

01/14/15

Outline for owner oversight bullet points

- **Technician Certifications, Lab qualifications, and Lab Inspection**
 - Personnel performing tests used in mix design acceptance, rejection, price adjustment decision, and laboratories in which those tests are performed, shall be qualified in accordance with CP10.
 - The personnel performing any test results that are to be recognized by the Projects Owner Quality Assurance Team in acceptance decisions would be Quality Control, Quality Assurance, and Independent Assurance Testing.
 - All equipment used in testing asphalt is to be up to date and current with all calibrations and in accordance with CP10.

- **Quality Control Plan P**
 - The Contractor shall submit a Quality Control Plan, to the Engineer at the preconstruction conference. The Contractor shall not start work on the project until the Engineer has approved the QCP in writing.
 - What we look for as an owner in the Quality Control Plan will need to conform to the requirements stated in section 106.05 of the 2011 CDOT Standard Specifications or specific Project Special Provisions.

- **IAT P**

- Independent assurance testing (IAT) is performed on the specified elements at the specified frequency outlined in the CDOT Field Materials Manual.
- This testing is performed as a check to determine QA test method and equipment are compliant with specified procedures.
- Testing is performed on samples split with QA at exact test locations utilizing separate equipment and personnel.
- The IAT lab is responsible for equipment inspection of QA test facilities.

- **Responsibilities of a Head Technician P**

- What a Head Technician or Resident Materials Manager looks for in the asphalt process being done on his or hers project are the following.
 - Ensuring that neither QA nor QC is holding up the project from progressing forward due to not meeting the qualifications as required in CP10?
 - Is equipment used in recording tests calibrated and current for usage on the project.
 - To ensure fairness between the Contractor and Projects Quality Assurance team with material testing and contract specification requirements.

- Most importantly make sure all testing and material requirements are being met as per the contract document and specifications.

- **Dispute Resolution P**
 - All test results performed that the contractor or owner do not agree with or find to possibly be an outlier must first meet the requirements as per CP17.
 - Once those results have been verified and meet the requirements as per CP17 then there is a process for the dispute. It is as follows.
 - **Level 1** The Project and Contractor personnel will perform investigation, review data, and possibly retest the sample in question. This must be completed within 3 working days from the time written notification is presented to the Engineer.
 - **Level 2** Issue is not resolved by Level 1. The Engineer and Contractor personnel will perform an investigation and review data to determine if the questioned is an isolated sample. All level 2 tasks must be completed within 8 working days from the time written notification is presented to the Engineer.
 - **Level 3** Issue is not resolved by Level 2. Project Engineer will submit a Blind Split Sample to CDOT Central Materials Lab within 18 working days from the time written notification is received. The blind split sample shall be submitted only to the Materials and Geotechnical Branch,

Asphalt Program Manager, by the Engineer using a CDOT Form 1304.

Samples shall be submitted only when the decision has been formally made at the project to conduct dispute testing.

- **Price reductions, Incentive, and Disincentive P**

- As test results for the project become available, they will be used to calculate the Quality Level and Pay Factor numbers for each process. The process Incentive and Disincentive Pay will then be calculated and accumulated for each element and for the item. The test results and the accumulated calculations will be made available to the Contractor upon request. Numbers from the calculations will be carried to significant figures and rounded to AASHTO Standard Recommended Rounding Method.
- Materials or work will be evaluated for price reduction only when deviations from specifications occur on any of the several individual test for the lot. The several individual test values will be averaged and the percent of price reduction for the lot will be determined.

- **Smoothness P**

- The Contractor shall mark the profiling limits and excluded areas. When the Contractor specifies the HRI Percent Improvement, the marking shall be placed in a location that will not be disturbed, so that the section start and stop location

will be identical for the initial and final pavement surface. The Engineer will verify that the Contractor shall use traffic cones with reflective tape or reflective tape on the pavement at the beginning and the end of each lane for triggering the start and stop locations on the profiler and at any other location, where portions of the profile are being deleted. These locations shall be marked with temporary paint so that the Department's profiler uses the same locations for any smoothness verification testing that may be performed.

