New technology puts ODU's maglev in line for test runs

By DEBBIE MESSINA, The Virginian-Pilot
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Workers contracted by American Maglev Technology Inc. prepare the guideway for the installation of part of the track at ODU on Wednesday morning. stephen m. katz/the virginian-pilot.

Background: Maglev train hits bumps with station demolition

NORFOLK — Laboratory tests of technology designed to fix Old Dominion University's troubled maglev train have been successful enough to justify trials with the vehicle itself.

Crews are working this week to prepare the elevated track and the train, which have sat idle on campus for two years . Limited trials could start later this month .

"It's kind of an exciting time," said Jeremiah F. Creedon , ODU's director of transportation research.

American Maglev Technology Inc., Lockheed Martin and ODU have tested the new elements on computers and on models over the past several months. "Those parts of the system worked and worked well," Creedon said. "While none of these guarantees a success, it's all good things to have.

"Now we start going to the actual vehicle."

Project partners hope to produce the country's first magnetic levitation train, which uses magnets to float a train over elevated tracks.

The project has been plagued by a series of setbacks and became the subject of growing criticism after its much-ballyhooed September 2002 debut was scuttled.

Work ended abruptly the following month when the train didn't work, money ran out and contractors were not paid.

Efforts to solve technical problems with the vehicle, which is supposed to glide along an elevated guideway but instead bumped and vibrated, consumed the last of the $14 million budget from state and private contributors.

Congress came through with a $2 million grant to continue the project, but the money was held up while ODU and American Maglev settled $800,000 in lawsuits filed by contractors and figured out exactly how the new money would be spent.

“They seem to be progressing as expected and on schedule,” said John Harding , the top maglev scientist for the Federal Railroad Administration and a frequent critic of American Maglev’s technology.

Magnets, used to levitate the vehicle about a half-inch above track, have been modified to include sensors and will be reinstalled on the train. A section of laminated track has been torn out and will be replaced with solid track.

Researchers hope those changes, as well as a new computer control system, will provide the stability that was lacking in the original design.

Under the terms of the grant, ODU staff and faculty have assumed a greater role in managing the project money and finding the fix.

“We’re pleased the way people at ODU have taken over and pleased they seem to be spending our money wisely,” Harding said. “We’re very hopeful things will work out well.”

Creedon said ODU’s emphasis has changed from a transportation project to a research project with clear measures and decision points.

For instance, engineering students and professors are building a “bogie” – a test apparatus that is basically half the undercarriage of the vehicle – to help them diagnose problems.

What they end up with, however, will fall short of what was originally promised – a transportation system, complete with three passenger stations, to shuttle students and faculty two-thirds of a mile across campus.

But technical and financial shortcomings have forced the team to scale back and instead produce a maglev prototype – a demonstration vehicle that can run smoothly at speeds up to 40 mph on one-third of the guideway.

The deadline is April , when the federal funding agreement expires.

More money and development would be needed for the train to carry passengers.

If the maglev still does not work in April , ODU must decide whether to seek other sources of money, convert the train to an alternative transportation system, or instruct American Maglev to remove it.

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