



PROPOSAL AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF
(EXEMPT)

7

Construction of drainage correction on U.S. 84 in Natchez from the Mississippi River Bridge to Canal Street, known as Federal Aid Project STP-0015-01(054) / 103252, in the County of Adams, State of Mississippi.

Project Completion: August 31, 2004

NOTICE

BIDDERS MUST PURCHASE A BOUND PROPOSAL
FROM MDOT CONTRACT ADMINISTRATION DIVISION
TO BID ON THIS PROJECT.

Electronic addendum updates will be posted on www.goMDOT.com

SECTION 900
OF THE CURRENT
(1990) STANDARD SPECIFICATIONS
FOR ROAD AND BRIDGE CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
JACKSON, MISSISSIPPI

**BIDDER CHECK LIST
(FOR INFORMATION ONLY)**

- _____ All unit prices and item totals have been entered in accordance with Subsection 102.06 of the Mississippi Standard Specifications for Road and Bridge Construction.
- _____ If the bid sheets were prepared using MDOT's Electronic Bid System, proposal sheets have been stapled and inserted into the proposal package.
- _____ First sheet of SECTION 905--PROPOSAL has been completed.
- _____ Second sheet of SECTION 905--PROPOSAL has been completed and signed.
- _____ Addenda, if any, have been acknowledged. Second sheet of Section 905 listing the addendum number has been substituted for the original second sheet of Section 905. Substituted second sheet of Section 905 has been properly completed, signed, and added to the proposal.
- _____ DBE/WBE percentage, when required by contract, has been entered on last sheet of the bid sheets of SECTION 905 - PROPOSAL.
- _____ Form OCR-485, when required by contract, has been completed and signed.
- _____ The last sheet of the bid sheets of SECTION 905--PROPOSAL has been signed.
- _____ Combination Bid Proposal of SECTION 905--PROPOSAL has been completed for each project which is to be considered in combination (See Special Provision No. 907-102-1).
- _____ Equal Opportunity Clause Certification, when included in contract, has been completed and signed.
- _____ Subcontract Certificate, when included in contract, has been completed and signed.
- _____ The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been executed in duplicate.
- _____ A Certified check, cashier's check or bid bond payable to the State of Mississippi in the principal amount of 5% of the bid has been included. Bid bond has been signed by the bidder and has also been signed or countersigned by a Mississippi Resident Agent for the Surety with Power of Attorney attached or on file with the Department's Contract Administration Engineer.
- _____ Non-resident Bidders: ON STATE FUNDED PROJECTS ONLY, a copy of the current laws regarding any preference for local Contractors from State wherein domiciled has been included. See Subsection 103.01, Mississippi Standard Specifications for Road and Bridge Construction, and Section 31-7-47, MCA, 1972 regarding this matter.

Return the proposal and contract documents in its entirety in a sealed envelope. **DO NOT** remove any part of the contract documents; exception - an addendum requires substitution of second sheet of Section 905. A stripped proposal is considered as an irregular bid and will be rejected.

Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6859

CODE: (SP)

DATE: 1/26/2004

SUBJECT: READVERTISEMENT

PROJECT: STP-0015-01(054) / 103252 - ADAMS COUNTY

The contents of this proposal are the same as when advertised for the January 2004 Letting, including the addenda, except as follows:

Table of Contents page 1 replaces same sheet;

Section 901-Advertisement showing February 2004 Letting date replaces one showing January 2004 Letting date;

Notice To Bidder's No. 5955 – DBE Goals replaces same one;

Notice to Bidders No 6451 - Contract Time dated 1/27/2004 replaces same one dated 12/16/2003;

Notice to Bidders No. 6823 - Petroleum Products Base Prices replaces Notice to Bidders No. 6786;

Notice To Bidder's No. 6822 – Project Number Change dated 1/26/2004 replaces same one dated 12/22/20023;

Add Notice To Bidder's No. 6860 - Railway-Highway Provision;

Add Special Provision No. 907-109-15 – Measurement and Payment;

Proposal Sheets 2-5 thru 2-11 replaces same ones.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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READVERTISEMENT NOTICE TO BIDDER'S NO. 6859

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- Status of ROW, Util. Adjustments and Underground Storage Tanks - # 437, W/ATTACHMENTS
- Agency, Commission and Office Name Changes - # 882
- Errata - # 1428
- Clarification of Significant Change Specifications - # 1991
- Use of Fly Ash in Non-Sulfate Areas - # 2904
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- Certificate of Traffic Control Devices - # 6289
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907-101-5: Definitions

907-102-1: Combination Bids

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| 907-104-3: | Significant Changes in the Character of Work and Differing Site Conditions |
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SECTION 905 - PROPOSAL - PROPOSAL SHEET NOS. 2-1 through 2-11,
COMBINATION BID PROPOSAL,
CERTIFICATE OF PERFORMANCE - PRIOR FEDERAL AID CONTRACTS,
CERTIFICATION REGARDING NON-COLLUSION, DEBARMENT AND SUSPENSION,
SECTION 902 - CONTRACT FORM, AND SECTION 903 - CONTRACT BOND FORM,
FORM -- OCR-485,
HAUL PERMIT FOR BRIDGES WITH POSTED WEIGHT LIMITS

(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE
SECOND SHEET OF SECTION 905 AS ADDENDA)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 901 - ADVERTISEMENT

Sealed bids will be received by the Mississippi Transportation Commission in the Office of the Contract Administration Engineer, Room 1013, Mississippi Department of Transportation Administration Building, 401 North West Street, Jackson, Mississippi, until 9:30 o'clock A.M., Tuesday, February 24, 2004; thereafter bids will be received in the First Floor Auditorium of the Mississippi Department of Transportation Administration Building, Jackson, Mississippi, until 10:00 o'clock A.M., Tuesday, February 24, 2004, and shortly thereafter publicly opened for

Construction of Drainage Correction on U.S. 84 in Natchez from the Mississippi River Bridge to Canal Street, Known as Federal Aid Project STP-0015-01(054) / 103252, in the County of Adams, State of Mississippi.

The attention of bidders is directed to the Contract Provisions governing selection and employment of labor. Minimum wage rates have been predetermined by the Secretary of Labor and are subject to Public Law 87-581, Work Hours Act of 1962, as set forth in the Contract Provisions.

The Mississippi Department of Transportation hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, religion or national origin in consideration for an award.

The award of this contract will be contingent upon the Contractor satisfying the DBE requirements.

Plans and specifications are on file in the offices of the Mississippi Department of Transportation.

Bid proposals must be acquired from the MDOT Contract Administration Division, Room 1013, MDOT Administration Building, 401 North West Street, Jackson, Mississippi, 39201, Telephone (601) 359-7744 or FAX (601) 359-7940. These proposals are available at a cost of Ten Dollars (\$10.00) per proposal. Specimen proposals are also available at the MDOT Contract Administration Division at a cost of Ten Dollars (\$10.00) per proposal, or can be viewed or downloaded at no cost at www.gomdot.com.

Plans may be acquired on a cost per sheet basis from **MDOT PLANS PRINT SHOP, RM. 1100**, Administration Building, 401 North West Street, Jackson, Mississippi, 39201, Telephone (601) 359-7460 OR E-Mail plans@mdot.state.ms.us OR FAX NO. (601) 359-7461.

Plans will be shipped upon receipt of payment.

Bid bond, signed or countersigned by a Mississippi Resident Agent, with Power of Attorney attached or on file with the Contract Administration Engineer of the Department, a Cashier's check or Certified Check for five (5%) percent of bid, payable to STATE OF MISSISSIPPI, must accompany each proposal attention of bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.

LARRY L. "BUTCH" BROWN
EXECUTIVE DIRECTOR

(FAP)

MISSISSIPPI STATE HIGHWAY DEPARTMENT

SECTION 904 - NOTICE TO BIDDERS NO. 1

CODE: (IS)

DATE: 7/26/90

SUBJECT: Governing Specifications

The current (1990) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi State Highway Commission is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained herein. Copies of the specification book may be purchased from the Construction Division.

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal contain references to the 1976 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 1990 Edition of the Standard Specifications.

MISSISSIPPI STATE HIGHWAY DEPARTMENT

SECTION 904 - NOTICE TO BIDDERS NO. 437

CODE: (IS)

DATE: 6/6/91

SUBJECT: Status of Right-of-Way, Utility Adjustments and Potentially Contaminated Sites

Although it is desirable to have acquired all rights-of-way and completed all utility adjustments and work to be performed by others prior to receipt of bids, it is not considered to be in the public interest to wait until each and every such clearance has been obtained. The bidder is hereby advised of unacquired rights-of-way, relocatees and utilities which have not been completed.

The status of right-of-way and utility adjustments and potentially contaminated sites are set forth in attachments entitled "Status of Right-of-Way", "Status of Utility Adjustments" and "Status of Potentially Contaminated Sites."

In the event right of entry is not available to ALL parcels of right-of-way and all work complete that is to be accomplished by others on the date set forth in the contract for the Notice to Proceed, the Department will issue a restricted Notice to Proceed upon written request of the Contractor.

STATUS OF RIGHT-OF-WAY

STP-0015-01(054)

103252/301000

ADAMS COUNTY

June 6, 2003

All rights of way and legal rights of entry have been acquired.

ASBESTOS CONTAMINATION STATUS OF BUILDINGS
TO BE REMOVED BY THE CONTRACTOR

STP-0015-01(054)

103252/301000

ADAMS COUNTY

May 30, 2003

Reference is made to notices to bidders entitled "Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)" and "Removal of Obstructions".

The following pertinent information is furnished concerning asbestos containing materials (ACMs), if any, found in buildings to be removed by the Contractor.

There are no buildings in the contract to be removed.

STATUS OF POTENTIALLY CONTAMINATED SITES

STP-0015-01(054)

103252/301000

ADAMS COUNTY

May 30, 2003

This project has been inspected and there was no visible indication of potentially contaminated sites within the proposed right of way.

**UTILITY STATUS REPORT
STP-0015-01(054) / 103252
ADAMS COUNTY
DECEMBER 16, 2003**

TERMINI: US 84 Drainage Correction in Natchez from the MS River BR to Canal Street

There are no utilities in conflict with the above referenced project.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 882

CODE: (IS)

DATE: 7/1/92

SUBJECT: AGENCY, COMMISSION AND OFFICER NAME CHANGES

Whenever the term "Mississippi State Highway Department", the word "Department", or variations thereof meaning the Mississippi State Highway Department appears in the plans, proposal, contract documents, and specifications for highway construction projects, in accordance with the laws of the State of Mississippi, it shall mean the "Mississippi Department of Transportation."

Whenever the term "Mississippi State Highway Commission", the word "Commission", or variations thereof meaning the Mississippi State Highway Commission appears in the plans, proposal, contract documents, and specifications for highway construction projects, in accordance with the laws of the State of Mississippi, it shall mean the "Mississippi Transportation Commission."

Whenever the term "Director", or variations thereof meaning the Chief Administrative Officer of the State Highway Department appears in the plans, proposal, contract documents, and specifications for highway construction projects, in accordance with the laws of the State of Mississippi, it shall mean the "Executive Director of the Mississippi Department of Transportation."

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 1428 CODE: (IS)
| DATE: 6/18/93
SUBJECT: ERRATA AND MODIFICATIONS TO 1990 STANDARD SPECIFICATIONS BOOK

| <u>Page</u> | <u>Subsection</u> | <u>Change</u> |
|-------------|-------------------|---|
| 101-2 | 101.01 | Change the abbreviation for Military Specifications from "MS" to "MIL". |
| 101-2 | 101.01 | After OD (Outside Diameter) add "OSHA" as the abbreviation for "Occupational Safety and Health Administration". |
| 101-4 | 101.02 | After the word "specifications," in the second line of the second paragraph under the definition for Contract add "supplemental specifications, ". |
| 101-5 | 101.02 | In the definition for County delete the word "specified". |
| 105-2 | 105.03 | In the fourth line of the last paragraph change "release" to "relieve". |
| 105-10 | 105.16 | In the second line of this page change "grass" to "plant establishment". |
| 107-21 | 107.25 | In the third line of the fourth paragraph change "until" to "unit". |
| 108-9 | 108.06.2 | In the last two lines of the sixth full paragraph delete "or when the number is greater than 1.0, the assessment is assigned as 1.0". |
| 218-1 | 218.03.2 | In the second line of third paragraph change "uniformly" to "uniformly". |
| 405-8 | 405.03.3.2.2 | In the first line change "crack" to "cracks". |
| 405-8 | 405.03.3.2.2 | In the first line change "then" to "than". |
| 405-9 | 405.03.3.3.1 | In the last line of the second paragraph add "shall" after the word "aggregate". |
| 405-9 | 405.03.3.3.1 | In the third line of the third paragraph change "Contract" to "Contractor". |
| 405-10 | 405.03.4 | In the last line of the first paragraph change "enterlayer" to "innerlayer". |

| <u>Page</u> | <u>Subsection</u> | <u>Change</u> |
|-------------|-------------------|--|
| 405-10 | 405.04 | In the second line of the first paragraph change "ploymmer" to "polymer". |
| 405-10 | 405.04 | In the last line of the third paragraph change reference "109.08" to "907-109.08". |
| 408-1 | 408.04 | In the first line change "Measurment" to "Measurement". |
| 603-9 | 603.03.9.3 | In the third line of the last paragraph of this subsection change "directd" to "directed". |
| 603-10 | 603.05 | In the description for pay item 603-C-F change "Sections" to "Section". |
| 603-12 | 603.05 | In the description for pay item 603-P-A delete the second "Box Culvert". |
| 604-1 | 604.02 | Change subsection reference for gray iron castings from "716.03" to "716.04". |
| 615-1 | 615.03.2 | In the eighth line change "placement" to "replacing,". |
| 618-2 | 618.03.1 | In the sixth line of the fourth paragraph change "walkaways" to "walkways". |
| 618-2 | 618.03.1 | In the seventh line of the fourth paragraph change the second "a" to "at". |
| 626-3 | 626.05 | Remove 4" from in front of Thermoplastic in description of pay item 626-G. |
| 628-2 | 628.05 | Add "linear foot" as a unit of measurement for payment under pay item 628-E. |
| 630-6 | 630.03.8.1 | In the last line of the first paragraph change the references from "810.03.6 and 810.03.7" to "810.03.5 and 810.03.6", respectively. |
| 630-6 | 630.03.8.1 | In the last line of the second paragraph change "shown" to "specified". |
| 630-7 | 630.03.8.2 | In the second line of the first paragraph change reference "810.03.2" to "810.02.2". |
| 699-2 | 699.04 | In the fourth line of the first paragraph change "included" to "include". |
| 702-7 | 702.12 | In the title for TABLE III change "EA-I" to "EA-1". |
| 711-1 | 711.02.1 | In the table for areas and weights of Standard Reinforcing Bars change the weight-lbs. per foot of number 5 bar from "1.048" to "1.043". |

| <u>Page</u> | <u>Subsection</u> | <u>Change</u> |
|-------------|-------------------|--|
| 712-1 | 712.04 | In the third line of the second paragraph change "Class B" to "Class D". |
| 712-1 | 712.04 | In the fifth line of the second paragraph change "Class A" to "Class C". |
| 712-8 | 712.12.5 | In the third line change the ASTM designation from "A 120" to "F 1083". |
| 714-13 | 714.11.7 | Change the Subsection No. "714-11.7.1" to "714.11.7.1". |
| 715-7 | 715.09.3 | In the fifth line from the bottom of the page change the lbs./sq.yd. minimum dry wt. requirement for straw from "0.70" to "0.5". |
| 716-2 | 716.11 | In the second line change the ASTM designation from "A 120" to "A 53". |
| 717-8 | -- | Change the Section No. shown in the upper left corner of the page from "7171" to "717". |
| 721-3 | 721.03.3 | In lines 5 and 7 of this subsection add "B 221, B 241, or" in front of B 429. |
| 803-10 | 803.03.9.6 | Revise the definition of the letter "S" in the pile formulas to read: "S = the average penetration in inches per blow for the last 5 to 10 blows for gravity hammers and the last 10 to 20 blows for steam/air hammers." |
| 804-37 | 804.03.19.6.3 | In the fourth line of the first paragraph change "otherwise" to "otherwise". |
| 820-2 | 820.03.4.1 | In the second line of this subsection change "with out" to "without". |
| 820-2 | 820.03.4.3 | In the second line of this subsection change "abraisions" to "abrasions". |
| 1 | Index | Change reference subsection for Advance on Materials from "109.02" to "109.06.2". |
| 5 | Index | Change reference subsection for Cofferdams and Cribs from "810.03.4" to "801.03.4". |
| 28 | Index | Delete the listing "Working Day, Definition of 101.02" contained in the third line from the bottom of the page. |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1991

CODE: (IS)

DATE: 5/11/94

SUBJECT: Clarification of Significant Change Specifications

Before any consideration will be given for an adjustment to the contract as noted in the first paragraph of Subsection 907-104.02.1, it must be determined that a significant change in the character of the work has occurred. A Significant change in quantity of a major item [plus or minus twenty-five percent (25%) variation from original quantity], in and of itself, does not constitute a significant change in the character of work. The character of the work, as altered, has to differ materially in kind or nature from that involved or included in the original proposed construction.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2904

CODE: (IS)

DATE: 10/4/95

**SUBJECT: USE OF FLY ASH OR BLENDED HYDRAULIC CEMENT
(TYPE IP) IN NON-SULFATE AREAS**

All references to the term "Portland Cement Concrete" in the Mississippi Standard Specifications for Road and Bridge Construction, contract plans and documents, and the Department's Standard Operating Procedures shall be deemed to mean a concrete mixture composed of cementitious materials, water, fine and coarse aggregates, and admixtures when specified or permitted.

At the Contractor's option, the cementitious materials may be portland cement (Type I or II), portland cement (Type III when permitted), blended hydraulic cement (Type IP), portland cement combined with ground granulated blast furnace slag or portland cement combined with fly ash.

The addition of fly ash as a replacement for cement will not be permitted in blended hydraulic cement (Type IP), portland cement combined with ground granulated blast furnace slag or portland cement (Type III) when specified in the contract.

The replacement of portland cement with fly ash shall not exceed 20 percent and the replacement rate (by weight) shall be one part fly ash for one part cement. The scales for weighing fly ash shall meet the requirements of cement scales as set forth in Subsection 501.03.2.3.

When blended hydraulic cement (Type IP) is incorporated in the work or when portland cement is replaced with ground granulated blast furnace slag or fly ash, cylinder tests shall be used as a guide for the removal of falsework and forms as set forth in Column B of Subsections 601.03.6.3 and 804.03.15; and concrete pavement shall not be opened to traffic until cylinder tests have attained a compressive strength of 3500 psi or may be opened after a curing period of 28 days.

In addition to meeting the requirements set forth in Subsection 714.05, the source of fly ash must have been approved for listing in the Department's "List of Approved Sources of Fly Ash for Concrete Mixtures in Non-Sulfate Areas" prior to its use.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2906

CODE: (IS)

DATE: 10/4/95

SUBJECT: Use of Ground Granulated Blast Furnace Slag (GGBFS)

Subject to the conditions set forth herein and at the Contractor's option, GGBFS may be used as a replacement for portland cement as the cementitious material in concrete mixtures and in cement-soil or cement-soil-aggregate mixtures. The replacement of portland cement with GGBFS shall not exceed 50 percent by weight of the total cementitious material and the replacement rate (by weight) shall be one part GGBFS for one part portland cement. Only one mineral admixture will be allowed for portland cement replacement in any mixture.

The addition of GGBFS as a replacement for portland cement will not be permitted in blended hydraulic cement, portland cement combined with fly ash or portland cement (Type III), when specified in the contract.

In addition to meeting the requirements set forth in Subsection 907-714.06, the source of GGBFS must have been approved for listing in the Department's "List of Approved Suppliers of Grade 120 - Ground Granulated Blast-Furnace Slag".

Concrete mixtures containing portland cement combined with GGBFS shall not be mixed or used alternately with concrete mixtures containing other cementitious materials in any structure or part thereof that, in its permanent position, will be visible above the ground.

When GGBFS is proposed to be used in concrete mixtures, the Contractor shall furnish the concrete mixture design with documentation of performance characteristics (based on trial batching or plant produced mixtures) to the Engineer for review prior to use. The approval of the mixture design will be based on verification of performance at the beginning of production.

When GGBFS is used for replacement of portland cement in concrete mixtures, cylinder tests shall be used as a guide for the removal of falsework and forms as set forth in Column B of Subsections 601.03.6.3 and 804.03.15 and concrete pavement shall not be opened to traffic until cylinder tests have attained a compressive strength of 3500 psi or may be opened after a curing period of 28 days.

Scales for weighing GGBFS shall meet the requirements of cement scales as set forth in Subsection 501.03.2.3.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3191

CODE: (IS)

DATE: 4/08/96

SUBJECT: Selection of Optional Items

Bidders are hereby advised that, because of a change by the Department in classifying "Optional" items, the bid schedule for this project lists as "Optional" items that formally have been listed as "Alternate".

The summary of quantities sheet(s) in construction plans printed prior to the effective date of this change may list as "Alternate" items that are listed as "Optional" in the bid proposal.

When this contradiction occurs, the listing in the bid schedule is correct and bidders are to disregard the contradicting listing on the summary of quantities sheet(s) in the construction plans.

Bidders should pay close attention to the items classified in the bid schedule as "Optional" items.

With the change by the Department in classifying optional items, a change will be required of the Contractor in the selection of optional items. (Refer to 907-101-2, 907-102-4 and Section 905)

WHEN THE BID SCHEDULE LISTS OPTIONAL ITEMS, THE CONTRACTOR'S SELECTION MAY, BUT IS NOT REQUIRED TO, BE MADE AT THE TIME OF BIDDING. FOR OPTIONAL ITEMS NOT PRE-SELECTED, THE CONTRACTOR'S SELECTION SHALL BE MADE PRIOR TO OR AT THE TIME OF EXECUTION OF THE CONTRACT.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3663

CODE: (IS)

DATE: 1/09/97

SUBJECT: Structural Steel Fabrication Inspection Costs

Bidders are hereby advised that this contract specifies that the Contractor be responsible for unauthorized overruns in structural steel fabrication inspection costs. Refer to Special Provision No. 907-810-7, Steel Structures, for details.

Under separate agreement, the Department will contract with a private company to provide inspection services for structural steel fabrication on this project. By this agreement a maximum amount payable, including a fixed fee will be established beyond which no funds will be authorized for payment without a Supplemental Agreement to this agreement.

The Department will be responsible for structural steel fabrication inspection costs not to exceed the established maximum amount payable including the fixed fee and any additional amount authorized for payment by Supplemental Agreement.

Structural steel fabrication inspection costs exceeding the above described amount will be deducted from monies due the Contractor under Pay Item Nos. 907-810-A, Structural Steel, 907-810-B, Steel Superstructure and/or 907-810-C, Miscellaneous Bridge Appurtenances, as the case may be.

Ninety percent (90%) of the amount bid for the structural steel items listed above will be the maximum amount paid the Contractor until such time final fabrication inspection costs have been determined and the Bridge Engineer notifies the Project Engineer to release full payment to the Contractor; otherwise, the Bridge Engineer will advise the Project Engineer of the amount to withhold from the Contractor's estimate to cover structural steel fabrication inspection costs that exceed the amount approved for payment by the Department.

This Notice to Bidders is for informational purposes only. Bidders should familiarize themselves with Special Provision No. 907-810-7 with emphasis on Subsection 907-810.04.5.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3745

CODE: (IS)

DATE: 3/31/97

SUBJECT: Plant Pest Quarantines Information

AT THE REQUEST OF THE U. S. DEPARTMENT OF AGRICULTURE, PLANT PEST CONTROL INFORMATION CONCERNING DOMESTIC QUARANTINES IS CITED AS FOLLOWS:

The entire state of Mississippi has been quarantined for the Imported Fire Ants. Soil and soil-moving equipment operating in the state will be subject to plant quarantine regulations. In general, these regulations provide for cleaning soil from equipment before it is moved from the state. Complete information may be secured from the State of Mississippi Department of Agriculture and Commerce, Bureau of Plant Industry, P. O. Box 5207, Mississippi State, Mississippi 39762-5207 -- Telephone 325-3390.

IMPORTED FIRE ANT QUARANTINES

THE FOLLOWING REGULATED ARTICLES REQUIRE A CERTIFICATE OR PERMIT FOR MOVEMENT:

1. Soil, separately or with other things, except soil samples shipped to approved laboratories*. Potting soil is exempt, if commercially prepared, packaged and shipped in original containers.
2. Plants with roots with soil attached, except houseplants maintained indoors and not for sale.
3. Grass sod.
4. Baled hay and straw that have been stored in contact with the soil.
5. Used soil-moving equipment.
6. Any other products, articles, or means of conveyance of any character whatsoever not covered by the above, when it is determined by an inspector that they present a hazard of spread of the imported fire ant and the person in possession thereof has been so notified.

* Information as to designated laboratories, facilities, gins, oil mills, and processing plants may be obtained from an inspector.

Imported Fire Ant Quarantines



Conditions of Movement.

Counties entirely colored are completely regulated; Counties partially colored are partially regulated.

Regulated Area.

Restrictions are imposed on the movement of regulated articles as follows:
From colored areas into or through white areas.

Consult your State or Federal plant protection inspector or your County Agent for assistance regarding exact areas under regulation and requirements for moving regulated articles. For detailed information, see 7 CFR 301.81 for quarantine and regulations.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4670

CODE: (IS)

DATE: 9/30/99

SUBJECT: Prompt Payment

Bidders are hereby advised that the Prime Contractor must pay their subcontractor(s) for satisfactory performance of their contracts no later than a specific number of days from receipt of payment from the Department.

Therefore, Prime Contractors are hereby advised of the following:

- (a) Within 15 calendar days after receiving payment from the Department for work satisfactorily performed, the Prime Contractor shall make prompt payment to all sub-contractors or material suppliers for all monies due.
- (b) Within 15 calendar days after receiving payment from the Department for work satisfactorily completed, the Prime Contractor shall promptly return all retainage monies due to all sub-contractors or material suppliers.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4758

CODE: (IS)

DATE: 6/11/99

SUBJECT: Alterations In Bidding Process

Bidders are hereby advised that they may either use the traditional method of entering their bid information by hand on Section 905--Proposal, or may insert printed information obtained from the available Electronic Bid System (EBS).

It is the responsibility of every bidder to check for any addendum or modification to the contract document(s) for which they intend to submit a response. It shall be the bidder's responsibility to be sure they are in receipt of all addenda, pre-bid conference information, and/or questions and answers provided at, or subsequent to, the pre-bid conference, if any are issued.

The Mississippi Transportation Commission assumes no responsibility for defects, irregularities or other problems caused by the use of electronic media. Operation of this electronic media is done at the sole risk of the user.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4954

CODE: (IS)

DATE: 4/4/2000

SUBJECT: ON-THE-JOB TRAINING PROGRAM

Bidders are hereby advised that the Department's policy for administering On-The-Job Training has been changed. Affective in the March 2000 letting, payment for training hours will be handled as outlined in Special Provision 906-4. A pay item for trainees will no longer be included in individual construction projects. Payment for training individuals will be processed in accordance with the conditions in MDOT's ON-THE-JOB TRAINING PROGRAM (Special Provision 906-4).

On Federal-Aid projects, failure on the part of the Contractor to carryout the terms of the Alternate Training Special Provision (Special Provision 906-4) will be considered grounds to preclude the Contractor from participating in the Alternate On-The-Job Training Program. In the event the Department is required to preclude the Contractor from participating in the program, the Contractor will be required to adhere to the requirements of the Training Special Provision (Special Provision 906-3), for which purpose the special provision is also made a part of this proposal.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5185

CODE: (IS)

DATE: 9/29/2000

SUBJECT: Change Order / Quantity Adjustment Name Change

Whenever the term "Change Order" appears in the plans, proposal, contract documents, and specifications for highway construction projects, it shall mean "Quantity Adjustment."

SUPPLEMENT TO NOTICE TO BIDDERS NO. 5955

DATE: 12/10/2001

The goal is 0 percent for the Disadvantaged Business Enterprise.

The bidder's execution of the signature portion of the proposal shall constitute execution of the following assurance:

The bidder hereby gives assurance pursuant to the applicable requirements of "Transportation Equity Act for the 21st Century -- TEA-21" and "Part 26, Title 49, Code of Federal Regulation" that the bidder has made a good faith effort to meet the contract goal for DBE participation for which this proposal is submitted.

A pre-bid meeting will be held in the first floor auditorium of the Mississippi Department of Transportation Administration Building, 405 North West Street, Jackson, Mississippi at 2:00 P.M. on the day preceding the date of the bid opening.

This meeting is to inform DBE firms of subcontracting and material supply opportunities. Attendance at this meeting is considered of prime importance in demonstrating good faith effort to meet the contract goal.

SUPPLEMENT TO NOTICE TO BIDDERS NO. 5955

DATE: 10/10/2002

Delete subparagraph (3) on page 5 under the heading AWARD, and substitute the following:

- (3) Bidder must submit **with the bid proposal** a list of all firms that submitted quotes for material supplies or items to be subcontracted. This information must be submitted on form OCR-485 in the back of the contract proposal.

Delete the first sentence of subparagraph (2) on page 6 under the heading DBE REPORTS, and substitute the following:

At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form OCR-482 whereby the Contractor certifies to the amounts of payments made to each Contractor/Supplier.

