

**PROJECT SPECIAL PROVISIONS****ROADWAY****CLEARING AND GRUBBING – METHOD II:**

(9-17-02)

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*.

**SHOULDER RECONSTRUCTION:**

(1-18-00) (Rev. 6-19-07)

R1 R07A (Rev.)

**Description**

The work covered by this provision consists of reconstructing earth shoulders in accordance with the *Roadway Standard Drawing Nos. 560.01 and 560.02*, from the edge of pavement to the existing shoulder point and construction of a new shoulder due to moving ditches or widening embankments on the existing roadway as directed by the Engineer. Perform this work immediately after the resurfacing operations are completed as directed by the Engineer.

**Materials**

Where “Shoulder Reconstruction” is required by the typical sections, use all suitable material generated from the widening operation to construct the shoulder. Furnish any other earth material necessary for the construction of the shoulders. Provide earth material meeting the approval of the Engineer. No testing will be necessary.

**Construction Methods**

Perform shoulder reconstruction in the following order: scarify the existing shoulder to provide the proper bond; add the earth material to the shoulder; and compact the reconstructed shoulder to the satisfaction of the Engineer.

The Contractor shall dispose of any excess material generated by the shoulder reconstruction in an approved disposal site.

**Measurement and Payment**

*Shoulder Reconstruction* will be measured and paid for as the actual number of shoulder miles that have been constructed. Measurement will be made along the edge of each shoulder. Measurement will be made to the nearest 0.01 of a mile. Such price and payment will be full compensation for furnishing earth material, hauling, placing, compaction, ditch construction and all incidentals necessary to complete construction of the shoulders.

*Incidental Stone Base* will be measured and paid for as provided in Article 545-6 of the *Standard Specifications*.

*Seeding and Mulching* will be measured and paid for as provided elsewhere in this contract.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Shoulder Reconstruction	Shoulder Mile

**SHOULDER AND FILL SLOPE MATERIAL:**

(5-21-02)

SP2 R50

**Description**

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 560 and Section 235 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.

**Compensation**

When the Contractor elects to obtain material from an area located beneath a proposed fill sections which does not require excavation for any reason other than to generate acceptable shoulder and fill slope material, the work of performing the excavation will be considered incidental to the item of *Borrow Excavation* or *Shoulder Borrow*. If there is no pay item for *Borrow* or *Shoulder Excavation* in the contract, this work will be considered incidental to *Unclassified Excavation*. Stockpile the excavated material in a manner to facilitate measurement by the Engineer. Fill the void created by the excavation of the shoulder and fill slope material with suitable material. Payment for material used from the stockpile will be made at the contract unit price for *Borrow Excavation* or *Shoulder Borrow*. If there is no pay item for *Borrow Excavation* or *Shoulder Borrow*, then the material will be paid for at the contract unit price for *Unclassified Excavation*. The material used to fill the void created by the excavation of the shoulder and fill slope material will be made at the contract unit price for *Unclassified Excavation*, *Borrow Excavation*, or *Shoulder Borrow*, depending on the source of the material.

Material generated from undercut excavation, unclassified excavation or clearing and grubbing operations that is placed directly on shoulders or slope areas, will not be measured separately for payment, as payment for the work requiring the excavation will be considered adequate compensation for depositing and grading the material on the shoulders or slopes.

When undercut excavation is performed at the direction of the Engineer and the material excavated is found to be suitable for use as shoulder and fill slope material, and there is no area on the project currently prepared to receive the material generated by the undercut operation, the Contractor may construct a stockpile for use as borrow at a later date. Payment for the material used from the stockpile will be made at the contract unit price for *Borrow Excavation* or *Shoulder Borrow*.

When shoulder material is obtained from borrow sources or from stockpiled material, payment for the work of shoulder construction will be made at the contract unit price per cubic yard for *Borrow Excavation* or *Shoulder Borrow* in accordance with the applicable provisions of Section 230 or Section 560 of the *2006 Standard Specifications*.

**PIPE TESTING:**

4-17-07

SP3R33

Revise the *2006 Standard Specifications* as follows:

**Page 3-3, Article 300-6**, add the following as a new paragraph before **(A)**:

The Department reserves the right to perform forensic testing on any installed pipe.

