

INFORMATIONAL PROPOSAL (For information only, not to be used for bidding)

NEBRASKA DEPARTMENT OF ROADS
LETTING DATE: April 17, 2008

CALL ORDER: 500 CONTRACT ID: 5318X

CONTROL NO./SEQ. NO.: 51318 /000 PROJECT NO.: STR-L17F(1008)

TENTATIVE START DATE: 09/15/08 CONTRACT TIME: 25 WORKING DAYS

LOCATION: L17F, LODGEPOLE LINK
IN COUNTY: CHEYENNE

BIDDER

GROUP 6 BRIDGE AT STA. 89+85.00

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.

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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.

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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.

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**SPECIAL PROVISIONS
FOR
STATE
PROJECT NO. STR-L17F(1008)**

GENERAL CONDITIONS

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 April 17, 2008, until 1:30 P.M.

- a. 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.
- b. Bids submitted electronically over the internet, shall be submitted using www.bidx.com.

The 2007 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 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.

STATUS OF UTILITIES

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 RIGHT OF WAY

The right of way for this project has been acquired and physical possession is held by the State of Nebraska and ready for the Contractor's use, except tracts listed below:

Unacquired Right-of-Way Tracts as follows:

Tract Number	Status of Tract	Hearing Date
None	None	None

Right-of-Way Tracts with Pay Items:

Tract Number	Pay Items
None	None

- No encroachments on the old right of way.
- Acquisition of right of way is not required for this project.

**SPECIAL PROSECUTION AND PROGRESS
(Migratory Birds)
(A-42-0807)**

The Department of Roads will, to the extent practicable, schedule the letting of projects such that bridge demolition activities or clearing and grubbing can occur outside of the primary nesting season in Nebraska which has been determined to generally occur between April 1 and July 15.

The Contractor shall, to the extent possible, schedule bridge demolition and clearing and grubbing activities for highway projects to occur outside the primary nesting season in Nebraska. However, if circumstances dictate that project construction or demolition must be done when nesting migratory birds may be present, a survey of the number of active nests and species of birds shall be conducted by qualified personnel representing the Contractor, and assisted by the Project Manager (PM), NDOR Environmental Section staff, or the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) - Wildlife Services Office.

The following guidance is provided for compliance with the Migratory Bird Treaty Act for construction of NDOR projects:

1. The Contractor shall submit a plan to the NDOR regarding how he intends to accomplish bridge demolition or clearing and grubbing of the project to avoid conflict with nesting migratory birds.
2. The Contractor must submit a temporary erosion control plan tailored to fit the plan for clearing and grubbing.
3. If construction operations result in unavoidable conflict with nesting migratory bird's eggs or young, which will result in "taking" nests and their contents, the Contractor should notify the NDOR Project Manager (PM). The PM shall notify

the Environmental Section of Planning and Project Development by telephone at 402-479-4410 or 4412.

4. The NDOR Environmental Section will then determine if assistance in conducting the survey will be provided by the NDOR Environmental Section (if available) or from the USDA APHIS - Wildlife Services Office and arrange for assistance with the survey of nest numbers, bird species, etc. Results of the survey shall be maintained by the NDOR until project completion. The Contractor will reimburse the Department of Roads for each survey required at \$1,000 per survey.
5. USDA and NDOR can assist the Contractor in completing Form 37 and Form 3-200 to apply for a depredation permit allowing removal and handling by the Contractor.
6. The Contractor shall submit the completed application materials to the following address: U.S. Fish and Wildlife Service, Office of Migratory Bird Management (Permits), P.O. Box 245486, DFC (60154), Denver Colorado, 80225-0486. A \$100 fee must be submitted with the application. A copy of the permit application shall be submitted to the Nebraska Ecological Services Field Office of the U.S. Fish & Wildlife Service.
7. The U.S. Fish & Wildlife Service Office of Migratory Bird Management (Denver, CO) will process road construction depredation permit applications as soon as practicable, recognizing the concerns for public safety and economic impact of delays.
8. It is the Contractors' responsibility to schedule his work to accommodate the process of conducting a survey(s) and obtaining the necessary permit(s) if avoidance is not practicable. The Contractor shall be responsible for using any legal and practical method to prevent the nesting of birds in order to prevent the need for any survey and prevent the need for additional surveys. It is understood and agreed that the Contractor has considered in the bid all of the pertinent requirements concerning migratory birds (including endangered species) and that no additional compensation, other than time extensions if warranted, will be allowed for any delays or inconvenience resulting in these requirements.

STORM WATER DISCHARGES (A-43-0408)

In compliance with the Federal Water Pollution Control Act, authorization to discharge storm water on this project has been granted under National Pollutant Discharge Elimination System (NPDES) General NPDES Permit Number NER110000 for Storm Water Discharges from Construction Sites to Waters of the State of Nebraska. This permit became effective on January 1, 2008.

Contractors are advised that, under the Construction Storm Water General Permit, ***plant sites, camp sites, storage sites, and borrow or waste sites not shown on the plans may be subject to separate NPDES permit authorization requirements for stormwater discharges from those locations.*** Contractors shall be responsible for verifying the need for NPDES permit coverage with the Nebraska Department of Environmental Quality (NDEQ).

When required for these locations, the filing of a "Notice of Intent" shall be made by the Contractor directly to the NDEQ.

Additionally, asphalt (SIC Code 2951) or concrete (SIC Code 3273) batch plants that are owned by a private contractor and are operated on a contract-for-service basis to perform work for the Contractor completing the project may be subject to NPDES General Permit Number NER000000 for Industrial Storm Water Discharges. While the plant may be required for completion of the project, it is not under the control of the Department (or other project owner); and the filing of a "Notice of Intent" shall be made by the Contractor directly to the NDEQ.

The NDEQ may be contacted at 402-471-4220 for additional information.

REQUIRED SUBCONTRACTOR/SUPPLIER QUOTATIONS LIST (A-43-0307)

All bidders must provide to the NDOR the identity of all firms who provided quotations on all projects, including both DBEs and non-DBEs. This information must be on a form provided by the NDOR Contracts Office.

If no quotations were received, the bidder must indicate this in the space provided.

Each bidder will be required to submit one list per letting to cover all projects bid.

PROPOSAL GUARANTY BID BOND (A-43-0307)

Paragraphs 1.a. and 1.b. of Subsection 102.15 in the Standard Specifications are void and superseded by the following:

- a. **OPTION 1 - (Project Specific Paper Bid Bond).** The bid bond shall be executed on an original Department bid bond form, which may be obtained from the Department. The original bid bond shall be delivered to the Department with the bid. A reproduction or a copy of the original form will not be accepted and will cause the bid not to be opened and read.
- b. **OPTION 2 - (Annual Bid Bond).** The Department at its discretion may allow a bidder to place an "Annual Bid Bond" on file with the Department. This bond would cover all projects the bidder bids for a 12-month period shown in the bond. The bidder must indicate in the bid submittal to the Department that their "annual bid bond" applies to the submitted bid. The original annual bid bond shall be executed on the Department of Roads Bid Bond Form, which may be obtained from the Department. A reproduction or a copy of the original form will not be accepted.

**WORKER VISIBILITY
(A-43-0507)**

Pursuant to Part 634, Title 23, Code of Federal Regulations, the following modified rule is being implemented:

Effective on January 1, 2008, all workers within the right-of-way who are exposed either to traffic (vehicles using the highway for purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel.

