particularly appropriate for sharing with a university, unless absolutely necessary in support of some threatened product line. When such work is undertaken, it is on an urgent, full-time basis. The emphasis is more on timely results, and less on full phenomenological understanding — just the opposite of the interest of the academy.

In this climate, the engineer in industry is inclined to view the engineer in the university with some reserve; and however unfairly, to subscribe to—"those who can do; those who can't teach!" The engineer in industry, while perhaps unpracticed in theoretical analysis, has accumulated an enormous reservoir of experience in his respective technology. To make use of a university professor as a consultant or colleague the engineer in industry must elect to inform the consultant in his own technology, and this he is sometimes reluctant to do, even though the resulting interaction would be mutually beneficial. Even where such arrangements are made, the partial commitment and the part-time availability of the university professor for an industrial assignment is something of a frustration to his industrial counterpart.

Management in industry is even more diffident in establishing working relationships with the universities. There is always the fear of untimely disclosure of proprietary information, or the concern for loss of control over work performed under university auspices. The insistence by management on tight contractual and project control and upon restricted or delayed publication and patent rights, and the equal insistence by the universities for freedom from such constraints constitutes a major impedance to improved relationships.

One might well question whether two such different enterprises can ever be persuaded each to recognize the assets of the other, and to develop a protocol to enable them to work together for common benefit. Our technological lead in the world is being seriously eroded, with the promise of certain further erosion should we fail to reap the benefits of strong industry-university productivity.

I believe the rapport between industry and the universities can be restored and perhaps even improved; but certain accommodations will be required.

Industry must turn from an almost total preoccupation with the bottom line and short-term interests to consideration of longer term goals. Research and development programs, consistent with overall corporate long-range plans, should be formulated and implemented through joint efforts of industrial and university personnel. Rather more planning is necessary to use university personnel and facilities effectively, but that very planning can ensure mutually satisfactory project management and control. Relatively longer term commitment for program support could help ease the problem of work schedules for university personnel. An appropriate research and development program, effectively carried out, can ensure future profitability for industry and a wealth of experience for the university.

Research and development programs including university participation should be budgeted as a continuing part of the cost of business, subject to periodic review naturally, but a regular and substantial commitment by industry.

The universities, particularly the engineering schools, have perhaps a more difficult accommodation to make. Assuming support from industry **on more than the present token basis**, the engineering schools incur an obligation to use the support effectively.

Utilization of industrial support might best occur if the schools of engineering were reorganized as professional schools with standards, priorities and rewards related to professional activities rather than to the traditional but less appropriate activities of the university. The organization of the engineering schools must permit, indeed encourage, the acceptance of complex engineering projects which can be successfully undertaken by a coordinated, cooperative group of faculty and students. The university administration must acknowledge the validity of this kind of professional activity in the engineering schools. Faculty and students participating in these industrially-supported programs of professional importance need to have assurance that they will be rewarded, or at least not penalized for their participation.

To assure closer ties with industry, it might be wise for the engineering schools to replace the traditional, and poorly used sabbatical year, with a more frequent fifth year in industry. Between term consulting arrangements would provide continuity to the program as well as financial incentives to the faculty members involved.

Finally, the universities should remove the present requirements that most degree work must be accomplished in residence, on campus, to permit the use of industrial facilities which are in some cases superior to those of the universities.

On an optimistic note, I detect recently a growing awareness on the part of both the universities and industry of the serious consequences of continued noninteraction.

A series of regional conferences within the past year or so, brought together key personnel from both industry and the universities in search of ways to ensure effective industry-university relations. And while the results from these conferences have thus far produced little, the effort was certainly a step in the right direction.

Perhaps if together the universities and industry really put their minds to it and their hearts in it, the "un-" can be removed from the "uncertain alliance." ■

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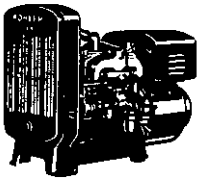

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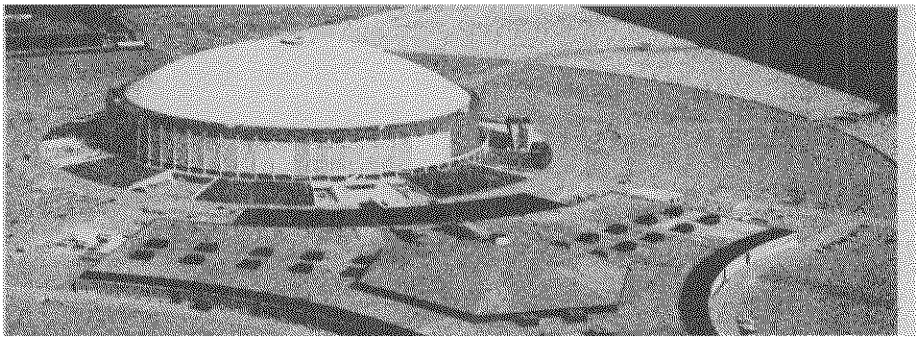

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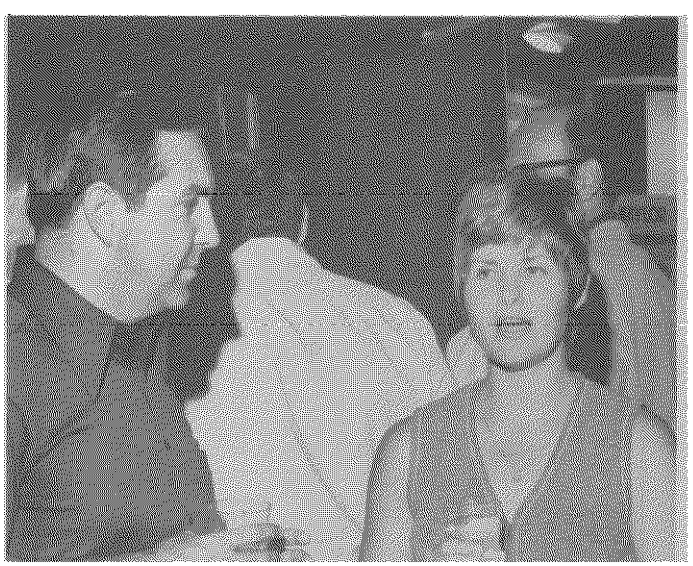
Convention Camera

"Captain" Charles Hair and his wife, along with Mr. and Mrs. T. J. Hogue, arrived at the convention by boat.

Mrs. Leo Odom, Mrs. James Janssen, and Mrs. Andrew Moore are shown in the exhibit area.



Mr. and Mrs. Bob Blanche enjoy cocktails in the exhibit hall.

Mrs. John Vogt, center, and Mrs. Hoyt Brown enjoyed the Seafood Safari. At left are their spouses.

President of the Lake Charles chapter Francis Roy and his wife are pictured serving themselves.

Main speaker for the closing banquet was Roger Masquelier, manager of utility sales for Westinghouse.

Former executive secretary of the Louisiana Engineering Society Gerald Simmons reaches for the fish.

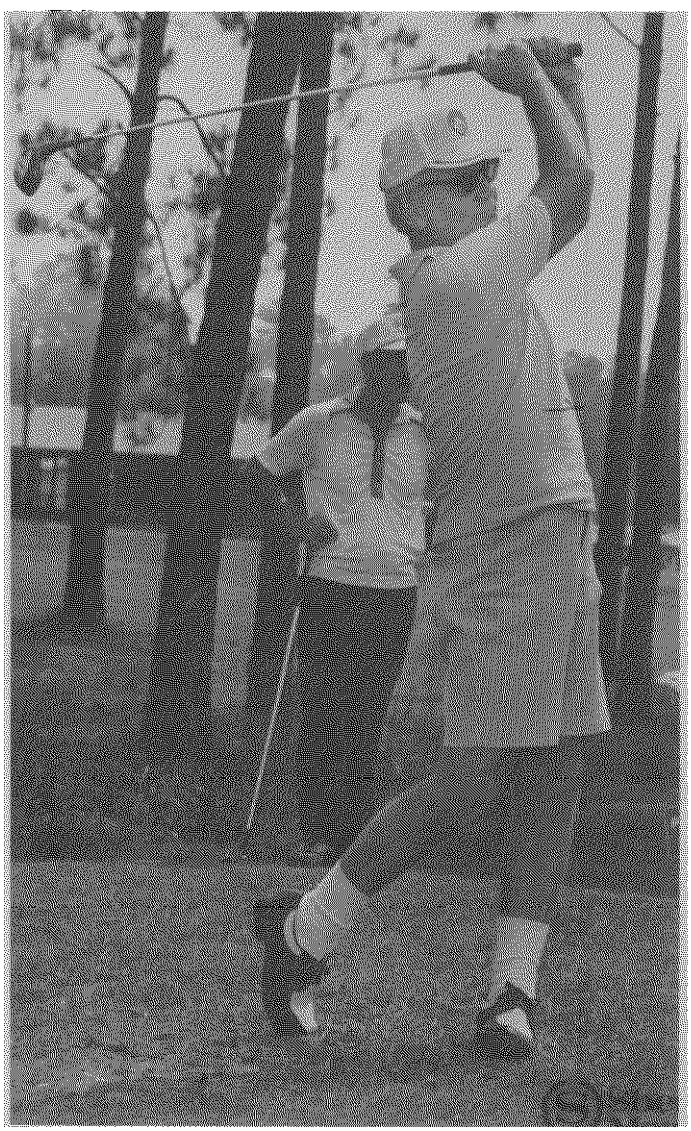
Mr. and Mrs. Joe Meade and Mr. and Mrs. Larry Grundmann, left to right, were in attendance at the convention.

ames Janssen and Dr. Dan Vliet, executive secretary of the State Board of Registration, help themselves in the buffet line.

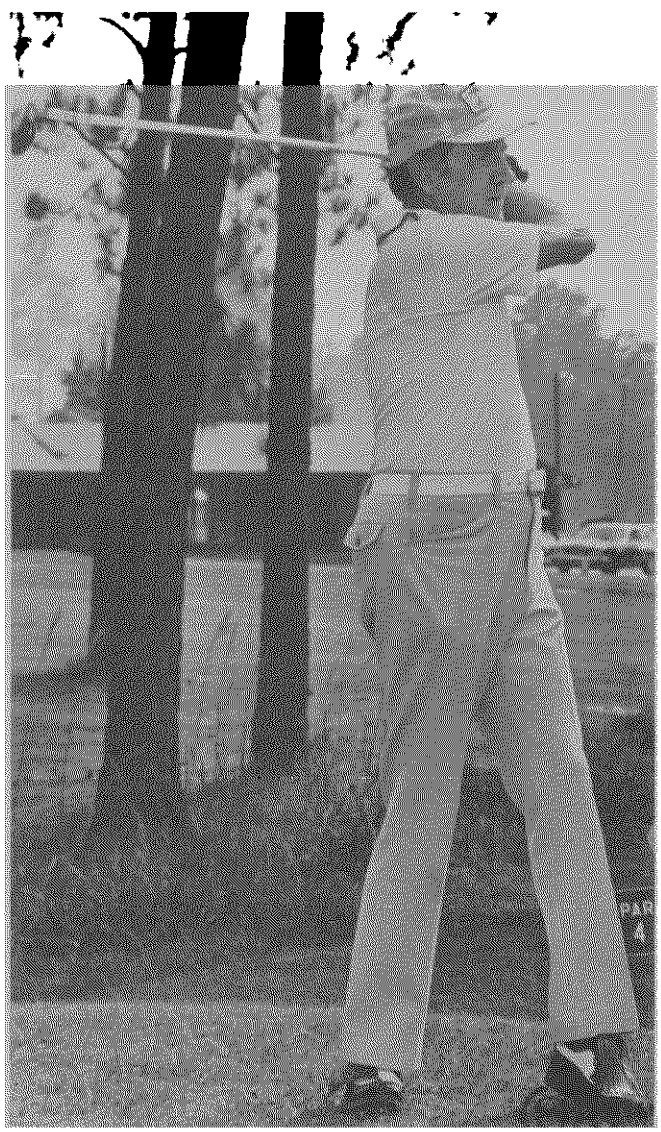
Mr. and Mrs. Emery Domingue, Grover Trammel, Marion Chaney, and Jim Meyer take their turn through the line.

Convention Camera

"Anyone lose his club on the course today?" asks Joe Brown, right, president of the Mississippi Engineering Society. Embarrassingly, former LES president John Vogt claims his club.



Outgoing LES president Hoyt Brown shows his style on the golf course.



R. O. Beckham tees off during the golf tournament.

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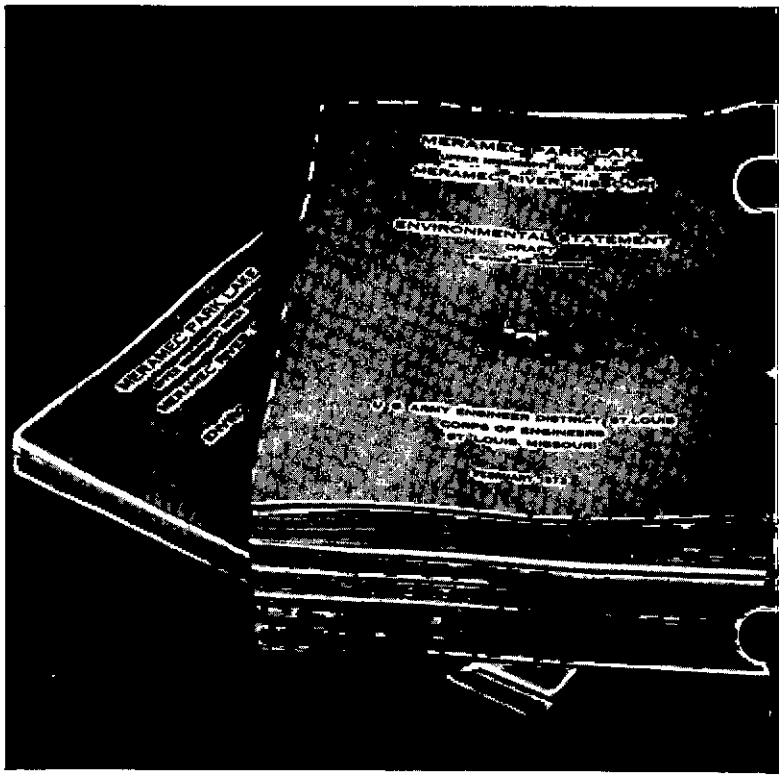
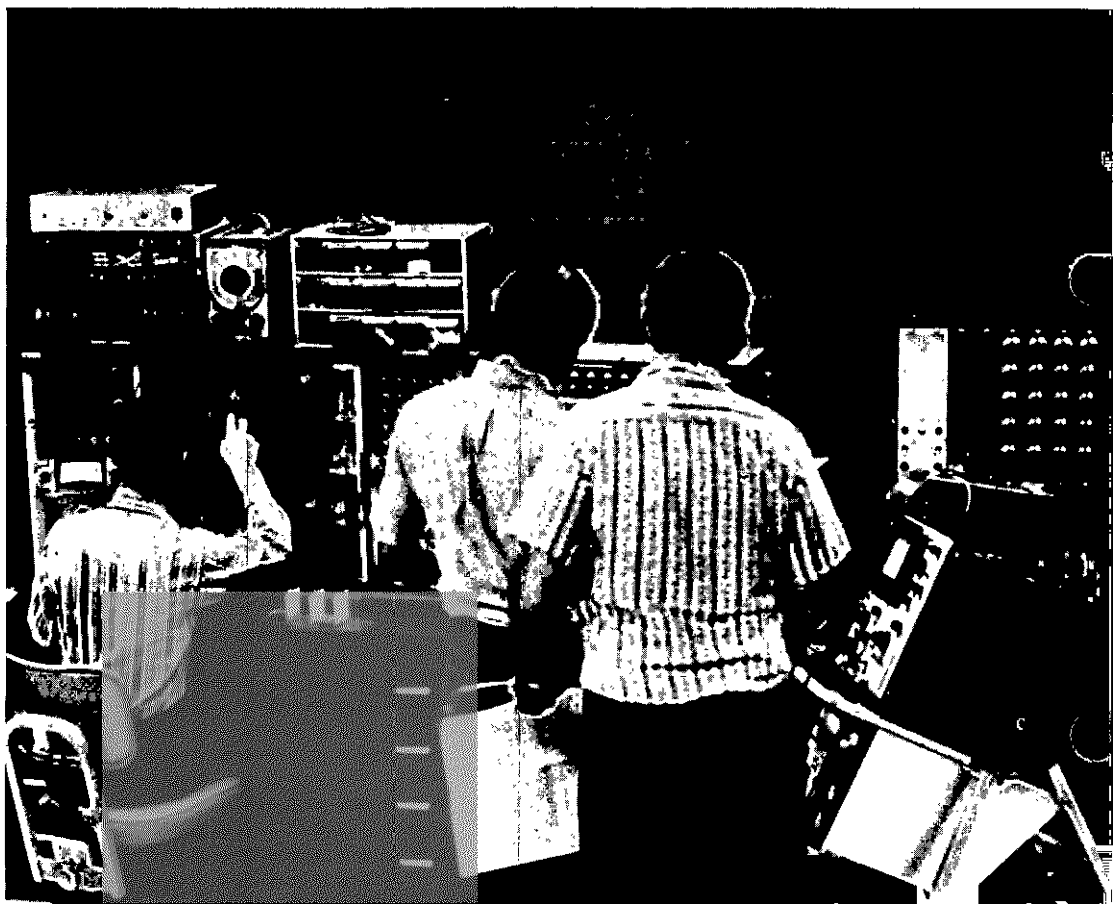




By Major General Charles C. Noble, Division Engineer, Lower Mississippi Valley Division, and President, Mississippi River Commission.

Image

General Noble is a multitalented professional, well versed in many different disciplines. In the last issue of LOUISIANA ENGINEER he discussed the difficulties encountered by the Corps of Engineers during recent flooding of the Mississippi River. Here, we reprint his remarks on the engineer's image made before a joint meeting of the Louisiana Engineering Society and the Mississippi Society of Professional Engineers.

In discussing the engineer's image in government, I will talk largely about the Corps of Engineers, partly because that is familiar ground to me and partly because I believe my comments will apply with equal force to the profession as a whole, in and out of the Corps.

Our nation emerged in nearly two centuries from a virtual wilderness to the most highly-developed country in history. It has been a saga of engineering. It has been the fascinating story of engineer heroes, such as Captain James Buchanan Eads and Major General George Goethels; a story of building cities and industries and transportation systems; of developing rivers and resources; of discovering new properties and processes; of inventing and developing new ways of living and working; of production and distribution on a scale never before approached even remotely during the many thousand years of human existence.

We have built roads, bridges, hospitals, sewerage systems beyond count. By cleaning up our environment, we have made it possible to conquer and all but wipe out deadly diseases which scourged previous generations. We in the Corps are proud of the part played by the Army Corps of Engineers in the development of our nation.

But, these are things we have done which people alive today have learned to expect. Many of them have no realization of what kind of world they have been rescued from.

The good that the engineer has wrought is taken for granted; the bad is held against him.

So what is the current image of the engineer? Certainly the hero worshipers among the young are few. St. Louis University closed its civil engineering department. Enrollments in engineering are down all over the country. The magic and mystique is gone. The truth is, the engineer is no longer the demigod. His work is not praised—his opinion is not respected. It often is not even solicited. The unqualified who don't know what they are talking about and who are not too careful with the facts are getting headlines when they express contrary views on issues of engineering judgment.

Nowhere is this turnabout more pronounced than in the emotional concern in recent years over the environment. Looking for a scapegoat, many have lashed out at the engineer. And the Corps, being such a prominent, visible target in the engineering community, has come into a full measure of the criticism.

A number of recent editorial cartoons have carried the same theme: the engineers lack vision; they have little consideration for human or social values. They bulldoze through with their engineering plans and projects regardless of what they destroy; they are like thoughtless machines, devoid of vision, devoid of judgment, devoid of sensibilities.

Now, we don't buy this picture of ourselves for one minute. And, while we can't help smiling at the cleverness and sense of humor of some of the cartoonists, we don't take criticism of this kind lightly or indifferently, even though it may be unfair, inconsistent with the facts, and held by a relatively small group rigidly oriented against development of any kind or merit.

It is important for us engineers to do a good and conscientious job and to know that we are doing so—but if our public, our customers think we are doing a bum job, we are in trouble. And this goes for all of us, in or out of government.

Jobs More Complex

The truth is that our jobs have become much more complex in recent years. The day of the simple engineering solution is gone. The great problems of our day—energy shortage, pollution, limited resources of all kinds from land, water, minerals, all cry for engineering solutions.

To maintain our way of life is no longer as easy as it was previously. By the year 2000, our needs for energy and water will triple. This poses a serious situation to a nation already short of energy and water. The answer does not lie in reduced expectations on the part of the public.

America is not in a mood to buy a steady state society—to go into the doldrums—to turn back the clock—but it now wants something else as well. In a crunch, the public will opt for economic development, but the public attitude has stiffened against environmental trade-offs for economic development, which can possibly be avoided or mitigated. It poses a serious challenge to the engineer who must find an answer to meet the needs of the people in the face of multiplying shortages and more complex and sometimes conflicting public attitudes and wants.

More than ever before, the need for professionalism is paramount. To be truly professional today, an engineer must not only be technically competent, but also sensitive to the aspirations of the people.

And, in the course of finding answers, we must find the balance between continued growth, economic well-being, and the very real environmental concerns of our people.

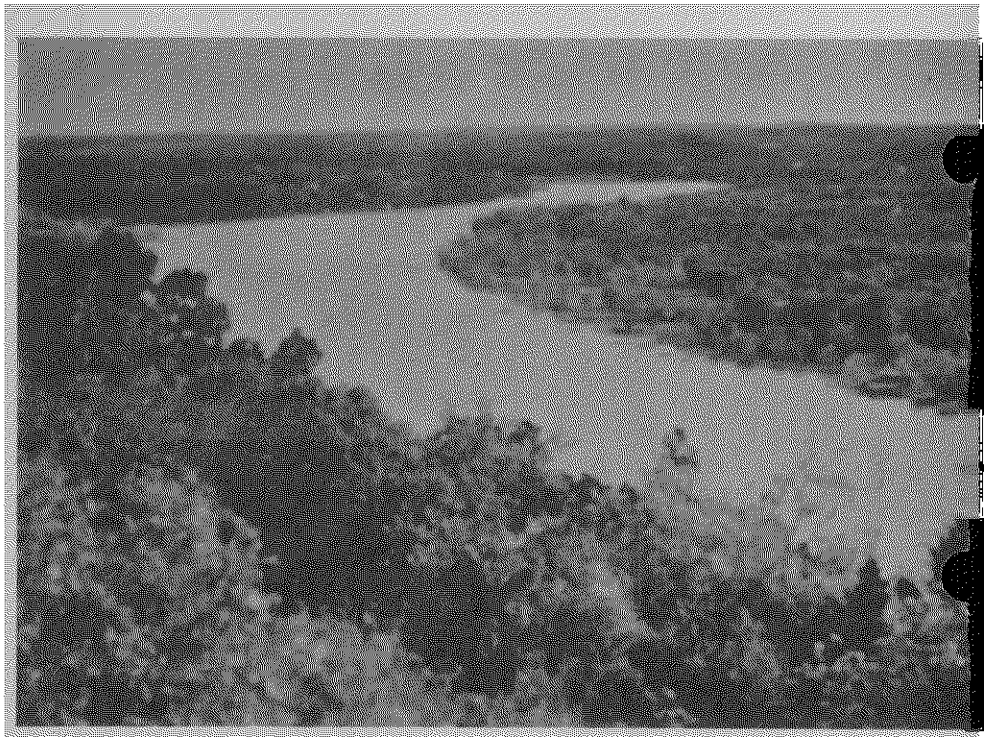
The environmental problems must be brought back from the high-flown realms of exaggeration, misinformation, and wild

guesses, and taken up by the engineer who has the professional technology, the training, the judgment, and the disciplined frame of mind to separate the facts from the fancy, the truth from the exaggerations, and who can convert an unendingly recited problem into solutions.

That is why I am so pleased with the Comprehensive Environmental Engineering Meeting and Exposition being sponsored by ASCE this fall in New York City. Others can talk and rant and rave, but it will be leadership of the engineer, working in concert with other disciplines which will methodically get about the task of solving the problem of the environment.

Innovative thinking about our environment did not just start in the last five years. Engineers have been worrying and working in this area long before it became fashionable. But, we must remember that the engineer must satisfy his customer; he can make recommendations, he can offer advice, he can look for innovative ways to solve the problem; but it is the constituency, the buyer, the owner, who has the final say. If our country is ready for a more environmentally sound approach, or a change in direction, then the people must make their desires known through their elected representatives. But if we are going to solve these problems in a sound manner, then we have got to have the type of thinking engineers, not only in the private sector but also in government who can make the studies and the recommendations that will provide answers and viable alternatives.

Our entry into the decade of environmental awareness, with its emphasis on programs to preserve or to restore the ecosystems of nature has been a challenging, rewarding, and at times a frustrating experience. Encouraging progress is being made on all fronts. Even our most severe critics reluctantly agree that they have found the Corps to be capable and willing to support and adjust to meet national priorities, and to assure



that development for future growth shall not degrade the quality of life.

We in the Corps have taken this environmental question very much to heart. First, because we have always, within our authorities, done as much as possible to improve the environment. The NEPA in imposing new statutory requirements on our work has also in effect invested us with new statutory authorities. To carry on this work, we have augmented our staffs at all echelons with a wide array of non-engineer disciplines: biologists, ecologists, economists, foresters, wildlife specialists, environmentalists, conservationists; and their influence is injected in our engineering studies, designs, and field construction from inception to completion.

These people are dedicated to doing the best job possible, they are environmentally aware; they are socially aware citizens who take an active participative part in their communities. Many of them belong to groups, such as the Sierra Club and the Open Space Council, and Coalition of the Environment. Most of them are level-headed enough to realize that you can't stop the world. They realize that doing nothing solves very few problems.

We feel that our Environmental Impact Statements are thoughtful, honest, objective assessments of the effect of proposed work. We hide nothing. Neither do we exaggerate, distort, misuse, or avoid the facts.

But, most of all, we deal with facts rather than just shoot from the hip, as is the custom with some extremists who stand in judgment of our work.

I believe our careful, honest approach is paying off. The distorted image is beginning to change.

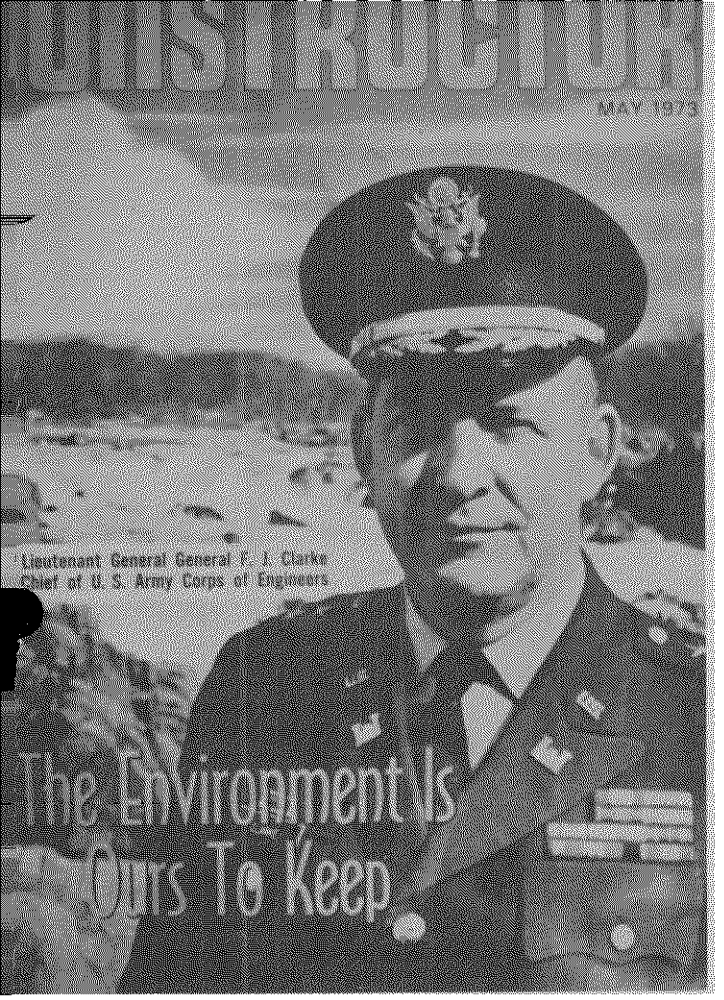
Our Chief of Engineers, Fred Clarke, has gained the reputation for being a staunch conservationist.

