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

NEBRASKA DEPARTMENT OF ROADS
LETTING DATE : April 17, 2003

CALL ORDER: F06 CONTRACT ID: 3368

CONTROL NO./SEQ. NO.: 31368 /000 PROJECT NO.: EACNH-30-5(124)

TENTATIVE START DATE: 06/23/03 CONTRACT TIME: 90 WORKING DAYS

LOCATION: ON US-30, 5TH ST. - 8TH ST. IN COLUMBUS.
IN COUNTY: PLATTE

BIDDER

GROUP 1 GRADING
GROUP 3 CONCRETE PAVEMENT
GROUP 4 CULVERTS
GROUP 4A SANITARY SEWER AND WATER MAIN
GROUP 8B ELECTRICAL
GROUP 10 GENERAL ITEMS

THIS PROPOSAL CONTAINS A DBE GOAL OF 5.0 %.

SEE SPECIAL PROVISIONS FOR GROUP TIES

NOTES

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

THE NUMBER OF _____ CONTRACTS WHICH WILL BE ACCEPTED IN THIS LETTING IS LIMITED TO ____.

NOTICE TO ALL BIDDERS

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

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

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

LETTING QUESTIONS

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

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

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

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Execu-

tive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. **General:**

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more

than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. **Classification:**

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. **Payment of Fringe Benefits:**

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. **Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:**

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for

the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. **Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. **Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. **Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. **Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. **Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. **Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. **Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of

the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be 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.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that $10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. **Instructions for Certification - Primary Covered Transactions:**

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. **Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE

Economic Area	Goal %
103 Sioux City, IA:	
SMSA Counties:	
7720 Sioux City, IA-NE . . . . . IA Woodbury, NE Dakota	1.9
Non-SMSA Counties . . . . . IA Cherokee, IA Crawford, IA Ida, IA Monona, IA O'Brien, IA Plymouth, IA Sioux, NE Antelope, NE Cedar, NE Cuming, NE Dixon, NE Knox, NE Madison, NE Pierce, NE Stanton, NE Thurston, NE Wayne, SD BonHomme, SD Clay, SD Union, SD Yankton	1.2
142 Lincoln, NE:	
SMSA Counties:	
4360 Lincoln, NE . . . . . NE Lancaster	2.8
Non-SMSA Counties . . . . . NE Butler, NE Fillmore, NE Gage, NE Jefferson, NE Johnson, NE Nemaha, NE Otoe, NE Pawnee, NE Polk, NE Richardson, NE Saline, NE Seward, NE Thayer, NE York	1.9
143 Omaha, NE:	
SMSA Counties:	
5920 Omaha, NE-IA . . . . . IA Pottawattamie, NE Douglas, NE Sarpy	7.6
Non-SMSA Counties . . . . . IA Adams, IA Audubon, IA Cass, IA Fremont, IA Harrison, IA Mills, IA Montgomery, IA Page, IA Shelby, IA Taylor, NE Burt, NE Cass, NE Colfax, NE Dodge, NE Platte, NE Saunders, NE Washington	5.3
144 Grand Island, NE:	
Non-SMSA Counties . . . . . NE Adams, NE Arthur, NE Blaine, NE Boone, NE Boyd, NE Brown, NE Buffalo, NE Chase, NE Cherry, NE Clay, NE Custer, NE Dawson, NE Dundy, NE Franklin, NE Frontier, NE Furnas, NE Garfield, NE Gosper, NE Grant, NE Greeley, NE Hall, NE Hamilton, NE Harlan, NE Hayes, NE Hitchcock, NE Holt, NE Hooker, NE Howard, NE Kearney, NE Keith, NE Keya Paha, NE Lincoln, NE Logan, NE Loup, NE McPherson, NE Merrick, NE Nance, NE Nuckolls, NE Perkins, NE Phelps, NE Red Willow, NE Rock, NE Sherman, NE Thomas, NE Valley, NE Webster, NE Wheeler	1.4
145 Scottsbluff, NE:	
Non-SMSA Counties . . . . . NE Banner, NE Box Butte, NE Cheyenne, NE Dawes, NE Deuel, NE Garden, NE Kimball, NE Morrill, NE Scotts Bluff, NE Sheridan, NE Sioux, WY Goshen	5.3

GOALS AND TIMETABLES FOR FEMALE PARTICIPATION IN EACH TRADE

Timetables	Goals (Percent)
From April 1, 1980 until further notice	6.9

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is by county.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)

1. As used in these specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

   c. "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   d. "Minority" includes:

      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

      (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

      (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice, which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the **Federal Register** in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

   a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

   d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

   f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

   g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and dispositon of the subject matter.

   h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

   Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

   Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

The contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the

work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Supplemental Reporting Requirements

A. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate the number of minority and non-minority group members and women employed in each work classification on the project.

B. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State Highway agency and the Federal Highway Administration.

C. The Contractor and each covered subcontractor will submit to the State Highway agency, for the month of July, for the duration of the project, a report (Form PR-1391) "Federal-aid Highway Construction Contractors Annual EEO Report), indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. If on-the-job training is being required by "Standard Federal Equal Employment Opportunity Specifications" the contractor will be required to furnish (Form FHWA 1409) "Federal-aid Highway Construction Contractor's Semi-Annual Training Report".

Equal Employment Opportunity Policy

The contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.

GENERAL DECISION **NE020002** 03/01/02 NE2
General Decision Number **NE020002**

Superseded General Decision No. NE010002

State: Nebraska

Construction Type:
HEAVY
HIGHWAY

County(ies):

ADAMS	FURNAS	NANCE
ANTELOPE	GAGE	NEMAHA
ARTHUR	GARDEN	NUCKOLLS
BANNER	GARFIELD	OTOE
BLAINE	GOSPER	PAWNEE
BOONE	GRANT	PERKINS
BOX BUTTE	GREELEY	PHELPS
BOYD	HALL	PIERCE
BROWN	HAMILTON	PLATTE
BUFFALO	HARLAN	POLK
BURT	HAYES	RED WILLOW
BUTLER	HITCHCOCK	RICHARDSON
CEDAR	HOLT	ROCK
CHASE	HOOKER	SALINE
CHERRY	HOWARD	SAUNDERS
CHEYENNE	JEFFERSON	SCOTTS BLUFF
CLAY	JOHNSON	SEWARD
COLFAX	KEARNEY	SHERIDAN
CUMING	KEITH	SHERMAN
CUSTER	KEYA PAHA	SIOUX
DAKOTA	KIMBALL	STANTON
DAWES	KNOX	THAYER
DAWSON	LANCASTER	THOMAS
DEUEL	LINCOLN	THURSTON
DIXON	LOGAN	VALLEY
DODGE	LOUP	WAYNE
DUNDY	MADISON	WEBSTER
FILLMORE	MCPHERSON	WHEELER
FRANKLIN	MERRICK	YORK
FRONTIER	MORRILL	

HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension & spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; other major bridges)

SAUNDERS COUNTY (WEST OF HWY. #109 EXTENDED NORTH AND SOUTH TO THE COUNTY LINE)

Modification Number	Publication Date
0	03/01/2002

COUNTY(ies):

ADAMS	FURNAS	NANCE
ANTELOPE	GAGE	NEMAHA

ARTHUR	GARDEN	NUCKOLLS
BANNER	GARFIELD	OTOE
BLAINE	GOSPER	PAWNEE
BOONE	GRANT	PERKINS
BOX BUTTE	GREELEY	PHELPS
BOYD	HALL	PIERCE
BROWN	HAMILTON	PLATTE
BUFFALO	HARLAN	POLK
BURT	HAYES	RED WILLOW
BUTLER	HITCHCOCK	RICHARDSON
CEDAR	HOLT	ROCK
CHASE	HOOKER	SALINE
CHERRY	HOWARD	SAUNDERS
CHEYENNE	JEFFERSON	SCOTTS BLUFF
CLAY	JOHNSON	SEWARD
COLFAX	KEARNEY	SHERIDAN
CUMING	KEITH	SHERMAN
CUSTER	KEYA PAHA	SIOUX
DAKOTA	KIMBALL	STANTON
DAWES	KNOX	THAYER
DAWSON	LANCASTER	THOMAS
DEUEL	LINCOLN	THURSTON
DIXON	LOGAN	VALLEY
DODGE	LOUP	WAYNE
DUNDY	MADISON	WEBSTER
FILLMORE	MCPHERSON	WHEELER
FRANKLIN	MERRICK	YORK
FRONTIER	MORRILL	

SUNE2002E 06/16/1999

	Rates	Fringes
CARPENTER	13.30	
CEMENT FINISHER	12.50	
ELECTRICIAN	11.90	
FLAGGER	7.60	
FORM SETTER	10.80	
LABORER	8.30	
MANHOLE BUILDER	10.20	
MECHANIC	12.95	
PAINTER	8.35	
PILE DRIVER LEADPERSON	8.35	
POWER EQUIPMENT OPERATORS:		
Asphalt distributor	9.65	
Asphalt paving machine	12.35	
Asphalt paving machine (screed)	10.45	
Asphalt roller, self-propelled	11.20	
Backhoe excavator (track type)	12.55	
Concrete finishing machine or slip form paver	12.80	
Concrete saw operator	11.20	
Concrete cure machine	9.20	
Concrete texture machine	9.20	
Bulldozer or push tractors:		
Less than 115 drawbar h.p.	11.60	
115 drawbar h.p. and over	12.80	
Material stockpiler	10.20	
Motor grader (finisher)	13.15	
Motor grader (rough)	10.90	

Power broom operator	9.15
Roller or compactor, earthwork, self-propelled	10.05
Scraper	12.40
Traveling plant stabilization	11.60
Water tankers:	
Under 6000 gallons	9.65
6000 gallons and over	11.20
All purpose spreader	9.50
Clamshell, dragline, crane, pile driver/shovel	13.60
Dredge pump	9.50
Front end loaders:	
4 cu. yds. or less	11.40
Over 4 cu. yds.	12.10
Hydrohammer	9.60
Loader/backhoe (rubber-tired)	9.85
Power grader machine (trimmer & profiler)	12.80
Skid steer loader	9.50
Tractor (farm type)	9.50
Trenching machine	9.85
Stationary plant (base or stabilization)	11.75
Stationary plant (asphalt or concrete)	12.75
Crusher (including those with integral screening plant)	11.75
TRUCK DRIVERS:	
Single axle	8.40
Tandem axle	9.65
Semi-trailer or lowboy	10.85
Transit mix	9.65
WELDER	12.25

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations

indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

SPECIAL PROVISIONS
FOR
FEDERAL AID
PROJECT NO. EACNH-30-5(124)

GENERAL CONDITIONS

Sealed bids for the work contemplated in this proposal form will be received at the office of the Nebraska Department of Roads in Room 104 of the Central Office Building at 1500 Highway 2 at Lincoln, Nebraska, on April 17, 2003, until 1:30 P.M.

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

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

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

The Required Contract Provisions, Form FHWA 1273, (Rev. 4-93), and the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity and Standard Federal Equal Employment Opportunity Construction Contract Specifications dated November 3, 1980, are attached to and are a part of this proposal form. The Standard Labor Classifications and Descriptions for Highway Construction dated September 1, 1996, are made a part of these special provisions, through reference.

The General Wage Decision issued under the Davis-Bacon and Related Acts is attached to and is a part of this proposal form.

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

GROUPS 1, 3, 4, 4A, 8B AND 10 ARE TIED TOGETHER AND BIDDING PROPOSAL FORMS FOR THIS WORK WILL BE ISSUED AND A CONTRACT AWARDED TO A CONTRACTOR WHO IS QUALIFIED FOR CONCRETE PAVEMENT.

DISADVANTAGED BUSINESS ENTERPRISES
(S1-8-0801)

A. Policy

The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 shall have a “level playing field” and equal opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this contract. Consequently, the disadvantaged business requirements of 49 CFR Part 26 are hereby made a part of and incorporated by this reference into this contract.

B. Disadvantaged Business Enterprises Obligation

The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 have a "level playing field" and equal opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, the Contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that disadvantaged business enterprises have a "level playing field" and equal opportunity to compete for and perform contracts. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of FHWA assisted contracts.

Failure of the Contractor to carry out the requirements set forth above shall constitute breach of contract and, after the notification of the FHWA, may result in termination of the agreement or contract by the State or such remedy as the State deems appropriate.

USE OF DISADVANTAGED BUSINESS ENTERPRISES (S1-9-0801)

I. INTRODUCTION: The specific requirements of the use of Disadvantaged Business Enterprises, hereinafter referred to as DBEs, are set forth in these Required Contract Provisions and are imposed pursuant to 49 CFR Part 26.

A. Definitions:

1. Whenever "NDR" is used within these special provisions it shall refer to the Nebraska Department of Roads.

2. For the purpose of these special provisions, the following definitions will apply:

   a. Disadvantaged Business Enterprise (DBE) means a for profit small business concern, as defined pursuant to Section 3 of the Small Business Act and Small Business Administration regulations implementing it, which is independently owned and controlled by one or more socially and economically disadvantaged individuals.

   b. Owned and controlled means a business:

      (1) Which is at least 51 percent (51%) owned by one or more socially and economically disadvantaged individuals or women, or, in the case of a public owned business, such individuals must own at least 51 percent (51%) of each class of voting stock and 51 percent of the aggregate of all stock outstanding.

      (2) Whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged owners.

   c. Socially and economically disadvantaged individual means a person who is a citizen (or lawful permanent resident) of the United States, and who is:

(1) "African American," which includes persons having origins in any of the Black racial groups of Africa;

(2) "Hispanic American," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;

(3) "Native American," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians;

(4) "Asian-Pacific American," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kirbati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;

(5) "Subcontinent Asian American," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;

(6) A Woman;

(7) Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

II. DBE CONTRACT GOALS:

A. DBE goals are set by the NDR for specific contracts. The specific DBE contract goals are stated on the Required DBE Participation Form included in the proposal. The Contractor must meet or exceed the goal or demonstrate good faith efforts to meet the goal. Requirements for submission of DBE good faith effort information are contained in Section IV of these special provisions.

B. A current list of certified DBE Contractors will be posted on the NDR website (www.dor.state.ne.us). Only the DBE firms whose names appear on the list will be considered in meeting the contract goal for this project. The DBE firms will be considered only for the items of work listed under the heading, "Nature of Business". DBE firms may request to have additional items of work added to their "Nature of Business"; however, no items of work will be added after 5:00 p.m., ten (10) calendar days preceding the letting.

C. Contractors shall, as a minimum, seek DBE subcontractors in the same geographic area in which they seek subcontractors generally for a given solicitation. If the contractor cannot meet the DBE goals using DBEs from the normal area, the contractor will expand its search to a reasonably greater geographic area.

D. Contractors are required to make good faith efforts to replace a DBE subcontractor that is unable to perform with another DBE. In order to ensure compliance with this

requirement, any substitution of DBE subcontractors after execution of the contract must be approved by the NDR.

E. Contractors are also encouraged to use the services of banks owned and controlled by minorities and women; however, this will not be counted toward the contract DBE goal.

III. MEETING DBE CONTRACT GOAL CRITERIA: The award of the contract will be made upon satisfaction of the requirements of these special provisions. The apparent low bidder must either meet or exceed the DBE goals for the contract or satisfy the NDR that good faith efforts were made to meet the goals.

A. REQUIRED DBE PARTICIPATION INFORMATION: All bidders are required to submit to the NDR the "Required DBE Participation Form" with their bid proposal on the form provided in this proposal.

B. THE REQUIRED DBE PARTICIPATION FORM SHALL INCLUDE:

1. The names and addresses of the DBE subcontractors that will actually participate in meeting the contract goal.

2. A complete description (by item number or group, etc.) of the work each named DBE subcontractor will perform.

3. The dollar amount of participation by each named DBE subcontractor.

4. Written and signed documentation from the bidder of commitment to use a DBE subcontractor whose participation it submits to meet a contract goal.

5. The apparent low bidder must submit written and signed confirmation from each DBE that it is participating in the contract as provided in the prime contractor's commitment, BY 5:00 P.M. ON THE FIRST WEDNESDAY FOLLOWING THE LETTING. IF THE WEDNESDAY FALLS ON A STATE HOLIDAY, THE TIME WILL BE EXTENDED UNTIL 10:00 A.M. ON THE NEXT OFFICIAL WORKING DAY OF THE NEBRASKA DEPARTMENT OF ROADS.

6. If the contract goal is not met, evidence of good faith efforts.

C. THE PROPOSAL WILL NOT BE READ IF THE "REQUIRED DBE PARTICIPATION FORM" IS NOT INCLUDED.

IF NO DBE PARTICIPATION IS INTENDED, THE FORM MUST INDICATE THAT GOOD FAITH EFFORT DOCUMENTATION WILL BE SUBMITTED. A BLANK FORM THAT IS SIGNED WILL BE INTERPRETED AS MEANING NO DBE PARTICIPATION IS INTENDED AND WILL BE READ.

LISTING OPTIONS AND/OR ALTERNATES FOR DBE SUBCONTRACTORS AND/OR ITEMS OR GROUPS OF WORK TO BE PERFORMED IS NOT ALLOWED, AND WILL CAUSE THIS BID TO BE DECLARED NON-RESPONSIVE.

REQUIRED DBE INFORMATION SHALL NOT BE SUBJECT TO REVISION AFTER BIDS ARE OPENED.

D. The information submitted on the DBE Participation Form will be verified by the NDR. Errors in addition will be treated in accordance with current NDR specifications and procedures.

E. If the use of non-certified firms or the use of DBE firms not certified for the type of work indicated results in under achievement of the goal, the bid will be declared non-responsive.

F. If, at any time prior to execution of the contract, previously undetected errors result in under-achievement of the goal, the low bidder, along with the other bidders on the project, will be given 5 days from receipt of notification by the NDR to submit good faith information as outlined in Section IV of these specifications.

G. REQUIRED BIDDERS LIST INFORMATION: All bidders must provide to the NDR the identity of all firms who bid or quote subcontracts on DOT-assisted projects, including both DBEs and non-DBEs. This information must be provided with the bid proposal on a form provided to the contractors by the NDR Contracts Office.

IV. GOOD FAITH DETERMINATION: It is the low bidder's responsibility to meet the DBE contract goals or to provide sufficient information to enable the NDR to determine that, prior to bidding, the low bidder actually made good faith efforts to meet such goals.

A. The NDR will, in the "Apparent Low Bidder" listing (available 24 hours after bid opening) identify all projects which contain a DBE goal. The listing will indicate the apparent low bidder's status in attaining the goal, i.e. "Contractor Meets DBE Goal," or "Contractor Requires Good Faith Determination."

B. If the low bidder's “Required DBE Participation Form” submitted with the bid indicates the DBE contract goal will be met, and the NDR concurs, the contract will proceed toward award and the low bidder need not submit any further DBE information prior to award.

C. Good Faith Information Submittal: If the contract DBE goals have not been met, the "Apparent Low Bidders" listing will reflect that the apparent low bidder is required to submit good faith effort information. Complete and accurate documented information to support a good faith efforts determination MUST BE SUBMITTED BY 5:00 P.M. ON THE FIRST WEDNESDAY FOLLOWING THE LETTING. IF THE WEDNESDAY FALLS ON A STATE HOLIDAY, THE TIME WILL BE EXTENDED UNTIL 10:00 A.M. ON THE NEXT OFFICIAL WORKING DAY OF THE NEBRASKA DEPARTMENT OF ROADS.

D. Any other bidder on the contract who requires a good faith effort submittal must also follow the time frames set forth in "C" above if they wish to be considered for award of the contract. Any bidder who does not meet the submittal deadlines, WILL BE NOT BE ELIGIBLE FOR AWARD OF THE CONTRACT. (The only exception is a case where the apparent low bidder who met the goal initially is declared ineligible for the award for reasons other than DBE goal attainment.) If this results in a new apparent low bidder who did not initially meet the goal, ALL other bidders on the contract indicating good faith effort will be notified, and given 5 days after receipt, to submit complete information to support their good faith efforts. Bidders are cautioned by the NDR to retain documentation of their good faith efforts until an award is made, or all bids are rejected.

E. The NDR will review all information submitted to determine whether the apparent low bidder actually made good faith efforts to meet the contract goal. The decision as to whether the good faith efforts are acceptable will be made jointly by a committee

comprised of the NDR' Highway Civil Rights Coordinator, the Contracts Letting Manager, and the Legal Counsel.

A NDR determination that the low bidder's information failed to show acceptable good faith efforts shall be cause for declaring the low bid non-responsive. In making a determination, information submitted by other bidders will be considered. If the low bid is declared non-responsive, the above procedure will be applied to the next lowest bid, and other higher bids if necessary, until a bid is found that meets the goal, or establishes that good faith efforts were made to meet it. NDR reserves the right to reject all bids and readvertise the contract if none of the bids result in a satisfactory level of DBE participation at a reasonable price.

F. Establishing Good Faith Efforts: To demonstrate good faith efforts to meet the DBE contract goals, documentation shall be maintained and submitted to the NDR as set forth above. Such documentation may include any or all of the following: (This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.)

1. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all Certified DBE firms that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE firms to respond to the solicitation. The bidder must determine with certainty if the DBE firms are interested, by taking steps to follow up initial solicitations.

2. Selecting portions of the work to be performed by DBE firms in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform work items with its own workforce.

3. Providing interested DBE firms with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

4. (1) Negotiating in good faith with interested DBE firms. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers, and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation should include the names, addresses, and telephone numbers of DBE firms that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE firms to perform the work.

   (2) A bidder using good business judgement would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE firms, is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith

efforts. Prime contractors are not, however, required to accept higher quotes from DBE firms if the price difference is excessive or unreasonable.

5. Not rejecting DBE firms as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection, or non-solicitation of bids in the contractor's efforts to meet the project DBE goal.