**INCIDENTAL STONE BASE:**

(7-1-95) (Rev.7-18-06)

R5 R28

**Description**

Place incidental stone base on driveways, mailboxes, etc. immediately after paving and do not have the paving operations exceed stone base placement by more than one week without written permission of the Engineer.

**Materials and Construction**

Provide and place incidental stone base in accordance with the requirements of Section 545 of the *2006 Standard Specifications*.

**Measurement and Payment**

*Incidental Stone Base* will be measured and paid for in accordance with Article 545-6 of the *2006 Standard Specifications*.

**ASPHALT PAVEMENTS - SUPERPAVE:**

(7-18-06) (Rev 12-18-07)

R6 R01

Revise the *2006 Standard Specifications* as follows:

**Page 6-2, Article 600-9 Measurement and Payment**, delete the second paragraph.

**Page 6-12, Subarticle 609-5(C)2, Required Sampling and Testing Frequencies, first partial paragraph at the top of the page, delete last sentence and add the following:**

If the Engineer allows the mix to remain in place, payment will be made in accordance with Article 105-3.

**Page 6-12, Subarticle 609-5(C)2, QUALITY CONTROL MINIMUM SAMPLING AND TESTING SCHEDULE**

**First paragraph, delete and replace with the following.**

Sample and test the completed mixture from each mix design per plant per year at the following minimum frequency during mix production:

**Second paragraph, delete the fourth sentence, and replace with the following**

When daily production of each mix design exceeds 100 tons and a regularly scheduled full test series random sample location for that mix design does not occur during that day's production, perform at least one partial test series consisting of Items A and B in the schedule below.

**Page 6-12, Subarticle 609-5(C)2(c) Maximum Specific Gravity, add after (AASHTO T 209):**

*or ASTM D 2041*

**Page 6-13, last line and on page and Page 6-14, Subarticle 609-5(C)(2)(e) Retained Tensile Strength, add a heading before the first paragraph as follows:**

(i) Option 1

**Insert the following immediately after the first paragraph:**

(ii) Option 2

Mix sampled from truck at plant with one set of specimens prepared by the Contractor and then tested jointly by QA and QC at a mutually agreed upon lab site within the first 7 calendar days after beginning production of each new mix design.

**Second paragraph, delete the and replace with the following:**

Test all TSR specimens required by either option noted above on either a recording test press or a test press that maintains the peak load reading after the specimen has broken.

**Subarticle 609-5(C)(3) Control Charts, delete the second sentence of the first paragraph and replace with the following:**

For mix incorporated into the project, record full test series data from all regularly scheduled random samples or directed samples that replace regularly scheduled random samples, on control charts the same day the test results are obtained.

**Page 6-15, Subarticle 609-5(C)(3) Control Charts, first paragraph on this page, delete the last sentence and substitute the following:**

Denote the moving average control limits with a dash green line and the individual test limits with a dash red line.

**Subarticle 609-5(C)(3)(a), (b) and (c), replace (a) (b) and (c) with the following:**

- (a) A change in the binder percentage, aggregate blend, or  $G_{mm}$  is made on the JMF, or,
- (b) When the Contractor elects to stop or is required to stop production after one or two moving average values, respectively, fall outside the moving average limits as outlined in subarticle 609-5(C)6 or,
- (c) If failure to stop production after two consecutive moving averages exceed the moving average limits occurs, but production does stop at a subsequent time, re-establish a new moving average beginning at the actual production stop point.

**Subarticle 609-5(C)(4) Control Limits, replace the first paragraph and the CONTROL LIMITS Table on page 6-16 with the following.**

The following are established as control limits for mix production. Apply the individual limits to the individual test results. Control limits for the moving average limits are based on a moving average of the last 4 data points. Apply all control limits to the applicable target source.

**CONTROL LIMITS**

Mix Control Criteria	Target Source	Moving Average Limit	Individual Limit
2.36 mm Sieve	JMF	±4.0 %	±8.0 %
0.075mm Sieve	JMF	±1.5 %	±2.5 %
Binder Content	JMF	±0.3 %	±0.7 %
VTM @ $N_{des}$	JMF	±1.0 %	±2.0 %
VMA @ $N_{des}$	Min. Spec. Limit	-0.5%	-1.0%
$P_{0.075}/P_{be}$ Ratio	1.0	±0.4	±0.8
% $G_{mm}$ @ $N_{ini}$	Max. Spec. Limit	N/A	+2.0%
TSR	Min. Spec. Limit	N/A	- 15%

**Page 6-16, Subarticle 609-5(C)(5) Warning Bands, delete this subarticle in its entirety.**

**Pages 6-16 through 6-19, Subarticle 609-5(C)(6), delete the word "warning" and substitute the words "moving average".**

**Page 6-16, Subarticle 609-5(C)(6) Corrective Actions, first paragraph, first sentence, delete and replace with the following:**

Immediately notify the Engineer when moving averages exceed the moving average limits.

