PROJECT SPECIAL PROVISIONS

ROADWAY

CLEARING AND GRUBBING – METHOD II:

(9-17-02) (Rev 3-18-08) SP2 R01

Perform clearing on this project to the limits established by Method "II" shown on Standard No. 200.02 of the *2006 Roadway Standard Drawings*.

Revise the *2006 Standard Specifications* as follows:

Page 2-2, Article 200-3, Clearing, add the following as the 6th paragraph:

At bridge sites, clear the entire width of the right of way beginning at a station 3 feet back of the beginning extremity of the structure and ending at a station 3 feet beyond the ending extremity of the structure.

EMBANKMENTS:

(5-16-06) (Rev 7-21-09) SP2 R18

Revise the *Standard Specifications* as follows:

Page 2-22, Article 235-3 Materials, add the following as the second sentence of the second paragraph:

Aerate and dry material containing moisture content in excess of what is required to achieve embankment stability and specified density.

Page 2-22, Subarticle 235-4(B) Embankment Formation, add the following:

(16) Do not place rock or broken pavement in embankment areas where piles or drilled shaft foundations are to be constructed. This shall include but not be limited to piles and foundations for structures, metal signal poles, overhead sign structures, and high mount lighting.

SHALLOW UNDERCUT:

(9-18-07)(Rev 7-21-09) SP2 R35

Description

Perform shallow undercut in accordance with the contract. Undercut and place fabric for soil stabilization and Class IV Subgrade Stabilization at locations shown on the plans or as directed by the Engineer.

Materials

Refer to Division 10 of the *Standard Specifications.*

Item	Section
Select Material, Class IV	1016
Fabric for Soil Stabilization, Type 4	1056

Use Class IV Select Material for Class IV Subgrade Stabilization. If Class IV Subgrade Stabilization does not meet the requirements of Article 1010-2 of the *Standard Specifications*, the Engineer may consider the material reasonably acceptable in accordance with Article 105-3 of the *Standard Specifications*.

Construction Methods

Undercut 6 to 24 inches as shown on the plans or as directed by the Engineer. Perform undercut excavation in accordance with Section 225 or 226 of the *Standard Specifications*. Install fabric for soil stabilization in accordance with Article 270-3 of the *Standard Specifications* before backfilling. Backfill with Class IV Subgrade Stabilization by end dumping subgrade stabilization material on the fabric. Do not operate heavy equipment on the fabric until it is covered with Class IV Subgrade Stabilization. Compact subgrade stabilization material to 92% of AASHTO T180 as modified by the Department or to the highest density that can be reasonably obtained.

Maintain Class IV Subgrade Stabilization in an acceptable condition and minimize the use of heavy equipment on subgrade stabilization material in order to avoid damaging the backfill. Provide and maintain drainage ditches and drains as required to prevent entrapment of water in backfill.

Measurement and Payment

Class IV Subgrade Stabilization will be measured and paid for in tons. Subgrade stabilization material will be measured in trucks on certified platform scales or other certified weighing devices. The contract unit price bid for *Class IV Subgrade Stabilization* will be full compensation for furnishing, hauling, handling, placing, compacting and maintaining subgrade stabilization material.

Undercut Excavation will be measured and paid for in accordance with Section 225 or 226 of the *Standard Specifications* except that the second sentence in the sixth paragraph of Article 226-3 of the *Standard Specifications* does not apply to shallow undercut. Backfilling for shallow undercut will be paid for at the contract unit price bid for *Class IV Subgrade Stabilization.*

Fabric for Soil Stabilization will be measured and paid for in accordance with Section 270 of the *Standard Specifications.*

Payment will be made under:

Pay Item	Pay Unit
Class IV Subgrade Stabilization	Ton

SHOULDER AND FILL SLOPE MATERIAL:
(5-21-02) SP2 R45 A

Description

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 226 of the *2006 Standard Specifications* except as follows:

Construct the top 6 inches of shoulder and fill slopes with soils capable of supporting vegetation.

Provide soil with a P.I. greater than 6 and less than 25 and with a pH ranging from 5.5 to 6.8. Remove stones and other foreign material 2 inches or larger in diameter. All soil is subject to test and acceptance or rejection by the Engineer.

