

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

NEBRASKA DEPARTMENT OF ROADS  
LETTING DATE : June 27, 2013

CALL ORDER: 405                      CONTRACT ID: 4544A

CONTROL NO./SEQ. NO.: 42544A /000 PROJECT NO.: RD-14-1(1017)

TENTATIVE START DATE: 09/23/13                      CONTRACT TIME: 25 WORKING DAYS

LOCATION: IN SUPERIOR & NELSON  
IN COUNTY: NUCKOLLS

BIDDER

GROUP 3 CONCRETE PAVEMENT

## 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 submitted to NDOR in a written format through the Bid Express (BidX) website at <https://www.bidx.com/ne/lettings>. Likewise, NDOR will post answers exclusively to the BidX website. All official answers will be identified as “Authorized by NDOR.” **Questions will not be answered verbally.**

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. RD-14-1(1017)**

**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 June 27, 2013, 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](http://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 April 30, 2013.

Aerial and/or underground utility facilities may exist within this project. The Contractor should request a utility status update at the 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 Diggers Hotline of Nebraska at 1-800-331-5666, or dial 811.

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

City of Nelson: The City has an existing fire hydrant in conflict with sidewalk improvements at the NW corner of the intersection of 3<sup>rd</sup> Street and N-14 (Main Street). The City will relocate the fire hydrant to a location north of the Limits of Construction for this intersection prior to or concurrent with the highway project construction. The Contractor and City shall coordinate construction activities to minimize disruption to

public access. Existing electrical poles and lighting poles are expected to remain in place during project construction. For construction coordination, or for additional information regarding the City's existing facilities, contact Ms. Sandra Schendt at (402) 225-4401.

City of Superior: The City has existing facilities in the vicinity of this project including water valves within proposed concrete pavement areas that will be adjusted to grade by the State's Contractor at no cost to the City. Existing electrical poles and lighting poles are expected to remain in place during project construction. No conflicts between the proposed project and with the City's underground and aerial utility facilities are anticipated. For construction coordination, or for additional information regarding the City's existing facilities, contact Mr. Larry Brittenham at (402) 879-4711.

Glenwood Telecommunications: Glenwood Telecommunications has existing communication facilities in the vicinity of this highway improvement project. Conflicts with the proposed project are not anticipated. For construction coordination and additional information regarding Glenwood Communication's existing facilities, contact Mr. Phil Bentz at (308) 468-6112.

Nebraska Department of Environmental Quality: The NDEQ has existing water monitoring facilities within the project area, but does not anticipate conflict with the highway improvement project. For construction coordination, or for additional information regarding the NDEQ's existing facilities, contact Mr. Phil Hargis at (402) 563-5893.

Nebraska Public Power District: NPPD has existing facilities in the vicinity of this project, but does not anticipate conflicts with the project. For construction coordination, or for additional information regarding the NPPD's existing facilities, contact Mr. Dave Young at (402) 563-5893.

SourceGas Distribution LLC: SourceGas has existing gas line facilities within the project area. Facilities in the City of Nelson at 2<sup>nd</sup> Street and at 5<sup>th</sup> Street may be in conflict with this project. The Contractor shall arrange to meet with a representative from SourceGas prior to the beginning of work to determine the extent of conflict, if any, and to establish any necessary protective measures. If existing gas facility relocation is necessary, SourceGas will relocate to accommodate the project. The Contractor shall allow adequate lead time to accomplish any necessary relocation. For construction coordination, or for additional information regarding existing SourceGas facilities, contact Mr. Gary Harms at (308) 340-7937.

Windstream: Windstream has existing communication facilities near or within the project area, but does not anticipate conflicts with this project. For construction coordination, or for additional information regarding the Windstream's existing facilities, contact Mr. Bill Lange at (402) 436-4553.

Zito Midwest: Zito Midwest has communication facilities near the project area, but does not anticipate conflicts with the project. For construction coordination, or for additional information regarding the Zito Midwest's existing facilities, contact Mr. Vance Wewel at (800) 471-3150.

Any 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
44	Stone Sign 675+65.47 Rt.

- Signs and/or bases may be removed by the owners prior to construction.
- No encroachments on the old right of way.
- The right of way has been acquired in accordance with the current Federal Highway Administration directives covering the acquisition of real property.
- All necessary arrangements have been made for the right of way clearance to be undertaken and completed before physical construction begins.
- All necessary rights of way, including control of access rights when pertinent, have been acquired including legal and physical possession.
- No individual or families were required to be relocated.
- Steps relative to relocation advisory assistance and payments for business and moving personal property as required by the current Federal Highway Administration directives covering the administration of the Highway Relocation Assistance Program are not required.

**ENVIRONMENTAL COMMITMENT**

**Control No.:** 42544A **Project No.:** RD-14-1(1017)

**Project Name:** In Superior & Nelson

Below are the Conservation Conditions that will be required for this project.

**(Responsible Party for the measure is found in parentheses)**

Conservation Measure for Environmentally Sensitive Areas

No wetland impacts. No 404 permit required. Regulated Wetlands and/or Water Resources for this project have been identified and delineated in the field by NDOR. The Contractor shall not drive through, stage, store, waste or stockpile materials and equipment within delineated wetland boundaries (Wetlands – Do Not Disturb) and/or environmentally sensitive areas (Area



of Environmental Concern – Do Not Disturb) as shown in the 2-W aerial plan sheets and/or the erosion control plan sheets included in the plan set. (Contractor, District Construction)

Contact Person: Nick Burnham, Highway Environmental Program Manager, (402) 479-3818

**SPECIAL PROSECUTION AND PROGRESS  
(Migratory Birds)  
(A-42-1112)**

The Department of Roads will, to the extent practicable, schedule the letting of projects such that clearing and grubbing can occur outside of the primary nesting season in Nebraska which has been determined to generally occur between April 1 and September 1. Work on structures, such as but not limited to bridges and culverts, should occur outside the primary swallow nesting season, April 15 to September 30, unless approved methods of avoiding nesting have been taken on the bridge and/or culvert structures. The nesting dates above are a guide only, nesting can occur outside of those dates. Work outside of those dates is not exempt from compliance with the Migratory Bird Treaty Act.

The Contractor shall, to the extent possible, schedule work on structures, such as but not limited to bridges and culverts, and clearing and grubbing activities 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. If the survey finds that nests will be impacted by the proposed construction, the Contractor may be responsible for delays.

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 402-479-4766.
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.
5. If the nesting survey is required, and the project was awarded prior to the nesting season, and the Contractor did not accomplish clearing/grubbing and/or work on

bridge/culvert structures outside the nesting season, the Contractor will reimburse the Department of Roads for each survey required at \$1,000 per survey. If the project was awarded during the nesting season, and construction activities are such that clearing/grubbing and/or work on bridge/culvert structures must be accomplished prior to any other activity on the project, then there will be no charge assessed for the initial survey. The Contractor is responsible for removing all trees surveyed, that do not contain active nests, and for taking appropriate measures on bridge/culvert structures, within 3 days of the survey. Reimbursement for additional surveys may be charged if the Contractor fails to remove the trees within 3 days of the survey, and requires an additional survey. Survey reimbursement will be determined on a project specific basis, considering the project timeline and associated activities.

6. If an active nest is found during the survey, the Contractor should do everything possible to restructure his activities and leave the nest undisturbed until the young fledge. Fledging could occur within a week, or up to a month, after the survey depending on the species of bird and whether the nest contained eggs or young. Also depending on the species of bird and their sensitivity to disturbance, a buffer of up to 30 feet surrounding the tree with the active nest could be required.
7. If construction cannot be rescheduled to allow the birds to fledge, and it is determined as an unavoidable "take" circumstance, the Contractor shall stop all work within 30 feet of the active nest and coordinate with the Construction Project Manager to determine how to proceed. The Construction Project Manager will then coordinate with the NDOR Environmental Section and they will facilitate coordination with the US Fish and Wildlife Service and the Federal Highway Administration (for projects using Federal-aid) to determine the appropriate way to address the active nest. No work shall occur within 30 feet of the active nest until US Fish and Wildlife Service coordination is complete and the requirements of the Migratory Bird Treaty Act are satisfied.
8. It is the Contractor's responsibility to schedule his work to accommodate the process of conducting a survey(s) and submitting the necessary documentation 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 titled "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.

**SHOP PLANS  
(A-43-1108)**

Paragraph 5. of Subsection 105.02 in the *Standard Specifications* is amended to provide that the Contractor may furnish shop plans on half-size plan sheets [11x17 inches (297x420 mm)], provided all information is legible.

**LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC  
(A-43-0210)**

Paragraph 4.a. of Subsection 107.01 in the *Standard Specifications* is void and superseded by the following:

4. a. Whenever the Contractor violates any governing Federal, State or local environmental quality regulation and/or is in noncompliance with any environmental commitment, the violating activity must cease immediately until the appropriate remedy can be determined by: the Engineer, the NDOR Environmental Section, the Federal Highway Administration (for projects utilizing Federal-aid) and other agencies, as deemed appropriate. The Engineer, with assistance from the NDOR Environmental Section and the FHWA, will provide a written order confirming the appropriate corrective action to the Contractor. Work can resume to normal conditions once the Engineer determines that the violation

or non-compliance has been addressed in accordance with the order for corrective action.

Subsection 107.01 in the *Standard Specifications* is amended to include the following two paragraphs:

5. Should the Contractor encounter any previously unidentified hazardous materials, the Engineer shall be promptly notified. The Contractor shall suspend operations in the area involved until such time that arrangements are made for their proper treatment or removal.
6. The Contractor shall prevent the transfer of invasive plant and animal species. The Contractor shall wash equipment at the Contractor's storage facility prior to entering the construction site. The Contractor shall inspect all construction equipment and remove all attached vegetation and animals prior to leaving the construction site.

**SPECIAL PROSECUTION AND PROGRESS  
(Federal Immigration Verification System)  
(A-43-1209)**

The Contractor shall register with and use a Federal Immigration Verification System to determine the work eligibility status of newly hired employees physically performing services within the State of Nebraska. The Prime Contractor shall contractually require every subcontractor to register with and use a Federal Immigration Verification System to determine the work eligibility status of newly hired employees physically performing services within the State of Nebraska.

The Federal Immigration Verification System shall be an electronic verification of the work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program. The Contractor may use an equivalent Federal program designated by the United States Department of Homeland Security or other Federal agency authorized to verify the work eligibility status of a newly hired employee. The equivalent program shall comply with the Immigration Reform and Control Act of 1986.

The Prime Contractor shall furnish a letter to the NDOR Construction Division in Lincoln on company letterhead and signed by an officer of the company stating that documentation is on file certifying that the Contractor and all subcontractors have registered with and used a Federal Immigration Verification System. The Contractor shall maintain all records of registration and use for a period of three years and make records available upon request. The Contractor shall contractually require subcontractors to maintain all records for a period of three years and make records available upon request.