Delete subparagraph (5) on page 6 under the heading DBE REPORTS, and substitute the following:

- (5) OCR-485: The bidder must submit **with the bid proposal** a list of all firms that submitted quotes for material supplies or items to be subcontracted.
- (6) OCR-487: Only used by Prime Contractors that are certified DBE firms. This form is used in determining the exact percentage of DBE credit for the specified project. It should be returned to MDOT with the OCR-481 form, or can also be returned with the Permission to Subcontract forms (CAD -720 or CAD-725).

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 5955

CODE: (IS)

DATE: 12/10/2001

SUBJECT: DISADVANTAGED BUSINESS ENTERPRISES IN FEDERAL-AID HIGHWAY CONSTRUCTION

This contract is subject to the "Transportation Equity act for the 21st Century -- TEA-21" and applicable requirements of "Part 26, Title 49, Code of Federal Regulations." Portions of the Act are set forth in this Notice as applicable to compliance by the Contractor and all of the Act, and the MDOT DBE Program, is incorporated by reference herein.

The Department has developed a Disadvantaged Business Enterprise Program that is applicable to this contract and is made a part thereof by reference.

Copies of the program may be obtained from:

Office of Civil Rights
Mississippi Department of Transportation
P. O. Box 1850
Jackson, Mississippi 39215-1850

POLICY

It is the policy of the Mississippi Department of Transportation to provide a level playing field, to foster equal opportunity in all federally assisted contracts, to improve the flexibility of the DBE Program, to reduce the burdens on small businesses, and to achieve that amount of participation that would be obtained in a non-discriminatory market place. In doing so, it is the policy of MDOT that there will be no discrimination in the award and performance of federally assisted contracts on the basis of race, color, sex, age, religion, national origin, or any handicap.

ASSURANCES THAT CONTRACTORS MUST TAKE:

MDOT will require that each contract which MDOT signs with a subrecipient or a contractor (and each subcontract the prime contractor signs with a subcontractor) includes the following assurances:

"The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MDOT deems appropriate."

DEFINITIONS

For purposes of this provision the following definitions will apply:

"Disadvantaged Business" means a small business concern: (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individual(s) or in the case of

any publicly owned business, at least 51 percent of the stock of which is owned by one or more socially and economically disadvantaged individual(s); and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individual(s) who own it. It is important to note that the business owners themselves must control the operations of the business. Absentee ownership or title ownership by an individual who does not take an active role in controlling the business is not consistent with eligibility as a DBE under CFR 49 Part 26.71.

CONTRACTOR'S OBLIGATION

The Contractor and all subcontractors shall take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of a portion of the work in this contract and shall not discriminate on the basis of race, color, national origin, religion or sex. Failure on the part of the Contractor to carry out the DBE requirements of this contract constitutes a breach of contract and after proper notification the Department may terminate the contract or take other appropriate action as determined by the Department.

When a contract requires a zero percent (0%) DBE goal, the Contractor still has the responsibility to take all necessary and reasonable steps to ensure that DBE firms can compete for and participate in the performance of the work in the contract. All work performed by a certified DBE firm is considered to be a “race neutral” measure and the Department will receive DBE credit towards the overall State goals when the DBE firm is paid for their work. If the Prime Contractor is a certified DBE firm, the Department can receive DBE credit only for the work performed by the Prime Contractor’s work force or any work subcontracted to another DBE firm. Work performance by a non-DBE subcontractor is not eligible for DBE credit. DBE credit is received when the DBE firm is paid.

CONTRACT GOAL

The goal for participation by DBEs is established for this contract in the attached Supplement. The Contractor shall exercise all necessary and reasonable steps to ensure that participation is equal to or exceeds the contract goal.

The percentage of the contract that is proposed for DBEs shall be so stated on the last bid sheet of the proposal.

The apparent lowest responsive bidder shall submit to the Contract Administration Division [OCR Form 481](#), signed by the Prime Contractor and the DBE Subcontractors, no later than the 10th day after opening of the bids.

FORMS ARE AVAILABLE FROM THE CONTRACT ADMINISTRATION DIVISION

The [OCR-481](#) Form must contain the following information:

The name and address of each certified DBE Contractor / supplier;

The Reference Number, percent of work and the dollar amount of each item. If a portion of an item is subcontracted, a breakdown of that item (including quantities and unit price) must be attached, detailing what part of the item the DBE firm is to perform and who will perform the remainder of the item.

If the DBE Commitment shown on the last bid sheet of the proposal, does not equal or exceed the contract goal, the bidder must submit, with the proposal, information to satisfy the Department that adequate good faith efforts have been made to meet the contract goal.

Failure of the lowest bidder to furnish acceptable proof of good faith efforts, submitted with the bid proposal, shall be just cause for rejection of the proposal. Award may then be made to the next lowest responsive bidder or the work may be readvertised.

The following factors are illustrative of matters the Department will consider in judging whether or not the bidder has made adequate good faith effort to satisfy the contract goal.

- (1) Whether the bidder attended the pre-bid meeting that was scheduled by the Department to inform DBEs of subcontracting opportunities;
- (2) whether the bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
- (3) whether the bidder provided written notice to a reasonable number of specific DBEs that their interest in the contract is being solicited;
- (4) whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested;
- (5) whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goal;
- (6) whether the bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
- (7) whether the bidder negotiated in good faith with interested DBEs and did not reject them as unqualified without sound reasons based on a thorough investigation of their capabilities; and
- (8) whether the bidder made efforts to assist interested DBEs in obtaining any required bonding or insurance.

DIRECTORY

Included with this Bid Proposal is a list of "Certified DBE Contractors" which have been certified as such by the Mississippi Department of Transportation.

To count toward meeting the goal, the DBE firm must be on the Department's list of "Certified DBE Contractors" that is attached to this proposal. DBE credit is received only when the DBE firm has been paid for the work they performed on the project.

REPLACEMENT

If a DBE Subcontractor cannot perform satisfactorily, and this causes the [OCR-481](#) commitment to fall below the contract goal, the Contractor shall take all necessary reasonable steps to replace the DBE with another certified DBE Subcontractor or submit information to satisfy the Mississippi Department of Transportation that adequate good faith efforts have been made to replace the DBE. All DBE replacements must be approved by the Department.

Under no circumstances shall the prime or any subcontractor perform the DBE's work (as shown on the OCR-481) without prior written approval from the Department. See "Sanctions" on Page 6 for penalties for performing DBE's work.

When a Contractor proposes to substitute/replace/terminate a DBE that was originally named on the OCR-481, the Contractor must obtain a release (in writing) from the named DBE explaining why the DBE Subcontractor cannot perform the work. A copy of the original DBE's release must be attached to the Contractor's written request to substitute/replace/terminate along with appropriate Subcontract Forms for the substitute/replacement/terminated Subcontractor, all of which must be submitted to the DBE Coordinator and approved, in advance, by MDOT.

GOOD FAITH EFFORTS

To demonstrate good faith efforts to replace any DBE that is unable to perform successfully, the Contractor must document steps taken to subcontract with another certified DBE Contractor. Such documentation shall include no less than the following:

- (a) Proof of written notification to certified DBE Contractors by certified mail that their interest is solicited in subcontracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.
- (b) Efforts to negotiate with certified DBE Contractors for specific items shall include as a minimum:
 - (1) The name, address, and telephone number of each DBE contacted;
 - (2) A description of the information provided about the plans and specifications for those portions of the work to be subcontracted; and
 - (3) A statement of why agreements were not reached.
- (c) For each DBE contacted that was rejected as unqualified, the reasons for such conclusion.
- (d) Efforts made to assist each DBE that needed assistance in obtaining bonding or insurance required by the Contractor.

Failure of the Contractor to demonstrate good faith efforts to replace a DBE Subcontractor that cannot perform as intended with another DBE Subcontractor, when required, shall be a breach of contract and may be just cause to be disqualified from further bidding for a period of up to 12 months after notification by certified mail.

PARTICIPATION / DBE CREDIT

Participation shall be counted toward meeting the goal in this contract as follows:

- (1) If the Prime Contractor is a certified DBE firm, only the value of the work actually performed by the DBE Prime can be counted towards the project goal, along with any work subcontracted to a certified DBE firm.
- (2) If the Contractor is not a DBE, the work subcontracted to a certified DBE Contractor will be counted toward the goal.

- (3) The Contractor may count toward the goal a portion of the total dollar value of a contract with a joint venture eligible under the standards of this provision equal to the percentage of the DBE partner in the joint venture. The joint venturer must submit a Joint Venture Eligibility Form provided by the Mississippi Department of Transportation.
- (4) Expenditures to DBEs that perform a commercially useful function may be counted toward the goal. A business is considered to perform a commercially useful function when it is responsible for the execution of a distinct element of the work and carries out its responsibilities by actually performing, managing, and supervising the work involved.
- (5) The Contractor may count 100% of the expenditures for materials and supplies obtained from certified DBE suppliers and manufacturers that produce goods from raw materials or substantially alters them for resale provided the suppliers and manufacturers assume the actual and contractual responsibility for the provision of the materials and supplies. The Contractor may count 60 percent of the expenditures to suppliers that are not manufacturers, provided the supplier performs a commercially useful function in the supply process. Within 30 days after receipt of the materials, the Contractor shall furnish to the DBE Coordinator invoices from the certified supplier to verify the DBE goal.
- (6) Any work that a certified DBE firm subcontracts or sub-subcontracts to a non-DBE firm will not count towards the DBE goal.
- (7) Only the dollars actually paid to the DBE firm may be counted towards the DBE goal.

AWARD

Award of this contract to the low bidder will be contingent upon the following conditions:

- (1) Concurrence from Federal Highway Administration, when applicable.
- (2) Bidder must submit to the Contract Administration Division for approval, Form [OCR-481](#) (DBE Commitment) no later than the 10th day after opening of the bids, or submit information with the bid proposal to satisfy the Department and that adequate good faith efforts have been made to meet the contract goal.
- (3) Bidder must submit to Contract Administration Division a list of all firms that submitted quotes for material supplies or items to be subcontracted no later than 10 days after opening of the bids. This information must be submitted on form [OCR-485](#).

Prior to the start of any work, the bidder must notify the Project Engineer, in writing, of the name of the designated "DBE Liaison Officer" for this project. This notification must be posted on the bulletin board at the project site.

DEFAULT

In the event the Contractor defaults on this project and the Surety Company is called upon to complete the contract, the DBEs named on the original [OCR-481](#) Forms must be given the opportunity to perform the work subcontracted to them by the original contractor unless the DBE requests, in writing, to be released. The DBE commitment percentage entered on the last bid sheet of the proposal shall remain in force as a provision of the contract, but only the contract goal established by MDOT in this proposal must be met or exceeded to fulfill the

terms of the contract. The Contractor may list DBE Subcontractors and items that exceed MDOT's contract goal, but should unforeseen problems arise that would prevent a DBE from completing its total commitment percentage, the Contractor will meet the terms of the contract as long as it meets or exceeds MDOT's Contract Goal. For additional information, refer to "Replacement" section of this Notice.

DBE REPORTS

- (1) **OCR-481:** Refer to "CONTRACT GOAL" section on page no. 2 of this Notice to Bidders for information regarding this form.
- (2) **OCR-482:** At the conclusion of the project the Contractor will submit to the Project Engineer for verification of quantities and further handling Form **OCR-482** whereby the Contractor certifies to the amounts of payments made to each DBE Contractor/Supplier to satisfy the contract goal. The Project Engineer shall submit the completed Form **OCR-482** to the DBE Coordinator (**Office of Civil Rights**). Final acceptance of the project is dependent upon Contract Administration Division's receipt of completed Form **OCR-482** which they will receive from the **Office of Civil Rights**.
- (3) **OCR-483:** The Project Engineer/Inspector will complete Form **OCR-483**, the Commercially Useful Function (CUF) Performance Report, in accordance with MDOT S.O.P. No. **OCR-03-09-01-483**. Evaluations reported on this form are used to determine whether or not the DBE firm is performing a CUF. The Prime Contractor should take corrective action when the report contains any negative evaluations. DBE credit may be disallowed and/or other sanctions imposed if it is determined the DBE firm is not performing a CUF. **This form should also be completed and returned to the DBE Coordinator (Office of Civil Rights).**
- (4) **OCR-484:** Each month, the Contractor will submit to the Project Engineer **OCR-484** certifying payments to all subcontractors.
- (5) **OCR-485:** The Contractor (apparent low bidder) will submit to Contract Administration Division within 10 days from the opening of the bids, a list of all firms that submitted quotes for material supplies or items to be subcontracted.

SANCTIONS

The Department has the option to enforce any of the following penalties for failure of the prime Contractor to fulfill the DBE goal as stated on the **OCR-481** Form or any violations of the DBE program guidelines:

- (1) Disallow credit towards the DBE goal
- (2) Withhold progress estimate payments
- (3) Deduct from the final estimate an amount equal to the unmet portion of the DBE goal
- (4) Recover an amount equal to the unmet contract goal
- (5) Debar the Contractor involved from bidding on Mississippi Department of Transportation projects.

(6) Deduct from the Contractor's final estimate all or any combination of the following.

| <u>Offense</u> | <u>Percentage of the monetary amount disallowed from (1) above</u> | <u>Lump Sum</u> |
|----------------|--|-----------------------|
| # 1 | 10% | \$ 5,000 or both |
| # 2 | 20% | \$ 10,000 or both |
| # 3 | 40% | \$ 20,000 & debarment |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. [5957](#)

CODE: (IS)

| DATE: [12/10/2001](#)

SUBJECT: DBE Goals

Bidders are hereby advised that the participation of a DBE Firm can not be counted towards the Prime Contractor's DBE goal until the amount being counted towards the goal has been paid to the DBE.

| Form [OCR-484](#) has been developed to comply with this requirement. Prime Contractors will submit this form to the Project Engineer no later than the 20th of each month. This form should be submitted monthly showing all firms even if the Contractor has paid no monies to the firm during that estimate period (negative report). The Project Engineer will attach this form to the monthly estimate before forwarding the estimate to the Contract Administration Division for processing.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6027

CODE: (IS)

DATE: 02/27/2002

SUBJECT: Work In Proximity Of High Voltage Power Lines

Bidders are hereby advised of Section 45-15-1, et seq., Mississippi Code of 1972, regarding the performance of work in the proximity of high voltage overhead power lines. It is the Contractor's responsibility to comply with those statutory requirements.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6143

CODE: (IS)

DATE: 05/22/2002

SUBJECT: Payments to Subcontractors

Bidders are hereby advised that each month, the Contractor will submit to the Project Engineer form OCR-484 certifying payments to all subcontractors. Form OCR-484 can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at the MDOT website under the *Business Section, Construction Contracts and Bidding, Disadvantaged Business Enterprise (DBE), Applications and Forms for the DBE Program.*

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6159

CODE: (IS)

DATE: 06/07/2002

SUBJECT: Contract Overpayment(s)

Bidders are hereby advised that by the execution of the contract for this project, the Contractor agrees that it has the duty to and will immediately reimburse the Mississippi Transportation Commission, without any demand therefore, for any overpayment(s) of which it has knowledge, or through due diligence, should have knowledge.

By the execution of the contract for this project, the Contractor also agrees that if the Mississippi Transportation Commission has made any overpayment(s) to the Contractor on any previously executed contract(s), the Mississippi Transportation Commission may notify the Contractor in writing of the nature and the amount of the overpayment(s). If the Contractor fails to remit the overpayment(s) to the Mississippi Transportation Commission within sixty (60) calendar days from the date of such notice, interest shall accrue from the date of such notification until payment is made in full at the rate of one percent (1%) per month until fully paid.

By the execution of the contract for this project, the Contractor also agrees that the Mississippi Transportation Commission may offset and withhold a sum equal to any overpayment(s) on any previously executed contract(s), plus interest, where applicable, against any sums due the Contractor under the terms of this contract or any other active contract(s).

By the execution of the contract for this project, the Contractor also agrees that if any overpayment(s) are made by the Mississippi Transportation Commission to the Contractor under the terms of this contract the Mississippi Transportation Commission shall have the right to offset and withhold that amount, plus interest, where applicable, from any sums which the Mississippi Transportation Commission might owe the Contractor on any other active contract(s) or any contract(s) executed subsequent to the execution of this contract.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6275

CODE: (IS)

DATE: 09/17/2002

SUBJECT: Federal Bridge Formula

Bidders are hereby advised that Federal Highway Administration Publication No. FHWA-MC-94-007, **BRIDGE FORMULA WEIGHTS**, dated January 1994, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration
400 7th Street, SW
Washington, DC 20590
(202) 366-2212

or

<http://ops.fhwa.dot.gov/freight/regulate/sw/>

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6289

CODE: (IS)

DATE: 09/26/2002

SUBJECT: Certification of Traffic Control Devices

Category 1 Traffic Control Devices

Category 1 traffic control devices are defined as low-mass, single-piece traffic cones, tubular markers, single-piece drums, and delineators.

The Contractor shall certify to the Project Engineer by a letter ONLY stating that the Category 1 traffic control devices, furnished and used, either meet the requirements of NCHRP Report 350 or were purchased prior to October 1, 1998.

All documentation supporting the certification is to be kept on file by the Contractor subject to review by the Department at any time. Support documentation shall be kept on file for two years after the completion of the project.

The Contractor may self-certify Category 1 Traffic Control Devices. In order to make the self-certification, the Contractor shall have as a minimum the following support documentation regarding the certification.

1. A title, e.g., "Certification of Crashworthiness";
2. Name and address of vendor making the certification;
3. Unique identification of the certificate (such as serial number) with numbered pages and the total number of pages;
4. Description and unambiguous identification of the item tested;
5. Identification of the basis for self-certification process used and to what test level of NCHRP Report 350. This basis as crash test experience with similar devices or years of demonstrably safe operational performance;
6. A signature and title, or an equivalent identification of the person(s) accepting responsibility for the content of the certification, however produced, and the date of issue;
7. A statement that the certification shall not be reproduced except in full.

All documentation supporting the self-certification is to be kept on file by the Contractor subject to review by the Department at any time. Support documentation shall be kept on file for two years after the completion of the project.

The Contractor's letter to the Project Engineer shall state that all Category 1 traffic control devices, furnished and used, were purchased after October 1, 1998 and met the requirements of NCHRP Report 350, or that the Category 1 traffic control devices, furnished and used, were purchased prior to October 1, 1998.

Category 2 Traffic Control Devices

Category 2 traffic control devices are defined as barricades, intrusion detectors, vertical panel assemblies, portable sign supports, drums with warning lights, and cones with warning lights.

The Contractor shall certify to the Project Engineer by a letter ONLY stating that the Category 2 traffic control devices, furnished and used, either meet the requirements of NCHRP Report 350 or were purchased prior to October 1, 2000. The Contractor's letter shall state that all Category 2 traffic control devices, furnished and used, were purchased after October 1, 2000 and met the requirements of NCHRP Report 350, or that the Category 2 traffic control devices, furnished and used, were purchased prior to October 1, 2000.

Category 3 Traffic Control Devices

Category 3 Traffic Control Devices are items similar to Category 2 but weigh more than 100 pounds. Category 3 Traffic Control Devices include concrete barrier, truck mounted attenuators (TMAs), workzone crash cushions, and fixed sign supports.

Concrete barrier and fixed sign supports, furnished and used, and purchased after October 1, 2002 must meet the requirements of Report 350.

The Contractor shall furnish a letter ONLY certifying that all concrete barrier and fixed sign supports purchased after October 1, 2002 meets the requirements of NCHRP Report 350. Concrete barrier and fixed sign supports purchased prior to October 1, 2002 may be used without written certification until they complete their normal service life.

Work zone crash cushions and truck mounted attenuators (TMAs), furnished and used, and purchased after October 1, 1998 must meet the requirements of Report 350.

The Contractor shall furnish a letter certifying that all work zone crash cushions and TMAs purchased after October 1, 1998 meets the requirements of NCHRP Report 350. Work zone crash cushions and TMAs purchased prior to October 1, 1998 may be used without written certification until they complete their normal service life.

Contractor's Letter to the Project Engineer

The following is an example of a letter to the Project Engineer.

"I, (*Contractor's name*), certify that the Category 1 traffic control devices used on this project and purchased after October 1, 1998 meet the requirements of NCHRP Report 350 and all Category 1 traffic control devices used on this project not meeting NCHRP Report 350 were purchased prior to October 1, 1998.

I also certify that the Category 2 traffic control devices used on this project and purchased after October 1, 2000 meet the requirements on NCHRP Report 350 and all Category 2 traffic control devices used on this project not meeting NCHRP Report 350 were purchased prior to October 1, 2000.

I also certify that except for concrete median barrier, all of the Category 3 traffic control devices crash cushions and truck mounted attenuators used on this project and purchased after October 1, 1998 meet the requirements on NCHRP Report 350 and all Category 3 crash cushions and truck mounted attenuators used on this project not meeting NCHRP Report 350 were purchased prior to October 1, 1998."

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6333

CODE: (SP)

DATE: 10/23/2002

SUBJECT: Submission of Form OCR-485

Bidders are hereby advised that prior to the November 2002 letting, Form OCR-485 was completed by the apparent low bidder and submitted 10 days after opening of the bids. Beginning with the November 2002 letting, Form OCR-485 will be completed by **ALL BIDDERS** submitting a bid proposal and **must be included in the bid proposal package**. Failure to include Form OCR-485 in the bid proposal package will cause the Contractor's bid to be considered **irregular**.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6451

CODE: (SP)

DATE: 12/16/2003

SUBJECT: CONTRACT TIME

PROJECT: STP-0015-01(054) / 103252 – ADAMS COUNTY

The calendar date for completion of work to be performed by the Contractor for this project shall be a August 31, 2004 which date or extended date as provided in Subsection 907-108.06 shall be the end of contract time. It is anticipated that the Notice to Proceed will be issued by not later than March 29, 2004 and the date for Beginning of Contract Time will be April 8, 2004.

A progress schedule as referenced to in Subsection 108.03 will not be required for this contract.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6452

CODE: (SP)

DATE: 03/27/2003

SUBJECT: Specialty Items

PROJECT: STP-0015-01(054) / 103252--ADAMS COUNTY(IES)

Pursuant to the provisions of Section 108, the following work items are hereby designated as "Specialty Items" for this contract. Bidders are reminded that these items must be subcontracted in order to be considered as specialty items.

CATEGORY: EROSION CONTROL

| Ref No | Pay Item | Description |
|---------------|-----------------|-----------------------------------|
| 80 | 212-B | Standard Ground Preparation |
| 90 | 907-213-A | Agricultural Limestone |
| 100 | 213-B | Combination Fertilizer (13-13-13) |
| 110 | 213-C | Superphosphate |
| 120 | 214-A | Seeding (Bahagrass) |
| 130 | 214-A | Seeding (Tall Fescue) |

CATEGORY: TRAFFIC CONTROL

| Ref No | Pay Item | Description |
|---------------|-----------------|---|
| 470 | 619-D1 | Standard Roadside Construction Signs (Less than 10 Sq. Ft.) |
| 480 | 619-D2 | Standard Roadside Construction Signs (10 Sq. Ft. or More) |
| 490 | 619-G4 | Barricades (Type III) (Double Faced) |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6484

CODE: (SP)

DATE: 03/19/2003

**SUBJECT: Storm Water Discharge Associated with Construction Activity
(≥ 5 Acres)**

PROJECT: STP-0015-01(054) / 103252 – Adams Co.

A Construction Storm Water General NPDES Permit to discharge storm water associated with construction activity is required.

The Department has acquired Certificate of Permit Coverage [MSR-101931](#) under the Mississippi Department of Environmental Quality's (MDEQ) Storm Water Construction General Permit. Projects issued a certificate of permit coverage are granted permission to discharge treated storm water associated with construction activity into State waters. Copies of said permit, completed Construction Notice of Intent (CNOI), and Storm Water Pollution Prevention Plan (SWPPP) are on file with the Department.

Prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director an original signed copy of the completed Prime Contractor Certification ([Form No. 1](#)).

Failure of the bidder to execute and file the completed Prime Contractor Certification ([Form No. 1](#)) shall be just cause for the cancellation of the award.

The executed Prime Contractor Certification ([Form No. 1](#)) shall be prima facie evidence that the bidder has examined the permit, is satisfied as to the terms and conditions contained therein, and that [the bidder](#) assumes the responsibility for meeting all permit terms and conditions and for performing permit requirements including, but not limited to, the inspection and reporting requirements of Part IV. For this project, the [Contractor](#) shall furnish, set up and read, as needed, an on-site rain gauge.

In accordance with Part IV.B, the Contractor shall display proof of coverage at a conspicuous place accessible by the public on or at the edge of the construction site.

The Contractor shall make inspections in accordance with Part IV.D and shall furnish the Project Engineer with the results of each weekly inspection as soon as possible following the date of inspection. A copy of the form provided in Part VII with the inspection portion completed shall be sufficient. The weekly inspections must be documented on the Monthly Inspection Report and Certification Form. The Contractor's representative and the Project Engineer shall jointly review and discuss the results of the inspections so that corrective action can be taken. The Project Engineer shall retain copies of the inspection reports.

[An amount equal to 25 percent \(25%\) of the total estimated value of the work performed during each period in which the Contractor fails to submit the completed monthly Inspection](#)

Report and Certification Form to the Project Engineer will be withheld from the Contractor's earned work. Thereafter, on subsequent successive estimate periods, the percentage withheld will be increased at the rate of 25 percent per estimate period in which the non-conformance with this specification continues. Monies withheld for this non-conformance will be released for payment on the next monthly estimate for partial payment following the date the submittal of the completed Monthly Inspection Report and Certification Form is brought back into compliance with this specification.

Upon successful completion of all permanent erosion and sediment controls for a covered project, accepted and documented by the Engineer, a completed Notice of Termination (NOT) of Coverage form (provided in Part VIII.) shall be submitted to the Office of Pollution Control. All the monthly inspection forms will be submitted at this time with the Notice of Termination (NOT) of Coverage form. If no sediment and erosion control problems are identified, the prime contractor will receive a termination letter from the Office of Pollution Control.

In summary, prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director an original signed copy of the completed Prime Contractor Certification (Form No. 1). Also, prior to the commencement of construction on the project, the Contractor shall transmit by letter an original signed copy of the completed Prime Contractor Certification (Form No. 2) to the Office of Pollution Control, P.O. Box 10385, Jackson, Mississippi 39289-0385. Copies of the completed Prime Contractor Certification (Form No. 2) and letter of transmittal shall be furnished the Project Engineer as proof of the required filing with the Office of Pollution Control. At project completion, when accepted and documented by the Engineer, a Notice of Termination of Coverage will be submitted to the Office of Pollution Control along with all monthly inspection forms.

Securing a permit (s) for storm water discharge associated with the Contractor's activity on any other regulated area the Contractor occupies, shall be the responsibility of the Contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6505

CODE: (SP)

DATE: 03/27/2003

SUBJECT: Placement of Fill Material in Federally Regulated Areas

PROJECT: NH-0015-01(054) / 103252 -- ADAMS COUNTY

A Permit (404, General, Nationwide, etc.) for placing fill material at federally regulated sites is required.

The Department has acquired the following permit(s) for permanently filling at regulated sites that are identified during project development:

Nationwide Permit No. 14 (Waters of U.S.) all sites with area less than 0.10 acre

Copies of said permit(s) are on file with the Department.

Securing a permit(s) for the filling of any other regulated site, the purpose of which is temporary construction for the convenience of the Contractor, shall be the responsibility of the Contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904- NOTICE TO BIDDERS NO. 6522

CODE: (SP)

DATE: 05/12/2003

SUBJECT: Removal of Construction Signs

Bidders are hereby advised that upon receipt of the **Final or Partial** Maintenance Release, as documented in writing by the State Construction Engineer, the Contractor shall have **fifteen (15)** calendar days in which to remove all construction signs on the project. It is agreed that if the signs are not removed within the **fifteen (15)** calendar days the signs shall be considered abandoned and shall become the property of the Mississippi Transportation Commission which may remove, use, and/or dispose of such signs as it sees fit.

The Contractor shall place and maintain appropriate construction signs for any additional work on the project after the Maintenance Release has been issued. These construction signs will not be measured for separate payment. Payment for these signs shall be included in Pay Item No. 618-A, Maintenance of Traffic.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6532

CODE: (SP)

DATE: 5/14/03

SUBJECT: Additional Construction Considerations

PROJECT: NH-0015-01(054) / 103252 – Adams County

The vertical drop inlet structure is an inlet control structure. It is the intent of this design to restrict the out flow of this structure by restricting the input to the structure. Therefore, alteration of this design is not allowed.

It is the intent of the plans to restrict flow of water around the exterior of the vertical drop inlet, around the exterior of the 30-inch jack and bore pipe, and under the railroad embankment. Loss of soil around these structures is not acceptable. Therefore, grouting of voids created by the Contractor's operation will be grouted at no additional cost to the State. Grouting of unforeseen voids or weak areas will be paid for under pay item 907-418.

The drainage basin bound by the railroad, U.S. Highway 98 & 84, and the Visitor's Center is drained by the 14-inch cast iron pipe under the railroad embankment. The first 12 feet of the pipe at the upstream end is obstructed with debris. Discharge from this pipe is greatly reduced. Previous attempts to remove this debris failed. It must be pointed out that due to this blockage and due to the fact that the 14-inch pipe is undersized, this basin is prone to flooding to depths of five (5) feet or more. This water can take anywhere from several hours to several days to drain out.

