

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

NEBRASKA DEPARTMENT OF ROADS
LETTING DATE: May 22, 2008

CALL ORDER: 400 CONTRACT ID: 4470

CONTROL NO./SEQ. NO.: 42470 /000 PROJECT NO.: ELEC-6-5(1010)

TENTATIVE START DATE: 10/20/08 CONTRACT TIME: 20 WORKING DAYS

LOCATION: US-6, IN SUTTON
IN COUNTY: CLAY

BIDDER

GROUP 8B ELECTRICAL

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.

April 4, 1995

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.

April 4, 1995

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.

April 4, 1995

**SPECIAL PROVISIONS
FOR
STATE
PROJECT NO. ELEC-6-5(1010)**

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 May 22, 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

The following information is current as of January 30, 2008.

Utility facilities, aerial and/or underground may exist within this project. The contractor should request a utility status update at the project preconstruction conference, and/or prior to starting work.

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.

The following utilities have facilities within the project area, and have been provided project plans.

City of Sutton: Has an 8" water main located near pole 5, and another water main located near pole 2. The water main near pole 5 is a possible conflict with the pole. The main near pole 2 should be clear of poles based on the preliminary plan. After pole locations are marked in the field, contact the City Administrator, Virg Ulmer, at (402) 773-4225, cell: (402) 469-3163, to determine conflicts.

Windstream: Has a buried copper communication line running westerly along the south side of Loraine Street from the intersection with US-6; and has a buried copper communication line running along the west side of US-6 from the intersection with Loraine Street southerly approximately 200 feet. Windstream does not anticipate conflict with the proposed project. For on-site meetings or questions, please contact Mr. Bob Rystrom at (402) 436-5756.

SourceGas Distribution LLC: Does not anticipate conflict with the project. For on-site meetings or questions, please contact Mr. Gary Harms at (308) 345-4761 x26.

Galaxy Cablevision: Has no fiber optic lines within the project area. Has aerial crossings at Laurel Street. Galaxy does not anticipate any conflicts with the proposed project. For on-site meetings or questions, please contact Mr. Vance Wewel at (402) 366-6919.

Level 3 Communications LLC: Does not anticipate conflict with the project. For on-site meetings or questions, please contact Mr. Keith Osborn at (720) 888-2774.

Kinder Morgan: Does not have facilities within the project area, and does not anticipate conflict with the project. For on-site meetings or questions, please contact Mr. Tom Bennett at (402) 469-5326.

MCI: Has buried cable along the south side of US-6 from the western City Limits to AA Street. MCI's facilities do not conflict with proposed project facilities. For on-site meetings or questions, please contact Mr. Kevin Keith at (402) 321-3892.

South Central Public Power District: Does not anticipate conflict with the project. For on-site meetings or questions, please contact Mr. Craig Cox at (402) 225-2351.

All utility rehabilitation will be accomplished prior to or concurrent with construction.

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

ROADWAY LIGHTING

Paragraph 2. of Subsection 415.02 in the Standard Specifications is void and superseded by the following:

2. Lamps provided shall be as shown in the plans.

Paragraph 7 of Subsection 1073.02 in the Standard Specifications is amended to include the following:

1. Conventional Roadway Luminaires

A. Housing

Luminaire housing shall be "rectilinear" style, of pressure die-cast or formed and welded aluminum, Large Housing Series. The casting shall be sound, complete, with smooth edges and free of flash. The lower portion of the housing shall be hinged for easy access.

The optical compartment shall be effectively sealed and filtered using a dacron polyester filter. The seal/filter combination shall be provided between the reflector and lens and between the socket assembly and reflector. The seal/filter combination shall be under compression when the assembly is in operating position. Seal/filter combination shall be of heat resisting material selected to last the functional life of the unit, but shall be easily replaceable should they become damaged. The optical compartment door shall be secured in position with a positive latch mechanism. The hinge arrangement shall be designed to prevent accidental disengagement when it is in the open position.

Finish shall be a gray Polyester Powder Coat or an electrodeposited epoxidized acrylic paint coat capable of successfully withstanding 1,000 hours of salt spray test per ASTM B 117.

Attachment hardware used to secure components to the aluminum housing shall be organically coated. Stainless steel or galvanized hardware is not allowed.

Housing must be legibly and durably marked with the lamp size, using ANSI NEMA lamp identification label.

B. Slipfitter

The slipfitter shall accept 1 1/4 inch to 2 inch (32 mm to 50 mm) pipe.

C. Reflector

The reflector shall be hydroformed aluminum with an approved aluminum oxide or silica coating bonded to the inside and outside surfaces.

D. Socket

The socket shall be a mogul base porcelain.

E. Lens

The lens shall be made of clear tempered flat glass, heat resistant and free from imperfections.

F. Terminal Block

A terminal block will be required.

G. Ballast

The ballast shall be of the magnetic regulator type the high pressure sodium lamp size as indicated in the plans.

Ballast shall be dual volt 120/240 or multi tap, ballast to be factory wired to 240 volt.

The ballast and starting aid shall not incur significant life reduction should the lamp continue in open or shorted circuit condition for a six-month period.

