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## A New Life for the Shortline Bridge

*Michael Mercil*

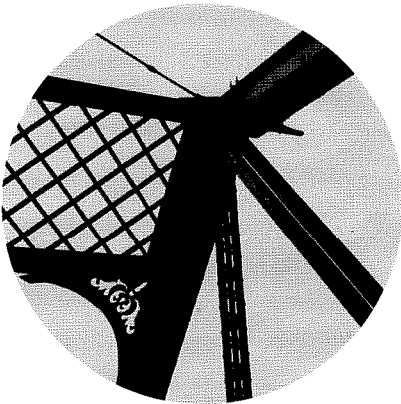
In autumn 1989, I was employed as artist-in-residence in St. Paul's public works department to explore how artists might become directly involved with public works projects and processes. Among the opportunities, I noted, would be the reconstruction of the aging, steel truss bridges that were scattered throughout St. Paul and stood in silent witness to the region's railroad history. In fact, that November, the department reluctantly closed the 100-year-old Shortline Bridge, which had carried traffic on Selby Avenue over a railroad right-of-way, to all but pedestrians.

"The heavy rumbling of freight trains seems to resonate from within their coal black beams slicing across the icy blue Midwestern sky," I wrote in my final report, and I challenged the city "to build new structures that weld together esthetic with functional concerns in ways as imaginative and compelling as in those bridges already lost." That challenge returned to me recently when the public works department commissioned me to help design a replacement for the Shortline Bridge.

By hiring me directly as an independent contractor and not as part of a separately administered public art program, the department established an unusual (and for me unfamiliar) design and decisionmaking process for the

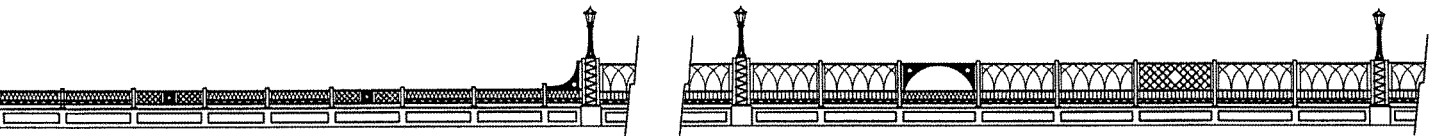
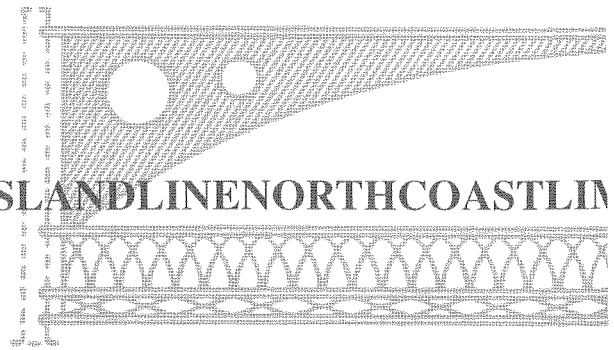
project. The structural engineering and design for the new Selby Avenue Bridge are the work of Eriks Ludens and several other city engineers; my work was limited to designing the railings and the surface treatments of the bridge's retaining walls, abutments, and sidewalks. I agreed to consider decorative detailing from the Shortline Bridge's portals and railings in my designs, and a city policy required me to incorporate the historic lighting standards then being placed in residential neighborhoods. Expenditures for the components I designed were bid as part of the overall construction contract; therefore, I was given no independent budget. Because of these constraints, I communicated closely with the engineering staff while we worked together on our bridge design.

I carefully studied the old Shortline Bridge and found it unique in many ways. Its heavy trusswork appeared to balance precariously upon the piers below, and its portals included decorative details not commonly found on other bridges. But the Shortline Bridge's most memorable feature was how the arrangement of spanning beams and iron lacings was visible and palpable to people passing through it — on most bridges built today, the steel beams lie invisibly beneath the decks. The city engineers commonly



The Shortline Bridge, panorama and detail. Drawings, photos courtesy Michael Mercil.

# BUILDER WESTERN STAR NIGHTINGALE ROCK ISLAND LINE NORTH COAST LINE



voiced the desire “to build something that feels like you’re crossing over the bridge, and not just travelling over a rise in the street.”

The Shortline Bridge was part of a complex transportation network with all sorts of locomotion — trains, cars, bicycles, and pedestrians — moving at different speeds under, around, and over it. The new bridge needed to express these varied functions and to consider as well the informal character of its residential, commercial, and

industrial surroundings. Among my concerns were how to balance “the bridge” as a noun (a thing) with “to bridge” as a verb (an experience). An 1,100-foot-long bridge is not, after all, a place to sit and think but is, rather, a location to move through. Making both physical and conceptual sense of this experience seemed to demand broad and relatively large-scaled gestures in which a variety of visual and textual patterns would create a sense of both openness and security.

The structure of the new Selby Avenue Bridge will be steel and concrete, our current vernacular bridge type, just as steel and wood truss bridges were commonly built 100 years ago. My designs for the railings and surface treatments attempt to link this contemporary structural vernacular to the Shortline Bridge’s historical profile. With the engineering staff’s assistance, I specified common materials and fabricating methods and kept the cost of these elements to a reasonable portion of total construction expenses.

