

**May 11, 2007 Meeting –  
WSDOT Bridge Office – Conf Room 1034 – Tumwater**

**Attendees:**

<b>WSDOT</b>	<b>ACEC</b>	<b>Guests</b>
Dick Stoddard	Bob Fernandes	Craig McDaniels - WSDOT
Ron Lewis	Steve Aisaka	Fred Tharp - WSDOT
Mike Bauer	Jose Carasquero	Tim Moore- WSDOT
Matt Preedy	Mark Johnson	Eric Schultz- WSDOT
Bill Prill	David Goodyear	Don Wagner – CH2M Hill
Paul Wolf		Pat Clarke - WSDOT

9:00 am	45 min	<ul style="list-style-type: none"> <li>▪ Review and approve minutes from last meeting (5 min)</li> <li>▪ Review and approve today’s agenda (5 min)</li> <li>▪ Review status of outstanding action items (10 min)</li> </ul>
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Notes:

Membership requiring Executive Committee nomination. What about biologist and environmental staff on the committee? Will keep some members in an on-call status as environmental issues come up. Executive committee will be sending out an announcement for nomination to the Structures Team. WSDOT should implement a similar approach. We also need to be aware of the required mix of expertise that is needed. It has been beneficial to include Region Construction, Region Design, and environmental experts on the structural team.

**Environment Issues Implementation Status:**

Proposal 1: *Performance Based Environmental Permitting* - WSDOT and Gov. Office of Regulatory Assistance is looking seriously at the ODOT approach

Proposal 2: *Use of Standard Specification Language in Environmental Documents* is an on going effort. Gov. Office of regulatory assistance is taking the lead on permit streamlining. Our proposal to reference the Standard Specifications is being considered.

Proposal 3: *Track Environmental Decisions* -The ESO Environmental Performance Program is working with Don Nelson to implement. Jose stated that new listings of endangered species and revisions of the WACs will affect some WSDOT activities. Revisions of the WACs will also affect the effectiveness of databases to determine best practices bases on past actions. Revisions are expected to be implemented by mid-year 2008. Listing of Steelhead as an endangered species is not expected to create a big problem for current contracts. Re-consultation of BA’s is not likely because the current BA’s have anticipated the Steelhead listing.

**Structural Expectation Matrix** – Mike is working implementing it in the BDM.

**Project Delivery Matrix** – No progress seen yet. Region delivery schedules are locked into the 30-60-90 concept and the MDL. Sno-King Office has a goal to review and proof the construction estimate at the Intermediate Review Submittal (60%). WSDOT’s SPMG and PRMS effort is addressing cost monitoring during the development of the design.. WSDOT Bridge Office currently performs a quantity based estimate during preliminary plan development for major projects.

<p><b>Bridge Cost Estimating:</b> Communication between project offices and bridge office is critical. Consideration of access to the site is a big factor affecting contractor pricing of bid items. Development of a construction review check list could be helpful. Construction offices should not be the QA/QC review for the design.</p>		
9:45 am	15 min	<ul style="list-style-type: none"> <li>• LT 4 – “<i>Determining Environmental Requirements</i>” Proposals 4, 5, 6 – Finalize Letter to Sponsors</li> </ul>
<p>Notes: Paul Wolf and Jose have prepared problem statements and implementation recommendations for Issues 4 and 5. Review of the documents will have to occur out side of the meeting. Each member is requested to review Paul and Jose’s documents.</p>		
10:00 am	10 min	<ul style="list-style-type: none"> <li>• Break</li> </ul>
10:10 am	90 min	<ul style="list-style-type: none"> <li>• “Design Build Issue” Review and Discuss Problem Statement with Engineers involved in D/B Contracts</li> <li>• Guests: Craig McDaniel, Fred Tharp, Tim Moore, Eric Schultz, Pat Clarke, Don Wagner</li> </ul>
<p>Notes:</p> <p>Review the Issue Statement and Possible Recommendations</p> <p>Craig explained WSDOT’s D/B policy development process. Fred described WSDOT learning process to transition into a D/B Owner perspective instead of a Design Bid Build and Owner perspective.</p> <p>Dave Goodyear described his statement focusing on the use of Standard Specifications on D/B contracts. It is very difficult to have a standard spec for an owner/engineer applied to a D/B project. Should WSDOT have a separate standard spec for D/B projects to resolve the difficulties? In Canada, the province of BC developed a separate D/B spec. by duplicating an existing document and making the proper edits. Engineer of Record and conflict with D/B contract requirements needs to be addressed and improved.</p> <p>WSDOT is looking at the roles of engineer and owner regarding specification and manual references. Creating a duplicate standard specification doesn’t seem practical. WSDOT is including sections of WSDOT Design Manuals in the D/B agreements to avoid the conflicts that result from differences in AASHTO specifications and WSDOT design practices. WSDOT currently has 37 different design manuals.</p> <p>The problem statement we have today is addressing engineering authority as opposed to specifications. Who has authority to certify the design? There is a conflict in professional responsibility and the contractual authority.</p> <p>Why does WSDOT contract admin need to worry about this conflict? Because the designer in a D/B projects wants the authority to enforce the standard specifications.</p> <p>Tim Moore provided copies of the Tacoma Narrows Bridge solution to this dilemma. Engineer of Record authority was delegated to a list of engineers on the project. The agreement also includes a section titled “Interpretive Engineering Decisions”. This addresses how the D/B team may apply in writing to WSDOT for approvals of an interpretive engineering decision concerning the meaning, scope, interpretation and application of the WSDOT Standards relating to design and construction. Any change to the contract document must be approved by the Engineer of Record. In addition,</p>		

WSDOT and the D-B scrubbed the Std Specs prior to execution of the D-B Agreement to conform to responsibilities outlined in the Design-Build Agreement.

