

**ACEC-KY Bridge Sub-Committee /
KYTC Division of Structural Design**

**Partnering Meeting Minutes
July 9, 2012**

A meeting of the ACEC-KY Bridge Sub-Committee and the KYTC Division of Structural Design was held on July 9, 2012 at the Transportation Cabinet Office Building, Frankfort, KY.

Present at the meeting were:

Mark Hite	Director, Division of Structural Design
Bill McKinney	Division of Structural Design
Kevin Sandefur	Division of Structural Design
Tony Hunley	Stantec
Chris Reid	J.M. Crawford & Associates
Pete Szak	Florence & Hutcheson, Inc.
Aaron Stover	Michael Baker
Craig Klusman	URS
David Deitz	Palmer (<i>could not attend</i>)

The following items were discussed:

- 1) **2012 Standard Drawings** – A few of the changes that were made to the new Standard Drawings were discussed:
 - a. Barrier System Type 3. Guardrail was raised 2” in the new standard drawings. This was not correlated to the barrier transition standard drawing. Therefore, do not call out this Standard Drawing in bridge plans. Instead, there is an active sepia on the KYTC website with the change. It is listed as Sepia 006 on the website located here: <http://transportation.ky.gov/Highway-Design/Pages/Sepias2012.aspx>. This will need to be incorporated into the bridge plans as a plan sheet.
 - b. Box Beam Std. Dwgs. BDP-005 & BHS-007. The standard drawing was revised to remove the curb. Rail on box beam doesn’t match new guardrail height, but no change required by DOSD. It is assumed that the guardrail height transition will occur at bridge approaches.
 - c. See attached list of revised and/or deleted standard drawings.

- 2) **2012 Standard Specifications – Special Notes** – There are fewer Special Notes in the new Standard Specifications, as many of the special notes have now been incorporated into the specifications directly.
 - a. Special Provision 4 (Welding Steel Bridges) has been eliminated.
 - b. Special Note for Drilled Shafts is now standard Special Note 11C.

- c. As before, if a unique Special Note is required, write up a project-specific Special Note and submit with Stage I Final Plans for review.
- d. Special Note 7S has been eliminated. The following general note should be included in the bridge plans for instances when Special Note 7S would have been used.

BONDING TO EXISTING CONCRETE USING STRUCTURAL ADHESIVES: Bond proposed plastic concrete to existing hardened concrete in all locations using a Type V Epoxy Resin or other approved Structural Adhesive as prescribed in section 826 of the specifications. Follow the manufacturer's recommended application instructions. This work and material is incidental to the unit price bid for concrete.

- 3) **Seismic Design with AASHTO LRFD** – The DOSD asked about the status of the effort by the Kentucky Transportation Center for developing seismic hazard maps for Kentucky and how that work would correlate with the AASHTO LRFD design code. The report has been completed, with a final major revision in March 2012. The report can be found here: <http://www.ktc.uky.edu/projects/seismic-hazard-maps-and-time-histories-for-the-commonwealth-of-kentucky/> . The DOSD has approved the use of the MCE level earthquake generated using the spreadsheet provided with the report in lieu of the design response spectrum determined from the AASHTO LRFD design code for seismic analysis and design of Kentucky bridges. This approach will generally result in lower seismic demand than that obtained from the LRFD seismic maps for most counties in Kentucky.
- 4) **AASHTO LRFD Topic: Positive Restraint Moment at Piers** – DOSD is not mandating that this condition be checked as they have not experienced problems with in-service bridges. If a consultant performs the check and determines that there is a significant issue, then a note can be added to the plans requiring a 90 day time frame from casting of beams to placing the bridge deck to eliminate the problem. This has been done on a DOSD design recently without complaint from the Contractor. However, previous attempts to require this timeframe have been met with resistance from Contractor's and concerns with negative impacts to project schedules.
- 5) **AASHTO LRFD Topic: Prestressed Beam Bridges Simple Span for Live Load with Continuous Decks** – Using this approach is an allowable option for projects if a designer needs it or has a reason for proposing it. Bridge designers should request approval on a case-by-case basis. There have been a few bridges constructed using this design approach from the DOSD. However, they have been in service for less than 10 years and there isn't any feedback from bridge inspections. The DOSD does not have a preference on a typical detail or design approach.
- 6) **Accelerated Bridge Construction for Bridges** – The Division of Structural Design reiterated that when a project appears to be a good fit for an all-precast design (for example) the consultant should make the recommendation to KYTC and the DOSD would review and, in the right situations, support an ABC structure design.