High-visibility safety apparel is defined to mean personal protective safety clothing that:

- 1 - is intended to provide conspicuity during both daytime and nighttime usage, and
- 2 - meets the Performance Class 2 or Class 3 requirements of the ANSI/ISEA 107-2004 publication entitled "American National Standards for High-Visibility Safety Apparel and Headwear."

**VALUE ENGINEERING PROPOSALS (VEP)
(A-43-0807)**

Subsection 104.03 in the Standard Specifications is amended to include the following:

14. A VEP will not be accepted if the proposal is prepared by an Engineer or the Engineering Firm who designed the contract plans.

CONSTRUCTION DETAILS

**EROSION CONTROL PLAN
(B-3-0307)**

Paragraph 8. of Subsection 204.01 in the Standard Specifications is void and superseded by the following:

The Contractor must submit an Erosion Control Plan prior to the start of any work. The Contractor shall not begin work until the Erosion Control Plan has been approved by the Engineer and appropriate erosion control measures are in place. Payment for work done shall be withheld until in the opinion of the Engineer adequate erosion control measures are in place.

Neither the approval of the Erosion Control Plan, nor the approval to increase the maximum surface area, nor any payment for, or acceptance of any or all of the work shall operate as a waiver of the Contractor's responsibility as prescribed in Section 204.

Subsections 204.04 and 204.05 are void and superseded by the following:

The temporary erosion control items will be measured for payment in accordance with the requirements stated in Section 814.

**TYPE B HIGH INTENSITY WARNING LIGHTS
(D-6-0307)**

All references in the plans to Type B High Intensity Warning Lights shall be considered void. The plans will not be revised to reflect this change.

**TEMPORARY TRAFFIC CONTROL DEVICES
(Type II Barricades, Reflectorized Drums, 42" (1070 mm) Reflective Cones, and
Vertical Panels)
(D-6-0307)**

Paragraph 2.b. of Subsection 422.04 of the Standard Specifications is void and superseded by the following:

- b.(i) Type II Barricades, Reflectorized Drums, and 42" (1070 mm) Reflective Cones shall be counted as "Barricades, Type II" and measured for payment by the number of calendar days each is in place and positioned as shown in the plans or as directed by the Engineer.
- (ii) Vertical Panels shall be measured for payment as permanent "Sign Days" (by the each) by the number of calendar days each vertical panel unit is in place and positioned as shown in the plans or as directed by the Engineer.

Paragraph 2.c. of Subsection 422.04 of the Standard Specifications is amended to include Reflectorized Drums.

Paragraphs 3. and 4. of Subsection 422.05 of the Standard Specifications are void and superseded by the following:

- 3. a. The pay item "Barricade, Type II" is used to pay for three items ("Barricades, Type II", "42" (1070 mm) Reflectorized Cones", and "Reflectorized Drums").
- b. "Barricades, Type II", which includes "42" (1070 mm) Reflectorized Cones", and "Reflectorized Drums", is paid for as an "established" contract unit price item. The established unit price is identified on the "Schedule of Items" shown in the Proposal.
- 4. Payment for vertical panels includes all posts, brackets, or hardware necessary to install and maintain the vertical panel units.

**WORK ZONE TRAFFIC CONTROL SIGNS
(D-6-0507)**

The Department has adopted the FHWA 2003 Manual of Uniform Traffic Control (MUTCD) and the 2005 Nebraska Supplement to the MUTCD as the official guidance for work zone traffic control signs. Many work zone traffic control signs have been revised, redesigned, or replaced in the 2003 MUTCD (and 2005 Nebraska Supplement). Accordingly, all work zone signs shall comply with the following:

- 1 - All signs, regardless of age, shall meet the design standards of the 2003 MUTCD (and 2005 Nebraska Supplement) by January 1, 2010.

- 2 - Current inventories of existing signs manufactured to meet the design standards of previous editions of the MUTCD may be utilized until January 1, 2010 or until the end of their useful life, whichever occurs first.

The Department encourages the use of signs meeting the design standards of the 2003 MUTCD (and 2005 Nebraska Supplement) prior to the implementation date of January 1, 2010.

TEMPORARY PAVEMENT MARKING (D-10-0307)

Paragraph 6. of Subsection 422.03 in the Standard Specifications and Supplemental Specifications is amended to include the following:

This work shall consist of installing and removing reflectorized temporary pavement lines of the color, width, and line configuration shown in the plans or as designated by the Engineer.

Temporary paint markings will be used on this project. The use of Type I tape will not be permitted and Type II tape may be used for short durations only, as directed by the Engineer. Temporary paint stripes shall be a minimum 4" (100 mm) wide, 10' (3 m) long with a 30-foot (9 m) gap or a minimum 4" (100 mm) wide solid line as shown on the plans.

Temporary pavement marking which is no longer applicable shall be removed as directed by the Engineer.

Section 1069 in the Standard Specifications is amended to include the following:

1. Prior to the initial placement of the markings, temporary paint, or Type II tape the pavement upon which the markings are to be placed shall be dry, cleaned and properly prepared by sand or shot blasting, as a minimum, and to the extent recommended by the manufacturer so that all contaminants, loose debris, and other foreign material are completely removed. Surface preparation for any subsequent application shall consist of air blasting and brushing the roadway surface to remove all loose dirt, mud or other debris and to dry the surface. Each additional application of paint shall be applied over the previously painted stripes.

Prior to placing the temporary pavement markings on the prepared surface, the Contractor shall layout, spot or string line the proposed temporary marking location. The temporary markings shall be aligned in such a way as to provide a smooth and gradual transition to and from the existing markings, and throughout both straight and horizontally curved sections of the project.

2. The material used for temporary paint marking shall be a commercially available alkyd resin Type II traffic paint that dries to no pickup in 4 minutes and shall be applied with a minimum of 6 pounds (0.7 kg) of glass beads per gallon (liter). The paint shall be applied at a minimum width of 4 inches (100 mm) and a wet thickness of approximately 15 mils (380 μ m) {approximately 16.5 gallons (39 liters) of paint per mile (kilometer) of solid line}. The equipment used to paint the line shall be a machine designed for the purpose of applying long line traffic lane markings of the type, width and thickness required, and shall be self-propelled or truck mounted and be equipped with an adjustable guide-on to assure proper placement of the line. Hand application, walk behind equipment or towing of the equipment will not be allowed.

Temporary paint lines shall be used on new or existing concrete pavement and asphaltic concrete pavement.

Any temporary painted line or segment of line, placed before December 1, which fails to adhere to the roadway surface for a minimum of 60 days under normal vehicular traffic or which appears wavy, nonuniform, thin, poorly applied, misaligned, beadless or nonreflective, shall be replaced as directed by the Engineer. For temporary painted pavement markings placed between December 1 and March 15, the minimum time requirement shall be 15 days with the same conditions applicable. No direct payment will be made for replacement within the 60 day or 15 day warranty periods.

After the minimum 60 day or 15 day warranty periods, the Contractor may be required to repaint the temporary traffic markings, as directed by the Engineer. Direct payment will be made for each additional application. However, should the additional application fail within the 60 day or 15 day warranty periods, the provisions as stated in the previous paragraph shall apply.

The Contractor must begin each additional repainting application within 72 hours after notification by the Engineer. Should the Contractor fail to begin repainting within this 72 hour period, the Engineer may use State forces or hire a private contractor to repaint the temporary traffic markings. The Contractor will be assessed any costs above the contract unit price "Temporary Pavement Marking, Type Paint" incurred by the State as a result of performing the corrective action by others, and the project will be shut down until the painting is completed.