Our Charleston, S. C. District Engineer, Col. Burke W. Lee, was named Water Conservationist of the Year for 1971 by the South Carolina State Wildlife Federation. Our people everywhere, by their professional dedication to our mission, are proving that we in the Corps do not wear black hats, nor do we have horns and cloven hoofs.

We have some way to go to regain the confidence of the nature lovers, which had been shaken by the immoderate, unreasoning attack of the extremists. They are learning that we really mean business when we say we believe in the environment and will do all in our power to enhance it in the course of providing otherwise for the needs and well-being of our people. ■

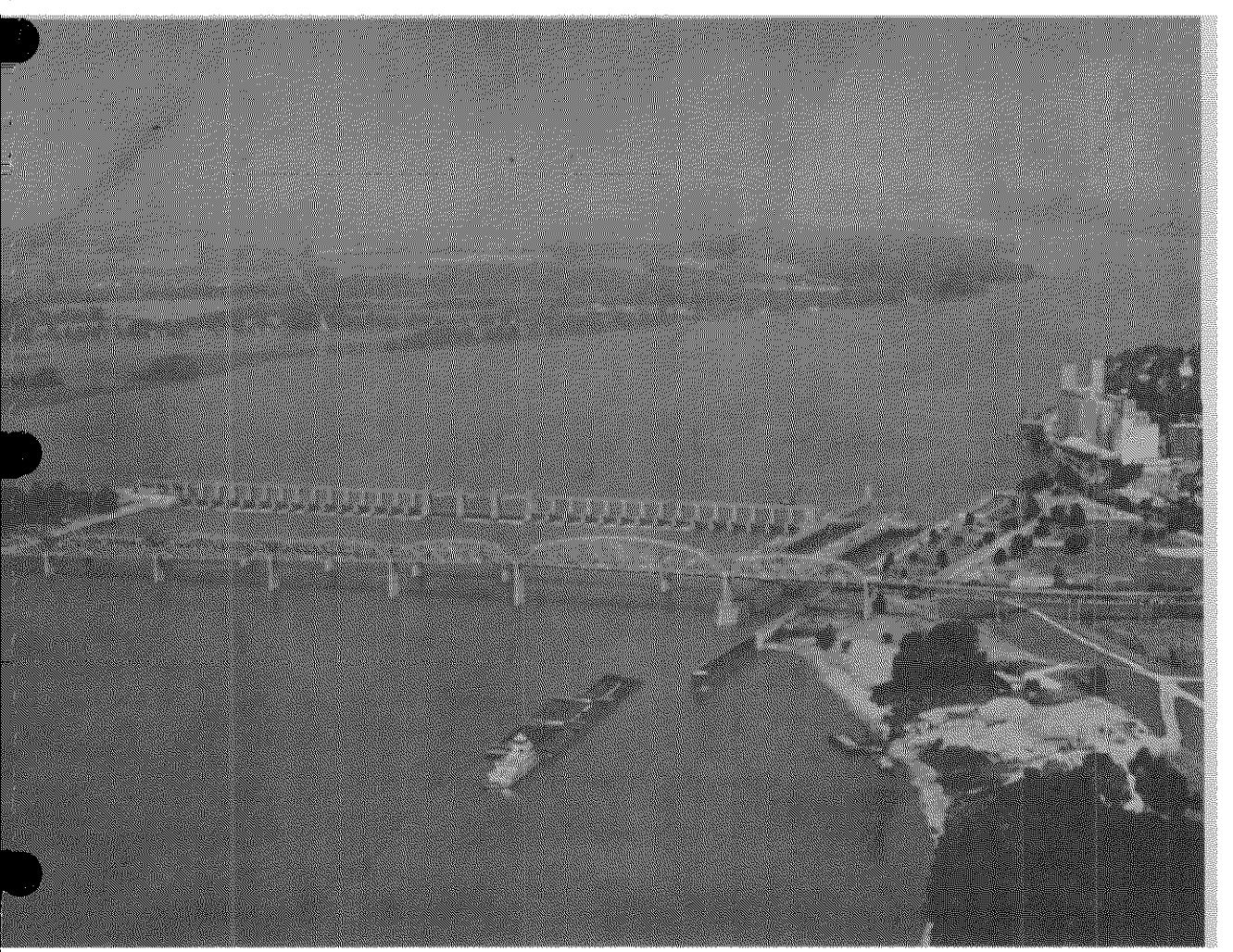
ROADBUILDER

MAY 1973



Lieutenant General General F. J. Clarke
Chief of U. S. Army Corps of Engineers

The Environment Is Ours To Keep



New Tulane Engineering Dean Is On The Move

Dr. Samuel F. Hulbert is a "man on the move." He will be moving shortly from Clemson, S. C., where he has served on the engineering faculty of Clemson University since 1964, to become dean of the Tulane University School of Engineering.

And Dr. Hulbert has been a "man on the move" for some time in regard to innovative research in the field of engineering.

Born 37 years ago in Adams Center, N. Y., Dr. Hulbert has managed to accomplish a great deal in a relatively short period of time. He received a bachelor of science degree in ceramic engineering in 1958 and a doctor of philosophy degree in ceramic science in 1964 from Alfred University, where he served as an instructor in mathematics and physics from 1960 to 1964.

In 1960, he married the former Joy Elinore Husband, who is also a graduate of Alfred. Their children are Gregory, 12, Samantha, 10 and Jeffrey, 4.

A recognized authority on the engineering aspects of developing artificial body parts, Dr. Hulbert has been a principal investigator in the past six years on 12 major research projects involving the use of plastics and ceramics as implant materials for replacement of bone and teeth.

At Clemson, where he was appointed associate dean for engineering research and interdisciplinary studies in 1970, Dr. Hulbert helped to develop one of the largest and best equipped bioengineering programs in the country.

In a recent series of articles published in the Orangeburg, S. C. "Times and Democrat" concerning research and technology at Clemson, Dr. Hulbert noted that the broad field of bioengineering can be broken down into smaller areas of study, including instrumentation, computers, microbial research, biomechanics and artificial organs.

His research has been in the latter two areas, specifically as they apply to the fields of orthopedics and dentistry. Much of his research, which has involved

ceramic hip, jawbone and teeth implants in animals, is currently receiving limited clinical testing in humans.

In explaining his research, Dr. Hulbert said that traditional methods of "repairing broken bones and arthritic knees have involved metallic replacement parts, and the body does not readily accept the metallic ions such as chromium, nickel and cobalt.

"These materials are extremely foreign to the bone and tissue structures, so the body rejects them," he said. "With ceramics, this is not so. They are composed of inert materials, mainly calcium, magnesium and phosphorus ions, which the body readily accepts."

Dr. Hulbert explained that research in bone implants must deal not only with the problem of implant compatibility but also with implant stability, that is, direct skeletal-muscle attachment.

"After all, you may have a perfectly beautiful artificial bone but if there is no way of attaching it to muscle and bone, it is of no use," he said. "It has been found that if the ceramic replacement part is porous in its construction, the body usually fills in the pores with normal tissue, thus locking the part into place.

"There is no doubt that a better understanding of how human tissue and artificial implant devices react to each other will lead directly to improvement of present orthopedic appliances," said Dr. Hulbert.

Most recently Dr. Hulbert received international recognition for his research in this area. Invited to deliver a lecture series on the design of orthopedic appliances to the medical faculty of the University of Bologna, Italy, in 1973, he was awarded medals by three Italian medical groups.

Two of the medals—one from the Italian Orthopedic Society and the other from the Rizzoli Institute—were given in honor of Dr. Hulbert's outstanding contributions to orthopedic research. The third medal, given by the Bologna Medical Society, recognized outstanding contributions to the general field of medicine.

While at Clemson, Dr. Hulbert was also involved in research to develop materials for a glass packaging container which could be easily processed to dissolve in water after use. A breakthrough on this problem could remedy a major source of solid waste pollution, he said.

"Solid waste presents a terrific technological challenge," Dr. Hulbert said. "The traditional methods of waste disposal are overloaded. Even municipal collection agencies are burdened beyond their capacities.

"These problems have to be solved or there must be a drastic change in the economics of solid waste disposal," he noted. "The federal government through subsidies must help clean up the waste or the consumer must pay for his share of the pollution."

Dr. Hulbert is listed in several directories devoted to those outstanding in their fields. These include "American Men of Science"; "Outstanding Educators of America"; "Dictionary of International Biography"; "Who's Who in the South and Southwest"; "Outstanding Young Men of America"; and "Personalities of the South."

He is a member of the Keramos honor fraternity, the Blue Key honor fraternity and Sigma Xi, national honor scientific society.

He is also a member of several professional societies—the American Society for Artificial Internal Organs, the Biomedical Engineering Society, the American Ceramic Society and the National Institute of Ceramic Engineers, to name a few.

Additionally, Dr. Hulbert serves as a consultant to the Environmental Protection Agency, the National Institute of Dental Research, the Medical College of Georgia and the Medical University of South Carolina.

Dr. Hulbert feels it is the place of private universities such as Tulane to provide the innovations needed in engineering education.

"It is my hope and objective that the Tulane School of Engineering will become ever more involved in areas which are of prime importance today — bioengineering, energy conversion engineering and ocean and coastal engineering," he said.

"Tulane is particularly well suited to become a national leader in bioengineering because it has a medical school of outstanding status and an engineering school, whose faculty is already much involved with the application of engineering to medicine and the biological sciences."

In the area of energy conversion engineering, Dr. Hulbert believes the energy drain will be the first real crisis for the American people.

"Brown-outs and gasoline rationing are only small warnings of what will come if we do not find other sources for energy," he said. "It is time we realize that oil is limited as a major source of energy and start considering whole new ideas of energy sources, everything from tornadoes and solar energy, to using tidal power."

Tulane's location in New Orleans, one of the country's leading seaports, coupled with Louisiana's valuable coastal lands, has given the university a natural bent toward ocean and coastal engineering, Dr. Hulbert pointed out.

Included in the problems and challenges covered by this area of engineering are beach erosion, off-shore structures, new techniques in harvesting seafood, developments in converting nonedibles into food and various environmental effects.

"Except for work on off-shore structures, these areas have been more or less neglected at Tulane so far," Dr. Hulbert said, "and I hope to get a program moving in ocean and coastal engineering soon."

"Moving" — that's the key word. Dr. Hulbert is definitely a man on the move and it appears that the Tulane engineering school will be moving right along with him. ■

U.S.L. College of Engineering To Offer Graduate Courses To South Louisiana Engineers

The College of Engineering of the University of Southwestern Louisiana is presently trying to offer a continuing education program for engineers in the Houma - Morgan City - Franklin area. As these communities are quite distant from the USL campus, evening courses would be offered at a central location for the area, such as Morgan City.

To begin the program, the first offering would be ENGR 501, ENGINEERING DATA ANALYSIS, during the fall of 1973 in Morgan City. The class could meet one evening a week for three hours during the entire fall semester. This course is a regular offering in USL's engineering management and engineering systems graduate programs. Credit earned in the course may be applied toward a graduate degree in engineering. The course may also be taken without credit for those who are so inclined.

If this course is to be offered as proposed above, 20 students must enroll. If you wish to take the course, please respond by letter to Edward E. Anderson, Assistant Professor of Mechanical Engineering, USL Drawer 4170, Lafayette, La. 70501.

MASTER OF SCIENCE
ENGINEERING SYSTEMS

An interdisciplinary engineering program is offered leading to a master of science degree in engineering systems (MSES). The program is designed to develop in the student a capability of applying advanced techniques to problems in engineering. The course of study is designed to be totally interdisciplinary with emphasis on foundations and solution techniques. The student completing this course of study should be well equipped to continue further graduate study or to solve advanced problems encountered in industry.

MASTER OF SCIENCE
ENGINEERING MANAGEMENT

An interdisciplinary engineering graduate non-thesis program is offered leading to a master of science degree in engineering management. The program is designed to provide management training for those engineers who are involved in the management of engineering projects or other highly technical and scientific oriented businesses where formal management and business training is needed in addition to advanced knowledge of engineering and scientific information. Also contained in this program is the opportunity for the student to continue his technical development through the study of courses in his particular engineering discipline and of a variety of interdisciplinary courses.

Prerequisites for MSES and MSEM Programs

Entering students must have a degree in engineering from the University of Southwestern Louisiana or the approved equivalent degree. If the undergraduate degree is not from an approved curriculum or if any deficiencies appear in the student's undergraduate work, the student may be required to take additional courses at the undergraduate level as prerequisites to graduate study. The prospective student must also meet all other admission requirements of the University and the Graduate School before entering the master's degree program.

List of Interdisciplinary Engineering Courses for Graduates only:

501. ENGINEERING DATA ANALYSIS. (3, 0, 3). A study of engineering experimentation theories, experiment planning, reduction of variables through dimensional analysis, experimental pre-

cision, error and uncertainty in data, including techniques of data evaluation, presentation and analysis through use of graphical, analytical, mathematical, statistical and empirical methods, and nomography.

502. ENGINEERING ECONOMICS. (3, 0, 3). A study of the relationship between the investment decision concerning engineering projects and such parameters as engineering, design, standardization, simplification, specification, material selection, preparation, fabrication, production rate, run period, plus cost models operation. Includes economic justification of engineering projects, financial planning, profitability analysis, equivalence analysis, and economic comparison of engineering alternatives. Prereq: ENGR 303.

503. ENGINEERING PROJECT MANAGEMENT. (3, 0, 3). A study of project planning and control using activity network analysis. Network logic, scheduling computations, resource scheduling under various constraints, time-cost trade-off algorithms, cost control and multi-project resource allocation. Prereq: ENGR 303.

510. INSTRUMENTATION & MEASUREMENTS. (2, 3, 3). Principles of instrumentation. Precision, sensitivity, static and dynamic characteristics of measurement devices and instrumentation systems.

513. ENGINEERING ANALYSIS. (3, 0, 3). Applications of modern analytical techniques in the solutions of engineering problems. Development of classical and numerical solutions in the areas of thermal-fluids, solid mechanics, electrical and chemical phenomena, and dynamics.

515. ENGINEERING SYSTEMS. (3, 0, 3). General analytical concepts used in the modeling and analysis of engineering systems. Applications of linear systems in all areas of engineering.

517. CONTROL SYSTEMS. (3, 0, 3). State-space representation of automatic feedback control systems. Analysis and design techniques for linear and nonlinear, continuous and sampled data control systems. Graphical and numerical methods for control system analysis and design. Performance specifications for system behavior. Introduction to modern stability and optimal control principles and applications. Prereq: ENGR 413.

525. ADVANCED ENGINEERING SYSTEMS. (3, 0, 3). Optimization theory and techniques. Theory of maxima and minima, and variational problems with bounded control variables. Computer applications to engineering systems. Prereq: ENGR 515.

527. NON-LINEAR SYSTEMS. (3, 0, 3). A study of techniques available to analyze non-linear and discontinuous feedback control systems. Phase plane, Lyapunov stability. Describing functions. Relay controllers. Prereq: ENGR 517.

530. SPECIAL TOPICS. (1-3).

UNIVERSITY OF SOUTHWESTERN LOUISIANA
M.S. ENGINEERING DEGREE PROGRAM

REQUIREMENTS
TWO OPTIONS

Engineering Management Degree Requirements Listed Below	Course Selection Is From Approved Courses Offered for Graduate Credit Listed Below	**Engineering Systems** Degree Requirements Listed Below
	M.S. CORE COURSES	
These 3 courses are required for this option.	1. Engineering Data Analysis 3 cr. 2. Adv. Engineering Economics 3 cr. 3. Engineering Project Mgt. 3 cr.	These 3 courses are required for this option.
Total **9 cr.**	**9 cr.**	Total **9 cr.**
	ENGRNG. INTERDISCIPLINE COURSES	
A minimum of 4 courses must be elected from this group. Courses selected must be approved by committee chairman.	1. Instrumentation & Measurements 3 cr. 2. Engineering Analysis 3 cr. 3. Control Systems 3 cr. 4. Engineering Systems 3 cr. 5. Non-linear Systems 3 cr. 6. Adv. Engineering Systems 3 cr. 7. Special Topics 3 cr. 7 courses—Total **21 cr.**	A minimum of 4 courses must be elected from this group. Courses selected must be approved by committee chairman.
	DISCIPLINE COURSES	
	1. Discipline Course 3 cr. 2. " " 3 cr. 3. " " 3 cr. 4. " " 3 cr. 5. Special Topics 3 cr. 5 courses—Total **15 cr.**	
Total **12 cr.**		Total **12 cr.**
	MANAGEMENT COURSES	
These 4 courses are required for the Management Option.	1. Management 401 3 cr. 2. Management 406 3 cr. 3. Management 420 3 cr. 4. Management 430 3 cr.	
Total **12 cr.**	4 courses—Total **12 cr.**	
	APPROVED ELECTIVES	
One course may be elected from this group or from the groups above, with approval of committee chairman.	Mathematics, Statistics, Computer Science, or other presently offered and committee approved electives.	Courses may be elected from this group with approval of committee chairman.
Total required 36 cr.		Total required With Thesis 30 cr. Without Thesis 36 cr.

ENGINEWS

James S. Janssen, P.E., manager of the Gas Engineering Division of the Engineering Department of New Orleans Public Service, Inc., has been elected to a second term as Southwest Regional Vice Chairman of the Professional Engineers in Industry (PEI) section of the 68,000-member National Society of Professional Engineers.

Janssen is a past president of the Louisiana Engineering Society from which he received the Andrew M. Lockett Civic Activities Award in 1972. He has also served on the NSPE-PEI Board of Governors. He is a past president of the Engineers' Club of New Orleans.

Janssen, a civil engineering graduate of Tulane University, has spent 37 years in the natural gas industry. He is a past chairman of the Natural Gas Men of New Orleans, and is a member of the American Gas Association and the Southern Gas Association. He is a recipient of the American Gas Association's Award of Merit.

He is also active in the New Orleans Chamber of Commerce, the Board of Commissioners of the New Orleans City Park Improvement Association, and the Tulane University Alumni Association. Outside interests include yacht racing as Janssen is a member of the Southern Yacht Club of New Orleans.

NEW LES MEMBERS

Alexandria

ROBERT C. HUGHES
Bayou Rapides Apts. # 908
700 Veterans Drive
Alexandria, La. 71301

R. GORDON SMITH, JR.
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Southern Branch
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Baton Rouge, La. 70810

CARL H. WALLING, JR.
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Baton Rouge, La. 70810

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Houma, La. 70360

JERRY SAVELL
555 South Van
Houma, La. 70360

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Lafayette, La. 70501

DONALD J. BISHOP, JR.
114 Bracy
Jeanerette, La. 70544

Monroe

ROBERT L. GEORGE, III
2605 Fort Miro
Monroe, La. 71201

RONNY GOODMAN
1414 Shelor Drive
Ruston, La. 71270

DAVID LEE MILNER (Student Member)
Tech Village #22
Ruston, La. 71270

BYRD L. MINTER, JR., P.E.
P. O. Box 1762
Monroe, La. 71201

New Orleans

REYNOLD D. BROUSSARD
1805 Esplanade Ave. Apt. #3
New Orleans, La. 70116

JAMES C. CHERON
2031 Franklin Ave.
New Orleans, La. 70122

CLYDE W. CROCHET
5747 Bancroft Drive
New Orleans, La. 70122

CHARLES E. HAGEMEIER, P.E.
5451 Carlisle Ct.
New Orleans, La. 70114

TERRY J. HARTMAN, P.E.
1030 Veterans Blvd., Suite A
Metairie, La. 70005

STEPHEN J. MEADE (Student Member)
532 Audubon St.
New Orleans, La. 70118

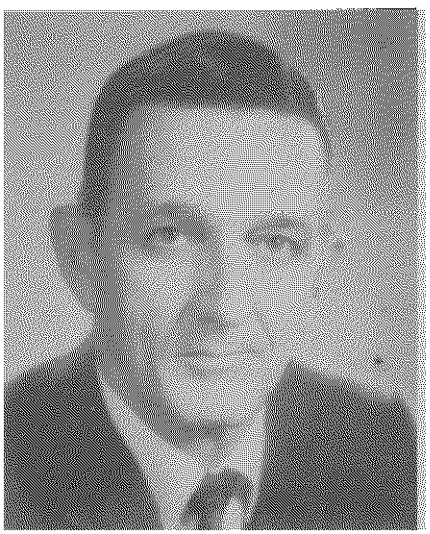
RUSSELL J. ROBICHEAUX
P. O. Box 60340
New Orleans, La. 70160

Non-Resident

JOHN C. JACKSON
8-A Barton Road
Port Deposit, Maryland 21904

ROBERT J. MOTCHKAVITZ
9335 SW FF Avenue, Apt. 25F
Miami, Florida 77156

IN MEMORIAM



EDWARD R. FREITAG

Edward R. Freitag, a member of the Louisiana Engineering Society and a registered professional engineer, died February 3, 1973 in New Orleans, Louisiana, after a long illness. He was 52.

Mr. Freitag was a native of New Orleans, was educated in local schools and graduated from Tulane University. He was extremely active in the Institute of Electrical and Electronics Engineers, serving as Chairman of the New Orleans Chapter. He also served in several IEEE regional posts, and participated in the work of national technical committees where he specialized in electric substations and equipment. At the time of his passing, Mr. Freitag was Vice-Chairman of the New Orleans Chapter L.E.S. Program Committee.

He was a long time employee of New Orleans Public Service, Inc., having worked there for 21 years. He had attained the position of Electrical Engineer in its Engineering Department.

Ed Freitag was a warm human being, courteous and friendly to all who came in contact with him. His humor and courage will be remembered by all his associates who are also appreciative of the great legacy of service that he left to his profession.

The condolences of the Society are extended to his dear ones.

Etienne J. Senac, Jr., Harahan, La., a junior in electrical engineering at the University of Southwestern Louisiana, is the recipient of the Samuel McCain Young Scholarship Award. The award, established by Mrs. Young in memory of her husband, is awarded to outstanding and worthy Louisiana students. The award was presented to Senac recently by Mrs. Robert Anderson, treasurer of the Women's Auxiliary to the Louisiana Engineering Society in New Orleans, and Mrs. Seymour Cambias, president.

The recipient must have demonstrated high scholastic ability, be in engineering and from the New Orleans area.

Senac also won the Eta Kappa Nu Sophomore of the Year Award at USL this year. He is a 1970 graduate of Holy Cross High of New Orleans.

PROFESSIONAL ENGINEERS GRANTED REGISTRATION

JUNE 19, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

ALANIS, RENE EVERARDO
Lafayette, La.
Petroleum

ARTIGUE, WADE JERRY
Lafayette, La.
Petroleum

BARRETT, JOHN EDWARD
Chicago, Ill.
Civil

BASINGER, JOHN GLENN
New Orleans, La.
Petroleum

BELL, CLIFFORD EUGENE
Metairie, La.
Civil

BELL, HOWARD FRANCIS
New Orleans, La.
Mechanical

BLEKE, JAMES HENRY
New Orleans, La.
Mechanical

BOKACH, PETER MICHAEL
Baton Rouge, La.
Chemical

BRADLEY, JAMES EDWARD
Clearwater, Fla.
Civil

BRODERS, EDWIN ALBERT
Baton Rouge, La.
Civil

BROWN, JACK LAMONT
Seattle, Wash.
Mechanical

BROWN, RICHARD LEE
Sherman Oaks, Calif.
Civil

BURKHARDT, LAWRENCE RONALD
Arlington Hts., Ill.
Civil

CALVIN, JOHN WESLEY
Hollywood, Fla.
Civil

CHRISTIANSEN, DAVID ROYCE
Slidell, La.
Mechanical

CLARK, THOMAS WILLIAM
Baton Rouge, La.
Electrical

COLE, LARRY EUGENE
New Orleans, La.
Mechanical

CONNOR, JR., MICHAEL A.
New Orleans, La.
Mechanical

COOLEY, LARRY ALLEN
Vicksburg, Miss.
Civil

CORCORAN, THOMAS KENTON
Ruston, La.
Electrical

DAHMS, GARY LEROY
New Iberia, La.
Civil

D'AQUIN, JR., ARTHUR FRANCIS
Metairie, La.
Electrical

DAVIS, DONALD EUGENE
Dallas, Texas
Civil

DUCOTE, FRANCIS CARL
New Orleans, La.
Mechanical

FONTENOT, LOUIS
Houston, Texas
Civil

GEWIN, RHUEL JACKSON
Slidell, La.
Electrical

GIBBON, JR., EDWARD JAMES
Lafayette, La.
Petroleum

GRAYBILL, WILMER BERNARD
Lake Charles, La.
Chemical

GRIFFIN, JR., PAUL MANUEL
Baton Rouge, La.
Civil

GUEST, JERRY DEAN
Baton Rouge, La.
Electrical

GUNN, BOBBY GLENN
Gretna, La.
Chemical

HAMILTON, JAMES HARPER
Memphis, Tenn.
Civil

HARPER, LONNIE GLENN
Lake Charles, La.
Civil

HAUSSLER, ROBERT WALTER
Sepulveda, Calif.
Civil

HEFFERNAN, JR., THOMAS HENRY
Metairie, La.
Civil

HUNTER, DONALD THOMPSON
Baton Rouge, La.
Mechanical

JERVIS, PETER HARRY
New York, N. Y.
Civil

JESSE, JR., JOHN JAMES
Omaha, Neb.
Mechanical

JEZEK, RICHARD ERWIN
Metairie, La.
Mechanical

JINDAL, AMAR
Baton Rouge, La.
Civil

JOHNSON, JR., HAROLD RAYMOND
Metairie, La.
Mechanical

KERNION, DAVID MICHAEL
Houston, Texas
Civil

KERR, DONALD JOSEPH
Tulsa, Okla.
Civil

KRIEDT, FREDERICK ALTON
Gretna, La.
Mechanical

KYLE, JR., WILLIAM WALSH
Richardson, Texas
Chemical

LANG, LAWRENCE JOHN
Berkeley Heights, N. J.
Chemical

LOVELL, BEN ALLEN
Wayne, Pa.
Chemical

LUSHENE, JOSEPH MICHAEL
Baton Rouge, La.
Civil

MELTON, JR., HOMER DOSTER
Lafayette, La.
Petroleum

McLAURIN, JOHN WILLIAM
Baton Rouge, La.
Electrical

MILLER, ROSS FERGUSON
Centralia, Ill.
Mechanical

MILLICAN, MARCUS LAVERNE
Shreveport, La.
Petroleum

MILLIORN, JOE VALERA
Metairie, La.
Civil

MINCHIN, JR., WILLIAM McCOLSKEY
Gretna, La.
Civil

MOORE, RUFUS JOSEPH
Palos Verdes Pen., Calif.
Mechanical

MOREHOUSE, RICHARD ALLEN
Slidell, La.
Civil

MORENO, NESTOR RAMON
Baton Rouge, La.
Mechanical

MORRIS, III, EDWARD JAMES
Baton Rouge, La.
Chemical

MYRICK, WILLIAM DERWARD
Denham Springs, La.
Electrical

NEIDINGER, LEONARD ARTHUR
Houston, Texas
Electrical

NOBLE, CHARLES CARMIN
Vicksburg, Miss.
Civil

OLIVER, II, RUDOLPH EUELL
New Orleans, La.
Mechanical

OLIVIER, DONALD GENE
Lafayette, La.
Mechanical

PARKS, GARY PETER
Baton Rouge, La.
Mechanical

PASTOR, ANTHONY
New Orleans, La.
Mechanical

PEE, LURLIE DELL
Ruston, La.
Electrical

PELTZ, KARL WILLIAM
Lake Charles, La.
Civil

PHARR, EUGENE HOUSER
Kenner, La.
Civil

PICKELS, JOHN CURTIS
Shreveport, La.
Electrical

(June Registration Listing will be completed in next issue.)