6. Making efforts to assist interested DBE firms in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

7. Making efforts to assist interested DBE firms in obtaining necessary equipment, supplies, materials, or related assistance or services.

8. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

G. If the NDR's preliminary finding is that the bidder did not demonstrate a satisfactory effort to meet the contract goal, the bidder may appeal the decision by submitting a written request for reconsideration within three (3) days of the decision. The bidder may then present information either in a written narrative supporting its good faith effort submittal, or may appear in person. Any new information not included in the original submittal will not be used in the final determination. The appeal will be heard by a Hearing Officer appointed by the NDR' Director. The Hearing Officer will be an individual who is knowledgeable about the DBE Program and its good faith efforts provision, but who had no part in the initial decision.

The Hearing Officer will hear the appeal within five (5) days of receipt of the written request, and will issue a written decision within three (3) days after the appeal. The reconsideration process is administratively final and has no further appeal.

V. COMMERCIALLY USEFUL FUNCTION:

A. A contractor may count toward its DBE goals only expenditures to DBE firms that perform a commercially useful function in the work of a contract. A DBE firm is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work of a contract, and carrying out its responsibilities by actually performing, managing, and supervising the work involved. The DBE firm must also be responsible for materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, installing (where applicable), and paying for the material.

Guidelines:

1. As a general rule, it is expected that workers on a DBE subcontract shall be regular employees of the DBE subcontractor, and shall be listed on the subcontractor's payroll. A regular employee is a person who would normally be working for the DBE firm on any other subcontract with any other prime

contractor, and whose immediate past employment has not been with the prime contractor on the present project, or with the renter-lessor of equipment being used on the present project.

2. On DBE subcontracts, the DBE must perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE will not be considered to be performing a commercially useful function. (If a DBE subcontracts part of its work to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.)

   Operators of leased specialized equipment are included under this provision. In any case, all employees shall be listed on the DBE firm's payroll and paid by that firm.

3. In addition, a DBE subcontractor shall be required to designate a project superintendent/foreman who is a regular employee of the subcontractor, and who shall be active in the day-to-day management of the project.

4. DBE subcontractors who purchase supplies and materials from the prime contractor, which are to be incorporated into the project WILL NOT count toward the established DBE contract goals.

5. TWO PARTY CHECKS: The NDR does not prohibit the practice of a DBE firm and a prime contractor using two party checks, so long as the prime contractor acts solely as a guarantor, and the funds do not come from the prime contractor. Two party checks cannot be used unless formal written requests to do so from the DBE firm and the prime contractor are delivered to the NDR Disadvantaged Business Enterprise Office and the NDR DBE Office gives its written approval to do so. The NDR will closely monitor the use of two party checks to avoid abuse of this practice.

VI. PROHIBITED PRACTICES:

A. An area of special concern is exclusive arrangements between the prime contractor and DBE subcontractors. The DBE subcontractors must be willing to contract with more than one prime contractor.

B. Any subcontracting arrangement which artificially inflates DBE participation is not acceptable. Of utmost concern are the interjection of DBE middlemen or passive conduits and arrangements in which a DBE subcontractor is acting essentially as a broker.

VII. ADMINISTRATION OF THE DBE PROGRAM:

A. The Nebraska Department of Roads intends to achieve its annual overall DBE participation goal with a "narrowly tailored" DBE Program that meets the "strict scrutiny" requirements as defined by case law. The NDR will adhere to all of the rules and regulations of the DOT's DBE Program Regulations as contained in CFR 49 part 26.

   It is the intention of the NDR that DBE subcontractors be independent companies, and function in the same capacity as majority contractors. It is not the intention of the NDR

to be involved with "in name only" DBE subcontractors who are not providing a commercially useful function to the highway industry. The following will be used in administering the DBE Program.

Situation #1:

Prime Contractor “A” subcontracts to a DBE subcontractor, who performs the work with its own workforce (the employees work on a full-time basis for the DBE firm, or were hired from a union hall, employment service, or other hiring sources by the DBE firm, and are supervised by a full-time employee of the DBE), and uses its own equipment, or equipment rented or leased from an equipment dealer. Prime Contractor “A” is not involved in the DBE firm’s operation, other than coordinating when the work is to be performed, and/or other normal industry practices of contracts between a prime contractor and a subcontractor.

THIS IS THE IDEAL SITUATION, IS TOTALLY ACCEPTABLE, AND IS WITHIN THE INTENT OF THE DBE PROGRAM.

Situation #2:

Prime Contractor “A” subcontracts to a DBE firm, that performs the work with its own workforce, (the employees work on a full-time basis for the DBE firm, or were hired from a union hall, employment service, or other sources by the DBE firm for the project, and are supervised by a full-time employee of the DBE). The DBE firm uses equipment owned by a majority contractor, (either Prime Contractor “A”, or some other majority contractor), on a long-term rent or lease arrangement at rates consistent with normal industry standards, and not leased on an “as equipment is needed” basis. This situation would be no different than the DBE firm leasing or renting equipment from a commercial equipment supplier. Many majority contractors lease equipment, and the action is standard industry practice. THIS IS TOTALLY ACCEPTABLE, AND IS WITHIN THE INTENT OF THE DBE PROGRAM.

Situation #3:

A DBE firm is a subcontractor to Prime Contractor "A", on a NDR’ project. When it is time for the subcontract work to be performed, the work is actually performed using Prime Contractor "A's" equipment, work force, and supervisory personnel. The DBE firm then makes a certified payroll using the names of Prime Contractor "A's" employees. Basically, the subcontract work was performed by Prime Contractor “A”. While the NDR cannot tell the DBE subcontractor who to hire, or where to obtain equipment, we find this to be a very close association with the prime contractor, and the DBE’s owner is not considered to be in control of the DBE firm, or the project in question. This situation described is not considered to be a commercially useful function, and may be subject to any of the administrative actions as cited in Section VIII, C. below.

Note: If a DBE subcontractor is performing work on a project with his own equipment, workforce and supervisory personnel, and an equipment failure or unusual circumstance occurs, and the prime contractor rents or loans equipment and/or employees on a short-term basis to the DBE, the NDR could find this acceptable as long as this only occurs occasionally and is kept to an absolute minimum.

Situation #4:

A DBE firm is a subcontractor to Prime Contractor "A" on a NDR project. When it is time for the subcontract work to be performed, the work is actually done using the workforce, equipment, and supervisory personnel of a majority contractor, Contractor “B”. The DBE firm makes a certified payroll showing Contractor "B's" employees. While the NDR cannot tell the DBE subcontractor who to hire, or where to obtain equipment, this condition is not considered to be within the intent of the DBE Program. In reality, majority Contractor "B" is the one that performed the work. The NDR does not consider this to be a commercially useful function, as Prime Contractor "A" is actually subcontracting to majority Contractor "B", in an unapproved status, rather than the DBE firm. This situation described is not considered to be a commercially useful function, and may be subject to any of the administrative actions as cited in Section VIII, C. below.

Situation #5:

Prime Contractor "A" is buying supplies from a DBE supplier or contractor to fulfill the DBE goal. This is only acceptable if the DBE firm is a true supplier. The mere fact that the DBE firm purchases the material from another supplier, then adds some cost and sells the material to a prime contractor, does not constitute the DBE as being a supplier. A supplier must have an inventory and be generally recognized as a material supplier. This situation described may be subject to any of the administrative actions as cited in Section VIII, C. below.

Situation #6:

A DBE firm is a subcontractor to Prime Contractor “A”. When it is time for the subcontract work to be performed, the DBE firm brings in its workforce to do the work, and uses equipment already at the site that belongs to Prime Contractor "A". The DBE subcontractor says it is leasing the equipment from Prime Contractor "A". The NDR will closely review this arrangement. This situation resembles a "specific equipment lease" where the equipment is made available on a convenience basis to the DBE firm. The test is whether or not the DBE firm can use the equipment at the DBE's convenience, and not be tied to the availability of the equipment by Prime Contractor “A”. If the equipment lease arrangement indicates the DBE firm has total control of the equipment, but in fact Prime Contractor "A" controls the equipment, the NDR would question the relationship to determine whether or not a commercially useful function had been provided. This situation described may be subject to any of the administrative actions cited in Section VIII, C. below.

The above situations are very broad and general. While it is known that many different situations may arise, these are basic guidelines used to administer the DBE Program.

The NDR is more than willing to discuss particular situations with either DBE firms or prime contractors prior to a letting in the hope of developing DBE firms.

VIII. INVESTIGATORY POWERS, ADMINISTRATIVE PROCEDURES FOR ENFORCEMENT AND PENALTIES

A. INVESTIGATORY POWERS:

1. The NDR specifically reserves the right and power to investigate, monitor and/or review all actions taken, statements made, documents submitted, by any contractor, subcontractor or DBE firm under the terms of these provisions.

B. ADMINISTRATIVE PROCEDURES FOR ENFORCEMENT:

Whenever the NDR believes a contractor, subcontractor or DBE firm may not be operating in compliance with the terms of these provisions, the NDR will conduct an investigation. If the NDR finds any person or entity not in compliance with these provisions, the NDR will notify such person or entity in writing as to the specific instances or matters found to be in non-compliance. At the option of the NDR, the person or entity shall then be allowed a reasonable time to correct any deficiencies noted, and to come into compliance. In the event that the person or entity cannot, thereafter, come into compliance, or fails or refuses to do so, then the NDR may impose one or more of the penalties hereafter provided for. It is specifically provided by the NDR that any person or entity will be found to be out of compliance with these provisions if an investigation reveals any violation or act of such serious or compelling nature that the violation or act indicates a serious lack of business integrity or honesty.

C. PENALTIES:

1. In the event the NDR finds any contractor, subcontractor, or DBE firm, to be out of compliance with these provisions, the NDR may impose one or more of the following sanctions:

a. Termination of the contract.

b. The DBE firm may be decertified and/or suspended from participating in the NDR' DBE Program.

c. The prime contractor may not be able to count the work performed toward his project DBE goal, and if possible to do so, may need to subcontract other work on the project to DBE subcontractors to achieve the goal.

d. The contract items involved may be considered for a monetary reduction equal to the amount of work not done by the DBE subcontractor.

e. The prime contractor may be suspended and/or debarred.

f. If at any time during the life of the contract, it is determined that the contractor is out of compliance with these provisions, the NDR may withhold payment of progress payments.

g. If at the completion of the project, the contractor is determined to be out of compliance, the NDR may sustain damages, the exact extent of which would be difficult or impossible to ascertain and, therefore, in order to liquidate such damages, the monetary difference between the amount stated by the contractor and the amount actually paid to the DBEs will be

deducted from the contractor's payment as liquidated damages. These damages would be in addition to any liquidated damages assessed in accordance with Subsection 108.08 of the Standard Specifications.

h. Referral to the Attorney General for possible prosecution for fraud.

i. Other action as appropriate, within the discretion of the NDR.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) GOAL (S1-9-0801)

ALL BIDDERS SHALL SUBMIT WRITTEN ASSURANCE THAT THE MINIMUM GOAL FOR DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION WILL BE MET. THE REQUIRED DBE PARTICIPATION FORM INCLUDED IN THIS PROPOSAL SHALL BE USED. The bidder shall submit the name and address of the DBE(s), a complete description of the participation by the DBE(s), and the dollar value of the participation. If the bidder cannot meet the minimum goal for DBE participation, as specified herein, the bidder shall submit complete documentation of its efforts, following the time limits set forth in IV. A., "Good Faith Information Submittal". These efforts shall include but not be limited to those stated previously in IV. E., "Establishing Good Faith Efforts".

Bidders that fail to meet DBE goals or fail to demonstrate sufficient good faith efforts shall be declared non-responsive and ineligible for award of the contract.

Bidders shall assume the responsibility of determining if they are the apparent low bidders by contacting the Nebraska Department of Roads, Contract Lettings Section in Lincoln, Nebraska. Such information is made public 24 hours after the announced time for opening bids. This information is available from the NDR' Internet web site (http://www.dor.state.ne.us/).

The contract shall be awarded to the lowest responsive responsible bidder.

The standard NDR' procedure concerning subcontractors and suppliers shall apply.

The DBE firms identified at the time of bid opening are the firms to whom subcontracts will be issued. The work subcontracted to be done, and the amount to be paid for the work, shall be as identified at the time of bid opening.

If the prime contractor desires to alter this list after execution of the contract, it must demonstrate to the NDR that the listed DBE firm(s) is unable to perform, and provide the necessary written justification for approval. Justification must also include written documentation from the affected DBE firm(s) stating their position on the prime contractor's request. There must be a solid basis for any change.

Any substitution of the named DBE firms must be approved by the Department of Roads Disadvantaged Business Enterprise Office. Substitution of DBE's will only be allowed when the DBE firm(s) is not able to perform because of default or over-extension on other jobs or other similar justification. A prime contractor's ability to negotiate a more advantageous contract with another subcontractor is not considered as a valid basis for change.

PRIOR TO FINAL PAYMENT THE FOLLOWING FORMS MUST BE COMPLETED AND SUBMITTED TO THE NDR DISADVANTAGED BUSINESS ENTERPRISE OFFICE.

A. DR Form 441, DBE I. This form shall be filled out by the prime contractor, indicating the DBE firms used, actual work performed, and actual amount of money paid to the DBE Firms.

B. DR Form 442, DBE II. This form shall be filled out by the DBE subcontractor, indicating the name of the DBE firm, actual work performed, and actual amount of money received from the prime contractor.

C. The above referenced forms are available from the NDR' Disadvantaged Business Enterprise Office, upon request. The forms are also available electronically from the NDR' Internet web site (http://www.dor.state.ne.us/).

The Code of Federal Regulations, Title 49, Part 26 and the Nebraska Department of Roads' Disadvantaged Business Enterprise (DBE) Program, are hereby made a part of and incorporated by this reference into this proposal. Copies of these documents are available, upon request, from the Nebraska Department of Roads, Disadvantaged Business Enterprise Office, P.O. Box 94759, Lincoln, Nebraska 68509-4759.

SUBLETTING OR ASSIGNING OF CONTRACT (S1-9-0801)

Prior to beginning work, a copy of all executed subcontracts, written agreements and/or lease agreements used to meet DBE goals shall be submitted to the construction engineer for forwarding to the minority business office. These copies must contain prices.

PROMPT PAYMENT CLAUSE:

The prime contractor shall include a "Prompt Payment Clause" as a part of every subcontract (including second tier subcontracts) for work and material. The "Prompt Payment Clause" will require payment to all subcontractors for all labor and material, for work completed, within twenty (20) calendar days of receipt of progress payments from the NDR for said work. The "Prompt Payment Clause" will also stipulate the return of retainage within thirty (30) calendar days after the subcontractor achieves the specified work as verified by payment from the NDR.

The failure by the prime contractor to carry out the requirements of the "Prompt Payment Clause" and/or timely return of retainage, without just cause, is a material breech of this contract, which may result in the NDR 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 NDR deems appropriate.

NOTE: The prime contractor may withhold payment only for just cause, and must notify the NDR in writing of its intent to withhold payment prior to actually withholding payment. The prime contractor shall not withhold, delay or postpone payment without first receiving written approval from the NDR.

DBE GOAL CREDIT
(S1-9-0801)

It is the intent of the NDR to assure eligible DBE firms have a “level playing field” and equal opportunity to participate in federal-aid contracts, and maintain the integrity of the DBE program. DBE participation is counted toward goals as follows:

When a DBE firm participates in a contract, only the value of the work actually performed by the DBE firm counts toward the goal.

1. The entire amount of that portion of a construction contract that is performed by the DBE firm’s own forces is counted toward the goal. This includes the cost of supplies and materials obtained by the DBE firm for the work of the contract, including supplies purchased or equipment leased by the DBE, but not supplies or equipment the DBE purchases or leases from the prime contractor or its affiliate.

   Example: A DBE firm furnishing and erecting steel or concrete superstructure members, furnishing and driving piling for bridge structures, furnishing and placing prestressed concrete deck panels, and furnishing and placing panels for retained earth walls will be considered a commercially useful function for attaining contract goals for disadvantaged business enterprise (DBE) participation unless the supplies or materials are purchased from the prime contractor or its affiliate.

   When a DBE subcontractor is responsible for substantially constructing a complete structure the total value of the subcontract may be credited to the DBE goal.

Paragraph 8.a. (5) of Subsection 109.07 in the 1997 English Edition of the Standard Specifications is void and superseded by the following:

When applicable a DR Form 441, "Identification of DBE Goal Achievement".

B. Manufacturers, Suppliers, and Haulers:

DBE Manufacturers may be given 100% credit towards the DBE goal for products they produce for the contract.

DBE Suppliers may be given 60% credit towards the DBE goal for products they furnish for the contract.

DBE Haulers may be given 100% credit towards a DBE goal for the delivery fees charged.

A DBE firm certified as both a supplier and hauler may be given 60% credit for supplying a given product and 100% credit for hauling that same product.

See the DBE Goal Credit Table for a guide to DBE credit.

DESCRIPTIONS
(S1-9-0801)

Manufacturer - To be certified as a manufacturer, a DBE firm must operate or maintain a factory or establishment that produces, on the premises, the materials, supplies, articles or equipment required under the contract and of the general character described by the specifications.

Supplier - A DBE supplier, or regular dealer, is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment of the general character described by the specifications, and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.
To be a supplier or regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

A DBE firm may be a supplier or regular dealer in such bulk products as petroleum products, steel, cement, gravel, stone, or asphalt without owning a place of business if the DBE firm both owns and operates distribution equipment for the products. Any supplementing of a DBE supplier's or regular dealer's own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

Hauler - The DBE firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract. There cannot be a contrived arrangement for the purpose of meeting DBE goals.

The DBE firm must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

The DBE firm receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
The DBE firm may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE firm that leases trucks from another DBE firm receives credit for the total value of the transportation services the lessee DBE firm provides on the contract.

The DBE firm may also lease trucks from a non-DBE firm, including an owner-operator. The DBE firm that leases the trucks from a non-DBE firm is entitled to credit only for the fee or commission it receives as a result of the lease agreement. The DBE firm does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE firm.

For the purposes of the above paragraphs, a lease must indicate that the DBE firm has exclusive use of, and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE firm, so long as the lease gives the DBE firm absolute priority for the use of the leased truck. Leased trucks must display the name and identification number of the DBE firm.

If a DBE firm performs in the manner outlined above, it will be performing a commercially useful function.

Pass-throughs and/or brokering will not be tolerated. A pass-through/brokering situation is one in which a DBE firm contracts to haul materials for a project, then hires another hauler to actually perform on the contract.

CERTIFICATION
(S1-9-0801)

Certain DBE's may be certified in multiple classifications as manufacturers, suppliers, and haulers. The certification will be limited by the products being manufactured, supplied, or hauled.

For example, a manufacturer of certain steel products or aggregates, may also be a supplier of products they store or deliver, but do not manufacture.

A supplier of bulk products, such as aggregates or fuel, may also be certified as a hauler.

DBE GOAL CREDIT TABLE

DBE Manufacturer **&** **DBE Hauler**	**100% Credit for Materials** **&** **100% Credit for Hauling**
DBE Manufacturer **&** **Non-DBE Hauler**	**100% Credit for Materials** **&** **No Credit for Hauling**
Non-DBE Manufacturer **&** **DBE Hauler**	**No Credit for Materials** **&** **100% Credit for Hauling**
DBE Supplier **&** **DBE Hauler**	**60% Credit for Materials** **&** **100% Credit for Hauling**
DBE Supplier **&** **Non-DBE Hauler**	**60% Credit for Materials** **&** **No Credit for Hauling**
Non-DBE Manufacturer **&** **DBE Hauler**	**No Credit for Materials** **&** **100% Credit for Hauling**

CERTIFICATION FOR FEDERAL-AID CONTRACTS (S1-11-0801)

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

STATUS OF UTILITIES

The following information is current as of December 9, 2002.

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

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

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

Loup River Public Power District: Existing facilities are in the project area.

Aquila Networks: Existing facilities are in the project area.

Citizen's Communications: Existing facilities area in the project area.

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

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

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

SUBCONTRACTOR BIDDERS LIST INFORMATION
(S1-43-0801)

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

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

CONTROL OF WORK
(S1-43-0901)

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

105.08 - Authority and Duty of the Inspector

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

105.13 – Tentative Acceptance of Portions of the Project

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

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

107.14 – Opening of Sections of the Project to Traffic

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

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

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

107.15 – Contractor's Responsibility for Work

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

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

MEASUREMENT AND PAYMENT
(S1-43-0901)

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

Subsection 109.08 Paragraph c. amended by deleting the word "normal".

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

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

SPECIAL PROSECUTION AND PROGRESS
(Phasing)

The plans depict phasing sequences that are to be used in the construction of this project. Any deviation from these sequences shall require the written approval of the Engineer.

CONSTRUCTION DETAILS

FUEL COST ADJUSTMENT PAYMENT
(S2-1-0801)

Section 205 in the Standard Specifications and Supplemental Specifications is amended to include the following:

Payment will be made to the contractor for monthly fluctuations in the cost of diesel fuel used in performing the items of work, "Excavation", "Excavation, Borrow", "Excavation, Established Quantity", and/or “Earthwork Measured in Embankment” when the fuel cost fluctuates by more than 10% from the base price defined below. Payments may be positive, negative, or nonexistent depending on the circumstances. Payments or deductions will only be calculated on that portion of the fuel cost fluctuation that exceeds the 10% specified above.

Payments or deductions for the fuel cost adjustment will be included in the contractor’s progress estimates; and the payment or deduction authorized for each estimate will be based upon the algebraic difference between the quantities for “Excavation”, “Excavation, Borrow”, “Excavation, Established Quantity”, and/or “Earthwork Measured in Embankment” on the current estimate and the quantities shown on the previous estimate.

