

Culinary Times @ RIDGEVIEW HIGH



Ridgeview High School, Redmond, Ore., offers a culinary arts program that delivers foodservice education in a working kitchen.

By Janice Cha

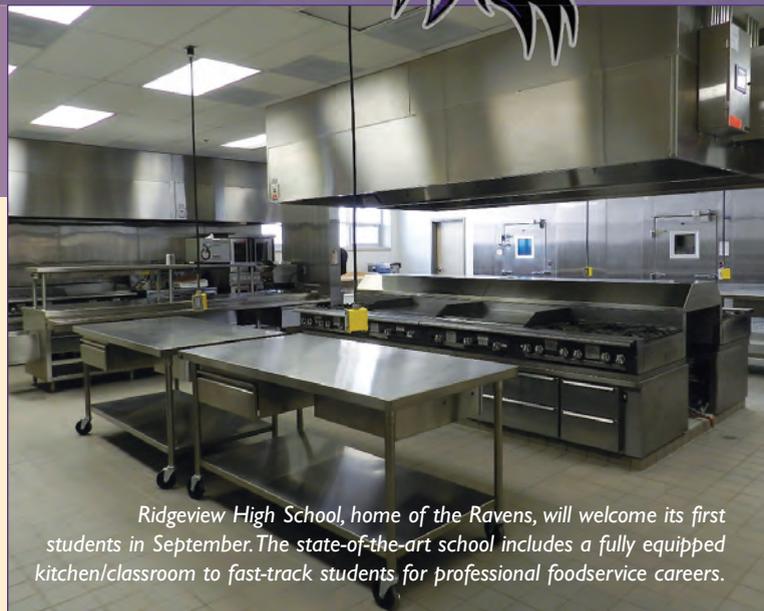
This September, Redmond, Ore., high schoolers will stream through the doors of the town's brand new \$60-million, 280,000-sq.-ft. school into a whole new stratosphere of hands-on learning.

One part of Ridgeview High's state-of-the-art curriculum will fast-track students for professional foodservice careers. The school's culinary arts program features a fully equipped professional kitchen and adjacent 40-seat classroom-restaurant. Immediately next to the training kitchen is the school's traditional kitchen and, beyond that, the school's cafeteria servery.

But what makes the twin kitchens so noteworthy—in addition to their smart design—are a number of cutting-edge equipment innovations, including on-demand ventilation, a glycol chilling system, and a water-saving warewasher, that will help the school attain LEED Gold certification.

Ridgeview is one of a new breed of schools meant to accommodate a growing population, embrace emerging technology, incorporate sustainability and offer both college-prep and career-path education. In addition to culinary training, the school also has labs for teaching medical and dental technician skills, media production, pre-engineering and advanced sciences. The school has space for 1,400 students.

When the Ridgeview project was launched nearly three years ago, RSA Inc., Portland, Ore., headed by Principal Ray Soucie, FCSI, was brought on board to design the main kitchen, culinary arts center, dishroom, storage areas, food waste handling and the student servery.



Ridgeview High School, home of the Ravens, will welcome its first students in September. The state-of-the-art school includes a fully equipped kitchen/classroom to fast-track students for professional foodservice careers.



Four Goals

Soucie and the design team had four goals in mind as they created Ridgeview's foodservice facilities: optimize flow, avoid equipment duplication, stay within budget and contribute sustainable elements to help the facility attain LEED Gold status.

"We knew up front that the culinary arts area had to be a certain size relative to classrooms, and that locating it next to the school kitchen was a given," Soucie says. "We also knew the scullery would have to be positioned to serve both kitchens."

With those elements sketched out, Soucie's design started at the receiving door, and the layout flowed from there: The receiving area determined the location of cold storage and established the location of the common wall that divided the culinary arts kitchen from the school kitchen.

"The nutrition services manager wanted open space and within that space, the ability to rearrange tables," Soucie says. Mobility and a "system approach" also was key. "Roll-in racks wheel from the cookline straight to the blast chiller before rolling to the walk-ins. Mobile hot-holding cabinets and chilled sheet pan racks also fit pass-throughs that open directly into the student servery to facilitate supply," he explains.

Synergy And Separation

In developing a classroom kitchen next to the main kitchen, Soucie says the team created two adjoining spaces "that work independently and yet can still share common equipment."