**Page 6-17, third full paragraph, delete and replace with the following:**

Failure to stop production when required due to an individual mix test not meeting the specified requirements will subject all mix from the stop point tonnage to the point when the next individual test is back on or within the moving average limits, or to the tonnage point when production is actually stopped, whichever occurs first, to being considered unacceptable.

**Sixth full paragraph, delete the first, second, and third sentence and replace with the following:**

Immediately notify the Engineer when any moving average value exceeds the moving average limit. If two consecutive moving average values for any one of the mix control criteria fall outside the moving average limits, cease production of that mix, immediately notify the Engineer of the stoppage, and make adjustments. The Contractor may elect to stop production after only one moving average value falls outside the moving average limits.

**Page 6-18, Subarticle 609-5(C)(6) Corrective Actions second full paragraph, delete and replace with the following:**

If the process adjustment improves the property in question such that the moving average after four additional tests is on or within the moving average limits, the Contractor may continue production with no reduction in payment

**Page 6-18, delete the third and fourth full paragraphs, including the Table for Payment for Mix Produced in the Warning Bands and substitute the following:**

If the adjustment does not improve the property in question such that the moving average after four additional individual tests is outside the moving average limits, the mix will be evaluated for acceptance in accordance with Article 105-3. Reduced payment for or removal of the mix in question will be applied starting from the plant sample tonnage at the stop point to the sample tonnage when the moving average is on or within the moving average limits. In addition, any mix that is obviously unacceptable will be rejected for use in the work.

**Page 6-19, First paragraph, delete and replace with the following:**

Failure to stop production and make adjustments when required due to two consecutive moving average values falling outside the moving average limits will subject all mix produced from the stop point tonnage to the tonnage point when the moving average is back on or within the moving average limits or to the tonnage point when production is actually stopped, whichever occurs first, to being considered unacceptable. Remove this material and replaced with materials which comply with the Specifications at no additional costs to the Department, unless otherwise approved. Payment will be made for the actual quantities of materials required to replace the removed quantities, not to exceed the original amounts.

**Page 6-20, Subarticle 609-5(D)(1) General, delete the third full paragraph, and replace with the following:**

Perform the sampling and testing at the minimum test frequencies as specified above. Should the density testing frequency fail to meet the minimum frequency as specified above, all mix without the required density test representation will be considered unsatisfactory. If the Engineer allows the mix to remain in place, payment will be made in accordance with Article 105-3.

**Page 6-23, Subarticle 609-5(D)(5) Limited Production Procedure, delete the first paragraph including (a), (b), (c) and substitute the following:**

Proceed on limited production when, for the same mix type and on the same contract, one of the following conditions occur (except as noted in the first paragraph below).

- (a) Two consecutive failing lots, except on resurfacing\*
- (b) Three consecutive failing lots on resurfacing\*
- (c) Two consecutive failing nuclear control strips.

\* Resurfacing is defined as the first new uniform layer placed on an existing pavement.

**Page 6-28, Subarticle 610-3(A) Mix Design-General, fourth paragraph, third sentence:**

Substitute 20% for 15%

**Fifth paragraph, first, second and third sentences:**

Substitute 20% for 15%

**Page 6-28, Subarticle 610-3(A) Mix Design-General, add the following as the fourth paragraph:**

Reclaimed Asphalt Pavement (RAP) or Reclaimed Asphalt Shingles (RAS) may be incorporated into asphalt plant mixes in accordance with Article 1012-1 and the following applicable requirements.

**Page 6-35, Table 610-3 delete and replace with the following:**

**TABLE 610-3  
ASPHALT PLACEMENT- MINIMUM TEMPERATURE REQUIREMENTS**

Asphalt Concrete Mix Type	Minimum Air Temperature	Minimum Surface Temperature
ACBC, Type B 25.0B, C, B 37.5C	35°F	35°F
ACIC, Type I 19.0B, C, D	35°F	35°F
ACSC, Type S 4.75A, SF 9.5A, S 9.5B	40°F	50°F *
ACSC, Type S 9.5C, S 12.5C	45°F	50°F
ACSC, Type S 9.5D, S 12.5D	50°F	50°F

\* 35°F if surface is soil or aggregate base for secondary road construction.