When painting is required with air temperatures between 38° F (3° C) and 50° F (10° C), the paint shall be heated according to the manufacturer's recommendation prior to application on the dry, clean and properly prepared pavement. Any paint application made when the air temperature is below 38° F (3° C) will be paid for by the State, even if the application falls within either the 60 day or 15 day warranty periods previously described.

3. Temporary pavement marking tape Type II shall be a mixture of high quality polymeric materials and pigments, with glass beads throughout the pigmented portion of the film, and a reflective layer of high index of refraction glass beads bonded to the top surface. The film shall be precoated with a pressure-sensitive adhesive. Unless otherwise specified, the temporary pavement marking shall be 4 inches (100 mm) wide and the reflectorizing glass beads shall be incorporated to facilitate removal of the tape easily from asphalt and Portland cement concrete surfaces intact or in large pieces, at temperatures above 40° F (4° C), either manually or with a recommended roll up device. Removal shall be accomplished without the use of heat, solvents, grinding, or sandblasting.
4. The use of paint, as provided above, shall be paid at the contract unit price per linear foot (meter) for the item "Temporary Pavement Marking, Type Paint".
5. Temporary pavement marking tape Type II shall be paid at the contract unit price per linear foot (meter) for the item "Temporary Pavement Marking, Type II".
6. The removal of temporary paint pavement marking, as directed by the Engineer, shall be paid at the contract unit price per linear foot (meter) for the item "Pavement Marking Removal".

7. Initial surface preparation requiring sand or shot blasting shall be paid at the contract unit price per linear foot (meter) for the item "Temporary Pavement Marking, Surface Preparation". Surface preparation for repainting, consisting of air blasting and brushing, shall be subsidiary to other items for which payment is made.

**TEMPORARY TRAFFIC CONTROL FOR PERMANENT PAVEMENT MARKING
(D-13-1007)**

Paragraph 4. of Subsection 423.04 in the Standard Specifications is void.

**PORTLAND CEMENT CONCRETE PAVEMENTS
GENERAL REQUIREMENTS
(F-20-0307)**

Paragraph 7.b. of Subsection 601.02 in the Standard Specifications is void and superseded by the following:

- b. The finishing machine shall travel at a controlled speed such that it produces a uniform, well consolidated pavement that does not contain large voids.

Paragraph 10.d. of Subsection 601.02 is void and superseded by the following:

- d. The Contractor shall always have a tachometer available to monitor vibrator frequency. The vibrator frequency shall be within the manufacturer's specifications not to exceed 9,000 vpm.

Paragraph 12. d. (2) of Subsection 601.02 is void.

Paragraph 12.d. (3) of Subsection 601.02 is void and superseded by the following:

- d. (3) The joint cut shall be made with a diamond-toothed blade.

Paragraph 12. of Subsection 601.02 is amended to include the following:

- (6) An early-cut system may be used by approval of the Engineer.

**CONCRETE PAVEMENT
(F-21-0307)**

Paragraph 2.a. of Subsection 603.03 in the Standard Specifications is amended to include the following:

- (6) The base material shall be moistened through a uniform, lightly applied spray pattern prior to concrete placement as directed by the Engineer.

Paragraph 2.d. & e. of Subsection 603.03 are void and superseded by the following:

- d. After being consolidated with internal mechanical vibration, the concrete shall be struck off to a uniform height approximately 0.5 inch (12 mm) above the finished surface and then finished to the final elevation by means of a vibrating mechanical or vibrating hand operated screed.
- e. Finished concrete shall be of uniform density with no segregation, honeycombing, or large voids.

Paragraph 3.f. of Subsection 603.03 is void and superseded by the following:

- f. (1) A wet burlap, carpet, or canvas drag will be drawn over the entire surface in a longitudinal direction for a final finish, dampening of this drag material will be accomplished through a uniform, lightly applied spray pattern.
- (2) The drag shall be suspended from a mandrel, or similar device, to insure a uniform texture.
- (3) The drag shall be lifted from the surface of the concrete pavement when the paving train is not in motion for 30 minutes or more and carefully reset before resuming the dragging operations.
- (4) Drags shall be rinsed or washed as necessary to obtain a uniform surface. Drags that cannot be cleaned shall be replaced.

Paragraph 4.e., f., g., and h. of Subsection 603.03 are void and superseded by the following:

- e. For areas with pavement widening, dowel baskets shall be placed in all transverse contraction joints which are 6 feet (1.8 mm) or wider.
- f. If normal vibration is found inadequate to thoroughly consolidate the plastic concrete within and around the dowel basket assemblies, adjustments to the material and/or operations shall be made.
- g. Precautions shall be taken to assure that the sawed contraction joint is located directly over the center of the dowel bars.
- h. Transverse cracks which form in the concrete pavement panels between load transfer joints shall be stitched as shown in the plans, described in the special provision or directed by the engineer. No payment will be made for this work.

Paragraph 6.b. (7) (i) of Subsection 603.03 is void and superseded by the following:

- (7) (i) The concrete shall be textured by dragging a wet burlap, carpet, or canvas belt over the full width of the surface in a longitudinal direction. Dampening of this drag material will be accomplished through a uniform, lightly applied spray pattern.

Paragraph 6.c. (4) (i) of Subsection 603.03 is void and superseded by the following:

- (4) (i) The concrete shall be textured by dragging a wet burlap, carpet, or canvas belt over the full width of the surface in a longitudinal direction. Dampening of this drag material will be accomplished through a uniform, lightly applied spray pattern.

Paragraph 7. a. (3) of Subsection 603.03 is void and superseded by the following:

- (3) (i) The curing compound shall be applied in 2 equal applications immediately following each other or other methods approved by the engineer.
- (ii) The total rate of applications shall be at a minimum of 1 Gal/100 SF (0.3 L/m²) of surface area for tined surfaces or 1 Gal/150 SF (0.2 L/m²) of surface area for all other finishes.

Paragraph 8. d. (3) of Subsection 603.03 is void.

Paragraph 8. d. (4), (5) and (6) of Subsection 603.03 are void and superseded by the following:

- (4) Before sealing, the joint wall (not the bottom of joint) surfaces shall be sandblasted or water-blasted to remove all dirt, curing compound residue, laitance, and any other foreign material. After sandblasting, the entire joint shall be cleaned with compressed air having a minimum pressure of 90 psi (620 kPa). The compressed air shall be free of oil, water, and other contaminants. The joints shall be dry at the time of sealing.
- (5) (i) Transverse contraction joints in Portland cement concrete pavements shall be sealed so that the joint is filled to approximately 1/8" to 3/8" (3 to 9 mm) below the top of the joint with an approved hot poured sealant.
 - (ii) All overflow material shall be removed from the surface of the pavement.
 - (iii) If adhesion is not satisfactory, the material shall be rejected.
- (6) The Contractor shall give the Engineer one copy of the hot pour manufacturer's sealing recommendations.

Paragraph 11. c., d. and e. of Subsection 603.03 are void and superseded by the following:

- c. The Contractor's forces may be allowed on the concrete pavement when the concrete has reached a minimum age of 14 days or when the concrete has reached a compressive strength of 3000 psi (24 MPa) when tested in accordance with ASTM C 39.
- d. With the approval of the Engineer, the Contractor may elect to increase the early strength of the concrete by adding cement and/or reducing the water/cement ratio, and then the pavement may be opened to traffic provided it has attained a compressive strength of 3500 psi (24 MPa). The concrete in the area where the early strength is required shall be paid for at the bid price.
- e. When required by the special provisions or when requested by the Contractor, the maturity method, as provided for in ASTM C 1074, may be used in lieu of the requirements of Subsection 603.03, Paragraph 10.c. and d. to determine the strength of concrete pavement for the purpose of early opening to traffic. Requests by the Contractor for use of the maturity method shall be on a project basis and shall be made in writing to the Materials and Research Engineer. The Contractor shall be responsible to coordinate with the Materials & Research Division to develop the maturity curve.

