

ASPHALT GUIDELINES - ROADWAY VT

- **READ CONTRACT DOCUMENTS**
 - QC Plan
 - Contract
 - Specifications
 - Plans

- **MAINTAIN COMMUNICATION WITH:**
 - Roadway QC
 - Plant VT
 - QC Manager
 - Project Administrator (P.A.)

- **MONITOR MILLING OPERATION (327.3)**
 - Randomly record ten cross slope measurements per lane mile in tangent sections
 - Randomly record a minimum of three cross slope in super-elevations.
 - Meet the tolerances in Table 327-1.

Table 327-1 Cross Slope Milling Acceptance Tolerance		
Roadway Failure	Individual Absolute Deviation	Average Absolute Deviation
Tangent Section (including turn lanes)	0.4%	0.2%
Super-elevated curve	0.4%	0.2%
Shoulder	0.5%	0.5%

- **MARK DENSITY QC AND IV CORE LOCATIONS (334-5)**
 - Random numbers received from Plant VT

DO NOT ALLOW QC TO SEE RANDOM NUMBERS

- **COMPLETE ASPHALT ROADWAY VERIFICATION REPORT (675-030-21)**
 - VERIFY **asphalt spread rate** once per layer/day (CPAM 5.10)
 - VERIFY **asphalt temperature** once per day (CPAM 5.10)
 - VERIFY **tack spread rate** once per day (CPAM 5.10)

- **VERIFY CROSS SLOPE (330-12.3.2)**
 - Randomly record a minimum ten measurements per lane mile in tangent sections and control points in transition sections
 - Randomly record a minimum of three cross-slope measurements in super-elevations.
 - Meet the tolerances in Table 330-2.

ASPHALT GUIDELINES - ROADWAY VT

(continued)

Table 330-2 Cross Slope Acceptance Tolerance		
Roadway Failure	Individual Absolute Deviation	Average Absolute Deviation
Tangent Section (including turn lanes)	0.4%	0.2%
Super-elevated curve	0.4%	0.2%
Shoulder	0.5%	0.5%

- **OBSERVE PAVING OPERATIONS, FOR COMPLIANCE WITH QC PLAN (SCO 08-07)**
 - If non-compliance observed - **NOTIFY QC MANAGER**
 - If non compliance not corrected -**NOTIFY P.A.**
 - **P.A.** will void that portion of QC plan if contractor is in non-compliance

- **COLLECT, REVIEW AND RETURN EACH DAYS PAPERWORK, DAILY**
- **DENOTE ANY CORRECTIONS ON THE PAPERWORK RETURNED TO QC**

ASPHALT GUIDELINES - ROADWAY QC

- **READ CONTRACT DOCUMENTS**
 - QC Plan
 - Contract
 - Specifications
 - Plans

- **MAINTIAN COMMUNICATION WITH**
 - QC Manager
 - QC Plant and VT Technicians
 - Communication between the Plant QC and Roadway QC is **IMPERATIVE**

- **MONITOR MILLING OPERATION (327-3)**
 - Record cross slope measurements in tangent sections once every 100 feet.
 - May be reduced to once/200 feet upon approval of the Engineer.
 - Record a minimum of three cross slope measurements in super-elevated sections.

- **MAINTAIN ASPHALT ROADWAY DAILY REPORT OF QUALITY CONTROL (675-030-20)**

- **MONITOR ASPHALT TEMPERATURE (330-6.3)**
 - First 5 loads
 - One out of every 5 loads thereafter

- **CONTROL TACK SPREAD RATE (300-8.4)**

- **MONITOR ASPHALT SPREAD RATE**
 - The **P.A.** will establish a **target spread rate** beginning of each day
 - Monitor spread rate at the beginning of each day and a **minimum of once/200 tons**
 - Maintain the spread rate **within 5%** of the target. (330-2.2)

- **MONITOR PAVEMENT CROSS SLOPE (330-12.3)**
 - Minimum once every 100 feet
 - May be reduced to once/200 feet upon approval of the Engineer.
 - Meet the tolerances in Table 330-2.