**Page 6-44, Article 610-8 Spreading and Finishing, third full paragraph, replace the first sentence with the following:**

Use the 30 foot minimum length mobile grade reference system or the non-contacting laser or sonar type ski *with at least four referencing stations mounted on the paver at a minimum length of 24 feet* to control the longitudinal profile when placing the initial lanes and all adjacent lanes of all layers, including resurfacing and asphalt in-lays, unless otherwise specified or approved.

**Page 6-50, Article 610-13 Density Acceptance, delete the second paragraph and replace with the following:**

As an exception, when the first layer of mix is a surface course and is being placed directly on an unprimed aggregate or soil base, the layer will be included in the "Other" construction category.

**Page 6-53, Article 620-4 Measurement and Payment, sixth paragraph, delete the last sentence.**



**Page 6-54, Article 620-4 Measurement and Payment, add the following pay item:**

<b>Pay Item</b>	<b>Pay Unit</b>
Asphalt Binder for Plant Mix, Grade PG 70-28	Ton

**Page 6-69, Table 660-1 Material Application Rates and Temperatures, add the following:**

Type of Coat	Grade of Asphalt	Asphalt Rate gal/yd <sup>2</sup>	Application Temperature °F	Aggregate Size	Aggregate Rate lb./sq. yd. Total
Sand Seal	CRS-2 or CRS-2P	0.22-0.30	150-175	Blotting Sand	12-15

**Page 6-75, Subarticle 660-9(B), add the following as sub-item (5)**

(5) Sand Seal

Place the fully required amount of asphalt material in one application and immediately cover with the seal coat aggregate. Uniformly spread the fully required amount of aggregate in one application and correct all non-uniform areas prior to rolling.

Immediately after the aggregate has been uniformly spread, perform rolling.

When directed, broom excess aggregate material from the surface of the seal coat.

When the sand seal is to be constructed for temporary sealing purposes only and will not be used by traffic, other grades of asphalt material meeting the requirements of Articles 1020-6 and 1020-7 may be used in lieu of the grade of asphalt required by Table 660-1 when approved.

**Page 6-76, Article 661-1 Description, add the following as the 2nd paragraph:**

Provide and conduct the quality control and required testing for acceptance of the UBWC in accordance with "Quality Management System for Asphalt Pavements (OGAFC, PADL, and Ultra-Thin HMA Version)", included in the contract.

**Page 6-80, Subarticle 661-3(A) Equipment, add the following as the first paragraph:**

Use asphalt mixing plants in accordance with Article 610-5.

Page 10-41, Table 1012-1, delete the last row of entries for OG AFC and add the following:

Mix Type	Course Aggregate Angularity <sup>(b)</sup> ASTM D5821	Fine Aggregate Angularity % Minimum AASHTO T304 Method A	Sand Equivalent % Minimum AASHTO T176	Flat & Elongated 5:1 Ratio % Maximum ASTM D4791 Section 8.4
S 9.5 D	100/100	45	50	10
OG AFC	100/100	N/A	N/A	10
UBWC	100/85	40	45	10

Delete Note (c) under the Table 1012-1 and replace with the following:

- (c) Does not apply to Mix Types SF 9.5A and S 9.5B.

Page 10-43 through 10-45, Subarticle 1012-1(G), delete this in its entirety and replace with the following:

**(G) Reclaimed Asphalt Pavement (RAP)**

**(1) Mix Design RAP**

Incorporate RAP from stockpiles or other sources that have been tested for uniformity of gradation and binder content prior to use in an asphalt mix design. Use reclaimed asphalt pavement that meets all requirements specified for *one of* the following *two* classifications.

**(a) Millings**

Existing reclaimed asphalt pavement (RAP) that is removed from its original location by a milling process as specified in Section 607. Millings should be such that it has a uniform gradation and binder content and all materials will pass a 2" sieve prior to introduction into the plant mixer unit.

