

**AASHTO Highway Subcommittee on Construction**  
**2001 Meeting**  
**August 6 - 9, 2001, Wichita, Kansas**

# **Minutes of Task Force Meetings**

## **KEY PERSONNEL**

### **AASHTO Highway Subcommittee on Construction**

<b>Chairman:</b>	<b>Len Sanderson, NC</b>	<b>919-733-7384</b>
<b>Vice Chairman:</b>	<b>Frank Gee, VA</b>	<b>804-786-2707</b>
<b>Secretary:</b>	<b>Madeleine Bloom, FHWA-HIAM</b>	<b>202-366-0392</b>
<b>AASHTO Liaison:</b>	<b>Ken Kobetsky, AASHTO</b>	<b>202-624-5862</b>

### **Task Force Leaders / FHWA Liaisons**

Computers	Claude Oie, NE	402-479-4532
	Jeff Kolb, CA	916-498-5037
Contract Administration	Steve DeWitt, NC	919-733-2210
	Jerry Yakowenko, DC-HQ	202-366-1562
Environmental	Arthur Gruhn, CT	860-594-2680
	Mark Doctor, TN	615-781-5788
Pavements & Structures	David Graham, GA	404-656-5306
	Kevin Kliethermes, MN	651-291-6123
Quality	Lee Onstott, NM	505-827-5631
	Ken Jacoby, DC-HQ	202-366-6503
Research	Tom Bohuslav, TX	512-416-2559
	Kathy Petros, TFHRC	202-493-3154

# Computers in Construction

## **Task Force Meeting Minutes – 8/6/01 and 8/9/01** **AASHTO Subcommittee on Construction – Wichita, Kansas**

Claude Oie, Task Force Chairman, began the meeting with introductions and brief discussion on what needs to be completed during the Task Force meeting.

### **Discussion on Last year's work plan:**

1. Construction Management Software – Provide information and leadership for SiteManager upgrades – Will take an active role in the development of the scope of work for the advancement of the materials module for TransPort - \$50,000 in InfoTech will need to be requested. This item will be carried over to next year's work plan.
2. Electronic Field Book – State of progress of software and hardware for field books is about the same as last year. Progress seems to be constant always advancing in this area.
3. Use of Wireless Technology – There is no report on this activity at this time but will have a presentation during meeting – Tucker Ferguson working on report – research on the internet shows there is a lot of information – Will take some time to develop report - in progress
4. Develop AASHTO Website to provide information on the Subcommittee on Construction – This effort has been slow – will be asking the other Task Force committees for a contact/lead person. This person will supply information from each Task Force to add to web page. AASHTO will design and initially set up then turned over to SOC. Claude Oie is working on this effort.
5. Evaluate what is available for WEB-based construction management. Mainly deals with internet bidding. No report but there will be a presentation on this subject during the meeting by Terry Sullivan.

### **Discussion on next year's work plan and other items:**

Electronic Field books – should this be continue - continuation of the palm? Where are we going and what is the new technology? Need to have real time entry. Will need more discussion.

Wireless technology – should we continue this effort - yes - there is a need to upload from site to Database. Presently only can upload data to field office – looking at wireless to upload from the field. Project information to project engineer or to HQ. Residence office to HQ is not normally a problem. Project to Residence is normally the problem. Each State problems are different.

What are some of the ideas to present to SOC?

- a. GPS – no
- b. Video Conference may be an idea - what are the benefits and problems with this technology? Ties into computer based training. Need to check to see who has it and how they like it. Robert Johnson will be lead.
- c. What about computer based training? Maybe a survey on this would be good. Is someone else working on this? Since we are unsure if anyone else is working on this, a survey would be wise to do first. Dexter Newman will do survey to determine need and possible topic areas.
- d. Is terminal server something to consider. Decided that it is just a tool and will not look at in any depth.
- e. Digital voice recognition is something new that is being used on many different applications. Some applications include Voice over Internet and Traveler information services that is tied into the new 511 number.

James Pol, FHWA ITS, made a presentation – Work Zone (WZ) Impacts – safety is important and traffic is growing – WZ's have a large impact on public, there is a need to minimize impacts – tracking safety in WZ is important to making WZ's better – lot of effort to collect data and see if we are making improvements – encouraged SHA to conduct self assessments on WZ – transportation planning is a major player – FHWA is developing QuickZone - Main key is to get in, stay in, and then get out and stay out.

Does ITS/work zone fit into computer task force? Maybe should have a task force on safety? Maybe a NCHRP should look at WZ technology? Maybe there should be more presentations on this item? Should there be more presentations on more specific devices? Maybe there needs to be a survey of what states are using? Will have more discussions on these items in the future.

Discussed the cost increase of over 25% for large (\$10 million) jobs. More to come on this item.

SOC web page will continue to be worked on. A presentation was made on what needs to be done to get the SOC web site included into AASHTO's overall web site.

