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Mentors prepare students for design careers

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BY: Nathalie Weinstein

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Look out, architects and engineers. There is a new contingent out there that can prepare a full Request for Proposals response for a variety of project types - and have it done in 24 hours.

Oh, and they're teenagers.

Portland-metro-area high school students got a crash course in working in the building industry when they were paired with local professionals as part of this year's assignment from the **ACE Mentor Program**, a nonprofit group.

"We had to study all of the processes that go into a building to finish this project," Westview High School student **Ronak Patangé** said. "It helped us learn what making a building is all about."

This year, students from 30 schools were separated into six groups. Each group was given an RFP to design a fire station, a library, or a public park and a transportation building. Con-way Inc. provided the project site - a piece of property the company owns near Northwest Raleigh Street and 20th Avenue.

Patangé's group, for example, was tasked with designing a fire station.

Meeting for two hours every two weeks for 12 sessions, Patangé and teammates Hayley Nelke of West Linn High School, Omar Lopez of Southridge High School, Christina Nguyen of Southridge High School, Zach Nolting of Sam Barlow High School and Rafael Penate of Benson High School created a design with ample green space, a fire hydrant water feature and an on-site vegetable garden.

Massing models - simplified renderings that depict the building's shape - were constructed from gumballs, spaghetti and kitchen sponges. Students also used sketches and 3D modeling software to flesh out their buildings.

But it wasn't all fun. The students were restricted by a \$3 million to \$5 million budget, and they had a deadline to meet.

"We had so many awesome ideas," Nguyen said. "But we also had to work within a budget, which required a lot of sacrifices."

"Time management was our biggest challenge," said Hannah Acok of Wilson High School. Her group designed a library for the Con-way site. "We all worked together really well, so we spent a lot of time just talking about awesome ideas."



Wilson High School student Hannah Acok presents her group's proposal for a new library in Northwest Portland. The students designed a library from the ground up with assistance from their mentors. (Photo by Dan Carter/DJC)



ACE Mentor Program mentors Dan Petrescu of Hennebery Eddy Architects, left; Travis Harris of Turner Construction, second from left; Justin Hunt of Amethyst Development, center rear; and Eric Teyema of McKinstry, right, stand with their student group. The students designed a library from the ground up with assistance from their mentors. (Photo by Dan Carter/DJC)

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Dan Petrescu of Henneberry Eddy Architects, who served as a mentor in the program, said students picked up every new task quickly.

“They learned how to use (3D modeling program) SketchUp in an hour,” Petrescu said. “In one day, they had their building modeled and ready. When they graduate (from college), we’ll have a new wave of professionals.”

This was the first year that the program required students to work from a RFP. In the past, the assignment was heavily design focused. But this year, ACE Mentor Program of Oregon chairman **Ed Dean** wanted to broaden the scope to include site plans, elevations, mechanical systems and other portions of the building process. Students rotated through each aspect of the building process.

The program confirmed for some students that a career in the building trades wouldn’t suit them.

“I enjoyed learning about architecture. It was good to learn what it’s all about,” Acok said. “But I want to go into occupational therapy.”

For other students, the experience cemented the choice of a career in the building industry.

“I’m going back and forth between architecture and engineering,” said Phil Corah of Wilson High School. “But it will be one of the two for sure.”

This year’s ACE Mentor Program included 45 mentors from 18 local firms and 65 students. Dean said he was pleased with the program’s growth over four years.

“We’ve greatly expanded from the six schools we started with,” Dean said. “This year we have 30 high schools represented. We’re too young to have any graduates come back to work for us yet, but other mentor programs have seen students come full circle. I expect the same to happen with ACE.”