

**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 *Roadway Standard Drawings*.

**BURNING RESTRICTIONS:**

(7-1-95)

SP2 R05

Open burning is not permitted on any portion of the right-of-way limits established for this project. Do not burn the clearing, grubbing or demolition debris designated for disposal and generated from the project at locations within the project limits, off the project limits or at any waste or borrow sites in this county. Dispose of the clearing, grubbing and demolition debris by means other than burning, according to state or local rules and regulations.

**EMBANKMENTS:**

(5-16-06)

SP2R18

Revise the *Standard Specifications* as follows:

Page 2-22, Article 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.

**DISPOSAL OF CONTAMINATED SOIL:**

The Contractor’s attention is directed to the fact that soils containing petroleum hydrocarbon compounds exist within the proposed right of way at the following locations:

| <u>Line</u> | <u>Station</u> | <u>Offset</u>  | <u>R/W Parcel No.</u> |
|-------------|----------------|----------------|-----------------------|
| -L-         | 13+25 to 13+55 | 25’ to 60’ Lt. | #005                  |
| -L-         | 14+30 to 14+65 | 20’ to 60’ Lt. | “                     |
| -L-         | 15+30 to 17+40 | 22’ to 55’ Lt. | #007                  |
| -L-         | 19+95 to 20+60 | 20’ to 45’ Rt. | #016                  |
| -L-         | 25+30 to 25+90 | 25’ to 50’ Rt. | #020                  |

Information about these contamination areas, sample locations and laboratory results are available upon request. Please note that only non-hazardous levels of contaminants were detected at these parcels.

Impact to these contaminated areas is expected during the installation of subsurface utilities. The Contractor should only excavate those soils that the Engineer determines must be removed to complete a particular task. The Contractor must transport and properly dispose of all contaminated media excavated within the above-mentioned limits at a licensed facility. It shall be the Contractor's responsibility to locate such a facility. NCDOT Departmental approval of the specific facility identified for use by the Contractor shall occur prior to disposal of any contaminated media from the project limits. The Contractor is required to present all disposal manifests to the Engineer within twenty (20) days of completion of the excavation. The Contractor must provide Certificates of Remediation to the Department within sixty (60) days of completion of the excavation.

The contractor is entirely responsible for compliance with all OSHA, EPA, DOT, DENR and local rules and regulations pertaining to excavation and transportation of the contaminated soil. Examples of such rules and regulations include, but are not limited to, 29 CFR 1910 and 1926, 40 CFR 260 - 265, 49 CFR 173 and 178, 15A NCAC 13A North Carolina Hazardous Waste Management Rules, NCGS 130A - 310 Inactive Hazardous Sites, the Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Federal Resource Conservation and Recovery Act (RCRA). It must be noted that inclusion of this paragraph is meant to highlight the Contractor's responsibility for regulatory compliance in all phases of work on this project.

#### Cleaning of Equipment and Vehicles:

All equipment, tools, etc. utilized in the project shall be thoroughly cleaned to the satisfaction of the Engineer prior to leaving the contaminated project areas.

No vehicles exiting the contaminated areas are to leave contaminated soil or other debris on public or private roadways. Provisions for ensuring all vehicle tires are free from contaminated soil or debris prior to exiting the project limits are to be the responsibility of the Contractor for the duration of the project.

Dust is not to be produced by the excavation activities. It is the Contractor's responsibility to provide dust control throughout the duration of the project.

#### Measurement:

The quantities of contaminated soil disposal to be paid for will be the actual number of short tons of material, which have been acceptably excavated, transported and received at the disposal facility, determined through weighing the loaded material with certified scales, documented by a certified weight certificate issued by a North Carolina public weighmaster, licensed in accordance with Chapter 81A of the General Statutes of North Carolina. The certificate shall be in the form of a ticket furnished by the Contractor and shall contain the following information:

1. Division of Highways project number
2. Date
3. Time issued

- 4. Gross weight
- 6. Tare weight
- 7. Net weight of material
- 8. Scale location
- 9. Truck number
- 10. Contractor's name
- 11. Public weighmaster's stamp or number
- 12. Public weighmaster's signature in ink or initials in ink

Payment:

The quantities of disposal of contaminated soil, measured as provided above, will be paid for at the contract unit price per ton for "Disposal of Contaminated Soil".

The above prices and payments will be full compensation for all loading, transportation, weighing and disposal of contaminated materials, equipment, labor, and personal protective equipment.

Payment will be made under:

Disposal of Contaminated Soil..... Ton

**SHALLOW UNDERCUT:**

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

SP2 R35

Perform undercut excavation and place a combination of fabric for soil stabilization and Class IV Subgrade Stabilization 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 Class IV Subgrade Stabilization.

**Materials**

| <b>Item</b>                     | <b>Section</b>  |
|---------------------------------|---|
| Fabric for Soil Stabilization   | 270   |
| Class IV Subgrade Stabilization | 1016-3, Class IV, or Material meeting gradation requirements of Table 520-1, Column C |

**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 Class IV Subgrade Stabilization by back dumping material on previously placed fabric.

Compact material to 95% of AASHTO T-99, Method "D" density 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*.

*Class IV Subgrade Stabilization*, as accepted in place, will be measured and paid for by the ton in accordance with Section 106-7 of the *Standard Specifications*.

Payment will be made under:

| <b>Pay Item</b>                 | <b>Pay Unit</b> |
|---------------------------------|-----------------|
| Undercut Excavation             | Cubic Yard      |
| Fabric for Soil Stabilization   | Square Yard     |
| Class IV Subgrade Stabilization | Ton             |

**SHOULDER AND FILL SLOPE MATERIAL (Lump Sum Grading):**

(5-21-02)

SP2 R45

**Description**

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 226 of the *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*.