### **Work Plan for 2002, Computers in Construction**

1. Computer based training – First step would be to do a survey to determine need and specific topic areas of need. Develop complete list of developed training that could be used by others with little modification and any other on-going efforts in the highway community on this area. Dexter Newman volunteered and will be assisted by George Raymond.
2. Continue to work on monitoring the development of hand held computers as they relate to construction administration. Robert Johnson will have the lead.

3. Continue to work on Web page for SOC. This Item was carried over from last year. Tucker Ferguson will help Claude Oie on this item. Will need one volunteer from other task forces of SOC to help develop web page. SOC web page will be tied to AASHTO. Need to consider functionality of web site
4. Construction Management Software – Provide information and leadership for SiteManager upgrades. Provide representative on the TransPort user group. Continue develop the Materials Manager Module for TransPort. Task force will evaluate consultant findings on the materials module. Claude Oie will take the lead being assisted by Robert Johnson, Greg Schiess, Cliff Thomas, and Alan Campo.
5. The Task Force will continue to provide the Sub-Committee with latest information available on the pertinent innovations in the field of computers, construction administration software, and automated construction equipment.

# **Contract Administration Task Force**

## **Task Force Meeting Minutes – 8/6/01 and 8/9/01** **AASHTO Subcommittee on Construction – Wichita, Kansas**

### **Discussions on the afternoon of Monday, August 6, 2001**

Chairman Ron Williams reviewed the Task Force's accomplishments for the past year. These include:

- 1) Members of the Contract Administration Task Force reviewed the innovative contracting technical provisions that were developed under NCHRP 10-49 ( lane rental, cost-plus-time bidding, incentive / disincentive provisions, warranties, and nighttime construction). In 2000-2001, Gary Gould (IL) and Cal Gendreau (ND) asked their staff to review the technical provisions for suitability for use by the AASHTO Subcommittee. Cal reported that there were no substantive changes recommended and that the provisions were satisfactory for further publication.

The provisions will be incorporated in the next edition of the "Primer on Contracting for the 21<sup>st</sup> Century."

- 2) Due to other resource demands, the Contract Administration Task Force was not able to perform an update of the "Primer on Contracting for the 21<sup>st</sup> Century" and this item was postponed to 2001.
- 3) Members of the Contract Administration Task Force assisted in reviewing, editing and providing recommendations for the Utah State University Technology Transfer Center's document titled "Best Contracting Guide for Innovative Contracting Procedures".
- 4) Tom Pierce (VT) assisted the Subcommittee in developing a resolution concerning the effectiveness of the Disadvantaged Business Enterprise Program. (submitted to SCOH and FHWA in late 2000).

### **Other Task Force Business**

- 1) Chairman Ron Williams read two resolutions that were passed by the AASHTO Subcommittee on Materials. The first resolution urges FHWA to insist on the same level of review for "other comparable accreditation programs" as is now being provided under the AASHTO Accreditation Program. The second resolution forwarded by the Subcommittee on Materials documents the Subcommittee on Construction's support for a National Transportation Curriculum Coordination Council Pooled Fund Project. This resolution documents support for a pooled fund study to coordinate the programs of the regional technician training and materials certification programs. The members of Task Force

suggested that further discussion be withheld until copies of the resolution could be distributed.

- 2) Shelly Row, FHWA Director of the Office of Traffic Operations, gave a presentation on Work Zone Safety and Mobility Initiatives. She encouraged all members of the Subcommittee to become champions in their states.
- 3) Cal Gendreau announced that Ron Williams will be retiring in late 2001 and will no longer be able to assume his Contract Administration Task Force Chairman duties. Cal took nominations from the floor for the new Chairman. Steve DeWitt (NC) was nominated and elected unanimously to this position.
- 4) Jerry Yakowenko led a discussion of FHWA /AASHTO issues. These included Buy America provisions, Davis-Bacon site-of-work issues, update of the "Primer on Contracting for the 21<sup>st</sup> Century", update of several FHWA Technical Advisories, FHWA's design-build regulation and the AASHTO/FHWA Innovative Contracting Conference. Jerry requested volunteers to assist with several tasks and these efforts will be included in the 2002 work plan.

