Module 3: Design-Build Bidding, ABC, and Maintenance of Traffic

Travis Butz, PE, Burgess & Niple

Existing Bridge

- 2012 Indiana & Kentucky Issue Request
- Design Build Project
- Replace Bridge at Same Location as Existing
- Bridge Must Be Closed During Construction

Bid Documents
240 Vehicles Per Hour

We're gonna need a bigger boat!

Bidding Formula

\[ A + B \]

A = construction cost (including ferry)  
B = closure days x $25,000/day.

$25,000 \times 365 = $9.1 Million
Five Contractors submitted bids
Awarded to Walsh Construction:
- Cost to construct project: $103 Million
- Length of bridge closure: 10 days
- State’s Estimate: $125 Million
Temporary Approaches:
Pier Retrofits
- Increase bending strength below river bottom
- Increase bending strength above river bottom
- Temporarily support temporary pier
- Support wider superstructure

Pier Strengthening

Construction Sequence – Temporary Piers
- Completed new spans slid into final position
- New truss span set down on sliding girder
- New truss spans lifted for gradual slide
- Sliding, under supervision
Lessons Learned:

- The A + B bidding formula can be a great tool to encourage bidders to innovate.
- Maintaining traffic can be really complicated!
- Sliding small bridges is easier than sliding big bridges.

Questions?

Thanks to the following for photos and other material included in this presentation:

- Walsh Construction
- Charlie Gannon
- Deborah Crawford (Milton Madison Facebook page)
- Michael Baker, Inc.
- Buckland and Taylor