Paul M. Martin PE, CEM & LEED AP

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Biographical sketch, Paul M. Martin, PE, & CEM

Mr. Paul M. Martin currently holds the academic rank of Adjunct Professor at SMU having taught courses in AutoCad and Energy Management for Buildings. He graduated in 1962 & 1970 from the University of Nebraska with a BSME & an MSME. He has taught ENCE 7384, Energy Management for Buildings & ENCE 7382, Introduction to CAD, and also served as staff member in the ENCE department. He has other related teaching experience (Teaching, Industrial, etc.) as an adjunct professor at East Field College, Mesquite, Tx, having taught the fundamentals of air conditioning design, Fall, 2001 as well as serving as a graduate teachers assistant in the Mechanical Engineering Dept, at the University of Nebraska, 1969-70. Upon graduation in 1970 he served as an instructor, in the School of Architecture, Construction Science Dept, at the University of Nebraska, 1971-1972. He taught HVAC, lighting/electrical wiring for buildings, construction materials, specification writing courses.

Mr. Martin has a professional career as an engineering consultant business as President of Martin Engineering & Associates having started his company in 1984 and has performed consulting services including replacing HVAC chillers & AHU's for Weatherford, Tx First Methodist Church. This work also included electrical design changes. Other projects & consulting include, engineering consultation services for Boxer Properties Property Management, projects for Terry Cone, Architect including a Fort Worth, Tx. Baptist Church HVAC, electrical & plumbing design, closeout & supervision of construction phase of VA hospital project (Sam Rayburn Memorial Hospital) in Bonham, Tx for Energetics Corporation of New Mexico, consultation with SMU in Dallas, Tx including preparation of report of physical condition of Mechanical & Electrical systems in Dallas, Hall, and evaluation of HVAC systems and Energy consumption simulation consultation work. He provided the design of new cooling towers for Southwestern Bell project, including mechanical & electrical interface with existing system. His work includes services performed with a direct relationship with customer or through association with other architects or engineers. Recent work included an energy audit for El Chico's restaurant in Arlington, Tx. for LPB Energy Consultants.

From 8/94 to 5/1/95 he worked for Flatow, Moore, Shaffer & McCabe, Albuquerque, NM, as Director of Mechanical Engineering, Responsible for supervision of Design & Engineering for various projects including School & Hospital in Las Cruces, NM, Marriot hotel in Washington, DC, & others. Investigated Energy Conservation Opportunities & recommended implementation of them. Involved with thermal storage design for GSA project located in Albuquerque, NM. From 1/1992 - 8/1994 he worked

for Merrick and Associates, Inc, Los Alamos, NM as Lead Mechanical Engineer, PHVAC design for lab facilities and other buildings at Los Alamos National Laboratories

From 4/1991 - 1/1992 he worked for Bernard Johnson Incorporated, Los Alamos, NM & Houston, Tx as Lead Mechanical Engineer in Los Alamos, promoted to Chief Mechanical Engineer/Dept head in Houston. Recommended mechanical systems for various projects at Los Alamos National Laboratory, reviewed other engineers work & sealed drawings based on drawing & calculations review & after changes required were made. Worked on project to provide new electrical generators using waste steam at central power plant at Los Alamos National Laboratory. Investigated use of co-generation and use of gas release by bio mass at land fill operation.

From , 2/1986 - 3/1987 he worked for Yandell & Hiller, Inc. , Ft. Worth, Tx, Team leader and Project Mechanical Engineer. His typical Projects included a New Boiler Addition to the existing Boiler Plant at the VA Hospital, Houston, Texas (Y & H), and the design of the mechanical system and central plant for All Saints Southwest Satellite Hospital, Fort Worth, Texas (Y & H)

From 6/1982 - 8/1984 Texas Energetics, Inc , Engineering , Richardson, Tx and New Mexico he served as Vice President and Head of Engineering and Marketing. He recruited projects including subsequently performing all aspects of project HVAC, architectural, electrical phases for Sam Rayburn Memorial Veterans Hospital, Bonham, Texas; White Sands Missile Range, New Mexico, Energy Audit for Corps of Engineers (COE) (audited over 70 buildings & made recommendations to the COE for changes). He worked with George Staten, architects out of El Paso, Tx. who were the prime contractors. Assisted with project management of solar projects for domestic hot water heating & for distillation of oil systems in refinery in New Mexico. Original design performed by Texas Energetics.

From 9/1981 - 6/1982 he worked for Page, Southerland, Page Dallas, Tx and his projects included Professional Engineer of Record for Margaret Perot OBGYN Seven Story Addition to Presbyterian Hospital and Grayson County Jail, Grayson County, Tx . He was offered position as an firm associate with PSP in Austin , Tx .

He programmed computer to do HVAC load calculations using Basic Language, with TRS-80 desk top computer. From 5/1976 - 9/1981 he worked for Henningson, Durham and Richardson, Omaha, NE & Dallas, Tx, as Mechanical Engineering Section head & Project Engineer, After four years in Omaha office transferred to Dallas as mechanical section head, his typical projects included, Mechanical Engineer of Record for St. Margaret's Hospital, Pittsburgh, Pa. \$20,000,000, 200,000 sf and co-engineer of record for the VA Hospital, North Little Rock, Arkansas, \$45,000,000, 450,000 sf. Designed solar heating system for domestic water for U.S. Navy Dry Dock station, project located in Hawaii.

