

NW-ACPA / WSDOT

Minutes for Monday, April 15, 2013 Meeting

Day/Time: Monday, April 15, 2013, 10:00 AM – 12:00 Noon

Location: WSDOT Cle Elum Maintenance Conference Room, I-90 Exit 80

Attendees:

Johnnie Zabel, Salina	David Jones, WSDOT	Kurt Williams, WSDOT
Jim Powell, ACPA	Morteza Davari, WSDOT	
Dave Erickson, WSDOT	Jeff Uhlmeier, WSDOT	

Next NW-ACPA Meetings Dates:

Date: October 7, 2013 Location: at WSDOT Cle Elum Maintenance Conference Room, I-90 Exit 80, 10:00 AM to 12:00 Noon.

Meeting Minutes available on line at:

<http://www.wsdot.wa.gov/Business/Construction/MeetingMinutes.htm>

New Business:

Project Engineer Authority and Change Approvals.

4/15/2013 - Dave Erickson started the conversation by highlighting the recent changes in the Construction Division. Tom Baker, State Materials Engineer and Mark Gaines, Bridge Construction Engineer have been assigned to the SR 520 project for an indeterminate period of time. With Mark's reassignment the offices traditional organization of Administration, Roadway and Bridge Teams has been divided into two sections Policy and Contracts. All the Assistant State Construction Engineers, with the exception of Denys Tak, report to Dave Erickson, under the Contracts section of the office. This will allow Dave to focus on consistent Contract Administration, while allowing Craig and his team to focus policy matters and specifications. Other changes include the addition of Denys Tak as a new Assistant to work for Craig and a new Specification Engineer.

At the Executive level Lynn Peterson is the new Secretary of Transportation. The Department is currently filling the vacant Deputy Secretary's position. Temporarily Keith Metcalf, Eastern Region Administrator is the acting Chief Engineer and Kay Taylor is temporarily filling the Chief of Staff position.

We have recently had some issues with Contactors performing work not in accordance with the contract, after being told by the project staff that it is not in compliance with the contract. Dave reviewed the roles and responsibilities related to contract changes. Jeff Carpenter is the "Engineer" and the Project

Engineer has delegated authority from him to supervise the administration of the contract. The Department has a number of Subject Matter Experts that may receive calls asking for guidance, but the authority to change the contract is spelled out in the Construction Manual and rests with the delegated authority of the Assistant State Construction Engineers, The Region Construction Engineers and the Project Engineers. Inspectors and Subject Matter Experts do not have the authority to change the contract. Contractors that proceed with work not in conformance with the contract or disregard the authority of the Contracting Agency may be found to be in breach of the contract and risk rejection of work and the potential removal and replacement of the work, at their costs. This type of behavior could also lead to a less than standard Contractor Performance Report, which can affect the Contractors ability to bid.

Do we want dowel bars across transverse joints between Cement Concrete Pavement and Bridge Approach Slabs? Currently Standard Specification 5-05.3(8)C requires Transverse Construction joint be constructed, which would include a dowel bar. Standard Plan A-40.10-02 has a detail **EXISTING APPROACH SLAB TRANSITION DETAIL** that would not require a dowel bar.

4/15/2013 – This detail is intended to be used on granular bases when placed next to the approach slab that existed before the contract. Utilizing this detail removes the requirement to drill into the heavily reinforced approach slab. It was determined that the detail is structurally acceptable. The plan needs to be clarified to note the detail is only to be used if the approach slab existed before the contract was awarded. The Standard Specification should be changed to reflect this.

Action Item: D.M.Jones is to get the Standard Plan and Standard Specification Changed.

Time of placement for end dump trucks needs to be extended to match those requirements in 6-02.3(4)D.

4/15/2013 – The time constraint is in Section 5-05.3(3)B. This specification allows the concrete to be delivered to the job site in nonagitator trucks provided it is fully discharged no later than 45 minutes after the introduction of mixing water to the cement and aggregates. Section 5-05.3(8)C, states that when a pour is discontinued for more than 45 minutes a transverse construction joint shall be installed. The goal is to insure the concrete is plastic enough when placed to prevent a cold joint from forming. The real issue is not the time in the nonagitator truck but the travel distance. The longer you travel the more likely you are going to have segregation, caused by vibration of the concrete. It was asked if a conveyor system between the truck and the paving machine would remix the concrete. There are some screws in the hopper to move the material, but they were not meant to remix the concrete. It was decided that the Industry would come back with a proposal for change to the time limit.

