



"Nearly \$200 million and counting. Lakewood High School is one of the most recent school projects completed by merit shop contractor C.T.Taylor, on time and within budget. With an additional \$31 million currently under construction, C.T.Taylor is proud to be one of the largest and most successful builders in the region of educational facilities for the 21st century."

21st century learning

Cutting-edge technology, forward-thinking architecture defines Lakewood school

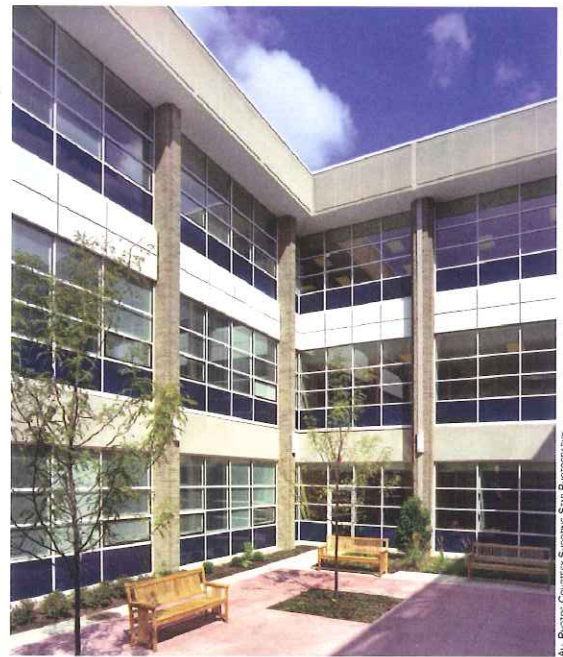
STORY AND PHOTOGRAPHY BY TODD WILLIAMS

The latest step in Lakewood's ambitious school building program showcases some of the latest design and technology innovations in high school construction. From a state-of-the-art culinary center to an advanced horticulture program to cutting edge Internet technology, designers have imbedded the first phase of the Lakewood High School project with ideas that will keep the school at the forefront of educational offerings.

Input from the community, educators and students helped the school's architect, Rodwell King of Akron's GPD Group, design a high school for the future while holding costs down. GPD's involvement in Lakewood's school development program began in 2003 when the firm snared a contract to build two elementary schools and the first phase of the high school project. According to King, the original plan was to renovate the entire 400,000-sf high school, but because of the disruption that this would cause as well as the cost, the district decided to renovate the newer, 1970s-era portion of the building first. The second phase will be for the complete demolition and reconstruction of the older, east side of the building. As of now, a date for the final phase has not been set.

GPD began the design of the \$23 million, 174,400-sf high school initial renovation phase in 2007 with construction commencing in 2008 and concluding in August 2009. "Lakewood," King points out, "is a unique community because of the intense citizen involvement in the school system. My initial concepts for the building were presented at a couple of community meetings. I came away from those meetings with a real sense of what the community wanted and how my design would evolve to meet those expectations."

Richard Berdine, treasurer of the school district, notes that the first phase of the high school



A courtyard provides quiet space for students and faculty.