Paragraph 3. a. and b. of Subsection 603.05 is void and superseded by the following:

3. a. A pay factor will be applied to each unit based on the compressive strength of 1 core per unit tested in accordance with AASHTO T 24. Concrete cores must have a minimum age of 28 days before testing. The Contractor will have the option to obtain two additional cores for any unit core that fail to have the required minimum compressive strength provided that the cores are:
 - (1) Obtained and tested within seven (7) days of being notified of the strength deficiency, under the supervision of the engineer.
 - (2) Cut within 6 inches of the original unit core in the longitudinal direction.

The results of all three cores sampled at the location will be averaged for the final compressive strength calculation and pay factor.

- b. The paved area shall be divided into units. Each unit will be considered separately. Units are 750 linear feet (230 m) of pavement for each separately placed width, or width of each class of concrete whether or not placed separately starting at the beginning of the pavement.

Paragraph 4. c. (4) of Subsection 603.05 is void and superseded by the following:

- (4) If the average thickness of the cores is deficient by more than 0.25 inch (6 mm) but not more than 0.50 inch (12.5 mm) an adjusted unit price will be paid in accordance with Table 603.04. Cores deficient by more than 0.50 inch (12.5 mm) will be treated as prescribed in Paragraph 4.d. of this Subsection.

PRECOMPRESSED POLYURETHANE FOAM JOINT

Section 734 of the Standard Specifications is void and superseded by the following:

Section 734 – Precompressed Polyurethane Foam (PPF) Joint

734.01 – Description

1. This work shall consist of providing and installing a Precompressed Polyurethane Foam (PPF) Joint Sealant System in a preformed roadway gap(s) at the locations and limits shown in the plans.

734.02 – Material Requirements

1. The PPF Joint Sealant System shall be a precompressed self-expanding polyurethane foam with a factory applied silicone facing on the top of the foam. The foam sealant shall be precompressed prior to packaging. The recompressed dimension shall be within ¼ inch of the joint opening at time of installation.

2. Materials shall be resistant to ozone, ultra-violet rays, petroleum products, solvents, salts, industrial cleaners, corrosive vapors and acids.
3. The approved products of PPF Joint Sealant Systems are shown on the NDR Approved Products List.
4. Storage
 - a. Sealant material shall be delivered to the storage area and to the job site in the manufacturer's original, undamaged containers with wrapping intact.
 - b. Storage of sealant material shall be in a dry, enclosed area, off the ground, between 60° F and 75° F (16° C and 24° C) and out of direct sunlight.

734.03 – Construction Methods

1. The installation of the PPF Joint Sealant System and adhesives shall be completed according to the manufacturer's Specifications. Additional field applied silicone is required on both sides of the joint.
2. The PPF joint installation instructions / specifications shall be given to the Engineer 7 days prior to the installation.
3. The installation of the PPF Joint Sealant System shall be done in the presence of the Engineer.
4. The concrete joint shall be cleaned by sandblasting and shall be dry before the installation of the Precompressed Polyurethane Foam Joint Sealant System.
5. The installation of the Precompressed Polyurethane Foam Joint Sealant System shall be done at 60° F (16° C) or warmer.

734.04 – Method of Measurement

1. The expansion joint system shall be measured for payment by the linear foot (meter) of the joint properly installed and accepted by the Engineer.
2. Pay limits for the expansion joints shall be the horizontal distance from end to end along the centerline of the joint assembly at the locations shown in the plans and 1 foot (0.3 m) upward at the gutter line.

734.05 – Basis of Payment

1. Pay Item	Pay Unit
Precompressed Polyurethane Foam Joint (Type A)	Linear Foot (LF) [Meter (m)]
Precompressed Polyurethane Foam Joint (Type B)	Linear Foot (LF) [Meter (m)]

2. Any installation that fails to meet the Specifications or the manufacturer’s recommendations shall be removed and replaced with a properly installed joint at the Contractor’s expense.

3. Payment is full compensation for all work, materials, labor and incidentals prescribed in this section.

EROSION CONTROL

Subsection 807.02 in the Standard Specifications is amended to include the following:

Erosion Control	Minimum Purity (%)	Application rate in lb. of Pure Live Seed/1000 yd. ²
Perennial ryegrass – Linn	85	0.75
Thickspike wheatgrass – Critania	80	1
Slender wheatgrass	85	0.5
Western wheatgrass – Arriba, Flintlock Barton	85	1
Switchgrass – Nebraska 28, Blackwell, Trailblazer	90	0.4
Buffalograss – Bison, Sharps II, Cody, Texoka	80	0.5
Little bluestem – Camper, Cimarron, Pastura	60	0.5
Sand bluestem – Garden County, Goldstrike, Champ	60	1
Sand lovegrass – Nebraska-27	75	0.2
Purple prairie clover – Kaneb, inoculated	85	0.1
Oats/Wheat *	90	3

* Wheat in the Fall

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 engineer’s 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. ² (Min.)
Available Nitrogen (N ₂) -----	8 or 9 lb.
Available Phosphoric Acid (P ₂ O ₅) -----	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. ² (Min.)
Nitrogen (Total Available) -----	0 lb.

**PORTLAND CEMENT CONCRETE
(J-15-1207)**

Paragraph 1. of Subsection 1002.02 in the Standard Specifications is amended to include the following:

- b. Concrete mixes will be in accordance of Table 1002.02.

Paragraph 3. of Subsection 1002.02 is void and superseded by the following:

- 3. Type 1 PF cement shall be used for all classes of concrete except for pavement repair. Pavement repair shall include Type I/II Portland cement for Class PR1 concrete and Type III Portland cement shall be used in Class PR3 concrete. Type 1 PF cement shall meet all requirements of ASTM C 595.

Tables 1002.02, 1002.02M and 1002.03 in Subsection 1002.02 are void and superseded by the following:

**ENGLISH
TABLE 1002.02**

Concrete Mixes (Cubic Yard Batch)

Class of Concrete (1)	Base Cement Type*	Portland Cement (Min. lb/cy)	Pre-Blended Class Fly Ash* (Min. lb/cy)	GGBFS Slag (Min. lb/cy)	Class C Fly Ash (Min. lb/cy)	Silica Fume (Min. lb/cy)	Total Cementitious Materials (Min. lb/cy)	Total Agg. (Min. lb/cy)	Total Agg. (Max. lb/cy)	Coarse Agg. (%) (3)	Type of Coarse Agg.****	Air Content (% Min.-Max.) (2)	Water/Cement Ratio Max. (4)	28-Day Required Strength (Min. psi)
47B**	1PF	423	141	0	0	0	564	2850	3150	30±3	Limestone	7.5 -10.0	0.48	3500
47B***	1PF	423	141	0	0	0	564	2850	3150	30±3	Limestone	6.0 - 8.5	0.48	3500
47BD	1PF	494	164	0	0	0	658	2500	3000	30±3	Limestone	6.0 - 8.5	0.42	4000
PR1	I/II	752	0	0	0	0	752	2500	2950	30±3	Limestone	6.0 - 8.5	0.36	3500
PR3	III	799	0	0	0	0	799	2500	2950	30±3	Limestone	6.0 - 8.5	0.45	3500
SF	I/II	564	0	0	0	25	589	2850	3200	50±3	Limestone	6.0 - 8.5	0.36	3500
47BHE	1PF	564	188	0	0	0	752	2500	3000	30±3	Limestone	6.0 - 8.5	0.40	3500
BX	1PF	423	141	0	0	0	564	2850	3150	0	0 (5)	6.0 - 8.5	0.48	3500
47BFS** ₍₆₎	1PF	338	113	113	0	0	564	2850	3150	30±3	Limestone	7.5 -10.0	0.48	3500
47BFS*** ₍₆₎	1PF	338	113	113	0	0	564	2850	3150	30±3	Limestone	6.0 - 8.5	0.48	3500
47BDFS ₍₆₎	1PF	396	131	131	0	0	658	2850	3000	30±3	Limestone	6.0 - 8.5	0.42	3500