Payment will not be made to the Contractor for using the Federal Immigration Verification System or the maintenance of the records. This work shall be subsidiary to the work being performed.

The Contractor's Certification shall become part of the final records of the Contract. The Department considers this document to have direct bearing to the beginning interest date and may affect the amount of interest earned.

**CONTRACT TIME ALLOWANCE  
(A-43-0911)**

Paragraph 5. of Subsection 108.02 of the *Standard Specifications* is void and superseded by the following:

5. Each week, the Engineer shall post on the Department's website a report of working days or calendar days charged. The Contractor then has 14 days from the day the Engineer's report is posted to provide a written explanation of why he/she does not concur with the working days or calendar days as assessed.

Paragraph 6.b. of Subsection 108.02 of the *Standard Specifications* is amended to include the following:

- (4) If the time allowance for the contract has been established on a calendar day basis, the Contractor is expected to schedule the work and assign whatever resources are necessary to complete the work in the time allowance provided regardless of the weather. Accordingly, regardless of anything to the contrary contained in these *Specifications*, the Department will not consider delays caused by inclement or unseasonable weather as justification for an extension of the contract time allowance unless:
  - i. the weather phenomena alleged to have contributed to or caused the delay is of such magnitude that it results in the Governor issuing a Disaster Declaration, **and**
  - ii. the weather phenomena alleged to have contributed to or caused the delay can clearly be shown to have directly impacted the work on the critical path identified on the Contractor's schedule.

Paragraphs 10.b. and 10.c. of Subsection 108.02 of the *Standard Specifications* are void and superseded by the following:

- b. (1) If the extra work is not in the original contract, time extensions will be granted by determining the actual time necessary to accomplish the extra work.
  - (2) If the extra work is the result of the addition of additional quantities of existing contract items, time extensions will be granted by either:
    - (i) determining the actual time necessary to accomplish the extra work; or
    - (ii) determining the additional time to be granted by comparing the value of the additional quantities of work to the total amount of the original contract when measurement of the actual additional time is not possible or practical.
  - (3) In either case, only the time necessary to perform the extra work of the additional quantities of existing contract items when the extra work or the additional quantities of existing contract items are deemed to be the current controlling operation will be granted as a time extension.
- c. Increases in quantities of work associated with traffic control items measured by the day will not be considered for extending the contract time allowance. Overruns of traffic control items that are measured by methods other than time

may be considered for extending the contract time allowance, but they must be deemed to be a controlling operation when the overrun of quantities occurs.

**PARTIAL PAYMENT  
(A-43-1110)**

Paragraph 2. of Subsection 109.07 of the *Standard Specifications* is void and superseded by the following:

2. When the value of the work completed during a semi-monthly period exceeds \$10,000, the Contractor will receive semi-monthly progress estimates from which the Department shall make such retentions as may be allowed by the contract, provided that the nature and quality of the completed work are satisfactory and provided further that the progress of the work conforms to the requirements of Subsection 108.07.

Paragraph 3.b. of Subsection 109.07 of the *Standard Specifications* is void and superseded by the following:

- b. Under normal circumstances, the Department shall not retain any earnings on a progress estimate. However, the Department reserves the right to retain such amounts as are necessary for material deficiencies, anticipated liquidated damages, unpaid borrow, and for other reasons to protect the Department's interests.

**PARTIAL PAYMENT  
(A-43-0611)**

Paragraph 4. of Subsection 109.07 of the *Standard Specifications* is void and superseded by the following:

4. a. (1) Upon presentation by the Contractor of receipted bills, billing invoices, or such other documentation sufficient to satisfy the Engineer and verify the Contractor's or subcontractor's actual costs for the materials, payments may also be allowed for acceptable nonperishable materials purchased expressly to be incorporated into the work and delivered in the vicinity of the project or stored in acceptable storage places within Nebraska.  
(2) Materials not delivered and stored in the immediate vicinity of or on the actual project site must be clearly marked to identify the project on which they are to be used, must be segregated from similar materials at the storage site, and cannot be included in a supplier's inventory of material available for sale for other purposes.  
(3) All items eligible for partial payment as stored materials must be available for verification, sampling, and measurement.
- b. The amount to be included in the payment will be determined by the Engineer, but in no case shall it exceed 100 percent of the value of the materials documented. This value may not exceed the appropriate

portion of the value of the contract item or items in which such materials are to be incorporated, nor shall the quantity in any case exceed the total estimated quantity required to complete the project.

- c. Payment will not be approved when the documented value of such materials amounts to less than \$1,000.00, when the progress of the work is not in accordance with the requirements set forth in Subsection 108.07, or when the material can reasonably be expected to be incorporated into the work and eligible for payment as completed work on a progress estimate within 15 days of being placed into storage.
- d. Deductions at rates and in amounts which are equal to the payments will be made from estimates as the materials are incorporated into the work.
- e. Payment for the materials shall not in itself constitute acceptance, and any materials which do not conform to the specifications shall be rejected in accordance with Subsection 106.05.
- f. The Contractor shall be responsible for all damages and material losses until the material is incorporated into the work and the work is accepted.
- g. Partial payment will not include payment for fuels, supplies, form lumber, falsework, other materials, or temporary structures of any kind which will not become an integral part of the finished construction.
- h. No partial payments will be made on living or perishable plant materials until planted.

**BUY AMERICA  
(A-43-0212)**

Subsection 106.07 in the *Standard Specifications* is void and superseded by the following:

**106.07 -- Buy America**

- 1. The Buy America rule requires that steel or iron materials be produced domestically, and only those products which are brought to the construction site and permanently incorporated into the completed project are covered. Construction materials, forms, etc., which remain in place at the Contractor's convenience, but are not required by the contract, are not covered.
- 2. To further define the coverage, a domestic product is a manufactured steel construction material that was produced in one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States.
- 3. All manufacturing processes to produce steel or iron materials (i.e., smelting, and any subsequent process which alters the steel or iron material's physical form or shape, or changes its chemical composition) must occur within one of the 50 States, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States, to be considered of domestic origin. This includes processes such as casting, rolling, extruding, machining, bending, grinding, drilling, and coating. Coating includes epoxy coating, galvanizing, painting, and



any other coating that protects or enhances the value of the material. The manufacturer shall include a statement on the material test report or certification that all material described above except the coating material is a domestic product.

4. Raw materials used in the steel or iron materials may be imported. All manufacturing processes to produce steel or iron materials must occur domestically. Raw materials are materials such as iron ore, limestone, waste products, etc., which are used in the manufacturing process to produce the steel products. Waste products would include scrap; i.e., steel no longer useful in its present form from old automobiles, machinery, pipe, railroad tracks and the like. Also, steel trimmings from mills or product manufacturing are considered waste. Extracting, crushing, and handling the raw materials which is customary to prepare them for transporting are exempt from Buy America. The use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the United States may be used in the domestic manufacturing process for steel and/or iron materials.
5. Notwithstanding this requirement, a minimum of foreign steel or iron materials will be permitted if its value is less than one-tenth of one percent of the total contract cost or \$2,500, whichever is greater.
6. Upon completion of all work utilizing steel or iron products, the prime Contractor shall furnish a letter to the State on company letterhead and signed by an officer of the company stating that documentation is on file certifying that all steel or iron materials brought to the construction site and permanently incorporated into the work complied in all respects with the Buy America requirements.

### **BORROW, WASTE, STOCKPILE, AND PLANT SITE APPROVAL (A-43-0512)**

Subsection 107.02 in the Standard Specifications is amended to include the following:

4. Site Approval:
  - a. When borrow is obtained from a borrow site or waste excavation is placed at sites which are not shown in the contract, or the Contractor plans to use a plant or stockpile site which is not shown in the contract, the Contractor shall be solely responsible for obtaining all necessary site approvals. The Department will provide the procedures necessary to obtain approvals from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Nebraska State Historical Society, Nebraska Game and Parks Commission, and Nebraska Department of Natural Resources on the NDOR website. The Contractor shall also be responsible for obtaining a Discharge Number from the Nebraska Department of Environmental Quality (NDEQ) that allows work under the current Construction Stormwater Permit. The Contractor shall also be responsible for obtaining any and all other permits required by local governments.
  - b. It is anticipated that it may require 60 calendar days or more for the Contractor to obtain the necessary approvals. The Contractor will not be

allowed to begin work at borrow or waste sites until the necessary approvals are obtained. No extension of completion time will be granted due to any delays in securing approval of a borrow or disposal site unless a review of the time frames concludes that there were conditions beyond the Contractor's control.

Paragraph 7. of Subsection 205.02 in the Standard Specifications is void and superseded by the following:

7. Borrow and Waste Site Approval:
  - a. Borrow and waste site approvals shall be in accordance with Section 107.02.
  - b. Material shall not be removed from borrow sites until preliminary cross sections and representative soil samples have been taken by the Engineer. The Contractor shall notify the Engineer a sufficient time in advance of the opening of any borrow site so that cross sections may be taken.
  - c. Material shall be removed in a manner that will allow accurate final cross sections to be taken for determining the quantity of excavation. The surfaces of the borrow sites shall be bladed and shaped to drain as shown in the contract or as directed by the Engineer.

**SPECIAL PROSECUTION AND PROGRESS  
(Subletting or Assigning of Contract)  
(A-43-0613)**

Paragraph 3. of Subsection 108.01 in the Standard Specifications is amended to include the following:

On all FHWA "full oversight" projects, a scanned copy (.pdf format) of the signed subcontract agreement shall be included with the subcontracting request.

Paragraph 5. of Subsection 108.01 is void and superseded by the following:

5. All subcontract documents relating to the contract shall be maintained during the course of the work and preserved for a period of three years thereafter. These documents shall be available for inspection by authorized representatives of State and Federal agencies. Scanned copies (.pdf format) of the signed subcontract agreements not specifically identified elsewhere in this subsection shall be furnished to the Department upon request.

Paragraph 7. of Subsection 108.01 is void and superseded by the following:

7. Scanned copies (.pdf format) of all executed subcontracts, written agreements, and/or lease agreements used to meet DBE goals shall be submitted to the NDR Construction Engineer with the subcontracting request. These copies must show labor cost, material prices, overhead, and profit.

