



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 10, 2006

Addendum No. 1

RE: Contract ID: C201535

WBS# 8CR.10631.5, Etc.

Moore County

7 Sections of US-1, 1 Section of NC-211

And 9 Sections of Secondary Roads.

January 17, 2006 Letting

To Whom It May Concern:

Reference is made to the proposal form recently furnished to you on this project.

The following revision has been made to the proposal.

On Page Nos. 68 and 69 the project special provision entitled "Large Beads In Paint Pavement Marking" has been revised. Please void Page Nos. 68 and 69 in your proposal and staple the revised Page Nos. 68 and 69 thereto.

Sincerely,

A handwritten signature in black ink, appearing to read "R. A. Garris".

R. A. Garris, PE
Contract Officer

RAG/jag/pa

cc: Mr. W. S. Varnedoe, PE
Mr. S. D. DeWitt, PE
Mr. E. C. Powell, PE
Mr. T. Johnson, PE
Ms. D. M. Barbour, PE
Mr. Art McMillan, PE
Mr. Victor Barbour, PE

Mr. Mark Staley (2)
Mr. Robert Memory
Mr. R. E. Davenport Jr., PE
Ms. Marsha Byrd
Ms. Taylor Mishoe
Project File (2)

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WBS#: 8CR.10631.5, 8CR.20631.5, 8CR.306309.5, 8CR.306328.5, 8CR.306329.5 &
8CR.306348.5
Date: 12-05-2005
Revised: 01-06-2006

Moore County

LARGE BEADS IN PAINT PAVEMENT MARKING

This work shall be in accordance with *Section 1205 Pavement Marking General Requirements* of the *2002 Standard Specifications* except as follows:

Glass Beads:

(A) Composition

The silica content of the glass beads must be at least 60 percent.

Manufacture the **Large** gradation beads from a composition designed to be highly resistant to traffic wear and to the effects of weathering.

Manufacture the **Regular** gradation beads from 100% recycled non-pigmented glass from a composition designed to be highly resistant to traffic wear and to the effects of weathering.

The appropriate glass bead coatings such as Moisture-proof and Adherence shall be applied by the bead manufacturer for proper bead embedment depth. All gradation tests shall be performed after the coatings have been applied.

This requirement will not apply for tape.

(B) Physical Characteristics

The glass beads must be colorless, transparent and free from milkiness, excessive air bubbles, skins and foreign objects.

The glass beads must have a minimum refractive index of 1.50 when tested by liquid immersion method (See ASTM D-1214) at 77°F (25°C), be spherical in shape, be essentially free of sharp angular particles, and particles showing surface scarring and scratching.

(C) Gradation

Use glass beads in all pavement marking material with a minimum of 80% true spheres when tested according to ASTM D-1155. Test large beads for Aspect Ratio, which shall be 1.2:1 or less.

Use Large Drop-On Glass Beads in Paint which meet the following gradation requirements:

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<u>U.S. STANDARD SIEVE SIZE</u>	<u>% PASSING</u>	<u>% RETAINED</u>
SIEVE #8	100	0
SIEVE #10	95-100	0-5
SIEVE #12	80-95	5-20
SIEVE #14	10-40	40-80
SIEVE #16	0-5	10-40
SIEVE #18	0-2	0-5
PAN	0	0-2

The large glass beads shall be capable of flowing freely through dispensing equipment in any weather suitable for marking the pavement.

(D) Glass Bead Application:

Drop-On: Method where glass beads are dispensed by a pressurized mechanical feed or high pressure means onto the pavement marking as it is applied to the pavement. Drop-On bead dispensing for symbols and characters may be accomplished by gravitational methods such as hand scattering.

Drop on glass beads in two applications with the **regular** gradation beads in the *first* application and the **large** gradation beads in the *second* application. Apply in equal amounts by weight.

(E) Paint Application:

Apply paint with drop-on beads at the rate necessary to produce a minimum wet film thickness of 15 mils (0.38 mm)

(F) Method of Measurement and Basis of Payment:

Method of Measurement and Basis of Payment will be in accordance with *Section 1205 Pavement Marking General Requirements* of the *2002 Standard Specifications*.