All pipes and inverts presented in the plans represent the data recovered from a detailed field survey conducted in 2000. Some pipes were buried by recent siltation and their location and inverts could not be verified in the field. Where indicated, the location and inverts of these pipes are based on information obtained from several sets of 'as built' plans from related construction projects. **It shall be the contractor's responsibility to verify the location, size and invert elevations of all pipe once work begins.**

The installation of the 30-inch diameter jack and bore pipe under the railroad will be from the Mississippi River side of the embankment. Access and space are limited. It should be pointed out that disturbance of the river bank and railroad embankment must be restricted to only what is necessary. This requirement is placed in order to minimize erosion on the riverbank and to minimize the affect on the railroad embankment.

Pipe welding necessary to install the steel pipe under the railroad must be performed by a certified welder. Proof of certification must be provided to the Engineer before any welding is done on the job.

Construction of the riprap stilling basin at the end of outfall "B" will be on top of the existing riprap lined "wash" area. The existing riprap should not be disturbed any more than what is necessary.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6783

CODE: (IS)

DATE: 10/28/2003

SUBJECT: Fuel Tax Applicability to Bidders and Contractors

Bidders are hereby advised that the “Mississippi Special Fuel Tax Law”, Section 27-55-501, et seq. and its requirements and penalties apply to any contract for construction, reconstruction, maintenance or repairs, for contracts entered into with the State of Mississippi, any political subdivision of the State of Mississippi, or any Department, Agency, Institute of the State of Mississippi or any political subdivision thereof.

The Mississippi State Tax Commission will be notified of the name and address of the Contractor that is awarded this contract. The Contractor will be subject to an audit during the life of this contract to make certain that all applicable fuel taxes are being paid promptly as outlined in Section 27-55-501, et seq.

In addition to any audits performed by the Mississippi State Tax Commission, the Department also reserves the right to audit the Contractor’s records during the life of this contract to make certain that all applicable fuel taxes are being paid promptly as outlined in Section 27-55-501, et seq.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6794

CODE: (SP)

DATE: 11/12/2003

SUBJECT: Estimated Monthly Quantities

Bidders are hereby advised that each month the Contractor works, the Engineer furnishes the Contractor with a monthly progress estimate showing the total estimated quantities for each pay item in the contract. The Contractor should review the Engineer's progress estimate as to the accuracy of the quantities. Should the Engineer's estimated quantity for any pay item be greater than a tolerance of plus or minus ten percent ($\pm 10\%$) of the Contractor's estimated quantity, the Contractor should confer with the Resident or Project Engineer to rectify any differences. Each should make a record of the differences, if any, and conclusions reached. In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 15 calendar days following the ending date of the monthly estimate in question to file in writing, a protest Notice of Claim in accordance with the provisions Subsection 105.17. Otherwise, the Engineer's estimated quantities shall be considered acceptable pending any changes made during the checking of final quantities.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6822

CODE: (SP)

DATE: 1/26/2004

SUBJECT: PROJECT NUMBER CHANGE

PROJECT: STP[-0015-01(054) / 103252 ADAMS COUNTY

ANYWHERE IN THE PLANS, PROPOSAL AND SPECIFICATIONS FOR THE ABOVE PROJECT THAT REFERENCE IS MADE TO FEDERAL AID PROJECT NO. NH-0015-01(054) / 103252, IT IS UNDERSTOOD THAT STATE PROJECT NO. STP-0015-01(054) / 103252 IS THE CORRECT PROJECT NUMBER.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6823

CODE: (SP)

DATE: 01/09/2004

SUBJECT: Petroleum Products Base Prices For Contracts Let In February, 2004

REFERENCE: Subsection 907-109.07

The following base prices are to be used for adjustment in compensation due to changes in costs of petroleum products:

FUELS

| | <u>Per Gallon</u> | <u>Per Liter</u> |
|----------|-------------------|------------------|
| Gasoline | \$1.3550 | \$0.3580 |
| Diesel | \$1.3714 | \$0.3623 |

MATERIAL OF CONSTRUCTION

| <u>Asphalt Cements**</u> | <u>Per Gallon</u> | <u>Per Ton</u> | <u>Per Liter</u> | <u>Per Metric Ton</u> |
|--------------------------|-------------------|----------------|------------------|-----------------------|
| Viscosity Grade AC-5 | \$0.8079 | \$191.67 | \$0.2134 | \$211.28 |
| Viscosity Grade AC-10 | \$0.7882 | \$187.00 | \$0.2082 | \$206.13 |
| Viscosity Grade AC-20 | \$0.7762 | \$184.14 | \$0.2051 | \$202.98 |
| Viscosity Grade AC-30 | \$0.7762 | \$184.14 | \$0.2051 | \$202.98 |
| Grade PG-58-28 | \$0.8043 | \$190.83 | \$0.2125 | \$210.35 |
| Grade PG 64-22 | \$0.7888 | \$187.14 | \$0.2084 | \$206.28 |
| Grade PG 67-22 | \$0.7882 | \$187.00 | \$0.2082 | \$206.13 |
| Grade PG 76-22 | \$1.1486 | \$272.50 | \$0.3034 | \$300.37 |
| Grade PG 82-22 | \$1.3016 | \$308.80 | \$0.3438 | \$340.39 |

Emulsified Asphalts

| | | |
|---------------------|----------|----------|
| Grade EA-4 (SS-1) | \$0.7433 | \$0.1964 |
| Grade RS-2C (CRS-2) | \$0.7533 | \$0.1990 |
| Grade CRS-2P | \$0.8661 | \$0.2288 |

Primes

| | | |
|-----------------------|----------|----------|
| Grades EA-1 and MC-70 | \$0.9550 | \$0.2523 |
|-----------------------|----------|----------|

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION: 904 – NOTICE TO BIDDERS NO. 6860

DATE: 01/23/04

SUBJECT: Railway-Highway Provision

PROJECT: STP-0015-01(054)/103252 -- Adams County

Prior to bidding, the Contractor shall contact the Canadian National - Illinois Central concerning insurance coverage required for this project. In case the railroad requires coverage over and above that required by the Standard Specifications, the railroad requirements shall be met.

The name insured, description of work and designation of the job site to be shown on the Policy are as follows:

Name Insured: The Canadian National – Illinois Central

Description and
Designation: Drainage Correction North of US 84 Between Canal Rd. and MS River

Notice of starting to work and correspondence pertaining to railroad liability insurance shall be directed to:

John Dining
Public Service Engineer
2151 North Mill Street
Jackson, Ms. 39202
(601) 914-2658

SUPPLEMENT TO FORM FHWA-1273

The following MINIMUM HOURLY WAGE RATES have been predetermined by the Secretary of Labor in Wage Determination Decision No. MS030024 dated 6/13/2003.

AREA 5 - COUNTIES

ADAMS, AMITE, COVINGTON, FORREST, FRANKLIN, GREENE, JEFFERSON, JEFFERSON DAVIS, JONES, LAMAR, LAWRENCE, LINCOLN, MARION, PERRY, PIKE, WALTHALL, WAYNE AND WILKINSON

| <u>PAYROLL CODE</u> | <u>CLASSIFICATION</u> | <u>MINIMUM HOURLY WAGE RATE</u> |
|---------------------|---|---------------------------------|
| 100 | Air Tool Operator (Jack Hammer/Air Comp.) | \$6.50 |
| 105 | Asphalt Raker | 5.88 |
| 108 | Mason Tender (Cement Mason Helper) | 6.48 |
| 110 | Carpenter | 8.58 |
| 120 | Cement Mason (Finisher) | 8.09 |
| 130 | Electrician | 14.40 |
| 131 | Mechanic (Heavy Equipment) | 9.24 |
| 135 | Oiler-Greaser | 7.01 |
| 140 | Form Setter | 7.33 |
| 145 | Grade Checker (Asphalt Crew) | 6.95 |
| 150 | Ironworker, Reinforcing (Tie Steel) | 8.51 |
| 155 | Ironworker, Structural | 7.50 |
| 160 | Laborer, Unskilled | 5.88 |
| 165 | Pipelayer | 7.88 |
| 175 | Painter (Structural Steel) | 8.86 |
| 180 | Piledriverman | 8.00 |
| 185 | Truck Driver (All Types) | 6.19 |
| 190 | Joint Filler | 5.24 |
| 195 | Joint Setter | 5.15 |
| 197 | Welder | 8.00 |

POWER EQUIPMENT OPERATORS

| | | |
|-----|---|-------|
| 205 | Aggregate Spreader Operator | 6.58 |
| 212 | Asphalt Broom (Sweeper) Operator | 6.17 |
| 214 | Asphalt Paving Machine/Spreader Operator | 6.89 |
| 215 | Asphalt Distributor Operator | 5.92 |
| 216 | Asphalt Plant Operator | 6.31 |
| 220 | Backhoe (Shovel) Operator | 7.69 |
| 225 | Bulldozer Operator | 8.03 |
| 235 | Concrete Finishing/Curing Machine Operator | 7.85 |
| 240 | Concrete Paving Machine Operator (Spreader) | 8.97 |
| 250 | Concrete Saw Operator | 6.15 |
| 255 | Concrete Breaker/Hydro-Hammer Operator | 7.00 |
| 270 | Loader (All Types) | 6.90 |
| 275 | Milling Machine Operator | 7.27 |
| 280 | Mixer Operator (All Types) | 6.53 |
| 285 | Motor Patrol (Grader) Operator | 8.51 |
| 290 | Mulcher Machine Operator | 6.00 |
| 295 | Earth Auger Operator | 8.00 |
| 300 | Piledriver Machine Operator | 10.50 |
| 305 | Roller Operator (Self-Propelled) | 5.73 |
| 310 | Scraper Operator (All Types) | 6.81 |
| 315 | Striping Machine Operator | 10.00 |
| 320 | Tractor Operator (Track Type) | 9.00 |
| 325 | Tractor Operator (Wheel Type) | 5.70 |
| 330 | Trenching Machine Operator | 8.01 |
| 350 | Crusher Feeder Machine Operator | 5.50 |
| 360 | Crane (Dragline) Operator | 9.18 |
| 365 | Guardrail Post Driver | 10.00 |

Authorized Payroll Code may be used in lieu of classification titles on weekly payrolls submitted to this Department. Codes or classification titles not conforming to those listed will not be acceptable.

SUPPLEMENT TO FORM FHWA-1273

DATE: 6/15/94

SUBJECT: Final Certificate and Contract Provisions for Subcontracts

All subcontracts shall be in writing and contain all pertinent provisions and requirements of the prime contract.

Each "Request for Permission to Subcontract" (Mississippi Department of Transportation Form CAD-720) shall include a copy of subcontract for review by the Mississippi Department of Transportation. The federal contract provisions may be omitted from the subcontract copy submitted for review provided the Contractor certifies that the provisions will be physically incorporated into the agreement furnished to the Subcontractor.

In lieu of submitting a copy of the subcontract for review, the Contractor may certify that the subcontract agreement is in writing and that it contains all the requirements and pertinent provisions of the prime contract.

Each Subcontractor will be required to provide a copy of the subcontract agreement for contract compliance reviews, along with physical evidence (copy of FHWA-1273) that requirements and pertinent provisions have been provided for review and adherence.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

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 Executive 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 an 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 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 than the applicable wage rate and fringe benefits or cash equivalent for the classification of work 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 than \$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 REQUIREMENTS 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 Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

| Timetables | Goals for female participation in each trade (percent) |
|---|--|
| From April 1, 1978 until March 31, 1979 | 3.1 |
| From April 1, 1979 until March 31, 1980 | 5.1 |
| From April 1, 1980 until March 31, 1981 | 6.9 |

| | |
|----------------------|---|
| Until further notice | Goals for minority participation for each trade (percent) |
|----------------------|---|

SHSA Cities:

| | |
|-------------------------------|------|
| Pascagoula - Moss Point ----- | 16.9 |
| Biloxi - Gulfport----- | 19.2 |
| Jackson----- | 30.3 |

SMSA Counties:

| | |
|-------------------------------|------|
| Desoto----- | 32.3 |
| Hancock, Harrison, Stone----- | 19.2 |
| Hinds, Rankin----- | 30.3 |
| Jackson----- | 16.9 |

Non-SMSA Counties:

| | |
|----------------------|------|
| George, Greene ----- | 26.4 |
|----------------------|------|

Alcorn, Benton, Bolivar, Calhoun, Carroll, Chickasaw, Clay, Coahoma, Grenada, Itawamba, Lafayette, Lee, Leflore, Marshall, Monroe, Montgomery, Panola, Pontotoc, Prentiss, Quitman, Sunflower, Tallahatchie, Tate, Tippah, Tishomingo, Tunica, Union, Washington, Webster, Yalobusha----- 26.5

Attala, Choctaw, Claiborne, Clarke, Copiah, Covington, Franklin, Holmes, Humphreys, Issaquena, Jasper, Jefferson, Jefferson Davis, Jones Kemper, Lauderdale, Lawrence, Leake, Lincoln, Lowndes, Madison, Neshoba, Newton, Noxubee, Oktibbeha, Scott, Sharkey, Simpson, Smith, Warren, Wayne, Winston, Yazoo ----- 32.0

Forrest, Lamar, Marion, Pearl River, Perry, Pike, Walthall ----- 27.7

Adams, Amite, Wilkinson----- 30.4

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 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 to the county and city (if any), stated in the advertisement.

5. The notification required in Paragraph 3 shall be addressed to the following:

Contract Compliance Officer
Mississippi Department of Transportation
P.O. Box 1850
Jackson, Mississippi 39215-1850

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. **907-101-5**

CODE: (IS)

| DATE: **01/03/2002**

SUBJECT: **Definitions**

Section 101, Definitions and Terms, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-101.02--Definitions. Delete the definition of "Change Order" on page 101-4.

Delete the definition of "Extra Work Order" on page 101-6.

Delete the definition of "Optional Items" on page 101-8 and substitute:

Optional Items - Items listed in the bid schedule of the proposal which are considered to be comparable for the purpose intended, and the Contractor is required to make a selection prior to or at the time of execution of the contract.

After the eighth definition on page 101-9, add the following:

Quantity Adjustment - A modification of contract quantities covering increases or decreases resulting from plan errors, omissions or changes made necessary in order to carry out the intent of the plans.

| Delete Figure 1 at the end of Section 101 on page 101-13, and substitute the following:

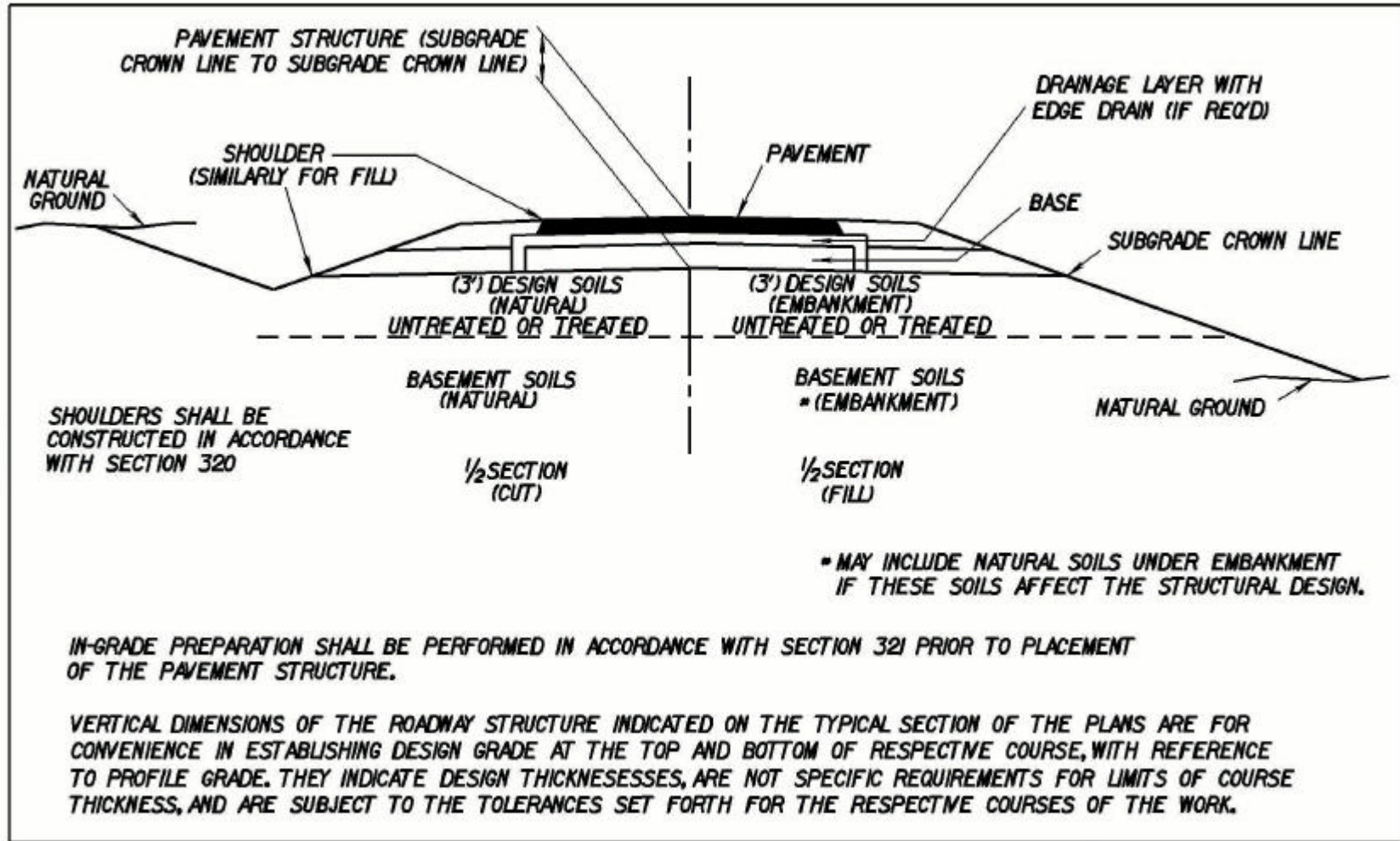


FIGURE 1 - REFERENCE DIVISION 100 - PAGE 101-1

MISSISSIPPI STATE HIGHWAY DEPARTMENT

SPECIAL PROVISION NO. 907-102-1

CODE: (IS)

DATE: 9/5/90

SUBJECT: Combination Bids

Section 102, Bidding Requirements and Conditions, of the 1990 Edition of the Standard Specifications for Road and Bridge Construction, is hereby amended as follows:

Delete Subsection 102.11 in toto and substitute the following:

907-102.11--Combination Bids. Combination bids which combine two or more individual projects may be submitted by stating in writing on each project proposal to be considered in the combination, one of the following:

(a) That the bidder is bidding on "All or None" of the work for designated proposals. The Department will evaluate all bids on these proposals and make awards based on the bids most advantageous to the State.

(b) The reduction the bidder will make in the unit price of one or more of the items in any or all of the proposals if awarded the combination; however, the bidder will not be permitted to make a reduction in any unit price that may be fixed by the Department in the proposal. The Department will select from the proposals submitted the individual or combination bids most advantageous to the State.

(c) That he is bidding on a number of projects but desires to be awarded work not to exceed a specified total amount or a specified number of contracts. The Department will select from his proposal those which are most advantageous to the State within its specified amount or total number of contracts.

Combination bids which state that a lump sum shall be deducted from the final estimate or retained percentage, or that a reduction in prices shall be made on a percentage basis, or that states that award of a job is contingent upon being awarded another job will not be accepted and the bids with which such a letter is submitted will be considered irregular and rejected.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. **907-102-8**

CODE: (IS)

| DATE: **03/01/2002**

SUBJECT: **Preparation of Proposal**

Section 102, Bidding Requirements and Conditions, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-102.06--Preparation of Proposal. Delete in toto the second full paragraph on page 102-4 and substitute:

Bid sheets generated by the Department's Electronic Bid System (EBS) along with a completed proposal package will constitute the official bid and shall be signed on the last sheet of the EBS generated bid sheets and delivered to the Department in accordance with the provisions of Subsection 102.09.

Bidders are cautioned that using older versions of the EBS will result in improperly printed bid sheets. The latest version of the EBS can be obtained at no cost from the MDOT Contract Administration Division or at the MDOT website, www.mdot.state.ms.us.

If bidders submit EBS generated bid sheets, then the bid sheets included in the proposal should not be completed. The EBS generated bid sheets should be stapled together and included in the bid proposal package in the sealed envelope. If both the forms in the proposal and the EBS generated bid sheets are completed and submitted, only the EBS generated sheets will be recognized and used for the official bid. The diskette containing the information printed on the EBS generated bid sheets should be placed in the pouch located on the inside of the front cover of the bid proposal package. Bid sheets printed from the EBS should be a representation of the data returned on the diskettes. To have a true representation of the bid sheets, the Bidder must copy the inputted unit prices back to the diskette by using the option titled "Copy Project File To Floppy Disk" from the drop-down menu under "Projects". Otherwise, the unit prices bid will not be recorded to the diskette. Bidders are cautioned that failure to follow proper diskette-handling procedures could result in the Department being unable to process the diskette. **Any modification or manipulation of the data contained on the diskette, other than entering unit bid prices, will not be allowed and will cause the Contractor's bid to be considered irregular.**

When the bid schedule lists optional items, the Contractor's selection may, but is not required to, be made at the time of bidding. For optional items not pre-selected, the Contractor's selection shall be made prior to or at the time of execution of the contract.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-103-5

CODE: (IS)

DATE: 12/2/99

SUBJECT: Execution and Approval of Contract

Section 103, Award and Execution of the Contract, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-103.01-Consideration of Proposals. Delete the third paragraph of Subsection 103.01 on page 103-1, and substitute the following:

In consideration of contract proposals which are equal to or in excess of \$50,000 and financed 100% with State funds, a nonresident bidder domiciled in a state having laws granting preference to local Contractors will be considered for such contracts on the same basis as the nonresident bidder's state awards contracts to Mississippi Contractors bidding under similar circumstances. When a nonresident Contractor submits a bid equal to or in excess of \$50,000 on a contract financed 100% with State funds, a copy of the current laws from the state of domicile and an explanation thereof pertaining to treatment of nonresident Contractors shall be attached. If no preferential treatment is provided for Contractors in the state of domicile and contracts are awarded to the lowest responsible bidder, a statement to this effect shall be attached. Should the attachment not accompany the bid when submitted, the Contractor shall have 10 days following the opening of the bids to furnish the required information to the Contract Administration Engineer for attachment to the bid. As used herein, the term "resident Contractors" includes a nonresident person, firm or corporation that has been qualified to do business in this State and has maintained a permanent full-time office in the State of Mississippi for two years prior to January 1, 1986, and the subsidiaries and affiliates of such a person, firm or corporation.

907-103.04--Return of Proposal Guaranty. Delete the third paragraph of Subsection 103.04 on page 103-2 and substitute the following:

In the event no award is made within **30 days** after the opening of bids, the Executive Director may permit the successful bidder to replace the certified check or cashier's check with a satisfactory bidder's bond.

Delete in toto Subsection 103.07 on page 103-2, and substitute the following:

907-103.07--Execution and Approval of Contract. The successful bidder to whom the contract has been awarded shall sign and file with the Director the contract and all documents required by the contract within **10 days** after the contract has been mailed to the bidder. The contract may require certain documents be submitted at an earlier date, in which case, those documents shall be submitted within the time frame specified. If the contract is not executed by the Department within 15 days following receipt of the signed contract and all necessary documents, the bidder shall have the right to withdraw his bid without penalty. No contract is in effect until it is executed by all parties.

907-103.08--Failure to Execute Contract. Delete in toto Subsection 103.08 on page 103-2, and substitute the following:

Failure of the bidder to execute the contract and file acceptable bond within **10 days** shall be just cause for the cancellation of the award and forfeiture of the proposal guaranty which shall become the property of the Department, not as a penalty but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the work may be readvertised at the discretion of the Department.

MISSISSIPPI STATE HIGHWAY DEPARTMENT

SPECIAL PROVISION NO. 907-104-3

CODE: (IS)

DATE: 11/27/91

SUBJECT: Significant Changes in the Character of Work and Differing Site Conditions

Section 104, Scope of Work, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-104.02.1--Significant Changes in the Character of Work.

Delete the first sentence of the first paragraph of Subsection 104.02.1 on page 104-1 and substitute:

If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract.

Delete the last paragraph of page 104-2 and the first paragraph of page 104-3 and substitute:

907-104.02.2--Differing Site Conditions. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.

Upon written notification by the Contractor, the Engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the contract is warranted.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| **SPECIAL PROVISION NO. 907-104-12**

CODE: (IS)

| **DATE: 04/11/2003**

SUBJECT: Minor Alterations to the Contract

Section 104, Scope of Work, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the end of Subsection 104.02.2 on page 104.3, add the following:

907-104.02.3--Minor Alterations to the Contract. When the Department makes alterations in the details of construction or specifications that are minor in nature, the Resident or Project Engineer may elect to make an equitable adjustment to the contract under the provisions of this subsection. Minor alterations shall be defined as those alterations **to** the contract that **are not addressed in the Standard Specifications, or supplements thereto, and** are valued at less than \$5,000.00. The District Engineer shall designate, in writing, the Resident or Project Engineer authorized to execute the Class I Supplemental Agreement. The Resident or Project Engineer and Contractor shall agree upon the scope of work and a lump sum amount, within the above stated limit, for the work to be performed. The agreement shall be reflected in a Class I Supplemental Agreement signed by the Resident or Project Engineer and the Contractor's authorized representative, which, when it bears both the signature of the Resident or Project Engineer and Contractor, shall constitute the scope of work and basis of payment under the item "Minor Alterations to the Contract." Work shall not proceed until both parties sign the agreement.

Any adjustment of contract time due to Minor Alterations will be in accordance with Subsection 108.06 of the Standard Specifications.

Payment will be made under:

| 907-104-A **S/A**: Minor Alterations to the Contract

- lump sum

(This pay item is not to be included on the plans or in the contract proposal)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-105-9

CODE: (IS)

DATE: 9/8/95

SUBJECT: Claims

Section 105, Control of Work, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-105.17--Claims for Adjustments and Disputes. Delete in toto Subsection 105.17 on pages 105-10 and 105-11 and substitute the following:

It is in the public interest that the Department have early or prior knowledge of an existing or impending claim of any nature by the Contractor so that the Department may appropriately consider modifying the details of the work or other actions of the Department which might result in mitigation or elimination of the effect of the act or conditions objected to by the Contractor and so that the Department may institute appropriate procedures, as required, to keep strict account of actual costs and to verify, at the time, facts upon which a claim for contract time adjustment is made. Therefore, if in any case the Contractor deems that additional compensation is due for work or materials not clearly covered in the contract or not ordered by the Engineer as Extra Work, or if the Contractor deems that adjustment in the contract time should be made because of any of the reasons provided for in the contract as a basis for an extension of time, the Contractor shall notify the Engineer in writing of an intention to make such claim for additional compensation before beginning the work on which the Contractor bases the claim or for such extension of time as soon as the facts first become known on which the Contractor bases the claim for adjustment. If such written notification is not given by the Contractor in accordance with these specifications and the Engineer and the Department's Audit Division are not afforded proper facilities by the Contractor for keeping strict account of actual costs or verification at the time of facts upon which a claim for contract adjustment is made, the Contractor hereby agrees that failure to provide written notice has denied the Department the prerogative of verifying additional time, materials, equipment, labor and making adjustments in the work which might remove or alleviate the conditions for which a claim might be made, and the Contractor further agrees that such failure on the Contractor's part shall be a conclusive waiver of any claim, or part thereof.

Mere oral notice or statement will not be sufficient, nor will an unnecessarily delayed notice or statement after the event.

Any such notice shall be in writing and shall describe any act of omission or commission by the Department or its agents that allegedly caused or contributed to the condition for which a claim may be made and the nature of the claimed damage. The Contractor shall deliver or mail the notice to the Project Engineer.

Upon receipt of the notice, the Project Engineer will acknowledge receipt in writing to the Contractor with a copy of the notice and acknowledgment to the District Engineer, State Construction Engineer and the Department's Audit Director.

The Project Engineer will evaluate the Contractor's claim and forward his/her recommendations to the District Engineer with a copy to the State Construction Engineer and the Department's Audit Director.

The State Construction Engineer, after consultation with the District Engineer and Project Engineer, will notify the Audit Division of the Contractor's claim and request that the Audit Director take the necessary steps to review the legitimacy of the Contractor's documentation of the claim.

Even when the Audit Division determines that the Contractor's documentation relative to the time, materials, equipment and labor are legitimate, that division will continue to monitor the Contractor's charges until the Contractor's services are complete.

Such notice by the Contractor and the fact that the Engineer has kept account of the costs and the Audit Division has verified the legitimacy of the Contractor's documentation and other facts as aforesaid shall not in any way be construed as substantiating the validity of a claim.

In presenting a claim, the Contractor shall clearly and specifically state:

- (a) The contract subsection number(s) under which each part of the claim is made.
- (b) The event(s) or conditions covered in each such subsections and made the basis for each part of the claim.
- (c) A claim for additional compensation shall include supporting auditable cost figures from entries made in the original records entered at the time of the work. The Contractor will be required to provide all records that the Department's Audit Director deems necessary for the performance of an audit in accordance with the United States General Accounting Office's Governmental Auditing Standards, the Institute of Internal Auditor's Professional Practice Standards, and the American Institute of Certified Public Accountant's Auditing Standards.

All claims made shall be sent to the Resident or Project Engineer for review and processing.

