

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)

RR 07

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 as directed by the Engineer. Perform this work immediately after the resurfacing operations are completed as directed by the Engineer.

Materials

On any map that contains widening, 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, 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:

| | |
|-------------------------|-----------------|
| Pay Item | Pay Unit |
| Shoulder Reconstruction | Shoulder Mile |

FINAL ACCEPTANCE AND FOURTEEN DAY OBSERVATION PERIOD:

(7-1-95)

RR 13 (Rev)

Upon satisfactory completion of all paving operations, a 14 day observation period is required before acceptance. During the 14-day period, warrant the paved area against failure.

No payment will be made for replacing failed pavement, as the cost of it will be considered incidental to the work initially paid for under the various items in the contract.

Completion and final acceptance of the project is contingent upon successful completion of the Observation Period. The observation period will be considered a part of the work required to be completed by the final completion date specified herein.

SHALLOW UNDERCUT:

(2-19-02) (Rev 7-18-06)

SP2 R35

Perform undercut excavation and place a combination of fabric for soil stabilization and select granular material at locations as directed. Work includes performing undercut excavation, disposing of unsuitable material, furnishing and placing fabric for soil stabilization; and furnishing, placing and compacting select granular material.

Materials

| | |
|-------------------------------|----------------|
| Item | Section |
| Fabric for Soil Stabilization | 270 |
| Select Granular Material | 265 |

Construction Methods

Perform undercut excavation in accordance with Section 225 and/or Section 226.

Place fabric for soil stabilization in accordance with Section 270.

Place select granular material by back dumping material on previously placed fabric.

Compact material to a density equal to 95% of that obtained by compacting a sample of the material in accordance with AASHTO T-99, as modified by the Department or compact material to the highest density that can be reasonably obtained.

Measurement and Payment

Undercut Excavation will be measured and paid for in accordance with Section 225 and/or Section 226 of the *Standard Specifications*.

Fabric for Soil Stabilization will be measured and paid for in accordance with Article 270-4 of the *Standard Specifications*.

Select Granular Material, as accepted in place, will be measured and paid for by the cubic yard in accordance with Section 265-4 of the *Standard Specifications*.

Payment will be made under:

| Pay Item | Pay Unit |
|-------------------------------|-----------------|
| Undercut Excavation | Cubic Yard |
| Fabric for Soil Stabilization | Square Yard |
| Select Granular Material | Cubic Yard |

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:

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

ASPHALT PAVEMENTS - SUPERPAVE:

(7-18-06) (Rev 9-19-06)

SP6 R01

Revise the *2006 Standard Specifications* as follows:

Page 6-2, Article 600-9 Measurement and Payment

Delete the second paragraph.

Page 6-12, 609-5(C)2(c) add after (AASHTO T 209):

or *ASTM D 2041*

Page 6-13, last line on page & Page 6-14, Subarticle 609-5(C)(2)(e), delete and substitute the following:

(e) Retained Tensile Strength (TSR) - (AASHTO T 283 Modified), add subarticle (1) Option 1 before the first paragraph.

(1) Option 1

Add subarticle (2) Option 2 and the following sentence as the first sentence of the second paragraph:

(2) 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.

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

Substitute 20% for 15%

First, second and third sentences of the fifth paragraph:

Substitute 20% for 15%

Page 6-44, 610-8, 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 6-54, Article 620-4, add the following pay item:

| Pay Item | Pay Unit |
|--|-----------------|
| 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/yd² | 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, 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 10-41, Table 1012-1, add the following:

| Mix Type | Course Aggregate Angularity ^(b) 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 |

Page 10-45, Replace Table 1012-2 with the following:

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

| Mix Type | 0-20% RAP | | | 21-25% RAP | | | 26%+ RAP | | |
|--------------------|-----------|--------|-------|------------|--------|-------|----------|--------|-------|
| | Base | Inter. | Surf. | Base | Inter. | Surf. | Base | Inter. | Surf. |
| Sieve (mm) | | | | | | | | | |
| P _b , % | | ± 0.7% | | | ± 0.4% | | | ± 0.3% | |
| 1 1/2" (37.5) | ±10 | - | - | ±7 | - | - | ±5 | - | - |
| 3/4" (19.0) | ±10 | ±10 | - | ±7 | ±7 | - | ±5 | ±5 | - |
| 1/2" (12.5) | - | ±10 | ±6 | - | ±7 | ±3 | - | ±5 | ±2 |
| 3/8" (9.5) | - | - | ±8 | - | - | ±5 | - | - | ±4 |
| No. 4 (4.75) | ±10 | - | ±10 | ±7 | - | ±7 | ±5 | - | ±5 |
| No. 8 (2.36) | ±8 | ±8 | ±8 | ±5 | ±5 | ±5 | ±4 | ±4 | ±4 |
| No.16 (1.18) | ±8 | ±8 | ±8 | ±5 | ±5 | ±5 | ±4 | ±4 | ±4 |
| No. 30 (0.600) | ±8 | ±8 | ±8 | ±5 | ±5 | ±5 | ±4 | ±4 | ±4 |
| No. 50 (0.300) | - | - | ±8 | - | - | ±5 | - | - | ±4 |
| No. 200 (0.075) | ±4 | ±4 | ±4 | ±2 | ±2 | ±2 | ±1.5 | ±1.5 | ±1.5 |

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:

(11-21-00)

SP6 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)

SP6 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)

SP6 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 **\$317.86** per ton.

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

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.

CONCRETE BRICK AND BLOCK PRODUCTION:

(11-20-01)

SP10 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/quarryasrprob.pdf>

Table 1024-1

Pozzolans for Use in Portland Cement Concrete

| <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)

SP10 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 |

PORTABLE CONCRETE BARRIER

(2-20-07)

SP10 R50

The *2006 Standard Specifications* is revised as follows:

Page 10-245, Article 1090-1(A) General, add the following after the first sentence:

The requirement for approved galvanized connectors will be waived if the barrier remains the property of the Contractor.

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.

PAVEMENT MARKING LINES MEASUREMENT AND PAYMENT:

(11-21-06)

SP 12 R01

Revise the *2006 Standard Specifications* as follows:

Page 12-14, Subarticle 1205-10, 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.