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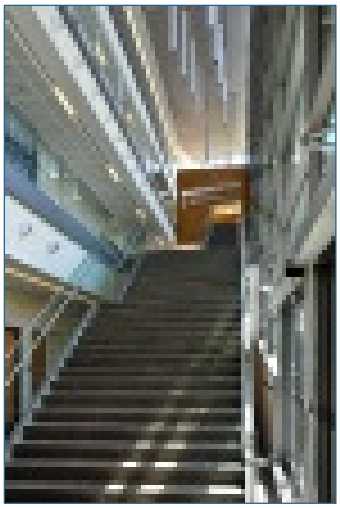

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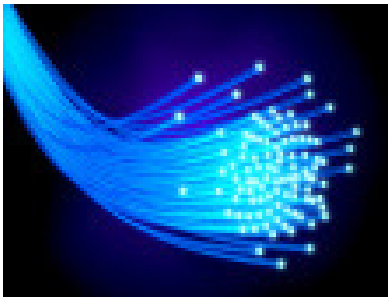
Introduction

Rivera Engineering, LLC, is a Dallas/FW Metroplex-based, multi-discipline engineering firm that provides design engineering services for comprehensive building systems (mechanical, electrical, plumbing) from planning through construction administration. The firm also provides sustainability (LEED), energy consulting and commissioning services.



Rivera Engineering prides itself on its ability to provide innovative, cost-effective, high-quality project solutions that respond directly to its clients' needs in a professional and ethical manner.

Rivera Engineering, LLC, is a minority-owned firm and currently holds the following certifications:

- Disadvantaged Business Enterprise (North Central Texas Regional Certification Agency)

Experience – Our experience encompasses design and construction phase services for a broad variety of project types, including healthcare, K-12 and higher education, commercial, critical facilities, research/hi-tech, energy, multi-family and assisted living residential facilities.

Quality – Rivera believes in the long-standing principle of "Quality Delivery, On Time, On Budget," and maintains exceptional quality and client satisfaction through an established set of procedures. All deliverables are checked through senior-level peer review before issuance.

Delivery – Rivera helps its clients develop mutually agreeable project milestones, tracks the progress of all work on a weekly basis, and promptly informs clients in writing of any matter that may jeopardize the project schedule.

Sustainable design – Rivera follows current sustainable design practices, and specializes in teaming with owners, architects and other design team members to pursue LEED points. We are particularly committed to the field of renewable energy, and enjoy researching, analyzing and conceptualizing alternative energy ideas.

Innovation – The "green building" movement is fostering fast-paced development of new technology in renewable energy and building efficiency. Rivera partners with building owners, architects and other design team members to promote the adoption of new technologies that reduce ecological impacts on a building's environment.

Representative Owners/Clients

Rivera Engineering, LLC, has performed project assignments for a broad range of public and private sector entities, including:

Public Sector

- Barksdale Air Force Base
- City of Dallas
- Dallas Independent School District
- Dallas County Community College District
- University of North Texas
- University of Texas at Dallas

Private Sector

- AT&T
- Hospital Corporation of America
- Intercontinental Hotels Group
- Lend Lease
- Methodist Health System
- Westador Addition Neighborhood, Arlington

A/E/C Firms

- Construction Zone
- Henneman Engineering, Inc.
- PBK Architects
- Profile Consultants Inc.
- PSA-Dewberry
- Vasquez Engineering LLC
- Salcedo Group Inc.
- EPB Associates Inc.
- Affiliated Western Inc.
- Acts 29 Consulting
- Aguilar Construction Group
- Bridges and Roads (*Grupo Puentes*)

Technical Services

Rivera Engineering, LLC provides mechanical and electrical engineering, LEED and energy consulting, commissioning services, IT and fire protection design for a broad range of public and private sector clients and projects.

Mechanical and Plumbing Engineering

- infrastructure assessments
- HVAC systems
- heating and chiller systems

- temperature controls
- heat recovery
- refrigeration
- building water and wastewater
- fire protection
- cogeneration facilities
- geothermal energy
- load calculations
- inspections
- shop drawings review

Electrical Engineering

- infrastructure assessments
- power distribution
- lighting design
- normal and essential hospital systems

- fire alarm and signaling
- lighting levels surveys
- inspections
- shop drawings review

Sustainability and Energy Consulting

Activities leading to LEED certification include:

- collaboration with design teams to establish reasonable sustainability goals
- sustainable engineering to achieve the LEED points needed for the desired certification level

Energy consulting activities include:

- energy audits
- energy modeling
- energy management systems design
- enhanced commissioning
- design for alternative energy generation backed by intensive research into current technologies and local financial incentives

Commissioning Services

Commissioning services focus on verifying and documenting that a facility and its systems and assemblies are planned, designed, installed, tested, operated and maintained to meet the owner's requirements. Specific commissioning services include:

- review and test all building systems
- ensure that systems are integrated properly
- ensure that systems are functioning properly

- ensure that building operators are fully trained to run and troubleshoot building systems

Other Services

- quality control reviews
- value engineering
- third-party inspections
- acceptance testing support

Education Projects (summary)

The following section presents a number of **Rivera Engineering, LLC's** representative projects, encompassing a variety of project types and clients.

New Ann Richards Middle School

Dallas, TX

Owner: Dallas Independent School District

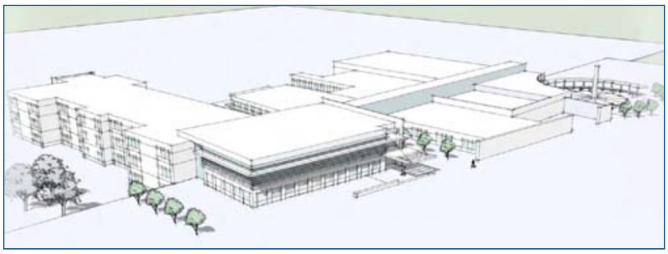
Prime Consultant: PBK Architects

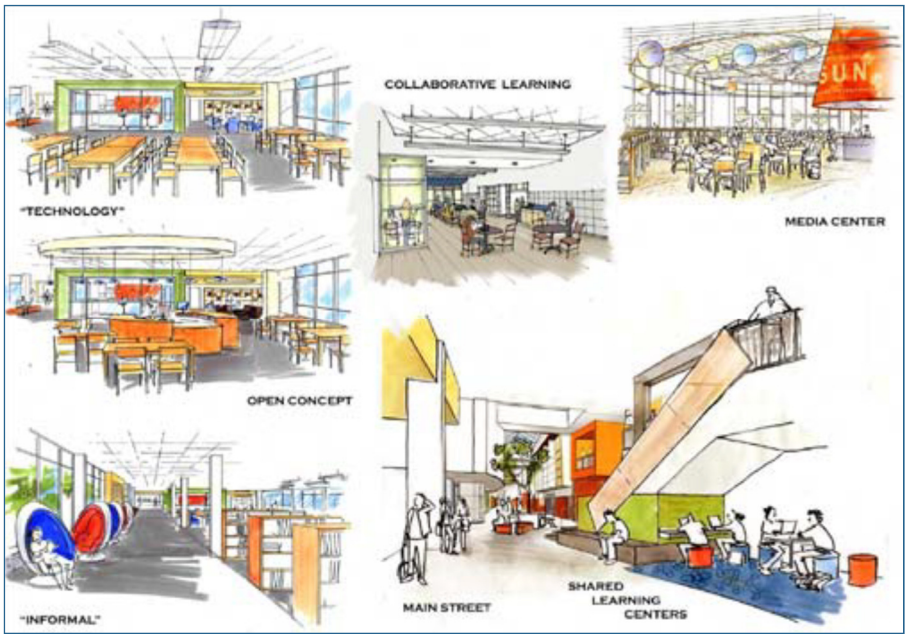
Completion: 2013

Construction Cost: $29,444,000

Rivera provided MEP, IT and systems design for a new 185,000-square foot middle school that is serving approximately 1,250 students. Rivera's scope included layout for the electrical distribution system, classrooms, laboratories and public spaces, and design for geothermal heat pump, plumbing, lighting and controls, IT and fire protection systems. A number of sustainability strategies implemented by Rivera will save about 20% of energy, in comparison with the ASHRAE 90.1 base model, and qualify the building for certification under LEED and the TX-CHPS program. These strategies include:

- highly efficient volumetric and direct/ indirect lighting fixtures;
- premier daylight harvesting and occupancy-sensing distributed solution;
- teacher control stations that optimize energy savings and the use of audio/ visual technology;
- performance-grade sound and theatrical lighting systems;
- distributed geothermal ground source heat pump system;
- electronic timed sun "mecho-shades" control; and
- a selection of LED lighting fixtures.





LeCroy Center Emergency Generator and Uninterruptible Power Supply (UPS) Replacement

Dallas, TX

Owner: Dallas County Community College District (DCCCD)

Prime Consultant: Henneman Engineering, Inc.

Completion: 2010

Construction Cost: $500,000

José Rivera leaded this project in a prior engagement.