If a claim is so vague that the Engineer cannot reasonably and expeditiously determine the specific contractual provisions relied on by the Contractor as the basis of each part of the claim, or if the Audit Director cannot reasonably and expeditiously determine that the costs related to the claim are related specifically to the reference project and are not related to any other project(s) that the Contractor is constructing or has constructed, it will be denied by the Engineer or returned without action.

Any part of a claim based on after-the-fact general statements of costs such as "Normal cost of such work", "computed as a percentage of..... etc." or other such indefinite statements will be denied or returned to the Contractor without action.

The Resident or Project Engineer may request supplemental data in writing, or return the claim to the Contractor for resubmission in accordance with these specifications.

A claim, as approved by the Department, will be paid in accordance with the provisions of 104.02 and 104.03 and adjustments in contract time will be made in accordance with the provision of 108.06. When a claim is denied or returned without action, the notice will state the reasons thereof.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-106-1

CODE: (IS)

DATE: 9/22/93

SUBJECT: Convict Produced Materials

Section 106, Control of Materials, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the end of Subsection 106.12 on page no. 106-5, add the following:

907-106.13--Convict Produced Materials.

Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-Aid highway construction project if such materials have been:

- (1) Produced by convicts who are on parole, supervised release, or probation from a prison or
- (2) Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal-aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal-aid highway construction during the 12-month period ending July 1, 1987.

Qualified prison facility means any prison facility in which convicts, during the 12-month period ending July 1, 1987, produced materials for use in Federal-Aid highway construction projects.

MISSISSIPPI STATE HIGHWAY DEPARTMENT

SPECIAL PROVISION NO. 907-107-6

CODE: (IS)

DATE: 5/3/93

SUBJECT: Material Pits (NPDES Permits)

Section 107, Legal Relations and Responsibility to Public, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-107.23--Material Pits.

At the end of Subsection 107-23 on page 107-20, add the following:

The Contractor is further reminded of the Clean Water Act Amendments requiring National Pollutant Discharge Elimination System (NPDES) permits for discharges composed entirely of storm water from active or inactive surface mining operations, excluding work areas covered by a U. S. Army Corps of Engineers Clean Water Act Section 404 Permit. Questions or problems concerning NPDES permits should be directed to the Mississippi Department of Environmental Quality (MDEQ), Office of Pollution Control, Industrial Branch, Jackson, Mississippi.

The Contractor shall, before a regulated area is opened or enlarged as a material pit, obtain from MDEQ the necessary Mining Storm Water NPDES Permit(s) authorizing the discharge of storm water subject to the terms and conditions of said permit. All costs involved in obtaining the permit(s) shall be borne by the Contractor. Delays encountered in obtaining the permit(s) will not be a reason for extension of contract time.

For regulated commercial sources, the owner(s) shall bear the responsibility for meeting the requirements of the NPDES permitting process.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-107-10

CODE: (IS)

DATE: 3/1/99

SUBJECT: Contractor's Responsibility For Work

Section 107, Legal Relations and Responsibility to Public, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the second full paragraph of Subsection 107.17 on page 107-15, add the following:

Damage to items of construction, caused by the traveling public on a project or section(s) of a project open to traffic, shall be repaired by the Contractor. The Contractor will be paid for repairing such damage to certain acceptably installed items of construction at the contract unit price(s) for the applicable item(s) used in the repair. An acceptably installed item shall be complete-in-place meeting the requirements of the specifications. The acceptably installed items of construction eligible to receive payment for repair of damage caused by the traveling public shall be items used for signing, safety and traffic control. The eligible items shall be limited to traffic signal systems, signs and sign supports, lighting items, guard rail items, delineators, impact attenuators, median barriers, bridge railing or permanent pavement markings. If damage to the above items necessitate only minor repairs, in lieu of total replacement, the work shall be performed in accordance with Subsection 109.04, or as directed by the Engineer. Damage not meeting the requirements to qualify for repair payment shall be repaired at no additional cost to the State.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-107-12

CODE: (IS)

| DATE: 10/21/2003

SUBJECT: Liability Insurance

Section 107, Legal Relations and Responsibility to Public, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-107.14.2--Liability Insurance.

Delete Subsection 107.14.2.1 on page 107-12 in toto and substitute:

907-107.14.2.1--General. The Contractor shall carry contractor's liability (including subcontractors and contractual) with limits not less than: \$300,000 each occurrence; \$1,000,000 aggregate; automobile liability - \$500,000 combined single limit - each accident; Workers' Compensation and Employers' Liability - Statutory & \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. Each policy shall be signed or countersigned by a Mississippi Resident Agent of the insurance company.

The Contractor shall have certificates furnished to the Department from the insurance companies providing the required coverage. The certificates shall be on the form furnished by the Department and will show the types and limits of coverage.

907-107.14.2.2--Railroad Protective.

Delete the last paragraph on page 107-12 and substitute:

Prior to starting any work on railroad property, the Contractor shall furnish satisfactory evidence to the Department that insurance of the forms and amounts set out herein in paragraphs (a) and (b) has been obtained.

Delete the last sentence of the first paragraph on page 107-13 and substitute:

Evidence to the Railroad Company shall be in the form of a Certificate of Insurance for coverages required in paragraph (b), and the original policy of the Railroad Protective Liability Insurance for coverage required in paragraph (a).

Delete the first sentence of the fourth paragraph on page 107-13 and substitute:

For work within the limits set out in 107.18 and this subsection, the Contractor shall provide insurance for bodily injury liability, property damage liability and physical damage to property with coverages and limits no less than shown in paragraphs (a) and (b).

Delete subparagraphs (a), (b) and (c) on pages 107-13 and 107-14 and substitute:

(a) **Railroad Protective Liability Insurance** shall be purchased on behalf of the Railroad Company with limits of \$2,000,000 each occurrence; \$6,000,000 aggregate applying separately to each annual period for lines without passenger trains. If the line carries passenger train(s), railroad protective liability insurance shall be purchased on behalf of the Railroad Company with limits of \$5,000,000 each occurrence; \$10,000,000 aggregate applying separately to each annual period.

Coverage shall be limited to damage suffered by the railroad on account of occurrences arising out of the work of the Contractor on or about the railroad right-of-way, independent of the railroad's general supervision or control, except as noted in paragraph 4 below.

Coverage shall include:

- (1) death of or bodily injury to passengers of the railroad and employees of the railroad not covered by State workmen's compensation laws,
- (2) personal property owned by or in the care, custody or control of the railroads,
- (3) the Contractor, or any of his agents or employees who suffer bodily injury or death as a result of acts of the railroad or its agents, regardless of the negligence of the railroads, and
- (4) negligence of only the following classes of railroad employees:
 - (i) any supervisory employee of the railroad at the job site
 - (ii) any employee of the railroad while operating, attached to, or engaged on, work trains or other railroad equipment at the job site which are assigned exclusively to the Contractor, or
 - (iii) any employee of the railroad not within (i) or (ii) above who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or Governmental authority.

(b) **Regular Contractor's Liability**, including subcontractors, XCU and railroad contractual with limits of \$1,000,000 each occurrence; \$2,000,000 aggregate. **Automobile** with limits of \$1,000,000 combined single limit any one accident; **Workers' Compensation and Employer's Liability** - statutory and \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. **Excess/Umbrella**

Liability \$5,000,000 each occurrence; \$5,000,000 aggregate. All coverage to be issued in the name of the Contractor shall be so written as to furnish protection to the Contractor respecting his operations in performing work covered by the contract. Coverage shall include protection from damages arising out of bodily injury or death and damage or destruction of property which may be suffered by persons other than the Contractor's own employees.

In addition, the Contractor shall provide for and on behalf of each subcontractor by means of a separate and individual liability and property damage policy to cover like liability imposed upon the subcontractor as a result of the subcontractor's operations in the same amounts as contained above; or, in the alternative each subcontractor shall provide same.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-107-13

CODE: (SP)

DATE: 11/13/2003

SUBJECT: Contractor's Protection Plan

Section 107, Legal Relations and Responsibility to Public, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 107.22.1 on page 107-17 and substitute:

907-107.22.1--Contractor's Protection Plan. At the preconstruction conference or prior to starting any work on the project, the Contractor shall submit to the Engineer for approval, an erosion control plan to supplement permanent erosion control work required under the contract. As a minimum, the plan shall include the following:

1. Plan profile sheets (11" x 17" or larger) of the entire project showing the locations of erosion control devices (pay items) such as silt fence, hay bales, silt basins, slope drains, etc. Also, showing the locations of other measures (absorbed items) such as brush barriers, diversion berms, etc. that the Contractor may elect to use to prevent siltation.
2. A plan for disposal of waste materials, if applicable.
3. A detailed schedule of operations at locations of high siltation potential to clearly indicate how siltation of streams, lakes and reservoirs and the interruption of normal stream flows will be held to a practical and feasible minimum.

The plan shall be updated as needed during the progress of the project. Work shall not be started until an erosion control plan is approved by the Engineer.

The Engineer will have the authority to suspend all work and/or withhold payments for failure of the Contractor to carry out provisions of the erosion control plan and/or proper maintenance thereof.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-108-11

CODE: (SP)

DATE: 4/30/98

SUBJECT: Determination and Extension of Contract Time

Section 108, Prosecution and Progress, of the 1990 Standard Specifications for Road and Bridge Construction is modified as follows:

Delete Subsection 108.06 in toto, and insert:

907-108.06 - Determination and Extension of Contract Time. Contract Time will be established on the basis of a Completion Date, as indicated in the contract. The span of time allowed for the completion of the physical features of work included in the contract will be indicated in the contract documents and will be known as "Contract Time."

For contracts in which a Completion Date is specified, the span of Contract Time shall be determined by the number of Calendar Days allowed in the contract between the date for the beginning of Contract Time and the Specified Completion Date or revised date for beginning of Contract Time and the revised Specified Completion Date in accordance with the provisions of the contract.

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Calendar Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract **unless it can be established that the extra work was of such character that it required more time than is indicated by the money value.**

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the project in accordance with the plans and specifications within the Contract Time.

At any given date, the ratio of the accumulated monetary value of that part of the work actually accomplished to the total contract bid amount adjusted to reflect approved increases or decreases shall determine the "percent complete" of the work.

The percentage elapsed time shall be calculated as a direct ratio of the expired Calendar Days to the total Calendar Days provided for in the contract.

No extension of the Specified Completion Date will be granted except as provided herein, and, except for abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes, tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

Any revision of the Specified Completion Date provided for in the contract will be made automatically on the Specified Completion Date as established in the contract, and at a later date if additional conditions so warrant.

In the event the Engineer determines that the completion date when extended as provided in the contract would cause certain items of work or portions thereof, properly prosecuted in the normal sequence and manner, to fall within a period of seasonal or temperature limitations, he will make a determination as to the scope of unavoidable delays, if any, contemplated because of such seasonal or temperature limitations for periods in excess of those contemplated in the original contract. The Director may thereupon establish a revised contract completion date by notifying the Contractor and his Surety in writing of such established completion date as warranted by the engineering determination.

Liquidated Damages as set forth under the heading "Per Calendar Day" in the "Schedule of Deductions for Each Day of Overrun in Contract Time," Subsection 108.07, shall be applicable to each Calendar Day after the Specified Completion Date, or authorized extension thereof, and until all work under the contract is completed.

Progress Schedule referred to in Subsection 108.03 will not be required.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| **SPECIAL PROVISION NO. 907-108-20**

CODE: (IS)

| **DATE: 1/02/2003**

SUBJECT: Liquidated Damages Table

Section 108, Prosecution and Progress, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby modified as follows:

Delete the table in Subsection 108.07 on page 108-12, and substitute the following:

Schedule of Deductions for Each Day of Overrun in Contract Time

| Original Contract Amount | | Daily Charge Per Calendar Day |
|---------------------------------|-----------------------------|--|
| From More Than | To and Including | |
| \$ 0 | \$ 100,000 | \$ 140 |
| 100,000 | 500,000 | 200 |
| 500,000 | 1,000,000 | 300 |
| 1,000,000 | 2,000,000 | 400 |
| 2,000,000 | 5,000,000 | 650 |
| 5,000,000 | 10,000,000 | 750 |
| 10,000,000 | ---- | 1,400 |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-109-8

CODE: (IS)

DATE: 9/8/95

SUBJECT: Claims

Section 109, Measurement and Payment, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

At the end of Section 109 on page 109-9, add the following:

907-109.12--Right to Audit. The Department reserves the right to audit the Contractor's records at any time during the contract period and up to three years after the final contract payment or up to three years after any litigation is filed with court, whichever is later. If the Department commences an audit, the Contractor will be required to provide sufficient original documents and records to satisfy the Department's Audit Division that the costs included in the Contractor's claim were incurred solely in performance of the referenced project and project phase and were not incurred on any other project or phase of the referenced project that the Contractor is constructing or has constructed. Department's audit will be conducted in accordance with United States General Accounting Office's Governmental Auditing Standards, the Institute of Internal Auditor's Professional Practice Standards, and the American Institute of Certified Public Accountant's Auditing Standards.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. **907-109-14**

CODE: (IS)

| DATE: **12/12/2002**

SUBJECT: **Measurement and Payment for Changes in Costs of Construction Materials (Fuels and Asphalt)**

Section 109, Measurement and Payment, of the 1990 Edition of the Standard Specifications for Road and Bridge Construction, is hereby amended as follows:

Delete line 9, page 109-8 and add the following subsection:

907-109.07 - Changes in Material Costs. Because of the uncertainty in estimating the costs of petroleum products that will be required during the life of a contract, adjustment in compensation for certain materials is provided as follows:

Bituminous Products--Each month the Department will acquire unit prices from producers or suppliers who supply the State highway construction industry with bituminous products. The average of all quotes for each product will serve as the base price for contracts let in the subsequent month.

Fuels--Selected cash price quotations for bulk gasoline and diesel fuel will be taken from Platt's Oilgram PAD 2 and PAD 3. The appropriate adjustment per gallon for gasoline and diesel fuel will be added to the quotations to allow for taxes and markups. The prices thus determined will serve as the base prices for contracts let in the subsequent month.

The established base prices for bituminous products and fuels will be included in the contract documents under a Notice to Bidders entitled "Petroleum Products Base Prices For Contracts Let In (Month and Year)."

Each month thereafter the Engineer will be furnished with the current monthly prices. Adjustments for change in cost will be determined from the difference in the contract base prices and the prices for the period that the work is performed and for the quantities completed provided the price change in a product is more than five percent. Adjustments may increase or decrease compensation depending on the difference between the base prices and prices for the estimate period.

The adjustments will be determined for the quantities of bituminous products and the average fuel requirements for processing a unit of work as set forth herein.

COST ADJUSTMENT FACTORS FOR FUEL USAGE

| <u>Item of Work</u> | <u>Units</u> | <u>Code</u> | <u>Diesel</u> | <u>Gasoline</u> |
|--|---|--------------|---------------|-----------------|
| Excavation & Embankment (Except Structure and Foundation) | gallons/cubic yard | (E) | 0.29 | 0.15 |
| Granular Materials, Stabilizer Aggregates or Coarse & Seal Aggregates | gallons/cubic yard or gallons/ton | (GY) (GT) | 0.88 0.62 | 0.57 0.40 |
| Subgrade & Base Mixing Items | gallons/square yard | (M) | 0.044 | 0.028 |
| Hot Mix Asphalt (HMA) | gallons/ton | (B) | 2.57 | 0.78 |
| Asphalt Drainage Course | gallons/square yard | (D) | 0.49 | 0.15 |
| Portland Cement Concrete Base & Pavement | gallons/square yard | (C) | 0.11 | 0.15 |
| Bridge Items, Structural Concrete, Pipe Culverts, (Including Foundation & Structural Excavation and all other Concrete related items) | gallons/\$1000 | (S) | 11.0 | 13.0 |

CONSTRUCTION MATERIALS

The items and quantities subject to compensation adjustment:

ADJUSTMENT CODE

- (A1) Asphalt for HMA mixture -- theoretical gallons based on job mix formula and unit weight of 8.43 pounds per gallon (new asphalt only for recycled HMA mixture).
- (A2) Asphalt for Surface Treatment -- pay quantity in gallons.
- (A3) Asphalt for Prime -- pay quantity in gallons.
- (A4) Asphalt for Curing Seal -- 0.25 gallons per square yard.
- (A5) Asphalt for Bituminous Treated Roving -- 0.50 gallons per square yard.
- (A6) Asphalt for Asphalt Drainage Course -- theoretical gallons per square yard based on job mix formula and unit weight of 8.43 pounds per gallon.

Any difference between checked final quantity and the sum of quantities shown on the monthly estimates for any item will be adjusted by the following formula:

$$FA = (FCQ - PRQ) \times EA$$

Where FA = Final Adjustment
FCQ = Final Checked Quantity
PRQ = Total Quantity Previously Reported on Monthly Estimate
EA = Total Adjustment Shown on Monthly Estimate

The final adjustment is to consider any error(s) that may have been made in the computations of monthly adjustments.

After the expiration of contract time, including all authorized extensions, adjustments will be computed using fuel and material prices that are in effect at the expiration of contract time.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-109-15

CODE: (IS)

| DATE: 01/05/2004

SUBJECT: Measurement and Payment

Section 109, Measurement and Payment, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-109.06.2--Advancement on Materials. After the first sentence of the first paragraph of Subsection 109.06.2 on page 109-6, add the following:

Advance payment may be requested for structural steel members provided fabrication has been completed and the members have been declared satisfactory for storage by a Department representative.

Remove the period at the end of the third sentence of the first paragraph of Subsection 109.06.2 on page 109-6 and add the following:

; or in the case of prestressed concrete members that may require being produced at an out-of-state location, the prestress members shall be produced and may be stored at the commercial manufacturer's yard provided it is a PCI certified plant on the Department's List of Approved Prestress & Precast Plants and it is located within the continental United States; or in the case of structural steel members that may require fabrication at an out-of-state location, the fabricated members may be stored at the location of the commercial fabricator's yard provided it is located within the continental United States.

Delete the second paragraph of Subsection 109.06.2 on page 109-6 and substitute the following:

Advancements will not be allowed until the Project Engineer has received triplicate copies of material invoices and certified test reports or acceptable certificates of conformance, and in the case of materials stored at the commercial producer's/fabricator's yard, the material shall be positively identified for the specific project and a Certificate of Storage issued by the State Materials Engineer, another designated Department employee or a designated representative of the Department. Requests for advancements on fabricated structural steel members and prestress concrete members stored out-of-state will be denied when the Department does not have available a designated representative to issue a Certificate of Storage.

Delete the first sentence of the third paragraph of Subsection 109.06.2 on page nos. 109-6 and 109-7 and substitute the following:

The Contractor shall make suitable arrangements to the satisfaction of the Engineer for storage and protection at approved sites or, in the case of materials stored at the commercial producer's yard located in Mississippi or, in the case of fabricated structural steel members stored at the

commercial fabricator's yard or prestress concrete members stored at a commercial manufacturer's yard located within the continental United States, the Contractor shall make arrangements with the producer/fabricator for suitable storage and protection.

Delete the second full paragraph on page 109-7, and substitute:

Unless specifically provided for in the contract, advance payment will not be made on materials, except for fabricated structural steel members or prestress concrete members, stored or stockpiled outside of the State of Mississippi.

Delete in toto Subsection 109.06.3 on pages 109-7 and 109-8, and substitute the following:

907-109.06.3--Retainage. Regardless of the value of the earned work based on the value of work scheduled for completion by the approved progress schedule, no deduction for retainage will be made from payments due to the Contractor. Likewise, no retainage will be made on any advancement of materials to the Contractor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-203-15

CODE: (IS)

DATE: 11/26/2002

SUBJECT: Excavation and Embankment

Section 203, Excavation and Embankment, of the 1990 Edition of Mississippi Standard Specifications for Road and Bridge Construction, is hereby amended as follows:

907-203.03--Construction Requirements.

907-203.03.8.7--Compaction of Embankments. Delete the fifth paragraph of Subsection 203.03.8.7 on page 203-11 and substitute the following:

For basement and design soils, the required density shall be 95.0 percent and 98.0 percent, respectively. If a density test fails within minus two percent (-2.0%), 93.0 to 95.0% or 96.0 to 98.0%, of the required density, a verification test will be performed and the average of the two tests will be the test value for the lot. If this test value does not meet the required density (95.0 or 98.0%), the lot shall be rejected. If the original test value exceeds minus two percent (-2%) of the required density, no verification test will be performed and the lot shall be rejected.

907-203.05--Basis of Payment. Delete the first, fifth, and ninth pay item, description and unit of measure shown on page 203-13, and substitute the following:

907-203-A: Unclassified Excavation (_____) - per cubic yard
FM or LVM

907-203-E: Borrow Excavation (_____) (Class _____) - per cubic yard
FM, FME or LVM

907-203-EX: Borrow Excavation (AH) (_____) (Class _____) - per cubic yard
FME or LVM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-208-1

CODE: (SP)

DATE: 02/27/2003

SUBJECT: Linear Grading

Section 907-208 Linear Grading, is hereby added to and becomes part of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-208 -- LINEAR GRADING

907-208-.01--Description. This work shall consist of grading sections of roadway where, in general, the elevation of the existing ground surface or roadbed is practically parallel with the proposed grade line and the bulk of embankment material can be moved by motor patrols, bulldozers or other similar equipment to its final position on the adjacent roadway. Generally, the purpose of this work is to correct the existing roadway section to a two percent (2%) cross slope. The sections of road on which this type of work is proposed will be shown on the plans.

907-208-02--Blank.

907-203.03--Construction Requirements. Linear grading shall consist of shaping the roadbed on a previously constructed road where to the finished section shown on the plans prior to the placement of a granular material course. Unless specifically shown on the plans machining of backslopes will not be required.

The finished section, constructed as shown on the plans, shall be maintained and preserved by machining until the placement of the granular course. The ditches may need to be shaped to provide adequate drainage.

Where linear grading of the roadway and ditches produces an excess of material, the excess material shall be removed from the right-of-way and paid for as excess material, or may be disposed of on the project site if approved by the Engineer.

907-208.04-- Method of Measurement. Linear Grading, complete and accepted, will be measured for payment by the linear foot. Measurement will be made based on the length of grading without respect to width.

907-208.05--Basis of Payment. Linear Grading will be paid for at the contract unit price per linear foot, which price shall be full compensation for satisfactorily completing the work.

Payment will be made under:

907-208-A: Linear Grading

- per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-213-1

CODE: (IS)

DATE: 9/29/2000

SUBJECT: Agricultural Limestone

Section 213, Fertilizing, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-213.04--Method of Measurement. After the last paragraph of Subsection 213.04 on page 213-2, add the following:

The measured quantity of fertilizer failing to meet the guaranteed analysis, as set out in Subsection 715.02, will be adjusted in proportion to the guaranteed analysis and the actual analysis.

907-213.05--Basis of Payment. Add the "907" prefix to pay item number 213-A in Subsection 213.05 on page 213-2.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-234-1

CODE: (IS)

DATE: 12/10/2001

SUBJECT: Silt Fence

Section 907-234, Silt Fence, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby modified as follows:

907-234.05--Basis of Payment. Add the “907” prefix to the pay items listed on page 234-2.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-418-1

CODE: (SP)

DATE: 8/15/2001

SUBJECT: Compaction Grouting

PROJECT: STP-0015-01(054) / 103252 – Adams County

Section 418, Compaction Grouting, is hereby added to and becomes part of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-418 -- COMPACTION GROUTING

907-418.01--Description. Compaction grouting shall consist of placing a grout mixture into the ground under pressure at the locations and depths shown in the plans. This work shall be performed in accordance with these specifications and with the details and dimensions shown in the plans. Compaction grouting shall consist of low slump sand, portland cement, and fly ash.

The intent of the compaction grouting is to compact the existing roadway embankment in the area of existing drainage structures where voids may exist. The compaction grouting is to fill the voids and/or compact the existing embankment.

The compaction grouting is to occur only after the existing drainage network has been plugged and grouted

907-418.02--Materials. Grout for compaction grouting shall conform to Subsection 714.11.2 of the Standard Specifications in the proportions outlined below.

| | |
|--------------|-------------|
| Sand | 71%* |
| Cement..... | 8%* |
| Fly Ash..... | 21%* |
| Slump..... | 6 inch max. |

*percent by weight of dry materials

The Contractor shall submit mix designs for compaction grout to the Engineer to be verified by the Materials Division.

Compaction grout will be manufactured at plants in accordance with Section 804.

907-418.03--Construction Requirements.

907-418.03.1--General. All compaction grouting will be done at the locations and depths specified in the plans. Grouting will be done only at locations outside of the main traffic lanes. Compaction grouting will occur in the embankment using 2-foot lifts. Grout volume is limited to two (2) cubic yards of grout per lift. Installation pressures during grouting will not exceed 300 psi unless conditions warrant otherwise, and approval is granted by the Geotechnical Engineer. Compaction grouting is to stop at a depth of 20 feet below the roadway surface. The remaining section of the grouting hole is to be filled with grout under low pressure.

907-418.03.2--Ground Heave. Ground heave will be monitored at four (4) locations. Each location will be equally spaced and not more than 10 feet from the grout hole. Grouting at a location will stop if ground heave exceeds ¼ inch. Ground heave will be monitored regularly during grouting.

907-418.03.3--Equipment. The equipment shall be that customarily used in compaction grouting of earthen embankments. It shall consist of no less than the following:

1. Pneumatic or rotary-wash equipment with a drill size that is compatible with the size of the pump discharge nozzle. The equipment shall be in satisfactory operating condition and operated in such a manner as to prevent unnecessary damage to the pavement.
2. Equipment for accurate and instantaneous measurement of the volume of grout installed during each lift. This can include manual recording of pump stroke counts.
3. A positive action pump capable of forcing grout into the embankment. The pump shall be capable of producing a discharge pressure range of 50 to 400 psi at the end of the discharge pipe. The pumping system shall be equipped with a pressure gauge so that any instantaneous change in pressure can be detected by the inspector.
4. Equipment for accurately determining the slump of the grout.
5. Equipment for a continuous supply of grout. The flow of grout into each grouting location shall be continuous.

907-418.03.4--Drilling Holes. The hole pattern and depths shown on the plans shall be used unless conditions warrant changes. The Contractor may alter the hole pattern with the Geotechnical Engineer's approval. The holes shall be of a sized and shape that best provides a positive seal for the pumping nozzle.

907-418.03.5--Clean Up and Opening to Traffic. Deposits of mud and/or grout on the pavement or shoulders shall be removed and the surface cleaned prior to opening to traffic.

907-418.03.6--Permanently Sealing Holes. After grouting is complete and the grout has cured, the grout hole will be excavated to the bottom of the existing pavement back filled with asphalt as directed by the Engineer.

907-418.04--Method of Measurement. Compaction grouting, complete and accepted, will be measured by the cubic yard. The volume for grout will be based on the supplier's haul ticket of each load of concrete delivered and incorporated into the project.

907-418.05--Basis of Payment. Compaction grouting, as measured above, will be paid for at the contract price per cubic yard, which price shall include all mobilization/demobilization, labor, equipment, traffic control, materials, and incidentals necessary to complete the required work.

Cost for maintenance of traffic and individual traffic control devices as required by the plans shall be included in the unit price for compaction grouting and will not be measured for separate payment.

Payment will be made under:

907-418-A: Compaction Grouting

- per cubic yard

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-603-14

CODE: (SP)

DATE: 3/17/2003

SUBJECT: Jacked or Bored Pipe

PROJECT: STP-0015-01(054) / 103252 -- Adams County

Section 603, Culverts and Storm Drains, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable to jacked or bored pipe only:

907-603.01--Description. Bored or jacked pipe shall consist of furnishing and installing pipe at the locations shown on the plans by jacking or boring in accordance with these specifications.

907-603.02--Materials. Pipe and joint materials shall conform to the appropriate sections of the Standard Specification and these specifications.

907-603.03--Construction Requirements. In general, pipes 30 inches and greater in diameter shall be jacked, and pipes less than 30 inches in diameter shall be bored.

The work shall begin at the down stream end of pipe when possible. When the grade at the jacking or boring end is below ground surface, suitable pits or trenches shall be excavated for conducting operations and placing joints of pipe. Adequate sheeting and bracing shall be provided to prevent earth caving. Pipes with bell joints are not recommended for boring or jacking. When pipe with bell joints are used and if the outside diameter of pipe bell exceeds the outside diameter of pipe by more than one (1) inch, the pipe shall be either cased or pressure grouted for the full length of the pipe. The casing shall be an approved type and size, and shall be furnished and installed by the Contractor in accordance with these specifications. Pressure grouting shall be performed with approved materials placed by approved methods.

The method used shall be such as not to weaken or damage the embankment. The Contractor shall furnish, for approval by the Engineer, a plan showing the proposed procedure, including backstop or jacking frame arrangement, pipe guides, position of jacks and jacking head. Approval of this plan shall not relieve the Contractor from responsibility to obtain the desired result.

(a) **Jacking:** Heavy duty jacks suitable for forcing pipe through the embankment shall be provided. Even pressure shall be applied to all jacks and shall be transmitted to the pipe end through a jacking head. The jacking head shall be designed so that pressure is uniformly applied around the ring of the pipe. Backstop or jacking frame shall be adequate to resist pressure of the jacks under load. The pipe shall be set on guides properly fastened together to support the pipe in the proper direction at correct grade. Suitable cushioning material, such as plywood, shall be provided between sections of concrete pipe.