Table 330-2 Cross Slope Acceptance Tolerance		
Roadway Failure	Individual Absolute Deviation	Average Absolute Deviation
Tangent Section (including turn lanes)	0.4%	0.2%
Super-elevated curve	0.4%	0.2%
Shoulder	0.5%	0.5%

- **CUT DENSITY CORES AT LOCATIONS MARKED BY VT ROADWAY (334-5)**

ASPHALT GUIDELINES - ROADWAY QC

(continued)

- **PERFORM STRAIGHTEDGE (330-12)**
 - Intermediate Layers
 - Tolerance = $\pm 3/8$ inch
 - Final Layer (Friction & Structural)
 - Minimum 48 hour notice before testing
 - Tolerance = $\pm 3/16$ inch

- **RECEIVE ASPHALT DELIVERY TICKETS FORM THE PLANT**
- **FORWARD QC ROADWAY REPORTS TO QC MANAGER DAILY**
- **SEND DAILY PACKAGE (COPIES OF THE QC ROADWAY REPORTS WITH ORIGINAL PLANT DELIVERY TICKETS) TO ROADWAY VT**

ASPHALT GUIDELINES - PLANT VT

- **READ CONTRACT DOCUMENTS**
 - QC Plan
 - Contract
 - Specifications
 - Plans

- **MAINTAIN COMMUNICATION WITH**
 - Roadway VT
 - District Materials Office (DMO)
 - QC Personnel
 - Project Administrator (PA)

- **GENERATE RANDOM NUMBERS (334-5, SCO MEMO 08-07)**
 - Send Roadway Random Numbers to Roadway VT

DO NOT ALLOW QC TO SEE RANDOM NUMBERS

- **MONITOR ALL QC PLANT TESTING (SCO MEMO 08-07)**

NOTIFY ROADWAY VT, P.A., AND DMO OF ANY FAILURES IMMEDIATELY

- **REPORT ANY PAY FACTOR < 90% TO THE P.A. AND DMO IMMEDIATELY (334-5.1.9)**

- **PERFORM VERIFICATION TESTING ONCE PER LOT/RANDOM NUMBER (334-5)**

- **NON-COMPARING VT TESTING (334-5.1.5)**

NOTIFY ROADWAY VT, P.A., AND DMO OF ANY NON-COMPARISONS IMMEDIATELY

 - Forward **non-comparing** samples to resolution. (334-5.1.6)
 - Report results to contractor within 1 day of lot completion.
 - Enter VT report data into LIMS within 1 day of completion.
 - Verify all QC data has been entered into LIMS for this lot.

- **OBSERVE PLANT OPERATIONS, FOR COMPLIANCE WITH QC PLAN:**
 - Non-compliance **observed** - notify Quality Control Manager (QCM)
 - Non compliance **not corrected** - notify P.A. & DMO
 - **DBE** will **void** that portion of QC Plan if contractor is in non-compliance

- **COLLECT AND REVIEW EACH DAYS PLANT PAPERWORK, DAILY**

- **DOCUMENT/UPDATE THE MIX DESIGN SUMMARY SPREADSHEET (675-030-24)**
 - Monitor the trends of critical material properties

- **RETURN PAPERWORK TO PLANT QC FOR ANY CORRECTIONS**
 - NOTIFY QCM & DMO OF ONGOING PROBLEMS

- **COMPILE AND DELIVER LOT SUBMITTAL PACKAGE TO ROADWAY VT FOR REVIEW AS SOON AS LOT IS COMPLETE (PLANS PREPARATION MANUAL, CHAPTER 9.3)**

ASPHALT GUIDELINES – PLANT QC

- **READ THE CONTRACT DOCUMENTS:**
 - QC Plan
 - Contract
 - Specifications
 - Plans

- **MAINTAIN COMMUNICATION WITH**
 - QC Manager
 - QC Roadway & Both VT's
 - Communication between QC Plant and QC Roadway is **IMPERATIVE**

- **CHECK ASPHALT TEMPERATURE(330-6.3)**
 - First 5 loads
 - Every 5th load thereafter

- **TEST HOT MIX ASPHALT**
 - Sampled Mix (334-5, SCO MEMO 08-07)
 - Asphalt binder content
 - Gradation
 - Volumetric properties
 - Minimum of once per day
 - Minimum of twice per day if > 1000 tons (330-2.2)
 - Report any results with a **Pay Factor < 90%** to VT Plant and QC Manager
 - **Verify** modifier addition (330-2.2)
 - **Verify** that all test results meet contract specs
 - **Inform** QC Manger, P.A., and DBE of any failures immediately