The R. Jan LeCroy Center for Educational Telecommunications is part of the DCCCD. The 28,000-square foot facility is a leader in distance learning, utilizing a full range of capabilities to deliver electronic instruction to learners on college campuses, at work and at home.

Both the emergency generator and the UPS systems in this **"mission critical"** facility failed, so DCCCD decided to do a **fast-track** project to replace both systems. The project included procuring quotes on a new emergency generator and UPS equipment considering both price and availability, pre-purchasing the equipment, and completing the installation bid package within four weeks. The project budget was $550,000, and all bids came in under budget.

The project was commissioned under engineering supervision to reduce the impact on broadcasting activities, which entailed several late-night working schedules.

"My thanks to you and the entire team for their due diligence in overseeing the completion of the project and for going the extra mile to be on site during the 3 shut downs in the wee hours of the night… It's a prime example of your team dedication and professionalism to ensure that the project is constructed within code and specifications. I really appreciate this type of effort.

Eugene Fernandez
Director of Facilities, LeCroy Center

Conversion of Clean Rooms to Research Labs at ECSN Building at UT Dallas

Dallas, TX

Owner: University of Texas System

Prime Consultant: Rivera Engineering, LLC

Completion: 2012

Construction Cost: $350,000

This kind of laboratory and research facility project requires an experienced consultant that, after listening carefully to a large group of stakeholders, can produce high-quality solutions that meet all expressed needs.

The project entailed electrical renovation of the power distribution system serving 12,000 square feet of clean rooms, which were being converted to laboratories for engineering and physics research. The new distribution system will improve safety and ease electrical system maintenance by providing circuit protection outside the laboratories in a dedicated electrical room.

Rivera's work also included lighting design and control. Because the typical laboratory visual tasks demand accuracy at bench level, the project required careful lighting planning. Rivera departed from building standard to specify state-of-the-art volumetric lighting fixtures. These fixtures fill the space better, providing a better balance of horizontal and vertical foot-candle levels for superior visual comfort.

Lighting control is provided through wall switches and ceiling-mounted occupancy sensors. Rivera commissioned the occupancy sensors to warrant the energy savings to the owner.

Rivera designed the layouts for the power receptacles/outlets and IT drops to the researchers' satisfaction.

Other Projects (list)

Education

- Six Mechanical-Electrical Replacement Projects for the Dallas County Community College District, Dallas County, TX – Construction Management

Energy

- Wind Turbine at a Dallas County Community College District's College Campus, Dallas County, TX – Electrical Engineering
- Four Energy Efficiency Improvement Projects, Barksdale AFB, LA – MEP Engineering

LEED Commissioning

- University of North Texas Stadium, Denton, TX - E
- University of North Texas 3-100KW Wind Turbines, Denton, TX - E
- City of Dallas Fire Station #37, Dallas, TX - MEP
- University of North Texas College of Law, Dallas, TX - E

Healthcare

- UT Southwestern Medical Center Several Renovations, Dallas TX - Electrical Engineering
- Apria Healthcare Specialty Pharmacy Albuquerque, NM and Oklahoma City, OK - Electrical Engineering QC review
- Methodist Healthcare System, Several renovations, Dallas - MEP Engineering
- HCA Surgery Center, Oklahoma City, OK – Electrical Engineering
- HCA Surgery Center, Henrico, VA – Electrical Engineering

Streets, Parking and Garages

- Life Covenant Church Parking lot, Keller TX - Electrical Engineering, Lighting Design
- Keller Parkway and Town Center Lane Pedestrian Lighting - City of Keller - Electrical Engineering, Lighting Design
- Audelia Road and Walnut Hill Lane Pedestrian Lighting – Dallas, TX - Electrical Engineering

  Life Church Parking Lot Lighting – Allen, TX - Electrical Engineering, Lighting Design

Industrial

- Bridges & Roads Site Concrete Pre-fab Nave – Electrical Engineering
- Bodycote Heat Treatment relocation - Electrical Engineering

Aviation

- QC Review for a DFW Airport Runway Lighting Renovation

Residential

- Privatized Lodging at Multiple Army Bases, United States – Electrical Engineering
- Stoney Brook Assisted Living Facilities, Multiple Locations, TX – Electrical Engineering
- Glendale Enterprise Lofts, Glendale, AZ – Electrical Engineering
- New Candlewood Hotel, Ft. Sam Houston, San Antonio, TX – Electrical Engineering
- Beck Replacement Residence (tornado damage), Rowlett TX – MEP Engineering