- (1) Each class shall identify the minimum strength requirement. (For example, 47B-3500, where the last four digits indicate the strength in pounds per square inch. In the chart, strength of 3500 psi is indicated for 47B-3500; however, other strengths may be authorized elsewhere in the contract. The classes shown in the chart are typical examples.)
All classes of concrete shall be air-entrained.
A slump test shall be performed to check for consistency and/or workability. Any increase in slump must be pre-approved by the Engineer.
A water reducer admixture shall be used at the manufacturer's recommendations.
- (2) As determined by ASTM C 138 or ASTM C 231.
FOR INFORMATION ONLY. The Contractor may develop a Quality Control Program to check the quantity of air content on any given project; such as checking the air content behind the paver.
- (3) Coarse aggregate shall be limestone unless otherwise specified.
- (4) The Contractor is responsible to adjust the water/cement ratio so that the concrete supplied achieves the required compressive strength without exceeding the maximum water/cement ratio. The minimum water/cement ratio for any slip form concrete pavement is 0.38.
- (5) Single aggregate (sand-gravel) used for these classes of concrete.
- (6) 47BFS is an acceptable substitute for 47B and 47BDFS is an acceptable substitute for 47BD.
- (*) Mixes with Type 1PF and Class F fly ash designation are pre-blended or interground with Class F fly ash by the cement mill producer at a rate of 25%±2%, no additional Class F fly ash is added at the batch plant.
- (**) For slip form applications.
- (***) For hand-pours and substructures applications.
- (****) Quartzite aggregate can be used in place of limestone providing the aggregate meets Paragraph 3.b. of Subsection 1033.02.

**METRIC
TABLE 1002.02**

Concrete Mixes (Cubic Meter Batch)														
Class of Concrete (1)	Base Cement Type*	Portland Cement (Min. kg/m ³)	Pre-Blended Class F Fly Ash* (Min. kg/m ³)	GGBFS Slag (Min. kg/m ³)	Class C Fly Ash (Min. kg/m ³)	Silica Fume (Min. kg/m ³)	Total Cementitious Materials (Min. kg/m ³)	Total Agg. (Min. kg/m ³)	Total Agg. (Max. kg/m ³)	Coarse Agg. (%) (3)	Type of Coarse Agg.****	Air Content (% Min.-Max.) (2)	Water/Cement Ratio Max. (4)	28-Day Required Strength (Min. Mpa)
47B**	1PF	251	84	0	0	0	335	1691	1869	30±3	Limestone	7.5 -10.0	0.48	25
47B***	1PF	251	84	0	0	0	335	1691	1869	30±3	Limestone	6.0 - 8.5	0.48	25
47BD	1PF	293	97	0	0	0	390	1483	1780	30±3	Limestone	6.0 - 8.5	0.42	30
PR1	I/II	446	0	0	0	0	446	1483	1750	30±3	Limestone	6.0 - 8.5	0.36	25
PR3	III	474	0	0	0	0	474	1483	1750	30±3	Limestone	6.0 - 8.5	0.45	25
SF	I/II	335	0	0	0	15	349	1483	1899	50±3	Limestone	6.0 - 8.5	0.36	25
47BHE	1PF	335	112	0	0	0	446	1483	1780	30±3	Limestone	6.0 - 8.5	0.40	25
BX	1PF	251	84	0	0	0	335	1691	1869	0	0 (5)	7.5 - 8.5	0.48	25
47BFS** ₍₆₎	1PF	201	67	67	0	0	335	1691	1869	30±3	Limestone	7.5 -10.0	0.48	25
47BFS*** ₍₆₎	1PF	201	67	67	0	0	335	1691	1869	30±3	Limestone	6.0 - 8.5	0.48	25
47BDFS ₍₆₎	1PF	234	78	78	0	0	390	1483	1780	30±3	Limestone	6.0 - 8.5	0.42	30

(1) Each class shall identify the minimum strength requirement. (For example, 47B-25, where the last two digits indicate the strength in MPa. In the chart, strength of 25 MPa is indicated for 47B-25; however, other strengths may be authorized elsewhere in the contract. The classes shown in the chart are typical examples.)

All classes of concrete shall be air-entrained.

A slump test shall be performed to check for consistency and/or workability. Any increase in slump must be pre-approved by the Engineer.

A water reducer admixture shall be used at the manufacturer's recommendations.

(2) As determined by ASTM C 138 or ASTM C 231.

FOR INFORMATION ONLY. The Contractor may develop a Quality Control Program to check the quantity of air content on any given project; such as checking the air content behind the paver.

(3) Coarse aggregate shall be limestone unless otherwise specified.

(4) The Contractor is responsible to adjust the water/cement ratio so that the concrete supplied achieves the required compressive strength without exceeding the maximum water/cement ratio. The minimum water/cement ratio for any slip form concrete pavement is 0.38.

(5) Single aggregate (sand-gravel) used for these classes of concrete.

(6) 47BFS is an acceptable substitute for 47B and 47BDFS is an acceptable substitute for 47BD.

(*) Mixes with Type 1PF and Class F fly ash designation are pre-blended or interground with Class F fly ash by the cement mill producer at a rate of 25%±2%, no additional Class F fly ash is added at the batch plant.

(**) For slip form applications.

(***) For hand-pours and substructures applications.

(****) Quartzite aggregate can be used in place of limestone providing the aggregate meets Paragraph 3.b. of Subsection 1033.02.

Table 1002.03	
Table of Acceptable Concrete Class	
Class	Acceptable Class for
BX	47B, 47BD, or 47B-HE
47B	47BD, or 47B-HE

Paragraph 5, 6, 7, 8, 9, and 10 of Subsection 1002.02 are void and superseded by the following:

5. Class PR1 and PR3 Concrete:
 - a. The calcium chloride for use in PR concrete shall be either:
 - (1) A commercially prepared solution with a concentration of approximately 32 percent by weight.
 - (2) A Contractor prepared solution made by dissolving 4.5 pounds (0.54 Kg) of Grade 2 or 6.2 pounds (0.74 Kg) of Grade 1 calcium chloride per gallon (liter) of water to provide a solution of approximately 32 percent by weight.
 - b. The 7.4 pounds (10.89 Kg) of water in each gallon (liter) of solution shall be considered part of the total water per batch of concrete.
 - c. The calcium chloride solution shall be added, just prior to placement, at a rate of 0.375 gallons/100 pounds of cement (1.4 lb. calcium chloride per 100 lb. cement) [3.13 L/100 Kg of cement (1.4 Kg calcium chloride per 100 Kg cement)].
 - d. Class A, Flaked or Pellet Calcium Chloride shall be added at a rate not to exceed 2.0 percent of the weight of the cement for Grade 1, or 1.6 percent of the weight of the cement for Grade 2.
 - e. For PR3 Concrete, an approved set retarding admixture may be used.
 - f. Where mixing trucks are used:
 - (1) For Class PR3 concrete, calcium chloride shall be thoroughly mixed into the concrete before placement. The minimum mixing time is 2 minutes.
 - (2) For Class PR1 concrete, calcium chloride shall be added first and then the concrete mixed at least 2 minutes or as required by manufacture. Next, the Type F high range water-reducer admixture is added and the concrete is mixed an additional 5 minutes.
 - g. Where continuous batching equipment is employed, such as a concrete mobile mixer, the calcium chloride solution and Type F high range water-reducer admixture shall be incorporated in the concrete through a flow meter.