Paragraph 9. of Subsection 108.01 is void and superseded by the following:

9. a. The prime Contractor, and subcontractors when subletting work to lower tier subcontractors, shall include language which can be identified as a "Prompt Payment Clause" as a part of every subcontract for work and materials.
- b.(1)The language constituting the "Prompt Payment Clause" will require payment to all first tier subcontractors for all labor and materials --- for work completed to date --- within 20 calendar days of receipt of progress payments from the Department for said work. Similar language in a contract between a subcontractor and a lower-tier subcontractor will require payment to the lower tier subcontractor for all labor and materials --- for work completed to date --- within 10 calendar days of receipt of progress payments from the prime Contractor for said work.
- (2)The language constituting the "Prompt Payment Clause" will also stipulate the return of retainage within 30 calendar days after the satisfactory completion of the work by the subcontractor as evidenced by inclusion of the work on a progress payment.
- (3)Additionally, the language constituting the "Prompt Payment Clause" may stipulate the subcontractor's obligation to return to the Contractor or subcontractor, as the case may be, any overpayments which result from adjustments to measured and recorded quantities as part of the preparation of subsequent progress payments or the final records. Overpayments shall be returned to the prime Contractor or subcontractor, as the case may be, within 20 calendar days of receiving notice of the adjusted quantities and the amount of the overpayment.
- c. The prime Contractor or subcontractors, as the case may be, may withhold payment only for just cause and shall not withhold, delay, or postpone payment without first receiving written approval from the Department.
- d.(1)The failure by the prime Contractor to abide by the agreements identified in the "Prompt Payment Clause" without just cause, including the timely return of retainage, is a material breach of this contract which may result in the Department withholding the amount of payment from the prime Contractor that should have been paid to the subcontractor, termination of this contract, or other such remedy as the Department deems necessary.
- (2)Additionally, the failure of any subcontractor to abide by the agreements identified in the "Prompt Payment Clause" without just cause, including the timely return of retainage to lower tier subcontractors, or by failing to return overpayments in a timely manner when the language permitted in Paragraph 9.b.(3) above is included in the subcontract may result in the Department withholding subcontract approval for other work until the overpayments have been returned.

**LIABILITY INSURANCE  
(A-55-0611)**

Subsection 107.13 in the Standard Specifications is void and superseded by the following:

**107.13 – Liability Insurance**

Prior to execution of the contract, the Contractor shall obtain insurance coverage to fully protect it from loss associated with the work, and have at a minimum the insurance described below:

1. General Liability:  
Limits of at least:
  - \$ 1,000,000 per Occurrence
  - \$ 2,000,000 General Aggregate
  - \$ 2,000,000 Completed Operations Aggregate
  - \$ 1,000,000 Personal and Advertising Injury
- a. Contractor shall be responsible for the payment of any deductibles.
- b. Coverage shall be provided by a standard form Commercial General Liability Policy (CG0001 or equivalent) covering bodily injury, property damage including loss of use, and personal injury.
- c. The General Aggregate shall apply on a Per Project Basis.
- d. The State of Nebraska, Department of Roads, shall be named as an Additional Insured on a primary and non-contributory basis including completed operations for three (3) years after final acceptance and payment.
- e. Contractor agrees to waive its rights of recovery against the State of Nebraska, Department of Roads. Waiver of Subrogation in favor of the State of Nebraska, Department of Roads shall be added to the policy.
- f. Contractual liability coverage shall be on a broad form basis and shall not be amended by any limiting endorsements.
- g. If work is being performed near a railroad track, the 50' railroad right-of-way exclusion must be deleted.
- h. Products and completed operations coverage in the amount provided above shall be maintained for the duration of the work, and shall be further maintained for a minimum period of three years after final acceptance and payment.
- i. Coverage shall be included for demolition of any building or structure, collapse, explosion, blasting, excavation and damage to property below surface of ground (XCU coverage).

- j. Policy shall not contain a total or absolute pollution exclusion. Coverage shall be provided for pollution exposures arising from products and completed operations as per standard CG0001 Pollution Exclusion or equivalent. If the standard pollution exclusion as provided by CG0001 has been amended, coverage must be substituted with a separate Pollution Liability policy of \$1.0 million per occurrence and \$2.0 million aggregate. If coverage is provided by a “claims made” form, coverage will be maintained for three years after project completion. Any applicable deductible is the responsibility of the Contractor.
2. Automobile Liability:  
Limits of at least:  
\$ 1,000,000 CSL per Accident
- a. Coverage shall apply to all Owned, Hired, and Non-Owned Autos.
  - b. If work is being performed near a railroad track, the 50-foot railroad right-of-way exclusion must be deleted.
  - c. Contractor agrees to waive its rights of recovery against the State of Nebraska, Department of Roads. Waiver of Subrogation in favor of the State of Nebraska, Department of Roads, shall be added to the policy.
  - d. Automobile liability coverage shall be obtained from an insurance carrier who is licensed with the Nebraska Department of Insurance.
3. Workers' Compensation:  
Limit: Statutory coverage for the State where the project is located.  
Employer's Liability limits: \$500,000 Each Accident  
\$500,000 Disease – Per Person  
\$500,000 Disease – Policy Limit
- a. Contractor agrees to waive its rights of recovery against the State of Nebraska, Department of Roads. Waiver of Subrogation in favor of the State of Nebraska, Department of Roads shall be added to the policy.
  - b. Workers' compensation coverage shall be obtained from an insurance carrier who is licensed with the Nebraska Department of Insurance.
  - c. Where applicable, the Longshore and Harborworkers Compensation Act endorsement shall be attached to the policy.
4. Umbrella/Excess:  
Limits of at least:  
\$1,000,000 per Occurrence
- a. Policy shall provide liability coverage in excess of the specified Employers Liability, Commercial General Liability and Automobile Liability.
  - b. The State of Nebraska, Department of Roads, shall be an “Additional Insured.”
  - c. Contractor agrees to waive its rights of recovery against the State of Nebraska, Department of Roads. Waiver of subrogation in favor of the State of Nebraska, Department of Roads shall be provided.

5. Pollution Liability:
  - a. When “hazardous wastes” or contaminated or polluted materials must be handled and/or moved, the Contractor shall obtain Pollution Liability Coverage with minimum limits of \$1,000,000 per occurrence and \$2,000,000 aggregate.
  - b. If, during the course of construction, hazardous wastes, contaminated or polluted material are discovered on the project, the Contractor shall immediately cease any operation that may disturb these materials, and shall immediately notify the Engineer of all facts related to the discovery of these materials.
  - c. Unforeseen work related to the discovery of hazardous, contaminated or polluted materials on the project, and the extra cost, if any, of pollution liability coverage will be handled as “extra work.”
6. Additional Requirements:
  - a. The Contractor shall provide and carry any additional insurance required by the Special Provisions.
  - b. Except as otherwise provided herein, all insurance shall be kept in full force and effect until after the State releases the Contractor from all obligations under the contract.
  - c. If any of the work is sublet, equivalent insurance shall be provided by or on behalf of the subcontractor or subcontractors (at any tier) to cover all operations.
  - d. Any insurance policy shall be written by an insurance company with a Best’s Insurance Guide Rating of A – VII or better.
  - e. Prior to execution of the contract, Contractor shall provide the State of Nebraska, Department of Roads evidence of such insurance coverage in effect in the form of an Accord (or equivalent) certificate of insurance executed by a licensed representative of the participating insurer(s). Certificates of insurance shall show the Nebraska Department of Roads as the certificate holders.
  - f. For so long as insurance coverage is required under this agreement, the Contractor shall have a duty to notify the Department when the Contractor knows, or has reason to believe, that any insurance coverage required under this agreement will lapse, or may be cancelled or terminated. The Contractor must forward any pertinent notice of cancellation or termination to the Department at the address listed below by mail (return receipt requested), hand-delivery, or facsimile transmission within 2 business days of receipt by Contractor of any such notice from an insurance carrier. Notice shall be sent to:

Nebraska Department of Roads  
Construction Division --- Insurance Section  
1500 Highway 2, P.O. Box 94759  
Lincoln, NE 68509-4759  
  
Facsimile No. 402-479-4854
  - g. Failure of the owner or any other party to review, approve, and/or reject a certificate of insurance in whole or in part does not waive the requirements of this agreement.

- h. The limits of coverage set forth in this document are suggested minimum limits of coverage. The suggested limits of coverage shall not be construed to be a limitation of the liability on the part of the Contractor or any of its subcontractors/tier subcontractors. The carrying of insurance described shall in no way be interpreted as relieving the Contractor, subcontractor, or tier subcontractors of any responsibility or liability under the contract.
- i. If there is a discrepancy of coverage between this document and any other insurance specification for this project, the greater limit or coverage requirement shall prevail.

## **CONSTRUCTION DETAILS**

### **TEMPORARY WATER POLLUTION CONTROL (B-3-0509)**

Section 204 in the Standard Specifications is void.

### **CONSTRUCTION STORMWATER MANAGEMENT CONTROL (B-3-0509)**

#### **General**

1. This Section defines some best management practices (BMPs) for erosion and sediment control measures and construction practices the Contractor shall use to prevent soil erosion and avoid water pollution.
2. The Contractor shall exercise every reasonable precaution throughout the life of the contract to prevent silting of the waters of the state, the project site, and adjacent property. Construction of drainage facilities, as well as performance of other contract work which will contribute to the control of siltation, shall be carried out in conjunction with earthwork operations or as soon thereafter as is practicable.
3. a. The Contractor shall take sufficient precautions to prevent pollution of the waters of the state, the project site, and adjacent property with construction debris, petroleum products, chemicals, or other harmful materials.  
b. The Contractor shall conduct and schedule the operations to avoid interference with any protected species.  
c. The Contractor shall comply with all applicable statutes relating to pollution of the waters of the state and fish and game regulations.
4. All construction debris shall be disposed in a manner that it cannot enter any waterway. Excavation shall be deposited as to protect the waters of the state from siltation.

5. The erosion and sediment control measures shall continue until the permanent drainage facilities have been constructed and the slopes are sufficiently vegetated to be an effective erosion deterrent or until tentative acceptance of the work.
6. All erosion and sediment control measures shall be properly maintained by the Contractor.
7. All erosion and sedimentation resulting from the Contractor's operations and the weather conditions must be corrected by the Contractor.

### **LIMITATION OF OPERATIONS (B-3-0509)**

#### **General**

1. The maximum exposed surface area for the Contractor's operations in excavation, borrow, and embankment is 18 acres (72,800 m<sup>2</sup>) plus an equal area of clearing and grubbing/large tree removal. A written request for an increase in the maximum exposed surface area may be approved by the Engineer unless an equal amount of finished grading and seeding has been completed in the previously opened area. This approval will be based on the soil, moisture, seasonal conditions, the Contractor's operation, or other conditions.
2. The Engineer shall have the authority to reduce the maximum exposed surface area when any of the following conditions warrant:
  - a. Soil and moisture conditions are such that erosion is probable.
  - b. Seasonal conditions may force extended delays.
  - c. Proximity to the waters of the state require more stringent controls.
  - d. Equipment and personnel available on the job is not sufficient to properly maintain erosion and dust control measures.
  - e. Any other environmental condition in the area that may exist which would be affected by erosion from the project.
3. Construction operations in rivers, streams, wetlands, and impoundments shall be restricted to those areas specifically shown in the contract. Rivers, streams, wetlands, and impoundments shall be promptly cleared of all false work, piling, debris, or other obstructions placed therein or caused by the construction operations.
4. Fording and operation of construction equipment within live streams and wetlands will not be allowed, unless explicitly allowed in the contract.