MAY 1, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

CALCOTE, JR., LLOYD LESLIE
Lake Charles, La.
Mechanical

CANTWELL, DAVID ALLEN
Morgan City, La.
Petroleum

CHEZEM, CURTIS GORDON
New Orleans, La.
Electrical

CLARK, LEE WILLIAM
Monroe, La.
Mechanical

COLACO, JOSEPH PHILLIP
Houston, Texas
Civil

DERRICK, ROBERT PARKER
Decatur, Ga.
Electrical

DIEDRICH, III, GEORGE HERMAN
New Orleans, La.
Industrial

FITTS, LARRY GERALD
Shreveport, La.
Mechanical

GARRISON, JR., ROBERT DENNIS
Columbia, S. C.
Civil

GOODING, JAMES GRANT
New Orleans, La.
Mechanical

HALLEY, ALEXANDER BELL
Metairie, La.
Civil

HARPER, GEORGE MICHAEL
Dallas, Texas
Petroleum

HELMSING, JOSEPH MICHAEL
Mobile, Ala.
Civil

HOLTKAMP, CLARENCE JULES
San Angelo, Texas
Electrical

HUNTER, JR., WILLIAM WINFIELD
Verona, Pa.
Mechanical

KAUPP, JR., HENRY JOSEPH GEORGE
Houston, Texas
Electrical

LANDRY, PAUL LORAINE
Slidell, La.
Mechanical

LIPSCOMB, JR., JOHN WILSON
Lake Charles, La.
Electrical Mechanical

MONROE, WILLIAM CHARLES
Baton Rouge, La.
Mechanical

OLIVIER, KENNETH J.
Gretna, La.
Mechanical

PRATT, OLIVER LAURENS
Houston, Texas
Mechanical

RAYNER, JAMES FRANCIS
Alexandria, La.
Electrical

REID, JAMES DEAN
Metairie, La.
Civil

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- Graver Water Conditioning Co.
- Lectrodryer Div.—Ajax Magnethermic
- Peabody Engineering Corp.
- Sola-Flex Expansion Joints
- Williams Patent Crusher & Pulv. Co.

Application Engineers to Southern Industry

SCHEXNAYDER, JR., CLIFFORD JOSEPH
Covington, La.
Civil

SIMPSON, JOHN WELLS
Atlanta, Ga.
Electrical

TANDY, TERRY FRANCIS
Donaldsonville, La.
Mechanical

WILDER, CARLTON SPENCER
Plantation, Fla.
Civil

YERDON, ROBERT S.
Metairie, La.
Mechanical

YOUNG, JR., SAMUEL LESLIE
Baton Rouge, La.
Industrial

ENGINEERS-IN-TRAINING CERTIFIED

APRIL 3, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

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ALVANEZ, JOSE F.
Baton Rouge, La.

ARDOIN, MICHAEL JOSEPH
Baton Rouge, La.

ARTIGUE, WADE JERRY
Lafayette, La.

ASHBAUGH, JESSE MARTIN
Gretna, La.

ATKINSON, JR., E. EARL
Baton Rouge, La.

BALLARD, BRUCE WAYNE
Baton Rouge, La.

BETZ, JR., ROBERT COHN
Baton Rouge, La.

BEUTZ, GARY G.
Baton Rouge, La.

BLUNSCHI, ROBERT MICHAEL
Ferriday, La.

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BOARD OF DIRECTION MEETING

May 11, 1973

Prince Murat Inn **Baton Rouge, La.**

MINUTES

President Hoyt Brown called the meeting to order with the following members present: Roger Battle, P.E.; Richard Bennett, P.E.; Fred Culpepper, P.E.; Brook Ewing, P.E.; T. J. Hogue, Jr., P.E.; Malcolm Hurstell, P.E.; James Meyer, P.E.; Frank Miller, P.E.; Buddy Moncla, P.E.; Lamon L. Moody, Jr., P.E.; Jesse Odom, P.E.; Herb Pourciau, P.E.; J. J. Thigpen, P.E.; and Ed Williamson, P.E. Guests present were: Gerald A. Simmons, Executive Secretary; A. J. Szabo, P.E., and Carl Thomas, P.E.

Minutes—The minutes of the March 31st meeting were approved as presented with the following additions:

Procedure for Board Meeting Minutes:

(1) Require written reports from committee and functional section chairmen.

(2) No action on motions not on the agenda, except with unanimous consent.

(3) The minutes reflect only action taken, including motions duly made, seconded and passed. Committee or functional section reports should be accepted as information only and not made a part of the minutes.

(4) Financial reports should not be "accepted as presented," with a motion, a second, and a vote. The reports are filed for audit.

Motion for approval was made by Mr. Culpepper, seconded by Dr. Thigpen and adopted.

Financial Report—The financial report was given by Mr. Hurstell, Secretary-Treasurer, for the month of April, 1973. The report reflects year to date total receipts of $83,020.55 and expenses of $89,706.75.

Mr. Hogue moved, and Mr. Culpepper seconded the motion "that the financial report be accepted, subject to the usual audit." Motion carried.

Committee Reports

Liaison Committee Report—Mr. Hurstell submitted the attached report in the absence of Mr. Vogt, Chairman of the Liaison Committee.

Mr. Hurstell also reported that the Liaison Committee is working on a proposed procedure for selecting nominees for the State Board of Registration. He said also that the State Board of Registration would like comments from the Society about the Registration Law.

Mr. Hurstell recommended that the Liaison Committee present the following stand to the State Board of Registration and that this stand be published in the LOUISIANA ENGINEER:

> The Louisiana Engineering Society, founded in 1898 and designated under Louisiana Law enacted in 1908 as the professional organization recommending nominees to the Governor for appointment as members of the Louisiana State Board of Registration for Professional Engineers and Land Surveyors, supports the concept of a State Board of Registration for Professional Engineers and Land Surveyors. The Board as it is now functioning, provides for registration of engineers and land surveyors so that the public may be protected. This purpose can best be served through a Board of Registration administered by the profession. Any consolidation of its function or grouping with other boards would endanger life, health and property and be to the detriment of the public welfare. It is our desire that the Louisiana Constitution continue to provide for an independent board of registration for professional engineers and land surveyors.

Section Reports

Professional Engineers in Construction—No Report.

Professional Engineers in Education—Ed Williamson reported that a letter had been written to the Education people in Mississippi inviting them to meet with the Louisiana Education people.

Professional Engineers in Industry—No Report.

Professional Engineers in Government—No Report.

Professional Engineers in Private Practice—No Report.

Old Business

P.E.E. Resolution—Mr. Williamson moved for adoption of the following resolution: "L.E.S. urges that, in view of the predicted shortage of engineers, there not be a dilution of the college-university preparatory program in public schools of the state. And further, that this resolution be presented to the State Board of Education, the Co-ordinating Council for Higher Education and the L.S.U. Board of Supervisors." The motion was seconded by Mr. Ewing, and passed.

Mr. Williamson moved "that the L.E.S. support a program designed to make high school counselors better informed about the various programs of engineering education, technician training, and technologist education so they can better guide their students." The motion was seconded by Mr. Battle and passed.

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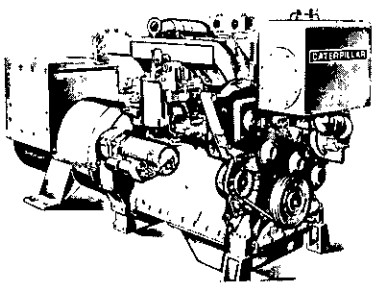

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P.E.P.P.—Mr. Moody moved that "the Board of Direction of L.E.S. encourage members to implement the salary scale contained in the L.E.S. Salary Survey Report as a minimum." Motion was seconded by Mr. Meyer and passed.

Mr. Meyer moved "that the L.E.S. President be authorized to write to the Governor and to the heads of various state agencies, and to elected officials to give more consideration to Louisiana firms for projects that are within the state. The letter should contain reference to recent work on the Atchafalaya basin in which no Louisiana firm was among the five selected to be considered for the work." The motion was seconded by Mr. Moody and passed.

Mr. Meyer moved "that the Board of Direction appropriate $200.00 toward the N.S.P.E.-P.E.P.P. Committee Pilot workshop, which is to be spearheaded by the Baton Rouge Chapter of L.E.S.-P.E.P.P. The money will be used to carry out the project and publish the results." The motion was seconded by Mr. Moody and passed.

The purpose of the workshop is to have the young engineers present items of mutual interest and to carry on indepth discussion of these items in a seminar atmosphere. A taped record of the proceedings will be made, but no record connecting any individual with any particular part of the discussion will be retained.

The workshop is designed to determine the concerns of young professional engineers working in private practice and to relate these concerns to meaningful programs of PEPP, LES and NSPE.

Mr. Battle recommended that a report be made to the Board after the workshop has been conducted.

P.E.I. Resolution—Mr. Williamson moved that the L.E.S. Board be urged to reconsider its action directing the cessation of activities by L.E.S. relating to changes in the registration law and that the Board be requested to have L.E.S. spearhead a coordinated effort by all professional engineering societies, including the State Board of Registration, to jointly develop proposed changes to the Registration Law. The motion was seconded by Mr. Moody.

Dr. Thigpen moved to substitute the motion and that this be tabled until a later time. The motion was seconded by Mr. Hurstell.

After much discussion, a vote was taken and the substitute motion failed by 9 to 5 and the main motion passed by 9 to 4.

Ethics and Professional Conduct—The Ethics and Professional Conduct Committee recommends to the Board of Direction the adoption of the following resolution:

"Be it resolved by the Board of Direction of the Louisiana Engineering Society that the Louisiana State Board of Registration for Professional Engineers and Land Surveyors be requested to adopt a Code of Ethics to be incorporated into the application procedure for registration in the State of Louisiana and that the Code be enforced in the administration of the Registration Law;

"Be it further resolved that this request be formally presented to the State Board of Registration and that the assistance of the Society be offered in any way deemed appropriate."

Motion by Mr. Meyer, seconded by Mr. Moody "that the above resolution be adopted." Motion carried.

Legislative Committee—No action was taken on the resolution presented at the last meeting. The Legislative Committee will report back to the Board at the next meeting.

New Business

Selection Committee for an Executive Secretary—Mr. Hurstell reported that the Selection Committee had met and interviewed four people. The committee recommends the hiring of Mr. Ralph Carlton Spears as Executive Secretary.

Mr. Hurstell moved that the Society employ Mr. Ralph C. Spears as Executive Secretary of L.E.S., beginning date of employment will be August 1, 1973. The motion was seconded by Mr. Culpepper and passed unanimously.

L.E.S. Nominating Committee Report—Mr. Hogue, chairman of the Nominating Committee reported that the following people had been nominated for L.E.S. offices for the 1973-74 year: President—Dr. J. J. Thigpen; President-Elect—Fred C. Culpepper, Jr.; 2nd Vice President—Malcolm Hurstell; Secretary-Treasurer—Frank M. Heroy, Jr.; N.S.P.E. Director—A. J. Szabo; State Directors—Al Badeaux and Roger Battle. Mr. Hogue moved that the nominations be accepted. Motion was seconded by Mr. Moncla and passed.

Auditor—Mr. Hurstell recommended that the Society retain Mr. Gus Gonzalez as the auditor for this year's audit.

Mr. Culpepper moved that Mr. Gus Gonzalez be retained as the auditor for the Society's annual audit. Motion was seconded by Mr. Battle and passed.

N.S.P.E. Conference—Dr. Thigpen reported that he had attended the President's Conference at Purdue University.

Proposed Revisions to P.E.I. Bylaws—The P.E.I. Section has recommended changes to its Bylaws. Copies of which have been distributed to the Board earlier. Mr. Culpepper moved that the proposed revisions to the P.E.I. Bylaws be approved. The motion was seconded by Mr. Battle and passed.

People to People Travel Program—Mr. Battle moved that the Board authorize Mr. Janssen to proceed with this program. The motion was seconded by Mr. Odom and passed.

L.E.S.-M.E.S. Meeting—Mr. Culpepper reported that speakers for the Convention will be General Noble and Mr. Bob Drake. Mr. Roger Masquelier has been selected to be the speaker for the banquet. The meeting will be held July 19-21, 1973 at the Sheraton Biloxi Hotel in Biloxi, Mississippi.

The next Board of Directors meeting will be held on July 21st in Biloxi.

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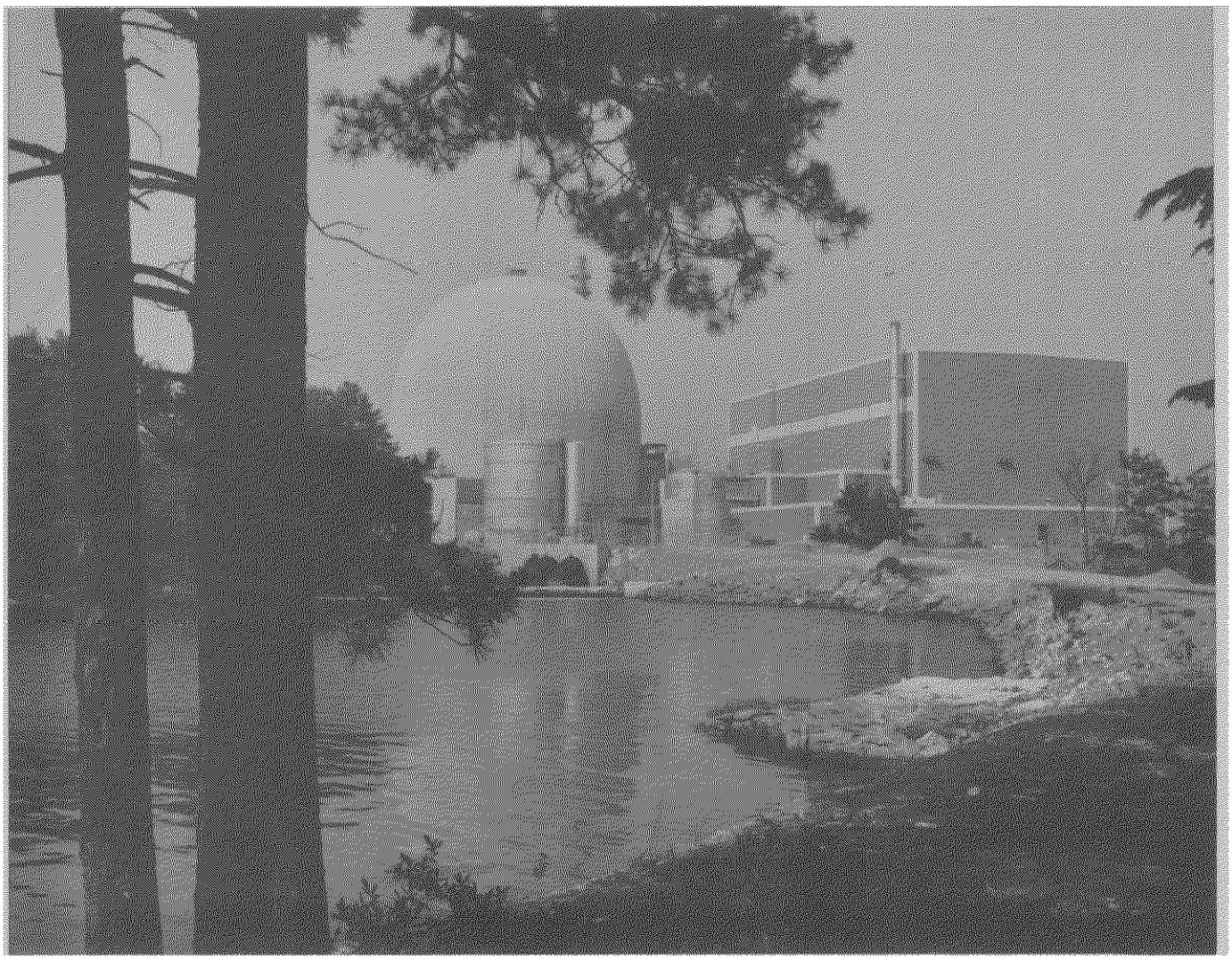

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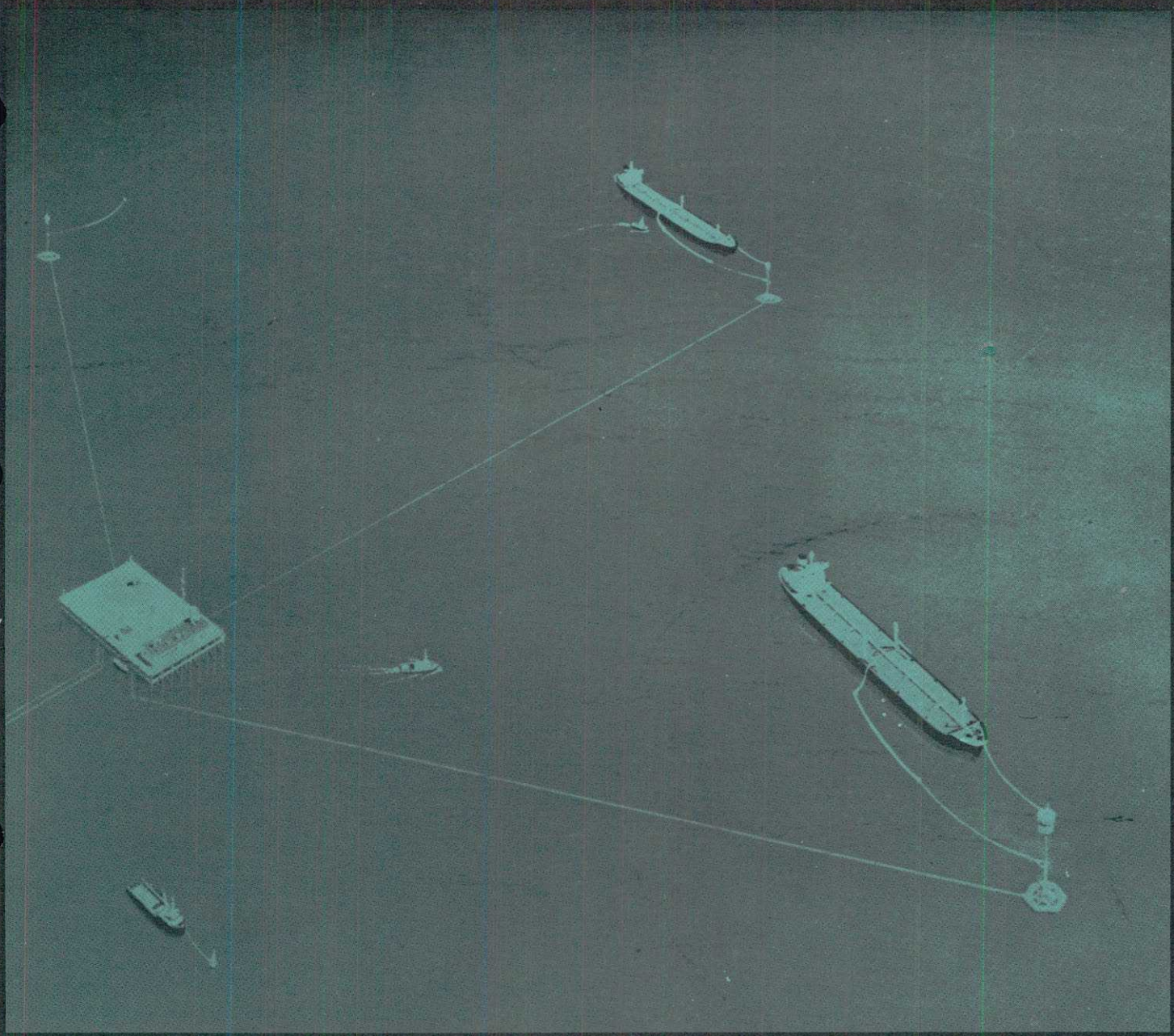

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GENTLEMEN:

I hereby apply for admission into the Louisiana Engineering Society as a _____ (grade) and agree to comply with the Constitution and Bylaws and the Code of Ethics of the Society. I also apply for admission into the National Society of Professional Engineers, if qualified and if I have indicated 'yes' to question No. 5 opposite.

Please assign me to the Chapter checked below:

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☐ INTRODUCTORY MEMBERSHIP OFFER ACCEPTED

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(Check One)

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PLEASE COMPLETE THE FOLLOWING SPACES

1. Name _____ (Last / First / Initial)
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8. If no, do you want to become a member of NSPE? Yes ☐ No ☐
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10. Birth date _____ Age _____ Wife's first name _____
11. Education _____ (School / Date Graduated / Degree Obtained)
12. Major engineering discipline _____

NOTE: If you are a PE, EIT or LS only a Sponsor is needed, otherwise please list the names of three LES members as your references. A brief professional experience record must be attached if you are not a PE, EIT or LS.

1. _____
2. _____
3. _____

Surveyors-In-Training Established by State Board of Registration

At its meeting last month the Louisiana State Board of Registration for Professional Engineers and Land Surveyors acted to provide for the establishment of requirements for the certification of persons as land surveyors in training. The movement for this action by the board was instigated by the Louisiana Land Surveyors Association and endorsed by the Louisiana Engineering Society and the American Society of Civil Engineers.

After January 1, 1974, persons may qualify to become certified as Land Surveyors-In-Training on the basis of Graduation Plus Examination, Education Plus Examination, or Experience Plus Examination. The requirements for certification as Land Surveyor-In-Training adopted by the board at its September meeting are as follows:

A. GRADUATION PLUS EXAMINATION

(1) Have at least a bachelor of science degree in an approved curriculum including the successful completion of at least six (6) semester credit hours in surveying courses approved by the board.

(2) Pass the written examination in the fundamentals of land surveying.

(3) Submit the names of three (3) references, not less than one of whom shall be a Professional Engineer or Land Surveyor knowing the applicant personally.

B. EDUCATION PLUS EXAMINATION

(1) Have at least two (2) years of formal education in an approved curriculum above high school level with at least sixty (60) semester credit hours or equivalent quarter credit hours passed, of the equivalent approved by the board, including the successful completion of at least six (6) semester credit hours in surveying courses approved by the board.

(2) Present evidence satisfactory to the board that one has at least two (2) years of combined office and field experience in land surveying with a minimum of one (1) year experience in charge of land surveying projects under the supervision of a Registered Land Surveyor.

(3) Pass the written examination in the fundamentals of land surveying.

(4) Submit the names of three (3) references, not less than one of whom shall be a Registered Land Surveyor having personal knowledge of the applicant's land surveying experience.

C. EXPERIENCE PLUS EXAMINATION

(1) Graduation from an approved high school.

(2) Present evidence satisfactory to the board that one has had at least four (4) years of combined office and field experience in land surveying with a minimum of two (2) years experience in charge of land surveying projects under the supervision of a Registered Land Surveyor.

(3) Pass the written examination in the fundamentals of land surveying.

(4) Submit the names of three (3) references, not less than one of whom shall be a Registered Land Surveyor having personal knowledge of applicant's land surveying experience.

In the near future, persons who qualify to become registered as Land Surveyors in Louisiana on the basis of Graduation Plus Examination, Education Plus Examination or Long Established Practice Plus Examination will be required to pass at least 16 hours of examinations. These examinations are described as follows:

A. EXAMINATION IN FUNDAMENTAL SURVEYING SUBJECTS

The examination in the fundamentals of surveying is a written, or oral and written examination which covers the basic surveying subjects included in the elementary and advanced surveying texts usually taught at the college level. The examination is designed to evaluate applicant's ability to make route surveys, to determine true meridians, to tie surveys to the Louisiana Coordinate System, to compute various tape corrections, to lay out and plot subdivisions, and any mathematical tasks as are encountered in the normal practice of land surveying in this state.

B. EXAMINATION IN THE PRACTICAL APPLICATION OF LAND SURVEYING PRINCIPLES

The examination in the practical application of land surveying is a written, or oral and written examination which primarily covers working with title abstracts and the laws that govern surveyors and surveying. This examination may also cover more complete practical applications of the basic land surveying subjects.

The board is planning to offer these examinations in New Orleans at least once each year and may adopt the new "Fundamentals of Surveying" examination of the National Council of Engineering Examiners as its examination in fundamental surveying subjects.

COVER

Artist's concept of Louisiana's Offshore Oil Port. See story page 8.

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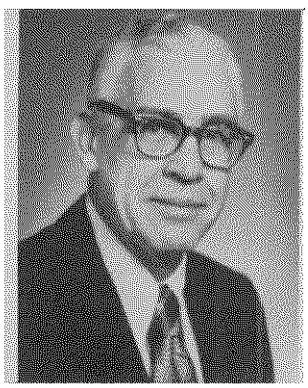
Presidential Privilege



LES President
Dr. J. J. Thigpen

For many activities of the Louisiana Engineering Society the beginning of the year starts with the Annual Planning Conference. This year, as for many years in the past, this meeting together with the Officers Training Conference was hosted by the Alexandria Chapter and their auxiliary, and as always they did an outstanding job. Thanks again for most enjoyable meetings.

Following the format that was established last year by President Hoyt Brown, the Officers Training Conference was held on the Thursday afternoon and Friday morning preceding the Planning Conference. The attendance at this meeting was good with two of the chapters having four officers present. All in attendance learned much about the operation of the Louisiana Engineering Society because the speakers did an outstanding job and provided information and suggestions which I am sure will bear fruit not only this year but in years to come.

At the Planning Conference the committee and Practice Section meetings in most cases were well attended. The reports of these meetings presented at the meeting of the Board of Direction indicate that there will be much meaningful activity during the coming year.

One committee that did not wait for the Planning Conference to get its activities underway is the Membership Committee. At the conclusion of the Biloxi meeting, this committee was off and running. Joe Meade and his committee have their work well outlined and I know we are going to have another outstanding year in this area. Membership development is an activity that is an individual concern for each of us. Each member must be alert to the opportunities for inviting new members to join the Louisiana Engineering Society and to do what we can to assure the retention of present members.

I know this is an old song, as practically every organization to which we belong is pushing membership and is encouraging each member to take an active part. However, if our society is to remain strong and serve the engineering profession, we must give active support to this endeavor. The records show that we have done a much better job in getting new members than we have in retaining existing members.

The membership audit of June 26, 1969, shows a total society membership of 2,395. For this year the membership audit of July 16, 1973, shows a total society membership of 2,422. The hard facts are that we have experienced small net growth in the past four years. Although I do not have all of the data at hand, I believe in only one of these four years have we failed to meet the new member quota for the state and in each year this quota has been in the neighborhood of 200—over 800 new members in a four year period but only a net growth of 27. Although there may be circumstances which explain this lack of net growth, I think one factor is very clear and that is that more attention must be placed on the retention of existing members.

We are near the end of our dues year and the state office will be providing chapters with a list of members who have not paid their dues for this year. Each of the persons on this list should be contacted personally. Experience has shown that this method is most effective, and it is far easier to keep an existing member on the rolls than to add a new member. Membership is so important. Let each of us resolve to give it the proper attention.

Roy T. Sessums Retires

Roy T. Sessums

It may be true that "Old soldiers never die, they just fade away," but if one is a major general, an engineer, a business executive, and a former college dean, he is not even allowed the luxury of fading away—even at retirement time. Perhaps the one individual in Louisiana who exemplifies this best is Roy T. Sessums, former Vice President of Freeport Minerals Company in New Orleans.

Sessum retired from active management last month after 18 years with Freeport but is continuing as a consultant with the company. Additionally, he is continuing to actively participate in all of the other diverse fields in which he has become involved during the past 40 years.