From 1962-1976 After graduation, BSME from University of Nebraska, worked for several consulting firms as EIT & HVAC Engineer in Nebraska (4 years at C& E, OB & T), (2 years at K & M), Iowa (2 years at HLM), Ohio (1 year at SSO& E) after initial graduation, became Registered Mechanical Engineer in 1966 after passing EIT exam in 1962 with a score of 95. He worked as EIT doing highway design for State of Nebraska Highway Dept for two years, served in National Guard & Reserves from 1962-1968, honorable discharge. Earned graduate degree in 1970 MSME from University of Nebraska. He learned Fortran language & Basic Language. Wrote first pavement thickness design calculation for computer program for the State of Nebraska. Worked summers for C & E, OB & T, & the State of Nebraska while teaching at the University of Nebraska as an instructor with the School of Architecture, Construction Management Department and served as teaching assistant with the Mechanical Engineering Department. Mr. Martin also served as a facilities engineer for Texas Instruments, Dallas , TX for twelve years: From 6/95 - 7/2001 he served in the South Building , as part of DFAB Wafer Fab Team, in roles as project manager, energy engineer, and systems engineer. From 5/89 - 4/91 he served at Texas Instruments, Stafford, TX, was mechanical engineering, supervisor and facilities engineer. During 8/84 -1/86 & 4/87-5/89 he contracted to work as a facilities engineer with Texas Instruments.

He worked in several buildings including South building, North building, Semiconductor building, Research West building, and designed HVAC for new clean room in Kilby Center. Responsible for first VAV installed for new computer division offices in North building including new AHU's, new VAV duct distribution systems and VAV boxes, along with control systems. He was responsible for fire protection design, HVAC design for clean rooms & other building area remodels. Utilized SAP cost management system & Meridian documentation program. His responsibilities included project management and bid analysis & contractor selection. He tracked Costs & supervised construction of new projects. As Energy Engineer in the South Building he monitored building energy consumption, implement recommended changes to save energy through design of VAV systems replacing multizone systems typically. He served as engineer in charge of documentation of systems into CAD system using Meridian, a tool for that purpose. Familiar with AutoCad & performed autocad drafting of HVAC systems for multiple projects.

Mr. Martin served on corporate team for Gas Panel Standards Committee & Stafford facilities team for Refrigerant CFC's recommendations and was awarded eleven merit awards for building improvements. He trouble shot problem jobs designed by others including Research West building HVAC system problems & redesign of backgrind area tank system. His project experience included some electrical design & structural system design for monorail system for crane lift. He assisted in design of & managed the pnuematic tube system project site wide. He saved \$500,000 on multi million dollar project due to recommended design changes to original concepts. Project was built in several successive phases over approximately 2 years. He is currently licensed in Nebraska & Texas as a Registered Professional Engineer and has held past registrations, in Virginia, Pennsylvania, Ohio, Minnesota, & New Mexico

Mr. Martin has published several articles including CFC's & the Ozone Layer in the Houston Hiliter magazine; CPM & the Design Process in the Building Systems Engineering Magazine, his masters thesis, CPM/PERT-Management System for Engineering Design Projects; the Computer, the Abacus & the Slide Rule in the NTAEE newsletter. He has authored, several NTAEE newsletter articles written during separate 2 year stints as newsletter editor.

Mr. Martin is a member of several Professional societies including Association of Energy Engineers (AEE), life member of American Society of Heating, Refrigeration & Air Conditioning Engineers (ASHRAE) and the Association of Facility Engineers (AFE).

Mr. Martin served **as a** Past President, Vice President, Secretary, webmaster & Newsletter Editor, & Board of Directors in the North Texas Association of Energy Engineers. He was selected as energy engineer of the year for NTAEE chapter in 2002 & Region 4 National AEE energy engineer of the year in 2003. He also served as a board Member, Vice President, Secretary, & Webmaster for NTAFE, North Texas Association of Facility Engineers. His memberships have included NSPE (Nebraska State Professional Engineers) EIT member Board of Directors.

He has been active in the past as a member of Iowa City Jaycees Board of Directors, chairman of the Red Cross Blood Drive, Sylvania, Ohio, chairman, Building Committee, First Baptist Church, Los Alamos, New Mexico. He was presenter at NTAEE Virtual Tour of Comanche Peak Nuclear power plant.

He served as the Webmaster, SMU ENCE department, chairman of the NTAEE CEM committee, moderator for April 1, 20002 NTAEE/AFE/TMAC sponsored Energy Seminar held at TMAC (Texas Manufacturing Assistance Center, Ft. Worth, Tx.), he chaired NTAEE deregulation Seminar held in Dallas, Tx Spring 2001. He was chairman, NTAEE National Energy Policy Legislation committee, served as ASHRAE, Webmaster, 2 years, chaired NTAEE CEM committee in Spring & Fall of 2005.

He is a Certified Energy Manager, has taken the Dale Carnigie Course, along with various other continuous education courses.