

A Hawker 800XP performs a ground run-up inside the GRE facility. The enclosure can accommodate both corporate and commercial aircraft up to a BBJ.



## Ground Run-up Enclosure Becomes a Marketing Advantage at Spirit of St. Louis Airport



Spirit of St. Louis Airport is a large general aviation reliever situated in an upscale suburban community just west of St. Louis, and being a good neighbor is high on its list of priorities. In the spirit of neighborly consideration, it completed a \$3.2 million ground run-up enclosure (GRE) in November 2011 to help decrease its noise impact on the surrounding community. As a result, the airport has a new marketing hook.



John Bales

For years, the airport limited engine run-ups to the hours of 7 a.m. to 10 p.m., but they still caused a lot of noise, acknowledges airport director John Bales. And although they were previously performed on a remote taxiway for safety, the location didn't do much to reduce the noise.

"We received a fair amount of noise complaints from engine run-ups because it's up and it's down and it's longer duration," Bales explains. The airport's technical advisory committee (made up of airport users and a citizens' advisory committee) flagged run-ups as a hot topic and a Part 150 noise study in 2005 recommended a GRE as one remedy.

The six-month project cost \$3.2 million and was funded by a 95% federal/5% local grant from the FAA. The airport worked with Parsons Brinkerhoff and Blast Deflectors to design and build the structure. The facility will be used for a large variety of general aviation aircraft, ranging from small twin-engine piston aircraft up to larger MD80s and B737s, explains Don Bergin, director of technical sales for Blast Deflectors.

"This is only the second GRE at a general aviation airport in North America,



*The Spirit of St. Louis GRE incorporates BDI's patented Stable Flow™ technology; including the vented side walls, sloped entry and aerodynamic roll top. These features allow turbulence-free airflow to the aircraft engines during high power runs.*

which is really a testament to the airport's commitment to the local community as well as current and prospective tenants," reflects Bergin. "And the fact that this facility has all the aerodynamic and acoustic features of larger GREs we have built at international airports confirms the airport's drive to provide world-class amenities."

The facility includes upgraded siding to enhance the appearance of the structure. This was an important requirement for the airport, due to its high aesthetic standards for airfield structures, Bergin explains. From a practical standpoint, the GRE was designed to reduce run-up noise by approximately 15 decibels.



Jennifer Kuchinski

In selecting the site, the project team ruled out locations that would typically encounter tail winds or those that would adversely affect current tenants or future development, recalls construction manager Jennifer Kuchinski, P.E., of Parsons Brinckerhoff. Accessibility was also key, so fixed-base operators and other tenants wouldn't have to cross runways or incur significant taxi or tug time to use the sound-dampening structure.

Once complete, staff leveraged the new GRE as a competitive feature for the airport — a characteristic move considering Spirit of St. Louis also has a 200-acre FAA-approved golf course that doubles as a storm water detention system.

The GRE's extra "bells and whistles" such as wind speed indicators and other features make the facility easier for operators to use and could help attract new tenants, notes Kuchinski.

Bales similarly sees the GRE's advantages as twofold: "It greatly benefits the community because they won't be affected by engine run-ups. It's also a great benefit for the airport operators because they can do engine tests 24 hours a day ... The maintenance operators were actually more excited than I thought they'd be." ✈️

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