**(b) Processed RAP**

RAP that is processed in some manner (possibly by crushing and/or use of a blending method) to produce a uniform gradation and binder content in the RAP prior to use in a recycled mix. Process RAP so that all materials have a uniform gradation and binder content and will pass a 2" sieve prior to introduction into the plant mixer unit.

**(2) Mix Production RAP**

During mix production use RAP that meets the criteria for one of the following categories:

**(a) Mix Design RAP**

RAP contained in the mix design stockpiles as described above may be used in all applicable JMFs. These stockpiles have been pretested; however, they are subject to required QC/QA testing in accordance with Subarticle 609-5(C)(2).

**(b) New Source RAP**

New Source RAP is defined as any acceptable material which was not included in the stockpile or other source when samples were taken for mix design purposes. Process new source RAP so that all materials have a uniform gradation and binder content and will pass a 2" sieve prior to introduction into the plant mixer unit.

After a stockpile of processed RAP or millings has been sampled and mix designs made from these samples, do not add new source RAP to the original stockpile without prior field testing to insure gradation and binder uniformity. Sample and test new source RAP before blending with the existing stockpile.

Store new source RAP in a separate stockpile until the material can be sampled and tested for comparison with the original recycled mix design data. New source RAP may also be placed against the existing stockpile in a linear manner provided it is sampled for mix design conformity prior to its use in the recycled mix.

Unprocessed RAP is asphalt material that was not milled and/or has not been processed to obtain a uniform gradation and binder content and is not representative of the RAP used during the applicable mix design. Unprocessed RAP shall not be incorporated into any JMFs prior to processing. Different sources of unprocessed RAP may be stockpiled together provided it is generally free of contamination and will be processed prior to use in a recycled mix. RAP contamination in the form of excessive dirt, debris, clean stone, concrete, etc. will not be allowed. Incidental amounts of dirt, concrete, and clean stone may be acceptable. Unprocessed RAP may be processed and then classified as a new source RAP as described above.

Field approval of new source RAP will be based on Table 1012-2 below and volumetric mix properties on the mix with the new source RAP included. Provided the Table 1012-2 tolerances are met, volumetric properties of the new mix will then be performed. If all volumetric mix properties meet the mix design criteria for that mix type, the new source RAP may continue to be used.

If the gradation, binder content, or any of the volumetric mix properties are not within the allowable tolerances of Table 1012-2, do not use the new source RAP unless approved by the Engineer. The Contractor may elect to either not use the stockpile, to request an adjustment to the JMF, or to redesign the mix.

**TABLE 1012-2  
NEW SOURCE RAP GRADATION and BINDER TOLERANCES  
(Apply Tolerances to Mix Design Data)**

Mix Type	0-20% RAP			20 <sup>+</sup> -25 % RAP			25 <sup>+</sup> % RAP		
	Base	Inter.	Surf.	Base	Inter.	Surf.	Base	Inter.	Surf.
P <sub>b</sub> %		± 0.7%			± 0.4%			± 0.3%	
25.0	±10	-	-	±7	-	-	±5	-	-
19.0	±10	±10	-	±7	±7	-	±5	±5	-
12.5	-	±10	±6	-	±7	±3	-	±5	±2
9.5	-	-	±8	-	-	±5	-	-	±4
4.75	±10	-	±10	±7	-	±7	±5	-	±5
2.36	±8	±8	±8	±5	±5	±5	±4	±4	±4
1.18	±8	±8	±8	±5	±5	±5	±4	±4	±4
0.300	±8	±8	±8	±5	±5	±5	±4	±4	±4
0.150	-	-	±8	-	-	±5	-	-	±4
0.075	±4	±4	±4	±2	±2	±2	±1.5	±1.5	±1.5

**ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:**

(1-1-02)

R6 R15

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course	Type B 25.0	4.3 %
Asphalt Concrete Intermediate Course	Type I 19.0	4.7 %
Asphalt Concrete Surface Course	Type S 4.75A	7.0 %
Asphalt Concrete Surface Course	Type SF 9.5A	6.5 %
Asphalt Concrete Surface Course	Type S 9.5	6.0 %
Asphalt Concrete Surface Course	Type S 12.5	5.5 %

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the *2006 Standard Specifications*.

**ASPHALT PLANT MIXTURES:**

(7-1-95)

R6 R20

Place asphalt concrete base course material in trench sections with asphalt pavement spreaders made for the purpose or with other equipment approved by the Engineer.

**PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:**

(11-21-00)

R6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2006 Standard Specifications*.

The base price index for asphalt binder for plant mix is \$ **322.50** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **December 1, 2007**.

**RESURFACING EXISTING BRIDGES:**

(7-1-95)

R6 R61

The Contractor's attention is directed to the fact that he will be required to resurface the bridges on this project if directed by the Engineer.

Place the surface so as to follow a grade line set by the Engineer with the minimum thickness as shown on the sketch herein or as directed by the Engineer. State Forces will make all necessary repairs to the bridge floors prior to the time that the Contractor places the proposed surfacing. Give the Engineer at least 15 days notice prior to the expected time to begin operations so that State Forces will have sufficient time to complete their work.

At all bridges that are not to be resurfaced, taper out the proposed resurfacing layer adjacent to the bridges to insure a proper tie-in with the bridge surface.

**PATCHING EXISTING PAVEMENT:**

(1-15-02) (Rev.7-18-06)

R6 R88

**Description**

The Contractor's attention is directed to the fact that there are areas of existing pavement on this project that will require repair prior to resurfacing. Patch the areas that, in the opinion of the Engineer, need repairing. The areas to be patched will be delineated by the Engineer prior to the Contractor performing repairs.

**Materials**

The patching consists of Asphalt Concrete Base Course, Asphalt Concrete Intermediate Course, Asphalt Concrete Surface Course, or a combination of base, binder and surface course.

**Construction Methods**

Remove existing pavement at locations directed by the Engineer in accordance with Section 250 of the *Standard Specifications*.

Place Asphalt Concrete Base Course, in lifts not exceeding 5 1/2 inches. Utilize compaction equipment suitable for compacting patches as small as 3.5 feet by 6 feet on each lift. Use an approved compaction pattern to achieve proper compaction. If patched pavement is to be open to traffic for more than 48 hours prior to overlay, use Asphalt Surface Course in the top 1.25 inches of the patch.

Schedule operations so that all areas where pavement has been removed, will be repaired on the same day of the pavement removal and all lanes of traffic restored.

**Measurement and Payment**

*Patching Existing Pavement* will be measured and paid for as the actual number of tons of asphalt plant mix complete in place, that has been used to make completed and accepted repairs. The asphalt plant mixed material will be measured by being weighed in trucks on certified platform scales or other certified weighing devices. The above price and payment will be full compensation for all work covered by this provision, including but not limited to removal and disposal of pavement; furnishing and applying tack coat; furnishing, placing, and compacting of asphalt plant mix; furnishing of asphalt binder for the asphalt plant mix; and furnishing scales.

Patching Existing Pavement will be considered a minor item. In the event that the item of Patching Existing Pavement overruns the original bid quantity by more than 100 percent, the provisions of Article 104-5 of the *Standard Specifications* pertaining to revised contract unit price for overrunning minor items will not apply to this item. Any provisions included in the contract that provides for adjustments in compensation due to variations in the price of asphalt binder will not be applicable to payment for the work covered by this provision.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Patching Existing Pavement	Ton

**MASONRY DRAINAGE STRUCTURES:**

(10-16-07)

SP8 R01

Revise the 2006 *Standard Specifications* as follows:

**Page 8-31, Article 840-4 Measurement and Payment**, add the following at the end of the second paragraph:

For that portion of *Masonry Drainage Structure* measured above a height of 10.0 feet, payment will be made at 1.3 times the contract unit price per linear foot for *Masonry Drainage Structure*.

**SHPO DOCUMENTATION FOR BORROW/WASTE SITES:**

(12-18-07)

R8 R02

Revise the *2006 Standard Specifications* as follows:

**Division 2 Earthwork**

**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.

**GUARDRAIL ANCHOR UNITS, TYPE 350:**

(4-20-04)

R8 R65

**Description**

Furnish and install guardrail anchor units in accordance with the details in the plans, the applicable requirements of Section 862 of the *2006 Standard Specifications*, and at locations shown in the plans.

**Materials**

The Contractor may at his option, furnish any one of the 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 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 Specifications.

No modifications shall be made to the guardrail anchor unit without the express written permission from the manufacturer. Perform installation in accordance with the details in the plans, and details and assembling instructions furnished by the manufacturer.

**Construction Methods**

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**

Measurement and payment will be made in accordance with Articles 862-6 of the *2006 Standard Specifications*.