#### **Discussions on the afternoon of Thursday, August 9, 2001**

- 1) Carol Jacoby and Ron Williams discussed the efforts of FHWA and AASHTO in meeting the directives issued at the May 2001 AASHTO Standing Committee on Highways meeting concerning cost growth issues. Ron Williams will issue a memorandum to all SOC members by September 1, 2001. He proposes to ask all Subcommittee members to provide cost information for projects greater than \$10 million by October 1 so that the data can be compiled for the December 2001 SCOH meeting. In addition, the States will also be asked to provide information regarding the following:
  - a) the State DOT's practices and policies for change order review;
  - b) the annual average cost of construction changes; and
  - c) a summary of the reasons for the cost increases.
- 2) Frank Gee asked the Contract Administration Task Force to provide a liaison with the AASHTO Subcommittee on Maintenance to develop contract maintenance guidelines. No State DOT members volunteered for this effort. However, anyone wishing to participate in this effort should contact Jerry Yakowenko and he will provide the latest revision of the contract maintenance guidelines.
- 3) There was a brief discussion regarding the use of the innovative contracting technical provisions developed under NCHRP 10-49. The group agreed to incorporate these provisions in the next version of the "Primer on Contracting for the 21<sup>st</sup> Century."
- 4) Cal Gendreau recommended that the Contract Administration Task Force continue to support Doyt Bolling's efforts at Utah State University with the innovative contracting web site ([www.ic.usu.edu](http://www.ic.usu.edu)).

- 5) There was a short discussion on the efforts of some states to change their retainage policies in response to the USDOT DBE regulations. It was agreed that a short national survey of State DOT retainage policies be conducted to assess implementation issues. (Tom Bohouslav will take the lead with assistance provided by Yakowenko).
- 6) Cal Gendreau led a brief discussion on the procedures being used by State DOTs to deal with unsatisfactory contractor performance. Cal agreed to initiate a survey for this subject. (Cal Gendreau will take the lead with assistance provided by Yakowenko.)
- 7) There was a brief discussion regarding the use of an independent consultant hired by the design-builder to perform QC/QA tests on a design-build project. Jerry Yakowenko indicated that FHWA's policy in 23 CFR 637 - "Quality Assurance for Construction" also applies to design-build contracts. Owners should develop a quality assurance program for design-build projects with appropriate modifications for the responsibility sharing with the design-builder and the use of contractual operational and warranty requirements. The owner must still provide a certain level of independent contract verification and independent assurance testing through its own qualified testing personnel or its designated agent (excluding the design-builder or its agents).

### **Contract Administration Task Force Work Plan Items for 2002**

- 1) Work with FHWA to develop a procedure for further analysis of construction cost growth issues. Survey the State DOTs regarding cost growth on projects greater than \$10 million and report to the AASHTO Standing Committee on Highways in time for the December 2001 meeting (Williams –AZ, Jacoby-FHWA).
- 2) Update the Primer on Contracting for the 21<sup>st</sup> Century” (Yakowenko and Hakala)
  - a) Publish as an AASHTO document and post on the Subcommittee’s web site (Yakowenko-FHWA)
  - b) Include the innovative contracting technical special provisions from NCHRP 10-49 in the next edition of the "Primer on Contracting for the 21<sup>st</sup> Century".
- 3) Assist FHWA with the update and revisions necessary for certain Technical Advisories, including:
  - a. FHWA Technical Advisory TA T 5080.4, Preparing Engineer’s Estimates and Reviewing Bids (Volunteers: Gould -ILDOT, McLaury-FHWA-IL)
  - b. FHWA Technical Advisory TA T 5080.6, Guidelines on Contract Procedures with Emphasis on Bid Reviews and Evaluation (Bohuslav-TXDOT, McLaury-FHWA-IL)
  - c. FHWA Technical Advisory TA T 5080.10, Incentive/Disincentive (I/D) for Early Completion (Gendreau- ND, Angles-OH, Hundley – TXDOT, Lynwood- MIDOT)
  - d. FHWA Technical Advisory TA T 5080.15, Construction Contract Time Determination Procedures (Zoller- MNDOT, Boswell – TXDOT, Beaulieu – MDSHA)
  - e. Electronic bidding (new) (Skelnar- TXDOT, Rhinesmith- WisDOT, Nichols – TXDOT)

- 4) Support the Utah State University Technology Transfer Center Innovative Contracting web site ([www.ic.usu.edu](http://www.ic.usu.edu)) by encouraging other State DOTs to submit evaluations and experiences regarding innovative contracting techniques.
- 5) Distribute a questionnaire regarding problems associated with retainage issues in association with the implementation of the DBE regulations. (Bohuslav – TX, Yakowenko – FHWA)
- 6) Distribute a questionnaire regarding the procedures used by State DOTs in handling unsatisfactory performance (Gendreau – ND)
- 7) Support Construction Tidbits by supplying articles to Kevin Kliethermes, FHWA-MN ([Kevin.kliethermes@fhwa.dot.gov](mailto:Kevin.kliethermes@fhwa.dot.gov)).

# Environmental Task Force

## Task Force Meeting Minutes – 8/6/01 and 8/9/01 AASHTO Subcommittee on Construction – Wichita, Kansas

### August 6, 2001

Art Gruhn (CT DOT) presided as Task Force Chairman.

Bob Tinney (WV DOH) was introduced as Vice Chair.