The fuel cost adjustment for the current estimate will be computed according to the following formula:

FCA=QFD where

FCA = Fuel cost adjustment, in dollars;

Q = The algebraic difference between the quantities (in cubic yards or cubic meters) for "Excavation", "Excavation, Borrow", "Excavation, Established Quantity", and/or “Earthwork Measured in Embankment” on the current estimate and the quantities shown on the previous estimate;

F = English
The fuel use factor for diesel fuel, in gallons per cubic yard. For the items of work “Excavation”, “Excavation, Borrow”, and “Excavation, Established Quantity”, “F” shall be equal to .15. For the item of work “Earthwork Measured in Embankment”, “F” shall be equal to .20.

Metric
The fuel use factor for diesel fuel, in liters per cubic meter. For the items of work “Excavation”, “Excavation, Borrow”, and “Excavation, Established Quantity”, “F” shall be equal to .74. For the item of work “Earthwork Measured in Embankment”, “F” shall be equal to 1.00.

D = Allowable price differential.

The allowable price differential, "D", for the current estimate will be computed according to the following formula:

When the current price, P, is greater than the base price, P(b).

D = P – 1.10P(b), but not less than zero.

When the current price, P, is less than the base price, P(b).

D = P – .90P(b), but not greater than zero.

In either case, P(b) shall be the base diesel price, in dollars per gallon (liter), defined as the average of the minimum and maximum prices for No. 2 Diesel Fuel (Oklahoma) published in the first issue of "*Platt's Oilgram Price Report*" for the month in which bids for the work were received.

In either case, P, shall be the current diesel price, in dollars per gallon (liter), defined as the average of the minimum and maximum prices for No. 2 Diesel Fuel (Oklahoma) published in the first issue of "*Platt's Oilgram Price Report*" for the month in which the progress estimate is generated.

REMOVE PULL BOX

Remove the existing pull box as indicated in the plans. The Contractor shall backfill the excavation with clean soil and compact the soil to the density requirements of the project. The removed pull box shall become the property of the Contractor and shall be removed from the project.

Method of Measurement and Basis of Payment

The item "Remove Pull Box" will be measured and paid for as a complete unit for each pull box removed and accepted by the Engineer. This work shall include, but not be limited to, the following: removal and disposal of the pull box; all necessary excavation; backfilling and disposal of surplus material; for the termination and abandonment of existing underground feeders and for all materials, labor, equipment, tools and incidentals necessary to complete this work.

REMOVE LIGHTING UNIT

Existing lighting units as indicated on the plans shall be removed. The contractor will remove the twelve lighting units by disassembling the luminaire from the mastarm, the mastarrn from the pole and the pole from its concrete foundation.

The contractor will remove the concrete pole foundation, including reinforced steel and anchor bolts, to a minimum of two feet below finished grade; backfill the excavation with clean soil and compact the soil to the density requirements of the project. The contractor may, at his option, remove the foundation as an entire unit. Abandon existing unused conduit and cable in place.

All components of the existing lighting units will become the property of the contractor and must be removed from the project.

Method of Measurement and Basis of Payment

The item "Remove Lighting Unit" will be measured and paid for as a complete unit for each lighting unit removed and accepted by the engineer. This work shall include, but not be limited to the following: Removing and disposing of the existing lighting units; removing existing concrete foundations; all necessary excavation, backfilling and disposal of surplus materials; for the termination and abandonment of existing underground feeders and for all materials, labor, equipment, tools and incidentals necessary to complete the work.

REMOVE TRAFFIC SIGNAL

Section 203 in the 1997 Edition of the Standard Specifications for Highway Construction is amended to include the following:

1 EA. REMOVE TRAFFIC SIGNAL AT US-30 & 8TH STREET

The street name signs mounted on the signal mast arms shall be salvaged and installed on the new mast arms. Separate payment will not be made for installing these signs.

All other removed material shall become the property of the contractor and shall be removed from the site.

The price and payment for the item "REMOVE TRAFFIC SIGNAL" shall be full compensation for the complete removal of the traffic signal, salvage of material for the city, salvage and installation of the street name signs, and for all labor, tools, material and incidentals required to complete the work.

ABANDON WELLS

This work shall consist of removing the casing to an elevation at least 1.5 meters below the surrounding ground or finished grade elevation, whichever is lower, and capping as specified in the Nebraska Department of Health & Environmental Control Council Regulations Title 178, published by the State of Nebraska Department of Health.

The work shall be measured for payment as a single unit complete for each location that is shown in the plans, or directed by the engineer.

The work measured as provided herein, shall be paid for at the contract unit price per each for the item, "Abandon Wells". This price shall be full compensation for all work, fees, materials and incidentals necessary to complete the work.

RE-ESTABLISH PROPERTY CORNER

This work shall consist of establishing ROW breaks and re-establishing existing property corners as directed by the engineer.

All work shall be performed under the direct supervision of a land surveyor registered to practice in the State of Nebraska. The surveyor shall prepare plats in accordance with Nebraska Survey Laws, and submit these plats with the survey. The survey and plats shall be filed with the county surveyor, and/or the county clerk, the city engineer, the department's district office, and the deputy state surveyor at the Department of Roads Lincoln headquarters.

The work shall be measured and paid for on a one each basis for the item "Re-Establish Property Corner". This price shall be considered full compensation for all research, materials, equipment, labor, tools and incidentals required to complete the work.

SUBGRADE PREPARATION
(S3-1-0801)

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

ROADWAY LIGHTING

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

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

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

1. Conventional Roadway Luminaires

A. Housing

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

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

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

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

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

B. Slipfitter

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

C. Reflector

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

D. Socket

The socket shall be a mogul base porcelain.

E. Lens

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

F. Terminal Block

A terminal block will be required.

G. Ballast

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

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

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

Regulation and Operation:

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

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

Ballast starting current must not exceed normal operating current.

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

H. Photometric and Performance Requirement

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

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

Parameters used; roadway width 68', pole spacing 61', mounting height 40', pole setback 8', mastarm length 6', maintenance factor .81, pole layout staggered.

I. Substitutions and Variations

No substitutions or variations of the above will be allowed.

J. Approval Requirements

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

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

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

Manufacturers allowed to submit luminaires for approval are as follows:

Crouse Hinds
General Electric
Hubbell
American Electric

PREFORMED PAVEMENT MARKING TAPE, TYPE 4 IN GROOVED PAVEMENT (S4-6-0801)

Paragraph 6. a. of Subsection 424.03 in the Supplemental Specifications is void and superseded by the following:

a. The permanent preformed pavement marking, Type 4 dashed lines on this project, shall be applied to the pavement in Contractor installed grooves.

TEMPORARY TRAFFIC CONTROL DEVICES (S4-9-1201)

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

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

TYPE B HIGH INTENSITY WARNING LIGHTS (S4-9-1002)

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.

CONTRACTOR FURNISHED SIGNS (S4-11-0303)

“Contractor Furnished Sign Day” shall consist of approved retroreflective fluorescent orange or white signs mounted on NCHRP-350 approved traffic control devices, i.e. Type III Barricades or Plastic Drums. The Contractor furnished sign, mounted on a traffic control device, shall together be NCHRP-350 Test Level 3 approved. The signs shall be of the size and shape required by the plans. The color and design of the signs shall be as required by the MUTCD and the NDR Traffic Engineering Division. Sign legends and symbols shall be of professional quality workmanship and in uniformity with the Standard Highway Signs design guide. Contractor furnished Signs shall meet the requirements of the American Traffic Safety Services Association (ATSSA), “Quality Standard for Work Zone Traffic Control Devices”, hand printing or poor workmanship shall not be allowed.

Rigid sign substrates that have been approved to NCHRP 350 (TL-3) mounted on a traffic control device may be used.

Retroreflective orange fluorescent sheeting used for Contractor Furnished Signs shall be 3M diamond grade, Avery Dennison 6500 sheeting or other approved equal material.

Subsection 422.03 is amended by adding Paragraph 1.h.

Contractor Furnished Signs shall be installed as shown in the plans, or as directed by the Engineer. Contactor Furnished Signs shall be installed as prescribed in the MUTCD.

Paragraph 1.a. of Subsection 422.04 is void and superseded by the following:

1.a. Sign days of permanent, temporary and Contractor furnished signs installed in accordance with the plans, or as directed by the Engineer, will be measured and paid for by the each.

Paragraph 1. of Subsection 422.05 is amended to include the following:

Pay Item	**Pay Unit**
Contractor Furnished Sign Day	Each (ea)

TEMPORARY TRAFFIC SIGNAL

Section 422 in the 1997 Edition of the Standard Specifications for Highway Construction is amended to include the following:

TEMPORARY TRAFFIC SIGNAL AT US-30 & 8TH STREET
TEMPORARY TRAFFIC SIGNAL AT US-30 & 7TH STREET

The contractor shall furnish, construct, maintain and remove the temporary traffic signal as directed by the project manager. All equipment and material shall be furnished by the contractor and will remain the contractor's property.

The contractor shall supply a solid state 170 style traffic signal controller capable of 8-phase operation. The contractor shall program and maintain the controller. Contact Bob Simard, Department of Roads Traffic Engineering Division, (402)479-4594, for the phasing and timing data to program into the controller.

The contractor shall contact Dan Hellbusch, Loup Power, (402) 564-4129, to request electric power service for the temporary signals.

Wire the signal heads so that the heads for each approach can be operated independently. A minimum of two signal heads are required for each approach. Center the signal heads over the approach lanes. The signal heads for each approach shall have a minimum horizontal separation of 10 feet as viewed by the driver. When two signal heads are placed on an approach with only one through lane the heads shall be evenly spaced over the through lane. The contractor shall realign the signal heads as required for each phase of the project.

The contractor shall maintain the entire temporary signal for the duration of its use at no additional cost to the state.

Payment for the temporary traffic signal shall be full compensation for furnishing, installing, operating, maintaining and removing the temporary traffic signal and for all labor, equipment, tools, materials and incidentals required to complete the work.

TRAFFIC CONTROL MANAGEMENT

Description and General Requirements

Paragraph 1. of Subsection 422.01 of the Specifications is void and superseded by the following:

1. This work consists of furnishing, installing at the locations shown on the plans, operating, maintaining, and when work is complete, removing the temporary traffic control devices described in this Section. This work shall also consist of providing Traffic Control Management by furnishing one or more qualified individuals who shall be specifically responsible for performing or supervising the installation, inspection, maintenance, and removal of those devices.

2. When project conditions warrant, the Engineer may suspend the need for Traffic Control Management and will notify the Contractor accordingly. The Contractor shall be given at least three days' notice of the suspension, but the work may be suspended in a lesser time if mutually acceptable to the Department and the Contractor. During periods when no payment is being made for Traffic Control Management under this Special Provision, this provision will not apply.

Paragraphs 2.i., 2.j.(2)(ii), and 2.k. of Subsection 422.01 of the Specifications are void; and Paragraph 2. of Subsection 422.01 of the Specifications and Supplemental Specifications is amended to include the following:

p.(1) The Contractor shall designate an individual, other than the project superintendent, to be the Traffic Control Manager for the project. This person shall be certified as a Traffic Control Supervisor or Traffic Control Technician by the American Traffic Safety Services Association (ATSSA). Other certifications may be accepted if approved by the Engineer. The Traffic Control Manager shall also possess a current Flagger Certification Card. Copies of the Traffic Control Manager's certifications shall be provided to the Engineer prior to the installation of any traffic control devices on the project.

(2) The Contractor may also designate one or more Assistant Traffic Control Managers for the project. These individuals shall be qualified by certification as a Traffic Control Technician by the American Traffic Safety Services Association (ATSSA) or other training or qualification satisfactory to the Engineer.

q. The Traffic Control Manager or Assistant Traffic Control Manager shall be available and reasonably accessible (within 30 minutes) to the project during normal working hours on every day that work is being performed on the project and always on call at other times. During other than normal working hours, these individuals shall respond and be on the project within 60 minutes of notice being given that traffic control items on the project are in need of attention. The Contractor may elect to have an employee or employees perform this function simultaneously on more than one project, but shall not be relieved from the sanctions or disincentives that may be imposed for failure to meet the deadlines specified herein.

r. The Traffic Control Manager's or Assistant Traffic Control Manager's activities on the project shall be dedicated to the purpose of monitoring and maintaining the traffic control

devices. The performance of other crafts or trades will be permitted, but shall be secondary to the performance of duties associated with traffic control.

s. The Contractor shall provide prior to the installation of any traffic control devices on the project two to four telephone numbers where the Traffic Control Manager or an Assistant Traffic Control Manager may be reached 24 hours a day, seven days a week.

t. The Traffic Control Manager or Assistant Traffic Control Manager shall have available at all times an approved, current version of the Traffic Control Plan.

u. If corrective action is not taken by the Contractor within the times specified in Paragraph 2.q., the Engineer may suspend all work on the project until the problem is corrected. The Engineer shall make reasonable allowance for existing weather conditions in the case of materials whose installation is governed by temperature or other atmospheric conditions.

Construction Methods

Subsection 422.03 of the Standard Specifications is amended to include the following:

19. The Traffic Control Manager's or Assistant Traffic Control Manager's duties shall include:

    a. Insuring that all traffic control devices are functioning properly, are clean, and are correctly located as shown on the Traffic Control Plan or as directed by the Engineer. This provision in no way restricts the cleaning, repair, and maintenance of traffic control devices to the Traffic Control Manager or his or her assistants.

    b. Inspecting all traffic control devices on every calendar day that traffic control devices are in place, whether in use or covered. Inspections shall take place a minimum of twice daily, and at least two inspections shall be eight hours apart. However, during or following periods of inclement weather or when the situation warrants for other reasons, inspections shall be done more frequently. At least 1 inspection each week shall occur during hours of darkness. The Traffic Control Manager or Assistant Traffic Control Manager shall perform the inspections.

    c. Monitoring the cleaning and maintenance of all traffic control devices and the placement of temporary pavement markings.

    d. Completing a Traffic Control Inspection form provided by the Engineer at the completion of each inspection. These forms shall be submitted daily to the Engineer, either in person or via facsimile transmission.

    e. Monitoring flagging operations on the project. The Traffic Control Manager or Assistant Traffic Control Manager shall not act as a flagger, except in an emergency or when providing relief for short periods of time.

    f. Coordinating all traffic control operations, including those of subcontractors and suppliers.

    g. Coordinating traffic-related activities with the appropriate law enforcement, fire, and emergency medical agencies.

    h. Attending all project scheduling meetings.

Method of Measurement

Subsection 422.04 of the Standard Specifications and Supplemental Specifications is amended to include the following:

21. (1) Traffic Control Management is measured by the day for the actual number of days management and inspection are required and provided. Payment will only be made for one day of Traffic Control Management during each midnight-to-midnight period regardless of the number of Traffic Control Managers or assistants required to adequately perform the work.

(2) No measurement will be made when the Engineer has suspended the need for Traffic Control Management and notified the Contractor accordingly.

Basis of Payment

Paragraph 1. of Subsection 422.05 of the Standard Specifications and Supplemental Specifications is amended to include the following:

Traffic Control Management	Day (d)

Paragraph 15. of Subsection 422.05 of the Supplemental Specifications is renumbered to be Paragraph 16. Subsection 422.05 of the Standard Specifications and Supplemental Specifications is amended to include the following:

15. With regard to inspection, maintenance, and repair of temporary traffic control devices, an assessment in the amount of $500 per occurrence per day shall be charged to the Contractor when any of the following occur (these assessments shall be in addition to any other liquidated damages which may be assessed):

a. The Contractor fails to respond within the timeframe specified in Paragraph 2.q. of the amended Subsection 422.01 of the Standard Specifications. Response time shall begin when:

1) The Engineer notifies the Contractor of deficiencies in person;
2) The Engineer makes notification of deficiencies via the 24-hour phone number(s) provided by the Contractor; or
3) The Engineer leaves a message or receives no answer at the number(s) provided;

b. The Contractor fails to begin corrective actions to repair, replace, remove, relocate, or clean any traffic control devices or pavement markings within two hours of the completion of an inspection that uncovers deficiencies or within two hours of notification of deficiencies by the Engineer.

c. The Contractor fails to begin corrective actions to repair, replace, remove, relocate, or clean any traffic control devices or pavement markings within two hours of documented notification by an official law enforcement agency.

d. The Contractor fails to make or report the inspections prescribed in this specification.

e. The Engineer observes and documents any occurrence of the Contractor or his or her subcontractors flagrantly disregarding the necessary maintenance of traffic control devices that are in obvious need of attention.

LOCAL MATERIAL SOURCES
(S5-1-0801)

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

ASPHALTIC CONCRETE
(S5-5-0801)

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

TEMPORARY SURFACING

The work shall consist of the construction and removal of the temporary surfacing on this project in accordance with plans and these Special Provisions.

The Temporary Surfacing depth shall be as shown in the plans. This provision is applicable to all Temporary Surfacing depths shown in the plans.

Prepare the underlying subgrade, prior to placing the temporary surfacing, in accordance with the requirements of Section 302 in the 1997 English Edition of the Standard Specifications.

At the Contractor's option, the surfacing may be constructed using Class "47B-3500" Concrete, Concrete or Asphaltic Concrete Type SP3. These materials may be used interchangeably during the course of the work except that surfacing at any individual location must be completed with the same material with which the work was begun.

Asphaltic Concrete used for surfacing shall meet all specifications and sampled and tested as shown in the Supplemental Specifications. The incentive, disincentive pay tables do not apply, however, any asphaltic concrete not meeting the specifications will be subject to removal.

Subsection 302.04 is amended to provide that work of subgrade preparation, as well as all water applied as directed by the Engineer, will not be measured for payment but shall be considered subsidiary to the item “Temporary Surfacing _____”.

Subsection 304.04 is amended to provide that work of shoulder construction, as well as all water applied as directed by the Engineer, will not be measured for payment, but shall be considered subsidiary to the item “Temporary Surfacing _____”.

Subsection 503.05 is amended to provide that Asphaltic Concrete and P.G. Binder used in asphaltic concrete will not be measured for payment, but shall be considered subsidiary to the item “Temporary Surfacing _____”. Performance Graded Binder 64-22 shall be used if asphaltic concrete is chosen as the temporary surfacing.

Subsection 504.04 is amended to provide that the application of a tack coat, including furnishing emulsified asphalt, will not be measured for payment, but shall be considered subsidiary to the item “Temporary Surfacing _____”.

Paragraph 10. of Subsection 603.03 is amended to provide that concrete used in the surfacing, reach a minimum strength of 3500 psi before opening to traffic.

Subsection 603.04 is amended to provide that concrete pavement will not be measured for payment, but shall be considered subsidiary to the item “Temporary Surfacing _____”.

When the need for the temporary surfacing is no longer required, the Contractor shall remove the temporary surfacing and it shall become the property of the Contractor and removed from the project. All the work necessary to accomplish this requirement is considered subsidiary to the item “Temporary Surfacing _____”.

Measure temporary surfacing by the square yard of completed and accepted work.

The work and materials required for temporary surfacing will be paid for at the contract unit price per square yard for the item “Temporary Surfacing ____.” Payment will be full compensation for the work prescribed in these Special Provisions and the Standard Specifications.

ADJUST VALVE BOX TO GRADE
(S6-7-0801)

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.

TINING
(S6-19-0203)

Paragraph 5.d. of Subsection 603.03 of the Standard Specifications is void and superseded by the following:

Description

When required by the plans or Special Provisions, the Contractor shall tine texture the concrete pavement surface using the following methods:

Construction Methods

1. The surface of the concrete pavement shall be dragged with wet burlap, carpet, or canvas belt before tining.

2. Mainline Tining-Longitudinal

   a. Mainline paving shall be tined with a metal device 23 feet (7 meters) in length with a single row of tines.

   b. The tines shall be of such dimensions as to produce grooves parallel to the centerline of the road approximately 1/8 inch (3 mm) wide and 1/8 inch (3 mm) deep spaced at 3/4 inch (19 mm) on center. A 2 inch (50 mm) to 3 inch (75 mm) wide strip of pavement surface shall be protected from surface grooving for the length of and centered along the longitudinal joint.

   c. The tining device shall be mechanically operated and shall cover the full pavement width in a single pass at a uniform speed and depth centered on the longitudinal joint. Longitudinal tining shall be accomplished by equipment with horizontal and vertical string line controls to ensure straight grooves.

   d. Hand tining will be allowed on irregular areas or areas inaccessible to the tining machine as shown in the 6 inch (155 mm) to 16 inch (405 mm) Concrete Pavement Plan. A tine rake shall be used for hand tining. The use of a corrugated bull float or other device that creates a smooth finish between the grooves will not be permitted.

3. When authorized, pavement texture damaged by rain and pavements not textured to the specified requirements shall be textured only after the concrete has attained its designed strength. The texturing shall be done with diamond grinding equipment specifically designed to grind and texture concrete pavements. The cutting head shall be at least 36 inches (915 mm) wide and capable of producing the depth and spacing indicated in 2.b.

TIE BARS FOR CONCRETE PAVEMENT
(S6-19-0203)

Paragraph 4.k. of Subsection 603.03 in the Standard Specifications is amended to include the following:

TIE BAR SPACING FOR LONGITUDINAL JOINTS * #5 X 30" (760 mm) Grade 40 Bars					
Slab Thickness	**2-Lane Roadway**		**Roadways w/3 or More Lanes**		**30' (9.1 meter) Top System**
	Shoulder Joint Bar Spacing	**Centerline Joint Bar Spacing**	**Shoulder Joint Bar Spacing**	**Lane Joint Bar Spacing**	**Centerline Joint Bar Spacing**
10" (250 mm) or Less	33" (840 mm)	33" (840 mm)	33" (840 mm)	24 ¾" (630 mm)	33" (840 mm)
Greater than 10" (250 mm)	33" (840 mm)	24 ¾" (630 mm)	33" (840 mm)	16 ½" ** (420 mm) **	24 ¾" (630 mm)

* Tie bar spacing may vary ±1" (±25 mm) from the nominal spacing shown. The number of tie bars per 16'-6" (5 meter) panel shall remain constant.

