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**PROJECT SPECIAL PROVISIONS**

**ROADWAY**

**SHOULDER REPAIR:**

(4-12-07)

R1 R07 Rev

**Description**

The Contractor shall place ABC (M) along the existing shoulders in areas where the shoulder has failed as directed by the Engineer. The area shall be backfilled and compacted to the satisfaction of the Engineer.

**Materials**

The ABC (M) shall meet the requirements of Section 1005 in the NCDOT 2006 *Standard Specifications for Roads and Structures*.

**Measurement and Payment**

*Shoulder Repair* will be measured and paid for as the actual number of tons acceptably placed. The aggregate will be measured by being weighed in trucks on certified platform scales or other certified weighing devices. Such price and payment will be full compensation for furnishing material, hauling, placing, compaction, and all incidentals necessary to complete repair of the shoulders.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Shoulder Repair	Ton

**BORROW EXCAVATION AND SHPO DOCUMENTATION FOR BORROW/WASTE**

**SITES:**

(12-18-07)(4-15-08)

SP8 R02

Revise the 2006 *Standard Specifications* as follows:

**Division 2 Earthwork**

**Page 2-16, Subarticle 230-1(D)**, add the words: *The Contractor specifically waives* as the first words of the sentence.

**Page 2-17, Article 230-4(B) Contractor Furnished Sources, first paragraph, first sentence** replace with the following:

Prior to the approval of any borrow sources developed for use on any project, obtain certification from the State Historic Preservation Officer of the State Department of Cultural Resources certifying that the removal of the borrow material from the borrow sources(s) will have no effect on any known district, site building, structure, or object, architectural and/or archaeological that is included or eligible for inclusion in the National Register of Historic Places.

**Division 8 Incidentals****Page 8-9, Article 802-2 General Requirements, add the following as the 1st paragraph:**

Prior to the removal of any waste from any project, obtain certification from the State Historic Preservation Officer of the State Department of Cultural Resources certifying that the deposition of the waste material to the proposed waste area will have no effect on any known district, site building, structure, or object, architectural and/or archaeological that is included or eligible for inclusion in the National Register of Historic Places. Furnish a copy of this certification to the Engineer prior to performing any work in the proposed waste site.

**Page 8-10, Article 802-2, General Requirements, 4th paragraph, add the following as the 2nd sentence:**

The Department's borrow and waste site reclamation procedures for contracted projects is available on the NCDOT website and shall be used for all borrow and waste sites on this project.

**WEATHERING STEEL BEAM GUARDRAIL:**Description:

Install steel beam guardrail (weathering steel) at locations shown on the plans in accordance with Section 862 of the *Standard Specifications*. Guardrail posts shall be galvanized steel painted in accordance with the special provision entitled "PAINTED GALVANIZED GUARDRAIL ANCHOR UNITS AND POSTS" found elsewhere in this contract. At the Contractor's option and at no additional expense to the Department treated timber posts will be allowed in lieu of painted steel posts.

Materials:

Material used in the steel beam guardrail must meet the corrosion requirements of Unpainted Structural Steel ASTM A242 and the rail and terminal sections shall meet the requirements of AASHTO M180.

Submit Type 1 Certified Mill Test Report in accordance with Section 106-3 of the *Standard Specifications*. The Engineer reserves the right to sample material.

Construction Methods:

Install guardrail that has outside surfaces on the roadway face of the guardrail with a uniform color appearance after construction. A brush-off blast cleaning or brushing in the field may be required after erection, if weathering of the sections has not been consistent.

Reflectorized washers are required on curve areas where nighttime visibility is required.

At locations where the guardrail is lapped, the ends of both sections to be lapped shall be coated in accordance with Section 442 of the *Standard Specifications* for Paint System 4. The coated back on the end of one rail shall be placed over the end with a coated front on the adjacent rail. Only the side of the rail that is in contact with the adjacent rail shall be coated and each rail shall be coated for the entire length of the lap.

Measurement and Payment:

*Weathering Steel Beam Guardrail with Painted Laps* will be measured and paid for in linear feet of guardrail that has been satisfactorily completed and accepted exclusive of that length of guardrail that is within the pay limits of guardrail anchors. Measurement will be made from center to center of the outermost post in the length of guardrail being measured.

*Weathering Steel Beam Guardrail with Painted Laps, Shop Curved* will be measured and paid for in linear feet of guardrail that has been satisfactorily completed and accepted exclusive of that length of guardrail that is within the pay limits of guardrail anchors. Measurement will be made from center to center of the outermost post in the length of guardrail being measured.