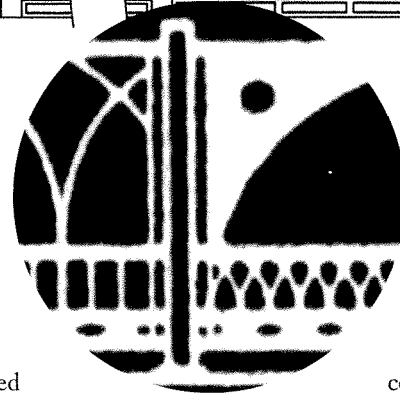
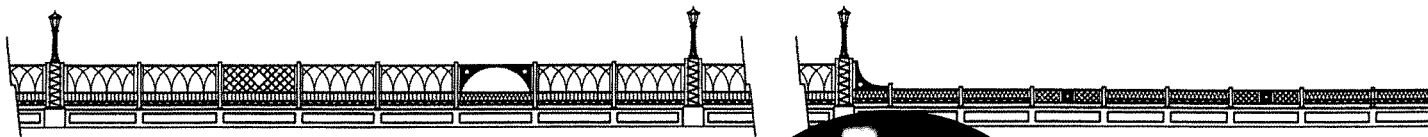
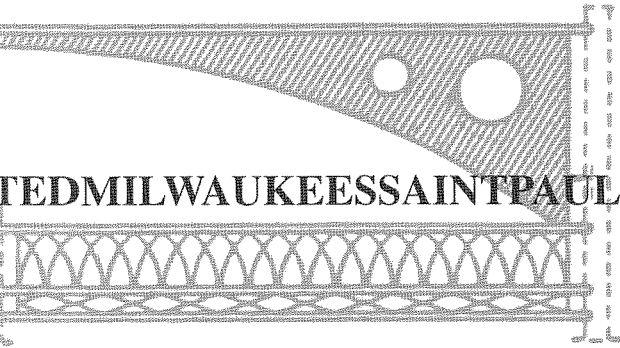
The concrete surfaces of the abutments and retaining walls will be rusticated in a masonry pattern similar to that on the interstate bridges (another vernacular element) now being rebuilt



Above: The Selby Avenue Bridge, panorama, detail, and the strip of names cast on retaining and abutment walls.

Left: The old Shortline Bridge enclosed travellers within a web of steel beams and lacings.

# TED MILWAUKEE SAINT PAUL & PACIFIC LE GION AIR LIMITED BLACK HAWK



in downtown St. Paul. But the pattern for the Selby Avenue Bridge is based upon the dimensions of the limestone blocks cut for the old Shortline structure. In deference to the nature of the original stone masonry, these surfaces will not be finish coated or painted. Instead, they will be lightly sandblasted and sealed.

The names of St. Paul railway lines will be cast in concrete along the bottom of the abutments and retaining walls. The names, running together in a continuous band of 30-inch-tall letters without spacing or punctuation, will create a decorative pattern that enhances the sense of movement and makes a game of trying to recognize particular words.

My proposal to include phrases of graffiti alongside the railroad names generated controversy within the neighborhood task force that the city convened to review the project. I had found the phrases on the Shortline Bridge and collected them as part of its unofficial history. The city engineers supported my idea, but it was rejected when we remained unable to persuade the task force — which had been given veto power over the design — to accept it.

The new steel railings for the bridge deck will echo the design of the original railings and the structural elements of the old bridge. Between

lanterns, occasional breaks in the pattern of Gothic arched spindles reflect the open steel webbing and flat steel panels that ornamented the portals on the Shortline Bridge. The locations of these breaks vary sequentially to mimic visually the rhythmic rumbling of freight trains traveling the rails below.

The point at which the actual span begins is marked by a doubling in scale of the railing. Along the span, the sense of rhythmic movement is enhanced by a varying sequence of visual screens and flat cutout arcs. At the bridge center, a 20-foot-long open arc provides a dramatic visual break and alludes to the spanning function of the structure. Here, the lantern stands are patterned after the skeletal steel construction of the original bridge.

I do not know if the new Selby Avenue Bridge will “weld together esthetic with functional concerns in ways as imaginative and compelling as those bridges already lost.” My designs are mostly concerned with issues regarding texture, size, and scale — in particular, with the bridge’s physical presence in relation to its neighborhood setting. As the engineers and I complet-

ed our work together, we arrived at deeper levels of mutual respect, and I understood better the impact of engineering standards on contemporary bridge design. With this new understanding, I felt that we could realize a project in which the structural engineering, material form, and physical and poetic experience of the bridge would be still more expressively integrated.

A project of this scope is now under way in St. Paul. The department has commissioned an artist-designed structure for the proposed Wabasha Street Bridge over the Mississippi River. Under the direction of public works director Tom Eggum and bridges division chief Art Werthausser, New York artist-designer James Carpenter is working with a local task force and public art organization to develop designs for a new bridge.

The Selby Avenue Bridge will open in December and its railings will be installed next spring; designs for the Wabasha bridge are not yet approved. When these bridges are completed, they promise to take their place as new city landmarks — gifts to St. Paul from its department of public works.