## **CONSTRUCTION METHODS (B-3-0509)**

### **General**

1. The Contractor shall conduct all construction activities to control sediment and avoid soil erosion.
2. The Contractor shall incorporate all permanent erosion control features into the project at the earliest practicable time.
3. Construction stormwater management control measures for Contractor obtained construction work areas located outside the right-of-way, such as borrow pit operations, haul roads, plant sites, staging areas, equipment storage sites, etc. are the sole responsibility of the Contractor. All construction stormwater management control measures for these areas are at the Contractor's expense. The Contractor is responsible for securing all required permits for use of these areas.
4. The construction stormwater management procedures contained herein shall be coordinated with any permanent erosion control measures specified elsewhere in the contract to the extent practical to assure economical, effective, and continuous erosion and sediment control throughout the construction period.
5. The Contractor shall be responsible to limit erosion and prevent siltation into the waters of the state during the construction period, as well as during the times that work may be suspended.
6. a. The installation of all erosion and sediment control items shall be installed by qualified personnel who are knowledgeable in the principles and practice of various BMP installations.  
  
b. The installation of all erosion and sediment control items shall be done under the direct supervision of the Contractor's NDOR-Certified Erosion and Sediment Control Inspector. The Contractor's NDOR-Certified Erosion and Sediment Control Inspector shall be present at each site during installation to direct and inspect all erosion and sediment control BMP installations.  
  
c. The Contractor shall notify the Engineer of all Contractor NDOR-Certified Erosion and Sediment Control Inspectors who will be on the project to direct and inspect all erosion and sediment control BMP installations.  
  
d. No payment will be made for any erosion and sediment control item unless a Contractor NDOR Certified Erosion and Sediment Control Inspector was present to directly supervise and inspect the work.  
  
e. No payment will be made for any erosion and sediment control item that is not properly installed. All erosion and sediment control items shall be installed as per the NDOR Standard Plan or the manufacturer's instructions.

**ENVIRONMENTAL COMMITMENT DOCUMENT  
(B-3-0509)**

**General**

This specification establishes the required documentation included in the Environmental Commitment Document and Project Erosion and Sediment Control Inspection. The Department and the Contractor, as co-permittees, will comply with all conditions required by the current NPDES Construction Storm Water General Permit.

**Environmental Commitment Document**

1. An Environmental Commitment Document will be created by the Department to identify all project specific environmental commitments, when applicable.
  - a. (Pre-Bid) The Department will provide information related to commitments made for but not limited to:
    - i. Storm Water Pollution Prevention Plan.
    - ii. U. S. Army Corps of Engineers 404 Permit.
    - iii. Nebraska Department of Environmental Quality 401 Water Quality Certification.
    - iv. State Title 117 Waters (COE Non-Jurisdictional).
    - v. Floodplain Permit.
    - vi. Historic Clearance.
    - vii. Threatened & Endangered Species Clearance.
    - viii. FHWA Environmental Clearance.
    - ix. NPDES Construction Stormwater Permit (within Right-of-Way limits, only).
    - x. Conservation Measures.
    - xi. Migratory Bird Treaty Act.
    - xii. Other pertinent issues.
  - b. (Post-Bid) The Contractor shall provide the following information that will be included in the Environmental Commitment Document but not limited to:
    - i. Temporary Erosion Control Plan.
    - ii. Spill Prevention and Control Plan.
    - iii. Name and telephone number of the Contractor's representative responsible for the Environmental Commitments.
    - iv. Name and telephone number of the employees that are NDOR-Certified Erosion and Sediment Control Inspectors.
    - v. Construction Schedule/Critical Path.

### **Temporary Erosion Control Plan**

1. The Contractor shall prepare and submit the Temporary Erosion Control Plan prior to the start of any work. The Contractor shall not begin work until the Temporary Erosion Control Plan has been submitted to the Engineer and appropriate erosion control measures are in place. Payment for any work on the contract will be withheld if erosion control measures are not in place or properly maintained.
2. The submittal of the Temporary Erosion Control Plan, the approval to increase the maximum surface area, or any payment for or acceptance of any or all of the work shall not operate as a waiver of the Contractor's responsibility under this specification.
3. The Temporary Erosion Control Plan shall be amended as work progresses and site conditions change.
4. The Temporary Erosion Control Plan will be reviewed at the project progress meeting. All active Contractors will have their Inspectors present, and work as a team to determine Temporary Erosion Control BMP's as they are needed.
5. Payment for preparing the Temporary Erosion Control Plan is subsidiary to items that direct payment is made.

### **Spill Prevention and Control Plan**

1. The Contractor shall prepare and submit the Spill Prevention and Control Plan prior to the start of any work. The Contractor shall not begin work until the Spill Prevention and Control Plan has been submitted to the Engineer and appropriate Spill Prevention and Control measures are in place.
  - a. Spill Prevention and Control Plan should clearly state measures to stop the source of the spill, contain the spill, clean up the spill, dispose of contaminated materials, and train personnel to prevent and control future spills.
  - b. Spill Prevention and Control Plans are applicable to construction sites where hazardous wastes are stored or used. Hazardous wastes include, but not limited to: pesticides, paints, cleaners, petroleum products, fertilizers, and solvents.
2. The Spill Prevention and Control Plan will be included in the Environmental Commitment Document.
3. Direct payment will not be made for the Spill Prevention and Control Plan.

### **Storm Water Pollution Prevention Plan (SWPPP)**

1. The Contractor shall comply with all conditions required by the current NPDES Construction Storm Water General Permit.
2. The Department will prepare the NDOR Project SWPPP for construction activities causing a land disturbance within the Right-of-Way, temporary easements, and permanent easements of one (1) acre or more.
  - a. Areas of construction support activities located on private property, obtained by the Contractor, are not included in the NDOR Project SWPPP.

3. The Engineer and the Contractor will perform inspections as required by the current NPDES Construction Storm Water General Permit. Payment for project inspection is subsidiary to items that direct payment is made.
4. The SWPPP will be maintained and updated by the Engineer as work progresses and site conditions change, to accurately describe the BMPs that are currently in place.
5. The Contractor's participation in SWPPP inspections, maintenance and updates shall begin on the first day construction activities cause land disturbance and end on the date of project completion as evidenced as the completion date in the District Engineer's Letter of Tentative Acceptance.

### **Project Erosion and Sediment Control Inspection**

1. Inspections must be conducted by a NDOR-Certified Erosion and Sediment Control Inspector. The Contractor and the Engineer shall conduct inspections in accordance with the NPDES Construction Storm Water General Permit.
2. The NDOR-Certified Erosion and Sediment Control Inspector certification is obtained by completing an erosion and sediment control inspector training course provided by the Nebraska Department of Roads and passing the examination that accompanies the training.
3. The Contractor's NDOR-Certified Erosion and Sediment Control Inspector shall be responsible for ensuring that all BMPs are installed in accordance with NDOR Specifications, Special Provisions, NDOR Standard Plans, or the manufacturers' recommended installation instructions. The Contractor's NDOR-Certified Erosion and Sediment Control Inspector shall be capable of reading and interpreting these documents. The Inspector shall be familiar with product and structural BMPs. The Contractor's NDOR-Certified Erosion and Sediment Control Inspector is required to inspect, assess, and supervise the maintenance of erosion and sediment control BMPs to ensure compliance with the NPDES Construction Storm Water General Permit while preserving BMP functionality.
4. Payment for project inspection is subsidiary to items that direct payment is made.

## **ENVIRONMENTAL COMMITMENT DOCUMENT ENFORCEMENT (B-3-0509)**

### **General**

1. This specification establishes a disincentive assessment for the Contractor's failure to comply with Environmental Commitments.
2. Deficiencies are described but not limited to:
  - a. Failure to install pollution prevention control BMPs as work progresses or as described in the SWPPP.
  - b. Failure to maintain existing pollution prevention control BMPs.

- c. Failure to remove non-functioning pollution prevention control BMPs.
- d. Failure to comply with U. S. Army Corps of Engineers 404 Permit requirements.
- e. Failure to comply with NPDES Construction Storm Water General Permit requirements.
- f. Failure to comply with all applicable statutes relating to pollution of the waters of the state.
- g. Exceeding the maximum exposed surface area for excavation of 18 Acres without written request for permission and written approval.
- h. Failure to comply with Plans, Specifications, and Contract requirements for the Environmental Commitment Document.

### **Conditions**

- 1. a. The count of Working Days and Calendar Days shall continue during the time period that corrective work is being performed.
  - i. Delays to the project as a result of the Contractor conducting corrective actions for the Environmental Commitment Document shall not constitute a valid reason for an extension of the contract time allowance.
- b. The Contractor shall begin maintenance operations, provide adequate equipment and personnel, and diligently pursue the work without cessation until all deficiencies have been corrected.

### **Corrective Actions**

- 1. a. Deficiencies shall be corrected within seven calendar days of notification. When deficiencies are not corrected within seven calendar days, the Engineer will make a disincentive assessment to the contract as stated herein.
- 2. If soil, weather, or other conditions prevent the Contractor from completing the corrective actions within seven calendar days, the Contractor shall notify the Engineer in writing. The Contractor's letter shall state the reasons preventing corrective action within the time allowed. The Contractor shall propose a Corrective Action Plan within 48 hours. Corrective work shall continue while the Plan is developed. The Contractor's Corrective Action Plan must contain a course of action and a time frame for completion. If the reasons and the Corrective Action Plan are acceptable to the Engineer, the Contractor will be allowed to proceed with the plan as proposed without incurring a disincentive assessment. If work described in the approved Corrective Action Plan does not commence as proposed, the Engineer may immediately invoke the NDOR Environmental Commitment Control Deficiency Notification Shut-Down Notice.

3. The Engineer may require the Contractor to provide a written Procedures Plan. The Procedures Plan shall detail the process to prevent reoccurrence of deficiencies. The written Procedures Plan shall be provided within seven calendar days of the request. Failure to correct all deficiencies and provide a Procedures Plan may result in payments being withheld until such time that procedures are outlined.

