

Former LC students nominated for excellence in engineering technology award

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Two Lethbridge College graduates have been nominated for the Capstone Project of the Year award. The Association of Science and Engineering Technology Professionals of Alberta (ASET) is expected to announce the winner in late October.

John Burt and Shay Wirll are former LC Civil Engineering Technology students whose work drew appreciation from their instructors. They designed a project to test the strength of the connection between a roof truss and the top plate it attaches to. To withstand the tremendous shearing power of southern Alberta's winds, the students experimented with a threaded six-inch screw to strengthen the connection between the truss and roof plate. Normally, nails or hurricane ties are used to secure the two.

"In doing applied research at Lethbridge College, we wanted to make sure that our research topic was relevant to the area we lived," Burt said. "It seemed like a good fit. We wanted to identify which connection strength would be the strongest. What we did was construct multiple samples of each type with traditional nailing, hurricane ties, and threaded screws. We loaded it into a universal testing machine, (and) what it does is applies a tensile force to the sample. That force, after being applied, is recorded. It ultimately led to a failure of the connection, and we were able to identify that failure point."

The team's research led to the conclusion that FrameFast six-inch structural threaded screws provided the strongest tensile connection strength, compared to traditionally nailed and hurricane tie connection methods.

An ASET media release on the project reported that, "A structural threaded screw had on average a connection strength that was 54.1 per cent higher than the traditionally nailed connection and 8.9 per cent higher than the hurricane tie connection," Barry Cavanaugh, CEO of ASET, said that in the final year of their program, all the students do a capstone project in collaboration with other students to demonstrate the application of what they're doing. The faculty pick what they deem to be the two most meaningful projects to come out of that school, and the ASET awards committee and a body of subject matter experts determine a winner.

"We became aware that some of these projects were pretty impressive and pretty innovative," Cavanaugh said. "We started to look into it, and we realized that this needs to be recognized."

There's a great deal of innovation and ingenuity at play here. Some really meaningful work. We needed to make sure the public knew about this and the people who were doing it needed to be recognized."

He continued, "Most of what goes on in our community has an engineering technologists' hand in it, in some way. We ask the colleges and polytechnics — there are four of them — to pick two of the capstone projects every year as the ones that seem most appropriate and the most outstanding. It always amazes me, the great ideas and follow through that comes from these students, and it just speaks well for the engineering technology profession generally."

"When those eight finalists come up, as far as I'm concerned, they're all winners. Honestly, something like this project we're talking about kind of blew my mind that they thought about this and came up with a solution. It's meaningful. I know that southern Alberta is famous for its winds, but we get tornadoes in this province, too. It really applies to us."

Cavanaugh was appreciative of the work coming out of Lethbridge College, and said that to the best of his knowledge, within a year of graduating from the LC's Civil Engineering Technology program, 100 per cent of students are employed in their field.