** Depth of tie bar placement for doweled pavement shall be (T/2) less 1 ½" (38 mm).

TIE BAR SPACING FOR LONGITUDINAL JOINTS * #5 X 30" (760 mm) Grade 60 Bars					
Slab Thickness	**2-Lane Roadway**		**Roadways w/3 or More Lanes**		**30' (9.1 meter) Top System**
	Shoulder Joint Bar Spacing	**Centerline Joint Bar Spacing**	**Shoulder Joint Bar Spacing**	**Lane Joint Bar Spacing**	**Centerline Joint Bar Spacing**
10" (250 mm) or Less	49 ½" (1260 mm)	49 ½" (1260 mm)	49 ½" (1260 mm)	33" (840 mm)	49 ½" (1260 mm)
Greater than 10" (250 mm)	49 ½" (1260 mm)	33" (840 mm)	49 ½" (1260 mm)	24 ¾" (630 mm)	33" (840 mm)

* Tie bar spacing may vary ± 1" (± 25 mm) from the nominal spacing shown. The number of tie bars per 16'-6" (5 meter) panel shall remain constant.

No tie bar shall be installed closer than ½ the tie bar spacing to a transverse joint.

Paragraph 4.k.(3)(ii) of Subsection 603.03 in the Standard Specifications and Supplemental Specifications is void and superseded by the following:

(ii) To minimize tie bar breakage, before placing the adjacent lane the tie bars shall be bent to a position that is at least 45 degrees to the longitudinal joint. The free end of the bar shall not be within six inches (150 mm) horizontally of the location of the transverse joint to avoid corner cracking when the joint is sawed. The free end of the bar shall also be positioned so that it does not interfere with the movement of any dowel bar in the transverse joint. Bars that are broken by bending or that are loose in their socket must be replaced or secured.

DOWELED CONCRETE PAVEMENT
(S6-20-0203)

Section 603 in the Supplemental Specifications and the Standard Specifications is amended to include Doweled Concrete Pavement.

Transverse Joints for doweled concrete pavement shall be constructed perpendicular to the roadway on 16'-6" (5 meter) centers.

The dowel bars shall meet the requirements of Section 1022.

The dowel bars shall be placed within a tolerance of 1/4 inch (6 mm) in both the horizontal and vertical planes. The Contractor shall check with a suitable template approved by the Engineer, the placement of each assembly and the position of the bars within the assembly. If the assembly is found to be placed outside any one of the tolerances, the placement shall be corrected.

Dowels for transverse joints furnished in approved assemblies shall be suitable for the joint layout shown in the plans. The assemblies shall be dipped in MC-70, RC-70, RC-250, CRS-1, CRS-2, CSS-1H, HFMS-2h, or HFMS-2s prior to delivery to the work site.

For areas with pavement widening, the Department requires that dowel baskets be placed in all contraction joints which are 6 feet (1.8 m) or wider.

When basket assemblies are used, the baskets shall be placed at all transverse joints where doweled concrete is required, and shall be securely pinned to the grade to prevent any movement during the paving operation. Pins shall be placed at a maximum distance of three feet (1 meter) apart and shall be a minimum of 12 inches (300 mm) in length. All lateral support braces, which would restrict movement of the dowel bars, shall be cut after the baskets are secured and prior to placing the concrete.

Assemblies that are damaged prior to placement shall not be used. Assemblies damaged after placement shall be replaced prior to paving.

If normal vibration is found inadequate to thoroughly consolidate the plastic concrete within and around the dowel basket assemblies, additional hand vibration or other procedures may be required by the Engineer.

Precautions shall be taken to assure that the sawed contraction joint is located directly over the center of the dowel bars.

CRACKS IN CONCRETE PAVEMENT
(S6-20-0901)

Transverse cracks which form in the concrete pavement panels between load transfer joints shall be secured with a minimum of 1 1/2 inch x 18 inch (38 mm x 450 mm) epoxy coated deformed reinforcing bars as shown in the plans. The reinforcing bars shall conform to the requirements of Sections 1020 and 1021. The dowel bars shall be secured using a resin adhesive listed on NDOR approved products list. No payment will be made for this work.

ARTICLE 5

STANDARD SPECIFICATIONS

For

WATER MAIN SPECIFICATION

Index

ARTICLE 5
STANDARD SPECIFICATIONS
For
WATER MAIN SPECIFICATION

5.1 GENERAL

The work covered by this Article 5 of the specification consists of furnishing all labor, equipment, supplies, and materials and in performing all operations in connection with the construction of water main and related appurtenances in accordance with the Recommended Standards for Water Works, 1987 Edition (commonly referred to as 'The 10 State Standards'). The following recognized standards [State of Nebraska, Department of Roads 1997 Standard Specifications for Highway Construction (NDOR), the American Water Works Association Standards (AWWA), American Standards for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), etc., or the latest revisions thereof] shall apply except as hereinafter provided. All specifications included in this Article 5 will pertain except those special notations on the plans, in the Special Provisions or in the General Provisions, shall have precedence.

The Contractor shall make all connections to existing mains as indicated on the plans. Only City of Columbus Water Department personnel shall operate valves that are part of the City's water system, (this includes all valves that isolate this construction from the existing system). The Contractor shall give the City's Water Department 24 hour notice prior to their needing the valve(s) operated. The Contractor is also prohibited from operating fire hydrants without direct permission of the City's Water Department.

5.2 MATERIALS

A. General: Unless otherwise specified on plans or in the Special Provisions, all materials furnished for work on this contract shall be new materials. No salvaged or revised materials shall be furnished.

B. Materials: Ductile iron shall be manufactured in accordance with the requirements of AWWA Standard C153/A21.53. The pipe thickness shall be designed in accordance with AWWA Standard C150/A21.50 and the joints shall conform to AWWA Standard C111/A21.11 for mechanical and push-on joints. Unless otherwise specified, all pipe shall be Class 51. Bidders shall state in their proposal the brand and type of pipe that they propose to furnish.

C. Mechanical Joint Fittings: All mechanical joint fittings shall be of the long radius type as tabulated in manufacturer's catalog and manufactured in accordance with the requirements of AWWA Standard C110/A21.10. Unless otherwise specified, all fittings shall be Class D.

D. Cement Mortar Lining: Cement mortar lining for pipe and fittings shall conform to AWWA Standard C110/A21.10 and, unless otherwise specified, all pipe and fittings furnished under this contract shall be cement mortar lined.

E. Concrete: All concrete entering into the work unless otherwise specified, shall be sand-gravel concrete as specified by the NDOR Specifications for ABX Concrete.

F. Polyethylene Encasement for Ductile Iron: All polyethylene encasement shall be as directed by the Engineer because of adverse soil conditions. This encasement shall conform to AWWA Specification C105-88.

G. PVC Water Pipe: The pipe shall meet the following specifications: AWWA C900 or AWWA C909-98 polyvinyl chloride (PVC) plastic municipal water pipe with integral bell and spigot joints. The pipe shall be Class 150 with a DR of 18, fittings shall be cast or ductile iron with mechanical of slip joints conforming to AWWA C110 and C111. The pipe shall be installed according to the Uni-Bell Plastic Pipe Association guides for installation of PVC plastic pressure pipe for municipal water main distributions systems. Pipe shall have cast iron O.D.

H. Cast Iron Fittings: All fittings for water main construction shall be cast iron conforming to the requirements of the A.S.A. Specifications A21.11 and AWWA C110. All underground fittings shall be mechanical joint or slip-on type. All cast iron fittings are to be bitumastic coated inside and out. Fittings for cement lined pipe shall be cement lined.

I. Joints: Joints for all water main construction shall be mechanical type and may be either bolt-up or slip-on type, as approved by the Engineer.

J. Gate Valves: Gate Valves are to be used for six (6) inch through twelve (12) inch water lines. All gate valves for water main construction shall meet or exceed the requirements of the standard AWWA Specifications C509 for resilient seat gate valves. They shall be of the non-rising stem pattern and shall offer no resistance to the flow of water when open. They shall be designed for 150 pounds water-working pressure and be tested to 300 pounds pressure. They shall open by turning to the left, or counter clockwise. Valves fourteen (14) inches and over shall be butterfly valves.

K. Butterfly Valves: All valves, fourteen (14) inches and larger, shall be rubber seated butterfly valves and shall conform to the "AWWA Standard for Rubber-Seated Butterfly Valves", ANSI/AWWA C504 and subsequent revisions, with heavy duty cast iron or ductile iron bodies. The valves shall be designed for a working pressure of 150 psi. Each valve shall have mechanical joint ends, a suitable heavy reliable operator with more than adequate strength for the torque involved, and a two (2) inch square operating nut for key operation. The operators and shafts shall be fully grease packed and sealed for life and shall be suitable for direct burial. Valves shall be furnished with standard AWWA nuts and stainless steel shafts or high tensile carbon steel. All valves shall be furnished with all required connecting bolts, nuts, glands, gaskets, and accessories and open counterclockwise. A vale position indicator shall be installed inside the cast iron valve box.

L. Tapping Sleeves and Tapping Valves: All tapping sleeves and tapping valves shall be mechanical joint, ductile iron or cast iron body. All tapping valves shall conform to the "AWWA Standard for Resilient Seated Gate Valves for Water Supply Service", ANSI/AWWA C509 and subsequent revisions. Valves shall have a two (2) inch square operating nut for key operation and "O" ring type stem seals. All valves shall open counterclockwise and be of the non-rising stem type. The valve sealing mechanism shall be a wedge design of ductile iron or cast iron, completely encapsulated with a molded resilient covering permanently boned to the iron wedge to meet ASTM D429 testing. The sealing mechanism shall be

designed to provide zero leakage at a minimum of 200 psi operating pressure, with flow in either direction. All valves shall have a full unobstructed waterway, coated with a corrosion resistant material free of cavities or projections conforming to "AWWA Standard for Protective Epoxy Interior Coatings for Valves and Hydrants", ANSI/AWWA C550, and subsequent revisions. All tapping sleeves and tapping valves shall be furnished with all required connecting bolts, nuts, glands, gaskets, and accessories.

Tapping sleeve and tapping valve shall be: American-Darling 1004 tapping sleeve with American-Darling 865 tapping valve; Clow F-5205 tapping sleeve with Clow F-6114 tapping valve; or Kennedy tapping sleeve with Kennedy 4950 tapping valve, or Mueller H-615 tapping sleeve with Mueller T2360-16 tapping valve.

M. Water Main Valve Boxes: All buried valves shall be provided with "Buffalo" type, cast iron valve boxes. Valve boxes shall have a screw type extension sleeve and be designed for the size of valve on which it is to be used and for the depth of cover as required. Covers shall have the work "WATER" cast thereon. Valve boxes shall be American made, Mueller H-10360, size 664-S or approved equal.

N. Sleeve Couplings: Sleeve couplings shall conform to the "AWWA Standard for Bolted, Sleeve Type Couplings for Plain End Pipe", ANSI/AWWA C219, and subsequent revisions, and have an inside diameter suitable for connecting ductile iron pipe to ductile iron pipe or cast iron pipe to cast iron pipe. The center sleeve shall be ductile iron ASTM A-536, grade 65-45-12. Ends shall have a smooth inside taper for uniform gaskets seating. End rings shall be ductile iron ASTM A-536, grade 65-45-12. Couplings shall be furnished complete with gaskets, bolts, and nuts conforming to the "American National Standard for Rubber Gasket Joints for Ductile Iron Pressure Pipe and Fittings", ANSI/AWWA C111/A21.11 and subsequent revisions, and without pipe stops. All materials shall be designed for 150-psi working pressure with the resulting seal flexible and bottle tight. Sleeve couplings shall be Romac #501 or approved equal. The center sleeve shall have a minimum of a seven (7) inch wide body.

O. Fire Hydrants: All hydrants shall conform to the standard AWWA Specification C502 for Fire Hydrants for Ordinary Waterworks Service. They shall be designed for 150 psi working pressure and tested at 300 psi. They shall be of the standard pipe or post type with a length to conform with the bury of the water main to which it is connected (five (5) feet measured from the ground line to the top of the connecting pipe unless otherwise specified in the Special Provisions).

Hydrants shall be of the size noted on the plans. Unless otherwise noted in the Special Provisions, all four (4) inch hydrants shall be equipped with two $2^1/_2$-inch hose nozzles and a four (4) inch hub base; all six (6) inch hydrants shall be equipped with two $2^1/_2$-inch hose nozzles, one $4^1/_2$-inch pumper nozzle and a six (6) inch hub base. All nozzles shall be bronze and shall have national standard hose coupling threads.

The valves shall open by turning to the left or counterclockwise. For locations where grader ditches or parking grade require a deeper setting, hydrants shall be supplied with longer barrel or with barrel extensions to provide for the proper nozzle height above final ground grade. All hydrants shall be as manufactured

by Mueller No. A-423 or American Darling No. 13-84-B and shall be of the highway break away type.

Hydrants will be counted and paid for at the applicable unit bid price for hydrants in place complete and ready for use. The pipe run from the main to the hydrants and the valves in the pipe run, if any, will be measured and paid for under the respective bid items for water main in place and valves in place.

P. Fire Hydrant Extensions: The Contractor shall adjust the height of fire hydrants to conform to the standard detail shown in the specifications. The price bid for hydrant extensions over the 5.5-foot normal hydrant will be total compensation for material, labor, and equipment to raise the hydrants to the proper height. This item will be paid for under "Adjust Fire Hydrant".

5.3 DEWATERING, TRENCH

The water line trenches shall be kept free from water during pipe laying and jointing by such method as the Contractor may elect, provided the method is acceptable to the Project Engineer. The Contractor shall be responsible for damages of any nature resulting from the dewatering operations, notwithstanding tacit approval of the method by the Project Engineer.

The work of dewatering trenches will not be measured and paid for directly, but shall be considered subsidiary to the pipe being installed.

5.4 WATER SERVICE

Where the contract requires installation of service connections, the materials shall be as follows:

A. Corporation stops shall be manufactured by Ford Meter Box Co., Inc., Mueller Co., or approved equal. Corporation stops shall be similar to Ford Catalog No. F1000 or Mueller H-15008 for copper service line pipe; or Ford Catalog No. F1001 or Mueller H-15009 for polyethylene (PE-SDR7) service line pipe. Each corporation stop shall also be furnished with a 90^{o} elbow, as shown in the detailed drawings in the appendix.

B. Copper service pipe shall be soft temper copper service tubing, Type K. It shall be installed with a horizontal "gooseneck" bend at the corporation stop to provide for expansion and contraction, in accordance with AWWA C800-66.

C. Curb stops shall be manufactured by Ford Meter Box Co., Inc.; Mueller Co.; or approved equal. Curb stops shall be similar to Ford Catalog No. B44 series or Mueller H-15155 for $^{3}/_{4}$-inch and 1-inch valves utilizing copper service line pipe; or Ford Catalog No. B66 series or Mueller H-15156 for $^{3}/_{4}$-inch valves and 1-inch valves utilizing polyethylene (PE-SDR7) service line pipe.

Curb stops shall be furnished with service boxes having cast iron tops. The service box caps shall be held in place with a suitable pentagonally shaped locking nut, and shall have the work "water" cast on them. Curb stop boxes shall be similar to Model 5614 Minneapolis Pattern Base, as manufactured by A.Y. McDonald Co.; Mueller Co.; or approved equal.

D. Service saddles shall be as manufactured by Ford, Mueller, Rockwell, or approved equal. Service saddles shall be similar to Ford Style 101NXCC3 for $^{3}/_{4}$-inch corporations, or Style 101NXCC4 for 1-inch corporations utilizing copper service line pipe, or Ford Catalog No. S70 for corporation stops utilizing polyethylene (PE-SDR7) service line pipe. All service connections to PV water mains, regardless of the SDR rating of the water main pipe, shall include a service saddle with the corporation stop.

5.5 PIPE LAYING AND JOINTING

A. General: Water main construction for all pipe shall conform to AWWA Standard C-600 and the following requirements: All pipe shall be laid and maintained to the required lines and grades with fittings, valves, and hydrants at the required locations, with joints centered and spigots home, and with all valve and hydrant stems plumb.

B. Mechanical or Slip Type Joints: Mechanical or slip type joints shall be made in accordance with the manufacturer's recommendations.

C. Protecting Underground and Surface Structures: Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers, and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his own expense under the direction of the Engineer.

D. Deviations Occasioned by Other utility Structures: Wherever existing utility structures or branch connections leading to main sewers, main drains or other conduits, ducts, pipes or structures present obstructions to the grade and alignment of the pipe, they shall be permanently supported, removed, relocated, or reconstructed by the Contractor through cooperation with the owner of the utility, structure, or obstruction involved. In those instances where their relocation or reconstruction is impracticable, a deviation from line and grade will be ordered.

E. Depth of Pipe Cover: All pipe shall be laid with a cover of five (5) feet above the top of the pipe barrel unless otherwise required in the Special Provisions. Deviations from the specified depth will be permitted where necessary to make connections with existing water mains.

Whenever the water line is at or sufficiently near the grade of a parallel sewer, the water line will be either lowered or raised so that the water line will not obstruct sewer lines to the parallel sewer main. This will be required because the relatively shallow grade shall be adjusted, usually be additional depth when necessary. A detail of sewer crossings is included at the end of these specifications.

F. Trench Excavation and Backfill: Width of trench shall be six (6) inch minimum, eight (8) inch maximum on each side of the pipe bell. The bottom of the trench shall be rounded so that an arc of the circumference equal to 0.6 of the outside diameter of the pipe rests on the undisturbed soil. Bell holes shall be excavated accurately to size by hand.

In addition, it is the intent of the foregoing to limit the width of the trench from the bottom to a point approximately one (1) foot above the pipe to a width of not more than three (3) times the diameter of the pipe. Backfill material shall be placed evenly and carefully around and over the pipe in six (6) inch maximum layers. Each layer shall be thoroughly and carefully tamped to a depth of twenty-four (24) inches above the top of the pipe. The remainder of the backfill shall be placed and puddled or otherwise settled, except where mechanical tamping of the backfill is required for the entire depth of the trench, generally within the road right-of-way and beneath drives. Backfill shall be compacted to ninety (90) percent of Standard Proctor.

Backfill material should be in accordance with AWWA Standard C600.

G. Laying Water Mains: Each section of pipe in trenches shall rest upon the pipe bed for the full length of its barrel with recesses excavated to accommodate bells and joints. Any pipe that has its grade or joint disturbed after lying shall be taken up and re-laid. The interior of all pipes shall be thoroughly cleaned of all foreign matter before being lowered into the trench and shall be kept clean during laying operations by means of plugs or other approved methods. Under no circumstances shall pipe be laid in water, and no pipe shall be laid when trench or weather conditions are unsuitable for such work. At all times when work is not in progress, all open ends of pipes and fittings shall be securely closed so that no trench water, earth, or other substance will enter the pipe or fittings. Any section of pipe already laid and found to be defective shall be taken up and replaced with new pipe without additional expense to the owner. Anchorage shall be as shown on the blockage plan for fittings. Deflections from straight line or grade shall not exceed manufacturers' recommendations and approved by the Engineer.

5.6 PRESSURE AND LEAKAGE TEST

The Contractor shall furnish all labor, pumps, pipe connections, additional line plugs, adapters, caps, and all other necessary apparatus, except gauges, for performing hydrostatic pressure and leakage tests in accordance with "AWWA Standard for Installation of Ductile-Iron Water Mains and their Appurtenances", ANSI/AWWA C-600, except as otherwise specified. The City will furnish a source of water.

After the pipe has been laid, all new potable water systems, two (2) inch diameter and larger, and each valved section thereof, shall be subjected to a hydrostatic pressure of at least one and one half ($1^1/_2$) times the working pressure (100 psi minimum - 125 psi maximum) at the point of testing. Each valved section of pipe shall be slowly filled with water, and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer. Valves shall not be operated in either the opening or closing direction at differential pressures above the rated pressure. When hydrants are in the test section, the pressure test shall be made against closed hydrant valves.

Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, corporation cocks shall be installed at such points so the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation cocks shall be

closed, and the test pressure applied. At the conclusion of the pressure test, the corporation cocks shall be removed and plugged by the Contractor.

When the specified pressure has been reached, the valve between the pump and the pipeline shall be closed, and the pump shall be disconnected and removed. The test pressure shall remain for a minimum of two (2) hours. If the pressure varies more than two pounds per square inch plus or minus (2 psi$\pm$) during the duration of the test it shall be extended for twenty-four (24) hours to satisfy those concerned that the decrease in the pressure is not due to thermal-volume changes of the water in the line. At the end of the twenty-four (24) hour period, the pressure shall be brought back up to the specified pressure and observed for two (2) hours.

During the pressure test, any exposed pipe, fittings, valves, hydrants, or joints shall be examined carefully. Any damaged or defective pipe, fittings, valves, hydrants, or joints that are discovered shall be repaired or replaced with sound material, and the test shall be repeated until it is satisfactory to the Owner.

After the pressure test has been successfully completed, the system shall be tested for leaks. The leakage test shall be at same pressure specified for pressure test. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within two pounds per square inch (2 psi) of the specified test pressure after the pipe has been filled with water and the air has been expelled.

A drop in pressure in a test section shall not measure leakage over a period of time. The allowable leakage and the quantity of water introduced to refill the main shall be accurately measured to within two-tenths (0.2) gallon.

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{SD(P)^{1/2}}{133{,}200}$$

Where
L = Allowable leakage, in gallons per hour
S = Length of pipe tested, in feet
D = Nominal diameter or the pipe, in inches
P = Average test pressure during the leakage test, in pounds per square inch (gauge).