Ridgeview's culinary arts kitchen takes up 2,400 sq. ft. Dry and cold walk-in storage is located along one wall. The cookline that students use to fulfill orders from the classroom-restaurant is equipped with a six-burner range, griddle, fryers with automatic filtration and stacked convection ovens. A table located parallel to this line is equipped with a food warmer, conveyor toaster and microwave oven. The table also has a generous tray landing space that allows student servers to pick up orders and shoot right through the door to the classroom-restaurant.

The center of the kitchen is devoted to culinary practice and features an island suite equipped with four ranges and four griddles. Long prep tables flank both sides of the island. An ice machine, a reach-in refrigerator and a beverage station line the side wall shared with the classroom-restaurant, and a prep sink plus shelving are arranged along the wall shared with the main production kitchen.

The high school's production kitchen and adjoining servery cover 3,808 sq. ft. Here, the equipment leans more toward vol-



Ridgeview High's culinary arts kitchen features a hands-on range/griddle cooking island lined by prep tables on either side. Bases are glycol-chilled ingredient drawers.

ume production. The cookline includes a roll-in blast chiller, a roll-in combi oven and two stacked combis, plus two roll-in holding cabinets; again, the roll-ins all work together. A simple prep table is close by to stage ingredients. Four more mobile prep tables are stationed in the center of the room; power cords hang from the ceiling to deliver power wherever it's needed. Staff washes produce in a prep sink station near the walk-ins.

Two open archways lead from the production kitchen into the servery. The wall between these openings is equipped with the pass-through refrigerator and pass-through hot holding cabinet mentioned previously. The pass-throughs are flanked by a pair of reach-in refrigerators, next to which is space to park hot holding cabinets from the cookline. All of this holding equipment supplies hot and cold display cases on the servery line's front counter.

Last but not least, Soucie strategically positioned the dish-room/scullery between both kitchens, enabling workers to feed into the area without problematic cross traffic. The scullery's scrapper and the operation's warewasher were chosen for their low-water requirements—an important consideration in Redmond's high desert setting.