Self-introductions of the 13 meeting attendants (see attached attendance list)

Art led a discussion on accomplishments from work plan

- The “Constructability Review Best Practices” guide was published
- A survey on constructability review state of the practice was also conducted

Survey Results (see Art’s PowerPoint slides for additional details)

- 22 states responded to the survey
- 21 states reviewed the “Constructability Review Best Practices” guide
- 8 states responded that they have a constructability review program in existence
- 50% responded they will do something with the guide
- 57% of the states indicated they will not develop a constructability review process (for reasons – see handout)
  
- 18 states responded to a survey on post construction reviews
- only 9 states have a post-construction review process
- 5 states have a written process for post-construction reviews
- see handout for more details from survey

Discussion on survey made by Steve DeWitt on environmental leadership issues and where there is a need for additional information

- 38 states responded to survey
- 37 states indicated that SCOC should be involved in Environmental Leadership
- Suggestions for involvement: work with others, training, information on best practices, articles in tidbits, draw on information from successful states

John Perry (FHWA) briefed the task force on a new training course on erosion and sediment control. This new course was developed on the heels of a previous effort that fell by the wayside after the consultant developing that course was dropped. The effort picked up again with a new technical panel put together and a new RFP released during Winter 2000. The firm Nichols Consulting was selected and the panel held a kick off session in January 2001 at TRB to talk about the course and draft an outline. A walk through of the course and reference manual was

done last month and is about 85% developed. On Aug 25-27 a pilot of the course was held in Jackson MS. A second pilot is to be scheduled and the course will soon be ready for presentation through NHI. Contact Mila Plosky at NHI, 703-235-0527 to order course # 134054.

### **Discussion on potential Work Plan items for next year**

#### **AASHTO Strategic Plan initiative on constructability and post construction reviews**

More work to be done on best practices for constructability and post construction reviews.

Revise constructability review guidelines to include a chapter on post construction review best practices. The Task Force will collect information from the 5 states that have indicated they have written procedures and from them draft a guide of best practices.

Rob McCleary (Del DOT) volunteered to participate in this effort along with Jim Tynan (NY DOT) and Jeff Lewis (FHWA-CA). Art volunteered to lead the effort.

Art will send out the survey request on post-construction review best practices again to try to get additional responses. Jeff will send the survey out to the FHWA Divisions to solicit additional information as well.

#### **Erosion and Sediment control**

Still looking for best practices and new ideas from States

Possibly could survey States on their current erosion control practices (i.e. "How many states are still using ...." and "How many states have discontinued using ....")

It was recognized that due to variations in state laws, some states are more ahead than others in stormwater management techniques and practices.

Tim Bertram will take over updating the erosion control best practices effort.

#### **Environmental Leadership**

The Task Force will solicit for information on important environmental issues that are pressing to the States and then try to find the best practices being used to address the issues. This effort can be an ongoing activity whereby each year the Task Force identifies some new issues and looks at previous issues to update any changes or new ideas.

The Task Force discussed why and how this focus on erosion control started. Art talked about a 1995 survey that was made and identified 18 important environmental issues faced by the States. Erosion and sediment control was identified as the #1 problem from that survey.

The Task Force also discussed the issue of a need for training for consideration staff in environmental issues.

Meeting adjourned at 4 pm.

### **August 9, 2001**

The Task Force had a discussion on the presentation by Gene Cleckley on Environmental Leadership. The presentation provided a good perspective of the evolution of previous

environmental legislation. Gene emphasized the importance of field people in dealing with the public and challenged us to commit to demonstrating environmental leadership in our positions. Art Gruhn noted that there are similarities in the issues Gene talked about and what he is involved with in the area of context sensitive design.

### **Election of Vice-Chairman**

With the possibility that Bob Tinney may be retiring within the year, Tim Bertram agreed to serve as Vice-Chair if Bob retires.

### **Finalization of Work Plan Items for the Upcoming Year**

#### **1. Work plan item regarding Best Practices in Post Construction Reviews**

Workgroup:

Art Gruhn (CT DOT) - Lead

Rob McCleary (Del DOT)

Jim Tynan (NYSDOT)

Jeff Lewis (FHWA-CA)

The constructability review guidelines will be revised to include a chapter on post construction review best practices. The work group will collect information from the 5 states that have indicated they have written procedures and from them draft a guide of best practices. Art will send out the survey request on post-construction review best practices again to try to get additional responses. Jeff will send the survey out to the FHWA Divisions.

The work group will collect written procedures from those states that have procedures and summarize best practices and assemble a draft guide.

#### **2. Work Plan for Sedimentation and Erosion Control Best Practices**

Workgroup:

Tim Bertram (IN DOT) - Lead

Bob Tinney (WVDOH)

Mark Doctor (FHWA-TN)

A revised survey will be developed and sent out to look for new ideas and new practices in erosion control. This effort will be coordinated with the new erosion control NHI training course.

