

Historic footbridge renovation draws community together

Public-private funding partnership makes project a reality

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When a community undertakes a historic preservation project, it can be difficult to quantify its total value to the community based on a traditional cost-benefit analysis. In the case of the Jefferson Avenue Footbridge in Springfield, Missouri, the bridge posed many unanticipated challenges in the form of structural, aesthetic, and preservation requirements. The budget had to expand to meet these challenges.

Ultimately, Springfield's commitment to honor its past and renew "relationship bridges" within the community helped leverage financial support for the project. The City collaborated with public agencies (federal, state, and city) and community organizations to fund the \$637,000 construction cost.

Last September, the community celebrated the centennial of the bridge, taking pride in its completion as well as the links it represents. While the bridge provides safe pedestrian transit across the 13-track rail yard, its value to the Springfield community exceeds the pure function of the structure. A tangible link to the city's roots as a railroad boomtown, the bridge offers a symbolic and highly visible link between a historic commercial district and a residential neighborhood. It also creates a focus and public venue for community events and renewed interest in Springfield's history.

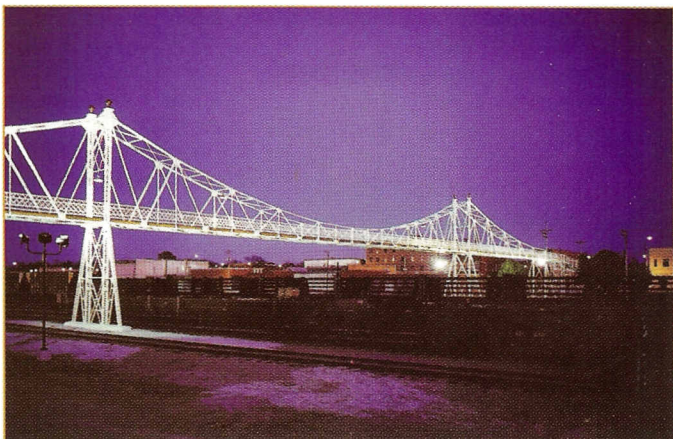
Project Background

Springfield grew up with the railroads. Erected in 1902, the Jefferson Avenue Footbridge gave railroad families a safe way to cross the former St. Louis-San Francisco (now BNSF) railroad tracks from the north-side Woodland Heights residential area to the retail shops, theaters, and offices on Commercial Street on the south.

But time took its toll. The bridge structure deteriorated and had been an ongoing safety and maintenance concern for the City. Though spot repairs were made over the years, the City knew the aging structure would require extensive work.

In 1993, Mary Collette, a Springfield graphic artist, photographer, and current City Councilmember who lives nearby and works in the Commercial Street District, learned about a bridge renovation in Chattanooga, Tennessee.

"What resonated for me was how the area around that bridge changed after the historic renovation," she says. Collette, then president of the Commercial Club, Springfield's oldest service organization, took the project to Bob Turner, then Springfield's Assistant Director of Public Works. The Public Works Department went forward with the grass-roots initiative.



The Jefferson Avenue Footbridge, which celebrated its Centennial on September 2, 2002, was constructed in 1902. At 562 feet, end-to-end, the steel truss bridge remains one of the longest footbridges in the United States. A new lighting system illuminates the bridge at night, a safety measure that dramatically showcases the bright white landmark. (Photo: Mark Wright for Affinis Corp.)

Funding the Project

City officials knew they could not fund the bridge rehabilitation solely from its street maintenance budget, so they sought alternatives. In 1994, the City received a \$130,000 grant from the Missouri Department of Transportation (MoDOT) Enhancement Funds through ISTEA, the Intermodal Surface Transportation Efficiency Act. The City earmarked \$60,000, and the project was underway.

"MoDOT granted ISTEA funding for this enhancement project because of its historical significance, the intermodal pedestrian connection and the surrounding landscaping and beautification," says Becky Baltz, P.E., Assistant District Engineer, MoDOT District 8.

With funding secured, engineers with Affinis Corp. (formerly Larkin Group Consulting Engineers) and John Burk Construction, Inc., proceeded with the project. However, they discovered that the deterioration was worse than what the initial non-destructive structural inventory and condition rating indicated. For example, they did not know the extent of the structural damage and the rehabilitation that would be required until the bridge deck was cut away. Selective demolition revealed deteriorating structural steel members and crumbling concrete.

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Thus, by April 1998, rehabilitation costs had increased, and the City explored additional funding opportunities. Ultimately, numerous civic groups, public agencies, and even private citizens supplemented the original ISTEA grant and City allocation:

- MoDOT transferred \$150,000 from another ISTEA Enhancement Fund project that did not go through.
- The City matched the additional ISTEA funds with another \$37,000.
- Community Development Block Grants (CDBG) provided more than \$168,000, first through Commercial Club, then through Urban District Alliance (UDA), an umbrella organization of the Commercial Club, Walnut Street Merchants Association, and Downtown Springfield Association.
- The Commercial Club sold red granite pavers for a plaza area at the base of the south entry on Commercial Street, generating more than \$2,000—perhaps a small dollar amount, but a huge contribution in terms of community buy-in.