AL Photos Courtesy: Sherman Sam Photography



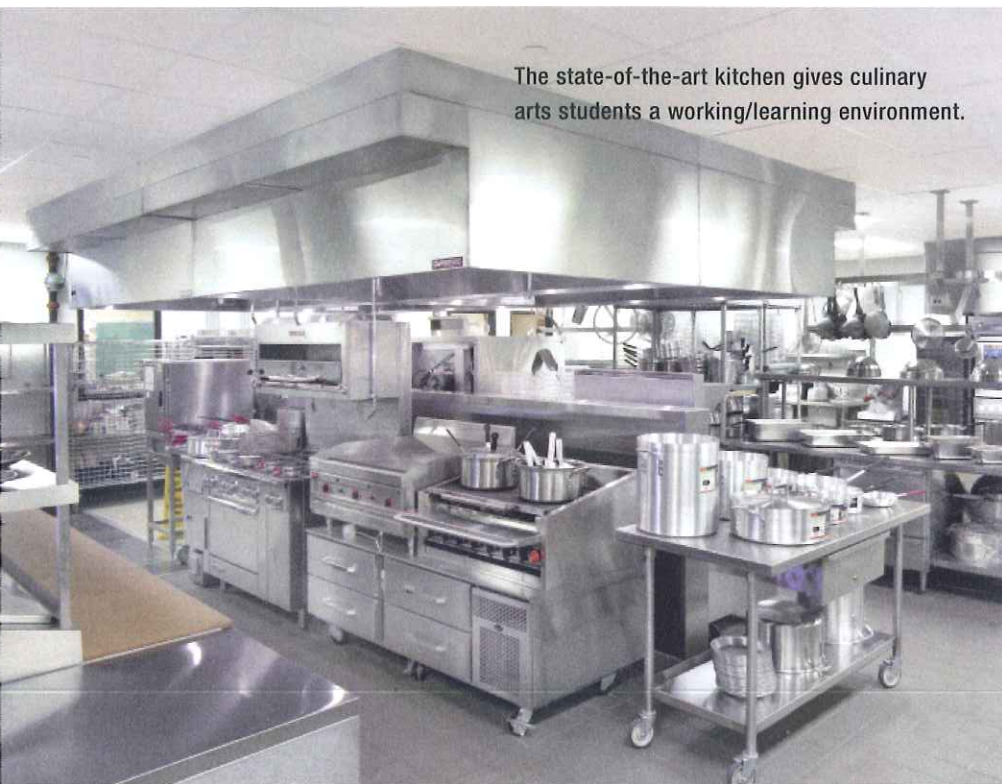
Skylight effuse the arts classroom and gallery with natural light.

“We have done four projects with C.T. Taylor totaling twenty eight million dollars. CT has performed admirably.”

– Rick Berdine, treasurer of the school district

construction is the seventh school project the district embarked on since beginning its rebuilding program in 2005. The last phase will be the reconstruction of the east part of the high school and construction of two new elementary schools at an estimated cost of \$75 million.

Berdine says, “We are designing our schools for the next 50 years. Part of the



The state-of-the-art kitchen gives culinary arts students a working/learning environment.

Project specs:

Lakewood High School

Architect: GDP Group

CM: Regency/Turner Construction Co.

Cost: \$23 million

Timeline: Initial renovation design 2007, construction commencing 2008, concluding August 2009

Vendors:

- Planning Advocates Inc., owner’s consultant
- Regional program consultant, Quandel Group
- Emerald Environmental, abatement consultant:
- URS Corp., geotechnical engineering
- Osborn Engineering, commissioning agent
- PSI, construction testing and geotechnical
- Lakeside Blueprint, print house
- B-Clean Cleaning Service, cleaning
- C.T. Taylor, general trades
- Tek Systems Design, IT design
- Conti Corp., plumbing
- Castle Heating & Air, HVAC
- Fire Protection Inc., fire suppression
- Atlas Electric Co., electrical
- J.S.J. Interiors, metal studs, drywall, ceilings
- Cardinal Environmental Services, asbestos abatement
- Valley Electrical Consolidated, technology
- Palos-Chudy Co., district insurance
- Riley Law Firm, construction attorneys
- Chester L. Sumpter & Assoc. LLC, legal advisor

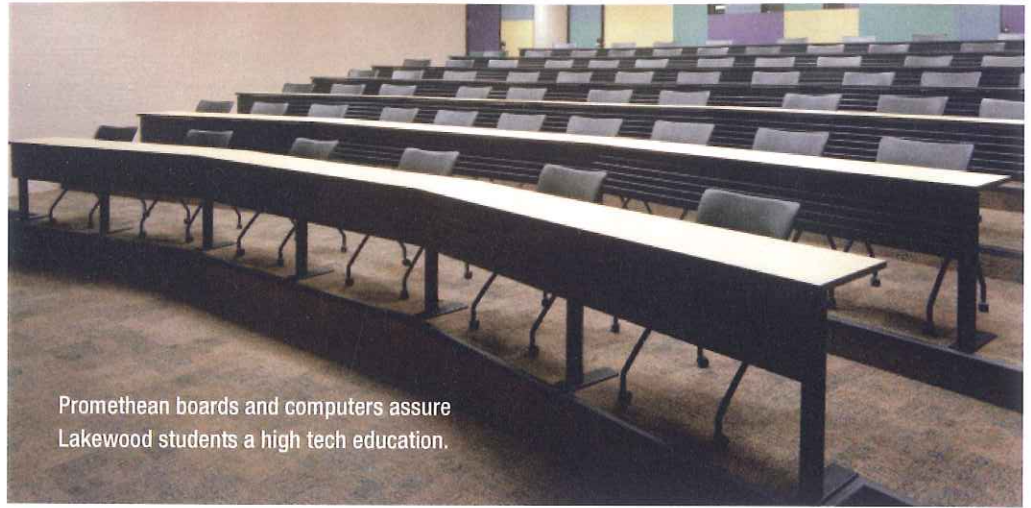
system's vision, according to the treasurer, is the total integration of technology into the new schools, especially the high school. He points to each classroom featuring four student computers and a teacher computer, Promethean light boards, 30-station computer labs in each school building and modern science labs, just to name a few.