A native of West Carroll Parish, he attended elementary, grammar, and high school in Pioneer, Louisiana. Following graduation from high school, he worked for several years in the sawmills of Northeast Louisiana before entering Louisiana Polytechnic Institute where he graduated magna cum laude in 1935 with a bachelor of science degree in civil engineering. The next year he entered Louisiana State University and received a master of science degree in civil engineering. This was followed by a year of advance study at the University of Minnesota.

Returning to Louisiana in 1937, Sessums was invited to join the faculty at Tech as assistant professor of civil engineering, a position he accepted and held for three years. In 1940, he was named Dean of the School of Engineering and Professor of Civil Engineering at Louisiana Tech. He served in this position for 12 years, 1940-52, with military leave of absence during the period 1942-46.

Having achieved his major goals at Tech, Sessums resigned from his academic post in 1952 to accept appointment as Director of the Department of Public Works for the State of Louisiana with headquarters in Baton Rouge. As a member of the Governor's staff, he directed the operations of this organization in the following activities: state planning, housing, supervision of the Division of Aeronautics, flood control, drainage, water conservation, inland navigation

and others. The department also serves as state engineer on all public works, other than highways.

Perhaps his greatest and most lasting contribution to the state and its citizens during his tenure as Director of Public Works was the creation of Toledo Bend Dam and Reservoir. It was under his administration and guidance that initial plans for this enterprising cooperative project with the state of Texas were consummated.

Although the project was completed after his departure from state government, the wisdom of the decision to undertake it has not been questioned. In fact, Toledo Bend Lake has provided the impetus for growth in an area of Louisiana which, at the time, was suffering from severe economic stagnation, a situation which no longer exists—thanks to Toledo Bend.

In 1955, Sessums joined Freeport Sulphur Company as assistant to the Vice President and Engineering Coordinator. Six years later, he was appointed a Vice President. His responsibilities included direction and supervision of public relations activities for Freeport Sulphur and its several subsidiaries in the South, including liaison activities with local, state and federal governments, and internal administrative duties. He was also responsible for the company's environmental services throughout the United States.

Indicative of the quality of his work and his value to Freeport is the fact that upon retirement, the company persuaded him to continue as a consultant.

Interspersed with all of his other activities, Sessums fashioned for himself an equally brilliant military record, both as an active and reserve officer. Entering the U.S. Air Force in 1942 as a first lieutenant, he served with distinction in active duty. Upon discharge from active duty in 1946, he accepted a reserve commission as a Lt. Colonel. By 1962, he had achieved the rank of Major General. He was awarded numerous honors and medals, including the Distinguished Service Medal.

During his tenure in the Air Force, Sessums served in many vital areas and contributed significantly to our nation's defenses until his retirement in 1970. Notable among his reserve assignments were: Mobilization Assistant to the Commander, Air Force Systems Command, Andrews AFB; and a similar assignment at Headquarters, Air Force Reserve, Robins AFB.

He also served on various committees and boards, including the Reserve Forces Policy Committee, Headquarters U. S. Air Force, serving as Chairman of the committee for two years; the Board of Visitors to the Air University; and for three years as a member of the Department of Defense Reserve Forces Policy Board.

In addition to his many other duties and responsibilities, Sessums has also found time to serve on many administrative boards and commissions. He served on the President's Water Pollution Control Advisory Board; was nominated by the President to membership on the Mississippi River Commission; and is serving as a director of the American Bank and Trust Company, Baton Rouge, and on Nuclear Systems, Inc., Baton Rouge. Additionally, he served as the first Chairman of the Louisiana Expressway Authority and in 1972 he was appointed as a member of the Board of Trustees of the Health Education Authority of Louisiana.

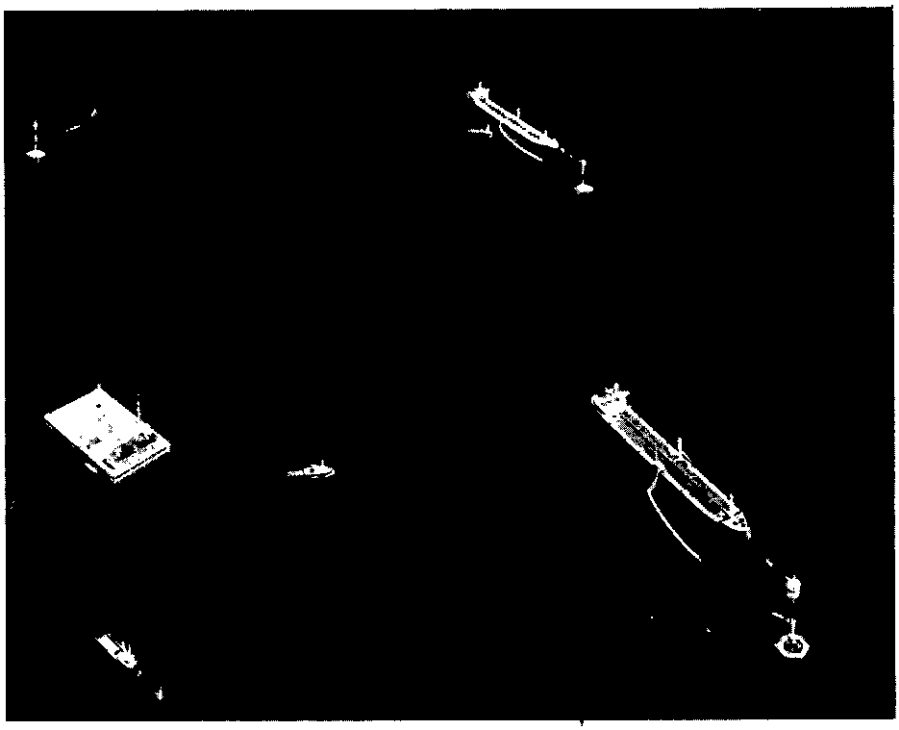
Although serving in many diverse administrative capacities, Sessums has managed to maintain an active role in the field of engineering, both on the state and national levels. He is the immediate past president of the National Council of Engineering Examiners and has served as a member and officer of many professional and business organizations.

Included among these are: American Society of Civil Engineers, past president of the Louisiana Section; Society of American Military Engineers, past president of the Louisiana Department; American Society of Engineering Education; National Society of Professional Engineers; National Director and Chairman of the Industrial Awards Committee; Louisiana Engineering Society, past president; Reserve Officers Association, past president of the Louisiana Department; Mississippi Valley Association, board of directors and executive committee; American Shore and Beach Preservation Association, national director; Professional Engineers Conference Board for Industry, Inc., board of directors, and the Louisiana State Board of Registration for Professional Engineers and Land Surveyors, past president.

As a result of having achieved extraordinary success in a number of fields, Sessum is listed in Who's Who in America; Leaders of Education; Who's Who in Engineering; and Who's Who in the Southwest. He also holds membership in the following fraternities. Phi Kappa Phi (scholarship); Omicron Delta Kappa (leadership); Tau Beta Pi (professional engineering society); and Lambda Chi Alpha (social).

Active in civic life, Sessums holds memberships in the New Orleans Chamber of Commerce, the Baton Rouge Chamber of Commerce and the Houma-Terrebonne, Louisiana, Chamber of Commerce. He is a member of the Legislative Committee and National Security Committee of the New Orleans Chamber of Commerce and a delegate to the Members' Council of the New Orleans Chamber.

Louisiana Offshore Oil Port



An artist's conception of a modern single-point-mooring terminal. Unloading crude oil moves through floating hoses to the SPM, then through submerged pipelines to a pumping platform where it is boosted to shore.

In a nation of paradoxes, one becomes more significant every day. Although the United States does more international trading than any other nation, it has no ports deep enough to handle the mammoth 21st century vessels increasingly important in world trade.

In the midst of expanding energy crisis, this paradox borders on critical. The vast majority of these "superships" are oil tankers, and the United States is rapidly approaching a time when almost 50 percent of crude oil needs must be imported—more than 15 million barrels of oil every day, the combined cargo of 45 conventional tankers.

Using the new class of supertankers—ships like the *Nisseki Maru*, a 373,000-ton ship capable of transporting more than 2,600,000 barrels of crude oil—can result in two important advantages. First, it can cut the cost of transporting imported crude oil by more than 50 percent over conventional tankers. Second, supertankers represent the answer to massive port congestion problems, and resulting collisions and spills.

In view of these significant advantages of supertanker operation, deep-water terminals are needed at strategic locations near major refining areas to permit the direct movement of petroleum from U. S. terminals to refineries in a manner that will minimize both environmental risks and transportation costs.

One of two such projects well on its way is a modern deep-draft crude oil tanker unloading terminal being planned for offshore Louisiana by LOOP Inc.

Formed in October 1972, LOOP comprises 14 stockholders: Ashland Oil, Inc.; Chevron Pipe Line Company; Exxon Pipeline Company; Marathon Oil Company; Murphy Oil Corporation; Shell Oil Company; Tenneco Oil Company; Texaco Inc.; The Toronto Pipe Line Company; Union Oil Company of California; Clark Oil & Refining Corporation; The Standard Oil Company (Ohio); Texas Eastern Transmission Corporation; and Amoco Pipeline Company. Additional shareholders may join through the completion of its engineering design, and the terminal is being planned as a common carrier open to all potential users who meet tariff requirements published with the I. C. C.

The LOOP facility will supplement crude oil supplies to existing Louisiana and Mississippi refineries and through Capline, the largest crude oil pipeline in the United States, will supply many of the refineries of midcontinent America, as far north as Chicago. These areas contain more than 25 percent of the nation's refinery capacity.

As conceived by LOOP engineers, the project will consist of a marine terminal for unloading supertankers, large diameter buried pipelines from the marine terminal to an onshore storage facility, and an onshore tank farm for interim storage. An adjunct to the facility will be a pipeline from the onshore storage facility to the St. James, Louisiana terminal of Capline.

A number of different concepts for the marine unloading terminal were considered for the LOOP project, including the "man-made island" facility of the type proposed by the Maritime Administration, the more conventional "fixed-pier" facility and the "single point mooring" concept.

By comparison of the various alternatives, the single point mooring system was selected as a safe and economical method for unloading large volumes of crude oil in the Gulf of Mexico.

Attached to the floor of the seabed by anchors or pilings, the SPM floating buoy can withstand very extreme sea and weather conditions. Vessel approach and departure from SPM's are relatively simple maneuvers for tankers of all sizes.

Ships approach the SPM directly, and mooring is accomplished in a short time with the aid of a mooring launch.

The vessel is secured to the SPM buoy with bow lines only and is free to rotate around a 360° arc, like a weathervane, always heading into the wind, sea and current. When the tanker finishes unloading, hoses which had been connected to the tanker's manifold are capped and placed in the water. Mooring lines are slipped and the tanker leaves the berth without the aid of tugs or launches.

The remaining elements of the LOOP project—the operations platforms, pipelines and tank farm—are conventional in nature, and certainly not unique to systems presently in use offshore Louisiana. Platforms will be of a double-deck design, 250 feet x 155 feet, designed for a 70-foot wave. Pumping capacity on the platforms will be a total of 90,000 HP (18,000 HP per line) and each line system will have a capacity of 100,000 bph.

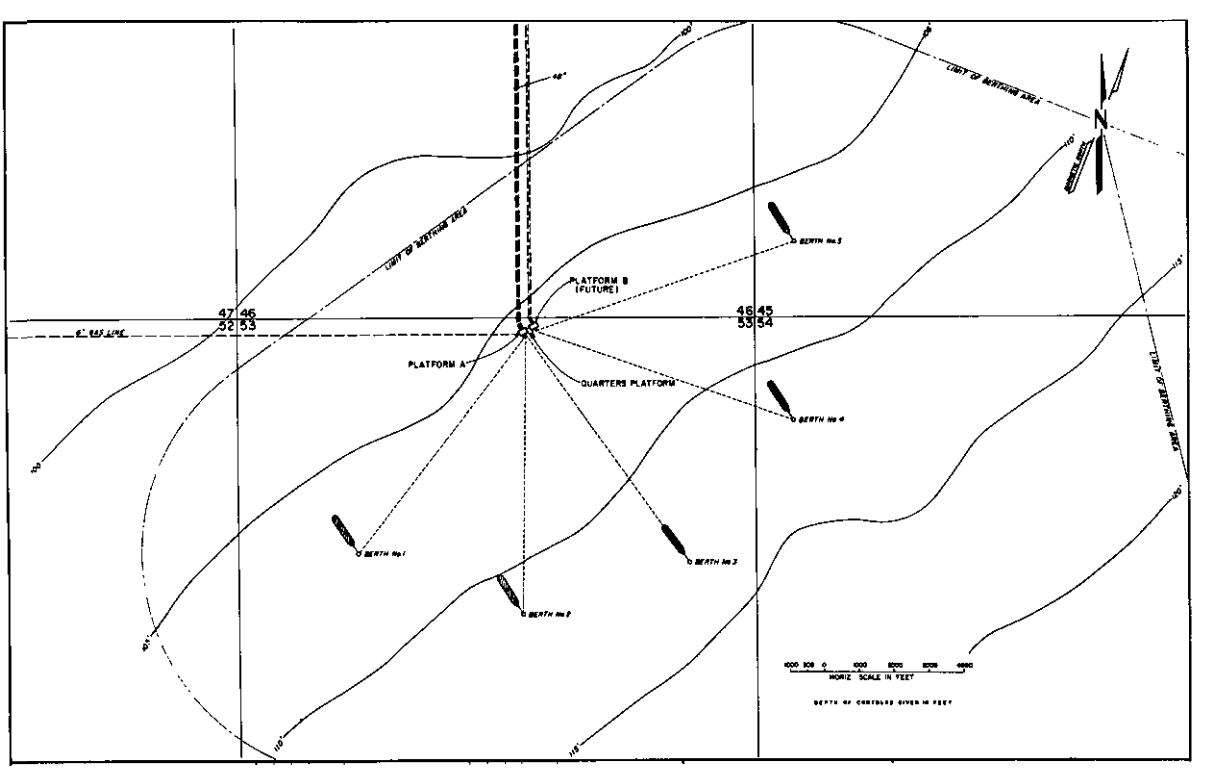
Designs of these items are being developed in accordance with existing federal and state regulations and industry standards. A vast storehouse of successful experience with offshore platforms, submerged pipelines, and tank farm construction in Louisiana is readily available.

Initially, it is expected that the LOOP facility will consist of three SPM's, operations platforms, and three buried pipelines to the onshore storage facility. The SPM's would be located in 100 to 120 feet of water approximately 19 miles offshore. SPM's and lines to shore would be added subsequently until the full configuration of five SPM's and five lines to shore is attained. SPM's will be spaced 5,000 feet apart, and each will be 8,000 feet from the operations platform.

This facility will have a potential throughput capacity of over four million barrels per day and would be able to unload tankers of up to 500,000 DWT through 20-inch and 24-inch diameter hoses at rates in excess of 100,000 barrels per hour. Different types of crude oil will be segregated during unloading, storage and transfer from the onshore storage facility.

The site selected for the terminal is near the end of the former Lafourche Delta of the Mississippi River and averages about minus 0.5 feet in elevation referred to mean sea level. The underlying soils occur in layers and range from peat and very soft clay at the surface to very firm, fine sand at a depth of 180 feet. Two layers of silty sand near the surface are separated by 15 feet of soft clay which is very compressible.

The surface layer of peat and soft clay must be removed by hydraulic dredging and replaced with fine sand from an adjacent area and then the site will be further filled to an elevation of plus 6 feet. Storage tanks will then be constructed on compacted sand foundations built up on the fill. A volume in excess of 15 million yards will be



In its final stage, the LOOP terminal will be composed of 5 SPM's in a cluster around a three-platform complex. This configuration will be capable of handling ships of up to 500,000 deadweight tons, and will have a capacity of 4 million barrels per day.

dredged in removing overburden and filling the site.

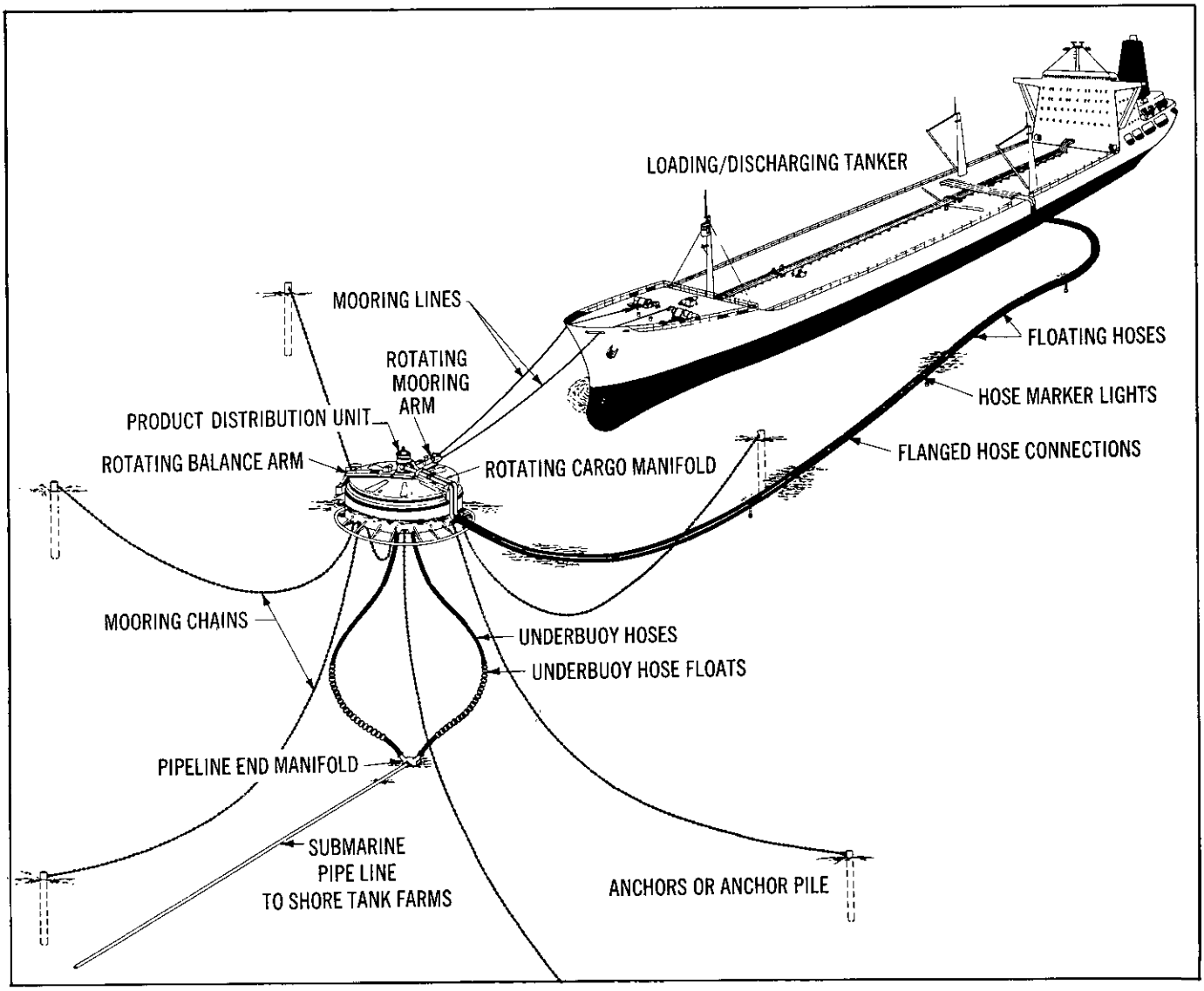
The presence of the 15-foot layer of compressible soft clay has a great influence on tank foundation design. The tanks must be loaded with water in stages over a 7- to 14-month period to compress the clay and dissipate the pore water pressure. Rapid filling of the tanks would likely exceed the shear strength of the highly plastic clay and sudden failure of the foundation could occur.

Carefully following a predetermined stage loading procedure and monitoring pore water pressure, lateral movement at various depths, settlement of the tank shell and bottom and vertical movement of the ground surface outside the tanks, tanks 48 feet high can be safely constructed. These 800,000-barrel tanks 48 feet high and 345 feet in diameter are expected to settle aproximately seven feet at the center and five feet at the shell during a 20-year period. Based on previous experience with similar soil conditions, a uniform vertical settlement without significant differential deviation is anticipated.

The tanks are designed to withstand winds of 166 mph and will be equipped with floating roofs to minimize venting of hydrocarbons to the atmosphere.

In addition to conventional firewalls around each group of four tanks, the entire tank farm will be ringed with a storm dike 12.5 feet high designed to withstand the tidal surge associated with a 100-year storm. The outboard face of the dike will be constructed of soil-cement placed and compacted in horizontal six-inch layers stair-stepped up the slope.

As a further safety measure during a hurricane threat, pro-



A typical SPM system. Once moored with bow lines only, a supertanker is free to "weathervane" 360° around the buoy in response to wind and wave conditions, so that the bow always faces the force vector. The first SPM was installed in 1959, and there are now over 100 installations in operation worldwide.

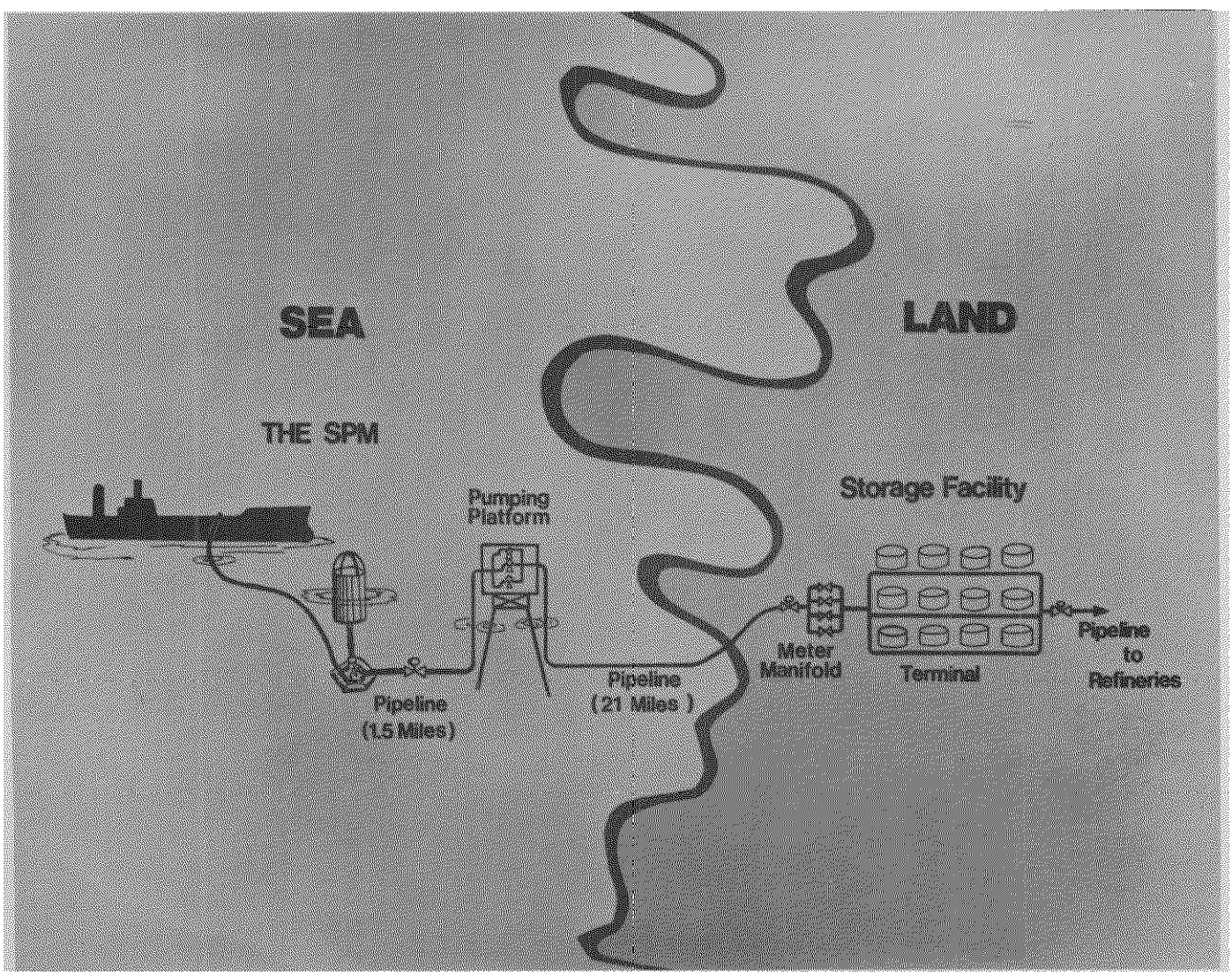
tection against floating will be provided by maintaining negative buoyancy in the tanks with a sufficient volume of oil or by ballasting with water by means of a large emergency fill pump.

Looking to the environmental considerations inherent in its plans, LOOP has recently initiated a 12-month environmental assessment program, expected to cost up to one million dollars, designed to more than meet the requirements for environmental impact statements outlined by the National Environmental Policy Act of 1969.

The objectives of LOOP's environmental program are to provide a comprehensive description of existing baseline conditions and to forecast the impact of the construction and operation of the proposed facility on these conditions. The study will be the most comprehensive ever undertaken in Louisiana's coastal zone, and the data will ultimately revert to the public domain for use by all citizens with an interest in this area.

In a presentation of the LOOP project to the Citizens Advisory Board to the Governor's Council on Environmental Quality on September 18, 1973, LOOP President W. B. Read told the board that responsible consideration of all the elements directly related to offshore oil port development leads to the conclusion that such a facility can be designed, constructed and operated in an environmentally compatible manner.

"Both as a spokesman for LOOP and as a private citizen, I can assure you of our willingness to shoulder our share of the responsibility for the environment as we move to meet the serious economic and social challenges posed by a mounting national energy crisis."



As indicated by this simplified flow diagram, the essential elements of the LOOP terminal include one or more single point moorings, pumping and operations platforms, and submerged pipelines connecting the offshore facility to a shore storage terminal.

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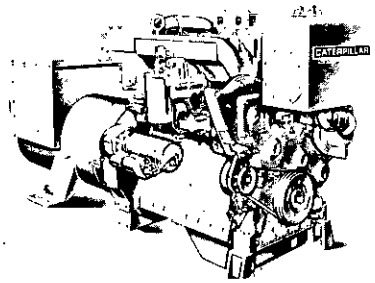

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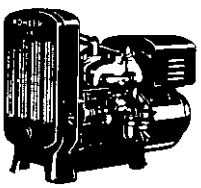

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What Is ICET? What Is ASCET?

Louis J. Schober, C.E.T., Chairman, LES Engineering Technicians Committee

ICET is an organization which certifies engineering technicians in three (3) levels of competence on a national scale. The NSPE pioneered this program to give an identity and recognition to the Engineering Technician, and in 1958 they established a committee for the purpose of finding a way to provide this recognition for their "teammates," the technicians.

In 1961, NSPE enacted the committee's recommendation by creating the Institute for the Certification of Engineering Technicians as a "By-Law" organization to their Society.

ICET was organized as a Board of Trustees, comprised of four Professional Engineers and four Senior Engineering Technicians, each serving without pay, and still functions this way.

January 1972 brought about an historical moment in the history of ICET when the NSPE included Certified Engineering Technicians as members of the NSPE Engineering Technicians Liaison Committee. Prior to that time the committee was entirely comprised of Professional Engineers. The committee now comprises four PE's and three CET's.

ICET has its offices in the NSPE Building in Washington, D.C. and has a full-time staff which includes the Executive Secretary and other clerical assistants.

