Founder President, CEO, & 100% Owner
of an Engineering Corporation

Graduated Texas A&M Jan 1961 - BSME

Started Private Practice in May 1967 as, incorporated business in 1971.

Engineer of record for 3 projects in Saudi Arabia, 1 Project in Bahrain, 2 projects in India, 1 in Chile, 1 in Denmark, and 1 In Barbados.

Registered Mechanical Engineer - Registered Electrical Engineer - Some licenses are not current.

NCEES Certificate 7447 (1978)	TX 24180 - 1965 - MECH & ELECT	AL 15780 - 1986
AR 6481 - 1986	LA 11318 - MECH - 1968	AZ 23920 - ELEC - 1990
MS 9851 - 1986	LA 25040 - ELECT - 1992	AZ 19762 - MECH - 1986
OK 11823 - 1980	CA M-020309 - 1986	CO 24725 - 1987
DC 8692 - 1986	FL 28295 - 1979	GA 16452 - 1987
ILL 38130 - 1980	IN 17556 - 1978	MD 14881 - 1986
MI 26925 - 1979	MO 19220 - 1980	MS 9851 - 1986
NC 13271 - 1986	NE E-6176 - 1986	NM 9881 - 1986
NY 06301-1 - 1986	OK PE-11823 - 1980	OR 13158-PE - 1986
SC 11100 - 1986	TN 018520 - 1986	VA 16505 - 1986
WA 23272 - 1986	WI E-13745 - 1973	CNMI 287 - 1996 - ELECT

I am the Mechanical and Electrical engineer of record for more than 1300 construction projects during the past 40 years. This includes HVAC systems as large as 8000 tons, commercial food warehouse refrigeration systems as large as 325 tons, plumbing systems to 19 floors in height, and various types of facility fire suppression systems. This also includes interior and exterior lighting systems, interior and exterior power distribution systems, un-interruptible power systems, single and parallel diesel and gas turbine driven generator installations, computer power conditioning systems, primary overhead and primary underground distribution systems of 15KV and 35KV class, specialized data processing power systems & grounding systems, shuttle flight critical power and grounding systems, computer rooms, x-ray machines, and radio frequency shielded design for U S Army missile maintenance facilities. I am the Engineer of Record for space simulation projects that include cryo-pumping systems, cryogenic circulation systems, solar simulation systems, and Helium refrigeration systems. These projects include health care facilities, medical & chemical research laboratories, computer equipment rooms, high rise buildings, office buildings, hotels, educational facilities, aircraft control towers, army ammunition manufacturing plants, ordinance storage facilities, food service facilities, refrigerated warehouses, ventilated warehouses, hazardous waste processing facilities, radioactive nuclear materials (plutonium) laboratory production facilities, dormitories, barracks, armories, vehicle maintenance facilities, barracks, and military family housing projects.

I have extensive total facility Project Construction Cost Estimating experience including the preparation of more than 200 Final Federal Government Construction Cost Estimates for the U.S. Army; U.S. Navy; USAF; NASA; NIMA; Department of State; GSA, HPD; HAS; and other non-public funded projects since 1965.

I was appointed to City of Houston Plumbing Review Board member 1970 by Mayor Louie Welch, and then re-appointed by each succeeding Mayor. I have served continuously since 1970. I have served as chairman of that body since approx. 1985.

I have extensive construction management experience plus general contractor experience. EXXON requested that I serve as the General Contractor to rush construction of projects including the new$1.2M Paleontology Laboratory, in addition to (after) performing the AE design services.

I have extensive experience as a multi-discipline design AE project manager and MEP engineer of record for more than 300 federal construction projects in the last 40 years. This includes remodeling projects, and new construction projects. The ACASS summary (Department of Defense AE contract performance summary maintained by the Corps of Engineers) printout on 30SEP96 for SEI indicates 21 completed projects with one excellent performance rating, one above average rating, and the remaining 19 projects with an average performance rating. ACASS summary printout 08MAY00 reveals 11 projects with one above average rating and 10 projects with an average rating. A copy of this summary sheet is included behind the form 254's. The complete ACASS report indicates that all but two of these DoD projects were completed without contract modifications due to any design deficiency. These two project modification for design deficiencies totaled less than $10,000.00. The Army did not advise us of these design deficiencies because these design deficiencies were insignificant compared

to the performance of other AE firms. The construction value amounted to more than $200,000,000.00. This report indicates that all of the projects had the low bid within our construction cost estimate and within the funds available, and that all of our projects were awarded construction contracts. The amount of construction contract change orders is inversely proportional to the completeness of the contract documents that are prepared by the Architects and Engineers.

