PARSONS

Newark Public Schools
Newark, New Jersey

CLIENT:
New Jersey School Development Authority

PROJECT VALUE:
$1.6 billion

PROJECT DURATION:
2001 – 2011

SERVICES PROVIDED:
Comprehensive assessment and planning advice
Program management
Design and construction management

The State of New Jersey invested $8.6 billion in public school construction in response to the state's court order, "New Jersey Educational Facilities Construction and Financing Act" of 2000, to increase capital construction aid to school districts in urban areas. In 2008, Governor Jon S. Corzine signed legislation authorizing $3.9 billion in additional funding for public school construction. This construction program will help develop New Jersey's special-needs districts (formerly known as the Abbott districts) by improving health, safety, and classroom instruction.

Approximately 40,000 students are enrolled in Newark's public schools, making this district the largest school system in New Jersey. Under a joint venture, Parsons is responsible for managing the design and construction of the Newark School District's improvement program. Newark is the largest of the 31 special-needs districts statewide. This multiyear, $1.6 billion program includes 34 replacement schools, 30 renovations or additions, and 9 new schools designed to serve concurrently as community resources. The work on these new schools includes complete campuses with classrooms, administrative space, dining facilities, libraries, media centers, auditoriums, and athletic facilities for its playing fields, pools, and gymnasiums. The pre-K through Grade 8 level school size is limited to 1,000 or fewer students. The high schools are designed for up to 1,400 students.

Entrance to auditorium and gymnasium at SPHS

As the firm responsible for managing the Newark School District's improvement program for the New Jersey School Development Authority (SDA), Parsons oversees all phases of design and construction, including its health and life-safety projects, onsite additions, renovations, remodeling, and new construction. Our services encompass:

- Comprehensive planning advice for the 5-year master plan, audits of project budgets, and development of cost control and containment reports for procurement and project delivery methods.
- Coordinate and support land acquisition for the new schools.
- Plan, budget, master schedule, report status, and maintain the management information system.
- Design management, construction management, procurement management, and coordination with school district staff and onsite field representatives.

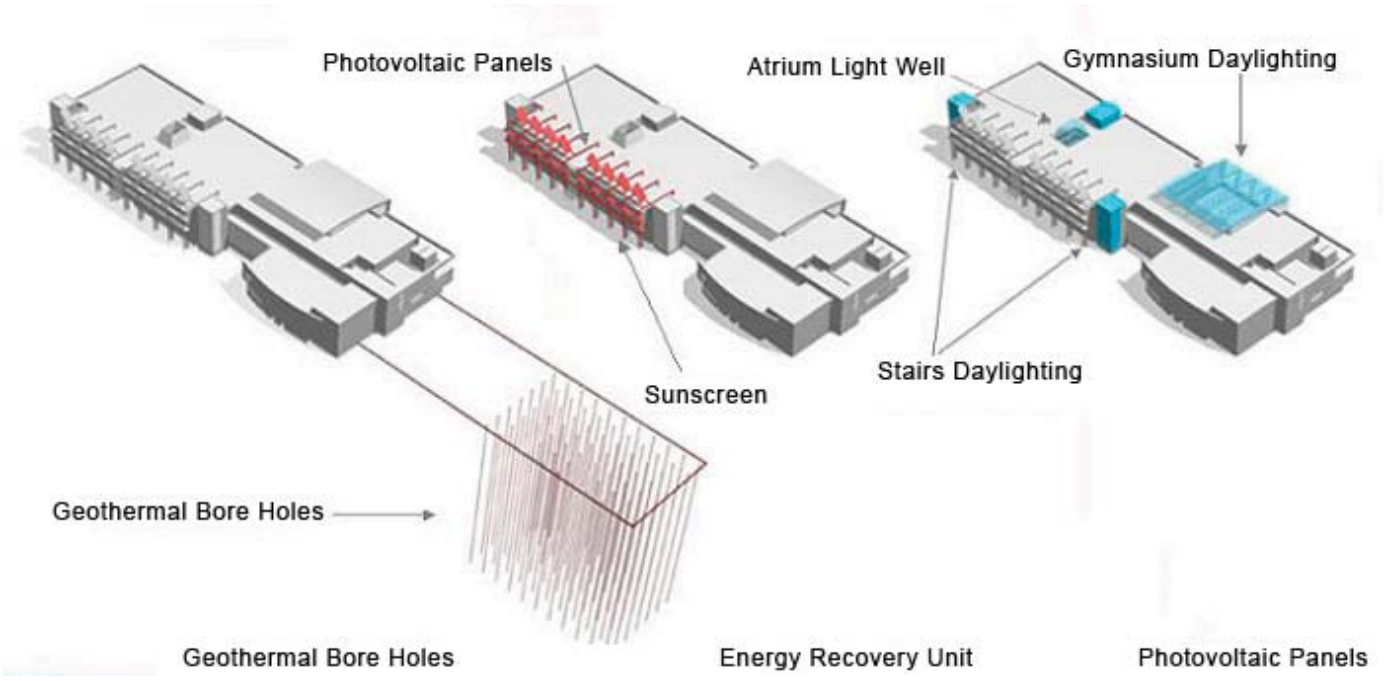
Parsons' proprietary project controls software, IMPACT, electronically links the program contractors to the construction managers and, at the same time, interfaces with scheduling and financial reporting on the program.

