

# INFORMATIONAL PROPOSAL

FOR INFORMATION ONLY, NOT TO BE USED FOR BIDDING

NEBRASKA DEPARTMENT OF ROADS  
LETTING DATE : December 06, 2001

CALL ORDER: N05            CONTRACT ID: 1993X

CONTROL NO./SEQ. NO.: 11993 /000 PROJECT NO.: SRR-55(106)  
CONTROL NO./SEQ. NO.: 12358 /000 PROJECT NO.: RD-S55B(1012)

TENTATIVE START DATE: 08/19/02      CONTRACT TIME: 40 WORKING DAYS

LOCATION: ON BLUE STEM LAKE REC RD & ON S-55B SPRAGUE SPUR.  
IN COUNTY: LANCASTER

BIDDER

GROUP 9 BITUMINOUS

SEE NOTICE TO BIDDERS SPECIAL PROVISION FOR COMBINED BID REQUIREMENT

## NOTES

THE TOTAL AMOUNT OF WORK WHICH WILL BE ACCEPTED IN THIS LETTING IS LIMITED TO \$\_\_\_\_\_.

THE NUMBER OF \_\_\_\_\_ CONTRACTS WHICH WILL BE ACCEPTED IN THIS LETTING IS LIMITED TO \_\_\_\_\_.

## **NOTICE TO ALL BIDDERS**

To report bid rigging activities, call: 1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

## **LETTING QUESTIONS**

Prior to the letting, any questions pertaining to the Special Provisions or the plans for this project should be directed to Construction Division personnel at (402) 479-4568 or (402) 479-4529.

STATE OF NEBRASKA  
DEPARTMENT OF ROADS

Required Provisions Supplemental to the

**Standard Specifications for Highway Construction**

**I. Application**

These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

The contractor shall insert in each of his subcontracts all of the stipulations contained in the Special Provisions and these Required Provisions.

A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

**II. Equal Opportunity**

1. **Selection of Labor**

During the performance of this contract, the contractor shall not discriminate against labor from any other state.

2. **Nebraska Fair Employment Practices Act**

The contractor shall not discriminate against any employee or applicant for employment, to be employed in the performance of this contract with respect to his hire, tenure, terms, conditions, or privileges of employment, because of his race, color, religion, sex or national origin. The contractor agrees to post in a conspicuous place or places a notice to be provided by the State Highway Department which sets forth excerpts of the Act.

3. **Nebraska Equal Pay Act**

The contractor shall not discriminate on the basis of sex by paying wages to employees of one sex at a lesser rate than the rate paid to employees of the opposite sex for comparable work on jobs which have comparable requirements. An abstract of the Act is included on the notice which is provided by the State Highway Department.

### III. Employment of Labor

#### 1. General

No person under the age of sixteen (16) years, and no one whose age or physical condition is such as to make his employment dangerous to his health or safety, or to the health and safety of others shall be employed on any project. This paragraph shall not be construed to deny the employment of older people or physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform.

No person currently serving sentence to a penal or correction institution shall be employed on any project.

Except as specifically provided under this section, workers who are qualified by training or experience to be assigned to projects of this character shall not be discriminated against on any grounds whatsoever.

#### 2. Payrolls

Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working on the site of the work.

The contractor's and subcontractor's payroll records shall be available for inspection by authorized representatives of the State Highway Department and authorized representatives of Federal Agencies.

The wages of labor shall be paid in legal tender of the United States, except that this condition will be considered satisfied if payment is made by a negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payment the contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.

No fee of any kind shall be asked or accepted by the contractor or any of his agents from any person as a condition of employment on the project.

No laborers shall be charged for any tools used in performing their respective duties except for reasonably avoidable loss or damage thereto.

Every employee on the work covered by this contract shall be permitted to lodge, board and trade where and with whom he elects and neither the contractor nor his agents, nor his employees shall directly or indirectly require as a condition of employment that an employee shall lodge, board or trade at a particular place or with a particular person.

No charge shall be made for any transportation furnished by the contractor or his agents to any person employed on the work.

No individual shall be employed as a laborer on this contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks or other

equipment from individuals. No such rental agreement, or any charges for feed, gasoline, supplies, or repairs on account of such agreement, shall cause any deduction from the wages accruing to any employee except as authorized by the regulations hereinbefore cited.

#### **IV. Safety and Accident Prevention**

In the performance of this contract, the contractor shall comply with all applicable Federal, State and local laws governing safety, health and sanitation. The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions, on his own responsibility or as the contracting officer may determine, reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

#### **V. Subletting or Assigning the Contract**

The contractor shall perform with his own organization contract work amounting to not less than 30 percent of the total contract amount except that any items designated in the contract as "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the total contract amount before computing the amount of work required to be performed by the contractor with his own organization.

Any items that have been selected as "Specialty Items" for the contract are listed as such in the Special Provisions found elsewhere in the contract.

