

## 2009 REGION 2 AASHTO SUBCOMMITTEE ON DESIGN DISCUSSION TOPICS

### ARKANSAS

1. What is your practice for the use of shoulder rumble strips? What criteria are used to select routes? How are bicycles accommodated?
2. All new culverts, retaining walls and other standard structures must be designed with LRFD specifications after October 1, 2010. How are you handling the design of concrete box culverts?
3. How is undercut handled on projects? Is an extensive soil survey done during plan preparation and undercut locations shown on plans? What type backfill in undercut areas? Is undercut a separate pay item?
4. Are other states offering both asphalt and concrete pavement sections as alternates for bids? If so, on what types of projects? Are life-cycle cost adjustments applied to bids? What are your experiences?
5. Are you using concrete pavement for overlays of existing asphalt and concrete pavements; for overlays in combination with full depth widening; for thin whitetopping?
6. How are other states handling utilities? Are the utilities moved before the project is let? Are the utilities put in the contract? Do you have a "hammer" to force the utility companies to move in a timely manner?

### FLORIDA

1. **As-Built Cross-Slope and Superelevation on 3R Projects:** One of our Districts discovered following litigation that the as-built cross-slope and superelevation were not consistently within a construction tolerance (see attached construction specification). The challenge is twofold:
  - a. The level of design survey for these projects was reduced in the 1990s so that the cross-sections provided that detail the current condition.
  - b. The level and method of QC being done by our field inspectors.What are the other states doing in this regard? Have you done post-construction surveys to see if you have similar challenges?
2. **Shoulder Widths:** The AASHTO Green Book (top of page 505) states that, *paved shoulders should be continuous on both the right and left sides of all freeway facilities. The useable paved width of the right shoulder should be at least 3m (10'); where the DDHV for truck traffic exceeds 250 veh/h, the right shoulder width should be at least 3.6, (12').*

The next revision of this sentence only deletes the word “useable.” However, AASHTO’s *A Policy on Design Standards Interstate System* (bottom of page 3) has essentially the same criteria but replaces “should be” with “should be considered.”

Are the states processing Design Exceptions for interstate resurfacing projects where DDHV for truck traffic now exceeds 250 veh/h and the shoulder width is less than 12’?

3. **Temporary Concrete Barrier Wall Deflection Space Requirements:** What is the practice for providing deflection space in other states? Do other states establish a deflection space requirement based on crash test results of the barrier being used or is some other criteria used?
4. **ARRA Funded Local Projects:** The ARRA funding caught many of our local agencies off guard. Most did not have projects that were “shovel ready” and could not produce plans for them in time. The Florida Division of FHWA required that ARRA projects done by/for local agencies did not have to be fully 3R compliant as all projects on the state system required. However, they would not allow the local agencies to simply resurface the roads either. The attached is the “Project Requirements for Improvements Requested by Local Governments” agreed to between FDOT and FHWA-Florida. What similar requirements were issued by the other Region 2 DOTs to their local agencies?
5. **Diamond Grade Sheeting on Overhead Signs:** FDOT has been asked to consider the use of Diamond Grade reflective sheeting without sign lighting instead of our current practice of using a lighted sign with conventional sheeting. One concern is that Diamond Grade sheeting is a sole source proprietary product. Another concern is the increasing number of vehicles with Visually/Optically Aimable (VOA) low beam headlights which have a very sharp cutoff and restrict the amount light reaching an overhead sign. Do any other states have experience with this?
6. **ITS Thoroughfare Classifications (Boulevards, Avenues, Streets, Alleys):** Are any other states classifying roads based on this system for the purpose of making design decisions? FDOT is getting a push from CSS advocates on this.
7. **Pavement Type Selection and Design:**
  - a. What is the pavement-type selection process in each Region 2 state? In Florida, we have a rigorous life-cycle cost analysis done that includes not just the difference in predicted agency costs but also user costs.
  - b. What is the status of each state’s review/adoption of the MEPDG? Florida has adopted the guide for rigid pavement with the necessary calibrations (some of which are being questioned by industry). We are proceeding with calibrating the flexible pavement guide’s parameters.

8. **Base Clearance and Groundwater Determination:** How do other states set and measure the level of groundwater above which you construct your pavement base? What minimum clearances do you construct your pavement base? What minimum clearances do you provide and how do you handle instances whether that “minimum” clearance cannot be provided? Do you reduce the subgrade modulus?

