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Stewardship

The following centennial proposal is certified as eligible for Centennial Challenge funding consideration in fiscal year 2008. Funding for the Centennial Challenge requires legislation.

Replace and Upgrade Programmable Logic Controller for Arch Trams

Location: St. Louis, Missouri
Partner(s): Metro
Partner Website: www.gatewayarch.org
Total Cost: \$2,770,743.00
Proposal # 137669

Summary: The Gateway Arch in St. Louis is a unique structure, designed to commemorate St. Louis' role in the westward expansion of the United States. One the highlights of a visit to the Arch is the ability to ride to the top in a unique "tram" system for a spectacular view from the observation deck. About 1 million visitors a year make the journey to the top. The trams, two trains of eight rotating capsules, one train being located in each leg of the Arch, continue to operate after 40 years of service. Over the years, new technological breakthroughs have been utilized to make each tram run more smoothly and to increase visitor safety and convenience. "Programmable Logic Control" (PLC) is a stand- alone technology management system that operates many of the controls of the tram system. Currently the PLC controls the speed, door operation, lighting, and capsule leveling functions of the tram. Installation of new and upgraded components will allow real- time monitoring of the trams using a visual orientation system. The individual tram speed, temperature and environmental controls, the number of trips, and fault indicator location information will be instantly available to tram operators and mechanics.

Installation of the new PLC system will increase visitor safety and security, the monitoring capabilities of the controller system, and trouble shooting efficiency. More reliable monitoring of the tram infrastructure will enable preventive maintenance and timely replacement of components to extend service of the tram and prevent unforeseen incidents. Visitor satisfaction should increase with the reduction of unplanned down-time for the trams, improved environmental controls in the capsules, and the ability to provide interpretive information.

For more information contact:

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