Action Item: Jim Powell agreed to work on a proposal.

The requirement for that the asphalt surface temperature not exceed 90°F needs to be examined. It was believed that this relates to placing concrete pavement over the top of recently placed Hot mix Asphalt (HMA) and that the temperature of the HMA should cool down to 90°F before the concrete is placed.

4/15/2013 – The group wasn't sure there is a problem here, there are options paving at night, or using water to cool down the surface temperature. Pavcool was mentioned as a tool that can be used to predict HMA pavement cooling rates. The concern is with early age cracking. Jim Powell and Jeff Uhlmeyer agreed to use HIPERPAV and determine if we are being too conservative.

Action Item: Jim Powell and Jeff Uhlmeyer will get together and look at this one.

Recycled Concrete Update

4/15/2013 - David Jones gave a brief update on the Washington State University Research effort looking at the use of Recycled Concrete Aggregate in Concrete Paving Mixes. Materials were secured from three different sources two concrete pavements (one on I-90 near Roslyn, WA and the other on I-5) and a section of runway from Fairchild Air Force Base. Not all the testing has been completed but so far the Flexural Strength of all mixes are breaking higher than 700 psi. One of the sources failed the WSDOT Degradation test, both the sources that were tested for LA Wear have passed; the third source has yet to be tested for LA Wear. Other tests to be completed are compressive strength at 28 and 90 days, and Alkali Silica reaction tests. Early indications are that workability decreases with the use of Recycled Concrete Aggregates.

Old Business:

Spall repairs within 6 inches of dowel bars.

10/3/2011- The Department was asked to reconsider the specification that does not allow a patch within six inches of dowel bar.

4/16/2012- The Department express concerns with patches within six inches of the dowel bar. The industry representatives did not see a concern with spall repairs closer to the dowel bars and felt the real issue was in the definition of what a spall repair was. The industry will work with WSDOT to better define spall repair.

10/1/2012 – Nothing to report on this item.

4/15/2013 – The discussion centered on the concrete cover needed to transfer loads across the dowel bar joints. It was mentioned that there is research available that suggest that you need at least 3 inches of concrete cover to transfer the loads. Jim Powell agreed to pass that information along for consideration.

Acceptance of concrete for concrete panel replacements?

We may not have enough test results to evaluate the concrete panels statistically. We may need to define a non-statistical acceptance similar to the amendment to Section 5-05.3(4)A.

10/1/2012- On a recent contract we experienced low compressive cylinder breaks. The testing frequency list in the construction manual is one per shift this lead to one test result per 8 – 16 panels. The specifications currently state the specifications limits but do not include the option to validate panel strengths through coring, as we allow for Portland Cement Concrete Pavements (PCCP). The Department would like to use Non statistical acceptance procedures established for concrete pavements with panel replacements. It was also pointed out that we should consider revising the testing frequency to one every 20 or 30 cubic yards of concrete placed or one per shift, per mobile mixer. It was agreed to use the non-statistical acceptance similar to PCCP. We generally place 8-10 panels per shift at about 6 CY per panel or 48 and 60 CY of concrete. We will keep the once per shift, but will add that when mobile mixes are used the testing frequency will be one per shift, per mobile mixer.

Action Item: Change Standard Specifications to include non-statistical acceptance and update Construction Manual.

Require the Foam Board to be full height for Dowel Bar Retrofits.

10/3/2011 – It was suggested that we require the foam board and the transverse joint come all the way to the top. That would better reestablish the joint.

4/16/2012- A general discussion of the topic lead to no concerns begin expressed concern having the foam board come all the way to the top. The Standard Plans should be revised to show that.

10/1/2012- This requires a specification change and a standard plan revision.

4/15/2013- The issue of full height foam board and possible aesthetics of misaligned foam boards was raised. The joints are saw cut and sealed after the placement of the dowel bars and that should take care of any aesthetic issues. It was felt that there are more benefits to insuring the vertical alignment of the foam boards than any possible aesthetics issues. It was agreed to move this issue forward.

Action Item: revise specification and standard plan.

Completed Items:

Do we need a test section for Grinding?

Test Section for grinding

Action Taken: GSP issued in April 2013.

Repair criteria for concrete panel replacements?

Should we use the same criteria as listed for repair of Defective Pavement Slabs in Standard Specifications Section 5-05.3(22)?