**STEEL PIPE HANDRAIL FOR RETAINING WALL:**

Furnish and install steel pipe handrail for the concrete retaining wall at the location shown in the plans, in accordance with the detail in the plans and as directed by the Engineer.

The quantity of steel pipe handrail to be paid for will be the actual number of linear feet of steel pipe handrail measured along the top of the handrail to the nearest 0.1 of a foot.

The quantity of steel pipe handrail measured as provided above will be paid for at the contract unit price per linear foot for "Steel Pipe Handrails for Retaining Wall". Such price and payment shall be full compensation for fabricating, furnishing, installing, painting and all incidentals necessary to satisfactorily install the handrail.

**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:

|  |                 |
|--|-----------------|
| <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<br>gal/yd <sup>2</sup> | Application<br>Temperature °F | Aggregate Size | Aggregate Rate<br>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<br>Angularity <sup>(b)</sup> ASTM | Fine Aggregate Angularity<br>% Minimum AASHTO | Sand Equivalent<br>% Minimum<br>AASHTO T176 | Flat & Elongated 5:1 Ratio<br>% Maximum ASTM |
|----------|--|---|---|--|
| S 9.5 D  | D5821<br>100/100                                   | T304 Method A<br>45                           | 50  | D4791 Section 8.4<br>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 <sub>b</sub> , % |           | ± 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 *Standard Specifications*.

**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 *Standard Specifications*.

The base price index for asphalt binder for plant mix is \$ 307.86 per ton.

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

**SEALING EXISTING PAVEMENT CRACKS:**

(7-1-95)

SP6 R50

**Description**

The work covered by this provision consists of sealing existing longitudinal and transverse pavement cracks with Sealant Type 2, PS/AR (hot-poured rubber asphalt) at locations as directed by the Engineer. The Contractor will not be required to seal the existing edge joints.

**Materials**

Use Sealant Type 2, PS/AR (hot-poured rubber asphalt) meeting the requirements of Article 1028-2 of the *Standard Specifications*.

**Construction Methods**

Install the sealant so that it forms a complete watertight bond with a high degree of elasticity, with maximum flexibility and longevity under extreme temperature ranges.

Use a HCA (hot compressed air) lance at all times to blast out any vegetation, dirt, dampness, and loose materials from the cracks.

Use a concentrated hot air jet that is a minimum of 3000°F in temperature and that has a minimum air jet force of 3000 feet per second of blasting.

Force open asphalt cracks, clean warm and dry, and have ready for the application of the preheated sealant for maximum crack sealability.

Preheat the sealant to correct temperature, using the air jacketed flow method to prevent the burning of the modified rubber in the sealant. Perform this by means of a trailer mounted 190 gallon safety tested crack sealant preheater melter kettle, with a horizontally mounted full sweep double paddle agitator.

Apply sealant in the prepared cracks at a temperature range of 370°F minimum and 420°F maximum, using the pressure screed shoe to completely fill the crack, leaving a sealed 2" overband. Excessive overbanding or waste of sealant materials will not be tolerated.

Do not apply the PS/AR sealant when the surface temperature of the pavement is below 32°F.

All cracks sealed must have a minimum of 1/8" depth of sealant installed.

After the crack has been sealed, promptly remove any surplus sealer on the pavement. Do not permit traffic over the sealed cracks without approval by the Engineer.

The sealant is to be packaged in polyethylene bags and placed in boxes that weigh approximately 60 pounds. The sealant may be packed in 60 pound boxes containing two polyethylene bags of sealant, which weigh approximately 30 pounds each. Boxes of sealant are to be palletized for shipment. The pallets are to be protected with a weatherproof covering. The Contractor is responsible for storage.

**Measurement and Payment**

*Sealing Existing Pavement Cracks* - The amount of the sealant material to be paid for will be the actual number of pounds of material that has satisfactorily been used to seal pavement cracks in the designated highway. Any material that has been spilled, used in excessive overbanding, wasted, misapplied, or unsatisfactorily used in any way will be deducted in determining quantities for payment. The Engineer will determine the quantity, if any, to be deducted. The Engineer's decision on the quantity to be deducted will be final and binding.

The above price and payment will be full compensation for all work required to seal the pavement cracks including but not limited to furnishing, hauling, loading and unloading, and storage of all sealant materials; cleaning and preparation of cracks to be sealed; application of sealant material in the prepared cracks; any clean-up; and any incidentals necessary to satisfactorily complete the work.

Payment will be made under:

|                                  |                 |
|----------------------------------|-----------------|
| <b>Pay Item</b>                  | <b>Pay Unit</b> |
| Sealing Existing Pavement Cracks | Pound           |

**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

**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.

**STEEL U-CHANNEL POSTS:**

(7-18-06)

SP9 R02

Amend the *2006 Standard Specifications* as follows:

Page 9-15 Subarticle 903-3(D) first paragraph, last sentence, delete the last sentence and add the following:

Use posts of sufficient length to permit the appropriate sign mounting height. Spliced posts are not permitted on new construction.

**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 *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 *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>

| <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      |

### 35-A

**GLASS BEADS:**

(7-18-06)

SP10 R35

Revise the *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 *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)

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.

**REMOVAL OF FOUNDATIONS:**

The existing railroad signal, gate arm and foundations will stay in place until the new railroad signal, gate arm and foundations are operational. The railroad will remove the signal and gate. It will be the responsibility of the Contractor to remove and dispose of existing foundations after the signal and gate are removed. There will be no direct payment for this work as it will be included in the contract lump sum pay item for "Grading".

**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.