#### **3. Environmental State of Practice Workgroup**

Workgroup:

Art Gruhn (CT DOT) – Lead

Manu Chacko (FHWA – IA)

Task force members were asked to identify 2 environmental issue areas or questions of importance to their State and E-mail them to Art by September 30.

Examples like:

How is your DOT enhancing cooperation with environmental resource agencies?

Does your State DOT fund a position of an environmental person in another agency (State or Federal) to work on environmental project issues?

How does your State handle the tracking of environmental commitments made for a project?

A questionnaire will then be sent out asking the states what they're doing in those areas. The group will choose 5-8 questions to go out initially. In future years more surveys may go out.

Discussion of the proposed resolution pertaining to constructability reviews and post construction reviews. The resolution was read and opened for discussion within the task force. Four states were in agreement that the resolution should be presented to the Committee for approval. (The resolution was later passed at the Subcommittee Final Meeting).

### **Other Issues**

There was a discussion on the need to reorganize or revise the focus of the subcommittee task forces. The environmental task force could possibly take on additional responsibility areas such as: public involvement, work zone safety (could draw more interest into the task force), utilities, work force development & training. Frank Gee has asked for comments from the Task Forces. Any suggestions should be E-mailed to Art by the end of September. The recommendations are to be presented to the subcommittee by next August.

### **Potential topics for presentations at next year's meeting in Delaware**

1. Context Sensitive Design (CSD)
2. Environmental Leadership - a State perspective (possibly NC or KY)
3. A design-build project case study/lessons learned from an environmental perspective
4. A State to talk about their post-construction review process
5. Best practices in tracking environmental commitments (possibly GA)
6. Viewpoints from a resource agency (possibly Corps of Engineers - Philadelphia to talk about permitting issues on SR 1) on various topics or requirements, hints on how to best get them involved, and how to get them as advocates for the project

Meeting Adjourned

# Quality Task Force

## Task Force Meeting Minutes – 8/6/01 and 8/9/01 AASHTO Subcommittee on Construction – Wichita, Kansas

### **Reviewed Last Year's Work Plan**

1. Complete AASHTO Strategic Work plan assignment by providing easy access (internet site) to various states' QC/QA, End Result, and Performance Based Specifications. (John Smythe, Ken Jacoby, Ken Stoneman)
  - Trauner was selected to put together a web site together for States to post their specifications and other various documents. Will be starting up work soon.
  - Web site will be housed with FHWA
2. Prepare and present paper on a quality safety culture. Develop safety checklist and audit process. (Anker Winther, Bill Moyers, Mike Martitila)
  - Anker will give a presentation on quality safety culture on August 07, which will fulfill this work plan item.
3. Develop process for managing agency personnel and processes to assist in managing quality aspects of construction projects. (Allen Samuels, Greg Xanders, Vince Barone, Gary Self)
  - Greg Xanders will give a presentation on August 07, which will fulfill this work plan item.
4. Liaison with the following activities
  - Performance Related Specification Project [Ted Ferragut, coordinator] (Ken Jacoby and Lee Onstott)
    - Expected Schedule: Develop National Working Group and hold first meeting (August 2001), Establish first two Expert Task Groups (October 2001), Complete Draft Action Plan (November 2001), Second Working Group Meeting (February 2002), Publish Final Action Plan (April 2002)
  - National Partnership for Highway Quality (Ken Stoneman)
    - Bobby Templeton will give a presentation on August 07, which will fulfill this work plan item.
  - National Coordination for Construction Training [Jim Sorenson, Coordinator] (Lee Onstott, Allen Samuels, Peter Osborn)
    - Renamed National Transportation Curriculum Coordination Committee
    - Lots of activities underway for this activity. Meeting held in June, 2001 in Williamsburg, VA. Resolution presented in AASHTO Subcommittee Meeting on Materials In late July, 2001.
    - Looking for seed money to get effort underway
    - Have found that many groups are developing similar material so this task item is expected to be very successful.
    - This effort will go beyond material certification programs and will likely cover many other inspection activity areas.
  - AASHTO Subcommittee On Materials (Amar Bhajandas)

- No know activity on this item
- 5. Make Contributions to *Construction Tidbits* newsletter (All, at least one article contributed by each Quality Task Force member)
  - Kevin Kleithermis (FHWA) is in charge of putting this newsletter together.
  - (Comment received after meeting) Greg Xanders submitted two articles.
  - Ken again encouraged each team member to contribute at least one article to the newsletter during the next year).
- 6. Develop a paper on updating definitions of new and different types of specifications. (Greg Doyle)
  - Greg worked with a consultant to put together a guideline manual (attachment 1). It is still in draft form
  - Gives overview of various types of specifications
- 7. Develop agenda item for the 2001 AASHTO Subcommittee on Construction annual meeting that shows how ISO quality programs can relate to state DOT's. Coordinate with Ron Williams [AZDOT] and the Europe Scanning Tour ( Anker Winther, Lee Onstott, Gary Todd, Gary Self, Amar Bhajandas)
  - ISO programs will be presented on August 07. Presentation will explain how ISO applies to Highway Projects, which will fulfill this work plan item.
- 8. Work with Environmental Task Force (Art Gruhn) to offer assistance in the quality aspects of environmental issues (Ken Stoneman)
  - Ken contacted Art several times during the past year to discuss coordination between the two topics.