Material shall be excavated ahead of the pipe and shall be removed through the pipe. Excavation shall not extend more than two feet beyond the forward end of pipe. The character of embankment material may cause the distance to be reduced to prevent the embankment from being damaged. Excavated material shall be disposed of in accordance with Subsection 202.02.

The excavation shall conform as closely as possible to the contour and grade of the pipe. Voids between the excavation and the pipe should be kept to a minimum to eliminate settlement and damage to the embankment.

A steel cutting edge may be used around the forward end of pipe, constructed so that it will transmit pressures uniformly around the ring of the pipe.

Jacking shall continue without interruption, to prevent pipe from becoming firmly set in the embankment.

The pipe shall not vary horizontally or vertically by more than one inch in 10 feet from established line and grade. Any variation shall be regular and no abrupt changes in direction will be permitted. Any pipe damaged or misaligned in jacking operations shall be removed and replaced by the Contractor at no additional cost to the State.

(b) Boring: Boring shall be done mechanically, using a pilot hole approximately two inches in diameter. The pilot hole shall extend through the embankment and shall be checked for line and grade before boring begins. Variations from line and grade shall not exceed those specified for jacking. The pilot hole shall serve as centerline of the larger diameter hole to be bored.

Overcutting in excess of one inch shall be remedied by pressure grouting the entire length of the installation. Pipe shall be joined as specified in the Standard Specifications.

During the dry boring or jacking of the pipe under the railroad, a lubricant of bentonite slurry, or approved equal, will be permitted.

907-603.04--Method of Measurement. The length of jacked or bored pipe will be measured by the linear foot by multiplying the number of commercial lengths installed by the nominal length of the section; except, portions of commercial lengths extending more than four feet beyond the end of the conduit actually required will not be measured for payment.

907-603.05--Basic of Payment. Jacked or bored pipe, as measured above, will be paid for at the contract price per linear foot, which price shall be full compensation for all excavation, disposal of excavation, sheeting, bracing, falsework, casing, joint materials and grouting necessary to complete the work.

Payment will be made under:

907-603-J: Jacked or Bored Pipe (Size, Type, Class or Thickness) - per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-604-4

CODE: (SP)

DATE: 5/22/2001

SUBJECT: Precast Sectional Manholes

Section 604, Manholes, Inlets and Catch Basins of the 1990 Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-604.01--Description. After the first paragraph of Subsection 604.01 on page 604-1, add the following:

Precast (Sectional) Manholes shall consist of furnishing and assembling precast sections for manholes, together with necessary fittings, bases, and connections, all constructed in accordance with these specifications and in reasonably close conformity with the details, lines, grades and dimensions shown on the plans, or established.

907-604.02--Material Requirements. After the first sentence of the last paragraph of Subsection 604.02 on page 604-1, add the following:

Precast (sectional) manholes shall conform to the requirements of ASTM Designation: C 478.

907-604.03--Construction Details. Delete Subsection 604.03.1 on page 604-1 and substitute the following:

907-604.03.1--Precast Manholes. As trenches are opened for the pipe conduit, truly leveled bases shall be prepared at each manhole site. The bases may be cast-in-place or may consist of precast base units. In either case, the seated base shall be truly horizontal. Inverts shall be smooth and accurately shaped to a semi-circular bottom conforming to the inside of the adjacent conduit, and extend upward at least half of the diameter of the conduit, or as shown on the plans. Joints shall be sealed in accordance with Section 603.

Steps in the manhole may be of cast-iron, aluminum, wrought iron, plastic or other material approved by the Engineer. All steps shall be built into the walls of precast sections in straight alignment to form a continuous ladder with a maximum distance of 16 inches between steps.

Each precast section shall have not more than two holes for handling. The holes shall be plugged with mortar after installation.

Concrete covers may be precast, or cast at the site. The covers shall be cast accurately to the dimensions and design indicated on the plans.

907-604.04--Method of Measurement. Delete the fourth paragraph of Subsection 604.04 and substitute the following:

Precast manholes will be measured per linear foot of depth from the flowline of the manhole to the top of the cover, or as indicated on the plans.

Excavation will not be measured for separate payment. The cost of excavation shall be included in the cost of precast manholes or other items bid.

Metallic manhole covers and frames will be measured for payment under pay item 604-A, Casings, per pound.

907-604.05--Basis of Payment. After the first paragraph of Subsection 604.05, add the following:

Precast Manholes, measured as prescribed in Subsection 907-604.04, will be paid for at the contract bid price per linear foot of depth, which price shall be full compensation for all necessary excavation, sheeting, cribbing, shoring, bracing, well-pointing, furnishing and assembling all elements of the manhole (including concrete bases & covers) except metallic cover and frame, for all other items of work necessary and incident to the complete construction and for all equipment, labor, tools and incidentals necessary to complete the work.

After the last pay item listed on page 604-3, add the following:

907-604-C: Precast Manhole (___" Diameter) - per linear foot

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-607-5

CODE: (SP)

DATE: 02/27/2003

SUBJECT: Type IV PVC Coated Fence

PROJECT: STP-0015-01(054) / 103252 -- Adams County

Section 607, Fences and Cattle Guards, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-607.02--Materials.

907-607.02.2--Chain Link Fence. After the first sentence of Subsection 607.02.2 on page 607-1, add the following:

Materials for Type IV Chain Link Fence shall meet the requirements of Subsection 712.04 with the exception that and all components associated with the chain link fence (fabric, tie wire, tension wire, barbed wire, fittings, etc.) shall be Class B PVC coated in a dark green color to match the color of the fabric.

907-607.02.3--Posts and Lumber. After the last paragraph of Subsection 607.02.3 on page 607-1, add the following:

Posts for Type IV Chain Link Fence shall meet the requirements of Subsection 712.05 and shall be Class B PVC coated in a dark green color to match the color of the fabric.

907-607.02.4--Gates. After the first sentence of Subsection 607.02.4 on page 607-1, add the following:

Gates for Type IV Chain Link Fence shall meet the requirements of Subsection 712.12 and all components associated with the gate shall be Class B PVC coated in a dark green color to match the color of the fabric.

907-607.05--Basis of Payment. Delete the pay item nos. descriptions and units of measurement listed at the end of Subsection 607.05 on page 607-6, and substitute the following:

- 907-607-B: 96" Type IV Chain Link Fence (Class II) (Dark Green Color) - per linear foot
- 907-607-G: Gate (Type IV Chain Link)(12' Single)(Dark Green Color) - per each
- 907-607-G: Gate (Type IV Chain Link)(24' Single)(Dark Green Color) - per each
- 907-607-P1: Line Posts (11'-0" x 2" Galvanized Steel)
(Dark Green Color) - per each
- 907-607-P2: Brace Posts (11'-6" x 2 1/2" Galvanized Steel)
(Dark Green Color) - per each

| | |
|---|------------|
| 907-607-P3: Gate Posts (11'-6" x 2 1/2" Galvanized Steel) (Dark Green Color) | - per each |
| 907-607-P3: Gate Posts (11'-6" x 3 1/2" Galvanized Steel) (Dark Green Color) | - per each |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-619-18

CODE: (IS)

DATE: 07/24/2002

SUBJECT: Temporary Pavement Markings

Section 619, Traffic Control for Construction Zones, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-619.03--Construction Requirements.

907-619.03.2--Temporary Stripe. Delete in toto Subsection 619.03.2 on page 619-4 and substitute the following:

Temporary stripes are pavement markings, temporary in nature, such as those used to direct traffic from its customary path or those to be removed from the pavement course under use for further temporary traffic control or those to be covered by the next pavement course and/or those to be replaced by permanent stripes. Temporary stripes shall be paint or preformed tape as designated on the plans or when not designated, the use of paint or tape will be at the Contractor's option. Temporary stripes on surface treatments shall be paint.

All temporary stripe shall be placed in accordance with the plans and the requirements set out in Section 625, except that alignment of temporary stripe placed on underlying courses shall have a tolerance of four inches in fifty (50) feet from true alignment for skip stripes and edge lines and one inch in fifty (50) feet from true alignment for no-passing stripes and lane lines. When preformed tape is used on the final pavement course for temporary traffic markings, it shall be removed at no additional cost to the State.

Temporary paint stripe requiring removal shall be removed by carefully controlled blast cleaning, approved grinding or other approved methods in such a manner that the surface to which the stripe was applied will not be unnecessarily marred or damaged. Preformed tape is to be removed in accordance with the manufacturer's recommendations.

Temporary paint stripe which has been placed on the final pavement course may be left in place and covered with permanent stripe of the same color provided the temporary stripe has been satisfactorily placed in the proper location. Under this condition, any remaining temporary paint stripe not covered by the permanent stripe shall be removed at no additional cost to the State.

Painted traffic stripe which has been removed from the final asphalt pavement surface shall be sealed with an approved sealant. The Engineer may waive the sealant requirement when the area to be sealed is insignificant. This sealing operation shall be performed at no additional costs to the State.

All temporary pavement markings placed and measured for payment under this section shall include any required removal. Removal of all temporary stripe will not be measured for separate payment.

Existing pavement markings conflicting with temporary markings shall be removed. Removal of such materials (paint, tape, marker, etc.) will be measured and payment made under Section 202. When measuring removal of pavement markings for payment, the skips will not be included in the measurement.

907-619.03.3--Short-term Stripe. Delete in toto Subsection 619.03.3 on pages 619-4 and 619-5.

907-619.04--Method of Measurement. Delete the second full paragraph on page 619-7 and substitute the following:

Temporary stripe, completed and removed in accordance with the requirements of this Section, will be measured as provided for painted traffic markings in 625.04, except as follows: Detail traffic stripe will be measured by the linear foot from end-to-end of individual stripes. Measurement will be made along the surface of each stripe and will exclude nominal skip intervals where specified. Stripes more than four inches in width will be converted to equivalent lengths of four-inch widths. Legend, which is to include railroad markings, pedestrian crosswalks and stop lines, will be measured by the square foot or linear foot. Pay areas of individual letters and symbols will usually be shown on the plans and measured by the square foot. Transverse railroad bands, pedestrian crosswalks and stop lines will generally be measured by the linear foot, in which case, stripes more than four inches in width will be converted to equivalent lengths of four-inch widths.

907-619.05--Basis of Payment. Add the "907" prefix to pay item numbers 619-A1, 619-A2, 619-A3, 619-A4, 619-A5 and 619-A6 in Subsection 619.05 on page numbers 619-7 and 619-8.

Delete in toto the pay item numbers, descriptions and units for pay item numbers 619-B1, 619-B2, 619-B3, 619-B4, 619-B5 and 619-B6 from Subsection 619.05 on page 619-8.

After pay item number 619-C5 on page 619-9 add the following:

- 907-619-C6: Red-Clear Reflective High Performance Raised Marker - per each
- 907-619-C7: Two-Way Yellow Reflective High Performance Raised Marker - per each
- 907-619-C8: One-Way Clear Reflective High Performance Raised Marker - per each
- 907-619-C9: One-Way Yellow Reflective High Performance Raised Marker - per each
- 907-619-C 10: Yellow Clear Reflective High Performance Raised Marker - per each

* Delete the last paragraph of Subsection 619.05 on page 619-10 and substitute the following: The description for temporary traffic stripe will be shown as "paint" or "tape". In the case of "tape" the type will also be designated. When the description is not designated, the use of "paint" or "tape" will be at the Contractor's option.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. **907-619-22**

CODE: (IS)

| DATE: **06/18/2003**

SUBJECT: Traffic Control for Construction Zones

Section 619, Traffic Control for Construction Zones, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-619.02.4--Construction Signs. Delete the last sentence of the second paragraph of Subsection 619.02.4 on page 619-1 and substitute:

Standards for height of construction signs shall be those shown for roadside signs in Chapter 6F of the Manual of Uniform Traffic Control Devices (MUTCD). Signs mounted on portable supports or barricades may be at lower heights but the bottom of the sign shall be no less than one foot above the traveled way.

Delete the third paragraph of Subsection 619.02.4 on page 619-1 and substitute the following:

Unless specified otherwise, fluorescent orange reflective sheeting, meeting the requirements of Subsection 721.06, shall be used on all construction signs regardless of whether used during daytime or nighttime hours.

Delete the fourth paragraph of Subsection 619.02.4 on page 619-1 and substitute the following:

Unless otherwise specified on the plans, the material on which the reflective sheeting is to be applied shall be 16 gauge (minimum) steel, 0.080" (minimum) aluminum, or 5/8" (minimum) high density overlaid plywood. Ungalvanized steel, exterior grade plywood and lumber shall have a minimum of two coats of paint on front, back, and edges. High density overlaid plywood shall have the edges painted. The material to which reflective sheeting is to be applied shall be prepared in accordance with the recommendations of the sheeting manufacturer.

| Delete the third sentence of the **sixth** paragraph of Subsection 619.02.4 on page 619-2 and substitute the following:

If tested by the Central Laboratory, the reflective sheeting shall have at least 50 percent of the reflectivity specified for new sheeting.

| **907-619.02.5--Advance Warning Flashing Arrow Panels.** Delete in toto Subsection 619.02.5 on page 619-2 and substitute:

907-619.02.5--Advance Warning Flashing Arrow Panels. Flashing arrow panels shall meet the requirements of Section 6F.53 of the MUTCD.

| **907-619.02.6--Concrete Median Barrier and Delineators.** Delete in toto Subsection 619.02.6 on pages 619-2 & 619-3 and substitute:

907-619.02.6--Concrete Median Barrier and Delineators. Precast concrete median barrier shall meet the requirements of the plans, contract documents, and Section 615 except the surface may be a Class 1 ordinary surface finish unless designated otherwise. When precast concrete median barriers are no longer needed at one location, as determined by the Engineer, the barriers shall be removed and reset at other designated locations. When barriers have to be stored until needed at another location, payment for removing and resetting will not be made until they are reset at their designated location. The Contractor shall furnish the storage area.

The Engineer may allow the installation of used barriers for temporary traffic control upon an inspection and determination that the barrier units are structurally adequate for their intended purpose. Barriers with small chips or fractures not affecting their integrity may be accepted.

Precast concrete barriers used on this project which were purchased or manufactured after October 1, 2002 must meet the requirements of NCHRP Report 350. Precast median barriers purchased or manufactured prior to October 1, 2002 may be used until they complete their normal service life.

Certification of precast concrete barriers shall be as required in the Notice to Bidders titled "Certification of Traffic Control Devices".

Delineators shall be listed on the Department's "Approved Sources of Materials" and meet the requirements of the plans and Section 6F.68 of the MUTCD.

907-619.02.7--Channelization Devices, Barricades, and Warning Lights. Delete in toto Subsection 619.02.7 on page 619-3 and substitute:

907-619.02.7--Channelization Devices, Barricades, and Warning Lights. Channelization devices, vertical panels, tubular markers, cones, drums, barricades and temporary raised islands shall meet the requirements of the plans and Sections 6F.55 through 6F.64 of the MUTCD. Drums shall be constructed of lightweight, deformable material capable of retaining reflective sheeting. Reflective sheeting for drums shall be Type III meeting the requirements of 721.06. Warning lights shall meet the requirements of Section 6F.72 of the MUTCD.

907-619.02.8--Traffic Signals and Flashers. Delete in toto Subsection 619.02.8 on page 619-3 and substitute:

907-619.02.8--Traffic Signals and Flashers. Traffic signals and flashers shall meet the requirements of the plans and Sections 6F.71 & 6F.74 of the MUTCD.

907-619.02.9--Impact Attenuators. Delete in toto Subsection 619.02.9 on page 619-3 and substitute:

907-619.02.9--Impact Attenuators. Impact attenuators must be listed on the Department's "Approved Sources of Materials".

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-631-8

CODE: (SP)

DATE: 12/12/2000

SUBJECT: Flowable Fill

PROJECT:

Section 907-631, Flowable Fill, is added to the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-631 - FLOWABLE FILL

907-631.01--Description. This work shall consist of furnishing and placing a flowable fill material. Uses include, but are not limited to, placement under existing bridges, around or within box culverts or pipe culverts, or at other locations shown on the plans.

907-631.02--Materials. All materials shall meet the following requirements:

| | |
|------------------------------------|-----------------------|
| Fine Aggregate..... | * |
| Portland Cement | 701.01 and 701.02 |
| Fly Ash..... | 714.05 |
| Air Entraining Admixtures ** | 713.02 |
| Water..... | 714.01.0 and 714.01.2 |

* Fine Aggregate gradation shall be fine enough to stay in suspension in the mortar to the extent required for proper flow and shall conform to the following grading:

| <u>Sieve Size</u> | <u>% Passing</u> |
|-------------------|------------------|
| 1/2 inch | 100 |
| No. 200 | < 1 |

** High air generators shall be used. These generators increase the fill's air content to 15 - 35% while reducing settlement and bleed water. **Only air generators manufactured by Master Builders Technologies (Rheocell Rheofill) and W.R. Grace Company (Darafill), or an approved equal, will be allowed to be used to obtain the required air content.**

907-631.02.1--Mix Design. Flowable fill is a mixture of Portland cement, fly ash, fine aggregate, air entraining admixture and/or high air generators and water. Flowable fill contains a low cementitious content for reduced strength development.

The consistency of the fresh mixture shall be that of a thin slurry. It shall be tested by filling an open-ended three-inch diameter by six-inches high cylinder to the top. With the mixture

in the cylinder, immediately pull straight up. The correct consistency of the mixture will produce an approximate eight-inch diameter circular-type spread with no segregation. Adjustments of the proportions of fine aggregate and/or water may be made to achieve proper solid suspension and optimum flowability; however, the theoretical yield shall be maintained at one cubic yard for the given batch weights.

The contractor shall submit mix designs for flowable fill to the Engineer to be verified by the Materials Division. The following table is a guide for proportioning flowable fill.

| Material | Amount |
|--|-----------------------------|
| Cement Type I | 75-150 lbs/yd ³ |
| Fly Ash | 150-600 lbs/yd ³ |
| Fine Aggregate | * |
| Water | ** |
| Air [†] | 15-35% |
| 28 Day Compressive Strength [†] | Min. 125 psi |
| Unit Weight (Wet) [†] | 90-110 lbs/ft ³ |

* Fine Aggregate proportioned to yield one cubic yard as verified by unit weight.

** Mix designs shall produce a consistency that will result in a flowable self-leveling product at time of placement.

† The requirements for percent air, compressive strength and unit weight are for Laboratory designs only and are not intended for jobsite acceptance requirements. An accepted air-generating admixture shall be used when no settlement is required.

907-631.02.2--Acceptance of Mix. The acceptance of the mix design shall be based on primary properties that include compressive strength, air content, hardening time, flowability, yield and settlement. This test data shall be submitted with the mix design. Continued use and acceptance, which will be based on the performance of the mix placed, will be at the discretion of the Engineer.

907-631.02.3--Manufacturing. Flowable fill will be manufactured at plants in accordance with Section 804.

907-631.03--Construction Requirements. Prior to placing flowable fill, each end of the structure shall be plugged leaving an opening at each end no larger than necessary to

accommodate the filling equipment. Flowable fill shall be discharged from the mixer by any reasonable means into the area to be filled. Unless otherwise approved by the Engineer, filling will begin on the downstream end of the structure and continue until no further material will enter the structure. The flowable fill will then be continued from the upstream end of the structure.

907-631.04--Method of Measurement. The volume of flowable fill, complete and accepted, will be measured by the cubic yard which will be determined by calculating yield. The yield will be calculated by dividing the actual batch weights of each load by the unit weight of the mix, which will be determined by testing the first load placed on each production day.

907-631.05--Basis of Payment. The accepted quantities of flowable fill will be paid for at the contract unit price per cubic yard which shall be full compensation for furnishing all labor, equipment, tools and materials to complete the work.

Payment will be made under:

907-631-A: Flowable Fill

- per cubic yard

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-699-3

CODE: (IS)

| DATE: 07/03/2003

SUBJECT: Construction Layout and Staking

Section 699, Construction Stakes, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Section 699 on page nos. 699-1 and 699-2 and substitute the following:

SECTION 907-699--CONSTRUCTION STAKES

907-699.01--Description. This work consists of performing all calculations and other work necessary to establish and/or verify all horizontal and vertical control data; and furnishing, placing and maintaining roadway construction stakes or bridge construction stakes, or both, necessary for the proper prosecution of all features and items of the work under contract. This shall include, but not be limited to, grades and drainage structure locations, lengths, elevations and skews. When the contract includes a pay item for roadway construction stakes as provided herein, any references in other sections of the Standard Specifications to establishment of control points or construction staking "by the Department" shall be construed to mean "by the Contractor".

907-699.02--Materials. The Contractor shall furnish all personnel, materials, equipment and devices necessary for determining, establishing, setting, checking and maintaining points, lines, grades and layout of the work. All surveying equipment shall be properly adjusted and suited for performing the work required. Traffic control necessary for the proper execution of the work shall be furnished by the Contractor without separate measurement for payment. Stakes shall be of sufficient length, thickness and quality to serve the purpose for which they are being used.

907-699.03--Construction Requirements. The Department will establish, one time only, reference points and bench marks at distances not to exceed 1000 feet for roadway work. For bridge work, the Engineer's field control will consist of a stationed baseline reference point near each end of the bridge(s) and one accessible bench mark near each bridge site. For the purpose of determining responsibility for construction stakes, lines and grades, a box bridge will not be considered as a bridge. The Contractor shall verify the accuracy of the control points before proceeding with the layout for construction.

When errors are discovered and control points do not agree with the plans, the Contractor shall promptly notify the Engineer in writing, and explain the problem in detail. The Engineer will advise the Contractor within five (5) working days of any corrective actions which may be deemed necessary.

The Contractor will be responsible for verifying and modifying, as necessary to best fit existing field conditions, lengths, locations, elevations and skew angles of all drainage structures shown on the construction plans. All junction box and inlet locations and heights shall also be verified and modified as necessary to fit existing field conditions. Modifications to the plans shall not be made without the consent of the Project Engineer. The Contractor will not be responsible for determining the size of drainage structures, but should immediately report any suspected error to the Engineer. Heights of fill over drainage structures shall be checked to verify class of pipe, bedding and the appropriate standard and/or modified standard drawing(s) required in the construction with any differences from the plans being reported to the Engineer.

The Contractor shall perform work necessary to verify alignment and plan grades on all roadway intersections and tie-ins. Any discrepancies in grades, alignment, location and or dimension detected by the Contractor shall immediately be brought to the attention of the Project Engineer.

The Contractor shall employ sufficient qualified personnel experienced in highway surveying and layout to complete the work accurately. The Contractor shall also determine and provide all additional grade controls and staking operations necessary to secure a correct layout and construction of the work. All minor variations in layout and grades required to meet field conditions shall be resolved with the Engineer and shall not be considered justification for adjusting contract price or time.

Examples of minor variations in layout and grades are:

- (a) Adjustment of drainage or other structure length, alignment, and flow line elevation.
- (b) The adjustment of grades and alignment at roadway intersections, cross-overs, railroad crossings, interchanges, existing bridges and roadways.
- (c) Adjustment of curve data.

The Contractor will be responsible for **calculating and laying out** all **additional** lines, grades, elevations and dimensions **necessary to construct the work required in the plans**. All grades and other layout data computed by the Contractor shall be recorded and a copy of this data shall be furnished, with sufficient time for checking, to the Engineer before field work is started. The originals of all data shall be furnished to the Engineer on or before final inspection for the Department's permanent file. The Contractor shall also furnish personnel to assist the Engineer in taking stringline or other notes to determine whether specified tolerances are met. Any inspection or checking of the Contractor's layout by the Engineer and the approval of all or any part of it will not relieve the Contractor of the responsibility to secure proper dimensions, grades, and elevations of the several parts of the work.

Prior to beginning construction on any structure which is referenced to an existing structure or topographical feature, the Contractor shall check the pertinent location and grades of the existing structures or topographical features to determine whether the location and grade shown on the plans are correct.

The Contractor shall stake centerline control at each station, BOP, EOP, PC, PT, SC, CS, TS, ST, and equations just before field cross sectioning by the Department for both original and final cross sections.

The Contractor shall furnish "as built" finish centerline elevations to the Project Engineer prior to final inspection of the project.

The Contractor shall set stakes and/or flags on the right-of-way line at each station and right-of-way break or as directed by the Engineer before clearing operations are started on any section of roadway.

On grading projects, the Contractor shall set slope stakes at each station and at the beginning and end of spirals and curves. Closer intervals will be required for sharp changes in grades or alignment, widening and certain other geometric details.

The Contractor shall set subgrade blue tops on centerline, break points and at the left and right subgrade shoulder lines at intervals of not more than 100 feet on tangents and intervals of not more than 50 feet in curves. Closer intervals will be required for sharp changes in grades or alignment, widening, or super elevation.

On paving contracts, the Contractor shall set subgrade, base and paving blue tops. The base and pavement blue tops shall be set on intervals in accordance with the appropriate applicable requirements of Sections 321, 403 and 501.

The Contractor shall exercise care in the preservation of stakes and bench marks and shall reset them when they are damaged, lost, displaced or removed. The Contractor shall use competent personnel and suitable equipment for the layout work required and shall provide that it be performed under the supervision of, or directed by, a Registered Professional Engineer or Registered Land Surveyor who is duly registered and entitled to practice as a Professional Engineer or Professional Land Surveyor in the State of Mississippi. The duties performed by said Registrant shall conform to the definitions under the "practice of engineering" and practice of "land surveying" in Mississippi Law. The Contractor shall not engage the services of any person in the employ of the Department for the performance of any of the work covered by this Section or any person who has been employed by the Department within the past six months except those who have legitimately retired from service with the Department during this period.

All cross sections, measurements, and tickets required for determining pay quantities will be the responsibility of the Department.

The Department reserves the right to check for accuracy any or all of the Contractor's layout work and shall be assisted by the Contractor's personnel in such checking. When errors or discrepancies are found, the Contractor will take measures necessary to correct, at no expense to the State, any construction that has been performed using the improper layout. Any inspection, checking and approval thereof by the Engineer of work for which the Contractor is responsible will not relieve the Contractor of responsibility to secure correct dimensions, grades, elevations, alignments and locations of the work for satisfactory completion of the project and as a condition for final acceptance by the Department.

907-699.04--Method of Measurement. Construction stakes will be measured as a lump sum quantity. When Pay Item No. 907-699-A, Roadway Construction Stakes, is provided in the contract, measurement shall include the staking of all bridges, including detour bridges, which are a part of the contract.

907-699.04.1--Roadway Construction Stakes. Measurement for payment will be in accordance with the following schedule:

- (a) When one percent of the original contract amount is earned from all direct pay items, 10 percent of the amount bid for Roadway Construction Stakes will be paid.
- (b) When five percent of the original contract amount is earned from all direct pay items, 25 percent of the amount bid for Roadway Construction Stakes will be paid.
- (c) When 20 percent of the original contract amount is earned from all direct pay items, 50 percent of the amount bid for Roadway Construction Stakes will be paid.
- (d) After the Contractor has earned 50 percent of the original value of all direct pay items, the amount paid will be based on the contract percent complete.

907-699.04.2--Bridge Construction Stakes. Measurement for payment will be in accordance with the following schedule:

- (a) When one percent of the original contract value of all bridge items is earned, 10 percent of the amount bid for Bridge Construction Stakes will be paid.
- (b) When five percent of the original contract value of all bridge items is earned, 25 percent of the amount bid for Bridge Construction Stakes will be paid.
- (c) When 20 percent of the original contract value of all bridge items is earned, 50 percent of the amount bid for Bridge Construction Stakes will be paid.
- (d) After the Contractor has earned 50 percent of original contract value of all bridge items, the amount paid will be based on the percentage of work completed on all bridge items.

907-699.05--Basis of Payment. Construction stakes, measured as prescribed in Subsection 907-699.04, will be paid for at the contract lump sum price, which shall be full compensation for completing the work.

Payment will be made under:

- 907-699-A: Roadway Construction Stakes - lump sum
- 907-699-B: Bridge Construction Stakes - lump sum

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-700-4

CODE: (IS)

DATE: 8/17/95

SUBJECT: Buy America

Division 700, Materials and Tests, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-700.01--General. Delete the fourth paragraph of Subdivision 700.01 on page no. 700-1 and substitute the following:

Domestic steel, iron and wire products including prestressing cable and strand shall be furnished for incorporation in the work. All manufacturing processes, including application of a coating, for these materials must occur domestically. However, pig iron and processed, pelletized, and reduced iron ore manufactured outside of the United States may be used in the domestic manufacturing process for steel and/or iron products. For the purpose of this specification, the activity of coating is considered a manufacturing process. The material being applied as a coating is not covered under Buy America. Coating includes all processes which protect or enhance the value of the material to which the coating is applied, such as epoxy coatings, galvanizing, painting, etc.

Add the following paragraph at the end of Subdivision 700.01 on page no. 700-1.

In the case of coatings for the above referenced domestic steel, iron and wire products, it shall be the Contractor's responsibility to forward to the State Materials Engineer a certified statement from those having applied a coating to these materials that the application of the coating occurred domestically.

907-700.05--Material Certifications and Certified Test Reports.

907-700.05.01-- Certifications. Delete paragraph (e) of Subdivision 700.05.1 on page no. 700-6 and substitute the following:

(e) Certification for all iron, steel and steel wire products must also include a certified statement by the manufacturer that all of the manufacturing processes, excluding those for pig iron and processed, pelletized, and reduced iron ore used in the manufacture of said steel and/or iron products, have occurred domestically.