No portion of the contract shall be sublet, assigned, or otherwise disposed of except with the written consent of the contracting officer or his authorized representative. Requests for permission to sublet assign or otherwise dispose of any portion of the contract shall be in writing and accompanied by a showing that the organization which will perform the work is particularly experienced and equipped for such work. The contractor shall give assurance that the minimum wage for labor as stated in his proposal shall apply to labor performed on all work sublet, assigned or otherwise disposed of in any way. Consent to sublet, assign or otherwise dispose of any portion of the contract shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract.

**SPECIAL PROVISIONS  
FOR  
STATE  
PROJECT NOS. SRR-55(106) AND RD-S55B(1012)**

**GENERAL CONDITIONS**

Sealed bids for the work contemplated in this proposal form will be received at the office of the Nebraska Department of Roads in Room 104 of the Central Office Building at 1500 Highway 2 at Lincoln, Nebraska, on December 6, 2001, until 1:30 P.M.

Bids submitted by mail should be addressed to the Nebraska Department of Roads, c/o Contract Lettings Section, P.O. Box 94759, Lincoln, NE 68509-4759.

The 1997 English Edition of the Standard Specifications for Highway Construction, including all amendments and additions thereto effective at the date of the contract, are made a part of these Special Provisions, through reference.

The Supplemental Specifications to the 1997 English Edition of the Standard Specifications for Highway Construction dated July 12, 2001, including all amendments and additions thereto effective at the date of the contract, are made part of these Special Provisions, through reference.

The Required Provisions dated April 4, 1995, are attached to and are a part of this proposal form.

The attention of bidders is directed to the Required Provisions covering subletting or assigning the contract.

The proposal contains a statement that the contractor is complying with, and will continue to comply with, fair labor standards in the pursuit of his business and in the execution of the work contemplated in this proposal.

Fair labor standards shall be construed to mean such a scale of wages and conditions of employment as are paid and maintained by at least fifty per cent of the contractors in the same business or field of endeavor as the contractor filing this proposal.

**NOTICE TO BIDDERS**

To be eligible for the award of this contract, bidders shall submit a completed bidding proposal for both Call Order No. N05 [Project No. SRR-55(106) and Project No. RD-S55B(1012)] and Call Order No. F04 [Project No. EACSTPD-EACBR-S55F(102)].

Award of Contract, if awarded, will be made on the combined bid for both contracts.

Separate contracts will be awarded for each Call Order Number.

Paragraph 1.a.(2) of Subsection 108.01 in the 1997 English Edition of the Standard Specifications is void and superseded by the following:

With the Engineer's consent, the Contractor may sublet up to 70 percent of the work for the combined contracts.

**STATUS OF UTILITIES  
[Project No. SRR-55(106)]**

No utilities have been or will be required to relocate within the limits of this project.

Underground utilities may exist within the limits of this project. The Contractor shall determine to his satisfaction the extent of occupancy of any underground utilities located within the respective construction areas and the extent of conflict with the proposed work under this contract.

Any utility adjustments or interruption of service for the convenience of the Contractor shall be the sole responsibility of the Contractor.

To arrange for utilities to locate and flag their underground facilities, contact The Diggers Hotline of Nebraska at 1-800-331-5666.

**STATUS OF UTILITIES  
[Project No. RD-S55B(1012)]**

The following information is current as of September 17, 2001.

Utility facilities, aerial and/or underground may exist within this project. The contractor shall determine to his satisfaction the extent of utility occupancy and utility conflict for facilities located within the construction areas.

At this time, no utilities have been required to relocate their facilities.

Any utility adjustments or interruption of service for the convenience of the Contractor shall be the sole responsibility of the Contractor.

To arrange for utilities to locate and flag their underground facilities, contact The Diggers Hotline of Nebraska at 1-800-331-5666.

Utilities known to be in the vicinity of this project.

Alltel Communications  
Rural Water District No. 1 Lancaster Co.  
Norris Public Power District  
Village of Sprague

Any work necessary will be concurrent with construction.

**STATUS OF RIGHT-OF-WAY  
(S1-16-0801)**

According to the best information available, all necessary right-of-way has been acquired.

**SUBCONTRACTOR BIDDERS LIST INFORMATION  
(S1-43-0801)**

All bidders must complete and submit with the bidding proposal, the "Subcontractor Bidders List" form provided by the NDR Contracts office.

Bidders must identify all firms who bid or quote subcontracts on all projects. If no bids or subcontractor quotations are received, the "Subcontractor Bidders List" must be submitted with the bidding documents and the bidder must indicate on the face of the "Subcontractor Bidders List" that no bids or subcontractor quotations were received.

**CONTROL OF WORK  
(S1-43-0901)**

Subsection 105.08 in the 1997 Standard Specifications is void and replaced by the following:

105.08 - Authority and Duty of the Inspector

Department inspectors are authorized to inspect all work performed and all materials furnished. Such inspection may extend to the preparation, fabrication, or manufacture of the materials. The inspector has the authority to reject work or materials until any issues can be decided, including the right to suspend work. The inspector is not authorized to alter or waive the provisions of the contract or act as a supervisor for the Contractor.

105.13 – Tentative Acceptance of Portions of the Project

Paragraph 3.a. of Subsection 105.13 is amended by deleting the word "normal".

**LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC  
(S1-43-1001)**

107.14 – Opening of Sections of the Project to Traffic

Subsection 107.14 Paragraphs 2.b.(1) and (2) are void and replaced by the following:

2.b. (1) Whenever the Department permits the public use of a highway undergoing construction, repair, or maintenance in lieu of a detour route, the Contractor shall not be held responsible for damages to those portions of the project upon which the Department permitted public use, when such damages are the result of no proximate act or failure to act on the part of the Contractor.

(2) If the traveling public should cause damage to the roadway, the Contractor shall assist the State in identifying the responsible party and the Contractor shall as a minimum if present at the time of the damage record pertinent information regarding the accident. (Who caused the damage; when the damage occurred; and how the damage was resulted.)

## 107.15 – Contractor’s Responsibility for Work

Subsection 107.15 is amended by adding Paragraph 1.b.(3) as follows:

- (3) The Contractor shall not be held responsible for damage caused by the traveling public on those portions of the project where the Department has permitted public use of the road in lieu of using a detour route and the damage as not the result of any proximate act or failure to act on the part of the Contractor.

## **MEASUREMENT AND PAYMENT (S1-43-0901)**

### 109.08 – Acceptance, Final Payment, and Termination of Contractor’s Responsibility

Subsection 109.08 Paragraph c. amended by deleting the word “normal”.

Subsection 109.08 Paragraph d. is void and replaced by the following:

- d. If the traveling public should cause damage to the roadway the Contractor shall assist the State in identifying the responsible party and the Contractor shall as a minimum if present at the time of the damage record pertinent information regarding the accident. (Who caused the damage; when the damage occurred; and how are damage was resulted.)

## **CONSTRUCTION DETAILS**

### **GENERAL CLEARING AND GRUBBING (S2-2-0801)**

Paragraph 1. of Subsection 202.03 in the Supplemental Specifications is amended to provide that General Clearing and Grubbing shall include all tree removal.

Paragraphs 2.a., b., and c. of Subsection 202.03 in the Supplemental Specifications are void.

Paragraph 3. of Subsection 202.04 in the Supplemental Specifications is void and superseded by the following:

3. All tree removal is subsidiary to the pay item “General Clearing and Grubbing”.

### **SUBGRADE PREPARATION (S3-1-0801)**

Paragraph 2.a. of Subsection 302.03 in the Standard Specifications is amended to include that trimming on narrow, irregular or roadway grading of 1/2 mile (0.8 km) or less may be accomplished using conventional methods.

## **TEMPORARY TRAFFIC CONTROL DEVICES (S4-9-1201)**

Paragraphs 2.a. of Subsection 422.05 in the Standard Specifications is void and superseded by the following:

2.a. If signs are not returned or are returned damaged, and the damage is beyond reasonable "wear and tear" and the damage was caused by the Contractor, then the Contractor shall be charged the value of the missing or damaged items. These charges shall be deducted from monies due the Contractor upon final payment.

## **LOCAL MATERIAL SOURCES (S5-1-0801)**

Information regarding possible sources of local materials is available at the Materials and Research Division of the Department of Roads, Lincoln, Nebraska.

## **SURFACING UNDER GUARDRAIL (S5-4-0801)**

Amend Section 503 in the Standard Specifications and Supplemental Specifications to include Surfacing Under Guardrail.

At the contractor's option, the surfacing may be constructed using Class "47B-3000" Concrete, Class "AX-3000" Concrete, Class "PR-3000" Concrete (Class 47B-20 Concrete, Class AX-20 Concrete, Class PR-20 Concrete), or any commercially produced hot mix asphaltic concrete, which has been approved by the Engineer. These materials may be used interchangeably during the course of the work except that surfacing at any individual location must be completed with the same material with which the work was begun.

If concrete is used in the surfacing, it shall reach a minimum strength of 3000 psi (20 Mpa) before opening to traffic.

Amend Subsection 302.04 in the Standard Specifications to provide that the work of subgrade preparation for surfacing under guardrail will not be measured for payment, but shall be considered subsidiary to the item "Surfacing Under Guardrail".

Subsection 503.05 in the Standard Specifications is amended to provide that P.G. binder used in the asphaltic concrete will not be measured for payment, but shall be considered subsidiary to the item "Surfacing Under Guardrail".

Subsection 504.04 in the Standard Specifications is amended to provide that the application of a tack coat, including furnishing emulsified asphalt, will not be measured for payment, but shall be considered subsidiary to the item "Surfacing Under Guardrail".

The work and materials required for any drainage curb placed on surfacing under guardrail will not be measured and paid for, but will be considered subsidiary to the item "Surfacing Under Guardrail".

The work and materials required for surfacing under guardrail will be paid for at the contract unit price per square yard (square meter) for the item "Surfacing Under Guardrail". Payment will be full compensation for the work prescribed in these Special Provisions and the Standard Specifications.

**ASPHALTIC CONCRETE  
(S5-5-0801)**

Paragraph 5. of Subsection 503.02 in the Standard Specifications is void.

**COLD MILLING CLASS 1**

Void Paragraph 9.a. Subsection 510.04 in the 1997 English Edition of the Standard Specifications and replace it with the following:

Bituminous material produced from the cold milling operation shall become the property of the Contractor and removed from the project.