- The Contractor shall clear the lanes to be tested of **all debris before profiling**.
- Each lane shall be profiled three times at a constant speed (+/-5mph) with a minimum speed of 15 mph and a maximum speed of 70 mph. The profile shall be taken in the intended direction of travel. The left and right wheel path shall be profiled simultaneously.
- The collection profiles shall be turned over immediately to the Engineer and will be analyzed using **CP 74**.
- Incentive and Disincentive adjustments will be based on the HRI for each tenth of a mile section or fraction thereof. Incentive/Disincentive adjustments for Pavement Smoothness will be made in accordance with Table 105-06 of the 2011 CDOT Standard Specifications. Sections less than a hundredth of a miles in length will not be subjected to disincentive adjustments.

Questions

1. Does the technician certification have to be LabCat or if any, what other certifications are acceptable?

CDOT and Local Agencies will only accept test results for acceptance or dispute acceptance results if the technician sampling or performing the tests involved, where LabCat Certified. The technician must meet the requirements as per CP10.

2. What does CDOT look for when inspecting a lab?

Equipment certifications and certifications on the technicians performing the tests.

3. Are there meetings before paving begins to discuss testing?

Yes these meeting are typically called Per Pave meetings.

4. What happens if a check test doesn't pass?

The Contractor Quality Control cannot dispute and acceptance results as per CP 17.

5. What does the owner look for in a QCP?

We look for certifications on all QC lab equipment and technicians performing the tests. We also look for the type of paving equipment the Contractor plans to utilize will placing

HMA/SMA. Finally we also look for on what procedures the contract plans to sample and perform field and lab testing on their HMA/SMA placement

6. How often is independent assurance testing (IAT) performed?

This is all based of the total amount of asphalt placed on the job.

7. What does a Head Technician expect the QA technician to cover on the project?

Keeping in contact with the Project Engineer Head Tester and Project personnel such as Inspectors. To not be holding up the contractor of work being done that is related in indirectly related to the paving process. Communication and utilizing your time are key in success for the whole paving process.

8. How does CDOT evaluate the different levels in the dispute resolution process?

9. Where can I find the specifications for asphalt testing for a Project?

10. Who is does the smoothness profiling QA or QC?

11. Is there a huge difference between DB and DBB process for asphalt?

Sampling, Testing and Documentation of Asphalt in the Field



Our Panelists

- ▶ Amy Strouthopoulos
 - ▶ Westest
- ▶ Tammy Buck
 - ▶ Yeh and Associates
- ▶ Pablo "Paul" Gonzales
 - ▶ CDOT





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From the PC (QC) Perspective

(2016 QC is now referred to as Process Control (PC))

- Amy Strouthopoulos
 - Operations Manager
 - Westest



Quality Control

- Who is quality control
- What is the purpose of quality control
- Pre-project start-up activities Project start-up activities
- Check testing and gauge correlation Sampling
- Reporting, sharing results
- Tracking results Testing frequency



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From the OA (QA) Perspective

(2016 QA is now referred to as Owners Assurance (OA))

- Tammy Buck
 - QA Field Manager
 - Yeh and Associates



Quality Assurance/Acceptance (QA)

- What is QA and why do we do it?
- Starting a project- Setting up project books, Mix design submittal, Check testing requirements, Mix verification testing
- Sampling and sample splitting requirements for acceptance testing
- Acceptance Testing & testing frequency- know your resources; FMM, Spec. Book, Plans & Specials
- Test results for contractor pay factor determination.
- Communication and accountability- know everyone's role on project and the best way to communicate with them
- The importance of exceptional documentation- know your forms, the difference between SMM/LIMS and traditional documentation.
- Organization keeps you from getting overwhelmed! How to keep up with testing and paperwork.





Sampling, Testing and Documentation of Asphalt in the Field



From the Owners Perspective

- Pablo "Paul" Gonzales
 - Head Tester/Inspector
 - CDOT Region 1



Owners Oversight

- Technician, Certifications Lab qualifications/Lab Inspection
- Quality Control Plan
- HMA/SMA Mix Design Approved
- IAT
- Voids vs. Gradation acceptance
- Responsibilities of a Head Technician
- Dispute Resolution
- Price reductions, Incentive, and Disincentive
- Smoothness



Summary

- The information presented in this session is to provide people with a better understanding of how important it is for the QC- QA and IA to be working together and communicating so a project can continually be moving forward.
- It is important for all parties to provide quick communicate to the other parties so if corrections or adjustments are needed, they can occur rapidly.



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Additional Discussion-

Questions?

