October 21, 2010

REVISION OF SECTION 109

MEASUREMENT OF QUANTITIES

**NOTICE**

This is a standard special provision that revises or modifies CDOT’s *Standard Specifications for Road and Bridge Construction* It has gone through a formal review and approval process and has been issued by CDOT’s Project Development Branch with formal instructions for its use on CDOT construction projects. It is to be used as written without change. Do not use modified versions of this special provision on CDOT construction projects, and do not use this special provision on CDOT projects in a manner other than that specified in the instructions unless such use is first approved by the Standards and Specifications Unit of the Project Development Branch. The instructions for use on CDOT construction projects appear below.

Other agencies which use the *Standard Specifications for Road and Bridge Construction* to administer construction projects may use this special provision as appropriate and at their own risk.

**Instructions for use on CDOT construction projects:**

Use this standard special provision on all projects.

Section 109 of the Standard Specifications is hereby revised for this project as follows:

In subsection 109.01, delete paragraphs 12, 13, 14, and 15, and replace them with the following:

Scales shall be operated according to the Colorado Department of Agriculture's regulations. Weighers, scales, scale tickets, scale house, and verification of the scales' accuracy will not be measured and paid for separately, but shall be included in the work.

The Contractor may use either certified hopper scales or certified platform scales.

When platform scales are used to weigh vehicles carrying material paid for by weight, each vehicle shall be weighed by a certified weigher. Hopper scales used to directly measure material paid for by weight shall be operated by certified weighers and provide an accurate net weight.

The operator of each vehicle carrying material measured and paid for by weight shall obtain a scale ticket (certificate of correct weight) from the certified weigher and deliver the ticket to the Engineer at the point of delivery of the material.

The scale ticket shall include the following information:

1. Project Number.
2. Date.
3. Ticket Number.
4. Haul Unit Number.
5. Gross Weight.
6. Tare Weight.
7. Net Weight.
8. Material Type.
9. Certified Weigher’s Name.

Vehicles used to haul material being paid for by weight shall bear a plainly legible identification mark. Each of these vehicles shall be weighed empty daily at times directed by the Engineer. The Contractor shall furnish to the Engineer, in writing, a vehicle identification sheet that lists the following for each delivery vehicle to be used on the project:

1. identification mark
2. vehicle length
3. tare weight
4. number of axles
5. the distance between extreme axles
6. information related to legal weight, including the Permit No. and permitted weight of each vehicle for which the State has issued an overweight permit.

This information shall be furnished prior to time of delivery of the material and at any subsequent time the Contractor changes vehicles, combination vehicles, axle length relationships, or overweight permitting of vehicles.

Weighers using hopper scales solely for batching materials not measured and paid for by weight need not be certified.

In subsection 109.01, following paragraph 15, add the following:

The Engineer will randomly verify the accuracy of the certified weigher on every project where the weights are manually entered on the scale ticket. This verification will consist of at least one comparison check on the project. Additional verification checks may be required as determined by the Engineer. The Engineer will randomly select a loaded truck after the truck has been issued a scale ticket by the certified weigher. The loaded truck will then be reweighed, in the presence of the Engineer, on the same scale and the weight compared with the weight on the scale ticket. Reweighed loads shall be within the tolerance of 200 pounds plus or minus.

The Engineer will also verify the accuracy of computerized scales. Computerized scales are scales that automatically print weights on the scale ticket. This verification will consist of at least one comparison check when the project requires more than 2500 tons of material to be weighed. This comparison check shall be made by reweighing a loaded vehicle. The Contractor shall either provide a second certified scale or select a second certified scale in the vicinity to be used for the comparison check. Comparison checks shall be performed using the following procedures:

(1) Hopper Scale. A loaded truck will be randomly selected by the Engineer. The loaded truck shall be weighed on a certified platform scale to record the gross weight. The truck shall be unloaded and weighed again on the same scale to record the tare weight. The tare weight shall be subtracted from the gross weight and compared against the net weight recorded on the scale ticket.

(2) Platform Scales. A loaded truck will be randomly selected by the Engineer. The loaded truck shall be reweighed on a second certified scale and the gross weight shall be compared against the gross weight on the first scale ticket.

Should a comparison check reveal a weight difference of more than one percent, a second comparison check shall be performed immediately. If the weight differences of both comparison checks exceed the one percent limit, the Contractor shall immediately stop weighing and the scale shall be recertified and resealed at the Contractor's expense. The necessary adjustments as indicated by the recertification will be made to all scale tickets issued since the last certification or on the entire project, whichever occurred later, unless the Contractor demonstrates to the satisfaction of the Engineer that the defect in the scale was present for a lesser period of time.

If it is necessary to recertify a scale, and more than 2500 tons of material remains to be weighed, another scale comparison check shall be made.

All comparison checks shall be made at the Contractor's expense.