To this end, King designed the renovation of the three-story section to include the latest in technological features. The scope of the project includes vocational rooms, general classrooms, art rooms and a gallery, three 77-seat tiered lecture rooms, as well as biology and horticulture areas. An added bonus to the project is a large, landscaped interior courtyard open to faculty and students.

What's cookin'

King points to the culinary arts center as one noteworthy highlight of the new school. This kitchen and restaurant, designed by King and Carley Michael, a food service designer with TriMark/SS Kemp, mirrors a commercial restaurant set-up. The kitchen, 50-seat restaurant, and adjoining lecture space will serve some 20 students in each class in the district's culinary arts program. The area, with some \$300,000 in commercial grade kitchen equipment, is designed to be a full teaching facility for culinary arts with input from the culinary arts faculty, according to Michael.

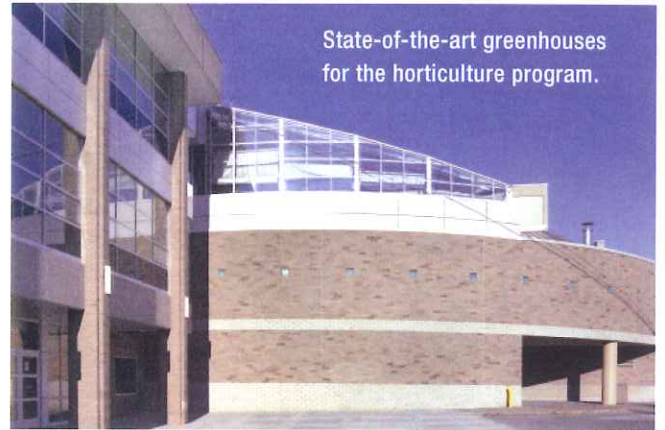
King is also very happy with the out-



Promethean boards and computers assure Lakewood students a high tech education.

come of the fine arts area, noting it includes the former two-story library that was transformed into an atrium and surrounded by art classrooms that include a ceramic kiln and a traditional film photographic darkroom. Skylights in the space give it a very open, light and airy feeling.

Another highlight of the renovation is the state-of-the-art technology systems. Tek Systems Design, Fredericksburg, with input from the Lakewood staff, designed all the advanced technology. Because the high school is a major network operations center, with Internet for every school in the district being fed through this space, the design of this system was crucial, King



State-of-the-art greenhouses for the horticulture program.