Payment will be made under:

**Pay Item**

**Pay Unit**

Guardrail Anchor Units, Type 350

Each

**FENCE:**

(3-6-06)

SP8 R86

Revise the *2006 Standard Specifications* as follows:

**Page 8-54, Subarticle 866-3(A)**, second sentence,

Add *existing fencing* after stumps

**AGGREGATE PRODUCTION:**

(11-20-01) (Rev. 11-21-06)

R10 R05

Provide aggregate from a producer who uses the current Aggregate Quality Control/Quality Assurance Program which 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.

**CONCRETE BRICK AND BLOCK PRODUCTION:**

(11-20-01) (Rev. 11-21-06)

R10 R10

Provide concrete brick and block from a producer who uses the current Solid Concrete Masonry Brick/Unit Quality Control/Quality Assurance Program that is in effect on the date that material is received on the project.

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/quarriesrprob.pdf>

<b>Table 1024-1</b>	
<b>Pozzolans for Use in Portland Cement Concrete</b>	
<i>Pozzolan</i>	<i>Rate</i>
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

**GLASS BEADS:**

(7-18-06)

R10 R35

Revise the *2006 Standard Specifications* as follows:

**Page 10-223, 1087-4(C) Gradation & Roundness**

Replace the second sentence of the first paragraph with the following:

*All Drop-On and Intermixed Glass Beads shall be tested in accordance with ASTM D1155.*

Delete the last paragraph.

**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

**CHANGEABLE MESSAGE SIGNS**

(11-21-06)

R11 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.

**PAVEMENT MARKING LINES:**

(11-21-06) (Rev. 9-18-07)

R12 R01

Revise the *2006 Standard Specifications* as follows:

**Page 12-2, 1205-3(D) Time Limitations for Replacement,** add the following at the beginning of the chart:

Facility Type	Marking Type	Replacement Deadline
Full-control-of-access multi-lane roadway (4 or more total lanes) and ramps, including Interstates	All markings including symbols	By the end of each workday's operation if the lane is opened to traffic

**Page 12-14, Subarticle 1205-10, Measurement and Payment,** delete the first sentence of the first paragraph and replace with the following:

*Pavement Marking Lines* will be measured and paid for as the actual number of linear feet of pavement marking lines per application that has been satisfactorily placed and accepted by the Engineer.

**SAFETY FENCE:**

**Description**

Safety Fence shall consist of furnishing, installing and maintaining polyethylene or polypropylene fence at locations shown on the plans.

**Materials**

Polyethylene or polypropylene fence shall be a highly visible preconstructed safety fence approved by the Engineer.

Either wood posts or steel post may be used. Wood posts shall be nominal 2" x 4" or 4" x 4" lengths as required, structural light framing, grade No. 2, Southern Pine. Steel posts shall be at least 5 ft. in length, approximately 1 3/8" wide measured parallel to the fence, and have a minimum weight of 1.25 lb./ft. of length. The steel post shall be equipped with an anchor plate having a minimum area of 14 square inches.

**Construction Methods**

No additional clearing and grubbing is anticipated for the installation of this fence; however, if any clearing and grubbing is required, it will be the minimum required for the installation of the safety fence.

The fence shall be erected to conform to the general contour of the ground. When determined necessary, minor grading along the fence line shall be performed to meet this requirement provided no obstructions to proper drainage are created.

Posts shall be set and maintained in a vertical position and may be hand set or set with a post driver. If hand set, all backfill material shall be thoroughly tamped. Wood posts may be sharpened to a dull point if power driven. Posts damaged by power driving shall be removed and replaced prior to final acceptance. The tops of all wood posts shall be cut at a 30-degree angle. The wood posts may, at the option of the Contractor, be cut at this angle either before or after the posts are erected.

The fence fabric shall be attached to the wood posts with one 2" galvanized wire staple across each cable or to the steel posts with wire or other acceptable means.

The Contractor shall be required to maintain the safety fence in a satisfactory condition for the duration of the project as determined by the Engineer.

**Measurement and Payment**

*Safety Fence* will be measured and paid for as the actual number of linear feet installed in place and accepted. Such payment will be full compensation including but not limited to clearing and grading, furnishing and installing fence fabric with necessary posts and post bracing, staples, tie wires, tools, equipment and incidentals necessary to complete this work.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Safety Fence	Linear Foot