These projects include health care facilities, medical & chemical research laboratories, computer equipment rooms, high rise buildings up to 19 floors, office buildings, hotels, educational facilities, aircraft control towers, army ammunition plants, food service facilities, refrigerated warehouses, warehouses, hazardous waste processing facilities, radioactive nuclear materials (plutonium) laboratory production facilities, dormitories, barracks, and military family housing projects.

Certificates from U S Army (EMCS) energy management control systems course, U S Army environmental engineering course, and U S Army M-CACES (Computer Aided Cost Estimating System) course.

I have completed many formal energy analysis and formal reports for several Government Agencies over the past 40 years.

I have performed trouble shooting to solve HVAC, Data Processing Power supply quality and Electrical grounding problems for various DoD agencies, the USPS, DOS, and NASA during the past 25 years.

I have been using PC computers for engineering calculations and word processing since 1979.

I am an Expert Operator and a Beta Development Site for Elite Mechanical Programs: CHVAC, RHVAC, MHVAC (Metric), EZDOE, Energy Analysis, EC Earth Coupled Heat Pump, REFRIG, Kypipe - Water multiple loop flow analysis, Sansys – Civilsystems® - Gravity Water Flow Analysis for sanitary sewer and storm water flow analysis.

I am an Expert Operator and a Beta Development Site for Elite Electrical Programs: VD Voltage Drop, ECOORD Protective Device Coordination, SHORT - (Electrical Short Circuit Analysis), LIGHT (Lighting Level Calculations), OUTPOINT point by point vertical and horizontal lighting levels for outdoor lighting, INPOINT point by point vertical and horizontal lighting levels for indoor lighting, Harmonic Circulating Current Analysis – Dranetz & RPM, Constructor - Constructs and tests ladder diagrams and imports them into AutoCAD drawings, Quicksize for Engine Generators, and Gen Size 96 for Sizes Engine Generator starting capabilities.

I am an Expert operator of AutoCAD 2000, Intergraph Microstation operator, Elite EZ-LCCID Life Cycle Cost Analysis

I am an Autocad Lisp Programmer, and a Dbase III & IV programmer.

User of Microsoft® Word, Wordperfect®, Microsoft®Excel, Microsoft®Office, Pagemaker and other Desktop Publishing

I am the Engineer of record for Federal Government Project Hard Metric Design Projects, plus foreign project metric design experience which is usually a mixture of Metric & English Units.

I am the Specification writer for Architectural, Civil, Structural, Mechanical and Electrical Project Specifications on more than 75 Federal Government projects.

I am the Engineer of record for control & instrumentation systems including many SCADA, UCS, EMCS, PLC, DCS, CPU, and PID systems.

I am the Engineer of record for MEP Seismic Risk Reduction projects in St. Louis, India, Chile and Bahrain. I am familiar with the current FEMA seismic resistance requirements.

My business development success has resulted in multiple U.S. Federal Government design contracts with the National Space & Administration Agency (70 projects), U. S. Army Corps of Engineers (30 projects), U.S. General Services Administration (8 projects), U.S. Air Force (4 projects), U. S. Department of State (8 projects), and the National Imagery & Mapping Agency (4 projects) during the past 38 years. Additional business development effort has resulted in securing AE contracts with the City of Houston (Police Department & Department of Aviation) and the State of Texas (GSA). I am also the Consulting Engineer of Record for foreign MEP projects in Bahrain, Mexico, Saudi Arabia, Commonwealth of the Northern Mariana Islands, and Chile as a consultant to other firms.