

Contractor QC Guide Specifications

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Introduction

- The goal is to create a useful Contractor QC Guide that is compatible with both Aviation and Highway Construction projects in Alaska
- Aviation Specifications generically defines Contractor QC fairly well but benefits of it's application are not well realized
- AK Highway Standard Specifications very briefly describes requirements for Contractor QC
- Perfect?

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Topics of Discussion

- Purposes
- Contractor QC for various materials
- Overall Provisions
- Emphasis on Hot Mix Asphalt QC
- What's next?

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Purposes

- Saving money
- Improving quality of construction
- Setting basic minimum standards
- Providing a platform for learning more about quality control
- Promoting working together for the common goal of excellent quality finished products you can be proud of taking part in creating.

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Materials

Highway Material	Airport Material	Minimum Estimated Quantity
203 Borrow	P-152	50,000 tons or 25,000 cy
301 Crushed Aggregates	P-208 P-209	10,000 tons or 5,000 cy
401 HMA	P-401	5,000 tons of mix
501 PCC	P-501	1,000 cy
Welding	Welding	SP Required ₅

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Overall Provisions

- Contractor develops QC Plan on forms included in the Guide
- QC Testing Laboratory must meet typical Field Laboratory requirements
- Plan Administrator and QC Technician qualifications defined
- Contractor develops: Testing Plan; Documentation methods; Reporting methods; Corrective action requirements

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QC Addresses

- Operational and process control techniques to fulfill QA
- Target Value
- Precision
- Accuracy
- Capability
- Action Limits
- Suspension Limits

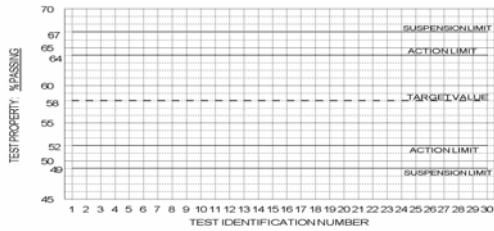
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Control Charts

CONTROL CHART SET UP

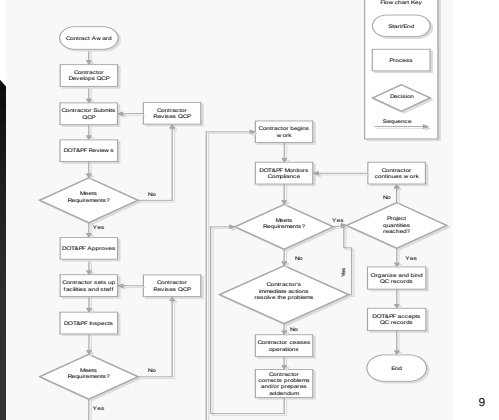
PROJ. # HOT MIX ASPHALT, TYPE IIA, #4 SIEVE, TARGET 56%



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Fig. 1: CONTRACTOR QUALITY CONTROL PLAN FLOW CHART



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HMA

- Monitor and Control:
 - ◆ Asphalt Cement Content
 - ◆ Gradation
 - ◆ Moisture in aggregates
 - ◆ Moisture in mix
 - ◆ Field Density
 - ◆ Temperatures
 - ◆ Smoothness
 - ◆ Segregation

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HMA QC

- WAQTC Sampling and Testing
- Put gradation and asphalt content data into Price Adjustment programs (provided)
- Plot other data on Control Charts or as required by the QCP

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**Gradation and AC%
Corrective Actions**

- Take actions if the CPF falls below 0.95. Use QCP provisions for corrective actions for the applicable case.
- Stop production if the CPF falls below 0.75. Use QCP provisions for corrective actions to get back in production.
- Addendum?

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Implementation

- Obtain FHWA and FAA approval
- How to pay for this?
- Submittal, review and administration
- Contractors need WAQTC Training
- Fair pay for QC personnel
- Gaps between QC and the QA

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What This Means

- Making the best better
- This is worthwhile

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Next Steps

- More Partnering
- Meetings, Plans, Reviews, Construction monitoring
- Trial Projects?
- Questions? Comments?
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- Thank you!

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