Acceptance shall be determined on the basis of allowable leakage. If any test of laid pipe discloses leakage greater than that specified, the Contractor shall, at this own expense, locate and make approved repairs as necessary until the leakage is within the specified allowance. All visible leaks are to be repaired regardless of the amount of leakage.

5.7 STERILIZATION OF MAINS

Before being placed in service, all new water distribution systems, extensions to existing systems or any valved section of such extension or any replacement in the existing water distribution system shall be sterilized in accordance with AWWA Standard C651 and addendum AWWA C651a-90.

Treated water shall be retained in the pipe long enough to destroy all non-spore forming bacteria. Sterilization of all water mains should be in accordance with AWWA standards. Chlorine should be injected into the water main and let stand twenty-four (24) hours at which time the residual should be not less than ten (10) ppm.

A. Preliminary Flushing: Prior to chlorination, all dirt and foreign matter shall be removed by a thorough flushing through the hydrants or by other approved means. Each valved section of newly laid pipe shall be flushed independently. This may be done either before or after the trench shall have been backfilled.

B. Liquid Chlorine: A chlorine gas-water mixture shall be applied by means of a solution-fed chlorinating device, or, if approved by the Engineer, the gas shall be fed directly from a chlorine cylinder equipped with proper devices for regulating the rate of flow and the effective diffusion of gas within the pipe. (Chlorination with the gas-water mixture is preferred to direct feed.)

The preferable point of application of the chlorinating agent shall be at the beginning of the pipe line extension or any valved section of it, and through a corporation stop inserted in the horizontal axis of the newly laid pipe. The water injector for delivering the gas-water mixture into the pipe shall be supplied from a tap on the pressure side of the gate valve controlling the flow into the pipeline extension. In a new system, application may be at the pumping station, the elevated tank, the standpipe, or the reservoir.

Water from the existing distribution system or other source of supply shall be controlled to flow very slowly into the newly laid pipeline during the application of chlorine. The rate of chlorine gas-water mixture flow shall be thoroughly flushed from the newly laid pipe line at it s extremities until the replacement water throughout its length shall, upon test, both chemically and bateriologically, be proven equal to the water quality served the public from the existing water supply system and approved by the Public Health Authority have jurisdiction.

C. Calcium Hypochlorite or Chlorinated Lime in Water: On approval of the Engineer, a mixture of either calcium hypochlorite or chlorinated lime of know chlorine content and water may be substituted as an alternative for liquid chlorine.

(1) Calcium Hypochlorite (comparable to commercial products known as "HTH", "Perchloron", and "Maxochlor") or,

(2) Chlorinated Lime (frequently called chloride of lime and known to the industry as bleaching powder) may be used.

A five (5) percent solution shall be prepared consisting of either powder to 95 percent of water by weight.

This calcium hypochlorite or chlorinated lime and water mixture, first made into a paste and then thinned to a slurry, shall be injected or pumped into the newly laid pipe under conditions heretofore specified for liquid chlorine application after preliminary flushing.

Provisions for final flushing, testing, and approval under this alternative shall be the same as those described in Paragraph 5.6(b).

D. Cost of Tests and Sterilization: The furnishing of materials and the labor and all other costs incidental to testing and sterilization shall be borne by the Contractor and merged into his bid price for construction of water mains.

E. Sterilization Results: Flushing or chlorination of the new portions of the projects shall continue until two (2) samples, free of chlorine taken at least twenty-four (24) hours apart, show absence from undesirable organisms.

5.8 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

A. Water Main: Water mains shall be measured for payment by measuring the length down the center line of construction of all pipe lines installed, with no deduction for fittings or valves. Payment shall be made at the contract unit price per lineal foot for various sizes, including fittings, excavation, and backfill complete in place.

B. Valves and Boxes: Valves and valve boxes of the various sizes shall be paid for at the contract unit price per each complete in place.

C. Hydrants: Fire hydrants shall be paid for at the contract unit price per each complete. If applicable, the fire hydrant bid price shall include the six (6) inch ductile iron pipe to complete the link between the hydrants and the tee at the main, the six (6) inch valve and box, and the six (6) inch 90^{o} bend. The tee will be paid for separately as set forth in the proposal.

D. Fittings: Fittings such as tees, bends, plugs, and reducers shall be paid for at the contract unit price per each, complete in place.

E. Blocking: The furnishing of materials, equipment, and labor to provide for blocking shall be borne by the Contractor and merged in the bid price bid for Water Mains.

F. Corporation Stop: Corporation stops shall be paid for at the contract unit price per each complete in place.

G. Curb Stop: Curb stops shall be paid for at the contract unit price per each complete in place.

H. Water Services: Water services shall be measured for payment by measuring the length down the center of the pipe line from the corporation stop to the curb stop. Payment shall be made at the contract unit price per lineal foot for various sizes, excavation, and backfill complete in place.

I. Removal, Restoration, and Maintenance of Surface: See Section 4 - Concrete Pavement specifications.

J. Salvage Fire Hydrant: Fire hydrants to be salvaged shall be removed so that all components necessary to reinstall the fire hydrant are salvaged. This work will be paid for at the contact unit price per each for the item “Salvage Fire Hydrant”.

K. Reinstall Fire Hydrant: Reinstall Fire Hydrants shall be paid for at the contract unit price per each complete in place.

L. Topping Sleeve and Valve: Tapping sleeves and valves shall be paid for at the contract unit price per each complete in place.

ARTICLE 6

SANITARY SEWER MAIN SPECIFICATIONS

Index

ARTICLE 6

SANITARY SEWER MAIN SPECIFICATIONS

6.0 GENERAL

Sanitary sewers shall be constructed of the sizes and at the locations shown on the plans. They shall be complete with manholes, clean-outs, and other incidental construction as shown on the plans.

6.1 MATERIALS

All pipe installed shall be of the type and class indicated on the drawings or noted in the Special Provisions.

A. VCP, Vitrified Clay Pipe: Extra strength, shall conform to the latest ASTM C-700 with compression joints, conforming to ASTM Designation C-425 or C-594.

B. Reinforced Concrete Pipe, Lined: Reinforced concrete pipe, lined, shall conform to ASTM Designation C76, Class III. The complete interior barrel surface area of all concrete sewer pipe shall be provided with an integral corrosion barrier. The corrosion barrier shall be applied to a minimum thickness of 90 mils (0.090 inch) and a minimum average thickness of 100 mils (0.100 inch). It shall be tightly bonded to the concrete and shall be free of pinholes, voids, and holidays.

The corrosion barrier shall be formulated with 100% solids: coal tar, epoxy resin vehicle and selected siliceous aggregates. The vehicle shall consist of coal tar derived from tar produced in high temperature cooking of bituminous coals, epoxy resin of bisphenol A/epichlorohydrin type, and selected additives to effect and control the viscosity, curing, and flexibility of the product. The aggregates shall be clean, dry, chemically inert and controlled in particle shape and gradation to achieve the optimum combination of proper flow during application with maximum density, abrasion resistance, impact strength and ductility, and minimum shrinkage after curing.

The pipe surface preparation, formulation, and application of the corrosion barrier, curing, trimming and repair, joint surface coating, plant testing, inspection, pipe handling, field patching, the joint mastic and its application shall all be in accordance with the current specifications of the manufacturer of the corrosion barrier.

Joints for reinforced concrete pipe may be made with a rubber gasket, rubber “O” rings which shall conform with ASTM C443-74.

C. Reinforced Concrete Pipe, Unlined:

1. General: Reinforced concrete pipe, unlined, fittings, and accessories shall conform to ASTM C76, latest revision, for Class III pipe.

2. Aggregate: Aggregate shall conform to the requirements of State of Nebraska, Department of Roads specifications for 47B concrete.

3. Gaskets: Gaskets shall conform to ASTM C361, Section 5.9. Minimum tensile strength shall be 1200 psi, hardness shall be forty plus or minus five (40 ± 5), maximum water absorption shall be ten (10) percent, and polymer shall be neoprene or other synthetic rubber. Natural rubber will not be acceptable.

4. Dimensions: The wall thickness of pipe shall be not less than Wall B, as specified in ASTM C76. In the preparation of pipe layouts, the maximum joint opening used shall not exceed three-eighths (3/8) inch.

5. Absorption: Absorption of pipe shall not exceed six (6) percent.

6. Joints: Joints shall conform to ASTM C361, Sections 7.1 and 7.4. Gaskets shall have circular cross section and shall be confined in a groove in the pipe spigot. Pipe employing collars in lieu of integral bells will not be acceptable. Joint design details including calculations and tests, shall be submitted for approval.

7. Reinforcement: Circumferential reinforcement may be either full-circle type or elliptical, but the type shall be the same for all pipe of each specified size. At least three (3) circumferential bars shall be provided in each pipe bell. The bars shall be placed within two (2) times the socket depth from the end of the pipe and shall be equal in area to an equivalent length of the outside cage in the pipe barrel. The end circumferential bar shall be placed one (1) inch from the face of the bell. The inside cage in the pipe barrel shall be extended to within one (1) inch of the end of the spigot.

8. Preliminary Approval Tests: Preliminary approval tests, which shall be made at the Contractor's expense, are for proof of design only. It is not required that such tests be made on pipe manufactured specifically for this contract. Reports covering tests made on other pipe of the same size, class, and design and manufactured at the same plant may be acceptable. Such tests shall include, but may not be limited to, joint leakage tests (ASTM C443, Section 8) and mill test reports of the cement used.

9. Fittings: In addition to straight pipe, the Contractor shall furnish all bends, tees, closure pieces, wall fittings, and other fittings which are shown on the plans or required to complete the work. Except as modified or otherwise provided herein, the design and manufacture of fittings shall be covered by the same requirements as the connecting piping.

10. Marking: Each pipe or fitting shall have plainly and permanently marked thereon: (A) pipe class, (B) date of manufacture, (C) manufacturer's name or trademark, (D) on bends, the angle turned thereby, and (E) the top marked if elliptical reinforcing is used. Marking shall be indented in the pipe or painted thereon with waterproof paint.

11. Control Tests: Control tests shall be made during manufacturer of the pipe to determine strength and absorption and to insure that the proper aggregate is used. Control tests shall be made by an independent testing laboratory at the expense of the Contractor.

    At the option of the Contractor, strength tests may be made on cores or standard concrete cylinders. A set of two (2) cores or four (4) cylinders shall be taken from each day's production and every time the concrete mix is changed. One-half (1/2) of the samples shall be tested at seven (7) days or earlier to determine when the pipe has attained sufficient strength for deliver. The remainder shall be tested at 28 days.

    Absorption tests shall be made on cores taken from the pipe barrel. Cores shall be made with a diamond drill and shall not be smaller than two (2) inches in

diameter. One (1) core shall be tested from the first length of pipe of each size and class. Thereafter, cores shall be tested from five (5) percent of the pipe produced, but not less than one (1) from each day's production.

Sufficient aggregate tests shall be made to insure compliance with the specifications. The aggregate shall be tested prior to the manufacture of the pipe. Testing will also be required when stockpiles are replenished and/or when other pertinent conditions have changed, or when directed by the Engineer.

12. Delivery: No concrete sewer pipe shall be delivered to the site of the work until strength tests representing such pipe have attained a compressive strength of at least eighty (80) percent of the specified minimum 28 day strength.

13. Holes: Core holes and handling holes shall be repaired by cementing a properly shaped concrete plug in place with epoxy cement or by other means approved by the Engineer.

14. Handling: Concrete pipe and fittings shall be handled carefully and shall not be bumped or dropped. Hooks shall not come in contact with joint surfaces.

15. Drawings and Data: Drawings and data showing complete details of the design, fabrication, and construction of pipe and fittings, together with complete data covering all materials proposed for use in connection therewith, shall be submitted for approval in accordance with the procedures set forth in the General Conditions. The drawings and data shall include, but shall not be limited to, the following for size and class of pipe: (A) data on reinforcement, (B) details of joints, (C) details of fittings, and (D) test reports.

D. ABS Pipe (Truss Pipe): The truss pipe shall meet the requirements of ASTM Specification D2680-72 and shall be installed in accordance with ASTM Specification D2321-74. Thirty (30) days after backfilling the pipe shall be tested for deflection. The pipe shall be tested by pulling a mandrel through the pipe. Maximum allowable deflection shall not exceed five (5) percent of the pipes' internal diameter.

E. Polyvinyl Chloride (PVC): PVC pipe shall meet the following specifications and requirements.

Standard PVC pipe shall be constructed of unplasticized polyvinyl chloride, Type I, Grade I, and shall meet the latest requirements of ASTM Specifications D1784. The PVC sewer pipe shall be SDR-35 and shall meet the latest requirements of ASTM Specifications D3034. The pipe shall be integral wall bell and spigot joints, ASTM Specification D3212 and ANSI/ASTM F477. Installation shall be in accordance with ASTM Specifications D2321.

The Contractor shall provide compliance certificates on pipe materials to assure compliance with specifications.

F. Ductile Iron Pipe: Ductile iron pipe shall conform to Standard C151, 350 psi rated working pressure, thickness Class 51 as shown in the plans.

G. Service Lines: Sanitary sewer service line shall be PVC Schedule 40.

H. Manholes: Manholes shall be precast, as approved by the Owner and Engineer. All manholes shall be four (4) feet inside diameter, unless otherwise shown on the plans.

Precast manhole sections shall meet the requirements of ASTM Specification C478. Precast manhole sections shall have tongue and groove joints with the tongue end pointing upwards from the base. Joints shall be sealed with RAMNEK pre-formed plastic gaskets, at one (1) inch E-Z STIK, or approved equal. All joints shall also be back-plastered with a neat cement grout, and all lift holes filled with cement grout. In addition, the exterior of all manholes shall be coated with one (1) coat of heavy-bodied tar or bituminous paint, similar to hydracide 700.

Manhole bottoms for all manholes shall be constructed by one of the following two methods, as shown on the plans:

1. Method 1: It is the intent of this method to have an uninterrupted channel formed by the sewer pipe through the bottom of all manholes. The sewer pipe shall be carried all the way through the manhole with wyes, tees, or bends installed as required. The concrete bottom shall then be poured, followed by the careful removal of the top of the sewer pipe. The removal of the top portion of the sewer pipe through the manhole shall be done in a neat and workmanlike manner with no sharp or jagged edges visible.

2. Method 2 This construction method involves the forming of the flow line or channel through the manhole out of concrete at the time the bottom is poured. The concrete trough shall have a smooth finish so as to prevent the buildup of solids in the manhole.

In addition to the above-described construction requirements, sewer pipe connections to manholes shall be made using manufactured flexible-type connections. The manufacturer or the supplier of the pipe being furnished shall also furnish the flexible-type connections to insure compatibility with the pipe. Flexible connections shall be similar to Lock-Joint Flexible Manhole Sleeve, as manufactured by Interspace Corporation; Press Wedge II, by Press-Seal Gasket Corporation; Link Seal, by Thunder Line Corporation; A-Lok, by A-Lok Corporation; or approved equal.

I. Clean-Outs: Clean-outs shall be constructed of plain concrete complete with cast iron rings and covers and pipe as shown on the drawings.

J. Manhole Ring and Covers and Steps:

1. Rings and Covers: Deeter Foundry No. 1005 or approved equal with machined bearing surface, minimum weight of 300 pounds and minimum opening of 22 inches.

2. Steps: Steps shall be Deeter Foundry No. 1605 or approved equal. Steps shall be spaced sixteen (16) inches O.C. and shall be a minimum of ten (10) inches wide.

3. Clean-Out Covers: Clean-out covers shall be Deeter Foundry No. 1810 or approved equal.

6.2 SERVICE WYES AND TEES

The Contractor shall furnish and install service wyes in the sewer lines for service to the individual residences. The location of the wyes will be designated by a representative of the Owner and the Contractor will be responsible for coordinating this work with the owner's representative. The Contractor will furnish the Engineer with a map showing the wye locations at the conclusion of the project. The Contractor shall furnish, in conjunction with the service wyes, 45^{o} bends and plugs for each wye. The cost of the 45^{o} bend and plug for each wye shall be included in the price of the wye.

In addition to the service wyes, service tees will also be accepted and may be used in lieu of the wyes wherever possible. The Contractor shall furnish a plug with each service tee, which shall be included in the Bid on the tee.

The Contractor shall mark the end of each service line with a six (6) foot "T" shaped steel fence post abutted to the face of the plug, and positioned so the top of the fence post will be no more than one (1) foot below the existing surface, and not protruding above ground. This shall also be included in the Bid in the "Tee" item. Refer to details on the standard drawings.

6.3 PROTECTING UNDERGROUND AND SURFACE STRUCTURES

Temporary support, adequate protection, and maintenance of all underground and surface utilities, structures, drains, sewer, paving, and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his own expense, under the direction of the Engineer.

6.4 DEVIATIONS OCCASIONED BY OTHER UTILITY STRUCTURES

Whenever existing utility structures or branch connections present obstructions to the grade and alignment of the pipe, they shall be permanently supported, removed, relocated, or reconstructed by the Contractor through cooperation with the Owner of the structure or obstruction involved. In those instances where relocation or reconstruction is impracticable, a deviation from the line and grade will be ordered in writing by the Engineer.

6.5 INSTALLATION

ASTM Specification D2321 "Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe", ASTM C12 "Installing Vitrified Clay Sewer Pipe", and these construction specifications shall govern, except where special notations have been made on the plans or in the Special Provisions, which shall have precedence, as these construction specifications are general in nature and will not cover special structures or unusual conditions. If there are any unusual conditions where structures are allowed for, they will be noted in Article 3, General Requirements.

The Contractor shall remove excess excavated materials, as directed by the Engineer. All trenches shall be over-excavated a minimum of four (4) inches and brought back to grade with suitable material, as is mentioned in Section 3.3 of ASTM.

Excavation for manholes and other accessories shall have twelve (12) inch minimum and twenty-four (24) inch maximum clearance on all sides.

Excavation shall not be carried below the required level. Excess excavation below required level shall be backfilled at the Contractor's expense with earth, sand, gravel, or concrete, as directed by the Engineer, and thoroughly tamped.

Ground adjacent to all excavation shall be graded to prevent water running in. The Contractor shall remove, by pumping or other means approved by the Engineer, any water accumulated in the excavation.

The Contractor shall furnish, install, and maintain all bridges, walkways, barricades, flashing lights, and flares that are required by state, county, and municipal regulation.

A. Trench Excavation: For sandy soils that are prone to caving with vertical excavations, the Contractor shall slope the banks as necessary to prevent caving of the trench walls. Width of trench shall be six (6) inch minimum, eight (8) inch maximum, on each side of the pipe bell.

In addition, it is the intent of the foregoing to limit the width of the trench from the bottom to a point approximately one (1) foot above the pipe to a width of not more than three (3) times the diameter of the pipe.

The compaction of the foundation, bedding, haunching, and initial backfill shall extend to the trench walls.

B. Bracing and Shoring: The Contractor shall do all bracing, sheathing, and shoring necessary to perform and protect all excavations. Where an unstable or running soil condition is encountered in the trench wall, such as may be found by excavation below ground water, stabilize this condition before laying the pipe. Depending upon the severity of the condition, the Contractor may elect to use tight sheeting, stay bracing, or a trench box to control such trench conditions during the course of pipe-laying operations.

C. Pipe Bedding: Pipe bedding for PVC pipe shall be in accordance with ASTM Specification 2321, which shall be enforced. Bedding for PVC pipe shall be included in the bid on the pipe and will not be paid for as a separate item.

Prior to pipe installation, the Contractor shall carefully bring the bedding material to grade along the entire length of pipe to be installed. The Contractor shall provide a uniformly compacted bedding to properly support the pipe, and to prevent any differential settlement of the pipe. The Contractor shall excavate the trench six (6) inches below the pipe grade, and replace and compact the bedding material using hand or mechanical tamping. The bedding material shall be compacted to a minimum of ninety percent (90%) Standard Proctor Density. The bedding shall be brought to the proper grade after compacting.

Bell holes shall be excavated accurately by hand in the bedding material to allow assembly of the joint. When the joint has been made, the bell hole shall be carefully filled with bedding material to provide pipe support.

D. Haunching, Backfilling, Compaction, Moisture Control, and Testing: Place and compact, by hand or mechanical tamping, backfill to the spring line of the pipe. During the initial stage of backfill, material shall be worked under the haunch of the pipe to provide adequate side support. Take precautions to prevent movement of the pipe during placing of the material under the pipe haunch. Place initial backfill material in two

stages; one to the top of the pipe and the other to a point at least six (6) inches over the top of the pipe. Compact each stage of haunching and initial backfill by hand or mechanical tamping to a minimum of ninety percent (90%) Standard Proctor Density. If the remaining backfill material contains large particles, which could damage the pipe from impact during placement, increase the second stage of initial backfill to a point at least twelve (12) inches over the top of the pipe.

The Contractor, after obtaining one (1) foot of cover over the pipe, shall place the succeeding material in twelve (12) inch lifts for pipes not located in street right-of-ways, and eight (8) inch lifts for pipes located in street right-of-ways, with each lift mechanically tamped.

The Contractor shall compact the backfill material from the bottom of the trench to a plane twenty-four (24) inches below the existing ground surface, to not less than ninety percent (90%) of the maximum dry density. In areas where the ground will be covered with Portland Cement or asphaltic concrete pavement or sidewalks, the top twenty-four (24) inches of backfill material in the subgrade shall be compacted to ninety-five percent (95%) of the maximum dry density. In all other areas, the top twenty-four (24) inches of backfill material shall be compacted to ninety percent (90%) of the maximum dry density.

However, in no case shall the degree of compaction of the trench backfill be less than the density of the original soil. Crushed rock pipe bedding, or granular pipe bedding (gravel), whichever may be specified, shall be compacted to seventy percent (70%) relative density, as determined by ASTM D-2049. This requirement is not a bid item, but shall be included in the bid on the piping.