### **Notification**

1. Deficiencies will be documented using the NDOR Environmental Commitment Deficiency Notification Form and the Corrective Action Log.
2. Initial Notice:
  - a. The Initial Notice will notify the Contractor of Environmental Commitment deficiencies and direct that they be corrected.
  - b. If all corrective work is completed within the time allowance shown in the initial notice or time shown in the Contractor's approved Corrective Action Plan, a disincentive assessment will not be imposed upon the Contractor.
3. Shut-Down Notice:
  - a. If all corrective work identified in the Corrective Action Log attached to the Initial Notice has not been completed at the end of the seventh calendar day after the Initial Notice Date, a Shut-Down Notice will become effective on the eighth calendar day after the Initial Notice Date.
  - b. All current operations shall cease as of the date and time cited by the Shut-Down Notice. The Contractor shall only work on Environmental Commitment deficiencies. After the Shut-Down Notice, the penalty day assessment will be counted as a Calendar Day.

### **Disincentive Assessments**

1. If the corrective work is not complete within seven Calendar Days after the Initial Notice, a disincentive assessment of \$250.00 per Deficiency Location per Calendar Day for each Deficiency Location remaining uncorrected will begin on the eighth calendar day after the Initial Notice Date and continue through and count the day the last corrective work was completed for each Deficiency Location.

### **Corrective Action Incentive**

1. The Contractor shall comply with the NPDES Construction Storm Water General Permit to correct all pollution prevention control deficiencies within 7 calendar days from when the Contractor was notified of the Environmental Commitment deficiencies and prior to the next storm event. The Contractor shall begin maintenance operations, provide adequate equipment and personnel, and diligently pursue the work --- without cessation --- until all deficiencies have been corrected.

2. The Department will pay an incentive as outlined in Table A when the Contractor is notified by the Environmental Commitment Deficiency Notification and Corrective Action Log and commences work to correct deficiencies resulting from a storm event that exceeded 0.50 inch of rain. One payment per notification will be made. Multiple deficiencies may be included in one notification.

<b>Table A</b>	
<b>Corrective Action Incentive Payment Schedule</b>	
Incentive to commence corrective work within:	
24 Hours of Notification	\$300.00
48 Hours of Notification	\$200.00

3. An incentive payment will not be paid if corrective work does not commence as outlined in Table A and completed within 7 days, or if an unscheduled visit coincides with a normally scheduled visit.
4. An incentive payment will not be paid for scheduled maintenance visits, expected to occur every 14 days, or pollution prevention BMP installations, maintenance, and removals required due to daily Contractor operations.
5. Immediate Action Deficiencies are not eligible for incentive payment.

**Immediate Action Deficiencies**

1. Deficiencies that pose an imminent threat to the environment are considered an emergency situation. These deficiencies will be identified in the Immediate Action Deficiencies section of the Environmental Commitment Notification Form. The corrective work for Immediate Action Deficiencies shall begin immediately and continue without cessation until completed.
2. The Contractor will be assessed a disincentive assessment of \$500.00 per Deficiency per Calendar Day for failure to begin corrective actions or failing to continue to completion.
3. Examples of Immediate Action Deficiencies include but not limited to:
  - a. Threatened & Endangered Species habitat protection deficiencies
  - b. U. S. Army Corps of Engineers 404 Permit Noncompliance
  - c. Petroleum Spills/Tank Leakage
  - d. Hazardous Material Spills

**Rights Reserved**

1. The Department reserves the right to initiate and perform corrective action on any deficiencies and then assess the costs to perform the work against the Contractor.

2. The Contractor shall be liable to the Department for any and all costs incurred by the Department as a result of the Contractor's actions, inactions, or for failure to comply with the NPDES Construction Storm Water General Permit, U. S. Army Corps of Engineers 404 Permit, or any other applicable permit.
3. It is expressly understood that the provisions of this specification will not relieve the Contractor of his/her responsibilities nor shall it relieve the surety of its obligation for and concerning any just claim.

**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-6-1112)**

Paragraph 2.d. of Subsection 422.03 in the Standard Specifications is void and superseded by the following:

- d. (1) Reflectorized drums used for traffic warning or channelization shall be constructed of lightweight, flexible, and deformable materials, be a minimum of 36 inches (900 mm) in height, and have a minimum width of 18 inches (450 mm), regardless of orientation. The predominant color of the drum shall be orange.
- (2) Steel drums shall not be used.
- (3) The markings on drums shall be horizontal, shall be circumferential, and shall display four 6-inch (150 mm) wide bands of retroreflective sheeting, alternating fluorescent orange - white – fluorescent orange - white. The fluorescent orange sheeting shall meet the luminance requirements of the following table.

**FHWA Luminance Factor**

Sheeting Type	Luminance Factor $Y_T$		
	Min	Max	Fluorescence Luminance Factor Limit, $Y_F$
Fluorescent Orange	25	None	15

- e. When approved by the Engineer or shown in the plans, 42" (1070 mm) reflective cones may be used in lieu of Type II Barricades or Reflectorized Drums. 42" (1070 mm) reflective cones shall include a 30-pound (14 kg) rubber base and display four 6-inch (150 mm) wide bands of retroreflective sheeting, alternating fluorescent orange - white - fluorescent orange - white. 42" (1070 mm) reflective cones shall not be used for lane-closure tapers or shifts.
- f. Rubber base-mounted 36-inch vertical panels shall not be used for channelization when the speed limit exceeds 40 miles per hour.



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-6-1212)**

The Department has adopted the FHWA 2009 Manual of Uniform Traffic Control (MUTCD) and the 2011 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 2009 MUTCD (and 2011 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 2009 MUTCD (and 2011 Nebraska Supplement).

### **ADJUST VALVE BOX TO GRADE (F-7-0307)**

This work shall consist of adjusting valve boxes, (RW) roadway boxes and (c.c.) corporation cocks boxes to finish grade as shown on the plans or as directed by the Engineer.

All work shall conform to the Specifications, Codes and Regulations of the Utility owner.

The adjustment required may be on either water or gas lines.

Existing boxes shall be used for adjustment if not damaged. If damaged, a new box or any part of it shall be installed. Adjustment shall be made by turning the screw part in or out, or by adding or removing extension pieces. After the adjustment has been made the box shall have a straight vertical continuous barrel.

Adjusting valve boxes to grade will be measured as a single unit and payment will be made at the contract unit price per each for the item "Adjust Valve Box to Grade". This price shall be full compensation for all labor, equipment, new parts (if needed), tools and incidentals necessary to complete the work.

### **DETECTABLE WARNING PANEL**

Detectable warning panels shall be installed on curb ramps at the locations and in accordance with the details shown in the plans. Approved detectable warning panels are shown on the NDR Approved Products List.

The item "Detectable Warning Panel" shall be measured and paid for by the square foot. Payment shall be considered full compensation for all work required to furnish and install the detectable warning panels.

### **HANDRAIL FOR STEPS**

Paragraph 1. of Subsection 716.05 in the Standard Specifications is amended to include the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Handrail For Step	Linear Foot (LF)

### **PORTLAND CEMENT CONCRETE**

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 1PF and 1PN 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 1P 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 F Fly Ash or Pozzolan* (Min. lb/cy)	Slag Cement (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)	Required Strength (Min. psi) (7)
47BR**	1PF/1PN	423	141	0	0	0	564	2850	3150	-	-	7.5 -10.0	0.48	3500
47BR***	1PF/1PN	423	141	0	0	0	564	2850	3150	-	-	6.0 - 8.5	0.48	3500
47BD	1PF/1PN	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	4000
47BRHE	1PF/1PN	564	188	0	0	0	752	2500	3000	-	-	6.0 - 8.5	0.40	3500
BX <sub>(8)</sub>	1PF/1PN	423	141	0	0	0	564	2850	3150	0	0 (5)	6.0 - 8.5	0.48	3500
47BRFS <sub>(6)</sub> **	1PF/1PN	338	113	113	0	0	564	2850	3150	-	-	7.5 -10.0	0.48	3500
47BRFS <sub>(6)</sub> ***	1PF/1PN	338	113	113	0	0	564	2850	3150	-	-	6.0 - 8.5	0.48	3500
47BDFS <sub>(6)</sub>	1PF/1PN	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, 47BR-3500, where the last four digits indicate the strength in pounds per square inch. In the chart, strength of 3500 psi is indicated for 47BR-3500; however, other strengths may be authorized elsewhere in the contract. The classes shown in the chart are typical examples.)  
A slump test shall be performed to check for consistency and/or workability. Any increase in slump must be pre-approved by the Engineer.  
All classes of concrete shall be air-entrained, and a water-reducing admixture shall be used.
  - Class 47BR, 47BRHE and 47BRFS shall use a mid-range water-reducing admixture. The dosage shall be at the manufacturer's recommendation. The Engineer may approve a low range water reducer.
- (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, unless the Contractor obtains written approval from the NDR Materials & Research Division prior to any placement on the project. The Contractor may request approval from Materials & Research in writing to change the water/cement ratio to 0.36.
- (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.
- (7) For acceptance of each class of concrete, refer to the specifications.
- (8) For temporary surfacing, straight Type I/II cement is allowed.
- (\*) Mixes with Type 1PF and 1PN are pre-blended or interground with Class F fly ash or Class N Pozzolan by the cement mill producer at a rate of 25%±2%, no additional Class F fly ash or Class N Pozzolan is added at the batch plant. Lithium Nitrate may be used in place of Class F fly ash or Class N Pozzolan, see Section 1007 of the Standard Specifications as modified in these Special Provisions.
- (\*\*) For slip form applications.
- (\*\*\*) For hand-pours and substructures applications.

