

## Crete Area Medical Center

The new \$10 million Crete Area Medical Center in Crete, Nebraska, held its grand opening on May 30, 2003. This 52,000 ft<sup>2</sup> critical access facility integrates the hospital, clinic and medical physician offices all under one roof. The facility includes 25 private patient rooms, two surgery suites, physical therapy and occupational therapy, cardiac rehabilitation area, a trauma area within the emergency department, classrooms for health education, laboratory, physicians clinic, specialty clinic spaces and a helicopter pad. Engineering Technologies Inc. provided design for the electrical systems, interior and exterior lighting, plumbing systems, medical gas systems, and life safety systems.



Reception Area



Labor & Delivery Room



Cafeteria



Emergency Room



Crete Area Medical Center Exterior

## North Star and Southwest High Schools

With the continuing growth of Lincoln, Nebraska, Lincoln Public Schools was in need of new schools, so a \$100 million bond issue was passed for the purpose building two new comprehensive high schools. ETI provided complete mechanical and electrical engineering for the recently completed North Star High School and Southwest High School, which was completed in 2002. Each of these 370,000 ft<sup>2</sup>, state-of-the-art educational facilities include classrooms each designed with five computer drops, television, intercom, clock, and an IP telephone; 600-seat performing arts theater; black box theater; industrial technology lab; full size competition gymnasium; two practice gymnasiums; indoor competition swimming pool; training and aerobic exercise areas; commercial kitchen; cafeteria; performing arts auditorium; and media center. Each school was designed to accommodate up to 1500 students.

Each school houses two hot water boiler plants and a 450-ton chilled water plant. A majority of the heating and all of the cooling for the facility is provided by a ground loop heat exchanger coupled with water source heat pumps and the chillers. Based on the attention paid to an efficient system design, a variable speed pumping scheme, and the tight control provided with the new digital control sequences, an annual energy savings in excess of 20-30% is expected over a conventional boiler and chiller/tower energy plant system.

Each school has a 3000 amp, 277/480 volt heating service, which allows the school to take advantage of the utility company's reduced heating rates, a 4000 amp, 277/480 volt, general service and a 150 kw emergency standby generator for essential and life safety emergency loads. Each school also has an addressable, ADA compliant fire alarm system that is integrated with a voice evacuation system for the gymnasiums, theater, swimming pool and large commons areas. The buildings use a voice over IP telephone system that is distributed over the computer networking system. State-of-the-art connectivity systems were designed by our firm and contain over 1,600 individual data drops terminated in seven data rooms. Fiber optics connect all data rooms and serve as a hub for other LPS schools reducing the need for outside telephone lines. In addition, intercom, clock, and class tone were integrated into one complete system.



Southwest High School



Commons Area/Cafeteria



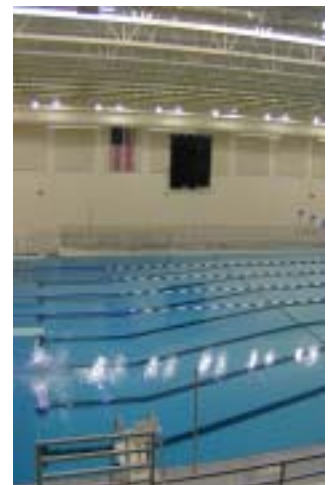
Auditorium



North Star High School



Library/Media Center



Competition Swimming Pool

## Atlantic Nursing Care Facility

ETI provided complete engineering services for this new 39,200 ft<sup>2</sup>, 100-bed assisted living facility in Atlantic, Iowa. This facility includes both private and semiprivate rooms, complete kitchen/dining area, nursing areas, commons area and separate laundry facilities. All HVAC systems were required to be balanced to maintain pressure relationships between "dirty" and "clean" areas. In addition a nurse call and Wanderguard system were incorporated into the facility. The facility is expected to be completed in April 2004.



Atlantic Nursing Care Facility (Rendering provided by Architectural Design Associates)

### A Few Recently Awarded Projects:

- ◆ Steve and Barry's University Sportswear Elyria, Ohio
- ◆ Lazlo's Restaurant Omaha, Nebraska
- ◆ Wilber-Clatonia Elementary School Wilber, Nebraska
- ◆ Ute Indian Elderly Village Ft. Duchesne, Utah
- ◆ Kearney Federal Credit Union Kearney, Nebraska

### A Few Projects Currently in Design:

- ◆ New Covenant Community Church Addition Lincoln, Nebraska
- ◆ NANG Norfolk Fire Station Facility Norfolk, Nebraska
- ◆ Walthill School Addition Walthill, Nebraska
- ◆ St. Francis Memorial Health Center Linear Accelerator Replacement & C.T. Scan Room Remodel Grand Island, Nebraska
- ◆ Victory Hills Assisted Living Facility Kansas City, Kansas

### A Few Recently Completed Projects:

- ◆ Westminster Church Addition Lincoln, Nebraska
- ◆ Lefler Middle School IAQ Renovation Lincoln, Nebraska
- ◆ Northeast Nebraska Telephone Co. Jackson, Nebraska
- ◆ Geneva YRTC HVAC Replacement Geneva, Nebraska
- ◆ York Physical Therapy Clinic York, Nebraska

## Telecommunications/Connectivity Design

On each and every project ETI is involved with, our engineers look at new technologies and systems to determine whether they would be beneficial to the client and their facility. Some of these state-of-the-art technologies that have been incorporated into our designs include:

- ◆ Computer Networking:
  - ◆ Wide Area Network
  - ◆ Local Area Network
  - ◆ Wireless Systems
  - ◆ BICSI Compliant Systems
- ◆ Telephone Systems
  - ◆ Conventional Systems
  - ◆ Voice-Over-IP Systems
- ◆ Backbone and Horizontal Cabling
  - ◆ Category 3 through Category 5e Copper Solutions
  - ◆ Fiber Optics
  - ◆ Cable Management
- ◆ Intercom & Paging Systems
- ◆ Nurse Call Systems (Wired & Wireless)
- ◆ Distance Learning & Teleconference Facilities
- ◆ Paperless Technologies



North Star High School Computer Network System

If you would like additional information on any of these technologies, please feel free to contact our office.

## Our Lady of Guadalupe Seminary

This facility in Denton, Nebraska is used as a seminary for the Priestly Fraternity of St. Peter. When all phases are complete, the facility will be approximately 100,000 ft<sup>2</sup>. Phase I was completed in the Fall of 2001 and comprised of offices, library, classrooms, kitchen, dining room, and a 65-room dormitory wing. The Seminary was designed in the style of the 15<sup>th</sup> century European monasteries using modern construction materials. Mechanical and electrical systems had to be sensitive to the Seminary's design. This includes minimal accessible ceilings and minimal fluorescent lighting. The heating and cooling system was designed without equipment being visible around the building's perimeter. This is an entirely electric facility with a geothermal loop heat pump system providing conditioning of all the spaces.

Engineering Technologies, Inc. is currently designing Phase II of the project which consists of a 51-Room Dormitory Addition. Phase III, the Chapel Addition of the project, is scheduled to begin next spring.



*Our Lady of Guadalupe Seminary*



*Chapel*



*Library*

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