How does WSDOT protect itself from the contractor just saying, “This is not a Change and is it OK.”? WSDOT depends on the Engineer of Record to be responsible for the QA/QC of the project.

Consulting Engineers stated that the WSDOT assumption is not happening. Engineer of Record is not empowered to be directly responsible for the project QA/QC. Putting the QA/QC in the realm of a third party really puts the EOR in a difficult position.

WSDOT is currently addressing who is the Engineer of Record. Do we need one for each discipline or one Premier EOR for the project?

The issue of conflict in the commercial agreement between the Engineer and the Builder can interfere with the concept of enabling the designer to have authority to accept a change or require a change by the Builder. Who is controlling the money? WSDOT does have the payment authority and is in the loop for resolving issues between the EOR and the Builder.

WSDOT behavior model for D/B teams is important and is being defined by the D/B Policy Team.

The problem with requiring Design Teams to be responsible for hiring and enforcing QA/QC is that there is a great deal of variance between engineering firms. It is very hard to find good inspectors and to keep them on the project. It is also very hard to find engineering firms that have the same perspective on quality acceptance.

The key is making the Engineer of Record responsible for implementing the QA/QC.

Tacoma Narrows and Everett HOV did not have contractual requirements that dealt with the problem, but the D/B Teams had QA plans. Don Wagner agrees with Dave’s description of the problem. The Engineer of Record can be skipped in the construction change process because the QA/QC was required to be a third party. However, WSDOT’s oversight was there to prevent that from happening. On the TNB project, the QA Manager was responsible for making sure the EOR provided approval.

WSDOT intends to remain engaged with the projects in the role of arbitrator and owner. Future language for agreements will be structured to delegate WSDOT EOR roles to the Designers on the D/B Teams. All policy and language changes are run through policy and industry groups. WSDOT’s D/B Policy team presents to the private groups from the owner’s perspective and will need to bring today’s EOR discussion to the groups for feedback.

WSDOT is looking for representative models. Fred Tharp will send policy change issues to the ACEC/WSDOT Structures Team for feedback. The WSDOT Co-Chair will be Fred’s point of contact.

11:50 am	10 min	Break
12:00 pm	40 min	Working Lunch Agenda <ul style="list-style-type: none"> <li>• Co-Location Business Model and Structural Design</li> <li>• Discuss Problem Statement</li> <li>• Future Meeting Dates &amp; Locations</li> </ul>

Notes:

**Co-Location Business Model**

Firms have a high organizational cost. People have a high personal sacrifice. Firms loose expertise and ability to work on other projects. It is a resource issue for structural

<p>firms. It is not the optimal method to produce the best design work.</p> <p>Can modern telecommunications be used instead of moving the design firms to the project offices?</p> <p>Everett HOV requirement for entire team to be co-located made delivery more difficult.</p> <p>Eric Schultz found the environment to be beneficial because it did create an environment that made communication very easy. Being able to address issues quickly reduced the problems at the final stages of the design/review process.</p> <p>Don Wagner found that having everyone on site at the beginning was more important for the first bridge than it was for the subsequent bridge designs. However, the investment in facilities becomes short term and this is very expensive.</p> <p>Dave – what about the benefit of being in the same building with the contractor? The benefit of contractor feedback takes place when you have meetings.</p> <p>ODOT D/B co-locates the management team and the engineering design teams are located back in their home offices. It works as well as the business model that requires all of the team to be in one place.</p> <p>WSDOT –does Co-Location cost us more? YES How Much?</p> <p>Pat provided an example where the engineering costs were inflated by a factor of 4. When the cost was investigated it was determined that the cost of the new facility and requirement to dedicate staff on one project results in inefficiencies. The owner ends up paying peak staff rates for 100% of the time. Pulling people out of a central office also reduces the central office capability and office synergy.</p> <p>The problem with WSDOT policy is the lack of flexibility and maybe, a lack of awareness of the impact it has on structural design firms.</p> <p>Three questions need to be answered – What is the Cost? What is the impact on quality? Are projects really getting what they need?</p> <p>TNB – Bridge Design teams were not co-located. Bridge Designs were conducted in multiple locations around the US. It had a very long lead time for design. That gave Tim time to develop a relationship with the design teams. Bi-weekly meeting were held to facility communication between teams and contractor.</p> <p>There are benefits in being part of the project office as well as being a part of the bridge office. Coordination with the other disciplines is the key issue.</p> <p>Boston Central Artery – design was performed in Federal Way.</p>		
12:55 pm.	5 min	<p>Wrap Up</p> <p><del>Review Action Items (10 min)</del></p> <p>Prepare agenda for the next meeting (10 min)</p>
<p>Notes: Next meeting will be in Bellevue at CH2M Hill Office.</p> <p>Agenda will include final review of Environmental Expectations – Proposals 4, 5, 6.</p> <p>Agenda will include problem statement development for D/B Engineer of Record issue and problem statement for Co-Location issue.</p>		
1:00 pm.		Adjourn

**Meeting Adjourned**