**METRIC  
TABLE 1002.02**

**Concrete Mixes (Cubic Meter Batch)**

Class of Concrete (1)	Base Cement Type*	Portland Cement (Min. kg/m <sup>3</sup> )	Pre-Blended Class F Fly Ash or Pozzolan* (Min. kg/m <sup>3</sup> )	Slag Cement (Min. kg/m <sup>3</sup> )	Class C Fly Ash (Min. kg/m <sup>3</sup> )	Silica Fume (Min. kg/m <sup>3</sup> )	Total Cementitious Materials (Min. kg/m <sup>3</sup> )	Total Agg. (Min. kg/m <sup>3</sup> )	Total Agg. (Max. kg/m <sup>3</sup> )	Coarse Agg. (%) (3)	Type of Coarse Agg	Air Content (% Min.-Max.) (2)	Water/Cement Ratio Max. (4)	Required Strength (Min. Mpa) (7)
47BR**	1PF/1PN	251	84	0	0	0	335	1691	1869	-	-	7.5 -10.0	0.48	25
47BR***	1PF/1PN	251	84	0	0	0	335	1691	1869	-	-	6.0 - 8.5	0.48	25
47BD	1PF/1PN	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	30
47BRHE	1PF/1PN	335	112	0	0	0	446	1483	1780	-	-	6.0 - 8.5	0.40	25
BX <sub>(8)</sub>	1PF/1PN	251	84	0	0	0	335	1691	1869	0	0 (5)	7.5 - 8.5	0.48	25
47BRFS** <sub>(6)</sub>	1PF/1PN	201	67	67	0	0	335	1691	1869	-	-	7.5 -10.0	0.48	25
47BRFS*** <sub>(6)</sub>	1PF/1PN	201	67	67	0	0	335	1691	1869	-	-	6.0 - 8.5	0.48	25
47BDFS <sub>(6)</sub>	1PF/1PN	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.)  
A slump test shall be performed to check for consistency and/or workability. Any increase in slump must be pre-approved by the Engineer.  
All classes of concrete shall be air-entrained, and a water-reducing admixture shall be used.
  - Class 47BR, 47BRHE and 47BRFS shall use a mid-range water-reducing admixture. The dosage shall be at the manufacturer's recommendation. The Engineer may approve a low range water reducer
- (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, unless the Contractor obtains written approval from the NDR Materials & Research Division prior to any placement on the project. The Contractor may request approval from Materials & Research in writing to change the water/cement ratio to 0.36.
- (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.
- (7) For acceptance of each class of concrete, refer to the specifications.
- (8) For temporary surfacing, straight Type I/II cement is allowed.
- (\*) Mixes with Type 1PF and 1PN are pre-blended or interground with Class F fly ash or Class N Pozzolan by the cement mill producer at a rate of 25%±2%, no additional Class F fly ash or Class N Pozzolan is added at the batch plant. Lithium Nitrate may be used in place of Class F fly ash or Class N Pozzolan, see Section 1007 of the Standard Specifications as modified in these Special Provisions.
- (\*\*) For slip form applications.
- (\*\*\*) For hand-pours and substructures applications.

<b>Table 1002.03</b>	
<b>Table of Acceptable Concrete Class</b>	
<b>Class</b>	<b>Acceptable Class for</b>
<b>BX</b>	<b>47BR, 47BD, or 47BR-HE</b>
<b>47BR</b>	<b>47BD, or 47BR-HE</b>

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. Grade 1 Calcium Chloride purity is between 70 and 90 percent and Grade 2 Calcium Chloride is between 91 and 100 percent.
  - e. 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 manufacturer. Next, the Type F high range water-reducer admixture is added and the concrete is mixed an additional 5 minutes.
  - f. 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.
  - d. A non-calcium chloride accelerator shall be used when the ambient temperature at the time of the placement of concrete is 70°F or less.
  - e. When requested by the Contractor, the maturity method, as provided in NDR C 1074, may be used in lieu of the requirements of Subsection 603.03, Paragraphs 11.c. and d. to determine the strength of concrete pavement for the purpose of early opening to traffic and acceptance. Requests by the Contractor for use of the maturity method shall be on a project basis and shall be made in writing to the Engineer.
7. The yield of the concrete proportions shall be determined and adjusted by the Producer or Engineer.

Subsection 1002.02 is amended to include the following:

11. All Classes of Concrete with the exception of PR1 and PR3 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.

Paragraphs 1. & 2. of Subsection 1002.03 are void and superseded by the following:

1. The Contractor shall identify the plant that will supply the concrete 14 days before use and be entirely responsible for its calibration, batching of concrete, aggregate and sampling of cement per NDR Sampling Guide.
  - a. The Contractor shall be responsible for the following:
    - 1) Batching concrete.
    - 2) Contractor shall sample aggregate from the conveyor belt or stockpile. The sample shall not be taken more than 5 days prior to the production of the concrete or at the Engineers discretion. Gradations from a split sample shall be reported to the Engineer at the frequency required by the Materials Sampling Guide.
      - i. Contractor shall retain possession of the split samples on-site at the Contractor's facility until such a time as determined by the Engineer.
        - a. At the pre-construction meeting:
          - 1) Contractor shall determine the location of testing and report the names of the technician performing the sampling and testing.

- 2) Engineer will notify the Contractor of the retrieval of the split samples.
        - ii. The Contractor shall immediately seal the split sample after splitting and before testing has begun. The cloth sample bag shall be supplied by the Contractor.
        - iii. The sampling splitting and placement of the security seal of aggregate samples shall be witnessed by certified Department personnel.
        - iv. Contractor shall secure the split sample using a consecutively numbered security seal of 75 pounds breaking strength provided by the Department. The Contractor shall use the consecutively numbered security seals to identify and track each Aggregate Class. Samples that are not consecutively numbered will be investigated for custody of the sample and the Engineer may cease production until it is determined what action will be required.
        - v. The Contractor shall report the security seal tracking number with the split sample gradation.
          - a. The following training shall be required for personnel who oversee the batching of the concrete:
            - 1) Concrete technician personnel.
              - i. Concrete Plant Technician
            - 2) Portland cement sampler.
              - I. NDR Portland Cement Sampler.
2. Portland cement concrete shall be supplied by certified Ready Mix Plants that are in compliance with the requirements in the *Quality Control Manual*, Section 3, -- Certification of Ready Mixed Concrete Production Facilities published by the National Ready Mixed Concrete Association. Refer to NDR Material Sampling Guide for the policy on stationary and portable plants.

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

6. Batch tickets shall be prepared as prescribed in the National Ready Mixed Concrete Association's *Quality Control Manual*. The Contractor shall keep all gradations and batch tickets until final acceptance by the Department. Projects that have less than 200 cubic yards of concrete placed will be allowed to have hand written tickets. The concrete batch tickets shall show batch weights,

aggregate moisture, admixtures used, water, and mix design calculations. A copy of the batch ticket shall be given to the Engineer upon delivery of concrete.

Paragraph 8. of Subsection 1002.03 is void and superseded by the following:

8. Aggregate from a dry pit and coarse aggregate shall be uniformly saturated with water before it is used. The wetting shall begin 24 hours before concrete mixing to allow complete saturation.

Subsection 1002.04 is void and superseded by the following:

1. a. Concrete Mix Design Submittal Class 47BR Concrete:
  - (1) The Contractor shall notify the PCC Engineer a minimum of 35 days, to approve the concrete mix design and schedule the trial mix prior to the start of any concrete operations. The trial concrete mix testing will be performed by NDR Materials & Research.
  - (2) The Contractor shall report the following for proposed concrete mix design:
    - (i) Cover page
      - Contractor Name
      - Project Number
      - Date
      - Location of ready mix or central mix plant
      - Signature of contractor representative
    - (ii) Contractor Name
      - Project Number
      - Date
      - Location of ready mix or central mix plant
      - Date submitted
      - Signature of contractor representative
    - (ii) Material Source Information
      - Cement Manufacturer
      - Type of cement
      - Proposed Admixtures
      - Aggregate pit or quarry location.
      - Percentage of each aggregate constituent within the combined aggregate gradation.
    - (iii) Specific Gravity of each individual aggregate.
    - (iv) Sand Equivalent for dry pit sand-gravel aggregate.
    - (v) Target combined gradation percent passing.
- b. Trial Mix Approval:

For the purpose of this specification, a concrete trial mix shall mean a minimum of 4 cubic yard of concrete that meets the requirements of the approved mix design.

  - (1) The Department will perform the required sampling and testing for the trial mix. The trial mix shall not be paid for directly by the Department and shall be subsidiary to items which direct payment is made. NDR Material & Research will notify the contractor of the following test results:
    - Temperature of concrete at time of sampling
    - Water/cement ratio
    - The air content of plastic concrete, ASTM C 231



- Unit Weight of plastic concrete, ASTM C 138
  - Sieve analysis of combined aggregate (Accumulative Combined-Percent Passing).
  - 7, 14 and 28-day compressive strength test results (in accordance with ASTM C 39). The minimum 28-day compressive strength shall be 3500 psi.
- (2) The PCC Engineer will notify the Contractor of the results for class 47BR concrete approval. Additional trial mixes may be required if unacceptable test results are obtained. The Contractor may choose to submit a new combined aggregate gradation to the PCC Engineer for concrete mix design and trial mix approval. The Contractor may perform additional testing at their discretion and may elect to do a trial mix concurrently with the Department.
2. a. Any combination of aggregates which requires the use of more than the specified maximum pounds (kilograms) of water per 100 pounds (100 kg) of cement to produce a workable mixture with the brand and type of cement to be used will be considered as being unsatisfactory, and all such combinations will be rejected.
3. The quantity of water to be used shall be determined by the Contractor. It shall not be varied without the Engineer's consent.
4. If the concrete mixture is excessively wet causing segregation, excessive bleeding, or any other undesirable condition, the concrete shall be rejected. At the option of the Engineer, slump tests may be performed to determine the consistency.
5. Concrete which has developed initial set before it is consolidated and finished shall be rejected.
6. a. If false set is encountered, the batching operation shall be stopped until the problem is resolved.
- b. Each batch must be mixed or agitated for at least 3 additional minutes after observing the false set and the concrete must be of satisfactory consistency.
7. Compressive strength tests shall be made in accordance with ASTM C 39. Compressive strength cylinders shall be cured in accordance with ASTM C 31 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.
8. Concrete shall be sampled as prescribed in the NDR *Materials Sampling Guide*. Samples shall be taken at the point of placement, never before the discharge from the last conveyance.
9. Aggregate Acceptance, Verification, Sampling and Testing:
- a. The aggregate will be accepted based on the Contractor's testing results except as noted below.
- b. The aggregate verification sampling and testing by the Department will be randomly selected and tested according to subplot sizes in Table 1002.5.

Table 1002.05

Aggregate Class	Lot	Sublot
E and F	4500 tons	1500 tons
A,B and C	6000 tons	2000 tons

- c. The results of Contractor split sample will be verified by the Department's verification tests. Any samples outside of the tolerances as specified according to the Materials Sampling Guide, Section 28 under the *Acceptable Tolerance Limits for Independent Assurance* will result in an Independent Assurance (IA) review of testing and may result in the Department test results being applied.
- d. On any given Lot, if the results of the gradation from the verification test are within Department's specification, the Contractor's results will be used for the entire lot. On any given Lot, if the gradations results from the verification test are outside Department's specification, further investigation will be initiated by the Engineer for that subplot. Any or all of the remaining Department subplot samples may be tested and the Department subplot test results may be applied to the respective subplot and the acceptance will apply.
- e. When verification tests are within testing tolerance but results show a consistent pattern of deviation from the split sample results, the Engineer will exercise one or more of the following:
- Cease production
  - Request additional verification testing
  - Initiate a complete IA review
- f. Independent Assurance (IA) Review of Testing:
- 1) The Contractor shall allow the Department personnel access to the Contractor's laboratory to conduct IA review of technician testing procedures and apparatus. Any deficiencies discovered in the Contractor's testing procedures will be reported to the Contractor and corrected by the Contractor.
  - 2) During IA review, the Department personnel and the Contractor shall split a sample for the purpose of IA testing. The samples selected will be tested in the Department's Branch Laboratory. Any IA test results found to be outside of defined testing tolerances as stated in Paragraph 8.c. of Subsection 1002.04 will be reported to the Contractor. The Contractor shall immediately correct any deficiencies found during the IA review.