907-700.05.2--Certified Test Reports. Delete paragraph (d) of Subdivision 700.05.2 on page no. 700-6 and substitute the following:

(d) Test reports for all iron, steel and steel wire products must also include a certified statement by the manufacturer that all of the manufacturing processes, excluding those for pig iron and processed, pelletized, and reduced iron ore used in the manufacture of said steel and/or iron products, have occurred domestically.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-707-3

CODE: (SP)

DATE: 02/19/2002

SUBJECT: Rubber Type Gaskets

Section 707, Joint Materials, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

In the first sentence of Subsection 707.04 on Page 707-4, delete the reference to AASHTO Designation: M 198 and substitute AASHTO Designation: M 315.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-710-4

CODE: (IS)

DATE: 5/21/93

SUBJECT: Inorganic Zinc Rich Paint System

Section 710, Paint, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 710.03 on pages 710-8, 710-9 and 710-10 and substitute:

907-710.03--Inorganic Zinc Rich System.

907-710.03.1--Inorganic Zinc Primer. The shop coat or prime coat shall be a self-curing multiple component inorganic zinc rich primer conforming to the requirements of AASHTO M 300, Type IA or Type II. The inorganic zinc rich primer, as applied, shall meet State and Federal regulations on Volatile Organic Compounds (VOC).

The inorganic zinc primer shall be formulated so as to produce a distinct contrast in color with the blast cleaned metal surface and the intermediate field coat to be applied thereon.

The inorganic zinc primer must be one from the Department's "List of Approved Sources of Materials."

The paint manufacturer's technical representative who is certified by the National Association of Corrosion Engineers (NACE) shall be present at the beginning of coating operations as needed to provide technical expertise in the application of the coating. This technical expertise shall be provided without additional cost to the Department. The fabricator is responsible for arranging for the presence of the manufacturer's technical representative.

907-710.03.2--Epoxy Mastic Field Touch-Up Paint. Inorganic zinc primer coat which has been damaged during storage, handling, transporting and/or erection shall be repaired using epoxy mastic touch-up paint prior to finish coating. Epoxy mastic touch-up paint shall be manufactured or recommended by the supplier of the inorganic zinc primer, shall be as listed on the Department's "List of Approved Sources of Materials" and, as applied, shall be VOC compliant with State and Federal Regulations.

The epoxy mastic touch-up paint shall conform to the same formulation as originally approved by the Department. Determination of conformance to the originally approved formulation will be based on physical tests, x-ray diffraction pattern and infrared spectrum. The results of these tests shall be in agreement with the results obtained on the originally approved formulation.

907-710.03.3--Acrylic Latex Intermediate and Top Coats (Field Coats). The acrylic latex field coats shall be manufactured by the supplier of the inorganic zinc primer coat, shall be as listed on the Department's "List of Approved Sources of Materials" and, as applied, shall be VOC compliant with State and Federal regulations. The acrylic latex paint shall conform to the same formulation as originally approved by the Department.

Determination of conformance to the originally approved formulation will be based on physical tests, X-ray diffraction pattern of the extracted pigment and infrared spectrum of the vehicle component. The X-ray diffraction pattern of the extracted pigment shall match that of

the originally approved paint. The infrared spectrum (2.5 to 15 microns) of the vehicle component shall agree with the infrared spectrum of the vehicle component of the originally approved paints in both peak position and relative intensity of the peaks.

The color of the acrylic latex intermediate coat shall be white in color. The color of the acrylic latex top coat shall be light gray in color.

At the Engineer's request, the paint manufacturer's technical representative who is certified by the National Association of Corrosion Engineers (NACE) shall be present at the job site at the beginning of each separate coating operation as needed to provide technical expertise in the application of the field coats. This technical expertise shall be provided without additional cost to the Department. The Contractor shall be responsible for arranging for the presence of the manufacturer's technical representative.

907-710.03.4--Mixing of Paint. All paint shall be mixed in accordance with the paint manufacturer's printed instructions.

907-710.03.5--Packaging and Marking. Multiple component paints shall be furnished in premeasured packages so as to form one unit of mixed paint when mixed with the vehicle in its container.

The containers for all paints shall be coated as necessary to prevent attack by the paint. Each container shall bear a label with the following information shown thereon: name and address of manufacturer, trade mark or trade name, kind of paint, date of manufacture and lot number, mixing instructions and equipment clean up instructions. The VOC content shall be stated either on the label, product data sheet, or Material Safety Data Sheet.

907-710.03.6--Acceptance Procedure. Prior to use, the Contractor must furnish the Engineer a certificate from the manufacturer, covering each lot of paint in the shipment, attesting that the paint in the shipment conforms to the same formula as that originally approved by the Department.

Final acceptance of the paint will be based on results of tests performed by the Central Laboratory on samples obtained by the Department's representative prior to or after delivery. The use of any lot of paint prior to its final acceptance shall be prohibited.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. **907-714-6**

CODE: (IS)

DATE: **10/31/97**

SUBJECT: **Miscellaneous Materials**

Section 714, Miscellaneous Materials, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After the fifth line of Subsection 714.05.2 on page 714-4, add the following:

The available alkalis, as Na₂O, not to exceed 1.5 percent.

Delete in toto Subsection 714.06 on page no. 714-4 and substitute:

907-714.06--Ground Granulated Blast Furnace Slag (GGBFS).

907-714.06.1--General. GGBFS shall be obtained from an approved source. The acceptance of GGBFS shall be based on certified test reports, certification of shipment from the supplier and tests performed on samples obtained after delivery in accordance with the Department's Standard Operating Procedures.

The Contractor shall provide suitable means for storing and protecting the GGBFS against dampness and contamination. Separate storage silos, bins or containers shall be provided for GGBFS. GGBFS which has become partially set, caked or contains lumps shall not be used.

The Engineer shall be notified in writing of the nature, amount and identity of any processing or other additions made to the GGBFS during production.

GGBFS from different mills shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer; except that this requirement will not be applicable to cement treatment of design soils, subbases or bases.

In addition to these requirements, GGBFS shall meet the following specific requirements.

907-714.06.2--Specific Requirements. GGBFS shall meet the requirements of AASHTO Designation: M 302, Grade 120. GGBFS shall contain no chlorides.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-714-10

CODE: (IS)

DATE: 12/11/2003

SUBJECT: Geotextiles

Section 714, Miscellaneous Materials, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 714.13 beginning on page 714-15 and substitute the following:

907-714.13--Geotextiles.

907-714.13.1--General. Unless specified otherwise, the geotextile may be woven or non-woven. The fibers used in the manufacture of the geotextiles and the threads used in joining geotextiles by sewing, shall consist of long-chain synthetic polymers, composed of at least 95% by weight polyolefins, polyesters, or polyamides. They shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including selvages. The geotextile shall be mildew resistant and inert to biological degradation and naturally encountered chemicals, alkalines and acids. Geotextile which is not protected from sunlight after installation shall contain stabilizers and/or inhibitors to make it resistant to deterioration from direct sunlight, ultraviolet rays, and heat.

The edges of the geotextile shall be selvaged or finished in such a manner to prevent the outer yarn of filaments from raveling. The geotextile shall be free of defects or flaws, which affect the required physical properties.

Geotextile for silt fence shall be manufactured in widths of not less than three feet, and geotextile for other applications shall be manufactured in widths of not less than six feet. Sheets of geotextile may be sewn or bonded together at the factory or other approved locations, but deviation from the physical requirements will not be permitted.

Acceptance testing, except geotextile for silt fence, will be conducted with geotextile samples from each lot shipped to the project, as per Subsection 907-714.13.10.

907-714.13.2--Geotextile for Silt Fence. The geotextile shall conform to the physical requirements of Type I or II as shown in Table I. Unless a specific type is specified in the plans or contract documents, the Contractor may select Type I or II.

907-714.13.2.1--Woven Wire Backing. Except as provided herein, silt fence shall be reinforced with a woven wire backing. The wire backing shall be at least 32 inches high and have no less than six horizontal wires. Vertical wires shall be spaced no more than 12 inches apart. The top and bottom wire shall be 10 gage or larger. All other wire shall be no smaller than 12½ gage.

907-714.13.2.2--Posts. Wood or steel posts may be used. Wood posts shall have a minimum diameter of three inches and length of five feet and shall be straight enough to provide a fence without noticeable misalignment. Steel tee posts shall be five feet long, approximately 1 3/8 inches wide, 1 3/8 inches deep, and 1/8 inch thick with a nominal weight of 1.33 pounds per foot prior to fabrication. The posts shall have projections, notches or holes for fastening the wire backing or [geotextile](#) to the posts.

907-714.13.2.3--Staples. Staples shall be made of nine gage wire with a minimum length of one inch after bending.

907-714.13.3--Geotextile for Subsurface Drainage. Unless otherwise specified, the [geotextile](#) shall conform to the physical requirements of Type III as shown in Table I.

907-714.13.3.1--Geotextile for Edge Drains. The [geotextile](#) shall conform to the physical requirements of Type V as shown in Table I, except the AOS for the woven [geotextile](#) shall have a range of 0.15 mm to 0.43 mm.

907-714.13.4--Geotextile Underseal. The [geotextile](#) shall be non-woven polyester or polypropylene, which is satisfactory for use with asphalt cements. Unless otherwise specified, the [geotextile](#) shall conform to the physical requirements of Type IV in Table I.

907-714.13.5--Geotextile for Use Under Riprap. Unless otherwise specified, the [geotextile](#) shall conform to the physical requirements of Type V in Table I. The requirements for grab tensile, puncture, and trapezoidal tear strengths may be reduced 50 percent when the [geotextile](#) is cushioned from rock placement by a 6-inch minimum layer of sand.

907-714.13.6--Geotextile Stabilization. The [geotextile](#) shall meet the physical requirements as shown in Table I for the Type specified in the plans or contract documents.

907-714.13.7--Securing Pins. Steel pins used for anchoring the [geotextile](#) shall be three-sixteenth inch (3/16") in diameter, minimum length of 15 inches, pointed at one end and fabricated with a head for retaining a steel washer. A minimum one and one-half inch (1½") washer shall be installed on each pin.

907-714.13.8--Identification. Each roll of [geotextile](#) or container shall be visibly labeled with the name of the manufacturer, type of [geotextile](#) or trade name, lot number, and quantity of material.

907-714.13.9--Shipment and Storage. During shipment and storage, the [geotextile](#) shall be protected from direct sunlight, ultraviolet rays, temperatures greater than 140°F, mud, dirt, dust, and debris. The [geotextile](#) shall be wrapped and maintained in a heavy-duty protective covering, including ends of roll.

907-714.13.10—Certification, Acceptance Sampling and Testing. The Contractor shall furnish to the Engineer three copies of the manufacturer's certification that each lot in a shipment complies with the requirements of the contract. [Certification of geotextile for silt fence shall](#)

include a material conformance statement, as per Subsection 700.05.1, that the geotextile meets or exceeds the minimum average roll values specified in Table 1. All fabric, steel pins, washers, fence posts, woven wire and wire staples are subject to approval by the Engineer upon delivery to the work site.

Acceptance testing shall be completed prior to incorporating in the work. Acceptance of geotextile to be used in the work, except geotextile for silt fence, will be based on the results of tests performed by the Department on verification samples submitted from the project. The Engineer will select one roll at random, from each lot in a shipment, for sampling. A sample extending full width of the randomly selected roll and containing at least five square yards of geotextile will be obtained and submitted by the Engineer. The sample shall be provided at no additional cost to the State.

**TABLE I
GEOTEXTILES**

| Type Designation | I ^a | II ^a | III | IV | V | VI | | VII | | |
|--|------------------|----------------------|--------------|--------------------|-----------------------|---|-----------|-----------------|-----------|-------------|
| Application | Sediment Control | | Drainage | Paving | Separation & Drainage | Separation, Stabilization & Reinforcement | | | | |
| Physical Properties | | | | | | | | | | Test Method |
| Grab Strength (lbs.) | 50 | 90 | 110 | 90 | 200 | W 280 | NW 180 | W 450 | NW 280 | ASTM D 4632 |
| Elongation % | ---- | 50% max @ 45 lbs. | 20% min | 50% min @ break | 50% min | 50% max 50% min | | 50% max 50% min | | ASTM D 4632 |
| Seam Strength (lbs.) | ---- | ---- | 70 | ---- | 180 | 240 | 160 | 400 | 240 | ASTM D 4632 |
| Puncture Strength (lbs.) | ---- | ---- | 40 | ---- | 80 | 110 | 75 | 180 | 115 | ASTM D 4883 |
| Trapezoidal Tear (lbs.) | ---- | ---- | 40 | ---- | 80 | 100 | 70 | 150 | 100 | ASTM D 4533 |
| Asphalt Retention (gal/yd ²) | ---- | ---- | ---- | 0.2 | ---- | ---- | ---- | ---- | ---- | ASTM D 6140 |
| Permittivity (Sec ⁻¹) | 0.05 | 0.05 | 0.5 | ---- | 0.15 | 0.2 | 0.2 | 0.2 | 0.2 | ASTM D 4491 |
| AOS Woven (mm) | 0.15 - 0.84 | 0.15 - 0.84 | 0.15 - 0.43 | ---- | 0.21 - 0.43 | 0.15 - 0.21 | ---- | 0.15 - 0.21 | ---- | ASTM D 4751 |
| AOS Non-Woven (mm) | <0.84 | <0.84 | <0.43 | ---- | <0.43 | ---- | <0.43 | ---- | <0.43 | ASTM D 4751 |
| Tensile Strength after UV (% Retained) | 70@500Hr. | 70 @ 500 Hr. | 70 @ 150 Hr. | ---- | 70 @ 150 Hr. | 70 @ 150 Hr. | | 70 @ 150 Hr. | | ASTM D 4355 |
| Melting Point (°F) | ---- | ---- | ---- | 325°F | ---- | ---- | | ---- | | ASTM D 276 |

^a: All property values, with the exception of apparent opening size (AOS), represent minimum average roll values in the weakest principal direction. Values for AOS represent the maximum average roll values.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-715-4

CODE: (IS)

DATE: 9/29/2000

SUBJECT: Agricultural Limestone

Section 715, Roadside Development Materials, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete the first sentence of Subsection 715.02.2 on page 715-1 and substitute the following:

Combination or manufactured fertilizer shall be "standard commercial products" and shall contain not less than the percentages by weight of the ingredients set out in Table A, except for agricultural limestone which shall meet the requirements of Subsection 907-715-.02.2.1.

In Table A of Subsection 715.02.2 on page 715-2, delete the column titled "Agricultural Limestone" and the row titled "Calcium and Magnesium Carbonate**".

Delete the third paragraph on page 715-3.

At the end of Subsection 715.02.2 on page 715-3, add the following:

907-715-02.2.1--Agricultural Limestone. Agricultural limestone shall be either a Grade "A" liming material, or a marl or chalk agricultural liming material as addressed in the latest Mississippi Agricultural Liming Material Act of 1993, published by the Mississippi Department of Agriculture and Commerce.

907-715-02.2.1.1--Screening Requirements. Grade "A" liming material, including ground shells, shall not have less than 90% of the material passing the No. 10 sieve, and not less than 50% passing the No. 60 sieve. Marl or chalk liming material shall not have less than 90% of the material passing the No. 10 sieve.

907-715-02.2.1.2--Neutralizing Values. Grade "A" liming material shall not have less than 90% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry weigh basis. Marl or chalk liming material shall not have less than 70% calcium and magnesium carbonate calculated as calcium carbonate equivalent when expressed on a dry weigh basis.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-716-1

CODE: (IS)

DATE: 05/16/2002

SUBJECT: Miscellaneous Materials

Section 716, Miscellaneous Metals, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete Subsection 716.04 on page 716-1 and substitute the following:

907-716.04--Gray Iron Casings. Gray iron castings shall conform to AASHTO Designation: M 105. Class 30B shall be furnished unless otherwise specified. For testing purposes a lot size shall be defined as the lesser of either a total of 35,000 pounds or one week's production for the Department. The test bars shall be made from a melt of iron used in production of units for the Department. The test bar length shall be a minimum of 16 inches.

907-716.07--Copper Bearings and Sheet Copper.

Delete Subsection 716.07.1 on page 716-1 and substitute the following:

907-716.07.1--Rolled Copper-Alloy Bearings and Expansion Plates. Rolled copper-alloy bearings and expansion plates shall conform to ASTM Designation: B 100. Alloy UNS No. C51000 shall be furnished unless otherwise specified.

Delete Subsections 716.10 on page 716-2 and substitute the following:

907-716.10--Lead Plates, Pipes, Etc. Lead used for plates, pipes, etc. shall conform to ASTM Designation: B 29, Grade: Pure Lead.

907-716.14--Bar Grates.

Delete Subsection 716.14.1 on page 716-3 and substitute the following:

907-716.14.1--Material Requirements. Plain round steel bars and strap bars shall conform to the following requirements:

| | |
|----------------------------|---|
| B-9 Grates and Bar Grates: | AASHTO Designation M 270, Grade 36. |
| MI, GI, & SS-3 Grates: | AASHTO Designation: M270, Grade 50W, or as specified in the plans. |

Delete the last paragraph of Subsection 716.14.2 on page 716-3 and substitute the following:

After fabrication, the bar grate shall be coated with an approved commercial quality coating designed for coating steel castings and fabricated units. The State Materials Engineer shall approve the coating material prior to application.

MISSISSIPPI STATE HIGHWAY DEPARTMENT

SPECIAL PROVISION NO. 907-720-3

CODE: (IS)

DATE: 1/13/92

SUBJECT: Performed Pavement Markings for Construction Zones

Section 720, Pavement Marking Materials, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-720.05.2.2--Type 2.

Delete lines 8 thru 18 on page no. 720-13 and substitute:

Removability. The markings shall be removable from asphalt and portland cement concrete pavement, either manually or with a roll-up device, at temperatures above 40°F. with the use of a small amount of controlled heat that does not damage the pavement. The manufacturer shall be able to show that the markings have met this requirement after the following minimum traffic exposure based on transverse test decks with rolling traffic:

| | |
|-------------------------|--------------------|
| Time in place ----- | 365 days |
| ADT per lane ----- | 9,000 (28% Trucks) |
| Minimum axle hits ----- | 10,000,000 |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-721-7

CODE: (IS)

DATE: 01/18/2002

SUBJECT: Reflective Sheeting

Section 721, Materials for Signing, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 721.06 beginning on page 721-4 and ending on page 721-12, and substitute the following:

907-721.06--Reflective Sheeting.

907-721.06.1--General. Retroreflective sheeting materials shall comply with all applicable requirements of ASTM Designation: D 4956, except as specifically modified herein, and must be listed on the Department's "Approved Sources of Materials".

Reflective sheeting shall be one of the following types.

Type III A high-intensity retroreflective sheeting. This shall be an encapsulated glass-bead or unmetallized microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure-sensitive adhesive backing.

Type VII A super high-intensity retroreflective sheeting. This shall be an unmetallized microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure sensitive adhesive backing.

Type VIII A super high-intensity retroreflective sheeting. This shall be an unmetallized microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure sensitive adhesive backing.

Type IX A very-high intensity retroreflective sheeting. This shall be an unmetallized, microprismatic retroreflective material. This sheeting shall have a protected, pre-coated, pressure sensitive, adhesive backing.

All other retroreflective sheeting shall be as shown in the plans.

907-721.06.2--Performance Requirements. The retroreflective sheeting shall have the following minimum brightness values at 0.2° and 0.5° observation angle (in addition 1.0° for Type IX sheeting) expressed as average candelas per footcandle per square foot of material.

Sheetings and inks processed and applied in accordance with the manufacturer's recommendations, shall perform effectively for the number of years stated below. The sheeting will be considered unsatisfactory if it has deteriorated due to natural causes to the extent that: (1) the sign is ineffective for its intended purpose when viewed from a moving vehicle under normal day and night driving conditions or (2) the coefficient of retroreflection

is less than the minimum specified for that sheeting during the periods listed below. For screen printed transparent colored areas on white sheeting, the coefficients of retroreflection shall not be less than 70% of the values for the corresponding color in the table.

Type III Sheeting Retain 85% of initial values listed in Table 1 through 7 years
Retain 80% of initial values listed in Table 1 between 7 & 10 years

Type VII Sheeting Retain 85% of initial values listed in Table 2 through 7 years
Retain 80% of initial values listed in Table 2 between 7 & 10 years
Retain 50% of initial values listed in Table 2 through 3 years (Fluorescent Orange)

Type VIII Sheeting Retain 85% of initial values listed in Table 3 through 7 years
Retain 80% of initial values listed in Table 3 between 7 & 10 years
Retain 50% of initial values listed in Table 3 through 3 years (Fluorescent Orange)
Retain 80% of initial values listed in Table 3 through 7 years (Fluorescent Yellow/Green) (Fluorescent Yellow)

Type IX Sheeting Retain 85% of initial values listed in Table 4 through 7 years
Retain 80% of initial values listed in Table 4 between 7 & 10 years
Retain 80% of initial values listed in Table 4 for 7 years (Fluorescent Yellow/Green)(Fluorescent Yellow)

MINIMUM COEFFICIENTS OF RETROREFLECTION

(Candela per foot candle per square foot) - cd/ft²

(Per ASTM E 810)

TABLE 1
Type III Sheeting

| Observation Angle | Entrance Angle | White | Yellow | Orange | Green | Red | Blue | Brown |
|-------------------|----------------|-------|--------|--------|-------|-----|------|-------|
| 0.2° | -4° | 250 | 170 | 100 | 45 | 45 | 20 | 12 |
| 0.2° | +30° | 150 | 100 | 60 | 25 | 25 | 11 | 8.5 |
| 0.5° | -4° | 95 | 62 | 30 | 15 | 15 | 7.5 | 5.0 |
| 0.5° | +30° | 65 | 45 | 25 | 10 | 10 | 5.0 | 3.5 |

TABLE 2
Type VII Sheeting

| Observation Angle | Entrance Angle | White | Yellow | Green | Red | Blue | Brown | Fluorescent Orange |
|-------------------|----------------|-------|--------|-------|-----|------|-------|--------------------|
| 0.2° | -4° | 750 | 560 | 75 | 150 | 34 | 23 | 200 |
| 0.2° | +30° | 430 | 320 | 43 | 86 | 20 | 10 | 85 |
| 0.5° | -4° | 240 | 180 | 24 | 48 | 11 | 8 | 90 |
| 0.5° | +30° | 135 | 100 | 14 | 27 | 6.0 | 4 | 50 |

**TABLE 3
Type VIII Sheeting**

| Observation Angle | Entrance Angle | White | Yellow | Green | Red | Blue | Brown | Fluorescent Orange | Fluorescent Yellow/ Green | Fluorescent Yellow |
|-------------------|----------------|-------|--------|-------|-----|------|-------|--------------------|---------------------------|--------------------|
| 0.2° | -4° | 700 | 525 | 70 | 105 | 42 | 21 | 200 | 480 | 375 |
| 0.2° | +30° | 325 | 245 | 33 | 49 | 20 | 10 | 85 | 240 | 170 |
| 0.5° | -4° | 250 | 190 | 25 | 38 | 15 | 7.5 | 90 | 235 | 165 |
| 0.5° | +30° | 115 | 86 | 12 | 17 | 7 | 3.5 | 50 | 110 | 85 |

**TABLE 4
Type IX Sheeting**

| Observation Angle | Entrance Angle | White | Yellow | Green | Red | Blue | Fluorescent Yellow/ Green | Fluorescent Yellow |
|-------------------|----------------|-------|--------|-------|-----|------|---------------------------|--------------------|
| 0.2° | -4.0° | 380 | 285 | 38 | 76 | 17 | 325 | 240 |
| 0.2° | +30.0° | 215 | 162 | 22 | 43 | 10 | 205 | 150 |
| 0.5° | -4.0° | 240 | 180 | 24 | 48 | 11 | 240 | 165 |
| 0.5° | +30.0° | 135 | 100 | 14 | 27 | 6.0 | 110 | 75 |
| 1.0° | -4.0° | 80 | 60 | 8 | 16 | 3.6 | 65 | 45 |
| 1.0° | +30.0° | 45 | 34 | 4.5 | 9 | 2.0 | 35 | 25 |

907-721.06.3--Certification. The Contractor shall require the supplier to furnish certified evidence and/or samples to the Engineer showing conformance to these requirements. Manufacturer's warranties or guarantees provided as customary trade practice shall be furnished the Department.

907-721.06.4--Color. Reflective sheeting shall meet the color requirements of ASTM Designation: D 4956. See Table 5 below for color specifications for fluorescent yellow green, fluorescent orange, and fluorescent yellow sheeting.

**TABLE 5
Color Specification Limits for New Sheeting (Daytime)**

| Color | Chromaticity Coordinate <u>1</u> | | Chromaticity Coordinate <u>2</u> | | Chromaticity Coordinate <u>3</u> | | Chromaticity Coordinate <u>4</u> | | Total Luminance Factor Limit <u>Y?</u> <u>Min.</u> |
|--------------------------|----------------------------------|----------|----------------------------------|----------|----------------------------------|----------|----------------------------------|----------|---|
| | <u>x</u> | <u>y</u> | <u>x</u> | <u>y</u> | <u>x</u> | <u>y</u> | <u>x</u> | <u>y</u> | |
| Fluorescent Yellow Green | 0.387 | 0.610 | 0.460 | 0.540 | 0.438 | 0.508 | 0.376 | 0.568 | 60% |
| Fluorescent Orange | 0.562 | 0.350 | 0.645 | 0.355 | 0.570 | 0.429 | 0.506 | 0.404 | 30% |
| Fluorescent Yellow | 0.521 | 0.424 | 0.557 | 0.442 | 0.479 | 0.520 | 0.454 | 0.491 | 40% |

907-721.06.5--Adhesive. The retroreflective sheeting shall include a pre-coated pressure sensitive adhesive (ASTM Designation: D 4956, Class I) applied without the necessity of additional adhesive coats on the retroreflective sheeting or application surface.

The Class I adhesive shall be a pressure sensitive adhesive of the aggressive tack type requiring no heat solvent or other preparation for adhesion to smooth clean surfaces.

The protective liner attached to the adhesive shall be removed by peeling without soaking in water or other solutions and shall be easily removed after accelerated storage for four hours at 160° F under a weight of 2.5 pounds per square inch.

907-721.06.6--Additional Contract Requirements. In addition to the above requirements, the following requirements are applicable only when the sheeting material is being purchased for use in the MDOT Sign Shop.

907-721.06.6.1--Sheeting Manufacturer's Replacement Obligation. Where it can be shown that retroreflective traffic signs with Type III, Type VII, Type VIII, or Type IX sheeting supplied and used according to the sheeting manufacturer's recommendations have not met the performance requirements, the sheeting manufacturer shall replace the sheeting required to restore the sign surface to its original effectiveness during the entire 10 years. In addition, during the first seven (7) years the manufacturer of Type III, Type VII, Type VIII, or Type IX sheeting shall cover the cost of restoring the sign surface to its original effectiveness at no cost to the Department for materials and labor for both sign manufacture and installation.

907-721.06.6.2--Technical Assistance Requirements.

Instruction and Training. The manufacturer supplying the retroreflective sheeting shall provide at no additional cost the services of a qualified technician for instruction and training at the sign manufacturing facility. This instruction shall be provided bi-annually or when requested, and shall include but not be limited to training films, material application, equipment operation, silk screening techniques, packaging, storage, and other proven sign shop practices as they apply to the retroreflective sheeting supplied by the manufacturer, and to assure that the resulting signs can comply with the applicable specifications.

Technical Service. The sheeting manufacturer shall, without additional cost to the Department, provide the sign shop with competent technical service and product information including service on screen printing problems with the inks furnished by the manufacturer.

Equipment. The manufacturer supplying the retroreflective sheeting shall provide technical assistance for the recommended sheeting application equipment and certify that trained personnel shall be available on 72 hours notice to render such service necessary to adjust ink consistency or otherwise modify the application of silk screen equipment to accommodate use of manufacturer's sheeting. "Service" is understood to mean the capability of calibration and trouble shooting, as well as the training and retaining of personnel as required.

907-721.06.6.3--Warranty. Any warranties prepared by the manufacturer shall be included with the bid documents.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SUPPLEMENT TO SPECIAL PROVISION NO. 907-803-16

CODE: (SP)

DATE: 6/17/2003

SUBJECT: DRILLED SHAFT EXCAVATION FOR DROP INLET

PROJECT: NH-0015-01(054) / 103252 – ADAMS COUNTY

Delete the fifth paragraph of Subsection 907-803.03.18.2 – Qualification of Contractor and Substitute the following:

At the preconstruction conference, or no later than 15 days prior to beginning the work described In this specification, the contractor shall furnish evidence of the following:

Delete the first paragraph of Subsection 907-803.03.18.3 – Submittals and substitute the following:

At the preconstruction conference, or no later than 015 days before drilled shaft construction begins, the Contractor shall submit an installation plan for review by the Engineer. This plan shall provide information on the following

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-803-16

CODE: (SP)

DATE: 7/13/2001

SUBJECT: Drilled Shaft Excavation for Vertical Drop Inlet

PROJECT: STP-0015-01(054) / 103252 – Adams County

Section 803, Bearing Piles, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete subsection 803.03.18 and substitute:

907-803.03.18--Construction of Drilled Shaft for Vertical Drop Inlet.

907-803.03.18.1--Description. This work consists of furnishing all labor, materials, equipment and services necessary to perform all operations to complete the drilled shaft installation in accordance with these specifications and with the details and dimensions shown on the plans. The drilled shaft shall consist of a cased, excavated shaft with seal concrete placed in the bottom of the shaft. The drilled shaft is to be constructed such that the shaft intersects the end of a 30" jack and bored pipe. The shaft and jack and bored pipe, in conjunction with other features of the design will form a vertical drop inlet structure.