10/1/2012- The Department would like to bring the requirements of section 5-05.3(22) for the repair of cracked panels into section 5-01 for panel replacements. This would allow for the resolution of any repairs required in a consistent manner. It was suggested that we should refer to section 5-05.3(22) in 5-01 so that any future changes would not have to be made in two different sections. It was agreed to proceed with the reference to 5-05.3(22) for repairs of panels in 5-01.

Action Taken: Amendment issued for specifications in 5-01 to refer to section 5-05.3(22) in April 2013.

Joint Training Specification

10/3/2011- The proposed GSP was handed out for review and comment. The Specification was recently included in a contract in the Northwest Region. A suggestion was made to require the ACPA for training. It was decided not to require a contract for training in the GSP. It was also suggested that we pre-qualify the presenters like we do contractors. The Department only pre-qualifies prime contracts and is not interested in developing a least of pre-qualified instructors. It was decided to include a list of people by position or office that should be invited to attend as is done in the bridge deck pre-pour meeting requirements. It was recommended that the training materials should be submitted at least five calendar days before the training rather than five working days.

10/1/2012 – We have received FHWA approval to use this specification on concrete pavement projects. The GSP will be placed in future PCCP projects.

Action Completed: GSP is in place. Instructions are to include in all projects with cement concrete pavement.

NW-ACPA / WSDOT

Minutes for Monday, October 7, 2013 Meeting

Day/Time: Monday, October 7, 2013, 10:00 AM – 12:00 Noon

Location: WSDOT Cle Elum Maintenance Conference Room, I-90 Exit 80

Attendees:

David Jones, WSDOT Kurt Williams, WSDOT
Bob Pipnich, Merlino Jim Powell, ACPA
Dave Erickson, WSDOT Jeff Uhlmeyer, WSDOT
Darrel McCallum, WSDOT

Next NW-ACPA Meetings Dates:

Date: April 21, 2014 Location: at WSDOT Cle Elum Maintenance Conference Room, I-90 Exit 80, 10:00 AM to 12:00 Noon.

Meeting Minutes available on line at:

<http://www.wsdot.wa.gov/Business/Construction/MeetingMinutes.htm>

New Business:

Tie Bars for Concrete Panel Replacements.

We are considering revising the requirements for tie bars. Tie bars would only be required when three or more continuous panels are being replaced.

10/7/13- The Contracting Agency is proposing to change the requirements for tie bars in concrete panel replacements. Tie bars will only be required when replacing three or more panels in a row. There was no objection to this change. There was a discussion about whether or not you need tie bars across the longitudinal joint of interior lanes. The big thing is to allow load transfer between the two outside adjacent lanes where truck traffic is expected. This probably would only apply to 5 lane sections.

Action item: Update Standard Plans to reflect the requirement to use tie bars when three or more panels in a row are replaced.

Allow the use of Corrosion resistant dowel bars in Dowel Bar Retrofits.

10/7/13- The Contracting Agency is proposing to allow the use of corrosion resistant dowel bars in dowel bar retrofits. Currently only epoxy-coated bars are required and allowing a corrosion resistant dowel bar would require a change

order. It was mentioned that there is confusion about whether epoxy-coated bars can be used for corrosion resistant bars. The specifications are clear that when working in 5-01 Cement Concrete Pavement Rehabilitation you use epoxy-coated dowel bars (9-07.5(1)) and when working in 5-05 Cement Concrete pavement you use corrosion resistant dowel bars (9-07.5(2)). Epoxy-coated dowel bars don't meet the requirements for corrosion resistant dowel bars. We are changing the titles in 9-07.5 and will highlight the use of the different bars within the Construction Manual.

Action Item: update the Construction Manual.

Smoothness requirements for PCCP rehabilitation

10/7/2013 – The bid item under section 5-05.5 “Ride Smoothness Compliance Adjustment” was recently placed in a PCCP grinding project (section 5-01). This created an issue in that the adjustment is calculated by multiplying the unit contract price for cement concrete pavement, times the volume of concrete, times the Ride Smoothness Profile index. The problem is that we pay for grinding by the square yard not cubic yards. Currently we wouldn't pay an incentive for grinding. The question was asked if we should pay an incentive for grinding. It was concluded that the small panel replacements were not a big deal and would not be considered for incentive. Jim Powell pointed out the International Grooving and Grinding Association (IGGA) is working on a smoothness specification. Jim Powell said he will see if he can get a copy and send it out to the group.

Action Item: Jim Powell to get a copy of the IGGA smoothness Specifications.