If the project personnel and the Contractor cannot reach agreement on the accuracy of the test results, the Department Central Laboratory will be asked to resolve the dispute, which will be final. All dispute resolutions will be in accordance with the Quality Assurance Program requirements in the NDR Materials Sampling Guide.

## **PORTLAND CEMENT (J-15-0812)**

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 ( $\text{Na}_2\text{O}_e$ ) and the potassium oxide ( $\text{K}_2\text{O}$ ) calculated as sodium oxide (equivalent alkali as  $\text{Na}_2\text{O}_e = \text{Na}_2\text{O} + 0.658 \text{K}_2\text{O}$ ).

### **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 or 1PN shall be a Type 1P made exclusively with Class “F” fly ash or Class N as the pozzolan. Type 1P cement shall conform to the requirements as prescribed in ASTM C 595 and the following requirements:
  - a. The pozzolan content shall be  $25 \pm 2$  percent of the cementitious materials by weight.
  - b. The pozzolan shall be Class F fly ash or Class N pozzolan.
  - c. Additional fly ash substitution shall not be allowed with Type 1P cement containing Class F fly ash or Class N pozzolan.

### **1004.03 – Procedures**

1. The Contractor shall provide adequate protection for the cement against dampness.
  - a. Cement shall be hauled or stored in railroad cars, dry bulk trailers or in suitable moisture-proof buildings.
  - b. The use of tarpaulins for the protection of the cement against moisture 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.
5. Cement coming directly from the manufacturer shall not be used until the temperature is 150°F (66°C) or less.

#### **1004.04 – Acceptance Requirements**

1.
  - a. Cements for use on NDR projects must be 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 and Blended Cements. This information can be found on the NDR Materials and Research website.
2. Portland cement chemical and physical test requirements shall conform to NDR Acceptance Policy for Portland and Blended Cements contained in the NDR's Materials Sampling Guide.
3. All cements shall be sampled and tested at the rate as described in the NDR's Materials Sampling Guide.
  - a. NDR will inform the Contractor when a sample is required.
  - b. A sample shall be taken by a Contractor's Certified Portland Cement Sampler and must be under the supervision of NDR certified personnel.
  - c. The sample shall be taken at the plant from a bulk shipment of a rail car, dry bulk trailer, batch plant silo or from the line between the bulk truck and the silo. Upon sampling, NDR will take custody of the sample.
4.
  - a. Blended cements shall be tested according to the provisions of ASTM C 1567. The mortar bars shall be composed of the Type 1PF/1PN cement and sand/gravel from a Platte River Valley source approved by NDR Materials and Research Division. The mortar bars for the ASTM C 1567 shall not exceed 0.10% expansion at 28-days. To accommodate precision within multi-laboratory testing, expansion up to and including 0.13% will be accepted for use. If the expansion is above 0.13%, the material will be noncompliant.
  - b. Noncompliant material from the terminal or mill will be temporarily removed from the Approved Products List pending further investigation.
5. If the noncompliant cement is removed from the Approval Products List, all shipments from the supplier will be held until the investigation of the failing samples have been completed by the NDR Materials and Research Division. These procedures shall be in accordance with NDR Acceptance Policy for Portland and Blended Cements in the NDR's Material Sampling Guide

## **WATER FOR CONCRETE (J-15-0512)**

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 using 1P under the following conditions:
  - a. Wash water shall conform to the requirements in NDR's Material Sampling Guide.
  - 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.

## **SECTION 1007 -- CHEMICAL ADMIXTURES (J-15-0211)**

Section 1007 in the Standard Specifications is void and superseded by the following:

### **1007.01 -- Description**

1. Admixtures are materials added to Portland cement concrete to change characteristics such as workability, strength, imperviousness, freezing point, and curing.
2. The Department's concrete admixture types are:
  - a. Type A - Water-Reducing Admixture - An admixture that reduces the quantity of mixing water required to produce concrete of a given slump.
  - b. Type B - Retarding Admixture - An admixture that slows the setting of concrete.
  - c. Type C - Accelerating Admixture - An admixture that speeds the setting and early strength development of concrete.
  - d. Type D - Water-Reducing and Retarding Admixture - An admixture that reduces the quantity of mixing water required to produce concrete of a given slump and slows the setting of concrete.
  - e. Type E - Water-Reducing and Accelerating Admixture - An admixture that reduces the quantity of mixing water required to produce concrete of a given slump and speeds the setting and early strength development of concrete.
  - f. Type F - Water-Reducing, High Range Admixture - An admixture that reduces the quantity of mixing water required to produce concrete of a given slump by 12 percent or greater.
  - g. Type G - Water-Reducing, High Range and Retarding Admixture - An admixture that reduces the quantity of mixing water required to produce concrete of a given slump by 12 percent or greater and slows the setting of concrete.
  - h. Air-Entraining - An admixture that encapsulates air in the concrete.
  - i. Lithium Nitrate – An admixture used to control the Akali-Silica-Reaction (ASR) in concrete.

### 1007.02 -- Material Characteristics

1. Type A through G admixtures shall meet the requirements in ASTM C 494.
2. Air-entraining admixtures shall meet the requirements in ASTM C 260.
3. Use of admixtures other than those cited may be requested by the Contractor.
4. Admixtures shall not contain more than 1 percent of chlorides calculated as calcium chloride.
5. Admixtures shall be used at the manufacturer's recommended dosage rates.
6. The air-entraining admixture characteristics shall produce concrete with satisfactory workability and a total air content as prescribed in Table 1002.02.
7.
  - a. When using the Lithium Nitrate admixture, the Contractor shall submit to the Engineer:
    - (i) A five pound sample of cement that will be used on the project.
    - (ii) The Manufacturer's method for determining the recommendation for the required dose rate based on the equivalent alkali content.
    - (iii) Water content of the Lithium Nitrate admixture solution.
  - b. The Engineer will report the equivalent alkali content to the Contractor. The Contractor shall use the reported equivalent alkali content to determine the required dose rate based on the manufacturer's recommendation.

### 1007.03 -- Procedures

1. 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.
  - a. The admixture is then poured over the surface of the concrete and mixed for at least 5 minutes.
  - b. 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.
  - c. When Lithium Nitrate is used, the portion of the admixture that is water will 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.
  - a. Approved chemical admixtures are shown on the NDR Approved Products List.
  - b. Admixture approval shall be based upon annual certifications and certified test results submitted to the NDR Materials and Research Division.
- 2. The admixture must be essentially identical in concentration, composition, and performance to the admixture tested for certification.
- 3. 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 AND CALCINED NATURAL POZZOLAN (J-15-0512)**

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

#### **1008.02 – Material Characteristics**

- 1. All fly ash and calcined clay natural pozzolan 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, Class F, and Class N 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  $\text{Na}_2\text{O}_e$ .
- 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/ft<sup>2</sup> (0.55 kg/m<sup>2</sup>) 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**

Subsection 1033.01 and Subsection 1033.02, Paragraphs 1. 2. and 3. of the Standard Specifications is void and superseded by the following:

#### **1033.01 – Description**

1. This combined aggregate gradation 47B Revised (47BR) is to optimize aggregate blends utilizing more locally available materials.
2. Mineral aggregates shall be crushed rock, broken stone, gravel, sand-gravel, crushed gravel, coarse sand, fine sand, crushed limestone, dolomite, granite, quartzite, or

other ledge rock approved for the intended purpose by the Engineer. These materials shall be composed of clean, hard, durable, and uncoated particles.

3. Achieving a uniform gradation for Class R may require the use of two or more different aggregates. It is the responsibility of the contractor to consider additional material characteristics such as, but not limited to particle shape, cubicity, angularity, etc. when designing a mix.

**1033.02 -- Material Characteristics**

**1. Sampling and Testing Procedures:**

The Department will perform the sampling and testing in accordance with Table 1033.01. The material must be tested and approved by the Department for all material source locations and quarries prior to use.

**Table 1033.01**

<b>Sampling and Testing Procedures</b>	
<b>Procedure</b>	<b>Method</b>
Sampling	NDR T 2
Sieve Analysis	NDR T 27
Clay Lumps, Shale, and Soft Particles	NDR T 504
Abrasion	AASHTO T 96
Freeze and Thaw Soundness	NDR T 103
Specific Gravity and Absorption (course aggregate)	AASHTO T 85
Specific Gravity and Absorption (fine aggregate)	AASHTO T 84
Total Evaporable Moisture Content of Aggregates by Drying	AASHTO T 255
Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	AASHTO T 176
Sodium Sulfate Soundness	AASHTO T 104
Calcium Carbonate	NDR C 25
Organic Impurities	AASHTO T 21
Mortar-Making Properties	AASHTO T 71
Reducing Field Samples of Aggregate to Testing Size	AASHTO T 248

**2. Aggregate Properties:**

- a. Aggregates shall be free of dust, soft or flaky particles, loams, alkali, organic matter, paper, wood, or other deleterious matter as determined by the Engineer. The Department may reject a pit or aggregate stockpile because of deleterious material.
- b. Dolomite as herein defined is a magnesium limestone containing calcium carbonate and magnesium carbonate in approximately a 4 to 3 ratio.
- c. The calcium carbonate content of limestone shall be at least 80% (computed as CaCO<sub>3</sub> from the value determined for CaO).

