Prefabricated Bridge Elements and Systems

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Jun 28, 2005

Prefabricated Bridge Systems
FOCUS AREAS

- Minimized traffic disruption (Congestion)
- Improved work zone safety
- Minimized environmental impacts
- Improved constructibility
- Improved product quality
- Lower life-cycle costs
Life After Scan - Next Steps

- Disseminate Report (Hot off the press!)
- Ongoing Technology Transfer Activities
- Compiling connection details
- Developing Decision-Making Framework
- Implementation Plan (STIP)
- Advancing Team’s Recommendations

Prefabricated Bridge Systems
TEAM’S RECOMMENDATIONS

- Scan Technology Implementation Plan (STIP)
  - Bridge Movement Systems (SPMTs)
  - Other Bridge Movement Systems
  - Superstructure Systems
  - Partial Depth Concrete Decks Prefabricated on Steel or Concrete Beams
  - U-shaped Segmental Beams with Ribs

Prefabricated Bridge Systems
TEAM’S RECOMMENDATIONS

- STIP - cont’d
  - Full Depth Deck Systems
  - Deck Closure Joint Detail
  - Hybrid Steel-Concrete Deck System
  - Multiple Corrosion Protection System
  - Substructure Systems
STIP -1

- Bridge Movement Systems (SPMTs)
  - Develop Project Planning Guide
  - Prepare Draft Specifications
  - Solicit Pilot Project
  - Web info sharing
- Lead: M.L. Ralls; H. Capers, B. Tang

Prefabricated Bridge Systems
STIP -2

- Other Bridge Movement Systems (i.e. Launching, Floating, Skidding, Lifting or Rotating)
  - Web Info Sharing
  - Showcase/Demo Projects

- Lead: B. Tang & B. Brecto
STIP -3

- **Superstructure Systems**
  - Poutre Dalle – or Inverted T-Beam
  - Obtain sample drawings, specifications and post on Web
  - Compile and enhance details
  - Solicit demo projects

- **Lead**: D. Dorgan & G. Calvert

Prefabricated Bridge Systems
Partial Depth Concrete Decks Prefabricated on Steel or Concrete Beams
- Obtain sample drawings and specifications and post on web
- Solicit 2 demo projects

Lead: D. Dorgan, G. Calvert & W. McElney
STIP -5

- U-shaped Segmental Beams with Ribs
  - Obtain sample drawings and specifications
  - Provide info to ASBI
- Lead: W. Nickas & S. Bhide
STIP -6

- Full Depth Deck Systems
  - Collect and enhance details
  - Solicit pilot projects
  - Coordinate with NCHRP 12-65
  - Coordinate with PCI
- Lead: S. Bhide, B. Tang & E. Matsumoto
STIP -7

- Deck Closure Joint Detail
  - Obtain sample drawings, specifications, test data
  - Proposes static and fatigue testing
  - Solicit pilot projects
  - Coordinate with NCHRP 12-65
  - Coordinate with PCI

- S. Bhide, E. Matsumoto, M.L. Ralls & C. Napier
STIP -8

- Hybrid Steel-Concrete Deck System
  - Obtain details and sample specifications
  - Evaluate details for use in the U.S.
  - Coordinate with NSBA
  - Solicit Pilot Projects

B. Tang, H. Capers & W. McElaney

Prefabricated Bridge Systems
STIP -9

- Multiple Corrosion Protection System
  - Evaluate for applications in the U.S.
  - Post German Specifications on Web
  - Solicit Demo Projects

- C. Napier
Substructure Systems
- Obtain sample drawings and specifications
- Solicit Demo Projects

Lead: B. Brecto, E. Matsumoto & C. Napier
OPPORTUNITIES AHEAD

Proposed Programs in Reauthorization

- Innovative Bridge Research and Deployment (IBRD)
- Highway for Life
- Federal Bridge Program ($4 B/Yr.)
THE FUTURE IS HERE!

- 2005 FHWA Prefab Workshop, San Diego, CA; December 14-16, 2005
  www.acceleratedbridge.com
- http://www fhwa dot gov/bridge/index htm
- http://www international fhwa dot gov

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