Certification Grades and Procedure

There are three (3) grades of certification as follows:

Associate Engineering Technician (AET)
Engineering Technician (ET)
Senior Engineering Technician (SET)

The requirements for certification as of January 1, 1973 are as follows:

Associate Engineering Technician

No minimum age requirement (specifically)
Endorsement by one (1) PE (or equivalent)
Mandatory examination if not a graduate of an ECPD accredited program.
No experience or formal education requirements for taking the exam.
Successful completion of the exam or graduation from a two-year ECPD program equals two years credit toward experience, or, in the case of a four year ECPD program, four years credit toward experience.

Engineering Technician

Minimum age is 25
Seven years experience (can include two years related craft)
Endorsement by two (2) PE's (or equivalent)
Mandatory examination

Senior Engineering Technician

Minimum age is 35
Seventeen years experience (can include four years related craft)
Must demonstrate high qualifications
Endorsement by three (3) PE's (or equivalent)
Must prepare a 5000-word essay, in his or her particular field, which is acceptable to the Board of Trustees of ICET.

Anyone certified as an AET or ET prior to Jan. 1, 1973 may apply for upgrading to SET, at the proper time, without the essay requirement until Jan. 1, 1976. After Jan. 1, 1976 all SET applicants must prepare and submit a 5000-word essay as described above.

Prior to Jan. 1, 1973 certification as an ET or SET was acquired through a resume of occupational experience, acceptable to the Board of Trustees of ICET, along with all of the other requirements described above. The exam was only mandatory for the AET applicant who had not graduated from an ECPD accredited program.

The present examination procedure has replaced the more liberal procedure of certification through a resume of experience. We all realize that those technicians who took the opportunity to become certified in the early years of ICET, and then fought the battles and growing pains, are technicians who are competent and respected in the profession.

Since the program has become successful and there are obvious rewards to be gained through certification, ICET must obviously regulate the manner in which applications are received and certifications are being approved. The examination is held three (3) times during the year. In January, May and August. In Louisiana the examination centers are La. Tech., U.S.L. and Delgado. The scheduled dates for the exam are published in the January issue of the NSPE magazine.

Applications for certification through examinations may be obtained from ICET at 2029 K Street, N.W., Washington, D.C. 20006.

To date there are 40,000 technicians who have been certified by ICET.

The American Society of Certified Engineering Technicians

This is a national organization that all CET's are entitled to join. ASCET has many local chapters and state chapters but unfortunately Louisiana does not as yet have an ASCET Chapter. Hopefully, through recent action by the LES board, Louisiana will be working toward the formation of an ASCET Chapter.

ASCET, by definition, is an organization composed of Certified Engineering Technicians. It devotes its time, money and efforts

to programs of direct interest to the engineering technician much the same as NSPE and LES does for the professional engineer. It is also their intent to strengthen the relationship between NSPE and ASCET in order that the two organizations may complement one another in this and other fields of mutual concern. The ASCET headquarters are also in the NSPE Building in Washington, D.C.

ASCET has a chairman of the board, a president, a secretary-treasurer and seven regional vice-presidents. Its national membership is approaching 4,500. ASCET publishes its own magazine, the "Engineering Technician," which comes out bi-monthly.

Regional meetings are held generally during the spring and the Annual National Meeting is held during the last week of June. This year, the Ninth Annual Meeting will be held in Kansas City and the S.W. Regional meeting will be held in San Antonio, Tex. in March.

The Louisiana Engineering Society, through its president, board of directors, local chapters and the LES Engineering Technicians Committee, is dedicating itself to the promotion of this program and is hopeful that all PE's and employers of engineering technicians will join in the promotion of the program.

Questions with regard to information on this program can be directed to the following:

Louis J. Schober, CET
Chairman, LES Engr. Tech. Comm.
P. O. Box 654
Houma, La. 70360

ANNOUNCEMENT

The Louisiana State Board of Registration for Professional Engineers and Land Surveyors announced that an examination in fundamental engineering subjects will be given on Saturday, November 3, 1973 at four testing centers in Louisiana. The centers are located in New Orleans, Baton Rouge, Ruston, and Lafayette. This examination is required of persons who desire to become registered Professional Engineers.

At the same time, the Board announced the schedule of tests for 1974. They will be given on Saturday, April 20, 1974 and November 9, 1974 at four testing centers in Louisiana. The centers are located in New Orleans, Baton Rouge, Ruston, and Lafayette.

All persons other than engineering students who desire to take the examination must submit their applications thirty (30) days prior to the testing date. Applications should be submitted to the Louisiana State Board of Registration for Professional Engineers and Land Surveyors, 1055 St. Charles Avenue, Suite 415, New Orleans, Louisiana 70130.

Engineering Societies in Louisiana

This list of the engineering societies and related groups in Louisiana is included as a convenience to our members and others and to promote inter-society cooperation and communications on professional, technical, social and other matters of mutual concern. Organizations wishing to be listed in future listings may contact the LES office: P. O. Box 2683, Baton Rouge, La. 70821.

American Institute of Aeronautics and Astronautics
Chairman, New Orleans Section
John Christopher
Box 29200
New Orleans, La. 70129

American Institute of Chemical Engineers
New Orleans Section
Charles Ray Cutler
2315 Lemon
Metairie, La. 70002

American Institute of Industrial Engineers
President, New Orleans Chapter
Charles E. Alexander
Rt. 3, Box 160
Picayune, Miss. 39466

American Society of Agricultural Engineers
Chairman, Louisiana Section
Charles Severance
Louisiana Coop. Ext. Service
Knapp Hall, L.S.U.
Baton Rouge, La. 70803

Chairman, Baton Rouge Section
Gene Baker
Rt. 2, Box 494C
Denham Springs, La. 70726

American Society of Civil Engineers
President, Louisiana
John F. Grosch III 9/74
P.O. Box 66317
Baton Rouge, La. 70806

President, Shreveport Section
Robert R. Aillet
1055 Louisiana Ave.
Shreveport, La. 71101

President, New Orleans Branch
Blaise M. Carriere 9/74
6628 General Diaz St.
New Orleans, La. 70124

American Society of Mechanical Engineers
Chairman, New Orleans Section
Dr. D. C. Hamilton, Jr.
Mechanical Engineering Dept.
School of Engineering
Tulane University
New Orleans, La. 70118

American Society of Safety Engineers
President, New Orleans Chapter
Lawrence N. Hunsinger, C.S.P. 7/74
Engineers Club of New Orleans
546 Carondelet St.
New Orleans, La. 70130

Consulting Engineers Council of Louisiana, Inc.
President
Frank H. Walk
762 Baronne St.
New Orleans, La. 70113

President, Baton Rouge Chapter
Easton Stewart
Easton Stewart & Associates
2124 Wooddale Blvd.
Baton Rouge, La. 70806

President, New Orleans Chapter
David Hunter
Linfield & Hunter
1515 Melpomene St.
New Orleans, La. 70130

President, Shreveport Chapter
Robert K. Hawkins
3346 Youree Dr.
Shreveport, La. 71105

President, Lafayette Chapter
Terry Gaudet
Richard & Gaudet
225 Luke Dr.
Lafayette, La. 70501

Instrument Society of America
President, New Orleans Section
Clark Mallard 9/74
P. O. Box 705
Harvey, La. 70058

Society of American Military Engineers
President
Col. Edmond L. Faust, USA (Ret.)
2514 State St.
New Orleans, La. 70118

Society of Automotive Engineers
Chairman, New Orleans Group
Charles Nielsen, Jr.
c/o Chrysler Corp. Space Division
P. O. Box 29200
New Orleans, La. 70129

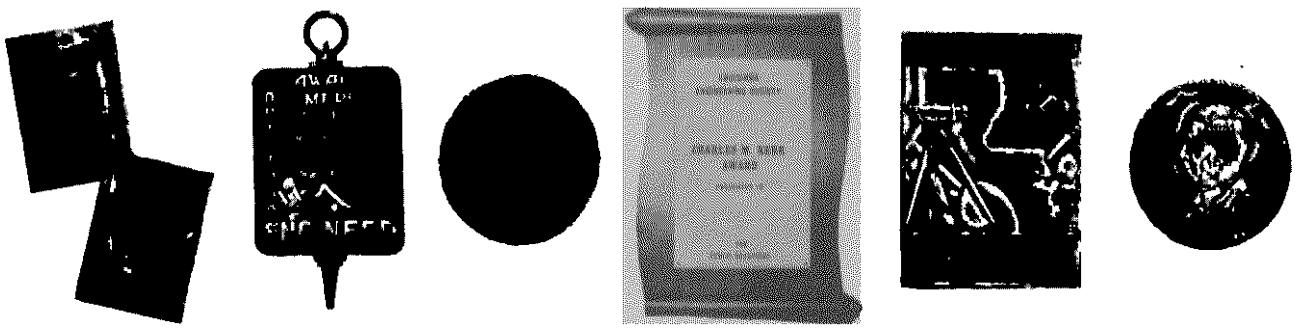
Society of Petroleum Engineers of AIME
Chairman, South Louisiana Section
Edwin L. Wilbanks
Union Oil Co. of California
5002 Highway 90 E
Morgan City, La. 70380

Chairman, Delta Section
W. W. Christian
Bank of New Orleans Bldg.
1010 Common St., Suite 1000
New Orleans, La. 70112

Chairman, Lou-Ark Section
Cecil E. Lohn
Box 1120
Shreveport, La. 71163

L.E.S. Awards Program

T. J. Hogue, Jr., P.E. Chairman, Honors & Awards Committee



Recognition of fellow engineers has always been an important program of the Louisiana Engineering Society. It has been the Society's feeling that honors and awards should be given deserving members so that they will receive public recognition of their attainments, and also to inspire others to greater heights.

The Society has six basic awards. These are the Andrew M. Lockett Medal, Technological Accomplishment Medal, A. B. Paterson Medal, Charles M. Kerr Public Relations Award, the Louisiana Engineer Award of Merit and the Leo M. Odom Award.

The Andrew M. Lockett Medal is the Society's civic activities award and was first given in 1951. Measuring 2 x 2½ inches, the heavy medallion is given annually to an engineer for distinguished civic service in the public interest without compensation for those services.

The Technological Accomplishment Medal is given for distinguished services by an engineer for technological advancement or discoveries as contributions to the advancement of engineering. Like the Andrew M. Lockett Medal, it was first awarded in 1951.

The Louisiana Engineering Society has a special award for the engineer who distinguishes himself in management. This is the A. B. Paterson Medal which was first given in 1965. Primary criterion for selection is achievement in management rather than engineering or scientific attainment.

The character and scope of contributions to the Society's overall public relations program is also recognized to encourage other members to take a greater part in public relations on the chapter or state level. Named the Charles M. Kerr Public Relations Award, it was first presented in 1965.

It should not be thought that in order to receive recognition from the Louisiana Engineering Society an engineer must be practicing in the profession for a great length of time. Young engineers are acknowledged by the Louisiana Engineer Award of Merit.

The Leo M. Odom Award, named after its first recipient in 1972, is given for distinguished service to the engineering profession in Louisiana by a registered Professional Engineer member of the L.E.S. over a period of long duration, including leadership in technical societies as well as this and other professional engineering groups.

Of course, besides these awards given on the state level, each chapter has its own awards given to its outstanding members.

Nominations may be made by chapter or state officers, the Board of Direction, the Executive Committee or the equivalent body of any chapter, or by three or more members of the Society.

When nominations are submitted, they should be supported by:

(a) A full statement of the training, experience and notable contribution of the nominee.

(b) A statement of the basic reasons for submitting the nomination and for believing the nominee eligible for the honor.

(c) Such other information and reference as may be of assistance to the Board of Direction in considering and acting upon the case.

(d) It is essential that such nomination carry the current title and company connection of the candidate, and if he is retired, his present permanent address.

The selection for the award to be recommended to the Board of Direction must be a unanimous vote of the Society's Honors and Awards Committee.

Awards will be presented during the Society's Annual Spring Meeting in March.

Potpourri

R. C. (Doc) Spears, LES Executive Secretary

Kickbacks

The LES Board of Direction at its September 15 meeting approved a PEPP recommendation to endorse the NSPE investigation of alleged kickbacks by engineers and to offer any assistance that may be requested to support the work of the NSPE task force.

North-South Highway

PEPP recommended that the LES Board approve the following resolution supporting the construction of a controlled access highway connecting North and South Louisiana. The resolution:

WHEREAS, the State of Louisiana has been denied a North-South Interstate Highway, and

WHEREAS, the safety of the traveling public is of paramount concern, and

WHEREAS, the growth of the center of the State of Louisiana has been greatly hindered,

NOW, THEREFORE, be it resolved by the Board of Direction of the Louisiana Engineering Society that the Society wholeheartedly support the construction to Interstate Standards of the North-South Highway.

Meeting Dates

The 1974 Annual Spring Meeting will be held in Lafayette, April 12-13, at the Roundtowner Hotel. Planning has begun, so mark your calendars now for this most important meeting.

The NSPE Winter Professional Meeting will be held in Biloxi, Mississippi on January 15-19, 1974.

EJC Study

LES paid its dues to EJC for 1973. However, the Intersociety Relations Committee has been directed to investigate LES position or status with EJC and report what benefits the Society derives from being an affiliate.

1974 Convention

The Mississippi Engineering Society and LES will hold their 1974 Convention at the Royal Sonesta Hotel in New Orleans on July 25-27, 1974. Stand by for details as they are formulated.

OSHA Seminar

The Professional Engineers in Construction Division of the National Society of Professional Engineers will sponsor a seminar entitled "An OSHA Checklist for the Construction Engineer," to be held Friday and Saturday, December 7-8, at the Town House Motor Hotel in Atlanta, Georgia.

The day-and-a-half seminar will stress a how-to-do-it approach to dealing with OSHA, specifically for the engineer in construction.

For further information and to register write NSPE/PEC OSHA Seminar, 2029 K Street, N.W., Washington, D.C. 20006 or call 202-331-7020 extension 60.

ASCE Meeting

"The Civil Engineer's Role in Environmental Impact Considerations" is the theme of the annual and national environmental engineering meeting to be held at the Americana Hotel, New York City, October 29-November 1.

This ASCE meeting will provide those in attendance an opportunity to present and discuss technical and professional developments in the civil engineering field, concentrating especially on environmental matters. Experts will discuss topics ranging from environmental considerations in fossil plant design to city planning and advances in solid waste technology.

For further information, contact ASCE, United Engineering Center, 345 East 47 Street, New York City 10017.

Underground Space

A condensed report of a 355-page in-depth analysis on "The Use of Underground Space to Achieve National Goals" has been published by the American Society of Civil Engineers. The summary identifies opportunities for advancing national goals to alleviate national problems through a deliberately increased use of underground area.

Programs proposed for early consideration include new underground urban expressways and electrical energy distribution systems. Storage and warehouse facilities, industries, shopping centers, buildings, and disposal areas for solid waste are also recommended for location underground.

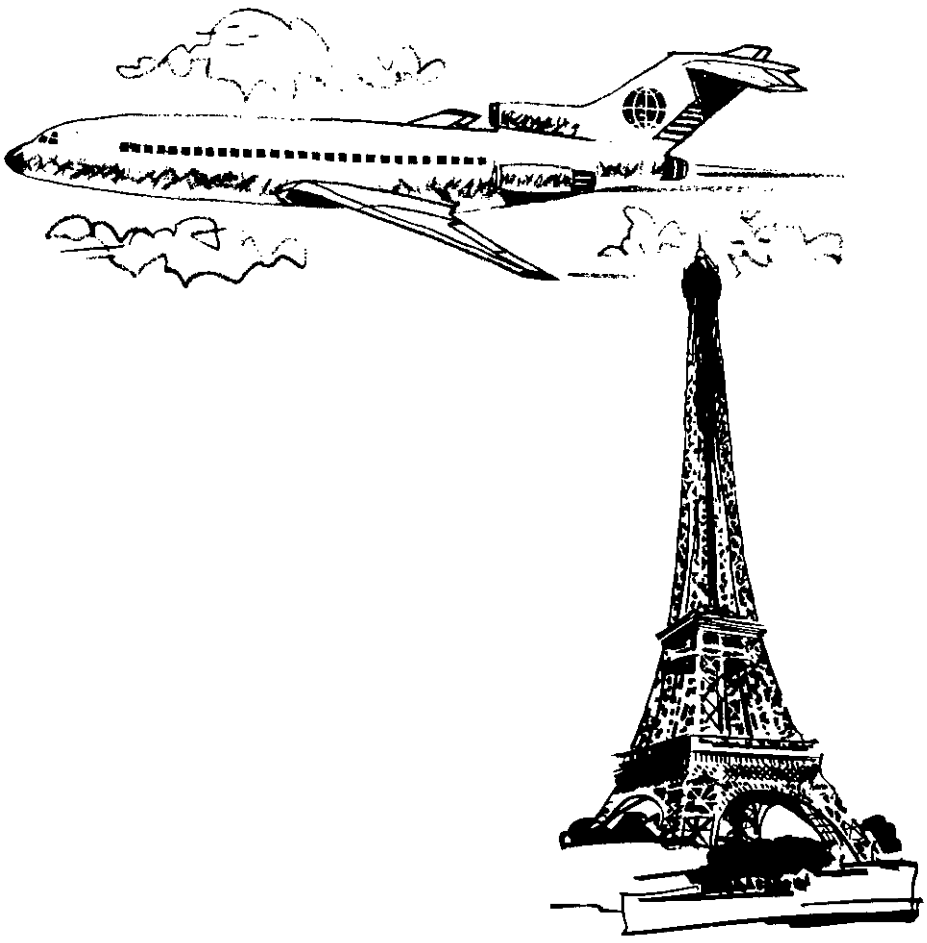
Single copies of the 20-page condensed report may be obtained from the American Society of Civil Engineers, 345 East 47th Street, New York 10017 at $1.00 per copy. Copies of the complete study are available at $7.00 per copy.

Membership Campaign

The 1973-74 NSPE membership campaign has been launched under a theme of "Growing Together." A feature of this year's NSPE membership campaign is to concentrate on six states (one from each of the six regions) in the membership campaign and to experiment with new approaches in marketing NSPE to prospective members. Texas has been selected in the Southwestern region as the "guinea pig state" in the new campaign.

Texas SPE will be carefully monitored to see what is working and why, as well as what is not working and why, in promoting membership.

Spend Your 1974 Vacation In Europe With LES



Your society, acting through its Board of Directors, has decided to cooperate with the "People-to-People International" organization in scheduling a European trip in September of 1974. This program, initiated by General Dwight D. Eisenhower during his term of office as President of the United States, is now strongly endorsed by the Nixon Administration.

For 10 years the People-to-People Travel Program has been sending teams of U. S. citizens to various areas of the world on three-week journeys with the purpose of creating international understanding and goodwill. American citizens visit foreign countries and meet with their occupational counterparts there, as well as with U. S. Embassy and foreign government officials.

These trips are not ordinary sightseeing tours, although sufficient time is set aside for visiting interesting places. This is a private citizen effort with delegates paying their own way. And taking their wives along too if they wish.

The cost of transportation, airport transfers, excursions, first-class hotels, meals and services of a professional tour manager will be included in the rate to be quoted. Tentatively, countries to be visited are Belgium, France, England, Russia, Czeckoslovakia, Germany and perhaps Switzerland.

James Janssen, LES member in New Orleans, has been selected to be the delegation leader. All LES members interested in being named as official members of this delegation should make application immediately to Mr. Janssen. The delegation will be limited to no more than 38 members.

Enginews

ENGINEERS IN THE NEWS

Malcolm Hurstell

Malcolm L. Hurstell has been elected president of the New Orleans Archdiocesan School Board for 1973-74.

Hurstell has been a member of the Archdiocesan School Board since 1971.

A New Orleans native, Hurstell resides in St. Gabriel the Archangel parish where he has served as president of the parish school board, the parish youth council, and as secretary of the parish council.

He is a past chapter president of the American Public Works Association, a past section chairman of the Institute of Electrical and Electronics Engineers, and is first vice-president of the Louisiana Engineering Society.

A. H. Douglas, Jr.

A. H. Douglas, Jr. has been appointed to the position of Vice President of American Creosote Works, Inc. His duties will be the coordination and supervision of all company's sales, advertising and public relations programs.

Douglas holds a BS degree in mechanical engineering from Tulane University and is a member of the Louisiana Engineering Society and the National Society of Professional Engineers.

NEW LES MEMBERS

Baton Rouge

CLARENCE E. HALL
142 Atkinson Hall—L.S.U.
Baton Rouge, La. 70803

ROGER H. JEFFERS
10044 W. Tams
Baton Rouge, La. 70815

CHARLES R. TOTTY, P.E.
P. O. Box 3077
Baton Rouge, La. 70821

GEORGE N. TENNISON
4445 Alvin Dark Drive, Apt 34
Baton Rouge, La. 70808

DAVID N. WILLIAMS, P.E.
1300 Wellington Drive
Baton Rouge, La. 70815

Bayou

ELVIN J. DANTIN, JR.
200 Armour Drive, Apt. 106
Houma, La. 70360

Lake Charles

TRUITT A. BRASSETTE, P.E.
710 W. Prien Lake Road
Lake Charles, La. 70601

ROBERT J. CALONGNE
2520 19th Street
Lake Charles, La. 70601

Monroe

JOHN G. MARONEY, P.E.
208 Louisville Avenue
Monroe, La. 71201

SUDHIR D. MEHTA
Bernhardt Bldg.
Monroe, La. 71201

RALPH M. OLMSTED (Student Member)
Box 7125 Tech Station
Ruston, La. 71270

New Orleans

ROBERT A. BROSSETTE, JR.
5232 Mandeville Street
New Orleans, La. 70122

MICHAEL A. BURAS
908 Rosa Avenue
Metairie, La. 70005

STAFFORD J. MENARD
1010 Common Street
New Orleans, La. 70160

WILLIAM G. OSBURG
6123 Catina Street
New Orleans, La. 70124

EUGENE A. WAGNER, JR., P.E.
629 Eleonore Street
New Orleans, La. 70115

Shreveport

JOSEPH R. EFFERSON
3754 Greenway Place
Shreveport, La. 71105

PROFESSIONAL ENGINEERS GRANTED REGISTRATION

(Continued from August Issue)

PINCINCE, GEORGE SIMON
Vicksburg, Miss.
Civil

PORTER, JAMES MARVIN
Lake Charles, La.
Chemical

PRABHU, VASUDEV DAYANAND
New Orleans, La.
Chemical

RAPHAEL, COLEMAN
Silver Spring, Md.
Civil

RIGGS, BARRYMORE DUVAL
Metairie, La.
Mechanical

ROLLINS, CARL LEE
Tulsa, Okla.
Civil

SALSMAN, CAROL JAMES
Houston, Texas
Mechanical

SANZGIRI, SUNIL MANGESH
Metairie, La.
Civil

SAPAUGH, PAUL E.
Tyler, Texas
Petroleum

SCOTT, LAWRENCE ROY
Ocean Springs, Miss.
Civil

SERAFIN, JOHN FRANCIS
West Vancouver, British Columbia
Chemical

SHAH, MADHUKARBHAI AMBALAL
Medford, Mass.
Civil

SHAW, GILBERT JACK
Bakersfield, Calif.
Civil

SHUKERS, SEWARD D.
Independence, Kansas
Civil

SIKES, FRANCIS GARY
Baton Rouge, La.
Chemical

SLATTERY, JACK EDWARD
Slidell, La.
Electrical

SMELLEY, REGINALD LAMARR
College Park, Ga.
Civil

SMITH, ALAN HIRSCH
Dallas, Texas
Mechanical

SMITH, DANIEL McLEOD
Hampton, Va.
Civil

SMITH, RICHARD ALAN
Houston, Texas
Mechanical

ST. CYR, CORDELL JOSEPH
Houston, Texas
Civil

SWAN, JR., FREDERICK A.
New Orleans, La.
Mechanical

SYKORA, JAMES HELLER
Baton Rouge, La.
Chemical and Mechanical

TABONY, JR., JOHN HELLER
Baton Rouge, La.
Metallurgical

THOMAS, JOSEPH PRIDGEN
Memphis, Tenn.
Civil

THOMPSON, RAYMOND HOWARD
Morgan City, La.
Electrical

THORNE, JAMES DALE
Sulphur, La.
Mechanical

TRIPATHY, CHANDRA S. D.
Tulsa, Okla.
Chemical

TURNBULL, ERIC WALTER
Lake Charles, La.
Chemical

TURNER, AMOS
Highland Park, Ill.
Electrical

WALLACE, WILTON GEORGE
Lake Charles, La.
Chemical

WELCH, CHARLES WILLIAM
Baton Rouge, La.
Electrical

WHITAKER, GARY LYNN
Lake Charles, La.
Chemical

WHITAKER, ROBERT JAY
Lake Charles, La.
Chemical

WILLIS, SHELBY KENNETH
Salina, Kansas
Civil

WILLOUGHBY, WILLIAM W.
Pittsburgh, Pa.
Mechanical

WOLCOTT, ELDON NICHOLSON
Houston, Texas
Electrical

WILSON, WILLIAM HOWARD
Shreveport, La.
Mechanical

WISTERMAN, JACK DELANO
Ruston, La.
Electrical

MEMBERSHIP CONTEST
Contest Standing as of September 12, 1973
Percent of year 20.3%

Position	Chapter	Quota	Applications	% Quota	NSPE	NET	Contest Percentage	Students
1	Lake Charles	12	2	16.67	1	3	25.00	0
2	Baton Rouge	46	5	10.87	3	8	17.39	1
3	Lafayette	16	1	6.25	1	2	12.50	0
4	Monroe	19	1	5.26	1	2	10.53	2
5	New Orleans	85	6	7.06	1	7	8.24	1
6	Alexandria	15	1	6.67	0	1	6.67	0
7	Shreveport	19	1	5.25	0	1	5.26	0
8	Bayou	10	0	0.00	0	0	0.00	0
	TOTALS	222	17	7.66	7	24	10.81	4
	Non-Resident		1		0			

WOLF, ROBERT LAWRENCE
Baker, La.
Chemical

WOOLVERTON, PAUL FLOYD
St. Louis, Mo.
Chemical

YANG, WILLIAM JIH-SHENG
Sherman Oaks, Calif.
Mechanical

LAND SURVEYORS

BERGERON, JAMES DAVID
Houma, La.
Land Surveyor

FERNANDEZ, PHILIP JULIAN
New Orleans, La.
Land Surveyor

PHELPS, RODGER DALE
Westlake, La.
Land Surveyor

SMITH, GARRISON PIXLEY
Orange, Texas
Land Surveyor

JULY 31, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

ADKINS, VALDAN C.
Lafayette, La.
Electrical

ALFONSO, CHRISTOPHER DECEIDUE
Metairie, La.
Civil

ATCHLEY, JR., BEN D.
Shreveport, La.
Civil

BABINEAUX, JULES DONALD
Lafayette, La.
Electrical

BACICA, JR., WOODROW LANSING
Guy, Texas
Electrical

BAILEY, JAMES F.
Tulsa, Okla.
Mechanical

BANKER, JR., KERNAN MATTHEW
Bastrop, La.
Chemical

BARLOW, II, EDGAR CLIFFORD
Pasadena, Texas
Civil

BLAU, ROBERT EDWARD
Winnetka, Ill.
Mechanical

BOLES, JIMMY PRINGLE
Baton Rouge, La.
Civil

BRADLEY, WILLIAM BERTRAM
Miami, Fla.
Mechanical

BROUSSARD, LAURENCE DOUGLAS
Houston, Texas
Mechanical

BROWN, PAUL HILLMAN
Cary, N. C.
Mechanical

BROWN, RICHARD S.
Shreveport, La.
Civil

CADELLI, GEORGE
New Orleans, La.
Mechanical

CAMPO, JUAN JOSE
Morgan City, La.
Civil

CARTER, DOUGLAS MARTIN
Largo, Fla.
Civil

COLLINS, DENTON TRABUE
West Monroe, La.
Electrical

DAY, THOMAS LEWIS
Westwego, La.
Civil

ELLIS, CHARLES DOUGLAS
Lafayette, La.
Mechanical

EPPERSON, THOMAS JAMES
Shreveport, La.
Electrical

EVANS, ROBERT FRANCIS
La Habra, Calif.
Metallurgical

FIEDLER, ERWIN CHARLES
Friendswood, Texas
Mechanical

FINLAY, ROSWELL LUGAR
Dallas, Texas
Civil

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INAME OF COMPANY]

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For reasons of economy, the Louisiana Engineering Society Board of Direction minutes are not published in this issue of the magazine. Mimeographed copies of the minutes are available on request from the LES office. Please send a self addressed stamped envelope (size 10 preferred) with your request to expedite your receipt of the minutes and to reduce expense.