There are a few projects either in design or with design complete (by the DOSD) using ABC techniques. A bridge in Harlan County (utilizing longitudinal deck panels with an 8-hour allowable bridge closure to replace a slab bridge) was constructed in the Fall of 2011. A bridge in Daviess County is under construction with a precast bent cap.

- 7) **Prestress Services Hybrid Beams** – The DOSD reiterated that the hybrid sections from Prestress Services should be considered during preliminary design for all bridges. However, similar to direction given by the fabricator during the January 2012 Bridge Engineering Seminar Day, the DOSD requested that they only be used where appropriate to facilitate construction, meet clearance requirements, or reduce project costs.
- 8) **Meeting with Division of Construction** – There was some discussion about potential topics for an upcoming partnering meeting between the Sub-Committee and the Division of Construction. The Division of Structural Design will attend the meeting and provide input and discussion.
- 9) **Bridge Engineering Seminar Day** – The Sub-Committee thanked the DOSD for the high level of participation from the DOSD at the Seminar. With nearly 75 attendees, the day was a great success and will now become a yearly event for the bridge design and construction community to interact. The date for the 2013 Bridge Engineering Seminar has been set for February 5, 2013. The DOSD will continue to have a one-hour time slot for presentations of their choice.
- 10) The next joint meeting of the KYTC Division of Structural Design and the ACEC-KY Bridge Sub-Committee will be in late Fall 2012.

The meeting concluded around 11:45 a.m.

ID	SectionNumber	Revisor	Title	Notes	Revise2012	NewFor2012	DeletedFor2012
1	BBP	1	11 Elastomeric Bearing Pads for Prestressed Beams	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	BBP	2	4 Bearing Details		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	BBP	3	1 Elastomeric Bearing Pads for Box Beams	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	BDP	1	3 Box Beam General Notes & References	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	BDP	2	3 Box Beam Bearing Details		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	BDP	3	3 Box Beam Miscellaneous Details		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	BDP	4	4 Box Beam Tension Rod Details		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	BDP	5	3 Railing System Type II	Revise to remove curb	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	BDP	6	3 Box Beam B12 & CB12 Details	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	BDP	7	3 Box Beam B17 & CB17 Details	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	BDP	8	3 Box Beam B21 & CB21 Details	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	BDP	9	3 Box Beam B27 & CB27 Details	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	BDP	10	3 Box Beam B33 & CB33 Details	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	BDP	11	3 Box Beam B42 Details	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	BDP	12	3 Box Beam CB42 Details	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	BDP	13	1 Slab Bridge for 12" & 17" Beams	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	BGX	4	9 Concrete Slopewalls for Grade Separation Bridges		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	BGX	5	9 Concrete Slopewalls for Grade Separation Bridges		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	BGX	6	8 Stencils for Structures	Revise to show KYHL-93 instead of HS25	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	BGX	9	4 Bridge Restoration and Waterproofing with Concrete Overla		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	BGX	10	4 Barrier Transition		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	BGX	11	4 Barrier Transition End Drainage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	BGX	12	2 Geotechnical Legend		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	BGX	13	2 Curved Barrier Transition		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	BGX	14	2 Curved Barrier Transition End Drainage		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	BGX	15	2 Bridge Drains		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	BGX	16	1 Low Flow Diversion Curb		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	BHS	7	5 Railing System Type II Guardrail Treatment	Revise to remove curb	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	BHS	8	Rail System Type 3	Revise to allow the use of WWR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	BJE	1	11 Neoprene Expansion Dams and Armored Edges	Revise for LRFD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	BPC	2	8 14" Reinforced Concrete Pile		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	BPC	11	7 14" Precast Prestressed Concrete Pile		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	BPS	3	8 HP12x53 Steel Pile	Revise to allow only grade 50	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	BPS	9	7 HP14x73 Steel Pile	Revise to allow only grade 50	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	BPS	11	3 HP14x89 Steel Pile	Revise to allow only grade 50	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	BGX	17	1 Approach Slab	Added back in for 2012	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
37	BGX	18	1 Cantilever Retaining Wall	New for 2012	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
38	BGX	19	1 Cantilever Retaining Wall Details	New for 2012	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This had to be pulled from the book as we discussed. The "sepia" on the website does reflect the inclusion of WWR.

These were not finished for publishing in the 2012 book. We are still contemplating adding to the 2016 edition.