Such price and payment will be full compensation for all work covered by this provision including but not limited to furnishing and erecting painted posts (or optional treated timber posts), offset blocks, rail, miscellaneous hardware, painting of laps and all other materials and all incidentals necessary to complete the work satisfactorily.

Payment will be made under:

Weathering Steel Beam Guardrail with Painted Laps .....Linear Foot

Weathering Steel Beam Guardrail with Painted Laps, Shop Curved ..... Linear Foot

**PAINTED GALVANIZED GUARDRAIL ANCHOR UNITS AND POSTS:**

**Description**

Install painted galvanized guardrail anchor units at locations shown on the plans.

**Materials**

<b>Material</b>	<b>Section</b>
Galvanizing	1076
Reflective sheeting	1088-3

Guardrail materials shall meet the requirements of Section 1046 of the 2006 *Standard Specifications* except that guardrail materials shall not be water quenched or treated with chromate conversion coatings.

For painted Guardrail Anchor Units, Type 350, the Contractor may at his option, furnish any one of the following guardrail anchor units.

Guardrail anchor unit (ET-2000) as manufactured by:

Trinity Industries, Inc.  
2525 N. Stemmons Freeway  
Dallas, Texas 75207  
Telephone: 800-644-7976

The guardrail anchor unit (SKT 350) as manufactured by:

Road Systems, Inc.  
3616 Old Howard County Airport  
Big Spring, Texas 79720  
Telephone: 915-263-2435

Prior to installation the Contractor shall submit the following to the Engineer:

- (A) FHWA acceptance letter for each guardrail anchor unit certifying it meets the requirements of NCHRP Report 350, Test Level 3, in accordance with Section 106-2 of the *Standard Specifications*.
- (B) Certified working drawings and assembling instructions from the manufacturer for each guardrail anchor unit in accordance with Section 105-2 of the *Standard Specifications*.

No modifications shall be made to the guardrail anchor unit without the express written permission from the manufacturer.

Painting shall be performed in accordance with the requirements of Section 1080 and Section 442 of the *2006 Standard Specifications* using System 4 as modified herein.

**System 4 (Modified)  
Acrylic Primer and Top Coats**

Coat	Material	Mils Dry/Wet Film Thickness	Mils Dry/Wet Film Thickness
		Minimum	Maximum
Primer	1080-12 White	3.0 DFT	5.0 DFT
Stripe	1080-12 Brown	4.0 WFT	7.0 WFT
Topcoat	1080-12 Brown	2.0 DFT	4.0 DFT
<b>Total</b>		<b>5.0 DFT</b>	<b>9.0 DFT</b>

**Construction Methods**

- (A) *Preparation of anchor units, guardrail posts and hardware for painting:* Perform surface smoothing by removing or cleaning all zinc high spots, such as metal drip line, by hand or power tools in accordance with SSPC SP 2 or 3. Level zinc material flush with the surrounding plane without removing the base coating.

Abrasive sweep blasting shall be performed in accordance with Section 5.4.1 of ASTM D 6386. This section also provides a description of the abrasive blast material to be used. The material and technique used will provide a stripping action to remove corrosion products and to provide a rough surface profile while leaving base zinc layers intact.

All surfaces of the anchor units, posts and hardware shall be blown down with clean compressed air to provide a clean, dry surface for additional coating to be applied.

All surfaces shall be free of visible zinc oxides or zinc hydroxides.

- (B) (1) *Certification*: Only SSPC QP-3 certified contractor shall shop paint guardrail material.
- (2) *Shop Paint*: Galvanized guardrail anchor units, guardrail posts and hardware shall be shop painted within 8 hours after surface preparation with the following exceptions:
- (a) Paint bolt heads after installation.
  - (b) Do not paint impact head of end terminals.
- (C) *Repair of Damaged Coating*:
- Repair damage occurring to the galvanized portion of the coating during shipment or installation in accordance with Articles 1076-6 and 1080-9 of the *Standard Specifications*. Repair damage occurring to the painted portion of the coating during shipment or installation by applying 4.0-7.0 wet mils of topcoat with a brush or roller and feather or taper this to be level with the surrounding areas.
- (D) *Anchor Unit Installation*: Install guardrail anchor units in accordance with Section 862, details in the plans, and details and assembling instructions furnished by the manufacturer. Guardrail end delineation shall be applied to the entire end section of all approach and trailing end sections.
- (E) Guardrail end delineation is required on all approach and trailing end sections for both temporary and permanent installations. Guardrail end delineation consists of yellow reflective sheeting applied to the entire end section of the guardrail in accordance with Section 1088-3 of the *2006 Standard Specifications* and is incidental to the cost of the guardrail anchor unit.