Obtain material from within the project limits or approved borrow source.

Measurement and Payment

No direct payment will be made for this work, as the cost of this work will be considered to be a part of the work being paid for at the contract lump sum price for *Grading*.

FINE GRADING SUBGRADE, SHOULDERS AND DITCHES:
(7-21-09) SP5R01

Revise the *Standard Specifications* as follows:

Page 5-1, Article 500-1 Description, replace the first sentence with the following:

Perform the work covered by this section including but not limited to preparing, grading, shaping, manipulating moisture content, and compacting either an unstabilized or stabilized roadbed to a condition suitable for placement of base course, pavement, and shoulders.

AGGREGATE BASE COURSE:
12-19-06 SP5 R03

Revise the *2006 Standard Specifications* as follows:

Page 5-11, Article 520-5 Hauling and Placing Aggregate Base Material, 6th paragraph, replace the first sentence with the following:

> Base course that is in place on November 15 shall have been covered with a subsequent layer of pavement structure or with a sand seal. Base course that has been placed

between November 16 and March 15 inclusive shall be covered within 7 calendar days with a subsequent layer of pavement structure or with a sand seal.

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.

PAINTED GALVANIZED STEEL BEAM GUARDRAIL

9-19-06 SPI

Description

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

Materials

Material	**Section**
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 Minimum	Mils Dry/Wet Film Thickness 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
Total		5.0 DFT	9.0 DFT

Construction Methods

(A) *Preparation of galvanized beams 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 blasted beams 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 beams, both front and back, posts, anchor units 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) *Guardrail Installation*: Install guardrail 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.

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*.

Such price and payment includes, but is not limited to furnishing and erecting posts, offset blocks, rail, terminal sections, miscellaneous hardware, and all other materials, field curving and shop curving of the rail; 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:

Pay Item	Pay Unit
Painted Guardrail Anchor Unit, Type ___	Each
Painted Guardrail Anchor Unit, Type ___, Shop Curve	Each
Painted Additional Guardrail Posts	Each

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.

PORTLAND CEMENT CONCRETE (Alkali-Silica Reaction):
(2-20-07) SP10 R16

Revise the *2006 Standard Specifications* as follows:

Article 1024-1(A), replace the 2nd paragraph with the following:

Certain combinations of cement and aggregate exhibit an adverse alkali-silica reaction. The alkalinity of any cement, expressed as sodium-oxide equivalent, shall not exceed 1.0 percent. For mix designs that contain non-reactive aggregates and cement with an alkali content less than 0.6%, straight cement or a combination of cement and fly ash, cement and ground granulated blast furnace slag or cement and microsilica may be used. The pozzolan quantity shall not exceed the amount shown in Table 1024-1. For mixes that contain cement with an alkali content between 0.6% and 1.0%, and for mixes that contain a reactive aggregate documented by the Department, regardless of the alkali content of the cement, use a pozzolan in the amount shown in Table 1024-1.

Obtain the list of reactive aggregates documented by the Department at:http://www.ncdot.org/doh/operations/materials/pdf/quarryasrprob.pdf

Table 1024-1
Pozzolans for Use in Portland Cement Concrete

Pozzolan	*Rate*
Class F Fly Ash	20% by weight of required cement content, with 1.2 lbs Class F fly ash per lb of cement replaced
Ground Granulated Blast Furnace Slag	35%-50% by weight of required cement content with 1 lb slag per lb of cement replaced
Microsilica	4%-8% by weight of required cement content, with 1 lb microsilica per lb of cement replaced

ENGINEERING FABRICS TABLE 1056-1:

(7-18-06) SP10 R40

Revise the *2006 Standard Specifications* as follows:

Page 10-100, Table 1056-1, replace the values for Trapezoidal Tear Strength with the following:

Physical Property	**ASTM Test Method**	**Type 1**	**Type 2**	**Type 3**		**Type 4**
				Class A	Class B	
Typical Applications		Shoulder Drain	Under Riprap	Temporary Silt Fence		Soil Stabilization
Trapezoidal Tear Strength	D4533	*45* lb	*75* lb	--	--	*75* lb

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. 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.