907-803.03.18.2--Qualification of Contractor. The person(s) or firm directing the work described in this specification shall be knowledgeable of drilled shaft installation procedures and shall have installed drilled shafts of both diameter and length similar to those shown on the plans in accordance with the following minimum experience requirements:

1. A drilled shaft Contractor shall have a minimum of three (3) years of drilled shaft installation experience prior to the bid date for this project; or,
2. A Contractor without prior drilled shaft experience shall have in his employ a superintendent with a minimum of fifteen years of drilled shaft experience prior to the bid date of this project.

A Contractor with limited drilled shaft installation experience may use a combination of his own and his superintendent's experience, with each five years of experience of the superintendent counting as equivalent to one year's experience of the Contractor.

At the preconstruction conference, or no later than 45 days prior to beginning the work described in this specification, the Contractor shall furnish evidence of the following requirements:

- (A) A signed statement from the superintendent responsible for the drilled shaft installation that the project site has been visited, and that all the subsurface information has been inspected. This information would include the soil profiles or boring logs furnished in the plans, soil samples and rock cores, and soil and foundation reports, all available at the Department's Materials Division.

- (B) Ability of the Contractor or firm responsible for installation of drilled shafts to complete a project of this type. This is to be supported by a list containing a detailed description of at least three (3) projects completed in the last three (3) years on which the Contractor and/or superintendent has installed or supervised installation of drilled shafts with similar size to those shown on the plans, and utilized excavation stabilization techniques similar to those anticipated for this project. This list of projects shall contain names and phone numbers of the project owner's representatives who can verify the Contractor's participation on the project, and the names of the superintendents who were in charge of the Contractor's operations.

907-803.03.18.3--Submittals. At the preconstruction conference, or no later than 30 days before drilled shaft construction begins, the Contractor shall submit an installation plan for review by the Engineer. This plan shall provide information on the following:

1. Proposed concrete mix designs (see Subsection 907-803.03.18.13.A and Section 804).
2. Name and experience record of drilled shaft superintendent in responsible charge of drilled shaft operations.
3. List and size of proposed equipment including cranes, drill rigs, augers, bailing buckets, digging buckets, final cleaning equipment, slurry tanks, desanding equipment, slurry pumps, method and equipment to preform exploration (if required), tremies or concrete pumps, casings, etc.
4. Details of sequence of construction operations in conjunction with the installation of the jack and bored pipe. The sequence of construction must also include details on the connection between the two pipes.
5. Details of shaft excavation methods.
6. Details of seal concrete placement including proposed operational procedures for concrete tremie or pump, including initial placement..
7. Details of casing installation (and removal if a temporary outer casing is used).

The Engineer will evaluate the drilled shaft installation plan for conformance with the plans and specifications, after which the Engineer will notify the Contractor of any additional information required and/or changes that may be needed. Any part of the plan that is unacceptable will be rejected and the Contractor shall submit changes for reevaluation. All approvals given by the Engineer shall be subject to trial and satisfactory performance in the field, and shall not relieve the Contractor of the responsibility to satisfactorily complete the work as detailed on the plans and in the specifications.

907-803.03.18.4--Construction Methods and Equipment.

A. Construction Sequence. The construction of the drilled shaft by the Contractor shall comply with the construction sequence as outlined in the plans.

B. General Methods and Equipment. The Contractor shall perform the excavations required for the shaft, through whatever materials encountered to the dimensions and elevations shown on the plans, or otherwise required by the specifications. The Contractor's methods and equipment shall be suited for the intended purpose and the materials encountered.

The drilled shaft can be constructed by either the dry method or the wet method. In either case, full length, permanent casing is required. The Contractor shall be prepared to construct the shaft using the wet method.

907-803.03.18.5--Dry Construction Method. The dry construction method shall be used only if the groundwater level and soil conditions are suitable to permit construction of the shaft in a relatively dry excavation. The dry method consists of placing full length, permanent casing, drilling the shaft excavation, and placing seal concrete in the bottom of the shaft in a relatively dry excavation.

The dry construction method will only be allowed during the shaft excavation if water is not flowing into the bottom of the excavation at such a rate as to be detrimental to the stability of the excavation. The shaft will be considered a dry shaft if: concrete can be placed with less than three (3) inches of accumulated water in the bottom of the shaft; the sides and bottom of the hole remain stable without caving or sloughing, swelling does not occur over a two-hour period immediately following completion of the excavation, and any loose material and excess water can be satisfactorily removed prior to inspection and prior to concrete placement.

907-803.03.18.6--Wet Construction Method. The wet construction method shall be used only if it is impractical to provide a dry excavation for placement of the shaft concrete.

The wet construction method consists of: drilling the shaft excavation below the water table, keeping the shaft filled with water, final cleaning of the excavation by means of a bailing bucket, air lift, submersible pump or other approved devices, and placing the seal concrete (with a tremie or concrete pump beginning at the shaft bottom) which displaces the water as the shaft is concreted.

907-803.03.18.7--Permanent Casing Installation. Permanent casing is required for the full length of the excavation, regardless of which construction method is used. The casing will be driven to the prescribed depth before excavation begins. If full penetration cannot be attained, the Engineer may direct the excavation through the casing to be accomplished and the casing driven again until reaching the desired penetration. In the event seepage conditions prevent use of the dry method, excavation shall be completed using the wet method. The placement of the concrete shall proceed after the excavation is complete and the shaft excavation is stabilized. The casing shall be cut off at the prescribed elevation upon the completion of the excavation and the placement of the seal concrete.

907-803.03.18.8--Excavation and Drilling Equipment. The excavation and drilling equipment shall have adequate capacity including power, torque, and down thrust to excavate a hole of both the maximum diameter and to a depth 20 percent greater than the longest shaft shown on the plans.

The excavation tools shall be of adequate design, size, and strength to perform the work shown on the plans or described herein. When the material encountered cannot be drilled using conventional earth augers with soil or rock teeth, drill buckets, and/or underreaming tools, the Contractor shall provide special drilling equipment including but not limited to: rock core barrels, rock tools, air tools, blasting materials, and other equipment as necessary to construct the shaft excavation to size and depth required. Approval of the Engineer is required before excavation by blasting is permitted.

907-803.03.18.9--Excavations.

A. General. Shaft excavation shall be made at the location, the top and bottom shaft elevations, shaft geometry and dimensions shown in the contract documents.

The Contractor shall maintain a drilling log during shaft excavation. The log shall contain information such as the description and approximate top and bottom elevation of each soil or rock strata, seepage or groundwater, and remarks. Three (3) copies of the typed final Contractor's log shall be furnished to the Engineer with a copy to the Geotechnical Engineer at the time the drilled shaft is completed and accepted. Payment for the shaft will not be made until the log is submitted to the Engineer.

The Contractor shall not permit workmen to enter the shaft excavation for any reason unless: both a suitable size casing has been installed and the water level has been lowered and stabilized below the level to be occupied, and adequate safety equipment and procedures have been provided to workmen entering the excavation. The Contractor is responsible for complying with all State and Federal safety regulations.

B. Obstructions. The Contractor shall remove surface and subsurface obstructions at the drilled shaft location. Such obstructions may include man-made materials such as old concrete foundations, and natural materials such as boulders. Special procedures and/or tools shall be employed by the Contractor after the hole cannot be advanced using conventional augers fitted with soil or rock teeth, drilling buckets and/or underreaming tools. Such special procedures/tools may include but are not limited to: chisels, boulder breakers, core barrels, air tools, hand excavation, temporary casing, and increasing the hole diameter. Blasting shall not be permitted unless specifically approved in writing by the Engineer.

Drilling tools which are lost in the excavation shall be promptly removed by the Contractor at no cost to the State. All costs due to lost tool removal shall be borne by the Contractor including, but not limited to, costs associated with hole degradation due to removal operations or the time the hole remains open.

907-803.03.18.10--Casings.

A. General. Casings shall be new steel, smooth, clean, watertight, and of ample strength to withstand both handling and driving stresses and the pressure of both concrete and the surrounding earth materials. The casing should include any reinforcement or extra wall thickness that is deemed necessary by the Contractor to install the casing to the specified tip elevation without damage to the casing. If it is determined that damage has occurred to the casing during installation, then at the expense of the Contractor and under the approval of the Geotechnical Engineer, the casing may have to be removed and repaired or replaced. Damaged casing includes, but is not limited to, any damage that would prevent the construction of the Inlet Control Structure and to the connection with the jack and bore connector pipe.

The outside diameter of casing shall meet the specifications set forth in the plans. The length of the casing must meet the minimum requirements set forth in the specifications. No extra compensation will be given for any additional length used by the Contractor.

B. Temporary Casing. All subsurface casing shall be considered temporary unless specifically shown as permanent in the contract documents. If over sized temporary casing is utilized to assist in the installation and construction of the shaft, then the temporary casing diameter is not to exceed the permanent casing diameter by more than six (6) inches. If larger temporary casing is used, then the void between the casings must be grouted at the Contractor's expense. When temporary casing is used for telescoping or overreaming, no additional compensation will be made. The Contractor will not be compensated for the use of temporary casing. All temporary casing must be removed from the shaft, unless written approval is given by the Geotechnical Engineer. The Contractor will not be compensated for any temporary casing left in place. If temporary casing is left in place the annulus between the permanent and temporary casings will be grouted using flowable fill at no cost to the State.

If the Contractor elects to remove a casing and substitute a longer or larger diameter casing through caving soils, the excavation shall be stabilized and back-filled before the new casing is installed, as directed in 907-803.03.18.9. Other methods, as approved by the Engineer, may be used to control the stability of the excavation and protect the integrity of the foundation soils.

907-803.03.18.11--Excavation Inspection. The Contractor shall provide equipment for checking the dimensions and alignment of each permanent shaft excavation. The dimensions and alignment shall be determined by the Contractor in the presence of the Engineer or his inspector. Final shaft depths shall be measured with a weighted tape or other approved methods after final cleaning. Unless otherwise stated on the plans, a minimum of 50 percent of the base of each shaft shall have less than 1/2 inch of sediment at the time of placement of the concrete. Shaft cleanliness will be determined by the Engineer, by visual inspection for dry shafts, or other methods deemed appropriate to the Engineer for wet shafts. In addition, for dry excavations, the maximum depth of water shall not exceed three (3) inches prior to concrete pour.

Inspection of a shaft excavation may be accomplished by any suitable method, including the use of video equipment or, in the case of a dry excavation, by personnel in the hole. Visual inspection by personnel in the hole requires safety measures that include, but are not limited to: (1) Usage of air sampling devices in the hole to check for volatile or poisonous gases, as well as oxygen content; (2) Providing proper ventilation to the excavation. Until all local, state, and federal occupational safety regulations are adhered to, no personnel will be allowed into the excavation.

907-803.03.18.12--Construction Tolerances. The following construction tolerances apply to drilled shafts unless otherwise stated in the contract documents:

- (a) The actual drilled shaft location will be dependent on the location of the upstream end of the 30-inch jack and bore pipe. The upstream end of the jack and bore pipe and the location of the drilled shaft inlet structure should be in the immediate vicinity of the location as shown in the plans. It shall be the responsibility of the drilled shaft Contractor to coordinate with the jack and bore pipe Contractor to determine the exact location of jack and bore pipe and the drilled shaft.
- (b) The tip elevation of the shaft may require adjustments to accommodate the upstream elevation of the jack and bore pipe. The final tip elevation must be approved by the Geotechnical Engineer.
- (c) The vertical alignment of a vertical shaft excavation shall not vary from the plan alignment by more than 1/4 inch per foot of depth.
- (d) All casing diameters shown on the plans refer to O.D. (outside diameter) dimensions. The dimensions of casings are subject to American Pipe Institute tolerances applicable to regular steel pipe. When approved, the Contractor may elect to provide a casing larger in diameter than shown on the plans.
- (e) The top elevation of the seal concrete shall have a tolerance of plus or minus two inches.
- (f) The top elevation of the casing for the shaft shall have a tolerance of plus one inch or minus three inches from the plan top of casing elevation.

- (g) Excavation equipment and methods shall be designed so that the completed shaft excavation will have a planar bottom. The cutting edges of excavation equipment shall be normal to the vertical axis of the equipment within a tolerance of $\pm 3/8$ inch per foot of shaft diameter.

Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. The Contractor shall be responsible for correcting all unacceptable shaft excavations and completed shafts to the satisfaction of the Engineer. Materials and work necessary, including engineering analysis and redesign, to complete corrections for out of tolerance drilled shaft excavations shall be furnished without either cost to the State or an extension of the completion dates of the project. Any redesign shall be performed by a professional engineer, registered in the State of Mississippi and engaged by the Contractor. Redesign drawings and computations prepared by the Contractor's engineer shall be signed and sealed.

Out of tolerance shaft holes shall be backfilled in an approved manner, when directed by the Engineer, until the redesign is complete and approved.

907-803.03.18.13--Concrete Placement.

A. General. Seal concrete for drilled shafts shall have a minimum 28-day compressive strength of 2500 psi. Concrete slump at the time of the pour shall be 8 (± 1) inches. In the event that the dry construction method has been used and free-fall concrete placement has been approved, a concrete slump of 6 inches will be allowed for free-fall concrete. Additional slump requirements are defined below. Concrete temperature at the time of the pour shall not exceed 90° Fahrenheit.

Concrete placement during cold weather shall be allowed when ambient air conditions are at or expected to drop below 40° Fahrenheit, but protection of the fresh concrete shall be in accordance with the provisions stated in Subsections 804.03.16.1 and 501.03.20.3 of the Standard Specifications. The Contractor shall assume all responsibility for protection of fresh concrete in cold weather.

Concrete shall be placed either through a tremie, concrete pump or free fall. Free fall placement shall require prior written approval of the Engineer and shall be restricted for use in dry excavations only. Free fall placement is restricted to heights of less than 75 feet.

For tremied or pumped concrete, the elapsed time from the beginning of concrete placement in the shaft to the completion of the placement shall not exceed four (4) hours, except as noted below. Retarders and/or water reducers in the concrete mix shall be adjusted as approved for the conditions encountered on the job, so that the concrete remains in a workable plastic state throughout the four hour placement limit. This is defined as a minimum slump of four (4) inches existing everywhere within the concrete shaft after placement has been completed. Prior to concrete placement, the Contractor shall provide test results of a trial mix, set time test (AASHTO T-197), and a slump loss test using approved methods, to demonstrate that the concrete meets this four hour requirement. These tests shall be conducted by an approved testing laboratory at least 30 days prior to initial concrete placement, with the Department's Central Laboratory personnel present, at temperatures and conditions similar to those at the job site at the time of the shaft pour.

The Contractor shall place the concrete within the approved time and temperature limitations determined by the trial mix demonstration.

B. Tremies. Tremies used for concrete placement in either wet or dry holes shall consist of a tube of sufficient length, weight, and diameter to discharge concrete at the shaft base

elevation. The tremie shall not contain aluminum parts that will have contact with the concrete. The tremie inside diameter shall be at least six (6) times the maximum size of aggregate used in the concrete mix but shall not be less than 10 inches. The inside and outside surfaces of the tremie shall be clean and smooth to permit both flow of concrete and unimpeded withdrawal during concreting. The wall thickness of the tremie shall be adequate to prevent crimping or sharp bends that restrict concrete placement.

The tremie used for wet excavation concrete placement shall be watertight. Underwater placement shall not begin until the tremie is placed to the shaft base elevation. Valves, bottom plates, or plugs may be used only if concrete discharge can begin within one tremie diameter of the base. Plugs and plates shall either be removed from the excavation or be of a material, approved by the Engineer, which will not cause a defect in the shaft if not removed. The discharge end of the tremie shall be constructed to permit the free radial flow of concrete during placement operations. The tremie discharge end shall remain at the excavation bottom as long as possible, and thereafter be immersed at least two shaft diameters but not less than 10 feet in concrete at all times after starting the flow of concrete. The flow of concrete shall be continuous. The concrete in the tremie shall be maintained at a positive pressure differential at all times to prevent water or slurry intrusion into the shaft concrete.

If, at any time during the concrete pour in a wet excavation, the tremie line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete level, the shaft shall be considered defective. In such case, the Contractor shall remove the reinforcing cage and concrete, complete all necessary sidewall removal directed by the Engineer and repour the shaft. All costs of replacement of defective shafts shall be the responsibility of the Contractor.

C. Pumping Concrete. Concrete pumps and lines may be used for concrete placement in either wet or dry excavations. All pump lines shall have a minimum five (5) inch diameter and be constructed with watertight joints. The use of aluminum pipe as a conveyance for the concrete will not be permitted. Concrete placement shall not begin until the pump line discharge orifice is at the shaft base elevation.

For wet excavations, a plug or similar device shall be used to separate the concrete from the fluid in the hole until pumping begins. The plug shall either be removed from the excavation or be of a material, approved by the Engineer, which will not cause a defect in the shaft if not removed.

The discharge orifice shall remain at least two shaft diameters but not less than 10 feet below the surface of the fluid concrete at all times after starting the flow of concrete. When lifting the pump line during concreting, the Contractor shall temporarily reduce the line pressure until the orifice has been repositioned at a higher level in the excavation.

If, at any time during the concrete pour, the pump line orifice is removed from the fluid concrete column and discharges concrete above the rising level, the shaft shall be considered defective. In such case, the Contractor shall remove the reinforcing cage and concrete, complete all necessary sidewall removal directed by the Engineer and repour the shaft. All costs of replacement of defective shafts shall be the responsibility of the Contractor.

D. Free Fall Method. Placement of concrete by the free fall method will be permitted only when approved in writing by the Engineer. Approval of concrete placement by the free fall method shall be contingent upon the following minimum conditions:

1. The dry construction method is used in constructing the drilled shaft.
2. The height of free fall placement shall not exceed 75 feet.

3. Concrete shall fall directly to the placement location without contacting the shaft walls.
4. A hopper shall be used at the top of the shaft to center and direct the free fall placement.
5. The Engineer will observe the falling of the concrete within the shaft. The Contractor shall reduce the rate of concrete placement or reduce the height of free fall as directed by the Engineer when the concrete strikes the shaft sidewalls, when there is excessive spatter from the impact of the falling concrete.
6. When in the opinion of the Engineer, placement cannot be satisfactorily accomplished by the free fall method, the Contractor shall change to either the tremie or pumping method to accomplish the pour.

907-803.04--Method of Measurement. After Subsection 803.04.10 on page 803-16, add the following:

907-803.04.11--Drilled Shaft Excavation. Drilled shaft excavation, of the diameter specified, shall be measured per linear foot of authorized length (including seal concrete). The length shall be determined as the difference between the plan top of shaft elevation (casing cut off elevation) and the final bottom of shaft elevation (bottom of seal concrete).

907-803.04.12--Permanent Casing. Permanent casing shall be measured by the linear feet of casing installed between the planned cut off elevation, as specified in the plans, and the final approved tip elevation. Any casing length above the specified cut off elevation is not included. Temporary casing will not be measured for separate payment.

907-803.05--Basis of Payment. After Subsection 803.05.11 on page 803-17, add the following:

907-803.05.11--Drilled Shaft Excavation. Drilled shafts excavation, of the diameter specified and measured as prescribed above, shall be paid for at the contract unit price per linear foot, which price shall be full compensation for the cost of concrete, all labor, materials, equipment, and incidentals necessary to complete the work.

907-803.05.12--Permanent Casing. Permanent casings, of the diameter specified and measured as prescribed above, shall be paid for at the contract price per linear foot, which price shall be full compensation for furnishing, placing, and removing (when required) the casing in the shaft excavation.

After the last pay item listed on page 803-18, add the following:

- | | |
|---|-------------------|
| 907-803-M: Drilled Shaft Excavation (Description) | - per linear foot |
| 907-803-R: Permanent Casing (Description) | - per linear foot |

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-804-15

CODE: (IS)

DATE: 01/04/2002

SUBJECT: Concrete for Bridges and Structures

Section 804, Concrete Bridges and Structures, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is deleted in toto and replaced as follows:

SECTION 907-804--CONCRETE BRIDGES AND STRUCTURES

907-804.01--Description. This work consists of constructing concrete bridges and structures in accordance with these specifications and in reasonably close conformity with the dimensions, designs, lines, and grades indicated on the plans or established.

Construction of box bridges shall be in accordance with Sections 601 and 602.

907-804.02--Materials.

907-804.02.1--General. Concrete produced and controlled from this specification shall be accepted upon proper certification of concrete production through an approved quality control plan and verification by job site acceptance criteria. The Contractor shall develop and implement a quality control plan that will be used to maintain the required properties of concrete. For large volume projects, 2000 cubic yards and more, quality control and acceptance shall be achieved through statistical evaluation of test results. For small volume projects, less than 2000 cubic yards, quality control and acceptance shall be achieved by individual test results.

The materials used in this construction, when sampled and tested in accordance with 700.03, shall meet the requirements of the following subsections:

| | |
|--|----------------------------|
| Portland Cement | 701.01 and 701.02 |
| Admixtures | 713.02 |
| Fly Ash | 714.05 |
| Water | 714.01.1 and 714.01.2 |
| Fine Aggregate | 703.02 |
| Coarse Aggregate | 703.03 |
| Curing Materials | 713.01 |
| Joint Materials | 707.01, 707.02, and 707.07 |
| Structural Steel Joints and Bearing Devices | 717.01 |
| Sheet Copper | 716.07.2 |
| Bronze Bearing Devices | 716.06 |
| Copper-Alloy Bearing Devices | 716.07.1 |
| Self-Lubricating Bearing Plates | 716.08 |
| Bearing Pads | 714.10 |
| Wire Rope or Wire Cable for Prestressed Concrete | 700.01 and 711.03 |
| Sprayed Finish for Concrete Surface | 714.12 |
| Reinforcing Steel | 711.02 |

907-804.02.2--Use, Care and Handling. The use, care and handling of materials shall conform to the applicable requirements of 501.03.10 and the specific requirements of 907-804.02.4 and 907-804.02.5. Unless otherwise authorized, only fine aggregate or coarse aggregate of one type and from the same source shall be used in the construction of any one

unit of a structure. Should the Contractor, with written permission of the Engineer, elect to substitute high early strength cement for cement of the type specified, the Contractor will not receive additional compensation for the substitution.

907-804.02.3--Sampling & Testing. Sampling and testing shall meet the requirements of these specifications.

907-804.02.4--Care and Storage of Concrete Aggregates. The handling and storage of aggregates shall be such as to prevent segregation or contamination with foreign materials. The Engineer may require that aggregates be stored on separate platforms at satisfactory locations.

When specified, coarse aggregates shall be separated into two or more sizes in order to secure greater uniformity of the concrete mixture. Different sizes of aggregate shall be stored in separate stock piles sufficiently removed from each other to prevent the material at the edges of the piles from becoming intermixed.

907-804.02.5--Storage of Cement. All cement shall be stored in suitable weather-proof buildings or bins. These buildings or bins shall be placed in locations approved by the Engineer. Provision for storage shall be ample, and the shipments of cement as received shall be stored separately or other provisions made to the satisfaction of the Engineer for easy access for the identification, inspection, and sampling of each shipment as deemed desirable. Stored cement shall meet the test requirements at any time after storage when a retest is ordered by the Engineer.

On small jobs, open storage consisting of a raised platform and ample waterproof covering may be permitted by written authorization from the Engineer.

When specified, the Contractor shall keep accurate records of deliveries of cement and of its use in the work. Copies of these records shall be supplied in the form required by the Engineer.

907-804.02.6--Classification and Uses of Concrete. When a specific class of concrete is not specified on the plans or in the contract documents, the structure or parts thereof shall be constructed with the class of concrete as directed by the Engineer.

The classes and their uses are as follows:

- (1) Class AA - Concrete for bridge construction and concrete exposed to seawater.
- (2) Class A - Concrete for use where indicated.
- (3) Class B - General use, heavily reinforced sections, cast-in-place concrete piles, and conventional concrete piles.
- (4) Class C - Massive sections or lightly reinforced sections.
- (5) Class D - Massive unreinforced sections and riprap.
- (6) Class F - Concrete for prestressed members.
- (7) Class FX - Extra strength (as shown on plans) concrete for prestressed members.
- (8) Class S - For all seal concrete deposited under water.

907-804.02.7--Composition of Concrete. The composition of concrete mixtures shall meet the requirements of these specifications.

907-804.02.8--Laboratory Accreditation. The Contractor shall be responsible for furnishing the laboratory used to perform concrete quality control tests. The laboratory may be the Contractor's facility, the concrete producer's facility, or a certified independent testing laboratory.

Only laboratories certified by the Mississippi Department of Transportation are qualified to perform material testing. Certification by AASHTO Accreditation Program (AAP) will be acceptable if the laboratory is listed in the latest AASHTO Accreditation Program publication and maintains accreditation to completion of concrete work.

The Contractor’s laboratory designated for quality control testing shall have equipment necessary to test aggregates and concrete for the test methods listed in Table 1.

Table 1

| | |
|---------------|---|
| AASHTO: T 2 | Sampling Aggregates |
| AASHTO: T 19 | Bulk Density (“Unit Weight”) and Voids in Aggregates |
| AASHTO: T 22 | Compressive Strength of Cylindrical Concrete Specimens |
| AASHTO: T 23 | Making and Curing Concrete Test Specimens in the Field |
| AASHTO: T 27 | Sieve Analysis of Fine and Coarse Aggregates |
| AASHTO: T 84 | Specific Gravity and Absorption of Fine Aggregate |
| AASHTO: T 85 | Specific Gravity and Absorption of Coarse Aggregate |
| AASHTO: T 119 | Slump of Hydraulic Cement Concrete |
| AASHTO: T 121 | Mass per Cubic Meter (Cubic Foot), Yield, and Air Content (Gravimetric) of Concrete |
| AASHTO: T 126 | Making and Curing Concrete Test Specimens in the Laboratory |
| AASHTO: T 141 | Sampling Freshly Mixed Concrete |
| AASHTO: T 152 | Air Content of Freshly Mixed Concrete by Pressure Method * |
| AASHTO: T 196 | Air Content of Freshly Mixed Concrete by the Volumetric Method * |
| AASHTO: T 231 | Capping Cylindrical Concrete Specimens |
| AASHTO: T 248 | Reducing Field Samples of Aggregate to Testing Size |
| AASHTO: T 255 | Total Evaporable Moisture Content of Aggregate by Drying |
| ASTM: C 1064 | Temperature of Freshly Mixed Portland Cement Concrete |

* Equipment necessary for either pressure or volumetric air content.

Testing equipment shall have been inspected by the Department or through AAP. Testing equipment calibration files shall be made available upon request by the Department.

907-804.02.9--Testing Personnel. Technicians testing Portland cement concrete, for either acceptance or production control purposes, shall be certified by an accepted certification program. Recertification is required for each Class after five years. Certification requirements are listed in Table 2.

Table 2

| Required Certification | Concrete Technician’s Tasks |
|-----------------------------|--|
| MDOT Class I or ACI Grade I | Field Testing of Plastic Concrete (AASHTO T 23, T 119, T 121, T 141, T 152, T 196, and ASTM C 1064) |
| MDOT Class II | Aggregate Sampling, Total Moisture, and Sieve Analysis (AASHTO T 2, T 27, T 248, T 255) |
| MDOT Class III | Unit Weight and Voids of Aggregates, Specific Gravity; Concrete Mix Design, Capping and Compressive Strength of Cylindrical Concrete Specimens (AASHTO T 19, T 22, T 84, T 85, T 126, T 231) |

Any technicians can cap and break concrete test specimens or perform aggregate specific gravity tests upon certification by the Central Laboratory during the laboratory inspection of equipment.

907-804.02.10--Portland Cement Concrete Mix Design. At least 30 days prior to production of concrete, the Contractor shall submit to the Engineer proposed concrete mix designs. Materials shall be from approved sources meeting the requirements of the Standard Specifications. Proportions for the mix designs shall be for the class concrete required by the contract plans and shall meet the requirements of the “Master Proportion Table for Structural Concrete Design” listed in Table 3. **The concrete producer shall assign a permanent unique mix number to each mix design.** Each mix design will be field verified as required in 907-804.02.10.3.

**Table 3
MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN**

| CLASS | COARSE AGGREGATE SIZE NO. * | MAXIMUM WATER/CEMENTITIOUS ** RATIO | SPECIFIED COMPRESSIVE STRENGTH (f'_c) psi | MAXIMUM SLUMP *** inches | TOTAL AIR CONTENT % |
|-------|-----------------------------|-------------------------------------|---|--------------------------|---------------------|
| AA | 57 or 67 | 0.45 | 4000 | 3 | 3.0 to 6.0 |
| A | 57 or 67 | 0.45 | 4000 | 3 | 3.0 to 6.0 |
| B | 57 or 67 | 0.50 | 3500 | 4 | 3.0 to 6.0 |
| C | 57 or 67 | 0.55 | 3000 | 4 | 3.0 to 6.0 |
| D | 57 or 67 | 0.70 | 2000 | 4 | 3.0 to 6.0 |
| F | 67 | 0.40 | 5000 | 3 | **** |
| FX | 67 | (As required by special provisions) | | 3 | **** |
| S | 57 or 67 | 0.45 | 3000 | 8 | 3.0 to 6.0 |

* Maximum size aggregate shall conform to the concrete mix design for the specified aggregate.