Regulation and Operation:

At nominal line voltage and nominal lamp voltage, the ballast design center will not vary more than 5% from rated lamp wattage. Lamp wattage variation shall not exceed 10% for a $\pm 10\%$ line voltage variation.

The ballast/lamp combination must provide reliable starting to -40 degrees F (-40 degrees C).

Ballast starting current must not exceed normal operating current.

Power factor must be rated above 90% through all operational modes.

H. Photometric and Performance Requirement

The luminaire shall have "cutoff" control characteristics as follows: Candela per 1000 lumens shall not exceed 100 (10%) at a vertical angle of 80 degrees above nadir, and 25 (2.5%) at an angle of 90 degrees above nadir horizontal.

The luminaries, with lamp size and lumens as specified in the plans and installed in accordance with the following parameters, shall provide an average maintained horizontal illumination level of 1.0 FC with an average to minimum uniformity ratio not exceeding 3.5:1. The maximum to minimum uniformity ratio shall not exceed 7.0:1. Any adjustments to the luminaire's optical system needed to provide a light distribution meeting the preceding requirements shall be made at the factory prior to shipment.

Parameters used; roadway width 20', pole spacing 180', mounting height 40', pole setback 15', mastarm length 1', maintenance factor .81, pole layout staggered.

I. Substitutions and Variations

No substitutions or variations of the above will be allowed.

J. Approval Requirements

In addition to the requirements for approval of the roadway lighting luminaires outlined in Subsection 1073.02, the contractor may be asked to supply IES formatted photometrics on a 1.44 MB computer disk for each type of luminaire he/she proposes to furnish for the project. The disk must be IBM compatible.

The contractor shall be prepared, upon request, to furnish a working sample of any luminaire proposed for this project (sample will be returned to the contractor or counted as part of the contract quantity).

The right is reserved to reject any and all proposals. The State of Nebraska will decide all questions which may arise as to the quality or acceptability of the luminaire submitted for approval under this specification.

Manufacturers allowed to submit luminaires for approval are as follows:

Crouse Hinds
General Electric
Hubbell
American Electric

**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.

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 unrepeated 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.

FINISH FOR STEEL LIGHT POLES

Subsection 1073.02 of the standard specifications is amended to include the following:

The finish for steel light poles shall be as follows:

1- Surface preparation:

Blast clean the pole surface to the Steel Structures Painting Council surface preparation specification No.6 (SSPC-SP6) using SAE recommended practice J828 and shot number S280. All cleaned surfaces prepared for painting shall be protected from moisture and other foreign materials prior to the prime coat being applied.

2- Interior Coating:

Apply a minimum dry film thickness (DFT) of 2.0 mils prime coat to the inside surface of the pole up to a minimum of two feet from the pole base. The prime coat shall be an energy absorbing, chip resistant, zinc rich epoxy resin capable of achieving a rating of 10A when tested in accordance with ASTM procedure D 1370 (SAE J400). The prime coat shall be applied using electrostatic spray equipment.

3- Exterior coating:

- (a) Apply a minimum dry film thickness of 6.0 mils prime coat to the exterior surface of the lower 8 ft. of the pole and a minimum dry film thickness of 3.0 mils prime coat to the remaining exterior surface of the pole using electrostatic spray equipment.
- (b) Cover all prime coated surfaces (interior and exterior) with a TGIG Super Durable Polyester topcoat to a minimum dry film thickness of 3.0 mils using electrostatic spray equipment.

**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.

* * * * *

400INFMAY08

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SCHEDULE OF ITEMS

CONTRACT ID: 4470

PROJECT(S): ELEC-6-5(1010)

CALL ORDER NO. : 400

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 GROUP 8B ELECTRICAL						
0001	0001.08 BARRICADE, TYPE II	200.000 BDAY	0.50000		100.00	
0002	0001.75 TEMPORARY SIGN DAY	80.000 EACH	.		.	
0003	0030.81 MOBILIZATION	LUMP	LUMP		.	
0004	A001.12 PULL BOX, TYPE PB-5	10.000 EACH	.		.	
0005	A001.16 PULL BOX, TYPE PB-6	1.000 EACH	.		.	
0006	A008.79 STREET LIGHTING UNIT, TYPE SL-BT-40-1-0.25F	18.000 EACH	.		.	
0007	A020.30 LIGHTING CONTROL CENTER, TYPE R	1.000 EACH	.		.	
0008	A070.10 1 1/2-INCH CONDUIT IN TRENCH	4615.000 LF	.		.	
0009	A074.12 1 1/2-INCH CONDUIT, JACKED	225.000 LF	.		.	
0010	A080.22 STREET LIGHTING CABLE, NO. 6 BARE	4840.000 LF	.		.	

NEBRASKA DEPARTMENT OF ROADS

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DATE: 03/18/08

SCHEDULE OF ITEMS

CONTRACT ID: 4470

PROJECT(S): ELEC-6-5(1010)

CALL ORDER NO. : 400

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0011	A080.24 STREET LIGHTING CABLE, NO. 6 USE	14520.000 LF	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	