

# Public partnership

Citizens help drive bridge project in Illinois

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**T**he Morgan Street Bridge project is a case study of the city of Rockford's commitment to sustainability and the betterment of the community for all of its citizens.

Back in 2000, when the decision was made to begin planning for the replacement of the Morgan Street Bridge, safety benefits and improved traffic flow were the major considerations. However, by the time ground broke for construction in 2012, the list of desired benefits had grown substantially. The bridge project became a catalyst to unify the community through the revitalization of an impoverished area of town, and it represented the city's commitment to implement context-sensitive and sustainable solutions.

The existing 800-ft, spandrel concrete arch bridge spans the Rock River, connecting the city's east and west sides. Replacing the bridge could be a rallying point to bring new life to the surrounding neighborhoods on the bridge's east end and revive an abandoned manufacturing development that was once the center of a thriving river town.

The Morgan Street Bridge/Corridor project includes a 503-ft, network tied-arch structure, along with roadway reconstruction projects on both sides of the bridge. Construction is scheduled for completion in December 2013. From the outset, a consensus emerged that this project would be "more than a bridge." The city specified goals and objectives that included quality-of-life enhancement, community betterment, neighborhood revitalization, improved access to city landmarks and the preservation of vital economic generators.





The intersection of College Street and Seminary Avenue was converted into a modern roundabout. The sustainable benefits of the hybrid roundabout configuration included lower construction and life-cycle costs, elimination of traffic signals and a decrease in operating and maintenance costs.

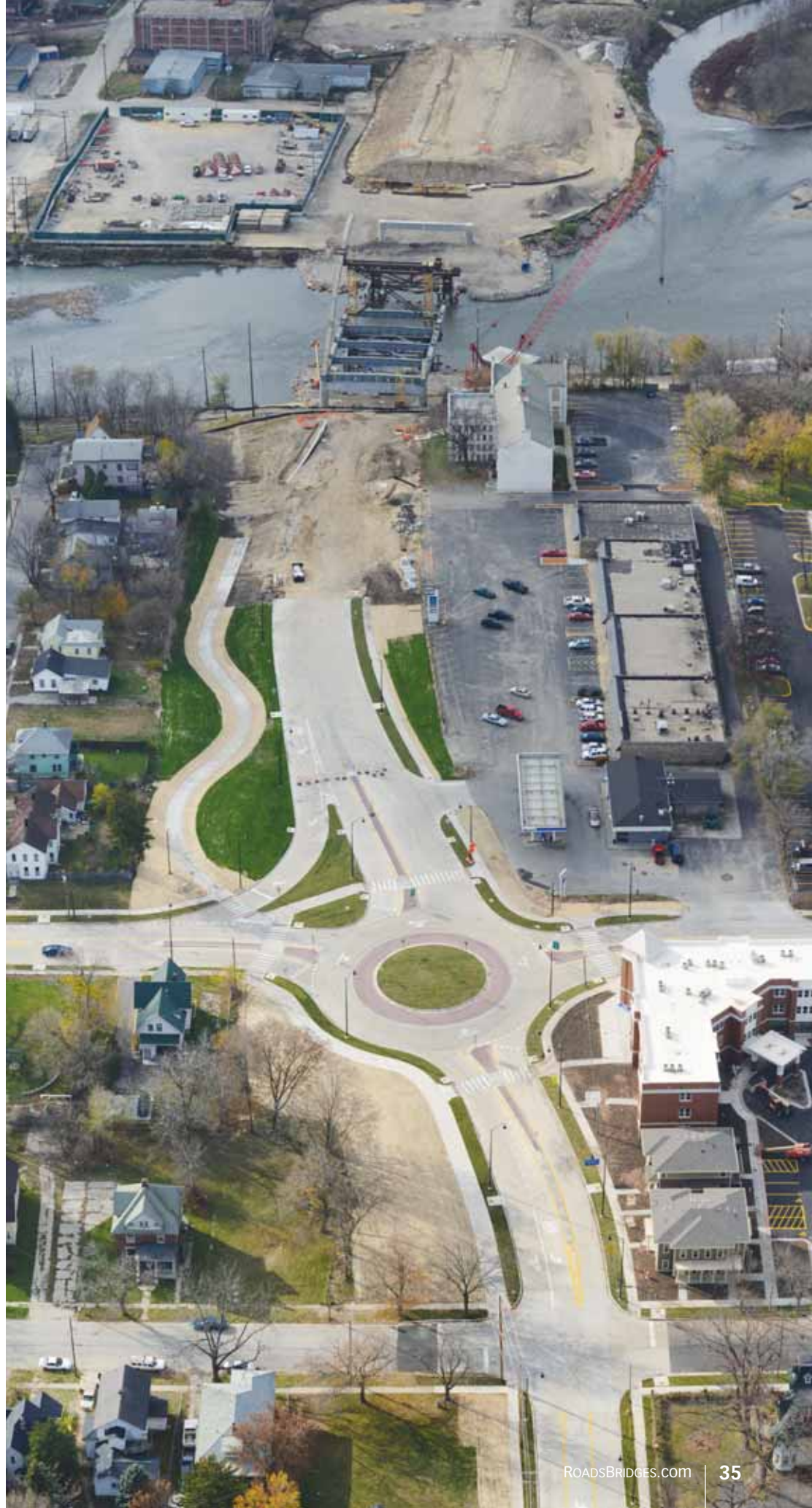
## By the people

It would have been impossible to achieve the ambitious and diverse goals attached to the project without using a people-driven approach. This approach was not limited to the planning stages. Instead, the project team continued to solicit and implement public input throughout the design and onto the construction phases, where new ideas and solutions provided value on this “more than a bridge” project.