## GEORGIA

1. Georgia began some data collection (roadway classification, posted speed, median width, etc.) last year for divided roadways. We are going to then compare crash data for these routes to see if any conclusion can be made concerning whether the number of cross-over type crashes decreased on wider medians. This is still ongoing, but initially it appears that there does not appear to be a significant increase in cross-over crashes in medians at or wider than 32 feet. Do any of the other states have or know of any similar type studies and, if so, are they available?
2. Does your state ever construct a bridge rail between the vehicle travelway and the pedestrian/bike/sidewalk portion bridges? If so, what’s your policy determining when to use them? Do you have details available?
3. Does your state ever use pure performance based specifications, and if so, what are some of the challenges/lessons learned that can be shared?
4. What standards/specifications does your state use when constructing 1) a highway tunnel and 2) tolling infrastructure?

## LOUISIANA

1. With the crisis caused by global warming/climate change, have any DOTs revised their hydraulic manuals/policies to deal with this situation?
2. Are the DOTs expanding their use of consultant contracts and retainers? Are you having any problems with your local FHWA Office in getting either or both through the system?
3. Have any DOTs developed Bridge Replacement Guidelines? I know North Carolina adopted guidelines in February 2008.
4. Other than Tennessee, have any other states developed sections dedicated to Project Management? If so, how are the sections staffed; i.e., engineers, senior engineers, non-engineers, etc.? Is the section effective, working well, large projects only, etc.
5. What is your State’s centerline rumble strip policy?

6. How many engineers in your section are dedicated to local programs (urban system, off-system bridges, enhancement program) in your DOT?
7. What are your DOT's policy regarding placement and design of bicycle paths and/or shared use facilities on urban projects?
8. What system or method is being used to estimate unit prices for construction estimates and how successfully?
9. Does anyone have a legal definition that your DOT uses for "reconstruction" and "major reconstruction"?

## MISSISSIPPI

1. **Access Management** – Does your State have an Access Management Manual, Guide or Policy? If so, does it go beyond AASHTO minimum criteria?
2. **Earthwork Models** – Have Contractors been requesting earthwork models? If so, do you furnish them?
3. **Stormwater** – How concerned are you about the proposed new proposed EPA limit of 13 NTU's for turbidity? We don't think this is practical or even feasible in many cases.
4. **Raised Reflective Raised Marker at Intersections** – A couple of MDOT's districts are installing clear raised reflective pavement markers in the radii of intersections on the edge of pavement. Does your State do anything similar to this, and if so, do you have a standard drawing or detail?
5. **Cable Barrier** – Recently MDOT installed a cable barrier on the interstate loop around Jackson. The purpose of the barrier was to prevent cross over head-on crashed. The barrier was installed 8' from the bottom of the ditch. There are several non-breakaway light poles and sign supports in the middle of the median, outside the clear zone, which have never been protected by guardrail. In the vicinity of the non-breakaway poles, the FHWA required MDOT to install guardrail on the shoulder opposite the side with the cable barrier to prevent vehicles that leave the roadway from hitting the cable barrier and being "sling-shotted" into the pole. Have you been asked to do anything similar?

## **NORTH CAROLINA**

1. Does your Department provide fiscal a monthly payout schedule for Design-Bid-Build contracts over \$50 million? This is the monthly payment to the Prime Contractor. (NC's Design-Build requirements are attached).

Is the payout curve adjusted for different types of projects? (Example, major bridge projects, major grading projects, and/or interstate reconstruction projects).

2. What did your State submit concerning EPA's proposal 40 CFR, Part 450, Effluent Limitation Guidelines and Standards for the Construction and Development Point Source Category, Proposed Rule?
3. Performance Measures. NCDOT's Annual Performance Report 2008.

## **TENNESSEE**

1. What plan distribution methods (prints, electronic files, combination of prints and electronic files) are used to distribute plans for field reviews, other offices within the agency, utilities, customers, and formal plan submittals at major milestones? If electronic files are used, describe the distribution procedure.
2. Does your state have a policy or guideline in place for placement of rumble strips/rumble strips on facilities designated as a bike route or have bike lanes? Describe the guidance, rumble dimension and rumble depth.
3. Does your state utilize grass shoulders? If so, describe the shoulder stabilization method (e.g., blend of granular material, soil and seed).
4. Does your state have a design for a curb and/or curb and gutter for use on high speed facilities? Describe the curb and the locations where it would be utilized in your state. Is the design approved for the use on the NHS?
5. Are electronic seals and signatures used for sealing plans and specifications? What procedures are used for sealing plans?
6. Does anyone engage the services of outside third party neutral (such as the American Arbitration Association) to resolve disputes which may arise during plans error and/or omission investigations? If so, are you please with the process?