2013 Purdue Road School

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Doug VanSlambrook, Walsh Construction
Design Team

› Burgess & Niple
  › Design Management
  › Truss Pier Modifications
  › Approaches
  › Temporary Ramps/bridges
  › Inspection access

› Buckland & Taylor
  › Truss Design
  › Temporary Piers for Truss

› HC Nutting/Terracon – Geotechnical

› RWDI – Wind Review
**Existing Bridge**

- Milton, KY
- Madison, IN

**Proposed Bridge**

- Strengthen Existing Pier
- New Pier Cap
- New Pier
VIDEO OF CONSTRUCTION SEQUENCE
20’ Water
60’ Soil
Un-reinforced Caisson
Rock
Reinforced Pier Stem
Pier Strengthening

Encasement

Drilled Shafts

Soil Response

Sheet Pile

Post tensioning to transfer load to shafts

Cap

3 drilled shafts each side

Boulders

Shale

Contraction Scour

Local Scour

Boulders

Shale

Pa

Pp
Pier Strengthening: Scour Mitigation

Rip Rap with Filter

Articulated Block Mat

Jet Grouting
Pier Strengthening

1. Drill holes into existing unreinforced caisson
2. Grout Rebar into Caisson
3. Add Stem Reinforcement
4. 2’ thick encapsulation
5. Pier Cap Reinforcement
6. Form and Cast new Pier cap
Pier Strengthening
Pier Strengthening
Video of Hole Investigation