Steel Bridge NEWS
NATIONAL STEEL BRIDGE ALLIANCE

Adaptive Use Bridge

Project Rebuilds Historic Bridges On Campus

The following item is based on an article by Allie Bahn, Collegian Correspondent (University of Massachusetts).

As 2005 begins, the University of Massachusetts campus will have two pieces of history connecting walkways for campus pedestrians.

The "Adaptive Use Bridge Project" is an on-campus program through which engineering students learn how to move and refurbish truss bridges from different locations in New England. The bridges are then reconstructed as part of the landscape to improve pedestrian paths around campus.

Alan J. Lutenegger, Ph.D., a professor and department head of the College of Engineering at UMass, started the program in the fall of 2001. It is the only program of its kind in the country to date.

The goal of the project is to restore five to six of the iron and steel truss bridges, while giving engineering students hands-on experience.

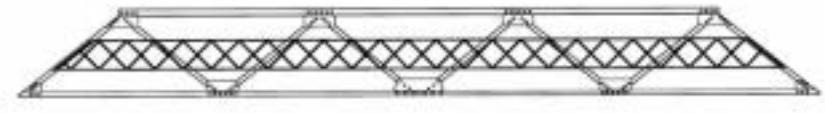
"We want to preserve engineering history, we want students to have the opportunity to do something meaningful for civil engineering, and we want to enhance the campus by putting up bridges for pedestrians," said Lutenegger.

Truss bridges, commonly found in western Massachusetts, are usually one lane, small bridges that run across rivers and streams. They have characteristic "X" structures, which are made from links and are connected by joints.

The 42' steel 1906 Warren Truss Pony Bridge was the first bridge brought to the campus. The bridge is originally from Vermont.

"We had to piece it all back together," said Lutenegger. The bridge was cleaned and re-painted a burgundy color in honor of the school colors of its new home.

Bridge No. 1



Bridge No. 2

"It's great that he [Lutenegger] can find a project that people can volunteer to do and not only is it beneficial to us [engineering students], but also to people on campus," said Michael Goodman, a senior and civil engineering student. Goodman spent his summer interning with Lutenegger, refurbishing old bridges and testing pieces of the structures in labs.

"We are doing a lot of lab work and a lot of comparisons, and seeing the strength of the old bridges," said Goodman.

Most of the student volunteers come from the Department of Civil and Environmental Engineering and the Student Chapter of the American Society of Civil Engineers on campus, where Lutenegger recruits during chapter meetings. Although the project seems to mainly attract engineering students, Lutenegger encourages anyone who is interested to become involved.

Building the bridges requires dedication, however. The project is done outside of class time, often on Friday afternoons. Like Goodman, some students chose to participate over the summer as well.

Lutenegger says that having the project outside of class keeps it "lighter" and

highlights those students who are truly passionate about their field.

During fall and spring, the bridges are built and worked on outside in a little field at the west end of campus. In the winter, new pieces for the bridges are made indoors.

By spring 2005, Lutenegger's goal is to have three bridges completed on campus. He hopes the project will run for at least ten years, and that a total of eight bridges will be reconstructed for use on bike paths and running or walking trails all over campus.

The "Adaptive Use Bridge Project" is made possible through cash donations and in-kind services, equipment, and materials. ★

NSBA 2005 World Steel Bridge Symposium Call for Papers

The organizers of the National Steel Bridge Alliance (NSBA) 2005 World Steel Bridge Symposium, to take place November 29 – December 2 in Orlando, FL, are interested in papers that deal with all aspects of steel bridge design and construction. Papers will be requested based on acceptance of abstracts of 500 words or less. The deadline for abstracts has been extended to January 31, 2005. Authors will be notified of acceptance by February 11 and completed papers must be received for review by May 27.

For more information on submitting an abstract, please visit:

www.nsbaweb.org.

The World Steel Bridge Symposium brings together design engineers, construction professionals, academicians, transportation officials, fabricators, erectors, and constructors to discuss and learn state-of-the-art practices for enhancing steel bridge design, fabrication, and construction techniques.

The Symposium is co-sponsored by NSBA and the Federal Highway Administration. For more information about the World Steel Bridge Symposium, see the ad on page 24. ★