### Research Topics

- Ken first gave an overview of the intent of this effort
  - Looking for topics in the quality area to present to the full subcommittee on construction for their consideration of support for forwarding as one of a few topic areas submitted by the committee
- Ideas
  - Claim/Dispute Resolution process – State of the practice
  - Time Incentives versus quality of construction
  - Night time work versus quality
    - A few states indicated that their research on this topic showed that there is no difference in quality of night work versus daytime work.
  - Quantification of variability in construction
    - This would rely heavily on QA data, which could be an issue)
      - NCHRP study on the matter may get around data issue
  - Implementation of specifications – intent of the spec. versus actual application
    - Example, contract completion/liquidated damages – waiving of this specification during construction.
    - Need a User Cost Manual to help on this matter

### **Election Of A New Chairperson For Quality Task Force**

- Ken Stoneman submitted Lee Onstott as potential person – Lee was voted to be the chairperson.

### **Presentation, FHWA Work Zone Mobility & Safety Integration Team, Jim Pol**

(Attachment 2)

- Effort looks at life cycle cost approach to work zone impact to the traveling public
- Fact: Since 1980, VMT up 72%, Lane Miles of Roadway up 1%
- Effort is looking for Measures of Effectiveness (MOE's) that can be tracked
- Looking at all phases of consideration of work zone impacts (planning, design and construction, Traffic control planning)
- Will look at implementation of ITS in the work zone
- Will look at mobility and safety aspects of the work zone

**August 9, 2001**

### **Discussion about Greg Doyle's report, "Major Types of Transportation Construction Specifications"**

- Document is an outcome of a course that Greg Doyle is developing.
- Purpose of the document: To clarify differences between the various types of specifications.  
Document:
  - Gives generalized definitions of each type of specifications
  - Gives pro's and con's of each type of specification
- Lee Onstott suggested that the definition for each type of specification should be defined sufficiently to be endorsed by the AASHTO Subcommittee on Construction.
- Greg has asked for all Task Force members to review the document and provide input on it.
- Jim Sorenson requested that the Performance Related Spec team review the document.

**Action Item:** All Team Members to review and provide input to Greg Doyle (gregory.j.doyle@fhwa.dot.gov) on the document by September 1, 2001

**Action Item:** Ken Stoneman will share document with the Subcommittee on Materials for their review and comment.

### **Discussion about the "Quality Action Team" (QAT)**

- The team would be a resource to solve problems and suggest new ideas on various technical issues when requested by a state.
  - An example of such a team was the pavement review team
    - The team would be called in to provide forensic review of pavement problems.
- Jim envisions the team to be made up of 8-10 people
  - 1 materials expert, 2 construction engineers, 3 industry representatives, 1 chief engineer, 2 FHWA representatives.
    - Additional technical experts could be called in as needed depending on the issue at hand.

- Jim envisions the group to be involved in 8-10 activities per year.
  - 3-4 site visits
  - 5-6 conference calls
    - There were concerns that this would be too big of a commitment for task members.
      - Jim indicated that not all members would be involved in every activity – only those with expertise in the area in question.
    - There were concerns that this team may get “caught up” in dispute resolution issues
      - Some thought that the team would be called in on program issues rather than project issues.
- Jim anticipates that each site visit will be about \$10,000 each
  - FHWA will underwrite the expenses of these trips for the first 2-3 years.
- There were thoughts that another way to set this program up would be to develop a list (and list them on the Internet) of subject matter experts for various topic areas.
- Group concluded that they would consider the item in this year’s Work Plan.

### **Election of a Vice-Chairperson**

- In this position, the person ...
  - fills in for chairperson when he/she can’t be in attendance
  - serves as the “Right hand man” of the chairperson
  - serves as the Research Committee representative for the Quality Task Force
  - prepares for the position of chairperson
- Time commitment: Annual Subcommittee meeting (this meeting) plus 1-2 additional meetings during the year. Also, the position attends several conference calls during the year.
- Mike Seigfried and Greg Xanders were willing to be considered for the position.
  - Greg Xanders was voted to be vice-chairperson

### **Resolution**

- Designed to coordinate and develop core technician training and certification materials.
- Pooled fund: \$20,000 per participating state.
  - Funding would go through NCHRP
- There was question about the benefit of such an effort since some states have already developed such materials
  - Group concluded that there is a sufficient number of states that could benefit from such an effort.

