

Bridge Alternatives

12 initial bridge structure types were selected for review.
A preliminary analysis determined 5 alternatives to carry forward.

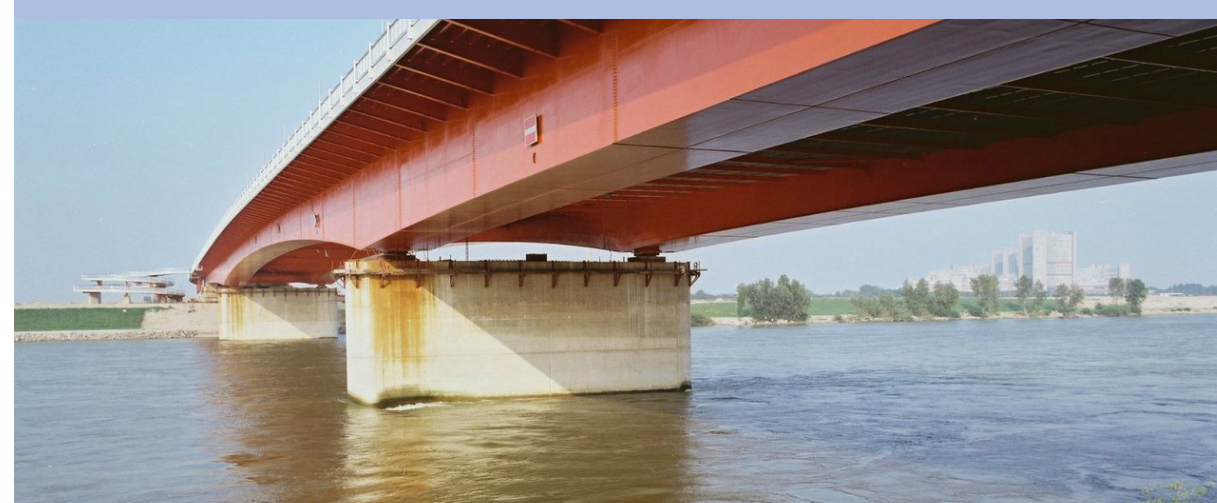
A Continuous Steel I-Girder Superstructure



B Simple-Span Precast/Prestressed Concrete I-Girder Superstructure



C Continuous Steel Box Girder Superstructure



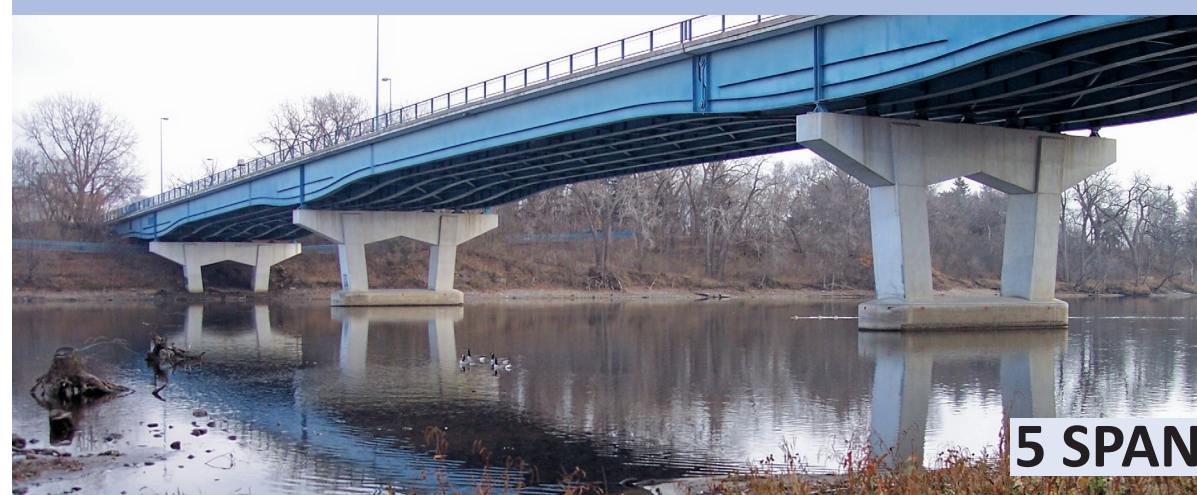
D Continuous Concrete Box Girder



E Tied Arch Main Span with Precast/Pre-stressed Concrete I-Girder Approaches



ALTERNATIVE A1 - Steel I-Girder, 5 Span



ALTERNATIVE A2 - Steel I-Girder, 4 Span



ALTERNATIVE B - Concrete I-Girder



Reasons Not Carried Forward:

- a. Has minimal advantages over the continuous steel I-girder alternative
- b. Higher design complexity
- c. Increased construction risk

Reasons Not Carried Forward:

- a. Deepest structure depth, resulting in increased grades and reduced sight distance on bridge compared to other alternatives

Reasons Not Carried Forward:

- a. Reduced sight distance compared to other alternatives
- b. Requires the most piers in the water compared to other structures, increasing risk in construction and environmental impacts
- c. Increased complexity in design and maintenance

Steel I-Girder, 5 Span



Reasons Not Carried Forward:

- a. Increased construction complexity and risk compared to 5 span alternative
- b. Would likely require eight temporary structures to support bridge segments during construction, compared to four segments with the 5 span alternative
- c. The location of temporary structures would greatly reduce the navigational opening below the bridge during construction

Reasons Not Carried Forward:

- a. Required the most substructures of remaining alternatives
- b. Could limit the number of potential fabricators because of long beams required for structure