Milton Madison Bridge
Main Spans (Trusses)
Design and Construction

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Bid Documents

Existing Bridge

Proposed Bridge

Truss Design

Plan View – Before Sliding – Old & New Bridge

Elevation of Completed New Bridge
Truss Design

- Permanent Bridge Design Features
- Design-Build Challenges for Steel Truss Bridge
- Bridge Design Adapted for Construction Techniques
Truss Design

Bearings

Main Spans: Construction Sequence
- Float in Span 2
- Lift Span 2
- Cantilever Span 1
Side Span Cantilever Construction

Erection Bents
Truss Sliding

Sliding Main Spans

The Numbers:
• 2433 Feet Long
• 4 Spans Continuous
• 15,260 Tons
• Lateral Move 55 Feet

Truss Sliding
Bearing Sliding Harnesses

Bearing Sliding Harnesses

Bearing Sliding Harnesses
Main Span Sliding: Time-Lapse Video

> Video is in PPT version; in PDF version, go to:
> http://www.miltonmadisonbridge.com/gallery/video/milton-madison-bridge-slide/

Lessons Learned

• develop construction scheme as far as possible (including during bid design) before committing to material order sizes
• be prepared for potential rejection of modifications to the permanent design to accommodate construction, have a backup plan
• friction can be too low as well as too high!
• no bridge is too big for a lateral slide!
Questions?

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