MoDOT's Becky Baltz observes, "Completing this project so successfully required dedicated public officials and community organizations."

Jim Anderson, President of the Springfield Area Chamber of Commerce, echoes her sentiments: "The project is practically a poster child for public/private partnerships. I'm a fan of leveraging resources. This project would not have been realized without public and private resources."

Impact of the Footbridge Rehabilitation

Rehabilitating the Jefferson Avenue Footbridge involved replacing pier footers, adding deck stringers to increase load capacity, adding to or replacing deteriorated and undersized structural members, water blasting to remove the old finish, painting, and improving the north and south pedestrian plaza areas.

But the rehabilitation involved much more than pure function or a cosmetic facelift.

"There's no question the project was trying at times, and it was not an easy process,"



Contractors were vital team members in the successful renovation, says Tate. John Burk Construction Inc., Springfield, MO, did the bridge repairs and Thomas Industrial Coatings, Pevely, MO, handled painting and deck replacement. Throughout the renovation, Affinis staff provided structural design services, plans and specifications, as well as day-to-day oversight and construction administration. (Photo: Bill Trivitt, City of Springfield)

acknowledges Phil Broyles, Assistant Director, Springfield Public Works Department. "But the community support has been overwhelming. In fact, we did not anticipate the level of emotion and positive feelings this project would generate."

Engineers and public works administrators traditionally are trained to analyze functionality and cost/benefit numbers. The success of the Jefferson Avenue Footbridge rehabilitation clearly demonstrates that public works projects can deliver or trigger other benefits to a community. For example:

- Pedestrian Traffic – Pedestrians once again enjoy safe passage across the 13-track rail yard.
- Beautification – The footbridge is an attractive architectural element in Springfield. A new lighting system plays up the aesthetics, most notably the dramatic, geometric lines of the bridge's truss design.
- Plaza Spaces – Both the north and south plaza feature new landscaping, and raised tree wells, pavers, lighting, landscape irrigation, and a stage for performances complete the south plaza.
- Farmer's Market – The south-side plaza is now home to a seasonal farmer's market three times a week.
- Historic Pride and Community-Building – While the bridge provides a new focal

point to celebrate Springfield's history and its emotional ties to another era, it also fosters a renewed connection among diverse parts of the city, one example of City efforts to strengthen the City's core.

Similar to the renewed interest in the south plaza as a venue for community events, redevelopment activity is underway on the residential north side. The nonprofit Preservation Springfield recently moved three single-residence houses into the neighborhood, including an aging Victorian home. With its wraparound porch facing the Jefferson Avenue Footbridge, this house will undergo restoration.



The Jefferson Avenue Footbridge Centennial Celebration was held September 2, 2002. The event included unveiling of a historic marker; a reenactment of the first bridge crossing in 1902; a ragtime festival; and installation of Kinetic Man, a 23-foot-tall interactive sculpture designed and built by Russ RuBert, a Springfield-based artist. The south plaza of the footbridge features commemorative pavers sold by the Commercial Club; individual pavers cost \$30, larger "logo pavers," \$100. The bridge is listed on the Springfield Register of Historic Sites; the City of Springfield has submitted the nomination for listing the bridge on the National Register of Historic Places. (Photo: Mary Collette, Collette Studios)

Springfield, like many municipalities, has come a long way from the days of limited public involvement to encourage a philosophy of public/private partnerships. In

particular, the footbridge illustrates that transportation enhancement projects are much more than concrete and asphalt. They address quality of life and aesthetics. Springfield has benefited by looking beyond the bottom line to establish the viability of a project and by seeking out potential funding partners beyond traditional sources.

Springfield's experience also illustrates the wisdom of John Heywood's observation in the 1400s: "Many hands make light work." Indeed, public agencies, neighborhood organizations, and private citizens shared the costs to renovate the Jefferson Avenue Footbridge. Now, everyone in Springfield can share the results.

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Based on our experience...

Any city or public agency dealing with renovation of an older structure must accept that all manner of issues and obstacles are going to surface. If your city is embarking on, or thinking about undertaking, a historic renovation project, keep the following points in mind:

- Get community buy-in up-front. With the Footbridge, we were fortunate to have the community fully behind the project from the start.
- Be on a constant watch for partnering possibilities. In Springfield, the three groups that make up the Urban District Alliance pool resources of their individual Community Development Block Grants. They collectively determine how to benefit Springfield as a whole.
- Expect the unexpected. Unforeseen construction factors and obstacles are certain to present themselves.
- Increase the contingency fund to a "healthy" level. Given all the unknowns with historic renovation, your contingency fund should be much greater than you anticipate. If you typically allow a 10 percent contingency, for example, it would not be out of line to think in terms of 25 percent for this type of project.
- Hire experienced designers and contractors.
- Expect the condition of the structure to continue to degrade the longer the project takes.
- Consider destructive testing during the feasibility phase.
- Account for current building codes and structural loading requirements.
- Allow enough time to apply for grants. Successful grant proposals require time and preparation. Give yourself time to do the research required to document historical information.
- Think collaboratively and build community partnerships for support and funding.

– Marc Thornsberry, P.E., and Brad Tate, P.E.