6. Class High Early (HE) Concrete
 - a. High Early (HE) strength concrete shall be cured as prescribed in Subsection 603.03, Paragraph 7. The contractor shall take necessary curing measures so the required strength is achieved.
 - b. High early concrete shall achieve a compressive strength of 3,500 psi (25 MPa) at 48 hours after placement.
 - c. The 48-hour compressive strengths shall be used to determine pay factor deductions for high early concrete in accordance with Table 603.03.
7. The yield of the concrete proportions shall be determined and adjusted by the Producer or Engineer.

Paragraph 4. of Subsection 1002.03 is void and superseded by the following:

4. a. Mix times shall meet the requirements of ASTM C 94. Mixing time tests shall be repeated whenever the concrete appearance indicates that mixing was inadequate.
- b. Batch plants that are transporting the concrete in non-agitating trucks, the mixing time will not be less than 60 seconds, and for agitating trucks, the mixing time will not be less than 45 seconds.
- c. The Certification of stationary and portable ready mix plants will conform to the tests that are required in the NDR Materials Sampling Guide.

Paragraph 1. b. of Subsection 1002.04 is void.

Paragraph 6 of Subsection 1002.04 is void and superseded by the following:

6. Compressive strength tests shall be made in accordance with ASTM C39. Compressive strength cylinders shall be cured in accordance with ASTM C31 paragraph 10. The compressive strength requirements shall be as specified. In general, 7-day compressive strength should be 70 percent of the 28-day compressive strength.

**PORTLAND CEMENT
(J-15-0307)**

Section 1004 in the Standard Specifications is void and superseded by the following:

1004.01 – Description

1. Portland cement is the binder in concrete, locking the aggregate into a solid structure. It is manufactured from lime, silica, and alumina (with a small amount of plaster of gypsum).
2. Equivalent alkali referred to herein is hereby defined as the sum of the sodium oxide (Na₂O) and the potassium oxide (K₂O) calculated as sodium oxide (equivalent alkali as Na₂O = Na₂O + 0.658 K₂O).

1004.02 – Material Characteristics

1. Type I, Type II and Type III Portland cement shall conform to the requirements in ASTM C 150 with the following additional requirements:
 - a. Portland cement shall not contain more than 0.60 percent equivalent alkali.
 - b. Processing additions may be used in the manufacture of the cement, provided such materials have been shown to meet the requirements of ASTM C 465 and the total amount does not exceed 1 percent of the weight of Portland cement clinker.
2. Type 1PF shall be a Type IP made exclusively with Class “F” fly ash as the pozzolan. Type IP cement shall conform to the requirements as prescribed in ASTM C 595 and the following requirements:
 - a. The pozzolan content shall be 25±2 percent of the cementitious materials by weight.
 - b. The pozzolan shall be Class F fly ash.
 - c. Additional fly ash substitution shall not be allowed with Type IP cement containing Class F fly ash.
 - d. A water-reducing admixture shall be used in all classes of concrete.
 - e. Mortar bars made and tested according to the provisions of ASTM 1567 shall have an expansion of no more than 0.10 percent after 28 days. The mortar bars shall be composed of Type 1PF cement, limestone, and sand and gravel in the proportions used for 47B concrete. The limestone shall be from a Weeping Water, NE, source and the sand/gravel shall be from an eastern Platte River Valley source.

- f. 47B and 47BD concrete made with Type 1PF shall have a Durability Factor not less than 70 and a mass loss not greater than five percent after 300 freeze/thaw cycles when tested in accordance with ASTM C 666. The freeze/thaw testing shall be conducted according to Procedure A.

1004.03 – Procedures

1. The Contractor shall provide adequate protection for the cement against dampness. Cement shall be stored in railroad cars or in suitable moisture-proof buildings. The use of tarpaulins for the protection of the cement will not be allowed.
2. No cement which has become caked or lumpy shall be used.
3. Cement which has been spilled shall not be used.
4. Accepted cement which has been held in storage at the concrete mix plant more than 90 days shall be retested.

1004.04 – Acceptance Requirements

1.
 - a. Approved cements are on the NDR Approved Products List.
 - b. Cements will be placed on the NDR Approved Products List based on conformance with the NDR Acceptance Policy for Portland Cements. This information is available upon request from the NDR Concrete Materials Section.
2. Portland cement chemical and physical test requirements shall conform to NDR Acceptance Policy for Portland Cements contained in the NDR's Materials Sampling Guide.
3. Cement coming directly from the manufacturer shall not be used until the temperature is 150°F (66°C) or less.
4. Cement which is placed in storage or is received on the project at temperatures of over 200°F (93°C) shall not be used until acceptable test results are obtained. Samples shall be taken when the temperature of the cement has decreased to 180°F (82°C).
5.
 - a. Should any sample indicate noncompliance with the specifications, use of material from that source based on certification only may be withheld. It will be necessary that the cement be held in special silos or bins at the plant or some facility under control of the company furnishing the cement until such time that test results show compliance.
 - b. When it can be shown that continuing production from that plant has a high assurance of meeting specifications, material acceptance may once again be based on certification only.

6. a. If tests made on field samples taken by the Department fail to meet any of the specification requirements, all shipments from the supplier will be held until tests have been completed by the NDR Materials and Research Division and approval for use is issued.
- b. This procedure will be continued until it can reasonably be assured that the cement from the supplier will again continue to meet contract requirements.

WATER FOR CONCRETE (J-15-0307)

Section 1005 in the Standard Specifications is void and superseded by the following:

1005.01 – Description

Water shall be free from objectionable quantities of oil, acid, alkali, salt, organic matter, or other deleterious materials and shall not be used until the source of supply has been approved.

1005.02 – Material Characteristics

1. Water which contains more than 0.25 percent total solids by weight shall not be used.
2. When required by the Engineer, the quality of mixing water shall be determined by ASTM C 1603, ASTM C 114 and ASTM C 1602.
3. Upon written request by the concrete producer and approval by Materials and Research, the concrete producer may utilize up to 10% wash water for batching fresh concrete, only in mixes that contain 25% Class “F” fly ash, under the following conditions:
 - a. Wash water conforms to requirements in ASTM C 94.
 - b. Wash water must be clarified wash water that has been passed through a settling pond system.
 - c. Wash water must be scalped off of a settling basin that has been undisturbed for a minimum of 12 hours.
 - d. Wash water must be metered into each load.
 - e. Wash water quantities shall be shown on the batch ticket.

**CALCIUM CHLORIDE
(J-15-0307)**

Section 1006 of the Standard Specifications is void and superseded by the following:

1006.01 – Description

Calcium Chloride shall be Type S (Solid) or Type L (Liquid). Calcium Chloride can be used for, but not limited to, dust control and acceleration of the set of concrete.