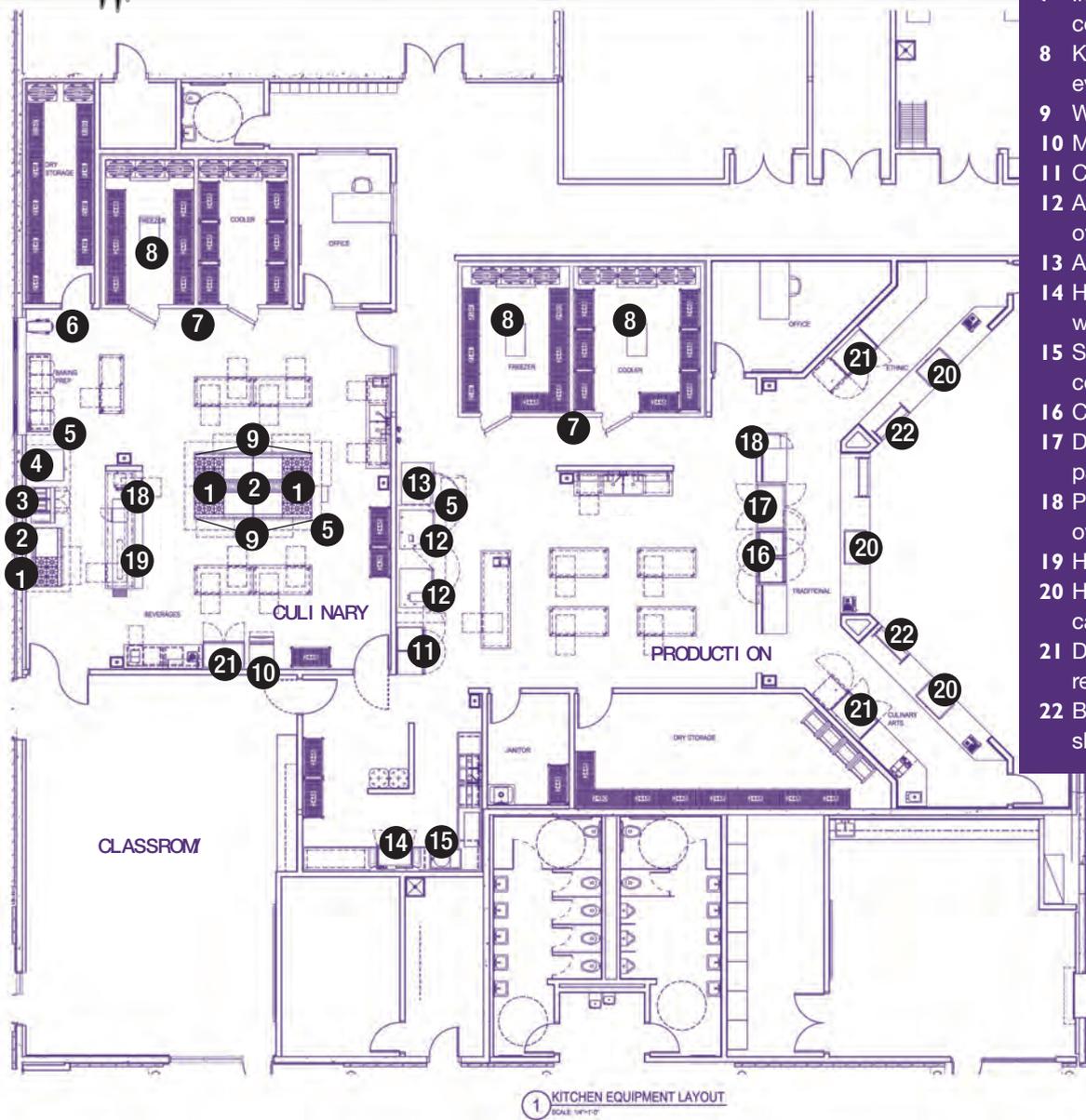
Kitchen Innovations

An assortment of cutting-edge equipment contributes to Ridgeview's bid for LEED Gold status. The list includes shared ducting and smart controls on ventilation hoods, a kitchen-wide glycol chiller system, modular cooking units, and more.

To justify the investment in cutting-edge equipment and systems, Soucie had to show their return on investment up front. "The school team was receptive to alternative ideas, but the administration also held us, the designers, accountable. We had to



Ridgeview High School, Redmond, Ore.



EQUIPMENT LIST

- 1 Wolf range
- 2 Wolf griddle
- 3 Frymaster/Manitowoc fryer
- 4 Blodgett/Middleby oven
- 5 Halton M.A.R.V.E.L. hood
- 6 Varimixer floor mixer
- 7 Imperial walk-in cooler/freezer
- 8 Kairak compressor/evaporator
- 9 Wolf refrigerated drawers
- 10 Manitowoc ice machine
- 11 Cres Cor holding cabinet
- 12 Alto-Shaam combi oven/steamer
- 13 Alto-Shaam blast chiller
- 14 Hobart/ITW conveyor warewasher
- 15 Salvajor food waste collector
- 16 Cres Cor hot cabinet
- 17 Delfield/Manitowoc pass-through refrigerator
- 18 Panasonic microwave oven
- 19 Hatco food warmer
- 20 Hatco heated display case
- 21 Delfield/Manitowoc reach-in refrigerator
- 22 BSI portable food shields



“Eagle, a broadline manufacturer of commercial foodservice equipment, is pleased to sponsor FER’s Unit/Kitchen Design feature. To learn more about us visit www.eaglegrp.com.”

support our recommendations by showing the math,” Soucie recalls. For that, the manufacturers and their reps played key roles in documenting savings.

All The Ducts In A Row

The exhaust/ventilation system has a couple of points of interest: an unusual shared ductwork arrangement and a smart controller that permits on-demand ventilation.

The hoods above the three cooklines feed into one main duct leading to a single rooftop unit. A smart controller senses equipment heat levels and adjusts fan speed and damper angles accord-

ingly. “We were able to eliminate the cost of two duct-shaft roof penetrations and their fans by specifying motorized, adjustable dampers,” Soucie explains.

“The system monitors the heat levels above the cooking equipment, sensing the difference between idle temperatures and cooking temperatures. As demand for exhaust cfm increases, an electronic signal ramps up the speed of the rooftop fan.”

“The adjustable dampers within the ducts balance air flow and static pressure automatically and on the fly,” Soucie adds. “The system is interlocked with a makeup air system, so it can adjust room air volume and temperature as needed. The overall reduc-

tion on HVAC and the exhaust system are considerable.”

