

CASE STUDY

Fossil Ridge High School Sustainable Design Fort Collins, Colorado

Making buildings work. **Better.**



Fossil Ridge is a new 288,685 SF high school in Fort Collins, Colorado. The facility is designed to house 1,500-1,800 students. As the energy consultant on the integrated design team, EMC assisted in setting energy goals, working with school maintenance personnel, the local utility, the architect, commissioning agent, and others to come up with acceptable design alternatives.

EMC evaluated four competing HVAC design alternatives using a detailed eQUEST simulation model and developed the concept HVAC design which included air-to-air heat recovery, evaporative pre-cooling, and ice storage. The school has an aggressive daylighting design which provides 100% daylighting in most classrooms throughout the year.

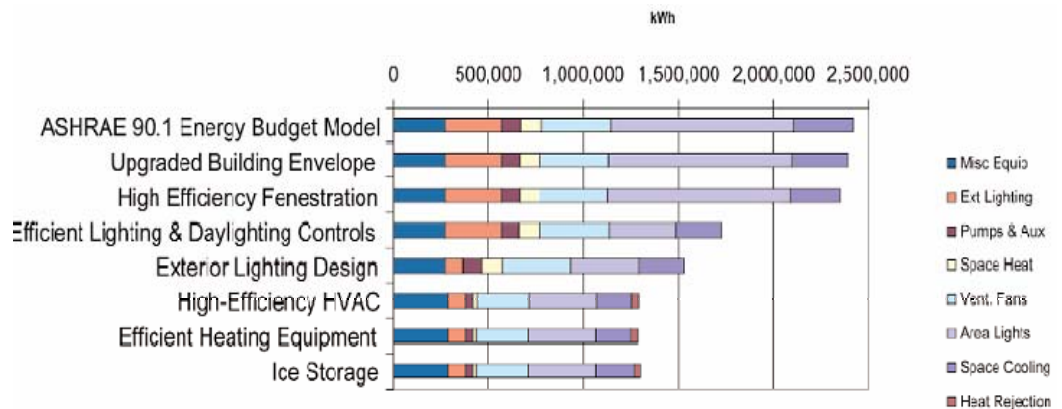
Low Energy Design included:

- * High-performance window glazing
- * Condensing boilers
- * Air-to-air heat recovery
- * Earned full 10 points for Optimized Energy Performance category under the LEED Green Building Rating System

Owner:
Poudre School District
Contact:
Mr. Stu Reeve
Energy Manager
Phone: (970) 490-3502
Architect:
RB+B Architects
Contractor:
Haselden
Schedule:
3 years, 7/02-8/2004
Budget:
\$38,500,000
construction



E M C Engineers, Inc.
143 Union Blvd., Suite 350
Lakewood, CO 80228
Phone (303) 974-1200
Fax (303) 974-1239
www.emcengineers.com



Engineering Excellence Since 1976!

Company Overview

EMC is dedicated to creating sustainable facilities by optimizing performance through energy modeling and analysis, building automation systems application, advanced mechanical and electrical design, construction management, and building commissioning to achieve lower energy costs, improved comfort, and increased productivity.

Experience

Since 1976, EMC has been a leader in delivering high performance building solutions. As a multidiscipline firm, we have strong credentials in mechanical, electrical, and control systems retrofit and modernization and energy engineering and commissioning.

Where do EMC's experts work?

You'll find us in schools, colleges, hospitals, government facilities, healthcare, and all types of private sector structures from supermarkets to office towers. In fact, EMC's engineers and technicians go wherever new facilities are under construction or existing structures or systems are operating at less than peak performance.



Whether you need a retrofit or a modernization or a new high performance building, you can rely on EMC to bring engineering excellence to your project.

Imagine reducing operating costs, improving comfort, increasing productivity, and getting your building's problems fixed quickly. EMC's services are the key!

Making buildings work. **Better.**



Services

BUILDING COMMISSIONING/RETRO-COMMISSIONING

The commissioning process for new buildings and major renovations, provides facility owners with assurance the facility is functioning to meet their project requirements. Commissioning is the only process that assures a quality outcome. Whether you manage a new or existing facility, it's really difficult to know unless an independent commissioning expert has evaluated your systems. EMC's retro-commissioning services provide low cost, high return operating improvements that reduce operating costs. Think of it as a building "tune-up".

SUSTAINABLE DESIGN

More organizations are considering Green building systems and renovations. But to go Green--affordably--you need integrated sustainable design. EMC provides energy simulation modeling, daylighting, and high performance systems concepts to meet LEED requirements. We're ready to advise and coordinate and show you how to make the wise choices that deliver real environmental and economic benefit.

ENERGY ENGINEERING

Energy and how it's used affects quality-of-life and the global environment. Our core business is creating energy systems that optimize energy use. Our energy-engineering services ensure that you meet today's needs while planning for tomorrow's growth. This includes audits, assessments and implementation of energy improvement projects.

FACILITY DESIGN

Integrated systems design is crucial to facility renovation and modernization, particularly in high performance facilities. EMC understands how to take cutting edge mechanical, electrical, and building automation system technology and integrate it into real world solutions. And we can do it while your facilities stay in operation.

DESIGN/BUILD

Identifying your facility's energy issues is just half the battle. You then need a retrofit strategy that maintains the building environment and minimizes system downtime through every phases of construction. EMC is skilled at engineer-led, design/build projects, including efforts funded through Energy Savings Performance Contracting.

TRAINING

Today's building systems are complex. But EMC believes any operations and maintenance team is up to the challenge--if properly trained. We offer an extensive program of live and videotaped training classes and seminars, onsite and hands-on.

WATER RESOURCES MANAGEMENT

With over 30 years of water resource management experience, EMC staff can assist you in securing a cost-effective, long term water supply; reduce your water demand, and decrease your operational costs. We offer expert services to water suppliers, major water users and industries, and to local/ regional governments.

OFFICE LOCATIONS

Denver, CO * Atlanta, GA * Salt Lake City, UT * Irvine, CA * Raleigh, NC * West Palm Beach, FL

WWW.EMCENGINEERS.COM