1006.02 – Material Characteristics

The requirements for calcium chloride shall be as shown in ASTM D 98.

1006.03 – Acceptance Requirements

Acceptance shall be based on sampling and testing in accordance with AASHTO T 143 and requirements contained in the NDR Materials Sampling Guide.

**CHEMICAL ADMIXTURES
(J-15-0307)**

Subsections 1007.03 and 1007.04 in the Standard Specifications are void and superseded by the following:

1007.03 – Procedures

1. a. The process for adding admixtures to a ready mix truck on the project site involves positioning the load of concrete up to the truck chute, stopping short of discharge.
- b. The admixture is then poured over the surface of the concrete and mixed for at least 5 minutes or per manufacturer's recommendations.
- c. No more than 1.3 gallons (5L) of water shall be used to rinse the admixture from the fins and top chute. This water must be shown on the proportioning report and shall not exceed the water cement ratio.
- d. The Contractor is responsible for the addition of the admixture.

2. a. If the air content is less than the minimum specified, addition of air-entraining admixtures is allowed.
- b. The Contractor shall take measures based on manufacturer's recommendations that are within compliance of NDR Specifications to bring the load of concrete into NDR prescribed limits according to Table 1002.02.
- c. If the air content is then outside the limits in Table 1002.02, the load of concrete shall be rejected.

1007.04 – Acceptance Requirements

1. Admixture approval shall be based upon annual certifications and certified test results submitted to the NDR Materials and Research Division.
2. Approved chemical admixtures are shown on the NDR Approved Products List.
3. The admixture must be essentially identical in concentration, composition, and performance to the admixture tested for certification.
4. Admixtures not identified on the NDR Approved Products List may be used under the following conditions:
 - a. A certificate of compliance and certified test results must be submitted to the NDR Materials and Research Division, and'
 - b. Approval for use must be given by the NDR Materials and Research Division.

FLY ASH (J-15-0307)

Subsection 1008.02 in the Standard Specifications is void and superseded by the following:

1008.02 – Material Characteristics

1. All fly ash will be acceptance tested by the NDR Materials and Research Division. This includes production plant samples and field samples.
2. Fly ash shall conform to the requirements of Class C or Class F pozzolan as defined in ASTM C 618 except that the maximum loss on ignition for Class F pozzolan shall be 3.0 percent. Either class of fly ash shall not contain more than 1.5 percent of available alkalis as Na₂O.
3. Fly ash produced in furnace operations utilizing liming materials or soda ash (sodium carbonate) as an additive will not be acceptable.

**SILICA FUME
(J-15-0307)**

Paragraph 2 of Subsection 1009.03 in the Standard Specifications is void and superseded by the following:

2. Silica fume shall be protected from temperatures in excess of 90°F (32°C).

**LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE
(J-15-0307)**

Subsection 1012.03 in the Standard Specifications is void and superseded by the following:

1012.03 – Acceptance Requirements

1. All curing compounds to be approved must be from the current calendar year with no carry-over from the previous years.
2. Approved compounds are on the NDR Approved Products List.
3. Products not on the NDR Approved Products List shall be sampled and tested in accordance with requirements of the NDR Materials Sampling Guide.

**BITUMINOUS LIQUID COMPOUNDS FOR CURING CONCRETE
(J-15-1007)**

Section 1013 in the Standard Specifications is void and superseded by the following:

1013.01 – Description

The compound shall consist essentially of an asphaltic base and shall be of a consistency suitable for spraying at temperatures existing at the time of construction operations. It shall form a continuous, uniform film. It shall be free of precipitated matter caused by conditions of storage or temperature. The compounds shall be relatively nontoxic.

1013.02 – Material Characteristics

- a. When tested in accordance with AASHTO T 155, the loss of water shall not be more than 0.11 lb/ft² (0.55 kg/m²) of surface area at 3 days, unless otherwise specified by the Engineer.
- b. The Contractor has the option of using bituminous tack coat. The tack coat shall conform to all requirements of Section 504.

1013.03 – Acceptance Requirements

Products shall be sampled and tested in accordance with requirements of the NDR Materials Sampling Guide.

**JOINT SEALING FILLER
(J-15-0307)**

Paragraph 1 a. i. of Subsection 1014.02 in the Standard Specifications is void and superseded by the following:

- i. Material having a bond specification will be tested on concrete blocks that will be constructed by the Department's Concrete Laboratory. The concrete blocks will be constructed using 47B-3500 (47B-25) concrete meeting the requirements of Section 1002 in the Standard Specifications.

**EPOXY COMPOUNDS AND ADHESIVES
(J-15-0308)**

Section 1018 in the Standard Specifications is void and superseded by the following:

1018.01 – Description

This specification provides requirements for two-component, epoxy-resin bonding systems for use in non-load bearing applications and resin adhesives for application to Portland cement concrete.

1018.02 – Material Characteristics

1. Epoxy-resin bonding systems shall conform to the requirements of ASTM C 881. Approved systems are shown on the NDR Approved Products List.
2. The classification of Epoxy-Resin Bonding Systems is as follows:
 - a. Type I For use in non-load bearing applications for bonding hardened concrete and other material to hardened concrete.
 - Type II For use in non-load bearing applications for bonding freshly mixed concrete to hardened concrete.
 - Type III For use in bonding skid resistant materials to hardened concrete, and as a binder in epoxy mortars or epoxy concretes.
 - b. Grade 1 Low viscosity.
 - Grade 2 Medium viscosity.
 - Grade 3 Non-sagging consistency.
 - c. Class A For use below 40°F (4°C); the lowest allowable temperature to be defined by the manufacturer of the product.
 - Class B For use between 40°F and 60°F (4°C and 15°C).
 - Class C For use above 60°F (15°C); the highest allowable temperature to be defined by the manufacturer of the product.
 - Class D For use between 40°F and 65°F (4°C and 18°C).
 - Class E For use between 60°F and 80°F (15°C and 26°C)

Class F For use between 75°F and 90°F (24°C and 32°C)

3. Resin adhesives for embedding dowel bars, threaded rods, rebars and other fixtures in hardened concrete are shown on the NDR Approved Products List.

1018.03 – Procedures

1. The compounds shall be of the type and grade specified in the plans or as directed by the Engineer.
2. The class of the compounds shall be selected for use according to climatic conditions at the time of application.
3. All bonding surfaces shall be clean and free of all oil, dirt, grease, or any other materials which would prevent bonding.
4. Mixing and application shall be in strict accordance with the manufacturer's instructions.

1018.04 – Acceptance Requirements

1. Epoxy-resin bonding systems and resin adhesives approved for use are shown on the NDR Approved Products List.
2. Epoxy-resin bonding systems that are not on the NDR Approved Products list may be accepted based on a manufacturer's certificate of compliance.

DEFORMED METAL CENTER JOINT AND METAL KEYWAY (J-15-0307)

Paragraph 1 a. of Subsection 1027.01 in the Standard Specifications is void and superseded by the following:

a. Metal Center Joint:

Metal center joint sections shall be manufactured from sheets no less than 18 gauge [0.05 inch (1.3 mm)] thick and shall be of the size and trapezoidal shape shown in the plans. The sections shall be punched along the centerline of the narrow face of the trapezoid to admit the tie bars required by the plans and also at intervals of not greater than 2 feet (600 mm) to receive pins that are driven vertically into the subgrade to support the metal center joint.