The computer-controlled system has the added benefit of real-time Internet monitoring. “If you suspect the system requires servicing, you can call the manufacturer’s tech support people and they’ll be able to see the same information you’re looking at. It’s a great diagnostic tool,” Soucie says.

For students, the “wow factor” is a donated plasma screen on which the kitchen operations’ energy use will be displayed in real time. With it, the students clearly can view the connection between equipment use and energy costs.

“The math and science of foodservice will take on new meaning,” Soucie explains. “When all six burners are turned on, students will be able to walk over to the screen and see the change in exhaust speed—it’s real-world feedback.”

The hoods above the production and culinary arts kitchen cooklines feature smart controllers that sense heat levels and adjust fan speeds and dampers accordingly.



Smart Chilling With Glycol

Another example of Ridgeview’s state-of-the-art equipment is its glycol-based refrigeration system. More common in European foodservice facilities, the kitchens’ key cold equipment (walk-in coolers, under-counter refrigerated drawers and blast chiller) chill contents via a closed-loop system that circulates a water/glycol mixture. Glycol chilling, combined with a remote parallel rack system, not only reduces the use of greenhouse gases, it also eliminates ambient heat produced by compressors and trims costs by cutting the number of compressors needed.

Because circulating fluids for long distances is easier than maintaining the pressure required to circulate gasses, a glycol chilling system was chosen, giving designers the flexibility to install rack-run lines in lengths of up to 750 ft. Quick disconnects branching off along the main glycol lines—including one for each under-counter drawer section—allow individual pieces of refrigeration equipment to be serviced without having to shut down the entire cooling system.

Batch Cooking = Efficiency

“Specifying a combination of stacked combis, a roll-in combi and a roll-in blast chiller contribute to the district’s goal of cooking to inventory [vs. to service] and meeting future catering needs,” Soucie says. Touch-screen graphics on the combis and a built-in computer make the system intuitively simple to use and allow employees to download a month’s worth of activity onto a thumb drive.

The combis reduced the amount of ovens needed, which led to a shorter width exhaust canopy and a lower cfm demand.

FACT BOX

MENU/SEGMENT: Schools

OPENED: June 2012

STUDENT POPULATION: 1,400

MEALS/DAY: 900

TOTAL SCHOOL PROJECT COST:
\$60 million

KITCHEN EQUIPMENT PACKAGE:
\$750,000

CULINARY ARTS KITCHEN:
2,400 sq. ft.

PRODUCTION KITCHEN & SERVERY: 3,808 sq. ft.

SHARED SCULLERY: 340 sq. ft.

KEY DESIGN PARTNERS:

Foodservice Consultant: Ray Soucie, RSA Inc., Portland, Ore.

Architects: Steve Olson, DOWA-IBI Group, Portland, Ore.

Engineer: Scott Miller & Jessie Swanson, MFIA, Portland, Ore.

Fabricator: Pacific Stainless, Portland, Ore.

Equipment Dealer: Bargreen Ellingson, Bend, Ore.

But Wait, There’s More!

Additional LEED-worthy elements include walk-in insulation, a nifty floor-cleaning system and water-saving dishroom equipment.

The walk-ins were specified with an extra inch of insulation, approximately 5” total. The insulation, combined with smart-defrost evaporators, will allow Ridgeview to save about \$1,200 a year in energy costs.

Cleaning the kitchen’s floors will be easier thanks to a 150-ft.-long hose and spray-wash assembly. The hose ends in a wand fitted with a rotating arm that sprays soapy water onto the floor. “The reel allows the hose to reach any point in the kitchen, all the way to receiving,” Soucie says. “It’s lightweight and comes with various attachments depending on the cleaning task.”

In the scullery, the design team contributed toward LEED points by specifying a rack conveyor dishmachine that uses up to 70% less water than units available just a few years ago, as well as a scrapper

that eliminates the need for a disposer.

“The scrapper keeps food waste out of the sewer system by catching big debris in a strainer basket; it uses a recirculating plume of water,” Soucie says. “A disposal unit can use up to 7 gals./min., but the scrapper uses less than half that, and it saves on labor by pre-washing caked-on food.”

These are just a few of the elements that contributed to Ridgeview’s bid for a LEED Gold certification. In the meantime, some very lucky Redmond culinary students will get a golden education this year as they make their way into the hospitality industry. ●