

ALABAMA DOT
State Report Answers

April 26-28, 2011 TTCC/NCC Meeting

1. Summarize your state's current QC/QA requirements for pavements.

Sampling and testing requirements for each 528-ft long Pavement Testing Unit:

- One set of three cores for compressive strength and thickness determinations
- Total Air Content
- Slump
- Temperature

2. Identify any differences in QC/QA requirements on projects with accelerated schedules.

N/A

3. Summarize the requirements for allowable time between batching and placement for agitated and non-agitated concrete mixes.

TEMPERATURE OF CONCRETE	MIX WITHOUT RETARDER ADMIXTURE	MIX WITH RETARDER ADMIXTURE
LESS THAN 85 °F {30 °C}	1 HOUR	1 HOUR AND 45 MINUTES
85 °F {30 °C} OR MORE	45 MINUTES	1 HOUR AND 15 MINUTES

These times are measured from the time at which water is introduced to the cement and aggregates to the time at which placement of the load is completed.

4. Summarize acceptance and payment adjustment clauses related to QC/QA requirements.

PRICE ADJUSTMENT BASED ON RIDEABILITY

Profile Index Inches/mile/section	Contract Price Adjustment Percent of Pavement Unit Contract Price
Under 10.0	105 – (Profile Index/2.0)
10.0 to less than 20.0	100
20.0 through 50.0	100 – [(Profile Index – 20.0)/1.5]
Over 50.0	Unacceptable

PRICE ADJUSTMENT BASED ON PAVEMENT THICKNESS

PRICE ADJUSTMENT FOR DEFICIENCY IN PAVEMENT THICKNESS	
Deficiency in Pavement Thickness Determined from Cores	Price Adjustment
Greater than 0.00" to less than or equal to 0.10"	100 %
Greater than 0.10" to less than or equal to 0.25"	90 %
Greater than 0.25" to less than or equal to 0.40"	80 %
Greater than 0.40" to less than or equal to 0.55"	70 %
Greater than 0.55" to less than or equal to 0.75"	60 %
Greater than 0.75"	Replace Pavement Testing Unit

PRICE ADJUSTMENT BASED ON COMPRESSIVE STRENGTH

The price adjustment shall be determined from the following formula:

$$\text{Price Adjustment (\% Payment)} = 100 \times (1.0 - [(f'_c - f_{c\text{AVG}}) / (0.30 f'_c)])$$

f'_c = Required 28-day Compressive Strength (psi)

$f_{c\text{AVG}}$ = Average Compressive Strength of Test Cores (psi)

RANGE OF PRICE ADJUSTMENTS AND ASSESSMENT OF COMBINED PRICE ADJUSTMENTS

- The range of price adjustment based on rideability is 105% to 80%
- The range of price adjustment based on pavement thickness is 100% to 60%
- The range of price adjustment based on compressive strength is 100% to 50%
- If more than one price adjustment is required, the product of the price adjustments (percentage price adjustments multiplied together) will be applied to the contract price for the pavement.

DEFICIENCIES REQUIRING PAVEMENT REPLACEMENT

The pavement shall be removed and replaced without extra compensation if any one of the following conditions exist:

- the profile index is greater than 50 inches per mile per section
- the deficiency in pavement thickness exceeds 0.75 inches
- the compressive strength is less than 85% of the required compressive strength
- the product of price adjustments for pavement thickness and compressive strength is less than 50%