Existing asphaltic concrete surfacing material is Type B Asphaltic Concrete.

**SEEDING**

Subsection 803.02 in the 1997 English Edition of the Standard Specifications is amended to include the following:

Type "B"	Minimum Purity (%)	Broadcast or Hydraulic Seeder Application Rate in lb. of Pure Live Seed/Acre	Approved Mech. Drill Application Rate in lb. of Pure Live Seed/Acre
Perennial Ryegrass - Linn	85	-	10
K-31 Fescue	85	-	15
Western Wheatgrass - Flintlock	85	-	8
Buffalograss - Sharps, Cody	80	-	5
Blue Grama - NE, KS, CO	35	-	2
Birdsfoot Trefoil - Empire - 5x Inoculation	90	-	4
Oats	90	-	12

All seed shall be origin Nebraska, adjoining states, or as specified. A contractor proposing to use a substitute variety, or origin shall submit for the engineer's consideration a seed tag representing the seed which shows the variety, origin and analysis of the seed.

Rates of application of commercial inorganic fertilizer shall be:

	Rate of Application Per Acre (Minimum)
Available Nitrogen (N <sub>2</sub> ) -----	32 or 36 lb.
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> ) -----	92 or 96 lb.

Rate of application of granular sulphur coated urea fertilizer shall be:

Nitrogen (total available) -----	60 lb.
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The contractor may, at his option, apply granular urea formaldehyde in lieu of the sulphur coated urea fertilizer at the following rate:

Nitrogen (total available) -----	60 lb.
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### EROSION CONTROL

Subsection 807.02 in the 1997 English Edition of the Standard Specifications is amended to include the following:

	Minimum Purity (%)	Application rate in lb. of Pure Live Seed/1000 yd. <sup>2</sup>
For all erosion control - use the same seed mix and rate as shown for Type B seeding.		

All seeds shall be origin Nebraska, adjoining states, or as specified. A contractor proposing to use a substitute variety or origin shall submit for the engineers consideration a seed tag representing the seed, which shows the variety, origin and analysis of the seed.

Rate of application of inorganic fertilizer shall be:

	Rate of Application Per 1000 yd. <sup>2</sup> (Min.)
Available Nitrogen (N <sub>2</sub> ) -----	8 or 9 lb.
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> ) -----	23 or 24 lb.

Rate of application of granular sulphur coated urea fertilizer or urea-formaldehyde fertilizer shall be:

	Rate of Application Per 1000 yd. <sup>2</sup> (Min.)
Nitrogen (Total Available) -----	18 lb.

### **GUARDRAIL END TREATMENT, TYPE II**

Section 902 in the 1997 English Edition of the Standard Specifications is amended to include "Guardrail End Treatment, Type II".

This work consists of furnishing and installing a guardrail end treatment system according to the details shown in the plans.

The Contractor has the option of installing the SRT-350 System, or the FLEAT-System.

### **CULVERT MOUNTED GUARDRAIL POSTS**

Section 902 in the 1997 English Edition of the Standard Specifications is amended to include the following:

Culvert Mounted Guardrail Posts, fittings and hardware shall be furnished by the Contractor and installed according to the details shown in the plans. The order length of all special posts shall be six feet and shall be cut to the proper length. The field cut and any damage to the galvanizing shall be repaired in accordance with Method 2 of Subsection 1061.

Paragraph 1. of Subsection 902.05 is amended to include the following:

Pay Item	Pay Unit
Culvert Mounted Guardrail Posts	Each (ea)

### **FLY ASH (S10-5-0801)**

Subsection 1008.01 in the Standard Specifications is void and superseded by the following:

Fly ash shall be Class C or F meeting the requirements of ASTM C 618.

**STRUCTURAL STEEL  
(S10-5-0801)**

Section 1045 of the Standard Specifications is amended to include the following:

1045.03 -- Steel Plate Substitution

The Contractor may use either English or Metric steel plates in accordance with Table 1045.01.

<b>Table 1045.01</b>			
<b>English-Metric Steel Plate Substitution Table</b>			
<b>Metric (millimeters)</b>	<b>English (inches)</b>	<b>Metric (millimeters)</b>	<b>English (inches)</b>
9	3/8	32	1 1/4
10	3/8	35	1 3/8
11	7/16	38	1 1/2
12	1/2	40	1 5/8
14	9/16	45	1 3/4
16	11/16	50	2
18	3/4	55	2 1/4
20	13/16	60	2 3/8
22	7/8	70	2 3/4
25	1	80	3 1/4
28	1 1/8	90	3 1/2
30	1 1/4		

**REPAIR OF DAMAGED METALLIC COATINGS  
(S10-5-0801)**

Paragraph 2. of Subsection 1061.01 in the Standard Specifications is void and superseded by the following:

2. The material used for repair shall provide a minimum coating thickness of at least 50 µm with one application.

**DOWEL BARS  
(S10-5-0801)**

Subsection 1022.02 in the Standard Specifications is amended to include the following:

In addition to these certificates, two 1.8 meter samples of the coated bar (for tension testing and bend testing) of each size bar and each heat number shall be sent to the NDR Materials and Research Laboratory, Lincoln, Nebraska. These bars will be properly identified with tags showing the size and heat number.