To balance the budget, it has been necessary to reduce the size of the magazine from 32 to 24 pages until additional revenue is available from advertising. LES has begun a campaign to substantially increase the professional listings and to publish a directory of suppliers and contractors. The cooperation of each chapter and member is needed.

Chapters are requested to solicit advertisers in their areas or to advise LES of contact information for possible advertisers. The Louisiana Engineer is distributed to every registered professional engineer in the state, representing an important segment of the market for manufacturers, retailers, financial institutions and service companies.

The advertising rate schedule follows:

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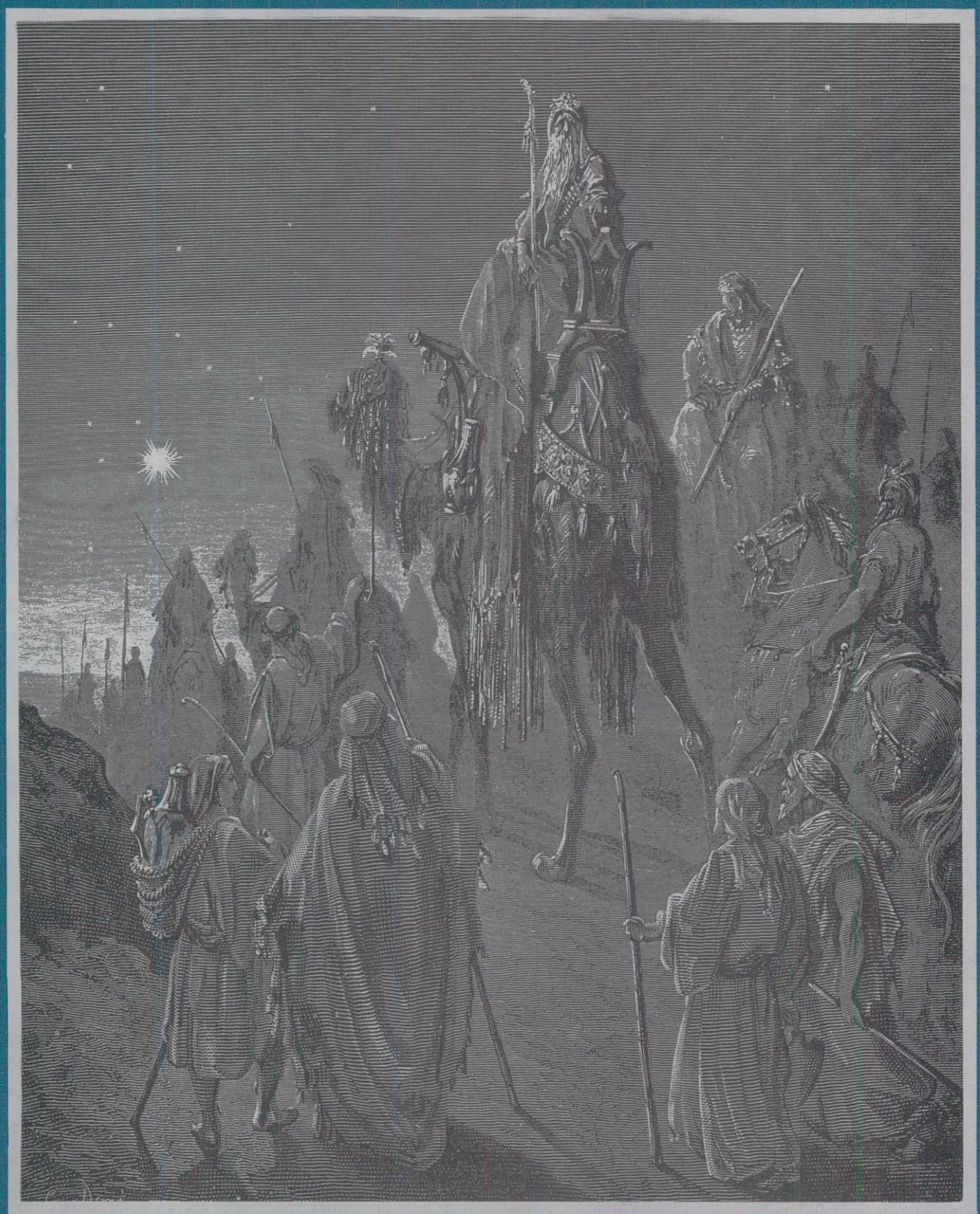
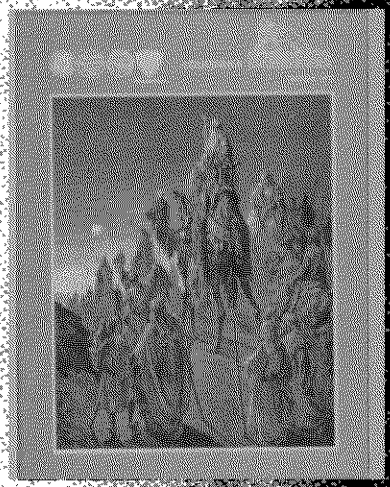
LOUISIANA ENGINEER

December, 1973





COVER

Season's greetings from the Officers, Board and Staff of the Louisiana Engineering Society and the State Board of Registration for Professional Engineers and Land Surveyors.

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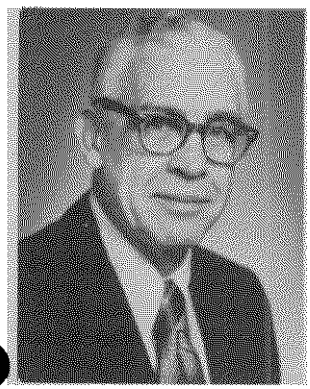
Presidential Privilege



LES President
Dr. J. J. Thigpen

Our Executive Secretary, "Doc" Spears, has come up with a very fine program which I think all us us should support. You received a copy of the program with the last issue of "Perspective." The program calls for members of the Louisiana Engineering Society to contribute a gift subscription of the **Louisiana Engineer** to a high school or library of your choice. It is particularly important to get this magazine in the hands of our high school students to give them as much exposure to the engineering profession as possible.

As many of you know, engineering does not have the prestige or interest among high school students today that it did in recent years. Let me quote some statistics that bear out this fact. In 1950, college freshman enrollment equaled 7 percent of the male high school graduates of that year. In 1970, this figure had dropped to 5 percent. Although the total freshman enrollment in engineering increased during the period of 1950-1970, due to the large increase of high school graduates, the fact remains that in 1950, one out of fourteen male high school graduates enrolled in engineering, while in 1970, this figure had dropped to one in twenty. Another significant statistic is that although engineering is still the most indicated major of the male National Merit Scholarship semi-finalists, the percentage of those who listed engineering as their first choice dropped from 32 percent in 1956 to 16 percent in 1971.

The decrease in interest is further borne out by enrollment statistics in recent years. A survey of the Engineers Joint Council showed that full time freshman enrollment in engineering dropped from approximately 77,500 in the fall of 1967, to 52,100 in the fall of 1972. No doubt some of the decrease was due to the bad publicity that resulted from many engineers being unemployed when the space program was cut back. This situation was coupled with a slowdown in the economy. We as engineers failed to tell the other side of the story, however; engineering graduates got engineering jobs during this time and at slightly increased salaries. Many college placement offices reported during this time that engineering graduates were obtaining employment faster than any other academic group.

An increase in freshman engineering enrollment of approximately 2 percent was predicted for this fall which is encouraging but still leaves much ground to regain. At this date I have seen no published figures on enrollment for fall, 1973.

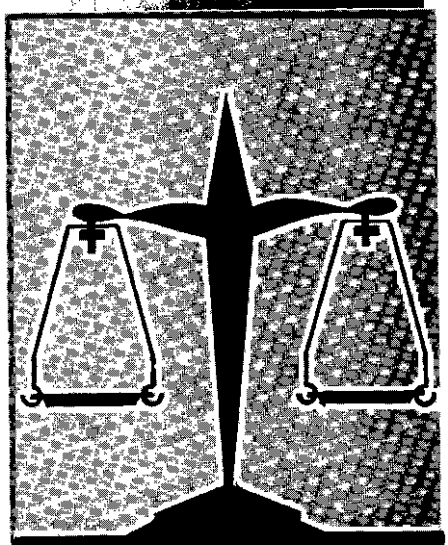
Today there is a greater demand for engineering graduates, far more than the number being graduated this year. This demand is predicted to remain at approximately the same level through the 1970's, while beginning next year, 1974-75, the number of engineering graduates will decline very sharply, reflecting the decrease in freshman engineering enrollment of the last few years.

True, we may have, as some predict, a slowdown in the economy ahead which may reduce temporarily the demand for engineers, but for the long haul engineering graduates will be in short supply. The major problems facing our nation are technical in nature, the energy shortage for instance, and they call for more engineers than our present enrollment will provide. At no other time in history has engineering need been more closely associated with mankind's need.

Back to "Doc" Spears' program, studies have shown that *outside information* about engineering is the largest single factor which the students say attracted them to engineering. Placing the **Louisiana Engineer** in high school libraries and other libraries in our state is an excellent way to provide a source of outside information, and I hope that many of you will participate in this fine opportunity.

Engineering is a challenging, interesting, and rewarding profession, and we must do all we can to tell our story to our high school students.

Registration Law Study Conclusion



By
Waldemar S. Nelson, Chairman
Registration Law Study Committee
Louisiana State Board of Registration for Professional Engineers and Land Surveyors

In a previous report (Louisiana Engineer—June 1973), the methods adopted by the Louisiana State Board of Registration for Professional Engineers and Land Surveyors in making its study of the Registration Law for Professional Engineers and Land Surveyors were described, including the procedures adopted for the first two phases of the work.

The first phase consisted in publishing notices of the study to the 10,000 engineers registered in Louisiana and to the public and addressing inquiries to 954 organizations or groups possibly having interest in the Registration Law, to solicit the broadest possible comment on the present law. These organizations included professional engineering societies, Federal, State, Parish and Municipal Agencies and industrial firms.

The second phase of the study consisted of a systematic review of the present statutes to determine any inconsistencies, archaic language, interim provisions, and material no longer applicable. Both the first and second phases were accomplished, and the board has now concluded the third phase, of tabulating, correlating and analyzing the responses to the inquiries and the results of the review.

After repeated requests, a broad range of replies and comments on the Registration Law were finally obtained. The fact that some replies were slow in being made probably reflects the procedural rules under which many organizations work, whereby opinions can only be developed by proper consideration and vote of the governing board.

In any case, 55 replies were received from the 954 inquiries and the public notice. The results have been tabulated and are appended to this report. Upon analysis of the replies and of its experience in administering the law by the Louisiana State Board of Registration for Professional Engineers and Land Surveyors, meeting in committee of the whole body, the following conclusions have been reached:

REGISTRATION LAW

As evidenced by the small number of replies received which recommended changes and in view of the fact that the present law has served well for 23 years it is concluded that no general rewriting of this law is needed. Developed as it was over a period of years as the consensus of thought and action of a broad representation of the engineering profession, and "enacted by the Legislature of the State of Louisiana . . . in order to safeguard life, health and property and to promote the public welfare," it represents typical democratic action "of the people, for the people, and by the people." Louisiana had the second such law in the nation. The original law is said to be the source of many other states' laws and the so-called Model Law. The board had experienced no serious problems in the administration of Act 73 of 1950 as amended.

INTERIM PROVISIONS

Interim provisions in the statute, enacted in 1950 and amended in 1970 permitted registration of certain individuals as public employees or as land surveyors until certain specified dates. These provisions are no longer applicable, and could well be deleted. In addition, certain minor inconsistencies or apparent errors or omissions could well be corrected. If the present law is amended

RULES OF PROFESSIONAL CONDUCT

The board believes that the adoption and enforcement of codes of ethics for engineers are matters for concern and action by the professional engineering societies and are not properly the province of the board under the present law.

The board, after due deliberation, has concluded that the promulgation of rules of professional conduct for professional engineers and land surveyors is within the board's authority and that action in this direction is proper, considering current developments in the engineering profession in the state. The board, therefore, has resolved to prepare and adopt such rules of professional conduct and to publish them in its regulations, "Information for Registration in Louisiana as Professional Engineer and Land Surveyor."

EXAMINATION FOR REGISTRATION

The board currently requires all applicants for registration to pass or to have already passed a one-day written examination in fundamental engineering sub-

jects except those applying on the basis of long established practice. A waiver of the examination in fundamental engineering subjects may be granted to a person who has many years of satisfactory engineering experience and who was graduated from an approved engineering curriculum prior to July 1, 1959.

The board presently requires a second one-day written examination in the principles and practice of the branch of engineering in which an applicant seeks registration for all applicants applying on the basis of experience plus examination; and will give such second one-day examination to any qualified applicant (including graduates of approved engineering curricula) requesting it.

The board, after due deliberation, has concluded that after June 30, 1978, each applicant for registration on the basis of graduation plus experience will also be required to take eight hours of written examination in the principles and practice of the branch of engineering in which he seeks registration. Adoption of this date permits those students who graduate from approved engineering curricula this year to become registered under the present rules. At the same time it will advance Louisiana toward requiring 16 hours of engineering examination (an eight-hour examination in fundamental engineering subjects and an eight-hour examination in the principles and practice of engineering) for all applicants. Most states have already adopted this as a requirement.

LONG ESTABLISHED PRACTICE

Registration under long established practice has been the least used provision for registration in the Louisiana law, 770 applications under this provision having been processed by the State Registration Board. In 23 years only 138 engineers have been registered under this provision. Suggestion has been made that this provision of the law could be phased out within a reasonable period of time to a definite cut-off date or that such registration might be made discretionary with the board by stating that the board "may" rather than "shall" register under this provision.

REGISTRATION BY BRANCHES

The present Louisiana statute provides for the registration of engineers by branches, with more than 97 percent of the engineers registered under Civil, Mechanical, Electrical, Petroleum, or Chemical engineering designations. Most states examine engineers by branches and indeed the national examinations which are coming into general use are classified by branches.

Unlike other licensed professions, it has been traditional for engineers to receive their first professional degrees in specialty areas. Various governmental units of Louisiana require such classification and have stated that they would continue to require engineers to be qualified in certain branches to perform certain types of work under their jurisdictions. There appear to be sound reasons to retain classification by branches at the present time. The board does not attempt to define the various branches of engineering nor to regulate the practice of individual engineers as between different branches. The board does, however, recognize the prerogative of other governmental agencies to specify the branches in which they require engineers to be proficient. It appears that any action to eliminate qualifications for registration by branches would encounter opposition from agencies or individuals acting in what they believe to be the public interest.

EXEMPTIONS

The present Louisiana law provides exemption from registration requirements for the following classes of work:

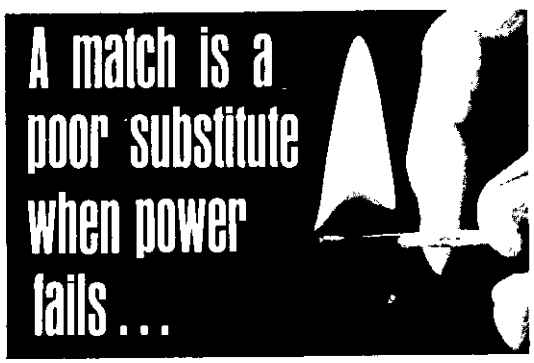
- Sub-professional work under supervision
- Residential and farm work
- Industrial operations (except C.E.'s and L.S.'s)
- Canals and Irrigation
- Surveying within own property boundaries
- Contracting or supervision of construction
- Federal Government employment
- REA Cooperative employment
- Public Utilities (except C.E.'s and L.S.'s)

Principal interest at the present time seems to lie in the exemption of engineers employed in industry and this matter may require further study by the profession. Most industries who responded to the board's inquiry advised that they strongly encouraged engineering registration, but some major industries did not want registration of their engineers to be made mandatory. Somewhat similar situations exist with respect to public utilities and REA cooperatives. The board recognizes that very careful negotiation would be required to obtain a consensus and action in these areas.

APPENDIX CLASSIFICATION OF COMMENTS

As of October 1, 1973 a total of 55 replies to the letters sent out by the Louisiana State Board of Registration for Professional Engineers and Land Surveyors were received from industry, government agencies, professional organizations and individuals. Of this number only 34 replies contained specific comments relative to the present law.

1. Law as presently written is satisfactory. 6
2. Favor change toward Model Law. 7
3. Requirements for registration should be more clearly specified by the Act. 1
4. Code of Ethics or Rules of Professional Conduct should be added. 3
5. Some review of ability should be required for renewal of registration. 1
6. Branch Registration should be maintained. 4
7. Branch competency should be specified by board. 2
8. Favor examination in branch areas. 1
9. Favor elimination or expansion of branches. 2
10. Opposed to removal of exemptions. 4
11. Retain reciprocal exemption extended to Civil Engineers and Architects in their respective laws. 1
12. A Land Surveyor should be a member of the board. 1
13. Civil Engineers should be allowed to practice Land Surveying. 1
14. Requirements for training of Land Surveyors should be strengthened. 1
15. Elimination of Long Established Practice Provision. 2
16. Opposed to registration of technologists. 1
17. Although exempt, registration of engineers employed by this industrial firm is required. 1
18. Although exempt, registration of engineers employed by industrial firms is encouraged. 11
19. Upgrade requirements to enhance registration by reciprocity. 4
20. Opposed to placing Board of Registration for Professional Engineers and Land Surveyors under a Central State Agency. 2
21. Favor removal of exemptions of engineers in industry from provisions of Act. 1
22. Favor 50 percent or more of registration board be engineers in private practice. 1
23. Favor change in terms of office of board members. 1



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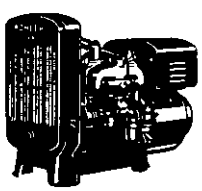

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For instance, how much will you have to pay for insurance?

Who replaces equipment lost in a fire, flood or other natural disaster? How much will it cost, and how soon can it be done?

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We've been around almost a hundred years, and we intend to be around for a long time to come.

We can send men and equipment into disaster areas and work around the clock to restore service—at no extra charge.

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You'll receive a professional survey of your communications needs without any extra charge or obligation.

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Sidney Poleynard Appointed to State Board

Sidney L. Poleynard

The Louisiana Secretary of State has informed the State Board of Registration for Professional Engineers and Land Surveyors that Governor Edwin W. Edwards has appointed Sidney L. Poleynard as a member of the board. Mr. Poleynard replaces Dr. F. W. zurBurg.

In accordance with the Registration Law, the Governor appoints board members for nine-year terms from a list of nominees recommended by the Louisiana Engineering Society.

Highway Department Assistant Director Sidney L. Poleynard is a veteran of more than 22 years' service with the department. A native of St. Martinville, he received his B.S. degree in Civil Engineering from LSU in 1947, after serving as a pilot with the U. S. Army Air Corps during World War II.

Poleynard joined the Highway Department in 1947 as an Engineer I. He resigned a year later to join a private firm, then was later recalled to active flying duty during the Korean War. He returned to the Highway Department in 1953, rising to the rank of bridge designer in 1959, and bridge design engineer in 1961.

He was promoted to the post of assistant chief location & design engineer in early 1969 and assumed the post of chief location & design engineer later during the year.

In September, 1971, Poleynard was promoted to assistant chief engineer, the position which he held at the time of his promotion to assistant director in August, 1973.

L.E.S. Awards Program

Nominations for the LES 1974 Honors and Awards are due at LES Headquarters prior to February 1, 1974.

A complete set of LES award material was mailed to chapter presidents, practice section chairmen and committee chairmen on October 17, 1973. Engineering recognition is very important and we hope each of you in the Society will take part in helping to recognize the engineers in your area who have done so much for the profession.

The 1974 Award winners will be honored at the LES Spring Meeting scheduled for Lafayette ruary 1, 1974.

Listed below are the 1973 Award recipients who will be requested to make the presentations of the 1974 Awards:

Elmer E. Shutts, P.E.—Andrew M. Lockett Medal for Civic Activities

George L. Heller, P.E.—Technological Medal for Technology Advancement

Clayton L. Nairne, P.E.—A. B. Patterson Medal for an Engineer in Management

Blaise M. Carriere, P.E.—Louisiana Engineer Award of Merit for Young Engineer

Leo M. Odom, P.E.—Charles M. Kerr Public Relations Award

Roger W. Richardson, P.E.—Leo M. Odom Award for Professional Services

LES Legislative Program - 1974

In its continuing effort to improve the professional status of engineers in the state of Louisiana, the Louisiana Engineering Society is currently undertaking the formulation of a Legislative Program to be presented to the 1974 session of the Louisiana Legislature. The State Board of Directors of LES has not at this time determined the final content of that program. It is the purpose of this article to inform all registered engineers of the state of the tentative program the board presently has under consideration.

It is the earnest desire of the board that each engineer study these proposals and submit comments, suggestions, and recommendations to the board through its Legislative Committee prior to January 7, 1974. These should be addressed to:

Arthur A. DeFraites, Jr.
Chairman
Legislative Committee
P. O. Box 327
Houma, Louisiana 70360

The final determination of the program content will be made at the January board meeting and will be published in the February issue of the **Louisiana Engineer.**

Four proposals are being considered as revisions to the existing Registration Law and two proposals as changes to the Business Corporation Law. The four changes to the Registration Law address problems considered in previous legislative efforts. However, the approach and scope of each of these is entirely different and should be considered on its own merit.

PROPOSED CHANGES TO ACT 73 OF 1950 AS AMENDED AND COMMENTARY

1. A proposed revision to the Registration Law as it applies to a long established practice.

Commentary

The problem with mandatory registration on a basis of long established practice is that a person so registered may or may not have achieved the competence necessary to practice engineering and thus, "safeguard life, health and property, and to promote the public welfare." On the other hand, there are occasions in which registration through this means is wholly justifiable.

It is felt that the law as it is presently written, does not allow the Board of Registration any latitude for judging the qualifications of the individual. By changing the mandatory provision from "shall" to a promising provision of "may," the judgment of the board in particular instances could be administered.

Present Law:

Section 12 (37:69), Paragraph A.(1)(c), provides:

"The board **shall** register an applicant without written examination, who presents the written recommendations of five or more professional engineers registered under this chapter, and, who submits proof that he has had at least twenty years of successful practice, satisfactory to the board, not less than twelve years of which shall have been in the responsible charge of important engineering work."

Proposed Revision:

The third word of this paragraph be changed from "shall" to "may."

2. A proposed revision to the Registration Law retaining the industry exemptions as they presently exist except for the engineer(s) in charge of responsible professional service.

Commentary

While industry has proposed numerous legitimate reasons why all of their employees need not be registered, due to the specialization of their work, it is inconsistent with the intent of the Registration Law that absolutely no one be legally responsible for engineering work performed in industry. Millions of dollars are spent annually by industry in Louisiana, most of which involves special knowledge of mathematical and physical science, the principles and methods of engineering analysis and design, professional education and practical experience. Certainly industry cannot function without being concerned or involved in the public welfare or in the safeguarding of life, health or property.

For this reason, although every person in industry performing engineering tasks may not need to be registered, certainly the engineer in charge of the responsible professional service should be.

One argument proposed by industry is that registration by branches would require an engineer in each discipline to impress his seal on all industry work. To assist industry in this matter a third revision is proposed to the Registration Law which will allow the registration of engineers as "Professional Engineers." Your attention is directed to the comments on this proposed revision for a better understanding of the detailed aspects of this subject.

Present Law:

Section 18 (37:698), Paragraph C., provides:

"This act shall not apply to affect, interfere with, or in anywise regulate employees of a person, firm, or corporation engaged in industrial operations, including, but not limited to, producing, processing, manufacturing, transmission, distribution or transportation, when performing services in the course and scope of the business of said person, firm or corporation, or affiliates thereof; provided that this exemption does not apply to the practice of Civil Engineering or Land Surveying."

Proposed Revision:

The last part of the above section would be changed to read as follows:

". . . provided that this exemption does not apply to the engineer(s) in charge of responsible professional service or to the practice of Civil Engineering or Land Surveying."

3. A proposed revision to the Registration Law providing for the registration of all engineers as Professional Engineers retaining the identification of the fields of competence of practice.

Commentary

In recent years many engineers in the state of Louisiana have indicated a preference to be registered as "Professional Engineers" rather than by branches. This practice would tend to improve the professional status of engineers by relating them to the medical and legal professions. It is recognized, however, that as fields of competence of practice are established in both the medical and legal professions, the field of competence of practice should continue to be recognized in the engineering profession. In order to achieve this improvement in the professional status of engineering, it is proposed that all engineers be registered as "Professional Engineers" with the field or fields of competency of practice designated by the State Board of Registration and published annually in the Roster of Engineers.

The mechanism of accomplishing this change would require a modification of the existing Registration Law concerning the issuance of the certificate of registration and the use of the engineering seal. It is proposed that newly issued certificates of registration state only "Professional Engineer." Any presently registered engineer preferring a new certificate of registration, stating only "Professional Engineer," may obtain one, although the existing one would suffice.

It is proposed that the design of the acceptable seals be determined by the State Board of Registration with the authority to approve the design of more than one seal. It would be recommended to the State Board of Registration that two seals be approved for future use and that regis-

tered engineers could obtain and use either or both seals.

The first design recommended would be the same as the existing seals. This would allow engineers to continue using their present seals without applying for a new one. The use of this seal would also continue to meet the requirements of many municipal building codes which require the seal of a Registered Professional Engineer practicing in a particular discipline.

The second design would state only "Professional Engineer" and the applicant's registration number. This seal would be applicable to all engineers. To determine the particular field of competence it would be necessary to refer to the annual Roster of Engineers published by the State Board of Registration. The use of this seal would greatly facilitate the registration of the engineer(s) in charge of responsible professional service in industry. The use of this seal would eliminate the requirement of multiple seals on industrial work. However, the legal responsibility for engineering work in industry will be established.

Present Law:

Section 12 (37:692), Paragraph A., provides:

"The board shall register each applicant in the branch or branches of engineering or as a Land Surveyor as specified herein, which may be requested by the applicant, when, in the opinion of the board, and after the applicant has met the requirements of this chapter, that applicant is proficient and qualified to practice as such.

"Professional engineers will be issued certificates of registration in one or more of the following branches: agricultural, chemical, civil, electrical, industrial, mechanical, metallurgical, mining and petroleum engineering."

Proposed Revision:

These two paragraphs would read as follows:

"The board shall register each applicant as a Professional Engineer or as a Land Surveyor as specified herein, which may be requested by the applicant, when, in the opinion of the board, and after the applicant has met the requirements of this chapter, that applicant is proficient and qualified to practice as such.

"The board shall determine the proficiency and qualifications of each applicant for registration as a Professional Engineer in one or more of the following branches: agricultural, chemical, civil, electrical, industrial, mechanical, metallurgical, mining and petroleum engineering."

Present Law:

Section 15 (37:695) reads as follows:

"The board shall issue a certificate of registration in the branch or branches of engineering in which the applicant has qualified upon payment of the registration fee as provided for in this chapter, to any applicant who, in the opinion of the board, has satisfactorily met all the requirements of this chapter. In the case of registered land surveyor, the certificates shall authorize the practice of land surveying. Certificates of registration shall show the full name of the registrant, shall have a serial number, and shall be signed by the chairman and the secretary of the board under the seal of the board.

"The issuance of a certificate of registration by this board shall be prima facie evidence that the person named therein is entitled to all the rights and privileges of a registered professional engineer, or a registered land surveyor, while the said certificate remains unrevoked or unexpired.