The maximum dry density and optimum moisture content of the backfill material will be determined in accordance with ASTM D-698. The Contractor shall adjust the moisture content of the backfill material to not more than four percent (4%) above, or two percent (2%) below, the optimum moisture content.

In-place compaction tests will be required if, in the opinion of the Engineer, the compaction of the trench backfill does not meet the compaction requirements as set forth herein. The Engineer shall be the sole judge in determining whether or not compaction tests shall be required. Compaction tests will be made in accordance with ASTM D-2167 or ASTM D-2922. A retest shall be required for every compaction test that does not meet the minimum requirements for moisture and compaction after the trench has been re-compacted.

The Contractor shall perform all work necessary to re-compact the trench in all areas where spot checking, by taking density tests, indicates that the specified densities are not consistently being obtained. Generally, low density and moisture tests will initial be run on the trench backfill on each 300 foot increment of pipe trench backfill. Each density test initially run shall be considered representative of the 300 foot length, as above described. In the event of a failing test, the trench backfill shall be re-compacted by the Contractor. If, however, a test indicates the density at any one test location is very close to the specified density, then the Contractor will be permitted to pay for additional tests to determine if any part of the representative section of trench backfill is in compliance with the specified density. The Engineer will be the sole judge in determining the number of additional tests required, and the acceptability of any part of the trench backfill when the Contractor elects to pay for additional moisture and density tests. The above conditions, notwithstanding, the very minimum amount of trench backfill that must be re-compacted by the Contractor will extend from the point of each

failing test to the midpoint of the length of pipe between such failing test, and the point where the next density test has been performed. If compaction tests are required, the Contractor shall obtain the services of a testing laboratory, acceptable to the Owners and Engineer, to perform all compaction testing. The cost of all compaction tests shall be the responsibility of the Contractor, and shall be included in his bid as he deems necessary. The Engineer will select frequency, location, and depth of all compaction tests.

It will be the Contractor's option as to the type of mechanical tamping equipment he uses to attain the specified soil densities; however, the tamping equipment shall be sized and used in such a manner as to not disturb or damage the pipe. Use of high force hammer equipment, gravity, or hydraulic type will not be permitted until compacted backfill is in place to a minimum of four (4) feet above the top of pipe.

E. Crushed Rock Bedding for Sewer Pipes: It may be necessary to bed some of the sewer lines with crushed rock, due to the possibility of encountering wet soil conditions during excavation. The need for this bedding will be determined by the Engineer; however, it will be the responsibility of the Contractor to notify the Engineer when soil conditions are encountered that warrant the use of this type of bedding material.

Granular bedding shall extend the full width of the trench and shall extend upward from the bottom of the trench to the spring line of the pipe to assure full support of the lower one-half of the pipe circumference. The minimum depth between the bottom of the trench and the lowest point of the pipe shall be six (6) inches to achieve adequate pipe support.

The rock or granular bedding shall be paid for on a lineal foot basis, either as set out in the Bid under "Additions", or otherwise negotiated with the Contractor. For areas that require more rock bedding, the extra depth shall be paid for by converting the additional rock to the amount of rock required described as minimum for pipe support. The additional rock shall then be converted to lineal feet, as described above.

Bedding material will be crushed rock or crushed gravel meeting the requirements of ASTM C33, gradation 67; or coarse aggregate for concrete, Type 47B, as stated in Table 1015.02 of the State of Nebraska, Department of Roads, 1985 Standard Specifications for Highway Construction. The need for this type of bedding material is separate and distinct from the bedding specifications under 6.(c) – Pipe Bedding.

F. Payment: All material excavated for site preparations, structures, or trenches shall be classified as earth excavation and will be included in the unit prices of sanitary sewer main per foot or manholes complete in place. The Contractor, in making his bid, shall satisfy himself from such information as shown on the plans and from personal examination of the site, as to the presence and the extent of groundwater, rock, or other obstructions to be encountered.

G. Safety Conditions: The Contractor shall conduct his operations in accordance with the requirements of OSHA and the Nebraska Department of Labor. Neither the Owners nor the Engineer is obligated under these specifications to be responsible for the safety of this project. Obviously dangerous situations may be observed by representatives of the Owners or the Engineer, and the Contractor's representatives notified of the problem.

H. Laying Pipe: The Contractor shall be required to use one of the following two methods.

1. The Contractor shall be required to furnish and use laser equipment for installation of all sewer mains as means of establishing proper line grade. Stakes shall be provided at points for changes in grade or alignment, with a stake provided as a reference check fifty (50) feet from the grade and/or alignment stake to check proper elevation. (Staking beyond that provided by the Owners will be the responsibility of the Contractor and at his cost.)

2. The Contractor may use an overhead grade line or top line method for establishing grade or sighting of the grade pole over parallel double lines. The Contractor shall have in position a minimum of three (3) grade or batter boards while laying pipe; any discrepancies or irregularities in the line or grade stakes should be corrected before pipe laying proceeds.

If the Contractor elects to use the second method for installation of the sewer mains, the required surveying and staking beyond that described for Method A shall be the Contractor's responsibility and at his cost.

The laser beam projector is to be rigidly mounted. Units using the laser beam coaxially through the center of the pipe should maintain control of atmospheric conditions in the pipe to assure proper line and grade. Units other than through the pipe should provide adequate control sufficient to produce acceptable standards of construction.

All sewers shall be laid in accordance with the requirements of ASTM D-2321, Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe. The sewer shall be laid true-to-line and grade so that, when complete, the sewer will have a smooth and uniform surface.

The pipe shall be inspected and rung before incorporation into the work. No water shall be allowed in the trench without approval of the Engineer. Not more than 100 feet of ditch may be opened ahead of pipe laying without approval of the Engineer. To prevent earth or other material from entering the pipe, excavation shall be kept ahead of the pipe laying, and the exposed end of the pipe shall be closed with a board or other stopper.

6.6 WATER MAIN CROSSINGS

Whenever the sewer to be constructed is within ten (10) feet horizontally or one and one-half (1 ½) feet vertically above or below a water main, the sewer shall be constructed of ductile iron, as noted on the plans.

This one and one-half (1 ½) foot separation between the existing water lines and the sewer construction is hereby defined to mean a clear distance between the top of the sewer line and the bottom of the water main.

The Contractor shall take care when under-crossing existing water lines, and shall leave the exposed water lines open for inspection by the Engineer before backfilling. If the water lines have deteriorated so as to represent a possible public health problem, the Owners shall replace this water system for a distance of at least fifteen (15) feet on each side of the sewer line crossing. Such construction may be done by the Sewer Contractor if suitable negotiations can be made with the Owners, but the water line repairs are the responsibility of the Owners.

6.7 TESTING

The Contractor may be required to perform infiltration, exfiltration, leakage, and/or deflection tests on all or a portion of all of the sewer system if, in the judgment of the Engineer, the quality of the contraction and/or subsoil conditions warrant testing. The Contractor shall include the cost of testing, including testing equipment, in his bid as he deems necessary. The Engineer shall select the sewer line segment or segments to be tested. If television inspection of the completed system is the selected method of final inspection and testing, no additional testing will normally be required.

The type of test to be performed shall be selected by the Engineer from the tests specified herein. In addition, more than one of the specified tests may be required depending on the pipe material and subsoil conditions as determined by the Engineer.

If testing is required, the Contractor shall furnish all required test equipment and conduct the tests(s) at his own expense. Testing will be observed by the Engineer and the Contractor shall notify the Engineer forty-eight (48) hours in advance of conducting the tests.

Should the Contractor not be prepared to perform the test(s) at the time stated in the notification to the Engineer, the Contractor shall so notify the Engineer at least twelve (12) hours prior to the specified commencement time. Failure to perform the test(s) at the specified time, unless proper notification has been given to the Engineer in accordance with the previously stated requirements, may result in the Contractor being charged for the time and expenses of the Engineer's personnel.

Any corrective work required shall be performed at the Contractor's expense and re-tested until satisfactory results are obtained.

A. Infiltration Tests: All sanitary sewers shall be cleaned and tested after backfill by the exfiltration method, or where the ground water table is such as to preclude a proper exfiltration test, the Engineer may require infiltration tests.

Maximum infiltration or exfiltration including manholes shall not exceed 200 gallons per inch of diameter per mile of sewer line per day.

If the quantity of infiltration is in excess of the maximum allowable, the leaking joints shall be re-laid if necessary, or other remedial construction shall be performed by and at the expense of the Contractor.

All tests shall be made in the presence of the Contractor and the Engineer. The cost of these tests shall be included in the unit price bid for installing the pipe.

B. Low Pressure Air Test for Gravity Sanitary Sewers: Air test shall be used to perform infiltration and exfiltration tests of sanitary sewer work, and shall be conducted in accordance with ASTM C828.

Plug the ends of the section to be tested with airtight plugs. Brace plugs to prevent slippage due to internal pressure. One plug must have provisions for connecting an air hose.

Connect air hose to plug and to portable air control equipment consisting of valves and pressure gauges to control the rate of air flow into the test section and monitor air pressure inside the pipe.

Supply air to test section such that internal pressure in the pipe section does not exceed 5 psig. When pressure reaches 4 psig, throttle air supply to maintain internal pressure between 3.5 and 4 psig for a minimum of two minutes.

Disconnect air supply and allow pressure to drop to 3.5 psig. At 3.5 psig start a stop watch and determine the time required for the pressure to drop to 2.5 psig. Minimum allowable time for pressure drop to occur shall be as follows:

Pipe Size	Time
6”	2 min. 50 sec.
8”	3 min. 47 sec.
10”	4 min. 43 sec.
12”	5 min. 40 sec.
15”	7 min. 5 sec.
18”	8 min. 30 sec.
21”	9 min. 50 sec.
24”	11 min. 20 sec.

Maximum allowable length of sewer line that can be tested by air test shall e as follows:

Pipe Size	Maximum Length
4”	1114.0 Ft.
6”	742.7 Ft.
8”	557.0 Ft.
10”	445.6 Ft.
12”	371.3 Ft.
15”	297.0 Ft.
18”	247.5 Ft.
21”	212.2 Ft.
24”	185.0 Ft.

Locate and repair leaks and re-test until requirements of this section are met.

The cost of testing will not be paid as a separate item, but shall be included in the price for the pipe.

C. Alignment Test: Completed sewers shall be checked for alignment using either a laser beam or lamping. Completed sewers that do not show sufficient artificial light from manhole shall be corrected by the Contractor.

D. Deflection Test: Conduct deflection test on sanitary sewers constructed of polyvinyl chloride (PVC) pipe. Conduct deflection test after final backfill has been in place at least thirty (30) days. Maximum deflection shall not exceed five percent (5%) of the inside diameter of the pipe being tested. Conduct deflection test using Go No Go deflection testing gauge or mandrel. Outside diameter of mandrel shall not be less than ninety-five percent (95%) of the specified inside diameter of the pipe being tested.

Thoroughly flush line prior to testing to remove mud and debris. Float pull rope from upstream manhole to downstream manhole of section being tested and attach mandrel to pull rope. Attach a second rope to back of mandrel to retrieve mandrel if blockage is

encountered. Mark pull rope so that if blockage is encountered, the location of blockage can be determined.

Pull mandrel through the sewer line. Mechanical pulling devices shall not be used. If resistance to pulling or blockage is encountered, remove mandrel and re-flush or clean sewer line, if necessary. If blockage remains locate and determine cause of blockage and make necessary repairs. Repeat test until requirements of this section are met.

E. Television Inspection: Mobile closed circuit television inspection shall be required to determine if any defects such as open joints, breaks, cracks, intrusions, depositions, settling, or other misalignment have occurred in the sewer line during the course of construction and prior to final acceptance. Inspection of the sewer line and appurtenances by closed circuit television shall be displayed continuously on a television monitor. Permanent photographs of the television image shall be made to record all defects in the work and their accurate locations. Defects in the sewer line or appurtenances shall be repaired or replaced by the Contractor, as directed by the Engineer, at no additional cost to the City. One copy of the television inspection report and photographs shall be provided to the City by the Contractor.

The quality of the television inspection shall be such as to enable the television inspection operator to photograph the monitor whenever defects are detected and such defects can be photographed. If, in the opinion of the Engineer, the quality of the image of the monitor is such that defects in the lines are not detectable, inspection operations shall cease until television equipment has been repaired and/or adjusted.

The unit price named in the proposal for “Television Inspection” shall be full compensation for continuous television monitoring and permanent photographs of the television image in all defective areas and at all service connections in the line.

6.8 COUPLINGS

All connections between PVC and DIP sewer main shall be by cast couplings, Fernco or approved equal.

6.9 CLEANUP

When the installation of the sanitary sewer system is completed, the Contractor shall remove all material, equipment, temporary structures, trash, and debris resulting from the construction of the project. The construction area shall be left in a neat and unlittered condition. All sewer lines and force mains shall be flushed with water, removing all dirt, trash, and debris from the sewers and manholes. The Contractor shall furnish all water and flush the sewer line and force mains until lamping of the lines shows that the pipe is clean.

6.10 METHOD OF MEASUREMENT AND PAYMENT

A. Excavation and Backfill: All excavation and backfill for site preparations, structures, or trenches shall be included in the unit prices of “Sanitary Sewer Per Foot” or Manholes Complete in Place”. The Contractor, in making his bid shall satisfy himself, from such information as shown on the plans and from personal examination of the site, as to the presence and the extend of ground water, rock, or other obstructions to be encountered.

B. Sanitary Sewer: Sanitary sewer pipe will be measured as the number of lineal feet of pipe in place and accepted. Measurement will be made along the centerline of the pipe to the center of manholes. The number of lineal feet of pipe in place and accepted will be paid for at the contract unit price for "Sanitary Sewers" which payment shall be full compensation for trenching, backfilling, material, equipment, and labor necessary to complete the storm sewer construction.

C. Manholes: Standard manhole structures will be paid for at the contract unit price per each for "Manhole" structure not over six (6) feet in depth, which payment shall be full compensation for excavation, backfilling, material, equipment, and labor necessary to complete the manhole construction. The vertical feet of manhole in excess of six (6) feet (top of concrete cone elevation to invert elevation) will be measured, in place, and paid for under the contract unit price for "Extra Depth, Manhole". Dewatering of the ground to set manholes shall be included in the price bid per manhole. The frame and cover is included in the unit price bid per manhole.

D. Clean-Outs: Clean-out structures will be paid for at the contract unit price per each for "Clean-Out" structure, which payment shall be full compensation for excavation, backfilling, material, equipment, cover, and labor necessary to complete the construction.

E. Dewatering, Trench: the sewer line trenches shall be kept free from water during pipe laying and jointing by such method as the Contractor may elect, provided the method is acceptable to the Project Engineer. The Contractor shall be responsible for damages of any nature resulting from the dewatering operations, notwithstanding tacit approval of the method by the Project Engineer.

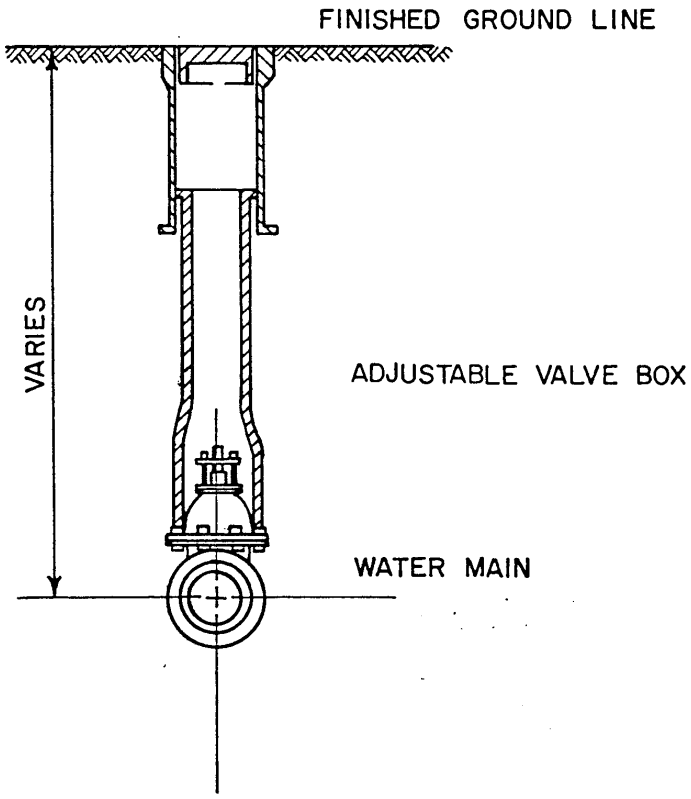
The work of dewatering trenches will not be measured and paid for directly, but shall be considered subsdiary to the pipe being installed.

F. Drop Manhole: This item shall consist of the construction of drop manholes and shall be paid for at the contract unit price per each for the item "Construct Drop Manhole".

LEGEND

⊟	Power Pole	⊖	Telephone Pole
←	Guy & Anchor	▣	Catch Basin
○	Manhole	⊹	Fire Hydrant
——≺	12" Culvert w/ length shown		
▒▒▒	Remove Concrete		
▒▒▒	Remove & Replace Concrete		

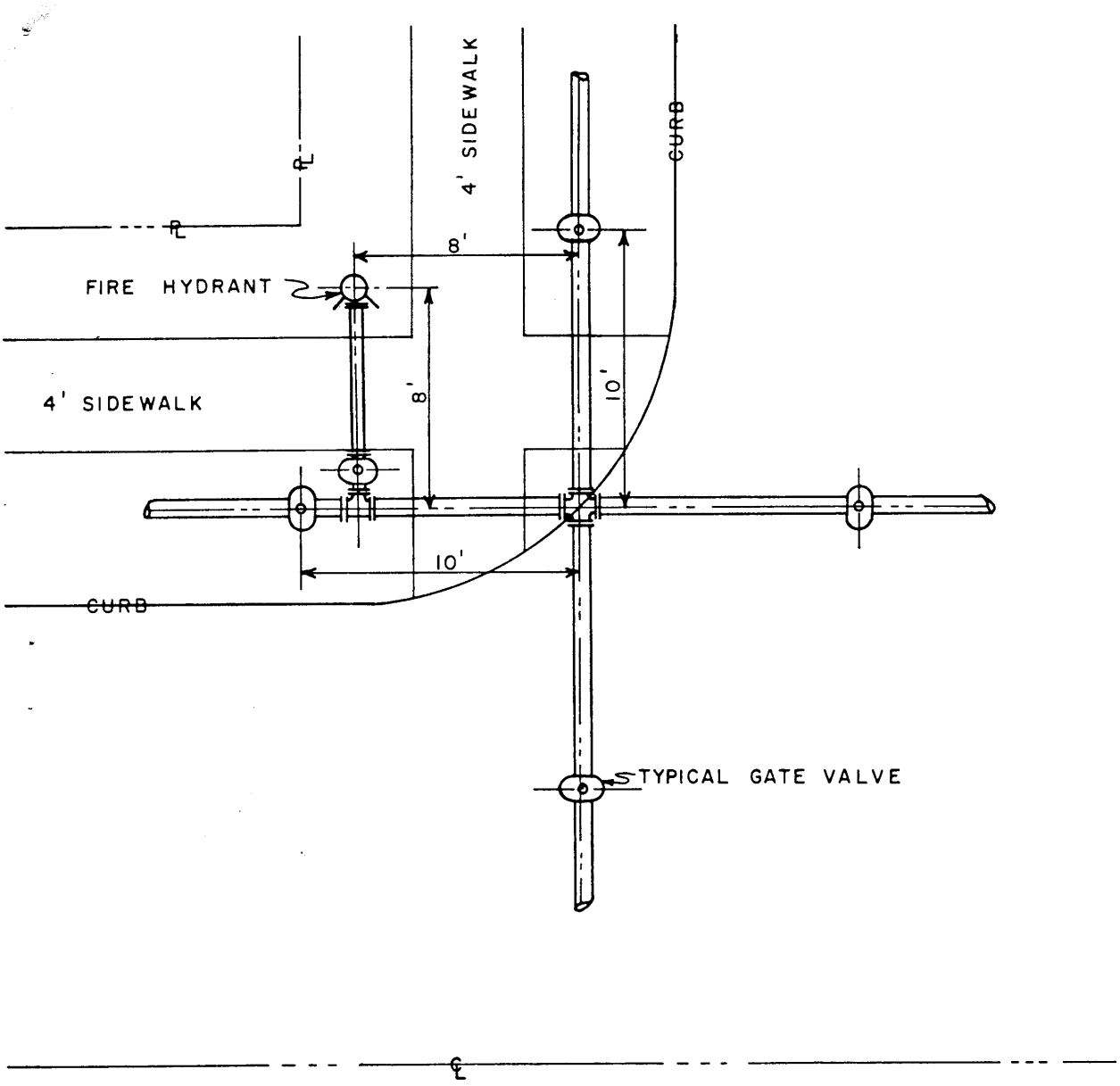
Existing		Proposed
— — — -W- — — —	Water Main	— — — — — — — —
— — — ⧖ — — —	Valve	— — — ⧖ — — — —
— — — ⊤ — — —	Hydrant	— — — ⊤ — — — —
——— SS ———	Sanitary Sewer	——— ——— ——
---------St S---------	Storm Sewer	----------



TYPICAL VALVE BOX SETTING

CITY OF
COLUMBUS, NEBR.