A context-sensitive solution (CSS) process was employed to encourage community input throughout the project. It was important to the city’s leaders that local citizens be involved, especially those in the immediate project area who would be most affected by both the eventual construction and the many permanent improvements that would be designed.

To solicit input and collaboration, a Citizens Design Advisory group was convened, and two focus groups were formed to study bridge-type alternatives and community revitalization opportunities. Public meetings allowed citizens to express their concerns and ideas to the team. Many of the ideas captured from these efforts, which included surveys and interviews, were incorporated into the design:

- The community wanted the bridge to retain its iconic status and preferred a tied-arch bridge for its impressive aesthetic qualities;
- The design for the Morgan Street Bridge, known for its regular contingent of fishermen, provides accommodations for fishing along the east and west riverbanks;
- The plans include a park-and-ride area for bicyclists on the west bank;





- Considering the amount of foot traffic over the bridge, a barrier wall was needed to provide increased safety as well as protection against snow and rain splash from vehicles;
- A unique, cable-style railing was used to provide an open-air feeling for pedestrians; and
- Commemorative plaques will be placed on the bridge to highlight the neighborhood histories at each corner of the bridge.

To keep the public informed of ongoing developments, an informational website was created, and a media outreach plan was developed in partnership with the Rockford Public Information Department, the Illinois Department of Transportation (IDOT) and the Rockford Metropolitan Agency for Planning (RMAP.)

Because the project exceeded \$20 million in projected costs, a value-engineering (VE) study was undertaken in accordance with Federal Highway Administration (FHWA) and IDOT regulations. This process sought to identify design alternatives that would reduce overall life-cycle costs without compromising the essential functions of the project—namely, improved transportation infrastructure and community revitalization.

While the purpose of the VE process is to identify cost savings, perhaps the most significant of these value analyses emerged when addressing the Illinois Railway (IR) traffic that ran beneath the west end of the Morgan Street Bridge.

## Down that path

The VE team recommended eliminating the expense for a railroad flagger during construction by rerouting IR traffic to a track operated by the Chicago, Central & Pacific Railroad (CC&P). A meeting with representatives of both railroads led to the decision to permanently reroute 0.65 miles of IR rail operations onto CC&P track. The



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permanent railway relocation allowed for the safer construction of a more sustainable highway bridge as well as a cost savings of \$815,000.

The environmental impact on the Rock River was further reduced by constructing the bridge piers on the shoreline rather than in the river.

In terms of sustainability, however, the most far-reaching benefits are the plans for the abandoned right-of-way that has been obtained by the city of Rockford.

The former IR railroad bridge will become a vital connection between the east and west sides of town as part of the Rock River Valley Greenway. The city has applied for a grant to develop a multiuse path to provide sustainable transportation alternatives. The path will connect Davis Park with

three other paths on the east and west sides of the river. The greenway will introduce residents to scenic riverfront vistas that were previously unknown because of the area's isolation.

The trail also will grant access to land that may be developed for recreational purposes. The land, previously occupied by a hydroelectric and coal-fired power plant, is currently under environmental remediation. After cleanup, the city hopes to adopt some of the proposals being presented for recreational use.

## Using the existing

The demolition material from the existing bridge and a nearby building was used as fill for the bridge embankment, yielding a project savings of \$220,000.

Several other abandoned buildings were slated to be demolished and used as landfill for the bridge project. Five buildings yielded enough recycled material for an additional savings of \$250,000.

To reduce the amount of fill needed for the roadway approaches, the existing roadway was crushed for use as aggregate backfill. Plans also have been made to recycle material generated from underground utility installation throughout the corridor.



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## Something for everyone

The Morgan Street Bridge/Corridor project is situated within one of the key areas targeted by the city for revitalization. The corridor provides an opportunity to develop a complete street that will make the neighborhoods it traverses more livable, attractive and connected.

The intersection of College Street and Seminary Avenue was converted into a modern roundabout. The sustainable benefits of the hybrid roundabout configuration included lower construction and life-cycle costs, elimination of traffic signals and a decrease in operating and maintenance costs. With traffic counts of 11,000 average daily traffic (ADT) existing and 16,000 ADT proposed, noise is reduced and air quality is enhanced, because vehicles are no longer stopping, idling and starting.

A key design feature is an outdoor seating and viewing area on the northwest quadrant

of the bridge. There, an earth embankment uses a grass/step configuration to accommodate outdoor pedestrian seating and viewing for river recreational events, including the city's annual fireworks display. The embankment affords one of the most prized vistas of the Rock River looking toward the central business district.

Further neighborhood enhancements include greater mobility through the inclusion of a multiuse path adjacent to the corridor. The bridge itself contains a 5-ft-wide sidewalk on the north side of the bridge and a 12-ft-wide multiuse path on the south side of the bridge, allowing pedestrians to have better access and also interact more with the river views. Sustainable features also include low-voltage LED lighting for supplemental bridge accent lighting.

The use of CSS and value engineering contributed significantly to the sustainable achievements on this project. CSS promoted

involvement and constant visibility of the project in a way that encouraged greater integration of other infrastructure and quality-of-life opportunities within the proximity of the project. This was a true community-driven project that has and will continue to reap rewards for the community. The utilization of VE provided some surprise outcomes that also contributed to the sustainability value of the project. Both sustainability and VE are compatible in that they both promote the minimization or elimination of waste and lower life-cycle costs. With community revitalization being a key function of the project, incorporating the VE process early in the design process allowed for creative ideas to emerge and enhance the quality of life of the community. **R&B**

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