- **TEST AGGREGATE (INCLUDING R.A.P.) STOCKPILE (330-2.2)**
 - Frequency - Once every 1000 tons of incoming material.
 - Binder Content and Gradation of extracted aggregate
 - Moisture Content - stockpiles or combined cold feeds once per day

- **TEST ROADWAY DENSITY CORES**
 - Process Control Cores (informational cores only) (330-2.2)
 - Quality Control Density Cores as identified by the Plant VT (334-5.1.3.2)
INSURE DENSITY CORES AND INFORMATION CORES ARE NOT MIXED

- **NOTIFY THE VT TECHNICIAN WHEN ALL TEST RESULTS ARE UPLOADED INTO LIMS**
- **FORWARD QC PLANT TICKETS TO VERFICIATION TECHNICIAN DAILY FOR PLACEMENT IN LOT PACKAGE**
- **QC MANAGER TO CHECK AND ENTER REPORTS INTO LIMS WITHIN 24 HOURS**
- **MAINTAIN SAMPLE AND ROADWAY CORES UNTIL NEXT LOT IS COMPLETED**

ASPHALT GUIDELINES – PROJECT ADMINISTRATOR

- **QUALITY CONTROL PLAN**
 - Review and Recommend approval
 - Review at 30%, 60%, 90%

- **READ THE CONTRACT DOCUMENTS**
 - QC Plan
 - Contract
 - Specifications
 - Review at 100%

- **SETUP AND CONDUCT PRECON AND ASPHALT PREPAVING MEETINGS**
 - Establish Target Spread Rate
 - Distribute Pre-Paving Minutes to all attendees

- **PERIODICALLY MONITOR MILLING AND PAVING OPERATIONS**

- **MAINTAIN COMMUNICATION WITH**
 - Contractor
 - QC Manager
 - Verification Technicians

- **RECEIVE AND REVIEW LOT SUBMITTAL PACKAGE FROM ROADWAY VT, WHEN LOT COMPLETE**

- **VERIFY QC/VT DATA ENTRY INTO LIMS, DAILY**

- **REVIEW CPF**
 - Make pay adjustments as necessary

- **INSURE ANY TYPE OF CONTRACT CHANGES VIA SA DWLS, DLS, STOP WORK ORDERS**

- **AT COMPLETION OF THE PROJECT, THE P.A. IS TO SUBMIT THE LOT SUBMITTAL PACKAGES TO FINAL ESTIMATES**

ASPHALT GUIDELINES – QC MANAGER

- **PREPARE AND SUBMIT QUALITY CONTROL PLAN**
- **READ THE CONTRACT DOCUMENTS**
 - QC Plan
 - Contract
 - Specifications
 - Plans
- **MAINTAIN COMMUNICATIONSWITH**
 - Contractor
 - PA
 - QC Techs & VT Techs
- **MONITOR QC PROCESS**
 - Administer, Adjust and Resubmit QC Plan as needed
- **ATTEND PRECON AND ASPHALT PREPAVING MEETINGS**
- **MONITOR MILLING AND PAVING OPERATIONS TO ENSURE THAT ALL OPERATIONS ARE IN COMPLIANCE WITH CONTRACT DOCUMENTS**
- **RECEIVE AND REVIEW QC ROADWAY REPORTS DAILY**
 - Maintain original documentation for three years
- **ENSURE THAT QC DATA IS ENTERED INTO LIMS, DAILY**
 - Check results for status
 - Review the mix design summary spreadsheet to monitor the trends of critical material properties
- **FORWARD COPIES OF REPORTS TO PA WITHIN 48 HOURS OF THE END OF THE DAYS PRODUCTION (IF REQUESTED)**
- **QC MANAGER MUST SPEND WHATEVER TIME IS REQUIRED ON THE PROJECT TO ENSURE QUALITY CONTROL.**
- **QC MANAGER IS RESPONSIBLE FOR ENSURING THAT LIMS DATA ENTRY OCCURS ON TIME AND IS ACCURATE.**

ASPHALT - TIMELINE