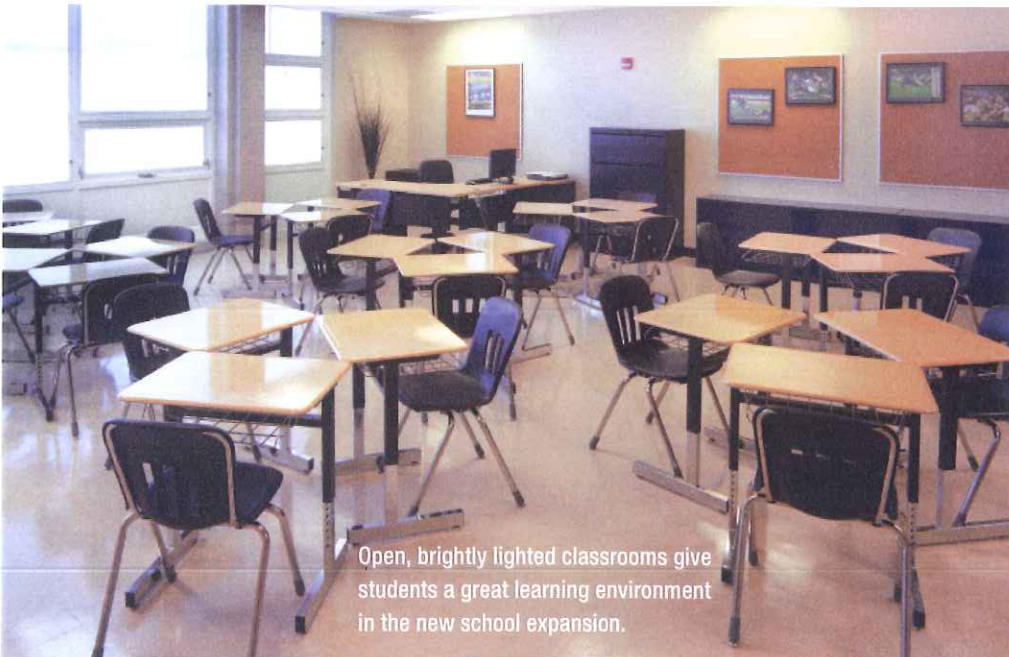
explains. The building is wired for the Internet including wireless technology. Each classroom has Promethean boards and digital video projection.

King cites the horticulture program's new space as another innovative design in the school. This space includes a new, 700-sf greenhouse heated with hot water. This structure, including classroom space, is located on the third floor of the building on the roof of the adjacent natatorium. King notes the greenhouse features an attached weather station that actually controls the house's ventilation system.

Berdine notes that C. T. Taylor Co. has worked on four of the Lakewood schools, including the high school renovation, and that its resolution of past structural deficiency issues in this project will enable the school to serve the needs of students well into the future.

Demo work

King explains that demolition work on the school was fairly easy because of the metal interior wall structure. This made reconfiguring the building into new teaching areas an easier task than had the walls been block construction.



Open, brightly lighted classrooms give students a great learning environment in the new school expansion.

After the interior gutting of the school, all electric and HVAC were replaced.

According to Robert Teitenberg, Turner Construction Company's project manager for the Regency/Turner Construction Company team, in spite of a few minor challenges, the project went very smoothly from start to finish. One challenge was the interconnectivity between the old HVAC system and the new lines. Workers also had to watch out for debris in the old water lines and the hot water heating system.

He also recalls that the site space in which to renovate was very restrictive. "The question was how do we do our job in this very limited area. The people of Lakewood were very cooperative in dealing with this major construction project in this dense neighborhood. In fact, we had to remove several homes that were very near to the south side of the building, allowing for more parking and space for safety purposes. All in all, it went very smoothly," Teitenberg notes.

"Lakewood was fortunate to have outstanding superintendents assigned to these projects. CT's people know their business."

- Rick Berdine, treasurer of the school district

Another challenge cited by King and Teitenberg was how to handle the logistics of moving students out of the half of the building being renovated. This was solved by the placement of \$3.5 million worth of modular classrooms to the north of the high school. They will continue to be used through the construction of the second half of the high school.

"Initially," Berdine recalls, "we were somewhat concerned about having students cross the street to go to these modular classrooms. But along with police cooperation, everything has gone well. Since we don't have school bus service in Lakewood, our students are used to walking and riding bikes to school."

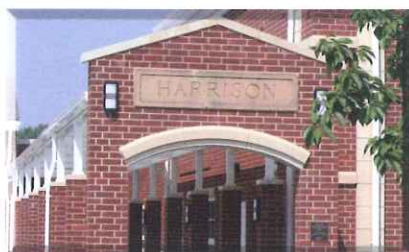
"We also had to coordinate our construction schedule very closely with the school officials," Teitenberg says. "We had to erect barrier walls within the school to isolate the construction in one wing from the kids and staff on the other side. Because of noise and

construction dust, this was essential."

All in all, Teitenberg and King agree the entire project went very smoothly. Berdine echoes that sentiment, adding that C.T. Taylor and other subs were great to work with.

Berdine concludes, "Technology is one of the centerpieces of this project and for

all the complexity of integrating it into the project, it turned out very well. There is nothing we don't offer at Lakewood High School and we have the facility and technology to follow up on that promise," he notes. "This is a first class structure. It's not Taj Mahal crazy, but a very nice, functional building." **BXM**



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