**CORRUGATED METAL PIPE  
(S10-5-0801)**

Table 1035.01 in Section 1035 of the Supplemental Specifications is amended by deleting the title "Steel and Aluminum Culvert Thickness".

**METAL FLARED-END SECTIONS  
(S10-5-0801)**

Table 1036.01 in Section 1036 of the Supplemental Specifications is amended by deleting the title "Steel and Aluminum Flared-End Thickness".

**REINFORCED CONCRETE PIPE, MANHOLE RISERS,  
AND FLARED-END SECTIONS  
(S10-5-0801)**

Paragraph 3.a. of Subsection 1037.02 in the Supplemental Specifications is void and superseded by the following:

3.a. Round reinforced concrete pipe shall conform to the requirements of AASHTO M 170-95 with the exception of the minimum circumferential reinforcing (in<sup>2</sup>/ft. (mm<sup>2</sup>/m) of pipe wall) for 15, 21, and 24 inch (380, 460, 600 mm) Class III pipe, as shown below:

Paragraph 3.b. of Subsection 1037.02 is void and superseded by the following:

b. AASHTO M 170-95 Specifications are modified as follows:

Paragraph 4. of Subsection 1037.02 is void and superseded by the following:

4. Reinforced concrete arch pipe shall conform to the requirements of AASHTO M 206-95.

Paragraph 5. of Subsection 1037.02 is void and superseded by the following:

5. Reinforced concrete elliptical pipe shall conform to the requirements of AASHTO M 207-95.

Paragraph 7. of Subsection 1037.02 is void and superseded by the following:

7. Concrete flared-end sections shall be of the design shown in the plans and in conformance with the applicable requirements of AASHTO M 170-95, Class II pipe, AASHTO M 206-95, Class A-II pipe, or AASHTO M 207-95, Class HE-II pipe for the diameter of pipe which it is to be installed.

### **HIGH TENSILE BOLTS, NUTS, AND WASHERS (S10-5-1001)**

Subsection 1058.02 in the Supplemental Specifications is void.

Paragraph 4.b.(5) in the Standard Specifications is void and superseded by the following:

- (5) The bolt, nut, and washer assembly shall be assembled in a Skidmore-Wilhelm calibrator or an acceptable equivalent device. For bolts that are too short to be assembled in the calibrator, see Subsection 1058.03, Paragraph 4.b.(9).

### **ELASTOMERIC BEARINGS AND LAMINATED BEARING PADS (S10-5-1001)**

Paragraph 2. of Subsection 1068.02 in the Standard Specifications is void and superseded by the following:

2. Samples and certification shall be furnished in accordance with NDR's *Materials Sampling Guide*.

Paragraph 3. of Subsection 1068.02 is void.

### **STEEL BARS FOR CONCRETE REINFORCEMENT (S10-5-1201)**

Section 1020 in the Standard Specifications is void and superseded by the following:

#### 1020.01 - Description

Steel tie bars for longitudinal joint reinforcement in concrete pavements shall be epoxy coated and deformed Grade 40 or 60 billet steel as shown in the plans, specifications or Special Provisions.

#### 1020.02 - Material Characteristics

1. Billet-steel bars shall conform to the requirements of ASTM A 615/A 615M.
2. Epoxy coatings shall conform to the requirements in Section 1021 of the Standard Specifications and Supplemental Specifications.

## 1020.03 - Acceptance Requirements

Acceptance shall be based on sampling, testing, and certification requirements in accordance with the NDR *Materials Sampling Guide*.

### **PERFORMANCE GRADED BINDER (Superpave)**

Section 503 in the Standard Specifications and Supplemental Specifications is amended to include Performance Graded Binders.

#### I. Description:

The performance graded binder to be used on this project shall be PG Binder 64-22, supplied by a Certified Supplier.

#### Certified Supplier

A supplier must be certified by the Nebraska Department of Roads to be allowed to supply Performance Graded Binder in Nebraska. A certified supplier must be a participant in one or more of the following PG Binder groups.

1. AASHTO Materials Reference Laboratory (AMRL)
2. Western Cooperative Testing Group
3. Combined States Binder Group

The supplier must maintain and follow the requirements of the group or groups in which they participate in to maintain certification by the Nebraska Department of Roads. In addition, active participation is required to maintain certification by the Department. Active participation will include submitting of round robin samples results, along with meeting other requirements of the group or groups. Failure to do so will result in loss of certification by the Department.

A certified supplier may be asked to supply to the Department, past round robin results, laboratory inspection reports, reasons for and investigative reports on out lying results, quality control testing, and/or technician training and proficiency testing reports.

#### Supplier Certification

A supplier may request certification by contacting the Nebraska Department of Roads, Materials and Research Division, Flexible Pavement Engineer at (402) 479-4675. A temporary certification may be issued for a period of up to one year. Split sample testing will be required prior to receiving a temporary certification. Split sample testing will be done on all grades of binder that the supplier intends to supply during the temporary certification. The supplier will have up to one year to become certified by participating in and following the requirements of one or more of the approved binder groups.