W-2
10-27-66

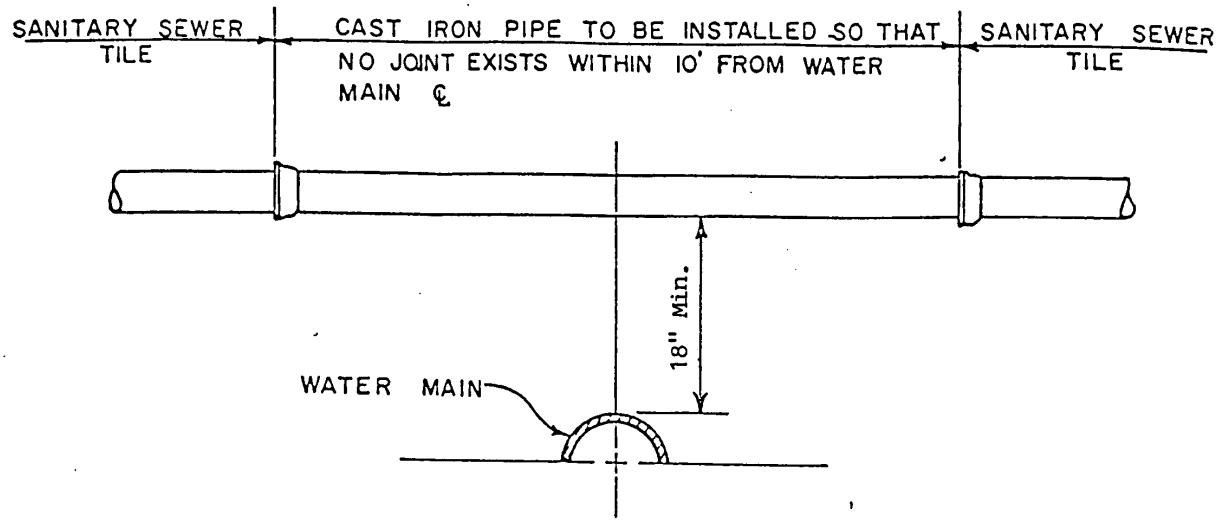


TYPICAL WATER LINE INSTALLATION
60' - R.O.W., 33' - STREET

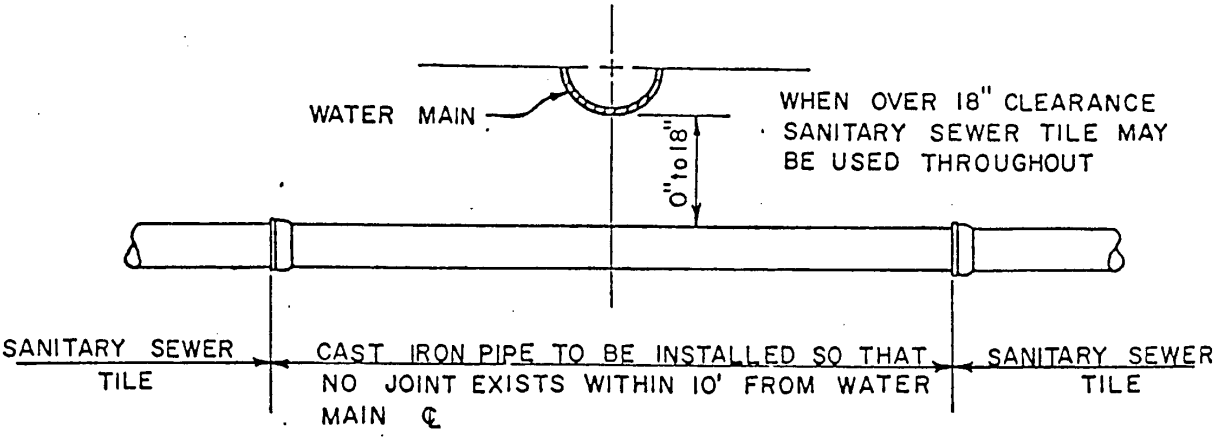
CITY OF
COLUMBUS NEBR.

SCALE 1" = 5'

W-3
7-18-69



SEWER CROSSING OVER WATER MAIN

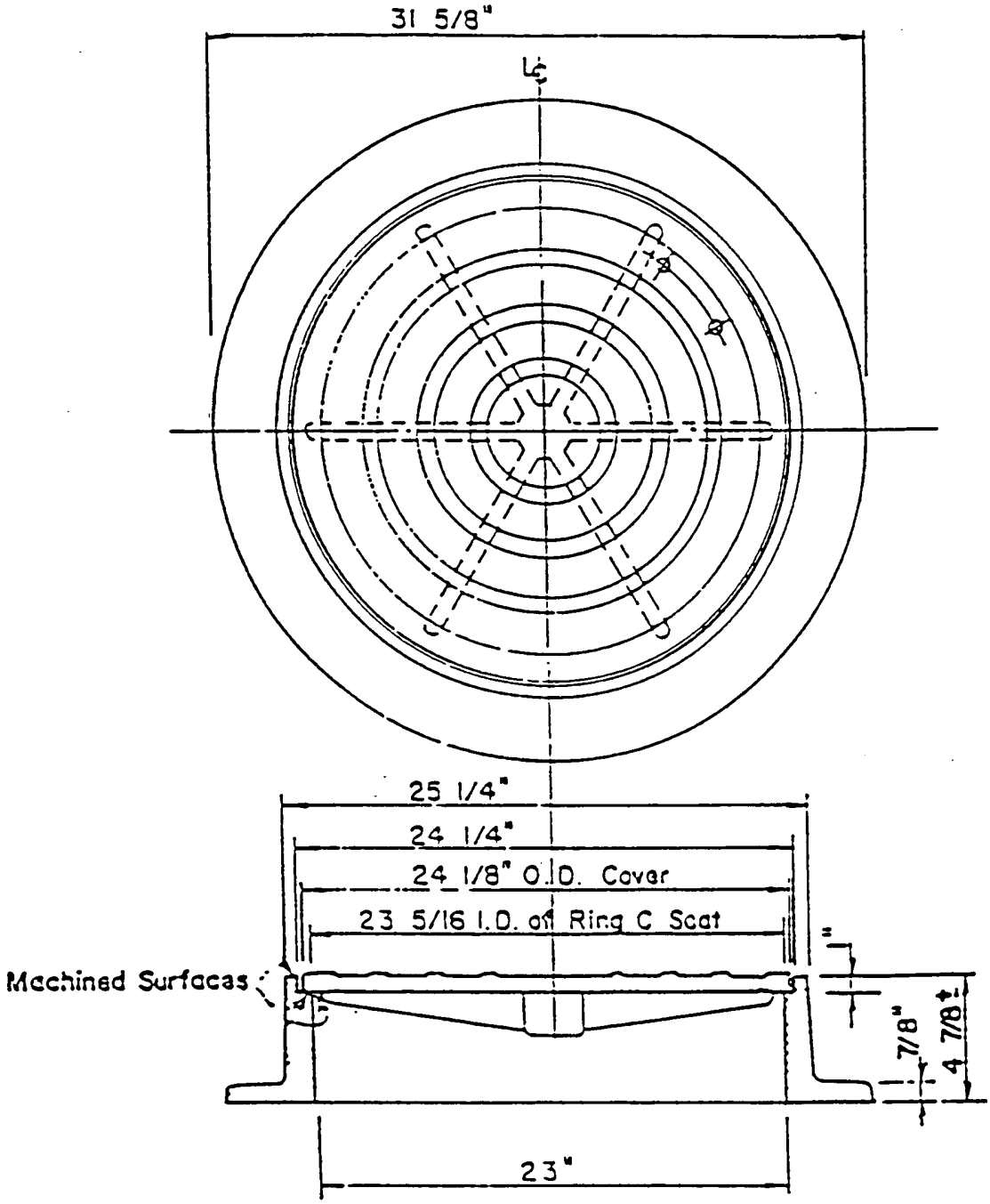


SEWER CROSSING UNDER WATER MAIN

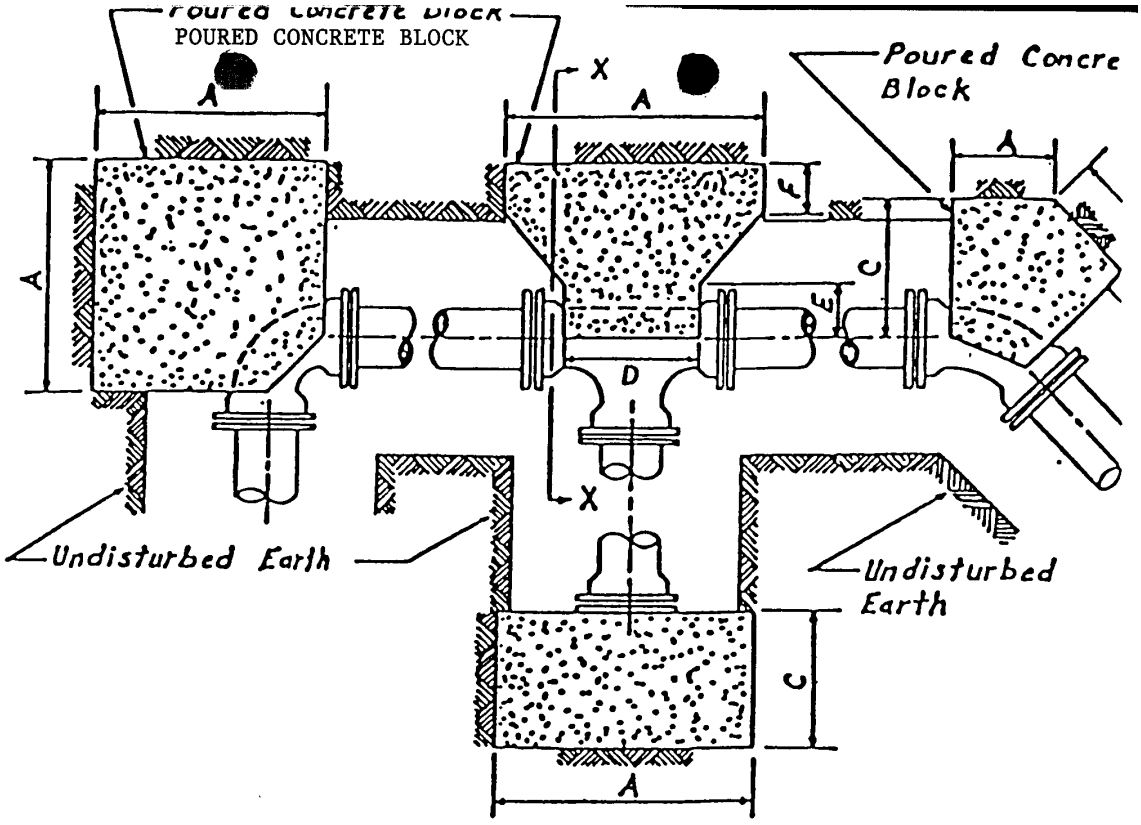
SANITARY SEWER-WATER MAIN CROSSING

CITY OF
COLUMBUS, NEBR.

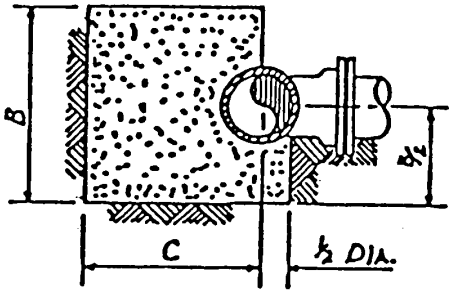
4 - 20 - 72



300 LB. RING & COVER
FOR STREET INSTALLATION



PLAN



SECTION X-X

BLOCKING DIMENSIONS																		
PIPE	TEES						PLUGS			90°BEND			45° BEND			22½° BEND		
DIA.	A	B	C	D	E	F	A	B	C	A	B	C	A	B	C	A	B	C
4"																		
6"	22	22	16	15	6	6	22	22	9	22	22	19	11	22	14	11	22	20
8"	22	22	16	17	7	6	22	22	12	23	23	19	11	22	14	11	22	20
10"	27	27	17	21	8	6	24	24	13	28	28	23	11	22	14	11	22	20
12"	33	33	20	23	9	6	28	28	15	33	33	27	13	25	13	11	22	20
18"	42	33	20	24	12	6	42	20	21	42	33	36	42	36	14	42	33	20

CITY OF COLUMBUS, NEBRASKA ENGINEERING DEPARTMENT	DATE AUG 1965 DRAWN BY K.K.K. APP'VD. BY	BLOCKING PLAN FOR FITTINGS

INTERLOCKING CONCRETE PAVER BLOCKS

Interlocking Concrete Paver Blocks shall conform to the Standard Specifications for Highway Construction except as amended.

1. Material Requirements

Subsection 705.02 of the Standard Specifications is amended to include the following:

Blocks shall be precast in a plant for which the method of manufacture and quality of concrete are subject to the approval of the Department of Roads. The unit weight of the concrete used shall not be less than 125 pounds per cubic foot (2000 kg/m3) on an oven-dried basis. The compressive strength of a 2-inch (50 mm) cube cut from the block shall not be less than 4000 psi (27,600 kPa). A minimum of two blocks per days pour shall be submitted to Materials and Research Division for testing.

The blocks shall be a minimum of 6 inches (150 mm) high. Each component shall lock firmly into the adjacent components in a manner that inhibits any horizontal movement. The interlocks shall be so dimensioned that the key portion shall have a close fit with the mating, locking socket to assure vertical security of the system. The interlocking of the blocks shall be such that no interruption of the integrity of the system occurs at or around corners or changes of direction. Under no circumstances will it be allowed to cut or abut the blocks within 20 feet (6 meters) of the corners or changes in direction. The interlocks shall be shaped to permit the assembled mat to flex in all directions to a radius of 25 feet (7.6 meters). The open area for blocks shall be less than 16%.

Interlocking concrete pavers shall be as shown on the NDR Approved Products List.

Geotextile Filter Fabric for Cellular Concrete Block Mats: Geotextile for cellular concrete block applications shall be a woven monofilament polypropylene geotextile recommended by the manufacturer. The geotextile fabric shall meet the following requirements:

Trapezoidal Tear	ASTM D 4533	200 lbs. (890 KN)
Grab Tensile/Elongation	ASTM D 4632	400 lbs. (1780 KN)
Mullen Burst	ASTM D 3786	800 psi (5510 kPa)
Puncture	ASTM D 4833	200 lbs. (890 KN)
Apparent Opening Size (U.S. Standard Sieve Size)	ASTM D 4751	No. 50 (300 µm)

The geotextile shall be free of defects, rips, holes, or flaws.

2. Construction Methods

Subsection 705.02 of the Standard Specifications is amended to include the following:

Prior to placing pavers, the previously constructed subgrade shall be cleaned of all foreign substances. The surface of the subgrade shall be inspected for adequate compaction and surface tolerances. The subgrade shall be compacted to 90% of maximum NDR T99 density.

Ruts, soft spots, areas having inadequate compaction, and deviations of the surface from the specified tolerances shall be corrected prior to placing pavers.

Areas on which pavers are to be placed shall be trimmed and dressed to conform to plan cross sections within an allowable tolerance of plus or minus 2 inches (50 mm) from the theoretical slope lines and grades. Ruts and ditches shall be filled and leveled. Where such areas are below the allowable minus tolerance limit, they shall be brought to grade by filling with material similar to the adjacent material and well compacted. Immediately prior to placing pavers, the prepared subgrade will be inspected by the Engineer and no material shall be placed thereon until the area has been approved.

Geotextile filter fabric shall be laid flat but not stretched on the soil and shall be secured with anchor pins, 12 inches (300 mm) minimum length with washers. Fabric shall be laid with the long dimension horizontal. Overlaps of fabric at transverse and longitudinal joints shall be 18 inches (450 mm) minimum. Pins shall be inserted through both thicknesses of overlapped fabric at not greater than 6-foot (1.8 meters) intervals along a line through the midpoint of the overlap. Additional pins shall be installed where needed to prevent slippage.

Geotextile installation shall proceed at such a rate that geotextile is covered with blocks within 2 days of laying of the fabric. The pavers shall be placed uniformly on the slope in accordance with the manufacturers recommendations to the slope lines and grades indicated on the plans or as directed by the engineer. The Contractor shall furnish a certificate from the manufacturer or authorized representative thereof stating that the pavers were installed correctly. Final acceptance and approval of the installation will be made by the Engineer.

Pavers shall be interlocked in a manner that discourages vertical or horizontal movement of any single component. Pavers shall be laid along a straight line perpendicular to the direction of placement. To maintain straight lines, no more than two rows shall be installed in the direction of placement. Turns or curves in the slope shall require the pavers to be stepped up or down as required to maintain the continuity of straight lines. Pavers shall be laid sequentially from bottom of slope to top of slope.

Equipment shall not be allowed on the installed pavers that would break or otherwise damage the pavers.

After pavers have been placed, the Contractor shall fill in the open areas with sand. The sand shall be furnished by the Contractor and conform to the requirements of Section 1033 of the Standard Specifications. The sand aggregate gradation limits are as follows: minimum 100% passing the No. 50 (300 µm) sieve and a minimum 70% retained on the No. 200 (75 µm) sieve.

3. Method of Measurement and Basis of Payment

The item "Interlocking Concrete Paver Block" shall be measured and paid for by the square foot (square meter), surfaced measured. The price bid shall be full compensation for excavation, geotextile filter fabric, sand, pavers, and all miscellaneous materials and labor required to complete the work.

REMOVE AND RESET FENCE

This work shall consist of removing and resetting the existing fence at the location shown in the plans or as designated by the engineer.

The fence shall be removed by the contractor and all materials stored or stockpiled in such locations and manner as may be necessary to preserve them intact for future resetting. Responsibility for the care of the materials shall be the obligation of the contractor.

The fence shall be reset in a manner similar to the existing fence. The contractor shall replace all materials damaged during removal if directed by the engineer.

Removing and resetting fence shall be measured by the linear foot of fence reset.

The total length of fence which is reset and accepted by the engineer will be paid for at the contract unit price per foot for the item "Remove and Reset Fence". This price shall be considered full compensation for removing, necessary excavation and backfill, storing and resetting the fence, concrete if required, all labor, equipment, tools and incidentals necessary to complete the work, including replacement of damaged or lost materials.

47B CONCRETE PAVEMENTS AND 47BD CONCRETE FOR BRIDGES (S10-4-0403)

General

Section 1002 in the 1997 Standard Specifications and Supplemental Specifications is amended to include the following:

For the purpose of this Special Provision, Type IPN shall mean Type IP cement made with 15 to 25 percent natural pozzolan and Type IPF shall mean Type IP cement made with 15 to 25 percent Class F fly ash. All cements must conform to the requirements of Section 1004 in the 1997 Standard Specifications and Supplemental Specifications.

47BD Concrete for Bridges and Barriers

The 47BD concrete used in bridge decks, approach slabs, bridge rails, and barriers shall be proportioned using one of the alternates shown in Table I.

TABLE I (ENGLISH)
CLASS 47BD CONCRETE PROPORTIONS

Alt.	Cement Type	Pounds of Cement per Cu.Yd.	Pounds of Class F Fly Ash	Air Content Percent Min.	Air Content Percent Max.	Pounds of Total Agg. per Cu.Yd. Min.	Pounds of Total Agg. per Cu.Yd. Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	I or II	590	130 Min.	5.0	7.5	2530	2950	30±3	Limestone
2	IPN	658	0*	5.0	7.5	2530	2950	30±3	Limestone
3	IPF	658	0**	5.0	7.5	2530	2950	30±3	Limestone
4	I or II	658***	0***	5.0	7.5	2530	2950	30±3	Limestone

TABLE I (METRIC)
CLASS 47BD CONCRETE PROPORTIONS

Alt.	Cement Type	Kg of Cement per Cu. Meter	Kg of Class F Fly Ash	Air Content Percent Min.	Air Content Percent Max.	Kg of Total Agg. per Cu.Meter Min.	Kg of Total Agg. per Cu.Meter Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	I or II	350	77 Min.	5.0	7.5	1500	1750	30±3	Limestone
2	IPN	390	0*	5.0	7.5	1500	1750	30±3	Limestone
3	IPF	390	0**	5.0	7.5	1500	1750	30±3	Limestone
4	I or II	390***	0***	5.0	7.5	1500	1750	30±3	Limestone

* Class C or F fly ash may be substituted in the mix design provided the total pozzolan content does not exceed 25 percent. The mix may be modified by substituting an amount of fly ash equal to the weight of cement removed.

** No additional fly ash substitution is allowed.

*** Total alkali content shall not exceed 3 lbs./yd.^{3} (1.8 Kg/m^3)

**** Alternate Aggregate from an approved source may be substituted for limestone.

Water reducing and set retarding admixtures shall be used in accordance with the manufacturer's recommendations of dosage rates.

47B Concrete Pavements

The 47B concrete used in concrete pavements shall be proportioned using one of the alternates shown in Table II.

TABLE II (ENGLISH)
CLASS 47B CONCRETE PAVEMENT PROPORTIONS

Alt.	Cement Type	Pounds of Cement per Cu.Yd.	Pounds of Class F Fly Ash	Air Content Percent Min.	Air Content Percent Max.	Pounds of Total Agg. per Cu.Yd. Min.	Pounds of Total Agg. per Cu.Yd. Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	I or II	510	110 Min.	5.0	7.5	2876	3130	30±3	Limestone
2	IPN	564*	0*	5.0	7.5	2876	3130	30±3	Limestone
3	IPF	564**	0**	5.0	7.5	2876	3130	30±3	Limestone
4	I or II	564***	0***	5.0	7.5	2876	3130	30±3	Limestone

TABLE II (METRIC)
CLASS 47B CONCRETE PAVEMENT PROPORTIONS

Alt.	Cement Type	Kg of Cement per Cu. Meter	Kg of Class F Fly Ash	Air Content Percent Min.	Air Content Percent Max.	Kg of Total Agg. per Cu.Meter Min.	Kg of Total Agg. per Cu.Meter Max.	Ratio of Total Agg. Percent	Type of Coarse Agg.****
1	I or II	303	65 Min.	5.0	7.5	1706	1857	30±3	Limestone
2	IPN	335*	0*	5.0	7.5	1706	1857	30±3	Limestone
3	IPF	335**	0**	5.0	7.5	1706	1857	30±3	Limestone
4	I or II	335***	0***	5.0	7.5	1706	1857	30±3	Limestone

* Class C or F fly ash may be substituted in the mix design provided the total pozzolan content does not exceed 25 percent. The mix may be modified by substituting an amount of fly ash equal to the weight of cement removed.