Most of existing schools included in the renovation or addition portfolio are well over 50 years old. Science Park High School (SPHS) is the first new high school built in Newark in more than 40 years, and it is one of the first beneficiaries of the Newark School District's improvement program. This 275,000-ft^2 facility is located on a 6-acre site bounded by Norfolk Street, Market Street, South Orange Avenue, and Richmond Street. SPHS is configured on two contiguous city blocks. Faculty/staff parking and recreational facilities such as the softball and soccer fields are on the adjacent block.

SPHS has an enrollment of 887 students in Grades 7 to 12. Its design is based on fulfilling the school's mission as Newark's magnet science high school. This facility was designed and developed in partnership with University Heights/Science Park and the four Newark institutes of higher learning (Essex County College, New Jersey Institute of Technology, Rutgers–Newark, and the University of Medicine and Dentistry of New Jersey), collectively known as CHEN or the Council for Higher Education in Newark. SPHS is near the CHEN institutions. This location is ideal because it supports a close relationship between the high school and the universities.

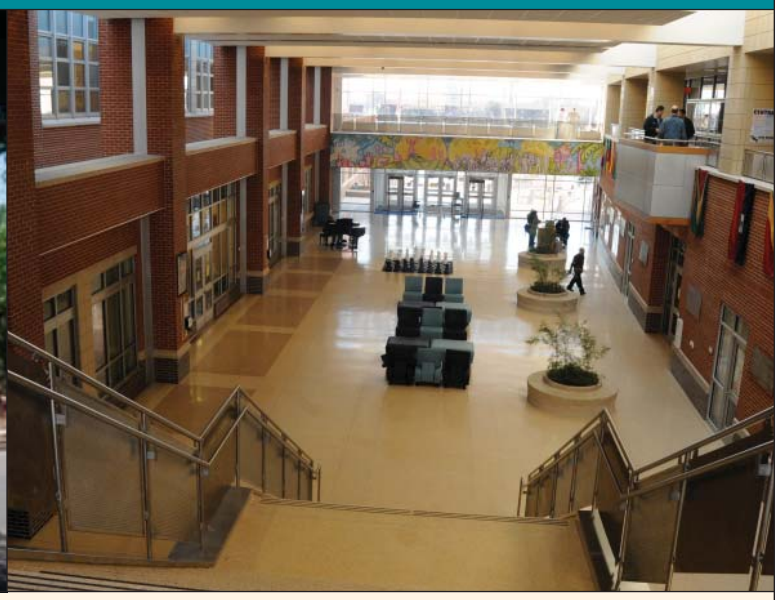
Along with teaching the core subjects (English, math, science, social studies, world languages, electives), SPHS' curriculum focuses on state-of-the-art, experiment-based learning. The heart of the school, like schools in other densely populated areas of Newark, is an "academic village." Four distinct "neighborhoods" or educational learning modules each house up to 300 students. Special highlights of the SPHS facility include:

- Media/technology center that features an instructional television lab
- Long-distance learning system and computer-aided design (CAD) classroom space divided into academic villages or educational learning modules for interdisciplinary instruction
- Lecture rooms
- Fabrication room for robotics and other science-related activities
- Independent science research area
- Auditorium
- Gym and cafeteria
- Space for student services



SPHS' alternative, sustainable energy: geothermal, energy recover, photovoltaic

First Avenue District School (side view while under construction)



Lobby of Central High School

It should also be noted that SPHS is a sustainable facility and incorporates performance features for LEED (leadership in energy and environmental design) silver certification. In fact, the design of all new schools constructed under this New Jersey program requires that each school be LEED certifiable (made possible through the design team's aggressive pursuit of utility and government rebates). The school has a state-of-the-art solar and geothermal energy system. The school also has atrium and stair light wells as well as sunscreens.

Two other prominent Newark projects are the First Avenue District School and Central High School. Completed in September 2007, the First Avenue District School earned an Award of Merit from *New York Construction* magazine in connection with its *Best of 2008* awards program. This $40 million project offers green design features that will qualify it to receive 31 different LEED credits. Some of these green features consist of recycled materials and geothermal heating and cooling systems. The elementary and middle school also uses low-flow water fixtures in its restrooms and high-performance lighting systems. Low e-glass is also incorporated. This 152,000-ft^2, two-story facility was designed to fit into the surrounding residential neighborhood and is accessible by foot. The school slopes 7 ft toward the south, which allows for underground parking. This school also features a courtyard that is accessible through the surrounding classrooms, a 500-seat auditorium, and a 250-seat cafeteria/gymnasium.

Central High School, which serves 808 students and is located in Newark's Central Ward, was completed in September 2008. This new school replaces the former 80-year-old Summit Street building. The new $102 million structure of brick and glass includes a three-story academic wing and a shared school/community wing housing an auditorium, gymnasium, and media center. A vaulted atrium lobby connects the two wings. The school also offers a full dental learning center and a childcare center, parking, and recreational space.

As the firm responsible for managing the Newark School District's improvement program, Parsons is playing a key role in developing high-performance schools based on the following design criteria:

- **Healthy and Productive** – enabling students and teachers to achieve their maximum potential
- **Cost-Effective** – providing facilities that save money over time by being efficient to build, maintain, and operate
- **Educationally Effective** – creating superior teaching and learning environments
- **Sustainable** – minimizing environmental impacts and maximizing the use of nonpolluting, renewable resources
- **Community Centered** – creating schools that are integral parts of their communities

Newark is in a highly dense urban environment, requiring close supervision of construction, proactive leadership of architects/engineers, and active engagement with the local community. Parsons has provided design and management services for its educational clients for more than 40 years. We are recognized for understanding our clients' needs and for our innovative solutions in addressing those needs.

Administrative corridor at SPHS