A supplier may become certified through active participation in other binder certification/round robin groups that are approved by the Department. The Department may request from the supplier prior to approval, past or current round robin results, quality control testing, laboratory inspection reports, and/or technician training and proficiency testing reports.

II. Binder Sampling and Testing:

1. Lots. Each 3750 tons (3400 Mg) of HMA produced will be a binder lot.
2. A binder lot will include only one PG Binder grade or a blend as allowed in paragraph 6.e.
3. A Binder lot will only include one supplier of the PG Binder or a blend as allowed in paragraph 6.e.
4. Blending of different binder grades and binders from different suppliers will be allowed with restrictions as noted in paragraph 6.e. The Engineer must be notified of the intent to blend prior to actual blending.
5. All binders shall be sampled at the rate of one sample per lot with a minimum of three samples per project.
  - a. The sample shall consist of two one-quart (liter) cans and shall be taken by the Contractor's Certified Sampling Technician, with assistance from or under supervision of NDR personnel. The sample shall be taken at the plant from the line between the storage tank and the mixer or from the tank supplying material to the line, at a location at which material sampled is representative of the material in the line to the mixer. One can will be tested for compliance with MP1 specifications and the other can portion will be saved for dispute resolution, if needed. The sampling process shall follow procedures of the NDR Materials Sampling Guide and NDR T 40.
  - b. Testing. When the tested PG Binder is in compliance, the binder lot will be accepted and both cans of the sample can be discarded. If the tested PG Binder does not comply, then the price of the PG Binder lot represented by the sample shall be adjusted according to Table 1. Overall project average testing requirements and price adjustments will also apply, as stated in Table 2.
6. Material Requirements:
  - a. Performance graded binder, as specified in the contract items shall be in accordance with AASHTO Designation MP1 and meet all minimum and maximum requirements.
  - b. Substitution of a PG Binder, which exceeds the upper and lower grade designations from the specified, requires advance notification of the Engineer, and be documented by a no cost change order. The bill of lading or delivery ticket shall state the binder grade and specific gravity.
  - c. Material Certification - A Material Certification shall be submitted prior to construction stating, the type of modifier being used, and the recommended mixing and compaction temperatures for the Hot Mix Asphalt.
  - d. The Contractor shall receive from the supplier, instructions on the proper storage and handling of each grade and shipment of PG Binder.

- e. Blending of PG Binders at the hot mix plant site will be allowed only when transitioning to an asphalt mixture requiring a different grade of binder and with the following restrictions:
- (1) The resultant blend will meet MP-1 specifications when tested as  $\pm 3^\circ$  of the specified PG binder. The sample of the blended material will 1) be considered as a lot sample, 2) will be taken during initial production following the blending of the binders, and 3) deductions when not meeting MP-1, will apply. On the blended sample's identification form will be a note explaining the blending conditions and a statement that the sample is a blend of materials. The next lot sample, following the sample representing the blend, will be tested as the specified binder grade for the asphalt mixture being produced and shall meet MP-1 specifications.
  - (2) Modified Binders - When a type of modification is used and stated in the Material Certification as required in paragraph 6.c., it will not be allowed to be blended with a binder containing a different type of modification. Blending of the same type of modifiers will be allowed.

**TABLE 1**

<b>SINGLE SAMPLE TOLERANCE AND PRICE REDUCTION TABLE</b>		
	<b>Price Reduction<sup>1</sup> Pay Factor of 0.75</b>	<b>Determined by Engineer<sup>2</sup> Pay Factor of 0.50 or Removal</b>
<u>Tests on Original Binder</u> Dynamic Shear, G*/Sin $\delta$ , kPa	0.86-0.92	< 0.86
<u>Tests on Rolling Thin Film</u> <u>Oven Residue</u> Dynamic Shear, G*/Sin $\delta$ , kPa	1.76-1.97	< 1.76
<u>Tests Pressure Aging Vessel</u> <u>Residue</u> Dynamic Shear, G*Sin $\delta$ , kPa	5601-6200	> 6200
<u>Creep Stiffness</u> S, Mpa	325-348	> 348
m-value	0.270-0.284	< 0.270

**NOTE:** If more than one test fails to meet requirements, the largest individual price reduction (pay factor of 0.75 or 0.50) will be used to calculate price reduction for the asphalt binder.

<sup>1</sup>Price Reduction will be based on contract unit price of asphalt binder.

<sup>2</sup>The Engineer will determine if the non-compliant material will be removed. If the non-compliant material is accepted, a price reduction of 50% will be applied. The price reduction shall be based on the contract unit price of asphalt binder.

The pay factor will be applied to the quantity of material that the sample represents.

Overall Project Average - Price Reduction Based on Complete MP-1 Testing

Out of specification material will be determined by the specifications outlined in AASHTO MP-1, excluding Direct Tension.

The Nebraska Department of Roads, Materials and Research, Bituminous Laboratory will do complete testing, per MP-1 specifications, on a minimum of three samples or 20% of the total samples from the project, whichever is the greatest. The Department will randomly select one sample for complete MP-1 testing out of every five samples received. When any test result shows sample not meeting MP-1 specifications, the previous and following sample received will be tested for complete MP-1 compliance. Testing will continue in this manner until tested samples meet all of MP-1 specifications.