** No additional fly ash substitution is allowed.

*** Total alkali content shall not exceed 3 lbs./yd.^{3} (1.8 Kg/m^3)

**** Alternate Aggregate from an approved source may be substituted for limestone.

Water reducing admixtures shall be used in accordance with the manufacturer's recommendations of dosage rates.

FLY ASH
(S10-5-0801)

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

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

STRUCTURAL STEEL
(S10-5-0801)

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

1045.03 -- Steel Plate Substitution

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

Table 1045.01

English-Metric Steel Plate Substitution Table

Metric (millimeters)	English (inches)	Metric (millimeters)	English (inches)
9	3/8	32	1 1/4
10	3/8	35	1 3/8
11	7/16	38	1 1/2
12	½	40	1 5/8
14	9/16	45	1 3/4
16	11/16	50	2
18	¾	55	2 1/4
20	13/16	60	2 3/8
22	7/8	70	2 3/4
25	1	80	3 1/4
28	1 1/8	90	3 1/2
30	1 ¼		

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

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

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

DOWEL BARS
(S10-5-0801)

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

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

CORRUGATED METAL PIPE
(S10-5-0801)

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

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

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

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

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

3.a. Round reinforced concrete pipe shall conform to the requirements of AASHTO M 170-95 with the exception of the minimum circumferential reinforcing (in2/ft. (mm 2/m) of pipe wall) for 15, 21, and 24 inch (380, 460, 600 mm) Class III pipe, as shown below:

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

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

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

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

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

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

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

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

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

Subsection 1058.02 in the Supplemental Specifications is void.

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

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

ELASTOMERIC BEARINGS AND LAMINATED BEARING PADS (S10-5-0202)

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

2. Certification shall be furnished in accordance with NDR's *Materials Sampling Guide*.

Paragraph 3. of Subsection 1068.02 is void.

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

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

1020.01 - Description

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

1020.02 - Material Characteristics

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

1020.03 - Acceptance Requirements

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

EPOXY COATED REINFORCING STEEL (S10-5-0403)

Table 1021.01 in Section 1021 of the Standard Specifications is void and superseded by the following:

Table 1021.01

Bend Test Requirements

English		Metric	
Bar No.	**Mandrel Diameter (inches)**	**Bar**	**Mandrel Diameter (millimeters)**
3	3	10	75
4	4	13	100
5	5	16	125
6	6	19	150
7	7	22	175
8	8	25	200
9	9	29	230
10	10	32	250
11	11	36	280
14	17	43	430
18	23	57	580

PERFORMANCE GRADED BINDER

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

I. Description:

The performance graded binder to be used on this project shall be PG Binder 64-28, supplied by a Certified Supplier.

Certified Supplier

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

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

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

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

Supplier Certification

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

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

II. Binder Sampling and Testing:

1. Lots. Each 3750 tons (3400 Mg) of HMA produced will be a binder lot.

2. A binder lot will include only one PG Binder grade or a blend as allowed in paragraph 6.e.

3. A Binder lot will only include one supplier of the PG Binder or a blend as allowed in paragraph 6.e.

4. Blending of different binder grades and binders from different suppliers will be allowed with restrictions as noted in paragraph 6.e. The Engineer must be notified of the intent to blend prior to actual blending.

5. All binders shall be sampled at the rate of one sample per lot with a minimum of three samples per project.

   a. The sample shall consist of two one-quart (liter) cans and shall be taken by the Contractor's Certified Sampling Technician, with assistance from or under supervision of NDR personnel. The sample shall be taken at the plant from the line between the storage tank and the mixer or from the tank supplying material to the line, at a location at which material sampled is representative of the material in the line to the mixer. One can will be tested for compliance with MP1 specifications and the other can portion will be saved for dispute resolution, if needed. The sampling process shall follow procedures of the NDR Materials Sampling Guide and NDR T 40.

   b. Testing. When the tested PG Binder is in compliance, the binder lot will be accepted and both cans of the sample can be discarded. If the tested PG Binder does not comply, then the price of the PG Binder lot represented by the sample shall be adjusted according to Table 1. Overall project average testing requirements and price adjustments will also apply, as stated in Table 2.

6. Material Requirements:

   a. Performance graded binder, as specified in the contract items shall be in accordance with AASHTO Designation MP1 and meet all minimum and maximum requirements.

   b. Substitution of a PG Binder, which exceeds the upper and lower grade designations from the specified, requires advance notification of the Engineer, and be documented by a no cost change order. The bill of lading or delivery ticket shall state the binder grade and specific gravity.

   c. Material Certification - A Material Certification shall be submitted prior to construction stating, the type of modifier being used, and the recommended mixing and compaction temperatures for the Hot Mix Asphalt.

   d. The Contractor shall receive from the supplier, instructions on the proper storage and handling of each grade and shipment of PG Binder.

   e. Blending of PG Binders at the hot mix plant site will be allowed only when transitioning to an asphalt mixture requiring a different grade of binder and with the following restrictions:

      (1) The resultant blend will meet MP-1 specifications when tested as ±3° of the specified PG binder. The sample of the blended material will 1) be considered as a lot sample, 2) will be taken during initial production following the blending of the binders, and 3) deductions when not meeting MP-1, will apply. On the blended sample's identification form will be a note explaining the blending conditions and a statement that the sample is a blend of materials. The next lot sample, following the sample representing the blend,

will be tested as the specified binder grade for the asphalt mixture being produced and shall meet MP-1 specifications.

(2) Modified Binders - When a type of modification is used and stated in the Material Certification as required in paragraph 6.c., it will not be allowed to be blended with a binder containing a different type of modification. Blending of the same type of modifiers will be allowed.

TABLE 1

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

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

[1]Price Reduction will be based on contract unit price of asphalt binder.

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

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

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

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

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

be tested for complete MP-1 compliance. Testing will continue in this manner until tested samples meet all of MP-1 specifications.

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

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

Table 2

OVERALL PROJECT AVERAGE - PRICE REDUCTION TABLE		
	Range of Average	**Pay Factor Applied**
Tests on Original Binder Dynamic Shear, G*/Sin δ, kPa Min. 1.00 kPa	< 1.00 - 0.98 < 0.98 - 0.96 < 0.96 - 0.94 < 0.94	0.98 0.95 0.92 0.85
Tests on Rolling Thin Film Oven Residue Dynamic Shear, G*/Sin δ, kPa Min. 2.20 kPa	< 2.20 - 2.156 < 2.156 - 2.09 < 2.-09 - 2.024 < 2.024	0.98 0.95 0.92 0.85
Tests Pressure Aging Vessel Residue Dynamic Shear, G*Sin δ, kPa Max. 5000 kPa	< 5000 - 5100 < 5100 - 5250 < 5250 - 5400 < 5400	0.98 0.95 0.92 0.85
m-Value Min. 0.300	< 0.300 - 0.298 < 0.298 - 0.293 < 0.293 - 0.290 < 0.290	0.98 0.95 0.92 0.85
Creep Stiffness S, MPa Max. 300 MPa	< 300 - 306 < 306 - 315 < 315 - 324 < 324	0.98 0.95 0.92 0.85

Single Sample Reduction and Overall Project Average Reduction

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

Investigation of Verification Lot Samples That Do Not Meet Specifications

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

1. The Bituminous Lab may conduct retesting of the remaining portion of the original can sample as determined necessary to confirm or disaffirm the original test result(s).

2. The Flexible Pavement Engineer will notify the Contractor who will arrange to investigate all aspects of the testing, loading, handling and delivery of the material in question. The Contractor shall report findings to the Central Laboratory, Flexible Pavement Engineer.

3. The Department will collect and compile all information and prepare a report. A copy of the report will be distributed to the District and the Contractor.

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

Dispute Resolution

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

Basis of Measurement

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

Basis of Payment:

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

SUPERPAVE ASPHALTIC CONCRETE

Asphaltic Concrete Type SP3 shall use the 0.5 gradation band.

Paragraph 2.b. of Subsection 503.06 of the Supplemental Specifications is amended to include Asphaltic Concrete Type SP6.

Section 1028 is amended to include Asphaltic Concrete Type SP6.

Paragraph 2. a. of Subsection 1028.01 is void and superseded by the following:

Before production of asphaltic concrete, the Contractor shall submit, in writing, a tentative job mix formula on the NDOR Mix Design Submittal Form for approval to the NDR Flexible Pavement Engineer at the Lincoln, Nebraska Central Laboratory.

Paragraph 2. b. of Subsection 1028.01 is void and superseded by the following:

The job mix formula shall identify the virgin mineral aggregates, RAP, if used, and mineral filler, if needed, with the value of the percent passing each specified sieve for the individual and blended materials.

Paragraph 2. c. (1) of Subsection 1028.01 is void and superseded by the following:

The Contractor shall submit six – 95 mm and two – 75 mm gyratory pucks compacted to 7% ± 1% air voids for testing and 3 proportioned 22 lb. (10,000-gram) samples of the blended mineral aggregates to be used in the mixture to the NDR Materials and Research Central Laboratory at least 15 NDR working days before production of asphaltic concrete. These samples will be used to validate the Contractor's Superpave mix design test results and mix properties.

Paragraph 2. c. (3) of Subsection 1028.01 is amended to include the following:

(ix) Dust to Binder Ratio

Paragraph 2. c. (3) (i) of Subsection 1028.01 is void and superseded by the following:

The bulk specific gravity of the blended aggregate. Whenever RAP is used it shall be processed through an ignition oven and then combined proportionally with the virgin aggregate. The bulk specific gravity shall be determined for the blend from an unwashed sample of the - #4 and a washed sample of + #4 material in accordance with AASHTO T 84 and AASHTO T 85 respectively.

Table 1028.01 is amended to include the following:

Table 1028.01

Asphaltic Concrete Type	Percent, Maximum RAP
SP6	15

Paragraph 4, f, (2), (i) of Subsection 1028.01 is void and superseded by the following:

The quality control technicians shall report directly to the Program Administrator and shall perform all sampling and quality control tests as required by the contract.

Paragraph 4. h. (3) of Subsection 1028.01 is void and superseded by the following:

All QC test results shall be documented on NDR Forms by the Contractor with a copy provided to the Engineer within 1 week after the tests are complete. Daily review by the Engineer will be allowed if requested.

Paragraph 4. i. (3) (ii) of Subsection 1028.01 is amended to include the following:

(VII) Dust to Binder Ratio

Paragraph 4. i. (3) (iii) of Subsection 1028.01 is amended to include the following:

(IV) Tearing
(V) Irregular surface due to mix tenderness

Paragraph 2.e. of Subsection 1028.02 is void and superseded by the following:

e. Crushed rock (Limestone) and Dolomite shall conform to the requirements of Subsection 1033.02 of the Standard Specifications, Paragraph 4.a. (4), (5) and (6). Sampling size and frequency shall adhere to the current NDR Materials Sampling Guide. (Some aggregate can be adversely affected by ignition ovens resulting in erroneous reading for asphalt content and gradation unless corrected for.)

Paragraph 2.h. of Subsection 1028.02 of the Supplemental Specifications is void and superseded by the following:

The coarse aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type as shown in Table 1028.02.

Table 1028.02 is void and superseded by the following:

Table 1028.02
Coarse Aggregate Angularity
(ASTM D 5821)

Asphaltic Concrete Type	Course Aggregate Angularity
SPS	35
SP0	55
SP1	55
SP2	65
SP3	75
SP4	85/80*
SP5	95/90*
SP6	95/90*

* Denotes two faced crushed requirements

Paragraph 2.h.(1) of Subsection 1028.02 is void.

Paragraph 2.i. of Subsection 1028.02 is void and superseded by the following:

The fine aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type *as* shown in Table 1028.03.

Note: The specific gravity for calculation of the Fine Aggregate Angularity (FAA) shall be based on material passing the No. 8 (2.36 mm) sieve and retained on the No. 100 (150 µm) sieve.

Table 1028.03 is void and superseded by the following:

Table 1028.03
Fine Aggregate Angularity
(AASHTO T304 Method A)

Asphaltic Concrete Type	Fine Aggregate Angularity
SPS	--
SP0	--
SP1	40.0
SP2	43.0
SP3	43.0
SP4	45.0
SP5	45.0
SP6	45.0

Paragraph 2.i.(1) of Subsection 1028.02 is void.

Table 1028.04 is amended to include the following:

Table 1028.04
Flat And Elongated Particles
(ASTM D 4791)

Asphaltic Concrete Type	Percent, Maximum
SP6	10

Table 1028.05 is amended to include the following:

Table 1028.05
Clay Content
(AASHTO T 176)

Asphaltic Concrete Type	Sand Equivalent, Minimum
SP6	50

Paragraph 2.l (1). of Subsection 1028.02 is void and superseded by the following:

It is recommended that the selected blended aggregate gradation does not pass through the restricted zones as specified in the following control points for nominal size. The plot of the blended aggregate gradation of Superpave mix designs with FAA values of less than 43.0 will not enter the limits of the restricted zone. The plot of the blended aggregate gradation of Superpave mix designs with FAA values of 43.0 to less than 45.0 passing through the restricted zone must intersect both the upper and lower limits of the restricted zone between 1) any two

consecutive sieves used to define the restricted zone limits, or 2) two vertical lines plotted between the #8 and #50 sieve a distance apart no greater than 1/3 the horizontal distance between the #8 (2.36-mm) and #50 (300-μm) sieves. Superpave mix designs with FAA values of 45.0 or greater will not be restricted from passing through the restricted zone.

The note following table 1028.08 is void and superseded by the following:

* Dust to binder ratio is the ratio of the percentage by weight of aggregate finer than the No. 200 (75 μm) sieve to the asphalt content expressed as a percent by weight of total mix. The dust to binder ratio shall be between 0.60 and 1.20. This shall be verified during mix design approval.

Table 1028.09 is amended to include the following:

* see note following Table 1028.08

Paragraph 3. b. (3). of Subsection 1028.02 is void and superseded by the following:

Rice equipment specified in AASHTO T 209, procedure 9.5.1, Weighing in Water. The thermometer being used to measure water temperature will be as specified in T 209.

Paragraph 3. b. (11). of Subsection 1028.02 is void and superseded by the following:

Personal Computer capable of running NDR software and Color Printer.

Paragraph 1. a. of Subsection 1028.03 is void and superseded by the following:

The job mix formula shall be determined from a mix design for each mixture. A volumetric mixture design in accordance with AASHTO PP 28 as modified within this special provision, will be required. However, the mixture for the Superpave specimens and maximum specific gravity mixture shall be short-term aged for two hours.

Paragraph 1. c. of Subsection 1028.03 is void and superseded by the following:

The Contractor shall inform the Engineer when changes in the types or sources of aggregates or PG Binders are made. These changes may require a new job mix formula, mix design and moisture susceptibility test. The new proposed job mix formula shall be in accordance with the requirements as stated above and submitted 5 working days prior to use for verification.

Paragraph 1. d. of Subsection 1028.03 is void and superseded by the following:

Each Superpave mixture shall be tested for moisture susceptibility in accordance with AASHTO T 283. The loose mixture shall be short-term aged for two hours in accordance with AASHTO PP 2. The 6-inch (152-mm) specimens shall be compacted in accordance with AASHTO T 312 to seven percent air voids at 95-mm in height and evaluated to determine if the minimum Tensile Strength Ratio (TSR) of 80 percent has been met. If the mixture has not met the minimum TSR value, an anti-stripping additive shall be added at a dosage rate, such that the mix will meet the minimum TSR of 80 percent. All data shall be submitted with the mix design verification request. For mixtures containing an anti-stripping additive; during production of Lot #1, the Contractor shall provide to the NDR Central laboratory properly prepared gyratory samples for AASHTO T 283 testing. A TSR test result of less than 80 percent will require mixture modification(s) and a sample from subsequent lots will be tested until a TSR value of at least 80 percent is achieved. Moisture susceptibility testing is not required for Asphaltic Concrete Type SPS.

Paragraph 1. d. (1) of Subsection 1028.03 is void and superseded by the following:

When tests indicate the need for an anti-striping additive the Contractor shall be compensated for the cost of the anti-strip additive needed at the invoice price of the additive. If the Contractor elects to use a liquid anti-strip additive it shall be added to the PG Binder by the PG Binder Supplier.

Table 1028.11 is amended to include the following:

Table 1028.11
Gyratory Compaction Effort
(Average Design High Air Temperature = < 39 degrees C)

Asphaltic Concrete Type	Nini	Ndes	Nmax
SP6	9	126	204

Table 1028.12 is void and superseded by the following:

Table 1028.12

Mix Criteria	SPS,SP0,SP1	SP2	SP3,SP4,SP5,SP6
Voids In Mineral Aggregate	See Table 13		
Voids Filled with Asphalt	See Table 14		
%Gmm at Nini	91.5*	90.5	89.0
%Gmm at Nmax	98.0*	98.0	98.0

* No specification requirement for SPS, only %Gmm at Ndes = 95 to 98.5

Table 1028.14 is amended to include the following:

Table 1028.14
Voids Filled With Asphalt
Criteria at Ndes

Asphaltic Concrete Type	Design VFA, Percent
SP6	65 – 75

Paragraph 3. c. of Subsection 1028.03 is void and superseded by the following:

c. The adjustment values in Table 1028.15 will be the tolerances allowed for adjustments from the NDR verified mix design "Combined Gradation" target values which resulted from production or mix design adjustments, but cannot deviate from Superpave gradation criteria, or violate restricted zone criteria specified in paragraph 2. l. (1) of Subsection 1028.02. Mix adjustments for individual aggregates, including RAP, greater than 25% of the original verified mix design proportion may require the Contractor to submit a new mix design, as determined by the Engineer

Paragraph 4.c.(4) of Subsection 1028.03 is void and superseded by the following:

At the project start-up and when a substantial aggregate proportion or other major mix change has been made, at least 1 sample shall be taken between the first 110 tons (100 Mg) and 300 tons (270 Mg) of production. This sample, when other than at start-up, will be in lieu of the next scheduled random sample location.

Paragraph 4.c. (5) of Subsection 1028.03 is amended to include the following:

When both ignition oven and cold feed cold feed samples are being tested the taking of the samples shall be timed such that each sample represents, as close as possible, the same aggregate being fed into the plant.

Paragraph 4. c. (6) of Subsection 1028.03 is void and superseded by the following:

For projects using RAP material the FAA and CAA shall be established as follows:

A RAP sample will be processed though an ignition oven and then combined with the proportioned amount of virgin aggregate defined by the mix design and then proceeding with FAA and CAA testing.

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

Bulk Specific Gravity (Gmb) shall be determined for each specimen in accordance with AASHTO T 166- Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface Dry Specimens.

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

At the Contractor's request, upon evidence that the 3 Bulk Specific Gravity specimens are exhibiting consistency in their results, The Materials and Research Central Laboratory or Branch Manager may reduce the number of specimens to 2.

Paragraph 4. f. (3) (i) of Subsection 1028.03 is void and superseded by the following:

The Blended Aggregate Bulk Specific Gravity (Gsb) shall be determined from a combined aggregate blend, including any RAP following ignition burn-off, on the + #4 and - #4 material.

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

5. (i) The percent of PG Binder shall be determined for each QC test. The percent of PG Binder will be computed by ignition oven results.

5. (ii) The gradations shall be determined for each QC test using AASHTO T 30.

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

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

Paragraph 4. h. (3) of Subsection 1028.03 is amended to include the following:

(x) Dust to Binder ratio to the nearest 0.01

The table of paragraph 4. i. (3) (i) of Subsection 1028.03 is void and superseded by the following:

Test	Tolerance
Asphalt Content by Ignition Oven	0.5%
Gyratory Density	0.020
Maximum Specific Gravity	0.015
Bulk Dry Specific Gravity (Gsb)	0.020
FAA	0.5%
CAA	10.0%
Field Core Density	0.020

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

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

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

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

Paragraph 7.b. of Subsection 1028.03 is amended to include SP6.

Paragraph 9. a. of Subsection 1028.03 is void and superseded by the following:

Density tests will be performed by the Contractor under direct observation of NDR personnel. The Contractor will establish the method of testing in the preconstruction conference and shall be tested in accordance with the AASHTO T 166 or NDR T 587. The Contractor will insure that the proper adjustment bias and/or correction factors are used and accessible to NDR personnel along with all other inputs when NDR T 587 is selected. All correlation factors and test results shall be generated and reported on the NDOR Density spreadsheet. All disputed values determined using NDR T 587 shall be resolved using AASHTO T 166.

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

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

Paragraph 9. h. 3 (i) of Subsection 1028.03 is void and superseded by the following:

If requested by the Contractor, check tests for all density tests in the original set, taken no later than the working day following placement will be allowed in lots with a density pay factor of less than 1.00**.** Locations for checks tests will be determined by a new random sampling schedule provided by the Engineer. The average density obtained by the check tests shall be used to establish the density pay factor for the lot.

Subsection 1028.03 is amended to include Paragraph 10 as follows:

10. PG Binder Sampling

    a. At least one sample (2-1 quart cans) (2-1 liter cans) of PG Binder will be sampled by the Contractor's QC Technician for every Lot (3750 tons) (3400 Mg) of asphalt concrete mixture produced.

    b. Samples will be taken in accordance with NDR Standard Method T 40.

    c. The QC Technician will include on the Sample Identification form all information required by the contract.

TEMPORARY PAVEMENT MARKING (SURFACE PREPARATION)

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

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

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

PROPOSAL GUARANTY
(S1-38-0801)

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

* * * * *

F06INFAPR03