**Action Item:** Group agreed that the resolution would be put forward.

### **2002 Work Plan Items**

- Customer Focus – State of the Practice.
  - Survey the States about their efforts related to business owners and other citizens regarding impacts of construction (both on project site and off-site locations)

**Action By:** Greg Xanders and Byron Coburn

- Implementation of Performance Specifications

**Action By:** Greg Xanders

- Creation of the “Quality Action Team” (QAT)

**Action By:** Lee Onstott, Bill Hakala

- Finalization of the document “Major Types of Transportation Construction Specifications”

**Action By:** Greg Doyle

- Work Zone Quality Presentation

**Action By:** Anker Winther, Mike Marttila

- National Partnership for Highway Quality (NPHQ) Liaison activities – ongoing

**Action By:** Ken Stoneman

- Quality Task Force Web Site coordinator

**Action By:** Mike Seigfried

- Buy America Response

**Action By:** Ken Stoneman, Lee Onstott

- Construction Workmanship Training Course development (through NHI)

**Action By:** Lee Onstott

- Impacts of Utilities in Construction – Best Practices

**Action By:** Ken Stoneman

- Performance Specifications coordination

**Action By:** Ken Stoneman

- Workforce Development

**Action By:** Chris Drda

- Streamlining of construction inspection - Risk assessment of inspection activities

**Action By:** Mike Marttila, Greg Xanders

- Liaison with Subcommittee on Materials

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# Research Advisory Task Group

## Task Force Meeting Minutes – 8/7/01

### AASHTO Subcommittee on Construction – Wichita, Kansas

The 2001 meeting of the AASHTO Subcommittee on Construction (SOC) Research Advisory Task Group was conducted at 6:30am on 8/7/01 in Wichita, Kansas. Those in attendance are listed on Attachment 1. The chairman, Steve DeWitt, began the meeting by announcing that he was replacing John Smythe (Iowa DOT) who was unable to attend due to travel restrictions. This will be his only year as chair of the Research Advisory Group, however, because next year he will be the new chair of the Contract Administration Task Force.

Mr. DeWitt pointed the group's attention to the briefing paper prepared for the SOC on NCHRP 10-58, "Construction Engineering and Management Research Program". It contains a list of prioritized research problem statement titles that resulted from extensive input from highway industry professionals. The group was asked to keep these priorities in mind and to also think in terms of identifying items that would be of practical value to the SOC.

The issues from the 2000 Research Advisory Task Group meeting in Lake Tahoe, CA and other unresolved issues were discussed:

- In 1999, a recommendation was made to address workforce issues. Although it did not get picked up as a research topic, AASHTO's Subcommittee on Research (SCOR) did give \$100K to another part of TRB to do a policy study on this topic. FHWA has also contributed toward the policy study. Work is not yet underway. There will also be a European scanning tour to look at workforce issues. Some disappointment was expressed that although this issue keeps getting raised, nothing seems to be getting done to address it.
- NCHRP 20-7 has a component looking at the cost benefits of constructability reviews. This is a result of involvement with AASHTO's strategic plan. A report is due at the end of August 2001 and a draft has been sent to Art Gruhn. The report documents the costs and benefits of constructability reviews and promotes the idea of conducting them.
- Creating a decision tree for use of innovative contracting practices was another recommended topic put forth in 1999. It remains unfunded as a stand-alone project, but could possibly fall under a bigger project on innovative contracting.
- The recommendation to examine issues related to night work, specifically plant operations, trucking, and lighting also did not get selected last year. There are, however, two current NCHRP projects dealing with some aspects of night work. One, NCHRP 17-17(2) is dealing with safety issues and is expected to be completed by the end of this year. The other, NCHRP 5-13(2), was addressing lighting guidelines and NCHRP is still awaiting a report from the Principal Investigator, Ralph Ellis.

- A synthesis project on home office/field office overhead is underway as topic 32-10, Compensation for Contractors' Home Office Overhead. Another synthesis project 32-12, on owner controlled insurance programs which was submitted by Tom Warne is ongoing and being conducted by Trauner.

Updates on the status of other projects of interest to the SOC were provided by Crawford Jenks:

- NCHRP 10-61, Highway Construction Project Procurement – Alternatives to the Low-Bid System  
The panel has been selected and will be meeting at the end of August 2001. Steve DeWitt is the panel chair. The objective of the project is to identify what can be done outside of the low system.
- NCHRP 10-58, Construction Engineering and Management Research Program  
As was discussed at the onset of the meeting, NCHRP 10-58 developed a list of prioritized research topics for the SOC. A workshop had been held with 55 industry experts in March 2001 to help develop the list. A draft final report summarizing the efforts to produce the recommended research program and implementation plan has been submitted to NCHRP. A final report is expected at the end of September 2001. As a result of this effort, the 10-58 panel requested \$750K to possibly fund the top three priority projects that had been identified. SCOR provided them with \$500K and the panel is currently considering how to proceed. It is possible that they may decide to fund the second and third priority projects only. It was emphasized that although 10-58 provides a wish list for the SOC to consider, for projects to move forward, they really need to have champions.
- NCHRP 10-60, Avoiding Delays in Constructing Highway Projects  
This proposed research will build on the results of NCHRP 20-24(12), which investigated the causes of delays. The panel requested \$500 for a continuing project on avoiding delays and a project statement is expected in September 2001.