In addition to the requirements provided for in this provision, Painted Extra Length Guardrail Posts shall meet the requirements of Section 862 of the *Standard Specifications* and the *Roadway Standard Drawings* except they shall be 7 ft. in length.

### **Measurement and Payment**

*Painted Guardrail Anchor Units, Type \_\_\_\_* will be measured and paid for in accordance with the applicable requirements of Article 862-6 of the *Standard Specifications*.

*Painted Additional Guardrail Posts* will be measured and paid for in accordance with the applicable requirements of Article 862-6 of the *Standard Specifications*.

*Painted Extra Length Guardrail Posts* will be measured and paid for in units of each that have been installed and accepted.

As an exception to the above, where the Contractor has chosen to use treated timber posts for the Weathering Steel Guardrail, "Additional Guardrail Posts" and "Extra Length Guardrail Posts" shall also be treated timber. Payment for providing said optional treated timber posts will be made at the contract unit price bid per each for "Painted Extra Length Guardrail Posts" and "Painted Additional Guardrail Posts".

Such price and payment includes, but is not limited to furnishing and installing anchor units, furnishing and erecting extra length posts, offset blocks, miscellaneous hardware, and all other materials, excavation; furnishing and installing additional guardrail posts and additional offset blocks; backfilling; fabrication; welding; painting, galvanizing; furnishing and installing guardrail delineators and end delineation.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Painted Guardrail Anchor Units, Type ____	Each
Painted Extra Length Guardrail Posts	Each
Painted Additional Guardrail Posts	Each

**STREET SIGNS AND MARKERS AND ROUTE MARKERS:**

(7-1-95)

SP9 R01

Move any existing street signs, markers, and route markers out of the construction limits of the project and install the street signs and markers and route markers so that they will be visible to the traveling public if there is sufficient right of way for these signs and markers outside of the construction limits.

Near the completion of the project and when so directed by the Engineer, move the signs and markers and install them in their proper location in regard to the finished pavement of the project.

Stockpile any signs or markers that cannot be relocated due to lack of right of way, or any signs and markers that will no longer be applicable after the construction of the project, at locations directed by the Engineer for removal by others.

The Contractor shall be responsible to the owners for any damage to any street signs and markers or route markers during the above described operations.

No direct payment will be made for relocating, reinstalling, and/or stockpiling the street signs and markers and route markers as such work shall be considered incidental to other work being paid for by the various items in the contract.

**AGGREGATE PRODUCTION:**

(11-20-01)

SP10 R05

Provide aggregate from a producer who uses the current Aggregate Quality Control/Quality Assurance Program that is in effect at the time of shipment.

No price adjustment is allowed to contractors or producers who use the program. Participation in the program does not relieve the producer of the responsibility of complying with all requirements of the *2006 Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

**QUALIFICATION OF WELDS AND PROCEDURES:**

(7-21-09)

SP10 R43

**Page 10-143, Subarticle 1072-20(D) Qualification of Welds and Procedures**, replace the third sentence of the first paragraph with the following:

For all prequalified field welds, submit Welding Procedure Specifications (WPS) for each joint configuration for approval at least 30 days prior to performing any welding. In lieu of this, use the WPS provided and preapproved by the Department. These preapproved WPS are available from the Materials and Tests Unit or at:

[http://www.ncdot.org/doh/operations/materials/structural/appr\\_proc.html](http://www.ncdot.org/doh/operations/materials/structural/appr_proc.html). Use non-prequalified welds only if approved by the Engineer. Submit WPS for all non-prequalified welds to the Engineer for approval. At no cost to the Department, demonstrate their adequacy in accordance with the requirements of the Bridge Welding Code.

**PAINT SAMPLING AND TESTING:**

(8-15-06)

SP10 R45

Revise the *2006 Standard Specifications* as follows:

**Page 10-190, Article 1080-4**, Delete the first paragraph and replace with the following:

All paint will be sampled, either at the point of manufacture or at the point of destination. Inspection and sampling will be performed at the point of manufacture wherever possible. The Contractor shall not begin painting until the analysis of the paint has been performed, and the paint has been accepted.

**CHANGEABLE MESSAGE SIGNS:**

(11-21-06)

SP11 R11

Revise the *2006 Standard Specifications* as follows:

**Page 11-9, Article 1120-3**, Replace the 3rd sentence with the following:

Sign operator will adjust flash rate so that no more than two messages will be displayed and be legible to a driver when approaching the sign at the posted speed.