"Each registrant hereunder may upon registration obtain a seal, of a design authorized by the board, bearing the registrant's name and the legend Registered Professional Engineer in _____ (insert the branch of engineering in which the registrant is registered) or Registered Land Surveyor. All registrants engaged in the practice of engineering or land surveying either in a private professional practice or an employee of a corporation, company, partnership, individual or other private employer shall impress with his official seal all plans, specifications, plats, maps, studies, reports or other drawings or documents which he shall prepare or which shall be prepared under his supervisions.

"All registrants who are employed by the State of Louisiana or some political subdivision thereof, or by a parish, city, municipality or any department, branch or agency of the United States government or any other public corporation, body or agency, may, if they wish, impress their seal upon all plans, specifications, plats, studies, reports or other drawings or documents which they prepare in the practice of engineering or land surveying, but such impress is not mandatory." (Act 1950, No. 73, Sec. 15; amended by Acts 1970, No. 685, Sec. 1.)

Proposed Revision:

In lieu of the present Section 15 the following revised Section 15 is proposed:

"The board shall issue to any applicant, who, in the opinion of the board, has met the requirements of this Act, a certificate of registration giving the registrant proper authority to practice his profession in this state. The certificate of registration for a Professional Engineer shall carry the designation "Professional Engineer," and for a Land Surveyor, "Land Surveyor." It shall give the full name of the registrant with his serial number and shall be signed by the chairman and the secretary under the seal of the board.

"The issuance of a certificate of registration by this board shall be prima facie evidence that the person named therein is entitled to all the rights and privileges of a registered Professional Engineer, or a registered Land Surveyor, while the said certificate remains unrevoked or unexpired.

"Each registrant hereunder may upon registration obtain a seal(s), of a design authorized by the board. All registrants engaged in the practice of engineering or land surveying either in a private professional practice or as an employee of a corporation company, partnership, individual or other private employer shall impress with his official seal all plans, specifications, plants, maps, studies, reports or other drawings or documents which he shall prepare or which shall be prepared under his supervision.

"All registrants who are employed by the State of Louisiana or some political subdivision thereof, or by a parish, city, municipality or any department, branch or agency of the United States government or any other public corporation, body or agency, may, if they wish impress their seal upon all plans, specifications, plats, maps, studies, reports or other drawings or documents which they prepare in the practice of engineering or land surveying, but such impress is not mandatory."

4. A proposed revision of the Registration Law allowing for an increase in the registration fee.

Commentary

The existing initial registration fees and renewal fees were established in the Registration Law in 1950. Everyone is aware of the increased cost of operating and administering all business since 1950. Additionally, the increased requirements of registration, including the provisions for testing, have imposed considerable increases in the operating cost of the State Board of Registration. It is for these reasons that an increase in the maximum allowed the State Board of Registration for the registration of applicants needs to be modified. The State Board cannot continue to provide the present-day services required under 1950 financial provisions.

(Continued on Page 19)

Cantor vs. The Koehring Co.- The Engineer's Viewpoint

Wood Brown III

On September 24, 1973, the Louisiana Supreme Court, over one dissent, handed down an opinion which is a landmark expression of law of some consequence to engineers, especially those who function as corporate executives or employees.

In order to understand the opinion from the view of the liability of the corporate employee, it is necessary to sketch in some background concerning the relationship which a corporate employer owes to its employees and which one employee (including an executive officer or supervisor) owes to other employees. In some respects in this article these relationships will be oversimplified to some extent but only in order to get to the main problem.

In the second decade of this century, Louisiana adopted a workmen's compensation statute which, with some amendments, is still in force today. Prior to that time, the injured workman had no rights if injured on the job unless there was positive neglect on the part of someone, which caused his injury. Of course, where he could prevail on the question of fault, his recovery was relatively substantial. The passage of the compensation statute was essentially a socio-economic trade.

The worker gave up the right of a substantial recovery under the limited circumstances where he could prove fault and negate his own contributory negligence in return for a rather limited recovery which was guaranteed to him regardless of fault on the part of anyone, and notwithstanding the fact that the accident and injury might have been the result of negligence on the part of the injured employee.

In other words, upon the passage of this compensation act, an injured employee had no right to recover from his employer for the negligence of the latter, but, regardless of the circumstances of the injury, he was guaranteed a weekly benefit during the period of his disability.[1] His right to sue "third persons" for damages rising out of the injury was reserved to him and this reservation has persisted to this day and is preserved in the present statute.[2]

In 1959, in a case arising in Baton Rouge,[3] the category of "third persons" was extended to corporate officers and executives and, for that matter, to co-employees who might be proved to have been guilty of fault in the causation of injury to a worker. The compensation act's immunity given the corporate employer did not protect these potential defendants but, to the contrary, ordinary fault standards applied; in other words, there had to be actionable negligence on the part of the defendant and a freedom from contributory negligence on the part of the plaintiff.

The result in the *Adams* case lay unnoticed for some period of time, and there was little activity or litigation which took advantage of the door which had been opened thereby. Then, about 1964 or 1965, and continuing up to the present, literally thousands of suits were filed with literally dozens of them getting to the appellate courts where they were reported and their decisions read by all.

There were a number of tangential problems which arose and which were dealt with by the Courts which are irrelevant to this discussion. What is important to this problem is the discussion and resultant dispute between the four appellate circuits as to the nature of the duty actually owed by the corporate executive to other employees of the corporation.

One line of thought was that there were certain duties which the corporate executive owed to the corporate employer alone for the breach of which the injured employee could not complain and a separate type of duty which he owed to that employee. Another line of thought was that any ordinary negligence on the part of the corporate executive or corporate employee could visit liability upon him for damages caused by that negligence.

As is easily seen, there is no way to reconcile these two views and the corollaries which developed from them. The result was that an employee injured in one part of the state got a completely different result from one injured somewhere else, depending on which appellate circuit he happened to be in when his accident happened, or, even more unfairly, where his suit happened to have been filed.

It is in this context that the *Cantor* case arose to the Supreme Court. It is a significant case from an engineer's point of view because the corporate employees who were found to have been guilty of negligence were engineers themselves. The facts of the case are relatively simple.

Cantor was a rigger foreman in charge of a crew which was accomplishing the lift of a large chemical still or "vessel" in connection with a construction project. This still, stripped, weighed 92,500 pounds. The information supplied by the engineers was that this was the weight of the lift and the lift was to be accomplished with a 50-ton crane. However, after initial manufacture, certain appurtenances had been installed in, on and around the vessel which added about 14,000 pounds to the total weight. This fact was not disclosed to the lift crew.

In the lifting operation, excessive strain was placed on the crane and the pendant arm link broke and the boom collapsed. In the accident, Cantor was killed and his widow sued for damages as a result of his death. The question regarding the negligence of the engineers was whether the individual defen-

dants knew of the additional weight and, if they did, whether they had an obligation to disclose it, or, in one case, to discover it, and, finally, to whom this duty ran or, more particularly, whether this duty ran to the decedent Cantor.

Returning to the background discussion set out above, the corporate employer of the engineers was immune from suit for damages under the compensation act. Therefore, in order to recover something in addition to the benefits she was entitled to under the compensation act, it was necessary for Mrs. Cantor to find some "third person" to sue as a defendant and these defendants turned out to be the engineering supervisory personnel involved with the project.

The question of engineering dereliction vel non was rather easy of determination. These persons had the duty of approving the work being performed and coordinating it in connection with the scheduling of heavy machinery needed for the various phases of the work. They also had the duty of furnishing drawings and specifications in connection with the use of this heavy machinery. Within this, it was, of course, the duty of these engineers to furnish the lifting personnel the weight of the equipment to be lifted. This weight, as furnished to the lift crew, was that the vessel to be lifted was 46 tons. The lift crew was not told that the weight was nearly 53 tons, as was actually the fact. As a matter of fact, no attempt to calculate the actual weight of the "vessel plus appurtenances" was made until after the accident.

The above recitation of fact indicates that an independent engineering consultant in the position of these corporate employees would have been hard put to explain this failure or to justify his failure to calculate the additional weight preparatory to the lift and the absence of accurate information in the hands of the lift crew prior to the accomplishment of the lift.

The problem presented in this case was that there was no independent engineering consultant in the picture. The engineering responsibility had been given to corporate employees and, of course, there is nothing really unusual about this situation. The question arose as to whether these corporate employees had personal responsibility for this dereliction, and whether this responsibility ran to an injured or dead co-employee. The Supreme Court held that such responsibility existed. The Court listed four criteria which are to be considered in cases like this.

First, the Court stated that every employer owes to his employees a duty to furnish a safe place to work.

Secondly, under normal circumstances, this duty is usually delegated to some executive or supervisory employee. In suits of this sort, it is this supervisory employee who is sought to be made defendant and from whom recovery of damages is demanded.

Thirdly, there has to be a breach of this duty by the supervisory or executive employee to whom the duty has been delegated. In the words of the Court "The breach occurs when the defendant has failed to discharge the obligation with the degree of care required by ordinary prudence under the same or similar circumstances—" This includes failing to act upon actual knowledge of the danger *or* failing to use ordinary care in the discovery of the danger in order to take steps to avoid it.

The fourth element in the court's discussion was the limitation that the supervisory employee could not be responsible simply because of his position, or because he had administrative responsibility for the performance of a certain function. The Court made a specific requirement of some specific personal duty to the injured employee-claimant. In those cases where the supervisory employee-executive had delegated his responsibility to responsible and competent subordinates, he would not be liable for the breach of duty in the absence of personal knowledge of the danger which ultimately caused the damage.

Within these parameters, four certain engineering supervisors were found to have been liable for the damages resulting from Cantor's death. The superintendent of engineering ordered the lift to proceed because the project was behind schedule, depriving further discussion of the additional weight problem and depriving the opportunity for the utilization of heavier equipment or, perhaps a shorter boom which might have prevented the accident. The construction engineer attended a conference concerning the lift about an hour beforehand, and, despite knowledge of the additional weight involved over and above the drawings, permitted the lift to proceed despite his responsibility to assure the safety of the lift.

The project or field engineer failed to supply the information concerning the additional weight to the lift crew although he knew of the additional weight, although, possibly, not of the exact amount thereof. The field engineer had a responsibility to be sure that the correct weight had been determined and provided and failed to take proper steps to determine this.

On the other hand, the plant construction engineer, the overall supervisor, was exonerated because he had delegated his precise responsibility for this particular lift to competent subordinates and there was no

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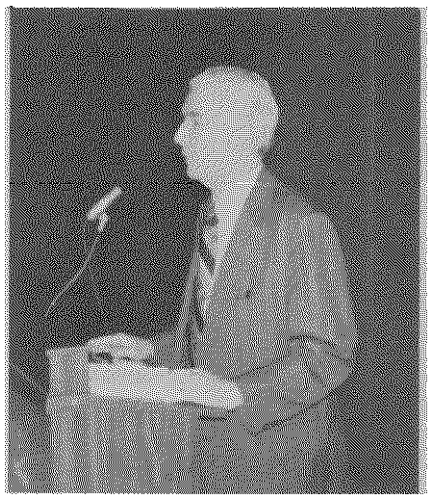
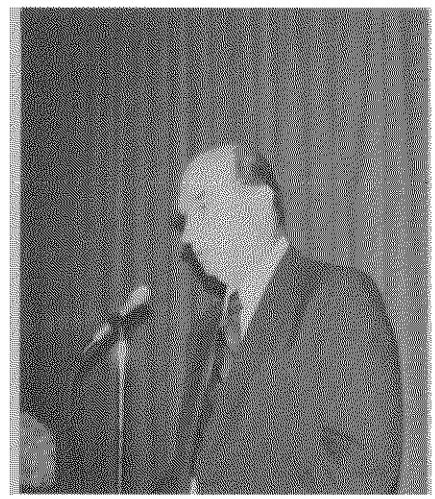
LES Hosts NSPE Regional Meeting



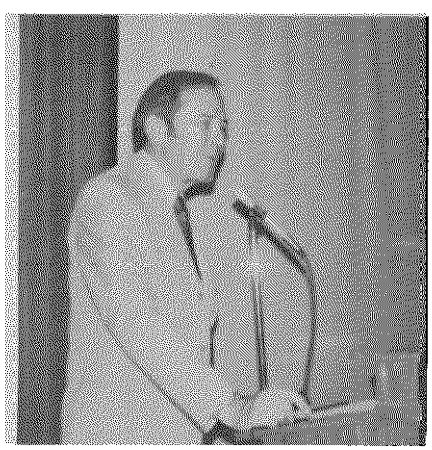
NSPE-PEI Chairman Horace Lehneis addressed the PEI group on the subject "What NSPE is Doing for the Individual PEI Member."



General Roy T. Sessums, NCEE president, talked to delegates on the subject of "Engineering Registration—Current Posture" at the Friday noon luncheon.

Col. Donald G. Weinert, district engineer, Little Rock, threw some light on the topic "Management in the Professional Engineering Society." Concentrating on his talk are, left to right, LES President J. J. Thigpen and Del A. Schmand.

A beaming Waldemar Nelson, chairman of the Southwest Region meeting, greets Robert Jarvis, vice chairman of PEI, North Central Region.



George R. Works, New Orleans, breaks into a smile as he addresses a crowd on LOOP, Inc.

A highlight of the Regional Banquet was a talk on "NSPE Unity and Youth" by Robert L. Reitinger, president NSPE.

LES HOSTS NSPE SOUTHWESTERN REGIONAL MEETING

The NSPE Southwestern Regional meeting was attended by representatives from all states of the region except Wyoming and the Canal Zone. The Louisiana Engineering Society hosted the event. Waldemar Nelson, P.E., served as general chairman assisted by Jim Janssen, P.E., co-chairman. All five practice divisions held meetings on Thursday, October 11.

PROFESSIONAL ENGINEERS IN INDUSTRY

The Professional Engineers in Industry (PEI) from the Southwest had a chance to meet Hal Rosengren when he delivered his "Report from Our New Man in Washington." He was followed by Horace Lehneis, P.E., chairman NSPE-PEI, who spoke on the direct benefits of NSPE to the individual PEI.

The Professional Engineers in Government (PEG) delegates joined PEI for two sessions: Don Ledbetter, P.E., immediate past chairman NSPE-PEI, speaking on the "Guidelines," and L. D. Chipman, P.E., PEI consultant,

Mrs. John Vogt, standing at right, reports to the Auxiliary group on LES Womens Auxiliary activities. Mrs. Philip Owens, chairman of Southwestern Region Ladies Auxiliary, standing at left, looks on.

NSPE General Counsel Milton Lunch emphasizes a point to NSPE President Robert Reitinger, seated right.

on organizing and conducting a workshop on employee-employer relations. Chipman also participated in a panel on the registration exemption for professional engineers in industry. This panel was moderated by Robert W. Jarvis, P.E., North Central vice-chairman, and a past member of the Minnesota Registration Board.

Other panelists were A. M. Moore, P.E., Central Louisiana Electric Company and a member of the Louisiana Registration Board, DeWitt Morris, personnel director for Freeport Sulphur Company, and A. L. Vitter, P.E., chief engineer for Production Management Staff of Chevron Oil Company.

The discussion covered various facets of registration including origin and extent of the exemption, proposed changes, methods of changing, effects of changes versus status quo, effect of nuclear power plants and of consumer protection movement, comparison of work performed by private practitioners versus work by industry-employed engineers and other aspects. The opinions expressed varied considerably and the discussion, scheduled for one and a half hours went on for three hours when the group broke for an attitude adjustment session before dinner.

PROFESSIONAL ENGINEERS IN GOVERNMENT

Ernest Hedgcoth, P.E., of Texas reported on the Board of Governors meeting in Chicago in July. The items which seemed to be of most interest were tax exemptions on retirement contributions and the percentage of NSPE membership eligible for PEG.

Richard L. Lanford, P.E., presented the private practice point of view in connection with the panel on In-House Engineering, while Frank Heroy, P.E., outlined government needs. It was agreed that we should and can have integrated participation of both groups to get the best engineering job done.

Oliver Buhls, P.E., assistant chief construction engineer for the Louisiana Highway Department, described the problem of collective bargaining on professional employees in that department and emphasized that unions need the dues checkoff system to prosper. Nick Wright of the NSPE staff then outlined how a strong professional affiliate organization might have been able to forestall this situation, but noted that state societies are reluctant to enter into such activities because of collective bargaining overtones.

The PEG group viewed the film "Gulf Intra-Coastal Waterway" furnished courtesy of the Corps of Engineers and Chairman Waldemar Nelson. The film "Rapid Transit Through the Panama Canal" furnished by Jean Burns, P.E., president of the Canal Zone Society, was shown to the convention on Saturday morning.

PROFESSIONAL ENGINEERS IN CONSTRUCTION

The second Southwest Regional meeting of the Professional Engineers in Construction (PEC) was attended by representatives from New Mexico, Texas, Louisiana, Colorado and Georgia. Discussions during the one-day session included the use and distribution of the new PEG brochure, newsletter and the Guidelines to Professional Employment for Engineers and Scientists. George Hightower, P.E., national chairman of PEC, addressed the meeting on the progress to date on the five newly formed PEC committees: education, registration, turnkey negotiated contracts, PEC rules of government and operation, and awards. These committees will form the backbone of future PEC action.

The Texas section of PEC reported that it had successfully assisted TSPE in the preparation and passage of a new Code for Responsibility for Professional Engineers in Texas. Good liaison communication and hard work enabled the Texas society to obtain this new code which is both meaningful and workable.

Professor Richard A. Smith addressed the group in the afternoon session. The title of his talk was "Construction Technology at Louisiana Tech—Filling a Need in the Construction Industry," and it illustrated how Tech has attempted to round out the undergraduate program with a curriculum aimed at the practical side of the construction industry. He reported on the success of the program and requested input from PEC to assist in updating the curriculum.

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE

PEPP split its Southwest Regional meeting into two distinct segments, the first dealing with current PEPP activities and programs, and the second, dealing with a specific problem area in an educational manner.

Chairman Everett Thompson, P.E., took some time to analyze several aspects of PEPP activities. He pinpointed professional employment relations and the necessity for good employment guidelines within the consulting firm. He cited PEPP's conference schedule which included seven seminars on quality control, two on public relations and marketing, and four on solid waste management.

Thompson pointed to the work of the Contract Documents Committee, the Professional Liability Insurance Committee, the Professional Employment Practices Committee and the Business Management and Firm Marketing Committees. He also reviewed the work of two ad hoc committees, one working with EPA and the other with the Farmers Home Administration.

Past Chairman Robert L. Nichols, P.E., then reviewed the work of the National Council of Professional Firms in Free Enterprise, emphasizing the major objectives relating to government competition from nonprofit firms and the revision of tax laws as related to services provided by nonprofit firms. Nichols also discussed recent actions of the Committee on Federal Procurement of A/E Services (COFPAES) stating that COFPAES now faces a task of preserving the victory won via the Brooks Bill a year ago.

Milton F. Lunch, NSPE general counsel, reviewed legislative matters of particular interest to PEPP and gave a status report on developments related to engineers and political involvement in Maryland and other states. He also noted that NSPE's contest with the Department of Justice was virtually unchanged from his report some months ago.

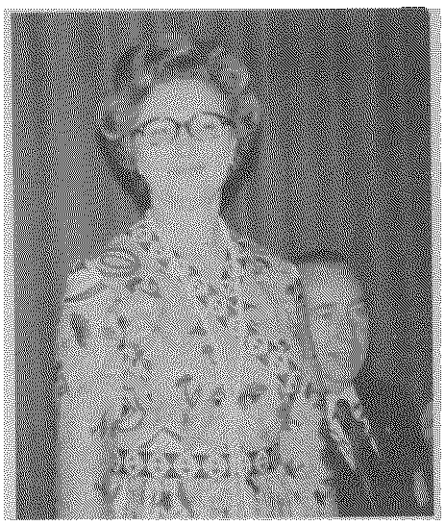
During the afternoon portion of the meeting, Gerald F. Farquhar, consulting attorney to the Office for Professional Liability Research of Victor O. Schinnerer & Co., Inc., and Paul Genecki, director of the Office, gave an analysis of factors contributing to professional liability insurance losses. They isolated specific practices and procedures which firms might implement to help reduce the incident of error or omission.

PROFESSIONAL ENGINEERS IN EDUCATION

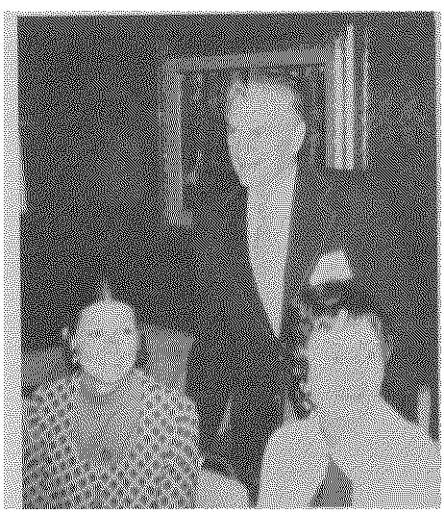
The Professional Engineers in Education (PEE) held their meeting for a half day and a lively roundtable discussion brought out many ideas for action and further study. Among the many topics discussed were the role of PEE in NSPE, recent developments in collective bargaining in the colleges and universities, the professional engineering school concept, continuing education and NSPE student chapter development.

LUNCHEON

Gary Works, Loop Inc., New Orleans, gave an interesting and timely presentation on the Louisiana Offshore Oil Port project at the all-practice divisions luncheon.



Mrs. Clarence Jones, president of the NSPE Ladies Auxiliary, Augusta, Ga., was an honored guest at the Southwestern Ladies Auxiliary meeting.



The camera caught this trio at the registration desk. Left to right are Prudence Landry, R. C. "Doc" Spears, both from the Baton Rouge LES office, and Mary Sudduth, from New Orleans.

Patty Y. Yates of New Orleans, LES's one lady engineer, attended the meeting.

In the midst of expanding energy crisis, deep water ports are needed to handle the 21st century vessels, the majority of which are oil tankers. Deep water terminals are needed at strategic locations near major refinery areas to permit the direct movement of petroleum from U.S. terminals to refineries. One site selected for a terminal is near the end of the former Lafourche Delta of the Mississippi River.

Works' address was featured in the October issue of the LOUISIANA ENGINEER magazine.

GENERAL MEETING

The general meeting on Friday was opened by D. A. Schmand, P.E., vice president NSPE, Southwestern Region. He introduced Dr. J. J. Thigpen, P.E., president of LES, and the Honorable James E. Fitzmorris, lieutenant governor of Louisiana, who welcomed the representatives on behalf of the Louisiana Engineering Society and the State of Louisiana.

Col. Donald G. Weinert, P.E., district engineer, Little Rock District, Corps of Engineers gave a comprehensive talk on managing the professional engineering society. Mrs. Ennis Bogle, executive director of the Texas Society spoke on methods to get and keep members which had been successful in her home state. W. LeRoy Culbertson, P.E., from Oklahoma and former chairman of the NSPE Guidance Committee, discussed the implementation of a cooperative ASEE-ECPD-NSPE approach to guidance and the various guidance efforts in many states.

Ira Oliver, executive director, Oklahoma Society, explained the role of the executive director, who must be well versed in accounting, public relations, personnel, law and have plenty of "horse sense" to be truly effective. Del Schmand, P.E., chairman NSPE budget committee, presented the unpopular topic "Society Finances."

The Friday luncheon group was treated to an exhibition of the U.S. Coast Guard Precision Drill Team from New Orleans. General Roy T. Sessums, P.E., president NCEE, presented an interesting talk on the current posture of engineering registration.

The Order of the Engineering ceremony was held and 14 engineers took the obligation and were presented rings by Roger W. Richardson, P.E., dean, College of Engineering, LSU. Garth Kennedy, P.E., past president Oklahoma Society of Professional Engineers organized and implemented this most impressive ceremoney.

J. Caldwell Wilson, P.E., past president NSPE, moderated a panel discussion on working with other engineering societies. The national program, state activities and chapter involvement were headed by panelists Gayle N. Wright, staff director, Economic and Liaison Activities NSPE; J. A. Westman, P.E., past president New Mexico Society of Professional Engineers; and J. R. Birdwell, P.E., national director NSPE respectively. A discussion period evolved with many ideas expressed on how to promote inter-society cooperation and communications on professional, technical, social and other matters of mutual concern.

Waldemar Nelson, P.E., NSPE national director, moderated a panel discussion on meeting the engineering challenges. Pension improvement activities were covered by Phillip R. Owens, P.E., chairman, NSPE Pension Improvement Committee. Gayle N. Wright, NSPE, discussed the economic guidelines and Milton Lunch, general counsel NSPE, summed up with the legislative program.

The Southwestern Regional banquet featured Robert Reitinger, P.E., president of NSPE who spoke on "NSPE-Unity and Youth."

Considerable discussion followed each presentation and it is believed that those in attendance came away better informed on overall professional society operations.

Next year's Regional meeting will be held in Little Rock, Arkansas at the Camelot Inn.

LADIES' AUXILIARY

A well attended Auxiliary meeting was held on Friday morning at 10:00 a.m. Mrs. Phillip Owens, vice-chairman Southwestern region, introduced the national president of the Ladies' Advisory Auxiliary Committee, Mrs. Eunice Jones. Mrs. Jones spoke about the goals of LAAC and requested all to be enthusiastic, full of optimism and dedication in their auxiliary work.

All states of the region were represented by auxiliary members with the exception of Wyoming.

True hospitality was afforded by the ladies' group. Mrs. Waldemar Nelson and Mrs. James Janssen served as co-chairmen for the ladies' entertainment committee. The ladies enjoyed breakfast at Brennan's, a walking tour of the French Quarter, a tour of Garden District Homes, the cocktail hour and banquet, and off-duty hours with their husbands. The ladies' hospitality committee from New Orleans did an outstanding job. Their dedication, hard work and beauty added greatly to the success of the overall meeting.

Are You A Concerned Engineer Who . . .

■ Wants to participate in organized programs at local, state, and national levels to evaluate and help shape legislation relating to the practice of engineering in all the separate disciplines and in areas of employment extending through industry, government, education, and private practice? ☐ YES ☐ NO

■ Wants definite control by the engineering profession of any efforts to improve the economic status of engineers, and insists that any such activities be conducted along strictly professional lines? ☐ YES ☐ NO

■ Wants to insure that the practice of engineering be carried out in accordance with the highest ethical standards and in a manner in which the integrity of the engineer would be always protected? ☐ YES ☐ NO

■ Wants to be part of the feedback into whatever the profession is going to do about the economic position of the employed engineer, including salaries, pension vesting, patent rights, employment practices, fringe benefits . . . in short, the whole economic package? ☐ YES ☐ NO

■ Wants a specific role and participation in relevant social, environmental, and educational issues so that inputs from the technological community can balance enthusiastic but often technically uninformed opinions on conservation, job training, housing, and other such programs? ☐ YES ☐ NO

■ Wants a profession-wide operational framework for developing and maintaining an effective public relations program which will educate and inform the general public about the scope and significance of engineering's contribution to the contemporary life and culture? ☐ YES ☐ NO

If your box score adds up to "yes" answers, why not look into participation in LES/NSPE? There is a need for togetherness. Think about it. Send in the form below. We'll show you what a concerned engineer can do when he works with his colleagues.

MEMBERSHIP DUES FOR 1974

	LES	NSPE
Member	$25	$25
Junior Member	17	12.50
Affiliate Member	28	25
Privileged Member	5	12.50
Student Member	1	2.50
Non-resident Member	14	25
Non-resident Junior Member	10	12.50
Non-resident Affiliate Member	16	25

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   Branch _____ **State** _____ **Reg. No.** _____
7. **Are you now affiliated with NSPE? Yes** ☐ **No** ☐ **If yes, what state?** _____
8. **If no, do you want to become a member of NSPE? Yes** ☐ **No** ☐
9. **Have you ever been a member of LES? Yes** ☐ **No** ☐ **If yes, you must also complete an "Application for Reinstatement."**
10. **Birth date** _____ **Age** _____ **Wife's first name** _____
11. **Education** _____ (School / Date Graduated / Degree Obtained)
12. **Major engineering discipline** _____

Complete all applicable sections and mail to: LOUISIANA ENGINEERING SOCIETY
P. O. Box 2683
723 Main Street
Baton Rouge, Louisiana 70821

Engineering Societies

This list of the engineering societies and related groups in Louisiana is included as a convenience to our members and others and to promote inter-society cooperation and communications on professional, technical, social and other matters of mutual concern. Organizations wishing to be listed in future listings may contact the LES office: P. O. Box 2683, Baton Rouge, La. 70821.

