
Feds Demonstrate Bridge Inspection Robot.

Federal transportation officials came to Allegheny County Thursday to show off a piece of new, million-dollar technology in the hope of wooing a potentially stingy buyer: the Pennsylvania Department of Transportation.

At center stage was a four-wheel robot named RABIT — Robotic Assisted Bridge Inspection Tool — that a team at Rutgers University designed and built for the Federal Highway Administration. Appearing like the lovechild of NASA's Mars rover and a Zamboni, the RABIT rolled around the floor of the Heidelberg Volunteer Fire Department Thursday morning, forced to perform part of the demonstration of its structure-evaluating talents indoors before the inclement weather cleared and officials were able to move it outside.

Federal officials see Pennsylvania as a likely buyer when it comes to bridge-safety technology, due to the state's infrastructure woes.

"We have the most structurally deficient bridges in the country, and our bridges are the oldest in the country," said Scott Christie, Pennsylvania's deputy secretary of highway administration.

Pennsylvania is home to 25,000 state-owned bridges, the third most of any state in the country, but it's No. 1 when it comes to the total of structurally deficient bridges. Allegheny County is home to more than 2,000 bridges, with more than 10 percent structurally deficient, according to a 2013 report from the American Society of Civil Engineers (ASCE). Structurally deficient refers to a bridge with worn or deteriorated elements that need repair but do not cause immediate safety concern.

"It looks like some exciting technology," said Lou Ruzzi, bridge engineer for PennDOT's District 11, which includes Allegheny County. He described the machine as an MRI for bridges to catch structural problems earlier, therefore leading to less expensive repairs. RABIT performs data collection in about an eighth of the time than is currently done manually, he said.

The Federal Highway Administration purchased five of the devices at about $1 million each and is testing them throughout the country as part of the Long-Term Bridge Performance Program. PennDOT officials expressed hope that the price would fall as more are produced, allowing the state to purchase the device in the future if it continues to prove adequate in demonstrations.

RABIT is being fine-tuned as it assesses bridges in Pennsylvania, Delaware, Maryland, New Jersey, Virginia, West Virginia and Washington, D.C. The system got a resounding vote of confidence in the spring when it received the Charles Pankow Award for Innovation from the ASCE.

BY MATT NUSSBAUM, MCCLATCHY NEWS SERVICE / JUNE 13, 2014