Original Dynamic Shear Rheometer testing will be completed on all samples. When a sample being tested for only Original Dynamic Shear Rheometer compliance falls out of MP-1 specification, it will then be tested for complete MP-1 specification compliance. Adjacent samples will be tested when results, other than the Original Dynamic Shear Rheometer result, do not meet specification. This additional complete testing for MP-1 compliance is in addition to the minimum number of samples that will be tested for complete MP-1 compliance.

At the completion of testing, all complete MP-1 test results will be averaged. For averages that do not meet MP-1 specifications, the largest reduction shown in Table 2 will be applied to all the Performance Graded Binder used on the project.

**Table 2**

<b>OVERALL PROJECT AVERAGE - PRICE REDUCTION TABLE</b>		
	<b>Range of Average</b>	<b>Pay Factor Applied</b>
<u>Tests on Original Binder</u> Dynamic Shear, G*/Sin δ, kPa Min. 1.00 kPa	< 1.00 - 0.98	0.98
	< 0.98 - 0.96	0.95
	< 0.96 - 0.94	0.92
	< 0.94	0.85
<u>Tests on Rolling Thin Film</u> <u>Oven Residue</u> Dynamic Shear, G*/Sin δ, kPa Min. 2.20 kPa	< 2.20 - 2.156	0.98
	< 2.156 - 2.09	0.95
	< 2.09 - 2.024	0.92
	< 2.024	0.85
<u>Tests Pressure Aging Vessel</u> <u>Residue</u> Dynamic Shear, G*Sin δ, kPa Max. 5000 kPa	< 5000 - 5100	0.98
	< 5100 - 5250	0.95
	< 5250 - 5400	0.92
	< 5400	0.85
m-Value Min. 0.300	< 0.300 - 0.298	0.98
	< 0.298 - 0.293	0.95
	< 0.293 - 0.290	0.92
	< 0.290	0.85
<u>Creep Stiffness</u> S, MPa Max. 300 MPa	< 300 - 306	0.98
	< 306 - 315	0.95
	< 315 - 324	0.92
	< 324	0.85

**Single Sample Reduction and Overall Project Average Reduction**

A sample representing a lot, not meeting MP-1 Specification, will have a reduction for the material that the sample represents. Only the largest reduction from Table 1, will apply when more than one result of a single sample does not meet MP-1 specifications. Only the largest overall project average reduction from Table 2, will apply when more than one test average falls out of MP-1 specifications. Pay Factors based on both Table 1 and Table 2 test results are separate from each other and both will be applied.

**Investigation of Verification Lot Samples That Do Not Meet Specifications**

When the lot sample shows test results out of specification limits, the process of resolving the sample failure will include the following actions as appropriate:

1. The Bituminous Lab may conduct retesting of the remaining portion of the original can sample as determined necessary to confirm or disaffirm the original test result(s).
2. The Flexible Pavement Engineer will notify the Contractor who will arrange to investigate all aspects of the testing, loading, handling and delivery of the material in question. The Contractor shall report findings to the Central Laboratory, Flexible Pavement Engineer.

3. The Department will collect and compile all information and prepare a report. A copy of the report will be distributed to the District and the Contractor.
4. The Bituminous Laboratory will issue the standard report of tests for all samples tested, to include any resulting pay factor deductions. A copy of the report of tests will be distributed to the District, Construction Division, and Contractor.

#### Dispute Resolution

After testing and investigations have been completed on the one can of the sample and there is still a dispute, the Department will select an independent laboratory for referee testing to take place on the second can of the sample. If the independent lab's tests indicate failing results and pay deductions equal to or great than the Department's, the Contractor will reimburse the Department for the cost of testing. If the independent lab's tests indicate that the material meets specification or is at a pay deduction less than the Department's, the Department will assume the cost of testing. When the independent lab's tests indicate a pay deduction, the lesser of the Department's and the independent lab's deductions will be applied.

#### Basis of Measurement

PG Binder shall be measured in accordance with Subsection 503.05 in the Standard Specifications and Supplemental Specifications.

#### Basis of Payment:

Subsection 503.06 in the Standard Specifications and Supplemental Specifications is amended to provide that PG Binder, accepted by the Engineer for use in asphaltic concrete, will be paid for at the contract unit price per ton (Megagram) for the item "Performance Graded Binder \_\_\_\_\_", less any deductions as prescribed in the tolerance and price reduction tables.

### **SUPERPAVE ASPHALTIC CONCRETE**

Asphaltic Concrete Type SP1 shall use the 0.5 gradation band.

Paragraph 4.f.(1)(i) of Subsection 1028.03 in the Supplemental Specifications is void and superseded by the following:

Bulk Specific Gravity (Gmb) shall be determined for each specimen in accordance with AASHTO T 166.

Paragraph 4.f.(5) of Subsection 1028.03 in the Supplemental Specifications is void and superseded by the following:

5. (i) The percent of PG Binder shall be determined for each QC test. The percent of PG Binder will be computed by ignition oven results.
5. (ii) The gradations shall be determined for each QC test using AASHTO T 30.