**AGGREGATES
(J-15-0307)**

Table 1033.02B of Subsection 1033.02 in the Standard Specifications is void and superseded by the following:

Table 1033.02B	
Aggregate Classes and Uses	
Aggregate Class	Concrete Description
A	Overlay Concrete SF
B	47B, 47B-HE, 47BD, PR 1, and PR 3
C	BX

Table 1033.03B of Subsection 1033.03 in the Standard Specifications is void and superseded by the following:

Table 1033.03B	
Aggregate Classes and Uses	
Aggregate Class	Concrete Description
E	47B, and 47B-HE 47BD, PR 1, and PR 3
F	Overlay Concrete SF

Paragraph 8. b. (10) of Subsection 1033.02 is void and superseded by the following:

- (1) The plasticity index (using dry preparation AASHTO T 87) of the crushed rock screenings passing the No. 40 (425 µm) sieve shall not exceed 4.

**GROUND GRANULATED BLAST FURNACE SLAG (GGBFS)
(J-15-0607)**

Description

Ground Granulated Blast Furnace Slag (GGBFS) shall meet the requirements of ASTM C 989, Grade 120.

Material Characteristics

1. All GGBFS will be acceptance tested by the NDR Materials and Research Division. This includes production plant samples and field samples.

Procedures

1. GGBFS shall be protected, stored, handled, and sampled in the same manner as specified for Portland cement in Sections 1002 and 1004 and the NDR *Materials Sampling Guide*.
2. Each shipment of GGBFS sent to the project or ready mix plant shall be accompanied with a certificate of compliance from the supplier or manufacturing plant. The certificate must include the following information:

- a. Name of the supplier or manufacturer.
 - b. Source of the GGBFS.
 - c. Consignee and destination of the shipment.
 - d. Project number to be used on, if available, and date shipped.
 - e. Railroad car number or truck identification number.
 - f. Weight of the shipment.
 - g. Certified test number representing the material being shipped.
 - h. An unrepeatable order number or other identification number so that each shipment is separately identified.
 - i. The NDR specifications that the product is in compliance with.
3. The following signed certification statement, or similar wording, must also be included on the form:

"This is to certify that this shipment of GGBFS meets the Specification Requirements of the Nebraska Department of Roads for GGBFS, Grade 120."

Signed _____

For _____
(Supplier)

4. Two copies of the certificate of compliance shall be sent with the shipment for the Engineer. The Engineer will retain one copy for his/her file and send the other copy to the NDR Materials and Research Division to serve as notification of receipt and identification of the GGBFS.
5. GGBFS may be used as soon as it is received; provided it is accompanied by the proper certificate of compliance and the results of previous tests indicate a satisfactory product.

Acceptance Requirements

1. a. Approved GGBFS will be on the NDR Approved Products List.
- b. GGBFS may be added to the NDR Approved Products List if it is in conformance with the NDR Acceptance Policy for GGBFS. This information is available upon request from the Department's Concrete Materials Section.
2. a. Should any sample indicate noncompliance with the specifications, use of material from that source based on certification only may be withheld. It will be necessary that the GGBFS be held in special silos or bins at the plant or some facility under control of the company furnishing the GGBFS until such time that test results show compliance.
- b. When it can be shown that continuing production from that plant has a high assurance of meeting specifications, material acceptance may once again be based on certification only.

3. a. If tests made on field samples taken by the Department fail to meet any of the specification requirements, all shipments from the supplier will be held until tests have been completed by the NDR Materials and Research Division and approval for use is issued.
- b. This procedure will be continued until it can reasonably be assured that the GGBFS from the supplier will again continue to meet contract requirements.

**DOWEL BARS
(J-15-1207)**

Paragraph 1.c. of Subsection 1022.01 in the Standard Specifications is void and superseded by the following:

- 1.c. Both Type A and Type B coated dowel bars shall be coated with a bond breaker shown on the NOR Approved Products List, dipped in asphalt or paraffin, or greased in accordance with the specified requirements as shown in the Standard Plans.

**PROPOSAL GUARANTY
(A-40-0307)**

As an evidence of good faith in submitting a bid for this work, the bidder shall indicate the type of bid bond applied to this project in accordance with the Proposal Guaranty Bid Bond Section of these Special Provisions.

* * * * *

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SCHEDULE OF ITEMS

CONTRACT ID: 5318X

PROJECT(S): STR-L17F(1008)

CALL ORDER NO. : 500

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 GROUP 6 BRIDGE AT STA. 89+85.00 1-40.5' & 2-40.0' SPANS PRESTRESSED TWIN TEE GIRDER						
0001	0001.08 BARRICADE, TYPE II	950.000 B DAY	0.50000		475.00	
0002	0001.10 BARRICADE, TYPE III	76.000 B DAY	.		.	
0003	0001.90 SIGN DAY	836.000 EACH	.		.	
0004	0002.30 PAVEMENT MARKING REMOVAL	7000.000 LF	.		.	
0005	0002.44 TEMPORARY PAVEMENT MARKING, TYPE PAINT	4250.000 LF	.		.	
0006	0002.47 TEMPORARY PAVEMENT MARKING SURFACE PREPARATION	2125.000 LF	.		.	
0007	0002.76 PERMANENT PAVEMENT MARKING PAINT	1850.000 LF	.		.	
0008	0010.04 FIELD OFFICE	1.000 EACH	.		.	
0009	0030.60 MOBILIZATION	LUMP	LUMP		.	
0010	1009.00 GENERAL CLEARING AND GRUBBING	LUMP	LUMP		.	

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SCHEDULE OF ITEMS

CONTRACT ID: 5318X

PROJECT(S): STR-L17F(1008)

CALL ORDER NO. : 500

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0011	1101.00 REMOVE PAVEMENT	72.000 SY	.		.	
0012	3008.05 TIE BARS	164.000 EACH	.		.	
0013	3075.12 6" CONCRETE PAVEMENT, CLASS 47B-3500	488.000 SY	.		.	
0014	6005.37 PRECOMPRESSED POLYURETHANE FOAM JOINT, TYPE B	80.000 LF	.		.	
0015	6007.01 CLASS I REPAIR	754.000 SY	.		.	
0016	6007.02 CLASS II REPAIR	184.000 SY	.		.	
0017	6007.03 CLASS III REPAIR	10.000 SY	.		.	
0018	6008.40 PLACING, FINISHING, AND CURING CONCRETE OVERLAY-SF	754.000 SY	.		.	
0019	6016.02 CONCRETE FOR OVERLAYS-SF	56.900 CY	.		.	
0020	6030.00 PREPARATION OF BRIDGE AT STA. 89+85	1.000 EACH	.		.	
0021	9110.01 RENTAL OF LOADER, FULLY OPERATED	5.000 HOUR	.		.	

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SCHEDULE OF ITEMS

CONTRACT ID: 5318X

PROJECT(S): STR-L17F(1008)

CALL ORDER NO. : 500

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0022	9110.03 RENTAL OF DUMP TRUCK, FULLY OPERATED	5.000 HOUR	.		.	
0023	9110.07 RENTAL OF SKID LOADER, FULLY OPERATED	5.000 HOUR	.		.	
0024	9110.27 RENTAL OF CRAWLER MOUNTED HYDRAULIC EXCAVATOR, FULLY OPERATED	5.000 HOUR	.		.	
0025	9111.00 WATER	3.000 MGAL	.		.	
0026	9170.00 EARTH SHOULDER CONSTRUCTION	6.010 STA	.		.	
0027	9173.20 SUBGRADE PREPARATION	488.000 SY	.		.	
0028	L020.00 EROSION CONTROL	835.000 SY	.		.	
0029	L022.90 TEMPORARY SILT FENCE	200.000 LF	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	