Old Business:

Time of placement for end dump trucks needs to be extended to match those requirements in 6-02.3(4)D.

4/15/2013 – The time constraint is in Section 5-05.3(3)B. This specification allows the concrete to be delivered to the job site in nonagitator trucks provided it is fully discharged no later than 45 minutes after the introduction of mixing water to the cement and aggregates. Section 5-05.3(8)C, states that when a pour is discontinued for more than 45 minutes a transverse construction joint shall be installed. The goal is to insure the concrete is plastic enough when placed to prevent a cold joint from forming. The real issue is not the time in the nonagitator truck but the travel distance. The longer you travel the more likely you are going to have segregation, caused by vibration of the concrete. It was asked if a conveyor system between the truck and the paving machine would remix the concrete. There are some screws in the hopper to move the material, but they

were not meant to remix the concrete. It was decided that the Industry would come back with a proposal for change to the time limit.

10/7/2013 - Wisconsin has developed a specification that Jim Powell handed out. This specification is based on concrete temperature at the time of placement. It suggests that you could place concrete pavement up to 60 minutes after batching when a retarder is used. ACPA has no guide lines on this issue. It was noted that we would rarely have a problem placing concrete within 60 minutes.

The requirement for that the asphalt surface temperature not exceed 90°F needs to be examined. It was believed that this relates to placing concrete pavement over the top of recently placed Hot mix Asphalt (HMA) and that the temperature of the HMA should cool down to 90°F before the concrete is placed.

4/15/2013 – The group wasn't sure there is a problem here, there are options paving at night, or using water to cool down the surface temperature. Pavcool was mentioned as a tool that can be used to predict HMA pavement cooling rates. The concern is with early age cracking. Jim Powell and Jeff Uhlmeyer agreed to use HIPERPAV and determine if we are being too conservative.

10/7/2013 – It was suggested that we use HIPERPAV to analyze and allow increases in temperature. It was noted that the risk of cracking is from the bottom up. It is basically a strength gain vs. shrinkage issue. We rarely see pavement cracking outside the contraction joints. The HMA acts as a heat sink. HIPERPAV would allow for condition specific temperatures to be utilized. Kurt suggested using the standard specification temperature of 90° F and allow for HIPERPAV to be utilized to demonstrating that a higher temperature could be allowed. Jim and Jeff will demonstrate HIPERPAV at our next meeting.

Action Item: Jim Powell and Jeff Uhlmeyer prepare a demonstration of HIPERPAV

Spall repairs within 6 inches of dowel bars.

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10/1/2012 – Nothing to report on this item.

4/15/2013 – The discussion centered on the concrete cover needed to transfer loads across the dowel bar joints. It was mentioned that there is research available that suggest that you need at least 3 inches of concrete cover to transfer the loads. Jim Powell agreed to pass that information along for consideration.

10/7/2013 – Jim Powell said that since bars are ok anywhere in the middle third and we need three inches of cover above the bar, based on research. On a 12 inch slab the bars could be within four inches of the surface and with a three inch cover requirement you could allow a one inch spall repair over the bars.

Other items raised at the Meeting:

10/7/2013 – Jim Powell pointed out that the adjustment for thickness deficiency is extreme. Standard Specification Section 5-05.5(1)B, **Thickness Deficiency of More than 0.05 Foot** requires that the area of the deficient thickness be identified. Then if the Engineer allows the deficient panels may be allowed to remain, but they would not be paid for plus a further penalty is assessed in the amount of 25 percent of the Contractor's unit bid price for the panels. The Contractor would also be responsible to pay for all the cores required to determine the area of the deficiency. It was suggested that we use some sort of life cycle cost to determine the appropriate amount to reduce the payment for the deficient pavement thickness.

Action Item: Jim Powell will develop a proposal based on a life cycle evaluation.

10/7/2013 – Jeff Uhlmeier, brought up the recessed pavement markers on Snoqualmie Pass that were done with a carbide tooth grinder. The recesses were not uniform and cut into the adjacent lanes more than they should have. Dave Erickson asked the group if recessed markers are normally done with diamond blades. The answer was yes. Dave Erickson said that he would work on a specification.

10/7/2013 – Jeff Uhlmeier noted a design-build project with panel replacements that damaged the adjacent panels. He questioned if the specification or inspection was the issue. The issue appeared to be an administrative issue not a specification issue.

10/7/2013 – Jeff Uhlmeier asked if the new specification in Section 5-01 for a crack in the panel is working ok. No one expressed any issues.