Paragraph 4.g.(1) of Subsection 1028.03 in the Supplemental Specifications is void and superseded by the following:

All test results and calculations shall be recorded and documented on data sheets using the latest version of NDOR provided "Superpave" software. A copy containing complete project documentation will be provided to the Materials and Research Division at the completion of the project.

Paragraph 5.b. of Subsection 1028.03 in the Supplemental Specifications is void and superseded by the following:

Two consecutive test results (single test) outside the Specification limits or a (50% or reject) shall be cause to cease operations.

Paragraph 5.e. of Subsection 1028.03 in the Supplemental Specifications is void and superseded by the following:

Failure to cease operations after two consecutive test results fall outside the Specification limits shall subject all subsequent material to be rejected.

The "**Note**" in paragraph 9.b. of Subsection 1028.03 in the Supplemental Specifications is void and superseded by the following:

**Note:** The individual QC test value of the Maximum Mix Specific Gravity (Rice) will be used to calculate the density of each corresponding core.

### **ASPHALTIC CONCRETE, TYPE SPL**

Asphaltic Concrete, Type SPL shall conform to the AASHTO T 245 test for a 50 blow mix criteria.

Section 1028 in the 1997 English Edition of the Standard Specifications is amended to include Asphaltic Concrete, Type SPL.

The following subsections in the 1997 English Edition of the Standard Specifications are void: 503.02 6., 7.a.b., 8., 503.04 5.c.(3) (4) (5) (6) and (7), 1028.01, 2.d.(3)(vii), 3., 4., 5.i.(ii) (iv), 1028.02 3., 4.a., 5.a.b., Table 1028.02 (Asphalt Content), 1028.02 6.f.(8) and (9), 1033.02 4.a.(1), and Table 1033.04A & B.

Subsections 1028.01 5.i. (3) (II) (IX) and 1028.02 6.h. (3) (vii) in the 1997 English Edition of the Standard Specifications are amended to include the Marshall Stability and Flow Test.

Paragraph 8.a. of Subsection 1028.02 in the 1997 English Edition of the Standard Specifications is void and superseded by the following:

The Contractor's sample testing of laboratory air voids, aggregate gradation, compacted in place density, Marshall stability and flow shall be verified by comparison to Department acceptance tests.

The contractor may approach the State with a proposal to supplement the virgin aggregates of the asphaltic concrete mix with a contractor specified percentage of recycled asphalt pavement (RAP). The State may accept or reject the proposal based on whether the mix design meets the specified criteria of the asphaltic concrete proposed. The RAP may come

from the project or an existing stockpile. The contractor is responsible for investigating the quality of the RAP material.

The combined mineral aggregate for Asphaltic Concrete, Type SPL, shall be composed of not less than 30 percent crushed rock, crushed mineral aggregates which contain no more than 20 percent naturally occurring fine aggregate retained on the No. 10 sieve and mineral filler if needed. The target field air voids shall be 2 percent. The gradation of the individual components shall be such that a mix design meeting the target value requirements shown below can be established.

RANGE FOR TARGET VALUES

SIEVE SIZE	PERCENT PASSING	
	Min.	Max.
No. 10	48.0	54.0
No. 50	15.0	21.0
*No. 200	4.0	8.0

\* This requirement is based on a specific gravity range of 2.55 to 2.75 for the material passing the No. 200 sieve. For specific gravities outside the limits shown, the range may be adjusted by Materials and Tests Engineer to maintain an equivalent volume of material passing the No. 200 sieve.

Field control target air voids shall consist of a maximum equal to the target plus one percent and a minimum equal to the target minus one percent, based on the moving average of four tests.

In addition to the above requirements, the gradation of the combined mineral aggregate proposed for use shall have 100 percent passing the one-inch sieve, 98 percent or more passing the 3/4-inch sieve, 81 percent to 89 percent passing the 3/8-inch sieve and the plasticity index of the portion of the combined mineral aggregate passing the No. 200 sieve of the materials submitted for experimental bituminous mixtures shall not exceed six for approval of the mixture design.

The bituminous mixture shall also have Marshall Stability and Flow values required to produce a Bearing Capacity of no less than 230 psi, as defined by the equation:

$$\text{Bearing Capacity} = \frac{\text{Stability}}{\text{Flow}} \times \frac{(120 - \text{Flow})}{100}$$

Note: Stability in lbs.  
Flow in 1/100 in.

Mineral aggregates shall comply with the quality requirements of Paragraph 4. of Subsection 1033.02 for mineral aggregate other than crushed rock for asphaltic concrete.

**PROPOSAL GUARANTY  
(S1-38-0801)**

As an evidence of good faith in submitting a proposal for this work or for any portion thereof as provided in the proposal form, the bidder must file with his proposal a bid bond, which must be executed on the Department of Roads' Bid Bond form, in the amount of 5 percent of the amount bid for any group of items or collection of groups for which the bid is submitted. Any alterations, conditions or limitations added to the Department of Roads' Bid Bond form will be unacceptable and cause the bid not to be opened and read.

\* \* \* \* \*

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