Following the NCHRP update, the discussion turned to the research priorities that had been identified at the meetings of the SOC various task forces during the 2001 annual meeting. The individual task force issues are as follows:

**Environmental Task Force – not present**

**Contract Administration Task Force – Cal Gendreau**

The following research priorities were identified:

- A synthesis on the use of consultants: how to get the best use out of consultants, negotiating contracts, overhead rates, defining responsibilities, examples of what States are using, etc.

NCHRP did a synthesis on hiring consultants, but it was more focused on preconstruction and how to hire them quickly.

A recommendation was made to address the issue of how an SHA maintains a uniform inspection force.

- Environmental Best Practices: how to avoid wasting of road materials, State role in disposal activities, issues off of the right-of-way

#### **Pavement and Structures Task Force – David Graham**

- Real time quality measurements: would like an instantaneous quality indicator, i.e., when placing mix, can you tell if it's good

This matches with the 11<sup>th</sup> highest priority identified under NCHRP 10-58. There had been a synthesis on this 8 to 10 years ago.

- The effectiveness of epoxy sealers on bridge decks

There was a synthesis (#209) on latex modified that was completed in 1994.

- The effectiveness of any sealers on high performance concrete: do they work, how long do they last, etc.

#### **Computers Task Force - Danny Shealy**

- Development of uniform specifications for ITS installations: SHAs are having problems with proprietary issues and compatibility between products. Every vendor has his own protocol and once you pick one, you get locked in. This is an issue with traffic signal systems and variable message signs and some sort of standardization is needed.

It was suggested that this issue may not get very far if it's coming out of the SOC. It was decided to draft a SOC resolution instead.

#### **Quality Task Force – Lee Onstott**

- Claims mitigation best practices: how to handle claims.

There have been two prior syntheses on this topic, #214 on how to avoid claims, and #105 on causes and methods of settlement. It seems that an update to #105 is what is being requested.

- Environmental best practices, just like the Contract Administration Task Force
- Investigation of time vs. quality: what is happening to quality as contract time is reduced
- Impact of night work on quality
- Incentives as tied to quality and related to time: are we getting our money's worth with incentives?

The group agreed that the last three topics could be combined into one suggested project on time issues vs. a quality product.

After discussing the research priorities that came out of each Task Force, the group separated the proposed topics into those that should be synthesis projects and those that should be research projects. The group also prioritized the projects within those two categories as follows:

Synthesis projects:

1. Use of consultants for construction engineering and inspection: selection, certification, how to fold them into an SHA program for uniformity
2. Claims process best practices: could be an inexpensive update of Synthesis #105
3. Environmental best practices: what are SHAs doing? This may help some States to pass legislation.

Research projects:

1. Sealers on concrete: Effectiveness of epoxy sealers on bridge decks and sealers on high performance concrete. Possibly update the 1994 effort and add HPC.
2. Real time quality measurements: This topic is currently too broad. Tom Bohuslav will team up with the Pavements Joint Task Force and the Subcommittee on Materials to see what's being done.

As the project on real time quality measurements is being narrowed, the group decided to put forth the project on sealers to the entire SOC. David Graham will develop the sealer problem statement.

Other final items:

- The SOC may want to pursue having a list server to aid communication outside of the annual meeting. The Subcommittee on Materials is currently using one.
- F-SHRP – One of the four main topic areas is in acceleration construction. NCHRP will be fleshing out the projects and the SOC should want to be in contact on this.

The meeting was adjourned at 8:00am.

Items subsequent to the 8/7/01 meeting of the SOC Research Advisory Task Group:

- On 8/8/01, at the Business Session of the SOC, the priorities of the Research Advisory Task Group were presented to the entire SOC. After discussing the topics and making some recommended revisions, the following projects were unanimously approved by the SOC:
  - Research projects
    1. Effectiveness and selection of appropriate sealers for concrete and high performance concrete structures and pavements
  - Synthesis projects
    1. State of the practice on the use of private engineering firms in construction engineering and inspection
      - In addition to the objectives discussed at the Research Advisory Task Group meeting, add an objective to explore the cost effectiveness of using consultants and develop an evaluation process to be used for future selections
    2. Best practices for construction claims resolution
    3. Environmental responsibility of SHAs
      - Address long term liability
      - Include environmental steamlining, which is a part of an ongoing 20-7 series project.

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