American Institute of Aeronautics and Astronautics
Chairman, New Orleans Section
John Christopher
Box 29200
New Orleans, La. 70129

American Institute of Chemical Engineers
New Orleans Section
Charles Ray Cutler
2315 Lemon
Metairie, La. 70002

American Institute of Industrial Engineers
President, New Orleans Chapter
Charles E. Alexander
Rt. 3, Box 160
Picayune, Miss. 39466

American Society of Agricultural Engineers
Chairman, Louisiana Section
Charles Severance
Louisiana Coop. Ext. Service
Knapp Hall, L.S.U.
Baton Rouge, La. 70803

Chairman, Baton Rouge Section
Gene Baker
Rt. 2, Box 494C
Denham Springs, La. 70726

American Society of Civil Engineers
President, Louisiana
John F. Grosch III 9/74
P.O. Box 66317
Baton Rouge, La. 70806

President, Shreveport Section
Robert R. Aillet
1055 Louisiana Ave.
Shreveport, La. 71101

President, New Orleans Branch
Blaise M. Carriere 9/74
6628 General Diaz St.
New Orleans, La. 70124

American Society of Mechanical Engineers
Chairman, New Orleans Section
Dr. D. C. Hamilton, Jr.
Mechanical Engineering Dept.
School of Engineering
Tulane University
New Orleans, La. 70118

Chairman, Baton Rouge Section
E. Wayne Albritton
Profesional Lighting
9165 Baker Drive
Baton Rouge, La. 70809

Professional Liaison, Baton Rouge Sect
Ted C. Heil
Dyer & Moody, Inc.
P. O. Box 368
Baker, La. 70714

American Society of Safety Engineers
President, New Orleans Chapter
Lawrence N. Hunsinger, C.S.P. 7/74
Engineers Club of New Orleans
546 Carondelet St.
New Orleans, La. 70130

Consulting Engineers Council of Louisiana, Inc.
President
Frank H. Walk
762 Baronne St.
New Orleans, La. 70113

President, Baton Rouge Chapter
Easton Stewart
Easton Stewart & Associates
2124 Wooddale Blvd.
Baton Rouge, La. 70806

President, New Orleans Chapter
David Hunter
Linfield & Hunter
1515 Melpomene St.
New Orleans, La. 70130

President, Shreveport Chapter
Robert K. Hawkins
3346 Youree Dr.
Shreveport, La. 71105

President, Lafayette Chapter
Terry Gaudet
Richard & Gaudet
225 Luke Dr.
Lafayette, La. 70501

Instrument Society of America
President, New Orleans Section
Clark Mallard 9/74
P. O. Box 705
Harvey, La. 70058

Society of American Military Engineers
President
Col. Edmond L. Faust, USA (Ret.)
2514 State St.
New Orleans, La. 70118

Society of Automotive Engineers
Chairman, New Orleans Group
Charles Nielsen, Jr.
c/o Chrysler Corp. Space Division
P. O. Box 29200
New Orleans, La. 70129

Society of Petroleum Engineers of AIME
Chairman, South Louisiana Section
Edwin L. Wilbanks
Union Oil Co. of California
5002 Highway 90 E
Morgan City, La. 70380

Chairman, Delta Section
W. W. Christian
Bank of New Orleans Bldg.
1010 Common St., Suite 1000
New Orleans, La. 70112

Chairman, Evangeline Section
Daniel E. Neumann 7/74
Coiled Tubing, Inc.
226 Sunny Lane
Lafayette, La. 70501

Chairman, Lou-Ark Section
Cecil E. Lohn
Box 1120
Shreveport, La. 71163

Chairman, Spindletop Section
Dan Riley 7/74
Continental Oil Co.
P. O. Box 5157
Lake Charles, La. 70601

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WALLACE & TIERNAN
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Chemical Pumps &
Rotameters

Potpourri

Hurstell Talks on Fuel Crisis

Malcolm L. Hurstell, P.E., gave a very timely presentation with slides on "The Fuel Crisis" at the New Orleans Chapter meeting on November 13. Over 60 engineers and guests enjoyed Mac's talk as noted by the many questions asked after the presentation.

The fuel crisis will affect not only engineers but every person in the United States. What can we do to ease the burden? Knowing and accepting the fact that we have a problem is a start. Many alternate sources of fuel including nuclear, solar and even reverting back to coal were discussed by Mr. Hurstell.

A. L. Adioue, P.E., president of the New Orleans Chapter, presided at the meeting.

Fred Culpepper Chairs National PEC Committee

National PEC Chairman George Hightower, P.E., has announced appointments of 18 engineers in construction to six PEC committees for 1973-74. LES's Fred C. Culpepper, P.E., has been appointed chairman of one of these action groups, "PEC Turnkey Negotiated Contracts Committee."

NSPE Nominees for 1974-75 Selected

The slate of NSPE 1974-75 officers has been selected by the nominating committee. Two nominees are of particular interest to LES: Harry Bovay, P.E., for president-elect and James Johnstone, P.E., for vice president, Southwestern Region. Other nominees are: President—Leslie Gates, P.E.; Treasurer—John Dillon, P.E.; Vice Presidents, Northeast Region—Harry Feldman, P.E.; Southeast Region—T. C. Cooke, P.E.; Central Region—J. Raymond Carroll, P.E.; North Central Region—J. Kent Roberts, P.E.; and Western Region—William Jones, P.E.

1974 NSPE Winter Meeting

The 1974 Winter Meeting of the National Society of Professional Engineers will be held in Biloxi, Mississippi on January 14-19 at the Broadwater Beach Hotel.

The general program outline is as follows:

January 14, 15, 16
Practice Divisions Meetings
January 16 (evening)
"State of the Society" Dinner
January 17, 18, 19
NSPE Board of Directors Meeting

The Mississippi Engineering Society is the host for the meeting. For registration information, contact E. F. McNeill, P.E., P.O. Box 287, Biloxi, Mississippi 39530.

Liaison Societies Second Legislative Forum

The second annual Joint Engineering Legislative Forum will be held at the Sheraton Park Hotel in Washington, D.C. on February 25-27, 1974, under joint sponsorship of the liaison societies. Capitol Hill luminaries expected to attend include: Senator Robert Byrd, the assistant Senate majority leader, who will keynote the forum; Senator Frank Moss, author of the Consumer Product Safety Act; Senator Harry Jackson, sponsor of major energy legislation; Senator Philip Hart, sponsor of major patent reform legislation; Russel Train, head of EPA, on transportation; Rogers Morton, secretary of the Interior, on energy; and Milton Pikarsky, chairman of the Chicago Transit Authority, on transportation.

Outstanding Engineering Achievements of 1973

NSPE calls for nominations from chapters and state societies for outstanding engineering achievements of 1973.

Nominated projects must be completed (or concluded) during the 1973 calendar year. They are not limited to engineering accomplishments with a specific end product, such as a building. They may include significant contributions toward solving air, noise, and water pollution problems, traffic congestion, industrial research and development, and any other projects that contribute to meeting a human need.

This year, chapters are limited to two nominations each, and must follow a format for submitting data. All entries must be postmarked by January 15, 1974 and arrive in NSPE Headquarters by January 25.

Contact the LES office if you need information on this program.

Iowa Highway Commission Selected for 1974 Government Professional Development Award

The Iowa State Highway Commission, Ames, Iowa, has been named recipient of the 1974 Government Professional Development Award by the National Society of Professional Engineers for superior engineering employment practices.

The award will be presented at a special award luncheon January 17, 1974 during NSPE's Winter Meeting in Biloxi, Mississippi. Robert L. Reitinger, P.E., president of NSPE, will make the presentation.

Check Your Calendar

January 15-19
NSPE Winter Meeting, Broadwater Beach Hotel, Biloxi
January 18
Deadline for submittal of copy for February issue of LOUISIANA ENGINEER
January 25
Deadline for submittal of Outstanding Engineering Achievements for 1973 to NSPE
February 17-23
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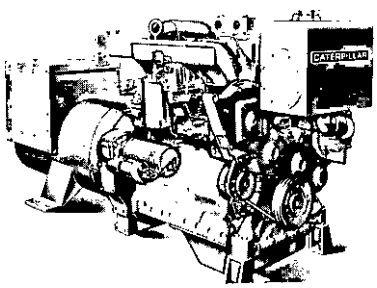

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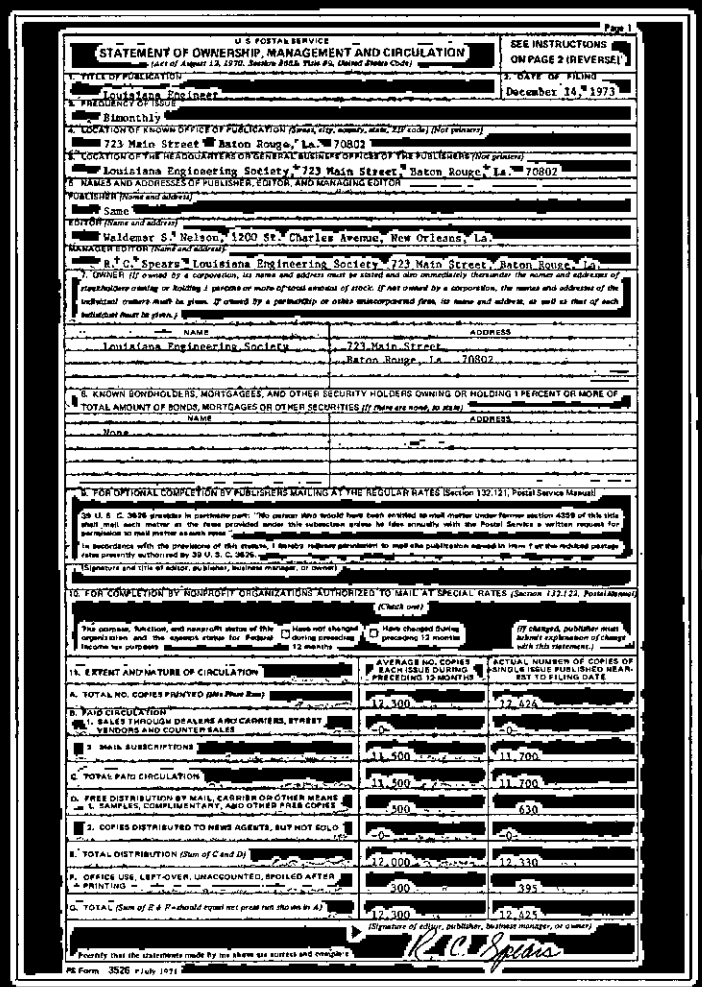

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2. DATE OF FILING: December 14, 1973
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EDITOR (Name and address): Waldemar S. Nelson, 1200 St. Charles Avenue, New Orleans, La.
MANAGER EDITOR (Name and address): R.C. Spears, Louisiana Engineering Society, 723 Main Street, Baton Rouge, La.
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proof at the trial that he had specific knowledge of the excessive weight or that he had had the opportunity to determine that there was a problem.

It should be emphasized here that the responsibility we are talking about on the part of the personnel who were cast was *personal* responsibility on the part of that particular individual. One of the tangential problems alluded to above in the jurisprudential development of this problem after the *Adams* case was the identification of which parties were "insureds" under the corporate employer's comprehensive general liability insurance policy. These policies generally provide that where the named insured is a corporation, the officers, directors and stockholders are insured thereunder.

The jurisprudence has broadened the strict terms of these policies to include some persons with more or less general supervisory responsibility even though they might not be a "president" or a "vice president." In some instances, policies are "handwritten" to the extent that they provide even broader coverage to all employees for suits such as those discussed above.

It is the purpose of this article to call to the attention of the engineer who functions in the capacity of a corporate executive or supervisor to the developing trend in the law of this state which creates a distinct personal responsibility for damage in the field of his employment.

[1] The act provides for a weekly benefit in a specified amount during the time that the worker is "temporarily totally disabled" and also provides a schedule of benefits to him for "permanent partial" disability, computation of which benefits depends on the wages being earned at the time of injury. In addition, the right to recover can be denied in certain limited circumstances such as where the worker is intoxicated or where the injury is deliberate.

[2] La. R.S. 23:1101, et seq. These instances arise where the accident is the fault of a person who is not the employer and not, therefore, protected by the act's immunity provision (R.S. 23:1032). The simplest example is that of a corporate employee-truck driver injured in an automobile accident by the negligence of another.

[3] *Adams v. Fidelity & Cas. Co.*, 107 So.2d 496 (La. App. 1959).

LEGISLATIVE PROGRAM (Continued from Page 9)

Present Law:

Section 13 (37:693), third and fourth paragraphs provide:

"The registration fee for professional engineering shall be $50.00, which shall accompany the application.

"The registration fee for interstate registration as a professional engineer or land surveyor shall be $50.00 and shall accompany the application."

Proposed Revision:

"The registration fee for Professional Engineers and Land Surveyors shall be established at the discretion of the board but shall not exceed $50.00 and said fee shall accompany the applications."

Present Law:

Section 16 (37:696) provides:

". . . Renewal may be effected at any time during the month of December by the payment of a fee not to exceed $10.00 at the discretion of the board for professional engineers, and not to exceed $5.00 at the discretion of the board for land surveyors engaged in private practice or employment. . . ."

Proposed Revision:

"Renewal may be effected at any time during the month of December by the payment of a fee which shall be established at the discretion of the board but which shall not exceed $25.00."

PROPOSED CHANGES TO SECTION 23, TITLE 12, LOUISIANA REVISED STATUTES OF 1950

1. A proposed revision to the business corporate law as it pertains to corporations using in their name the words "engineer," "engineering," "surveyor" or "surveying."

Commentary

The present Registration Law of the State of Louisiana requires firms presenting themselves to the public as engineers or land surveyors to in fact be engineers or land surveyors under the provisions of the Registration Law. At the present time there are no provisions for notification of the State Board of Registration of new corporations, either domestic or foreign, that may be applying for incorporation in the State of Louisiana and presenting themselves as Professional Engineers or Land Surveyors. It is, therefore necessary to have some form of communication between the secretary of state's office and the State Board of Registration Professional Engineers and Land Surveyors concerning those corporations.

Present Law:

There is no such provision in the present law.

Proposed Revision:

Add to Sub-Section "E" of Section 23 of Title 12 the following additional paragraph:

"If the corporation seeking the issuance of a Certificate of Incorporation in this state shall include in its name the words "engineer," "engineering," "surveyor" or "surveying," the secretary of state shall require prior to issuance of the Certificate of Incorporation evidence satisfactory to him that written notice of such application for a Certificate of Incorporation shall have been delivered to the Louisiana State Board of Registration for Professional Engineers and Land Surveyors in writing not less than 10 days prior to the date of issuance of the Certificate of Incorporation. In the event that the applicant corporation shall with its application to the secretary of state file a written waiver signed by the executive secretary or any officer of the Louisiana State Board of Registration for Professional Engineers and Land Surveyors waiving the requirement of 10 days written notice to the said board, as set forth in the next preceding paragraph, the secretary of state shall be authorized to proceed immediately with the processing of such application."

Add to Section 304 of Title 12 the following paragraph:

"C. If the corporation seeking the issuance of a Certificate of Authority to transact business in this state shall include in its name the words "engineer," "engineering," "surveyor" or "surveying," the secretary of state shall require prior to issuance of the Certificate of Authority evidence satisfactory to him that written notice of such application for a Certificate of Authority shall have been delivered to the Louisiana State Board of Registration for Professional Engineers and Land Surveyors in writing not less than 10 days prior to the date of issuance of the Certificate of Authority. In the event that the applicant corporation shall with its application to the secretary of state file a written waiver signed by the executive secretary or any officer of the Louisiana State Board of Registration for Professional Engineers and Land Surveyors waiving the requirement of 10 days written notice to the said board, as set forth in next preceding paragraph. The secretary of state shall be authorized to proceed immediately with the processing of such application."

Enginews

IN MEMORIAM

COLONEL FRANK X. ARMIGER

Colonel Frank X. Armiger, a member of the Louisiana Engineering Society, died in New Orleans, Louisiana on July 14, 1973, following a brief illness.

At the time of his death, Colonel Armiger was serving as Executive Director of The Mississippi River Bridge Authority and as Executive Secretary of the Louisiana Expressway Commission. He had been with the Bridge Authority since 1952 and in 1958 had been designated as Executive Director.

Prior to joining the Bridge Authority, Colonel Armiger had been employed by the City of New Orleans as an Administrative Assistant to the New Orleans Railroad Terminal Board during the construction of the Union Passenger Terminal.

Frank Armiger was born in New Orleans on July 9, 1913, and had been a lifelong resident of the City. Most recently, he resided in the Algiers section of New Orleans.

He was a retired Army Reserve Officer, having begun his military career with the Louisiana National Guard's Washington Artillery Unit in 1932. Colonel Armiger retired from the Army Reserve in 1968 after 36 years of service and, in 1969, was awarded the Legion of Merit by President Nixon.

Armiger had been active in civic and professional affairs, having served on the board of the International Bridge, Tunnel and Turnpike Association, The Society of American Military Engineers, and as President of the Washington Artillery Veterans Association. He was also a member of the Bienville General Assembly of the Knights of Columbus.

Those of us who knew Frank Armiger and who worked with him share a sense of personal loss. We have lost a valued friend, and we mourn his passing.

W. B. Conway

LETTER TO LES

November 28, 1973

Mr. R. C. Spears
Louisiana Engineering Society
PO Box 2683
Baton Rouge, Louisiana 70821

Dear Mr. Spears:

As discussed in your recent telephone conversation with Hugh N. Thompson of this office, I am requesting that you publish in your next mailing to members of the Louisiana Chapter the following information.

The Postal Service in the Jackson District will solicit proposals from interested engineers in the near future for design and/or construction as appropriate. This will include supervision of construction, evaluations, on-site inspections, review of shop drawings, etc. Those engineers interested should request PS Form 251 from the United States Postal Service, PO Box 2050, Jackson, Mississippi 39205, no later than January 1, 1974. For those firms currently having a Form 251 already filed with the Postal Service, an updating is desirable, however, not mandatory.

Thank you for your help in this matter.

Very truly yours,

A. B. Cleveland
District Manager
U. S. Postal Office
Jackson, Miss. 39205

USL ACCREDITED

Continuing accreditation has been granted to all engineering departments in the College of Engineering at the University of Southwestern Louisiana by the national accrediting agency, the Engineers' Council for Professional Development (ECPD), according to an announcement made by Dr. Ray Authement, USL president.

Dr. James W. Reeves, dean, College of Engineering, said that this continued accreditation applies to all of the undergraduate programs; chemical engineering, civil engineering, electrical engineering, mechanical engineering and petroleum engineering.

Because the students typically enter the profession from these disciplines with a B.S. degree, the USL graduate programs were not submitted for accreditations. Most universities follow this practice.

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OCTOBER 16, 1973

By the Louisiana State Board of Registration for Professional Engineers and Land Surveyors

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Baton Rouge, La.
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Victoria, Texas
Mechanical

BONIOL, JR., LEO J.
Port Allen, La.
Mechanical

BRYAN, WILLIAM A.
Shreveport, La.
Civil

CARTER, FRANKLIN D.
Slidell, La.
Mechanical

CLARK, ELLIS B.
North Tonawanda, N.Y.
Chemical

CLEMENTS, DONALD R.
Vicksburg, Miss.
Agricultural

COLLEDGE, WILLIAM G.
Jacksonville, Fla.
Mechanical

CRAWFORD, BYRON E.
Houston, Texas
Electrical

CUNNINGHAM, JOHN W.
Arlington Heights, Ill.
Civil

ELDRIDGE, MICHAEL
New Iberia, La.
Civil

FELTS, GARY D.
Laplace, La.
Mechanical

FRANKLIN, JEROME C.
Baton Rouge, La.
Civil

GARMAN, JR., MELVIN C.
Fort Worth, Texas
Electrical

GERLACH, JR., PHILIP E.
Lake City, Fla.
Civil

GIBBS, LAWRENCE C.
New Orleans, La.
Civil

GIESEN, FRANK H.
Nashville, Tenn.
Civil

GLASSMAN, SIMON I.
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Mechanical

GRAVES, RICHARD M.
Unicoi, Tenn.
Civil

HARRILL, RODNEY A.
Sunset, La.
Civil

HAYNES, GUY W.
Metairie, La.
Electrical

HERLIN, BRUCE G.
Metairie, La.
Mechanical

HIGGINS, WILLIAM G.
Baton Rouge, La.
Mechanical

HILL, JOE P.
DeSoto, Texas
Civil

HO, RONALD YUE-YIN
Tampa, Fla.
Civil

KINSER, JAMES R.
Memphis, Tenn.
Civil

KUTTRUFF, JACK S.
New Orleans, La.
Mechanical

MAMONE, FRANK A.
Columbus, Ohio
Civil

MAY, LESTER G.
Baton Rouge, La.
Mechanical

McGINNIS, HENRY
Arlington, Texas
Civil

MELANCON, JAMES A.
Metairie, La.
Mechanical

NASSER, ANDREW R.
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Civil

NEWMAN, PRESTON E.
Atlanta, Ga.
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TODARO, FRANK R.
Shreveport, La.
Mechanical

TRYON, GARY E.
Shreveport, La.
Electrical

WALKER, JOSEPH M.
Baton Rouge, La.
Civil

WILLIAMS, DAVID N.
Baton Rouge, La.
Civil

WOLFE, ROBERT R.
Columbus, Ohio
Electrical

WUTKE, LEO P.
Omaha, Neb.
Civil

Well Control Schools

The University of Southwestern Louisiana will offer five Well Control Schools for oil industry personnel and others interested in the programs during the coming spring semester. Dates for the schools will be January 21-25, February 11-15, March 11-15, April 8-12 and May 6-10.

The purpose of the Well Control Schools at USL is to bring into one training program all of the current knowledge and technology concerning drilling and completion of oil and gas wells under all environmental conditions in well control operations.

The four-day courses are offered by USL's Department of Petroleum Engineering through University College. Four Well Control Schools were held during the fall semester.

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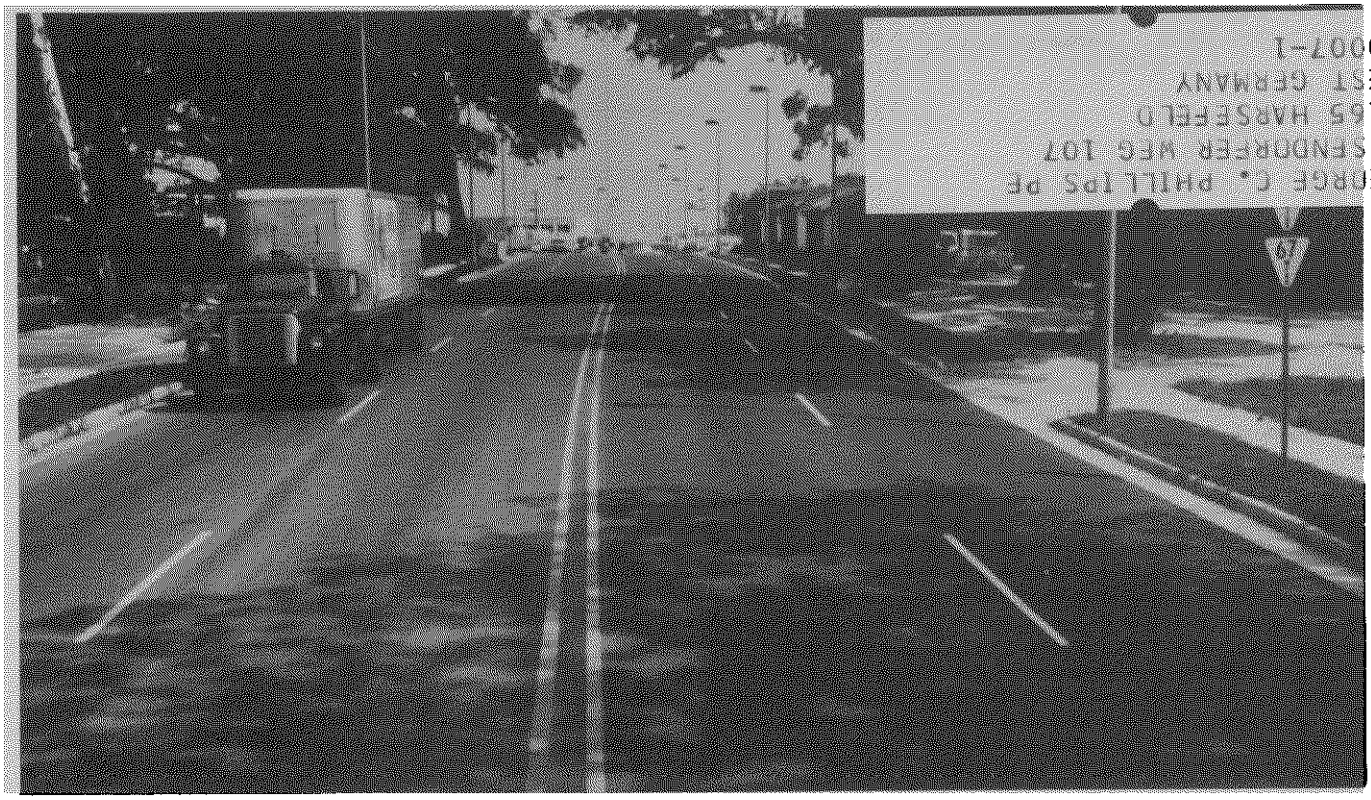

Biloxi, Miss., travels new urban renewal route.

Traffic keeps moving during Full-Depth® Asphalt construction.

First step in an ambitious urban renewal plan for Biloxi, Mississippi, is this rebuilding of Caillavet Street with Full-Depth Asphalt construction. The Asphalt base was placed directly on the improved subgrade. The four-lane section recently completed extends 1850 feet and measures 48 feet wide.

The Full-Depth Asphalt construction kept traffic hindrance minimal during the entire course of the work and through construction all lanes were open to traffic at night. Planners anticipate use by as many as 32,000 vehicles daily on Caillavet Street once it has been completed to its full length.

For more information on the strength and economy of Full-Depth Asphalt construction in both new and rebuilding projects, contact your local Asphalt Institute engineer or write The Asphalt Institute, 406 John Hancock Bldg., New Orleans, La. 70130.

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THE ROAD

LOCATION: Caillavet Street, Biloxi, Miss., north from U.S. 90.
TYPE: City street widened to 48 ft. with 10″ Full-Depth Asphalt pavement placed directly on improved subgrade in four lifts.
TERRAIN: Flat.
LENGTH OF PROJECT: 1850 ft.
DRAINAGE: Curb and gutter to drop inlets.
CLIMATE: Jan: high 68.3F, low 52.1F; July: high 98.7F, low 74.5F.
WEATHER: 62″ average rainfall per year (10 year average).
TRAFFIC: ADT-32,000, 15% trucks.

ROADWAY: Subgrade: Silty, fine sand (CBR-10) to medium gray brown soil. **Base:** 7″ Asphalt concrete, placed in two 3½″ courses. **Binder and Surface:** 1½″ each Asphalt concrete.
ASPHALT: 85-100 pen (Miss. designation AC-8) emulsion, (Miss. designation DM-2) between base and intermediate courses and between intermediate and surface courses.
COMPACTION: Base: 95% min. laboratory density; intermediate and surface: 98% min. laboratory density.
Equipment: 10-12 ton tandem steel wheel roller followed by 9-wheel pneumatic roller.