- d. Fine sand shall have at least 95% of its particles pass the No. 10 (2.0 mm) sieve and no more than 25% pass the No. 200 (75  $\mu$ m) sieve. This definition applies to the sodium sulfate soundness test.
- e. Once an aggregate's soundness and abrasion quality has been determined, additional quality testing for soundness and abrasion loss will be at the Engineer's discretion.
- f. Sand-Gravel Aggregate:
  - (1) Aggregate shall be washed and composed of clean, hard, durable, and uncoated particles.
  - (2) Aggregates produced from wet pits by pumping must adequately be washed by means approved by the Department.
  - (3) Aggregates from a dry pit shall be washed and have a sand equivalent not less than 90 percent (in accordance with AASTHO T 176).
    - (i) If the Sand Equivalent is less than 90 percent, the Engineer may elect to stop aggregate production until such a time ASTM C 109 has been completed. The aggregate, when subjected to the test for mortar-making properties, shall produce a mortar having a compressive strength at the age of 7 days equal to or greater than that developed by mortar of the same proportions and consistency made of the same cement and aggregate after the aggregate has been washed to a sand equivalent greater than 90 percent. Materials failing to produce equal or greater strength shall be unacceptable.
  - (4) Aggregate for concrete shall have a soundness loss of not more than 10% by weight at the end of 5 cycles using Sodium Sulfate Soundness test AASHTO T 104.
  - (5) The weight of the aggregate shall not contain more than 0.5% clay lumps.
  - (6) Aggregate subjected to the colorimetric test for organic impurities which produces a color darker than the standard shall be further tested for its mortar-making properties (in accordance with AASHTO T 71). The Engineer may elect to stop aggregate production until such a time AASHTO T 71 testing has been completed.
    - (i) Aggregate, when subjected to the test for mortar-making properties, shall produce a mortar having a compressive strength at the age of 7 days equal to or greater than that developed by mortar of the same proportions and consistency made of the same cement and aggregate after the aggregate has been treated in a 3% solution of sodium hydroxide. Materials failing to produce equal or greater strength shall be unacceptable, except when determined to be acceptable under the provisions of Subsection 105.03.
  - (7) Aggregate shall meet the requirement in Tables 1033.02A, B and 1033.03C.

**Table 1033.02A**

<b>Fine Aggregate for Concrete Gradation Limits</b>						
	<b>Class A Aggregate</b>		<b>Class B Aggregate</b>		<b>Sand-Gravel Aggregate for Concrete Class C Aggregate</b>	
<b>Percent Passing</b>						
<b>Sieve Size</b>	<b>Target Value</b>	<b>Tolerance</b>	<b>Target Value</b>	<b>Tolerance</b>	<b>Target Value</b>	<b>Tolerance</b>
1 inch (25 mm)	---	---	100	None	100	---
3/8 inch (9.50 mm)	100	None	---	---	---	---
No. 4 (4.75 mm)	96	±4	87	±10	66	±22
No. 10 (2.00 mm)	77	±13	60	±10	37	±13
No. 30 (600 µm)	25	±15	28	±12	12	±8
No. 200 (75 µm)	1.5	±1.5	1.5	±1.5	1.5	±1.5

**Table 1033.02B**

<b>Aggregate Classes and Uses</b>	
<b>Aggregate</b>	<b>Concrete Description</b>
A	Overlay Concrete S5
B	47BD, and PR 1, PR 3
C	BX

g. Ledge Rock Aggregate:

- (1) Aggregate shall consist of Limestone, Quartzite, Dolomite and Granite composed of clean, hard, durable, and uncoated particles.
- (2) The percent of clay lumps, shale, or soft particles shall not exceed the following amounts:

Clay Lumps	0.5%
Shale .....	1.0%
Soft Particles.....	3.5%

- (3) Any combination of clay lumps, shale, and soft particles shall not exceed 3.5%.
- (4) Aggregate for concrete shall be free of coatings that will inhibit bond and free of injurious quantities of loam, alkali, organic matter, thin or laminated

pieces, chert, or other deleterious substances as determined by the Engineer.

- (5) Aggregate for concrete shall not have a soundness loss greater than 8.0% by weight at the completion of 16 cycles of alternate freezing and thawing.
- (6) Aggregates for concrete shall have a Los Angeles Abrasion loss percentage of not more than 40.
- (7) All fractions passing the No.4 (4.75 mm) sieve shall meet quality requirement of soundness loss of not more than 10% by weight at the end of 5 cycles using sodium sulfate solution.
- (8) Aggregate shall meet the requirements in Tables 1033.03A, B, and C.

**Table 1033.03A**

<b>Coarse Aggregate for Concrete Gradation Limits</b>				
<b>Class E Aggregate</b>			<b>Class F Aggregate</b>	
<b>Percent Passing</b>				
<b>Sieve Size</b>	<b>Target Value</b>	<b>Tolerance</b>	<b>Target Value</b>	<b>Tolerance</b>
1 1/2 inch (375 mm)	100	---	---	---
1 inch (25 mm)	100	- 8	---	---
3/4 inch (19.0 mm)	78	±12	100	0
1/2 inch (12.5 mm)	---	---	98	±2
3/8 inch (9.50 mm)	30	±15	65	±25
No. 4 (4.75 mm)	6	±6	17	±13
No. 10 (2.00 mm)	---	---	4	±4
No. 20 (850 µm)	2*	±2	---	---
No. 200 (75 µm)	1.5	±1.5	1.5	±1.5

\* The percent passing may be increased to 3±3 provided no more than 1.5% is passing the No. 200 (75 µm) sieve when washed.

**Table 1033.03B**

<b>Aggregate Classes and Uses</b>	
<b>Aggregate Class</b>	<b>Concrete Description</b>
E	47BD, PR 1, and PR 3
F	Overlay Concrete SF

h. Combined Aggregates:

- 1. The Contractor shall design and meet the specification requirements. It is the contractor's responsibility to provide desirable mix properties; such as, but not limited to, workability, resistance to segregation, stable air void system, good finishing properties and good consolidation properties.

2. The combined blended aggregate shall meet the gradation requirement in Table 1033.03C.

**Table 1033.03C**

<b>Class R - Combined Aggregate Gradation Limits (Percent Passing)</b>									
<b>Sieve Size</b>	<b>1 ½ inch</b>	<b>1 inch</b>	<b>¾ inch</b>	<b>No.4</b>	<b>No.8</b>	<b>No.16</b>	<b>No.30</b>	<b>No. 50</b>	<b>No.200</b>
Minimum	-	92.0	85.0	45.0	31.0	17.0	8.0	2.0	0
Maximum	100	100	98.0	65.0	48.0	41.0	30.0	8.0	3.0

**Table 1033.03D**

<b>Aggregate Classes and Uses</b>	
<b>Aggregate Class</b>	<b>Concrete Description</b>
R	47BR and 47BR-HE

**3. Aggregate Production and Testing:**

- a. Any change greater than 3% in the original verified constituent percentage of the combined aggregates gradation will be considered non-compliant. Any change of the combined gradation targets must remain within the Combined Aggregate Gradation Limits in Table 1033.3C. **The Contractor shall resubmit a new mix design if the material is deemed non-compliant in accordance with Subsection 1002.04, Paragraph 1.**
- b. The blended gradation tolerance ranges from the approved mix design are established in Table 1033.03E.
- (i) The Contractor shall assume the responsibility to cease operations when the specifications are not met. Production shall not be started again without the approval of the Engineer.

**Table 1033.03E Blended Aggregate Production Tolerances**

<b>Sieve Size</b>	<b>Tolerances</b>
No. 4 or greater (4.75 mm or greater)	<b>± 5%</b>
No. 8 to No. 30 (2.36 to 600 µm)	<b>± 4%</b>
No. 50 (300 µm)	<b>± 3%</b>
Minus No. 200 (75 µm)	<b>± 1%</b>

- c. Coarse aggregate and aggregate from a dry pit shall be uniformly saturated with water before it is used. The wetting shall begin 24 hours before concrete mixing to allow complete saturation.



## SLAG CEMENT (J-15-0512)

### Description

Slag cement shall meet the requirements of ASTM C 989, Grade 120.

### Material Characteristics

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

### Procedures

1. Slag cement 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 Slag cement 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 Slag cement.
  - 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 Slag Cement meets the Specification Requirements of the Nebraska Department of Roads for Slag Cement, 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 Slag cement.

5. Slag cement 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 Slag cement will be on the NDR Approved Products List.
  - b. Slag cement may be added to the NDR Approved Products List if it is in conformance with the NDR Acceptance Policy for Slag cement. 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 Slag cement be held in special silos or bins at the plant or some facility under control of the company furnishing the Slag 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.
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 Slag cement from the supplier will again continue to meet contract requirements.

### **DOWEL BARS (J-15-0812)**

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 NDR Approved Products List, dipped in asphalt or paraffin, or greased in accordance with the specified requirements as shown in the Standard Plans.

**EPOXY COATED REINFORCING STEEL  
(J-15-0509)**

Paragraph 5. of Subsection 1021.03 in the Standard Specifications is void and superseded by the following:

5. In order to protect the coated reinforcement from damage, the Contractor shall use padded or nonmetallic slings and padded straps. Bundled bars shall be handled in a manner which will prevent excessive sagging of bars which will damage the coating. If circumstances require storing coated steel reinforcing bars outdoors for more than two months, protective storage measures shall be implemented to protect the material from sunlight, salt spray and weather exposure. Coated steel reinforcing bars, whether individual bars or bundles of bars, or both, shall be covered with opaque polyethylene sheeting or other suitable opaque protective material. For stacked bundles, the protective covering shall be draped around the perimeter of the stack. The covering shall be secured adequately, and allow for air circulation around the bars to minimize condensation under the covering. Coated steel reinforcing bars, whether individual bars or bundles of bars, or both, shall be stored off the ground on protective cribbing. The bundled bars shall not be dropped or dragged. If, in the opinion of the Engineer, the coated bars have been extensively damaged, the material will be rejected. The Contractor may propose, for the approval of the Engineer, alternate precautionary measures.

**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: 4544A

PROJECT(S): RD-14-1(1017)

CALL ORDER NO. : 405

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 GROUP 3 CONCRETE PAVEMENT						
0001	0001.90 SIGN DAY	1160.000 EACH	.		.	
0002	0030.30 MOBILIZATION	LUMP	LUMP		.	
0003	1107.00 REMOVE WALK	590.000 SY	.		.	
0004	1113.00 REMOVE STEP	1.000 EACH	.		.	
0005	1136.03 REMOVE STONE SIGN	1.000 EACH	.		.	
0006	3016.21 CONCRETE CLASS 47B-3000 SIDEWALKS	714.000 SY	.		.	
0007	3016.39 DETECTABLE WARNING PANEL	536.000 SF	.		.	
0008	4093.80 WALL MATERIALS	582.000 SF	.		.	
0009	4095.15 COMPACTED EARTH LEVELING PAD	213.000 LF	.		.	
0010	4103.06 CLASS 47B-3000 CONCRETE FOR STEP	2.200 CY	.		.	

NEBRASKA DEPARTMENT OF ROADS

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DATE: 05/24/13

SCHEDULE OF ITEMS

CONTRACT ID: 4544A

PROJECT(S): RD-14-1(1017)

CALL ORDER NO. : 405

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0011	4165.00 HANDRAIL FOR STEP	26.340 LF	.		.	
0012	6406.00 PEDESTRIAN HANDRAIL	291.800 LF	.		.	
0013	8091.03 SELECT GRANULAR BACKFILL FOR RETAINED EARTH STRUCTURE	49.000 CY	.		.	
0014	L010.00 SODDING	178.000 SY	.		.	
0015	W600.03 ADJUST VALVE BOX TO GRADE	2.000 EACH	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	