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Computer models to guide development in downtown Astoria

Interns measure structures as first step in creating land-use program funded by the Ford Foundation

By **SANDRA SWAIN**

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Is it a cat burglar? Is it Spider-Man? No, the person climbing up the front wall of the Fort George Brewery and Public House Monday morning was Brenton Christensen.

The 22-year-old student intern was taking measurements and calling down the figures to fellow intern Joe McCartin, 20, who was keeping track of the numbers on a clipboard.

The two Clatsop Community College graduates are gaining work experience while they help the city create a three-dimensional computer model of downtown Astoria buildings and the riverfront. It's a hands-on process accomplished with the most basic of tools - mainly a tape measure, a note pad and discerning eyes.

City of Astoria Intern Brenton Christensen, 22, scales a ladder outside of the Fort George Brewery and Public House in order to get an accurate measurement of the height of the building. The measurements will help to build a three-dimensional model of the building. The information will then be used to gauge the effects of land-use planning strategies by implementing them in a virtual environment.

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But the information gathered is destined for a state of the art land-use planning computer program being developed and tested by the Ford Foundation, which has provided a \$40,000 grant to create the three-dimensional model.

"It looks like I've gotta go back up again and get that window," Christensen said, whipping out a long yellow metal tape measure. He headed back up the rusty ladder attached to the side of the historic building at the corner of 15th and Exchange streets. Formerly an auto body shop, it now houses the Blue Scorcher Bakery Cafe as well as the brew pub.

Christensen slid the tape measure along the chipped concrete sill of a big window on the Exchange Street side. "Seven feet, six inches," he called down to McCartin. With lunchtime fast approaching, scents of cinnamon and grilled burgers began to fill the air. But McCartin and Christensen persevered with their work.

"It's pretty exciting because we can't reach half the places we're supposed to measure," Christensen said. Sometimes he has to cast the tape measure like a fishing rod. Other times he folds it over to keep it from bending forward during a vertical measurement above his head. The limit for that method is roughly 14 feet, he said.

The men are spending the summer measuring and creating computer models of every single building from Sixth to 16th Street between Exchange Street and the Columbia River, while another intern, Sara Morrissey, is gathering data on the current uses of the downtown buildings.

The process is time-consuming. McCartin said they usually start by measuring the height of a single brick, then multiplying that figure by the number of rows used to construct the building. Then they measure the windows and doors. "Often every single window and door will be the same size," McCartin said, "but sometimes we have to go back and measure that one window that's different."



City of Astoria interns Joe McCartin, left, 20, and Brenton Christensen, 22, prepare to enter measurements taken from the Fort George Building onto their computers at Astoria City Hall. The measurements will be used to create a three-dimensional computerized model of the building.

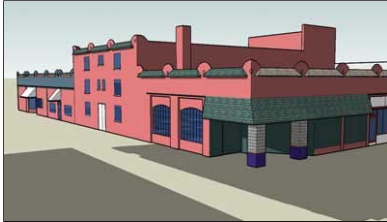
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After measuring a building, the pair head back to a tiny office at Astoria City Hall with barely enough room to accommodate their desks and computers. There, under the supervision of Clatsop Community College instructor Lucien Swerdloff, they use a computer-aided design (CAD) program to convert the building measurements into three-dimensional computerized models. Swerdloff has taught CAD at the college for years with the goal of eventually modeling the entire city.

"At the top level of the hierarchy you have a building," Swerdloff explained. "At the next level you have what we're calling the components, which are the different types of models: the massing model, the detail model, the use model, the photo model. The use model is broken down into another level, so it's like a tree diagram ... retail, office, residential and so on." He said the models are built in a way that will make it possible to incorporate social information such as uses and demographics.

Last year, the Ford Foundation selected the city of Astoria to be one of four pilot communities, including Los Angeles, Boston and St. Paul, Minn., that would participate in a Ford Foundation project called a Human development Overlay District (HDOD).

Along with the pilot community designation came a \$125,000 a year grant. But it soon became apparent that the demands of the program on Astoria's resources and small staff were too great. So Astoria was allowed to go on "observing status," which keeps the city and its project partners - ShoreBank Enterprise Cascadia and Clatsop Community College - in the loop, provides a \$40,000 grant to develop the three-dimensional models and preserves the opportunity for Astoria to rejoin the program later.



A three-dimensional model created by City of Astoria Interns Joe McCartin and Brenton Christensen shows the Riviera Building at the intersection of Marine Drive and 11th Street. ALEX PAJUNAS - The Daily Astorian

The measuring and computer modeling now under way, supported by the Ford Foundation grant, are part of Astoria's participation in HDOD, an initiative intended to integrate human capital, social and community planning through the innovative use of information technology. It provides the ability to foresee how a plan or development might affect the people who live there by including a social component that focuses on people and their reactions to change as much as on buildings, open space, transportation and other components of what planners term the "built environment."

Noting that the main purpose of the Ford Foundation grant is to model the physical environment along with the social information, Swerdloff said the models McCartin and Christensen are constructing with the CAD program are being built in a way that will make it possible to incorporate those social aspects later. The model makes it possible to gauge the effects of land-use planning strategies by implementing them virtually.

Astoria Community Development Director Brett Estes said Astoria's downtown association is already interested in the possibility of developing a Web site that could have a link to the the 3-D models to use in marketing. And he said the city is coordinating with local nonprofit organizations that have a Meyer Trust grant to look at cooperating by sharing resources and co-locating their operations. "We're kind of setting up the framework, hoping that shared intake systems, shared resources can be identified," Estes said, and finding out some of their data can be plugged into the 3-D models.

Swerdloff said the models could help developers, too. For example, he said, for someone planning to construct a new building, "we can build a model of that proposed new building and superimpose it on the existing model to see how it works, do sun studies, sight lines, proportions, really start to analyze that building. And that might be a tool that's used by the planning commission and by developers," Swerdloff said. "The challenge is to really build this model in such a way that it can be adapted and used and easily accessible by a variety of people."

City Manager Paul Benoit has high hopes for the project and said he expects it to yield something concrete and useful for Astoria. "The model being developed is cutting-edge technology. We'll get a computer model that's very interesting to us," he said. "We can use it to help people visualize change."

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