** Maximum replacement of Portland cement by weight is 25% for fly ash or 50% for ground granulated blast furnace slag.

*** The slump may be increased up to 6 inches with an approved mid-range water reducer or up to 8 inches with an approved type F or G high range water reducer. A mid-range water reducer is classified as a water reducer that reduces the mix water a minimum of 8% when compared to a control mix with no admixtures.

**** No entrained air except for pilings exposed to seawater.

Either Type A, D, F, G, or mid-range chemical admixture, shall be used in all classes of concrete. **Any combinations of water reducing admixtures** shall be approved by the Engineer before their use.

907-804.02.10.1--Proportioning of Portland Cement Concrete Mix Design. Proportioning of Portland cement concrete shall be based on an existing mix of which the producer has field experience and documentation or based on a recently batched laboratory mix tested according to the required specifications.

907-804.02.10.1.1--Proportioning on the Basis of Previous Field Experience of Trial Mixtures. Where a concrete production facility has a record, based on at least 10 consecutive strength tests within the past 12 months, the standard deviation shall be calculated. The record of tests from which the standard deviation is calculated shall:

- a) Represent similar materials and conditions to those expected. Changes in materials and proportions within the test record shall not have been more closely restricted than those for the proposed work.
- b) Represent concrete produced to meet a specified strength.

- c) Consist of at least 10 consecutive tests (average of two cylinders per test).

The standard deviation, s , shall be calculated as:

$$s = \left[\sum (X_i - \bar{X})^2 \div (N - 1) \right]^{1/2}$$

where:

X_i = the strength result of an individual test

\bar{X} = the average of all individual tests in a series

N = number of tests in the series

When the concrete production facility does not have a record of tests for calculation of standard deviation, as required in the above formula, the requirements of 907-804.02.10.1.2 shall govern.

The required average compressive strength (f'_{cr}) used as the basis for selection of concrete proportions shall conform to the inequality listed below, while using a standard deviation, s , calculated as shown above.

$$f'_{cr} \geq f'_c + 1.43s$$

where:

f'_c = specified compressive strength of concrete, psi

f'_{cr} = required average compressive strength of concrete, psi

s = standard deviation, psi

1.43 represents the Lower Quality Index necessary to assure that 93% of compressive strength tests are above f'_c .

907-804.02.10.1.2--Proportioning on the Basis of Laboratory Trial Mixtures. When an acceptable record of field test results is not available, concrete proportions shall be established based on laboratory trial mixtures meeting the following restrictions:

- a) The combination of materials shall be those intended for use in the proposed work.
- b) Trial mixtures having proportions and consistencies suitable for the proposed work shall be made using the ACI 211.1 as a guide to proportion the mix design.
- c) Trial mixtures shall be designed to produce a slump within $\pm 3/4$ in. of the maximum permitted, and for air-entrained concrete, 6.0 ± 0.5 percent total air content. The temperature of freshly mixed concrete in trial mixtures shall be reported.
- d) For each proposed mixture, at least three compressive test cylinders shall be made and cured in accordance with AASHTO Designation: T 126. Each change of water-cement ratio shall be considered a new mixture. The cylinders shall be tested for strength in accordance with AASHTO Designation: T 22 at 28 days.

- e) The required average strength of laboratory trial mixes shall exceed f'_c by 1200 psi for concrete mix designs less than 5000 psi and by 1400 psi for concrete mix designs of 5000 psi or more.

907-804.02.10.2--Documentation of Average Strength. Documentation that the proposed concrete proportions will produce an average strength equal to or greater than the required average shall consist of the strength test records from field tests or results from laboratory trial mixtures.

907-804.02.10.3--Field Verification of Concrete Mix Design. All concrete mix designs will be reviewed by the Central Laboratory prior to use. Concrete mix designs disapproved will be returned to the Contractor with a statement explaining the disapproval. Concrete mix designs will only be tentatively **approved** pending field verification. Mix designs may be transferred to other projects without additional field verification testing, once the mix design has passed the field verification process. Qualification testing described in 907-804.02.10.1.1 will be required to transfer a mix design to another project.

The Contractor's Certified Quality Control Technicians shall test each concrete mix design upon the first placement of the mix. **Aggregates** and concrete **tests** during the first placement **shall be** as follows:

Aggregates

- Specific Gravity
- Moisture
- Gradation

Concrete

- Water Content
- Slump
- Air Content
- Unit Weight
- Yield
- 3, 7, & 28 day Strengths

The mix shall be verified to yield within 2.0% of the correct volume when all the mix water is added to the batch, producing a slump within a minus 1½ inches tolerance of the maximum permitted, and air-entrained concrete within a minus 1½ percent tolerance of the maximum allowable air content (allow a minimum of 4 inch slump with Type F or G chemical admixture). The mix shall be adjusted and retested, if necessary, on subsequent placements until the above mentioned properties are met. Any mix design adjustments are to be made by a Class III Certified Technician representing the Contractor. After the mix design has been verified and adjustments made, verification test results will be reviewed by the Central Laboratory. Any subsequent adjustments to the mix design shall be reviewed by the Central Laboratory.

907-804.02.10.4--Adjustments of Laboratory Trial Mixtures. If the concrete mix design was proportioned on the basis of laboratory trial mixture, after ten compressive tests have been performed of which a standard deviation is calculated, the formula in 907-804.02.10.1.1 may be used to adjust the mix design as long as the average strength is more than the calculated required average compressive strength (f'_{cr}) and the adjusted mix design contains the water/cement ratio requirement listed in Table 3. Any adjustments of the concrete mix design shall necessitate repeat of field verification procedure as described in 907-804.02.10.3

907-804.02.11--Concrete Batch Plants. The concrete batch plant shall meet the requirements of the National Ready Mixed Concrete Association Quality Control Manual,

Section 3, Plant Certification Checklist. A copy of the checklist along with proof of calibration of batching equipment, i.e. scales, water meter and admixture dispenser, shall be furnished to the Project Engineer 45 days prior to the production of concrete. The plant shall meet the requirements of a semi-automatic system or automatic system as described in the checklist and be capable of recording batch weights.

Mixer trucks to be used on the project are to be listed in the checklist and shall meet the requirements of the checklist.

The concrete batch plant shall have available adequate facilities to cool concrete during hot weather.

The concrete batch plant shall have a moisture meter on the fine aggregate bin capable of:

- a) Automatically compensating moisture weight in fine aggregate for an automatic batching system,
- or
- b) Moisture compensation indicated from meter be preset in fine aggregate in a semi-automatic system.

For small volume projects, where the total volume of concrete is less than two thousand (2000) cubic yards, the batch plant can be a manually operated plant with a moisture meter visible to the plant operator.

907-804.02.12--Contractor's Quality Control. The Contractor shall provide and maintain a quality control system that will provide reasonable assurance that all materials and products submitted to the Department for acceptance will conform to the contract requirements, whether manufactured or processed by the Contractor or procured from suppliers, subcontractors or vendors.

The Contractor shall perform, or have performed, the inspections and tests required to substantiate product conformance to contract document requirements and shall also perform, or have performed, all inspections and tests otherwise required.

The Contractor's quality control inspections and tests shall be documented and shall be available for review by the Engineer throughout the life of the contract.

The Contractor shall maintain standard equipment and qualified personnel as required to assure conformance to contract requirements.

907-804.02.12.1--Quality Control Plan. The Contractor shall prepare a Quality Control Plan detailing the type and frequency of inspection sampling and testing deemed necessary to measure and control the various properties of materials and construction governed by the specifications. As a minimum, the sampling and testing plan shall detail sampling location, sampling techniques and test frequency. As set out in these specifications, quality control sampling and testing performed by the Contractor shall be used by the Department for determination of acceptability of the concrete. The Quality Control Plan shall be submitted in writing to the Engineer for approval 45 days prior to the production of concrete.

The Plan shall identify the personnel responsible for the Contractor's quality control. This shall include the company official who will act as liaison with Department personnel, as well as the Certified Technician who will direct the inspection program.

The class(es) of concrete involved will be listed separately. If an existing mix design(s) is to be used, the mix design number(s) as previously approved shall be listed.

Quality control sampling, testing, and inspection shall be an integral part of the Contractor's Quality Control Plan. In addition to the above requirements, the Contractor's Quality Control Plan shall document the quality control requirements shown in Table 4, "CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL". The quality control activities shown in the table are considered to be normal activities necessary to control the production and placing of a given product or material at an acceptable quality level. To facilitate the Department's activities, all completed gradation samples shall be retained by the Contractor until further disposition is designated by the Department.

The Contractor's Quality Control Plan shall encompass the requirements of AASHTO M 157 into concrete production and control, equipment requirements, testing, and batch ticket information. The requirement of Section 11.7 of AASHTO M 157 shall be followed except, on arrival to the job site, a maximum of 1½ gallons per cubic yard shall be allowed to be added to bring the slump within the required limits. Water shall not be added at a later time.

It is intended that sampling and testing be in accordance with standard methods and procedures, and that measuring and testing equipment be standard and properly calibrated. If alternative sampling methods and procedures, and inspection equipment are to be used, they shall be detailed in the Quality Control Plan.

907-804.02.12.1.1--Elements of Plan. The Plan shall address all elements that affect the quality of the structural concrete including but not limited to the following:

- 1) Mix Design(s)
- 2) Aggregate Uniformity
- 3) Quality of Components
- 4) Stockpile Management
- 5) Batching - Including any added water
- 6) Mixing and Transportation - Including time from batching to completion of delivery
- 7) Concrete Batch Weights for each material.
- 8) Initial Mix Properties - Including temperature, air content, and consistency
- 9) Placement and Consolidation
- 10) Compressive Strength
- 11) Finishing and Curing
- 12) Conditions for Admixture Type and Dosage Rates
- 13) Procedures for Corrective Actions for Non Compliance of Specifications
- 14) Procedure for Controlling Concrete Temperatures

907-804.02.12.1.2--Personnel Requirements.

- 1) The Plan shall detail:
 - a) The frequency of sampling and testing, coordination of activities, corrective actions to be taken, and documentation.
 - b) How the duties and responsibilities are to be accomplished and documented, and whether more than one Certified Technician is required.
 - c) The criteria used by the Technician to correct or reject unsatisfactory materials.
- 2) The Certified Technician shall perform and use quality control tests and other quality control practices to assure that delivered materials and proportioning meet the requirements of the mix design including temperature, slump, air content, and strength

and shall periodically inspect all equipment used in transporting, proportioning, and mixing.

- 3) The Contractor's Designated Technician shall periodically inspect all equipment used placing, consolidating, finishing, and curing to assure it is operating properly and that placement, consolidation, finishing, and curing conform with the mix design and other contract requirements.

907-804.02.12.2--Documentation. The Contractor shall maintain adequate records of all inspections and tests. The records shall indicate the nature and number of observations made, the number and type of deficiencies found, date and time of samples taken, the quantities approved and rejected, and the nature of corrective action taken as appropriate. The Contractor's documentation procedures will be subject to approval of the Department prior to the start of the work and to compliance checks during the progress of the work.

All conforming and non-conforming inspections and test results shall be kept complete and shall be available at all times to the Department during the performance of the work. Forms shall be on a computer-acceptable medium where required. Batch tickets and gradation data shall be documented in accordance with Department requirements. Copies shall be submitted to the Department as the work progresses.

Test data for Portland cement concrete, including gradation, shall be charted in accordance with the applicable requirements.

The Contractor may use additional control charts as deemed appropriate. It is normally expected that testing and charting will be completed within 24 hours after sampling.

All charts and records documenting the Contractor's quality control inspections and tests shall become the property of the Department upon completion of the work.

907-804.02.12.3--Corrective Action. The Contractor shall take prompt action to correct conditions that have resulted, or could result, in the submission to the Department of materials and products that do not conform to the requirements of the contract documents. All corrective actions shall be documented.

907-804.02.12.4--Non-Conforming Materials. The Contractor shall establish and maintain an effective and positive system for controlling non-conforming material, including procedures for its identification, isolation and disposition. Reclaiming or reworking of non-conforming materials shall be in accordance with procedures acceptable to the Department.

All non-conforming materials and products shall be positively identified to prevent use, shipment, and intermingling with conforming materials and products. Holding areas, mutually agreeable to the Department and the Contractor, shall be provided by the Contractor.

**TABLE 4
CONTRACTOR'S MINIMUM REQUIREMENTS FOR QUALITY CONTROL**

| Portland Cement Concrete | | |
|------------------------------------|--|--------------------------------|
| Control Requirement | Frequency | AASHTO/ASTM Designation |
| A. PLANT AND TRUCKS | | |
| 1. Mixer Blades | Prior to start of job & weekly | |
| 2. Scales | Daily | |
| a. Tared | Prior to start of job and/or every 6 mo. | |
| b. Calibrate | Weekly | |
| c. Check Calibration | | |
| 3. Gauges & Meters - Plant & Truck | | |
| a. Calibrate | Prior to start of job and/or every 6 mo. | |
| b. Check Calibration | Weekly | |
| 4. Admixture Dispenser | | |
| a. Calibrate | Prior to start of job and/or every 6 mo. | |
| b. Check Operation & Calibration | Daily | |
| B. AGGREGATES | | |
| 1. Sampling | | T 2 |
| 2. Fine Aggregate | | |
| a. Gradation / FM | 250 yd ³ Concrete | T 27 |
| b. Moisture | Check Meter Against Test Results Weekly | T 255 |
| c. Specific Gravity / Absorption | 2500 yd ³ Concrete | T 84 |
| 3. Coarse Aggregates | | |
| a. Gradation / FM | 250 yd ³ Concrete | T 27 |
| b. Moisture | Minimum of once daily or more as needed to control production | T 255 |
| c. Specific Gravity / Absorption | 2500 yd ³ Concrete | T 85 |
| C. PLASTIC CONCRETE | | |
| 1. Sampling | | T 141 |
| 2. Air Content | First load then one per 50 yd ³ | T 152 or T 196 |
| 3. Slump | First load then one per 50 yd ³ | T 119 |
| 4. Compressive Strength | One set (two cylinders) for 0-100 yd ³ inclusive and one set for each additional 100 yd ³ or fraction thereof for each class concrete delivered and placed on a calendar day from a single supplier. A test shall be the average of two cylinders. | T 22, T 23, T 231 |
| 5. Yield | Each 400 yd ³ | T 121 |
| 6. Temperature | With each sample | ASTM C 1064 |

907-804.02.13--Quality Assurance Sampling and Testing. Quality Assurance (QA) inspection and testing shall be provided by the Department to assure that the Contractor's Quality Control (QC) testing meets the requirements of these specifications.

Acceptance of the material is based on the inspection of the construction, monitoring of the Contractor's quality control program, QC test results, and the comparison of the QA test

results to the QC test results. The Department may use the results of the Quality Control Plan as a part of the acceptance procedures, **provided:**

- a) The Department's inspection and monitoring activities indicate that the Contractor is following the approved Quality Control Plan and,
- b) The results from the Contractor's quality control and the Department's quality assurance testing of aggregate both meet gradation requirements; and Contractor's and Department's concrete strengths compare when using the data comparison computer program with an alpha value of 0.01 for large volume projects ($\geq 2000 \text{ yd}^3$); or, strength comparisons are within 990 psi for small volume projects ($< 2000 \text{ yd}^3$).

The minimum frequency for QA testing of aggregate and plastic concrete by the Department will follow the frequencies listed in Table 5, "DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE".

When it is determined that the Contractor's QC test results of aggregate gradation and concrete compressive strengths are comparative to that of the Department's QA test results, then the Department's QA testing frequency can be reduced to a frequency of no less than 50 percent of the frequency for testing listed in the Table 5.

**TABLE 5
DEPARTMENT'S MINIMUM REQUIREMENTS FOR QUALITY ASSURANCE**

| Quality Assurance Tests | Frequency | AASHTO/ASTM Designation |
|---------------------------------------|--|-------------------------|
| A. AGGREGATES | | |
| 1. Sampling | | T 2 |
| 2. Fine Aggregate Gradation and FM | 250 yd ³ Concrete | T 27 |
| 3. Coarse Aggregates Gradation and FM | 250 yd ³ Concrete | T 27 |
| B. PLASTIC CONCRETE | | |
| 1. Sampling | | T 141 |
| 2. Air Content | First load, then every 100 yd ³ | T 152 or T 196 |
| 3. Slump | First load, then every 100 yd ³ | T 119 |
| 4. Compressive Strength | One set (two cylinders) for every 100 yd ³ inclusive. A test shall be the average of two cylinders. | T 22, T 23, T 231 |
| 5. Temperature | With each sample | ASTM C 1064 |

Periodic inspection by the Department of the Contractor's QC testing and production will continue through the duration of the project. Weekly reviews will be made of the Contractor's QC records and charts. Comparison of data of the Contractor's QC strength test results to those of the Department's QA strength test results will be made monthly during concrete production periods according to Department Standard Operating Procedures. If the Contractor's QC strength test results fail to compare to those of the Department's QA strength test results, Department testing will continue as shown in Table 5 until the Contractor's and Department's strength test data compare.

907-804.02.13.1--Basis of Acceptance.

907-804.02.13.1.1--Slump. Slump of plastic concrete shall meet the requirements of Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.2--Air. Total air content of concrete shall be within the specified range for the class of concrete listed in Table 3: MASTER PROPORTION TABLE FOR STRUCTURAL CONCRETE DESIGN. A check test shall be made on another portion of the sample before rejection of any load.

907-804.02.13.1.3--Yield. If the yield of the concrete mix design is more than plus or minus 3% of the designed volume, the mix shall be adjusted by a Class III Certified Technician representing the Contractor to yield the correct volume plus or minus 3%.

907-804.02.13.1.4--Temperature. Cold weather concreting shall follow the requirements of 907-804.03.16.1. Hot weather concreting shall follow the requirements of 907-804.03.16.2 except the maximum allowable temperature for concrete shall be 95°F for concrete mixes containing pozzolanic materials as a replacement of Portland cement and 90°F for concrete mixes without pozzolanic materials, when measured according to ASTM C 1064. Concrete with a temperature more than the maximum allowable temperature shall be rejected and not used in Department work.

907-804.02.13.1.5--Compressive Strength. Laboratory cured concrete compressive strength tests shall conform to the specified strength (f'_c) listed in the specifications. Concrete represented by compressive strength test below the specified strength (f'_c) may be removed and replaced by the Contractor. If the Contractor elects not to remove the material, it will be evaluated by the Department as to the adequacy for the use intended. All concrete evaluated as unsatisfactory for the intended use shall be removed and replaced by the Contractor at no additional cost to the Department. For concrete allowed to remain in place, reduction in payment will be as follows:

Large Volume Projects (³ 2000 yd³). When the evaluation indicates that the work may remain in place, a statistical analysis will be made of the QC and QA concrete test results. If this statistical analysis indicates at least 93% of the material would be expected to have a compressive strength equal to or greater than the specified strength (f'_c) and 99.87% of the material would be expected to have a compressive strength at least one standard deviation above the allowable design stress (f_c), the work will be accepted. If the statistical analysis indicates that either of the two criteria are not met, the Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c - (f_c + s)} \times 100$$

where:

- f'_c = Specified 28-day compressive strength, psi
- X = Individual compressive strength below f'_c , psi
- s = standard deviation, psi*
- f_c = allowable design stress, psi

* Standard deviation used in the above reduction of pay formula shall be calculated from the nine preceding compressive strengths test results plus the individual compressive strength below f'_c . If below f'_c strengths occur during the project's first ten compressive strength tests, the

standard deviation shall be calculated from the first ten compressive strength tests results.

Small Volume Projects (< 2000 yd³). When the evaluation indicates that the work may remain in place, a reduction in pay (percentage) will be based on a comparison of the deficient 28-day test result to the specified strength. The Engineer will provide for an adjustment in pay as follows for the material represented by the test result.

Total Pay on Material in Question = Unit Price - (Unit Price x % Reduction)

$$\% \text{ Reduction} = \frac{(f'_c - X)}{f'_c} \times 100$$

where:

f'_c = Specified 28-day compressive strength, psi

X = Individual compressive strength below f'_c , psi

907-804.02.14--Dispute Resolution. Disputes over variations between Contractor's QC test results and the Department's QA test results shall be resolved at the lowest possible level. When there are significant discrepancies between the QC test results and the QA test results, the Contractor's Quality Control Manager, the Project Engineer, and/or the District Materials Engineer shall look for differences in the procedures, and correct the inappropriate procedure before requesting a third party resolution.

If the dispute cannot be resolved at the project or District level, the Department's Central Laboratory will serve as a third party to resolve the dispute. The Central Laboratory's decision shall be binding.

The Contractor shall be responsible for the cost associated with the third party resolution if the final decision is such that the Department's QA test results were correct. Likewise, the Department will be responsible for the cost when the final decision is such that the Contractor's QC test results were correct.

907-804.03--Construction Requirements.

907-804.03.1--Measurement of Materials.

907-804.03.1.1--General. The accuracy for measuring materials shall be in accordance with AASHTO Designation: M 157.

907-804.03.1.2--Measurement by Weighing. Except when otherwise specified or authorized, materials shall be measured by weighing. The apparatus provided for weighing materials shall be suitably designed and constructed for this purpose. Cement and aggregates shall be weighed separately. Cement in standard bags need not be weighed, but bulk cement shall be weighed. The mixing water shall be measured by volume or by weight. All measuring devices shall be subject to approval.

907-804.03.2--Blank.

907-804.03.3--Blank.

907-804.03.4--Hand Mixing. Hand mixing of concrete will not be allowed.

907-804.03.5--Delivery. The plant supplying concrete shall have sufficient capacity and transporting apparatus to insure continuous delivery at the rate required. The rate of delivery shall be such as to provide for the proper continuity in handling, placing, and furnishing of the concrete. The rate shall be such that the interval between batches shall not exceed 20 minutes. The methods of delivering and handling the concrete shall be that which will facilitate placing with minimum rehandling and without damage to the structure or the concrete.

907-804.03.6--Handling and Placing Concrete.

907-804.03.6.1--General. Prior to placing concrete, all reinforcement shall have been accurately placed in the position shown on the plans and fastened as set out in Section 805. All sawdust, chips, and other construction debris and extraneous matter shall have been removed from the interior of the forms. Temporary struts, braces, and stays holding the forms in correct shape and alignment shall be removed when the concrete placing has reached an elevation rendering their service unnecessary. These temporary members shall be entirely removed from the forms and shall not be buried in the concrete.

No concrete shall be placed until the forms and reinforcement have been inspected.

Except as provided for truck mixers and truck agitators, concrete shall be placed in the forms within 30 minutes after the time that the cement is first added to the mix.

Concrete shall be placed so as to avoid segregation of materials and displacement of reinforcement. The use of troughs, chutes, and pipes over 25 feet in length for gravity conveyance of concrete to the forms, will not be permitted except when authorized by the Engineer and subject to the production of quality concrete.

Only approved mechanical conveyors will be permitted.

Open troughs and chutes shall be metal or metal lined. The use of aluminum pipes, chutes or other devices made of aluminum that come into direct contact with the concrete shall not be used. Where steep slopes are required, the chutes shall be equipped with baffles or be in short sections that change the direction of movement.

All chutes, troughs, and pipes shall be kept clean and free from coatings of hardened concrete by thoroughly flushing with water after each run. Water used for flushing shall be discharged clear of the structure.

When placing operations involve dropping the concrete more than five feet, it shall be deposited through sheet metal or other approved pipes to prevent segregation and unnecessary splashing. The pipes shall be made in sections to permit discharging and raising as the placement progresses. A non-jointed pipe may be used if sufficient openings of the proper size are provided to allow for the flow of the concrete into the shaft. As far as practicable, the pipes shall be kept full of concrete during placing, and their ends shall be kept buried in the newly placed concrete.

Except as hereinafter provided, concrete shall be placed in horizontal layers not more than 12 inches thick. When, with the Engineer's approval, less than the complete length of a layer is placed in one operation, it shall be terminated in a vertical bulkhead. Each layer shall be placed and compacted before the preceding layer has taken its initial set and shall be compacted so as to avoid the formation of a construction joint with the preceding layer.

907-804.03.6.2--Consolidation. Concrete, during and immediately after depositing, shall be thoroughly consolidated by the use of approved mechanical vibrators and suitable spading tools. Hand spading alone will be permitted on small structural members such as railing and small culvert headwalls. Mechanical vibration of concrete shall be subject to the following:

- A. The vibration shall be internal unless special authorization of other methods is given by the Engineer or as provided herein.
- B. In general, vibrators shall be a type and design approved by the Engineer. They shall be capable of vibration frequencies of at least 4500 impulses per minute.
- C. The intensity of vibration shall be such as to visibly affect a mass of concrete of one inch slump over a radius of at least 18 inches.
- D. The Contractor shall provide sufficient vibrators to properly compact each batch immediately after it is placed in the forms.
- E. Vibrators shall be manipulated so as to thoroughly work the concrete around the reinforcement and embedded fixtures and into the corners and angles of the forms.

Vibration shall be applied at the point of deposit and in the area of freshly deposited concrete. The vibrators shall be inserted into and withdrawn out of the concrete slowly. The vibration shall be of sufficient duration and intensity to thoroughly compact the concrete, but shall not be continued so as to cause segregation. Vibration shall not be continued at any one point to the extent that localized areas of grout are formed.

Application of vibrators shall be at points uniformly spaced and not farther apart than twice the radius over which the vibration is visibly effective.

- F. Vibration shall not be applied directly or through the reinforcement to sections or layers of concrete which have taken initial set. It shall not be used to make concrete flow in the forms over distances so great as to cause segregation, and vibrators shall not be used to transport concrete in the forms.
- G. Vibration shall be supplemented by spading as necessary to insure smooth surfaces and dense concrete along form surfaces, in corners, and in locations impossible to reach with vibrators.
- H. These provisions shall apply to the filler concrete for steel grid floors except that the vibrator shall be applied to the steel.
- I. These provisions shall apply to precast piling, concrete cribbing, and other precast members except that, if approved by the Engineer, the manufacturer's methods of vibrations may be used.

When hand spading is used for consolidation, a sufficient number of workmen with spading tools shall be provided. They will be required to flush a thin layer of mortar to all the surfaces and thoroughly and satisfactorily consolidate the concrete.

The entire operation of depositing and consolidating the concrete shall be conducted so that the concrete shall be smooth and dense and free from honeycomb or pockets of segregated aggregate.

907-804.03.6.3--Discontinuance of Placing. When placing is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints insofar as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel. Where a "feather edge" might be produced at a construction joint, such as in the sloped top surface of a wing wall, an inset form work shall be used in the preceding layer to produce a blocked out portion that will provide an edge thickness of at least six inches in the succeeding layer. Work shall not be discontinued within 18 inches of the top of any face unless provision has been made for a coping less than 18 inches thick. In this case and if permitted by the Engineer, the construction joint may be made at the under side of the coping.

Immediately following the discontinuance of placing concrete, all accumulations of mortar splashed on the reinforcement and the surface of forms shall be removed. Dried mortar chips and dust shall not be puddled into the unset concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to break or injure the concrete-steel bond at and near the surface of the concrete while cleaning the reinforcement. After initial set the forms shall not be jarred, and no strain shall be placed on the ends of projecting reinforcement until the concrete has sufficiently set to insure against any damage by such jarring or strain.

907-804.03.6.4--Placing Bridge Concrete. The method and sequence of placing concrete shall conform to the provisions and requirements set forth for the particular type of construction.

907-804.03.6.4.1--Foundations and Substructures. Concrete seals shall be placed in accordance with 907-804.03.9. All other concrete for foundations shall be poured in the dry unless otherwise stipulated or authorization is given in writing by the Engineer to do otherwise. Concrete shall not be placed in foundations until the foundation area has been inspected and approved.

Unless otherwise specified, the placement of concrete in the substructure shall be in accordance with the general requirements of 907-804.03.6.

Unless otherwise directed, concrete in columns shall be placed in one continuous operation, and shall be allowed to set at least 12 hours before the caps are placed.

907-804.03.6.4.2--Superstructure. For simple spans, concrete shall preferably be deposited by beginning at the center of the span and working toward the ends. For continuous spans, concrete shall be deposited as shown on the plans. Concrete in girders shall be uniformly deposited for the full length of the girder and brought up evenly in horizontal layers.

Unless otherwise permitted by the Engineer, concrete shall not be placed in the superstructure until the column forms have been stripped sufficiently to determine the character of the concrete in the columns. Unless otherwise permitted by the Engineer, the load of the superstructure shall not be placed on pile bents until the caps have been in place at least seven days and shall not be placed on other types of bents until the bents have been in place at least 14 days.

In placing concrete around steel shapes, it shall be placed on one side of the shape until it flushes up over the bottom flange of the shape on the opposite side, after which it shall be placed on both sides to completion.

Concrete in girder haunches less than three feet in height shall be placed at the same time as that in the girder stem. Whenever a haunch or fillet has a height of three feet or more at the abutment or columns, the haunch and the girder shall be poured in three successive stages:

first, up to the lower side of the haunch; second, to the lower side of the girder; and third, to completion.

Except when intermediate construction joints are specified, concrete in slab, T-beam, or deck-girder spans shall be placed in one continuous operation for each span.

The floors and girders of through-girder superstructures shall be placed in one continuous operation unless otherwise specified, in which case special shear anchorage shall be provided to insure monolithic action between girder and floor.

Concrete in box girders shall be placed as shown on the plans.

Concrete shall not be chuted directly into the forms of the span and shall be placed continuously with sufficient speed to be monolithic and to allow for finishing before initial set.

907-804.03.7--Pneumatic Placing. Pneumatic placing of concrete will be permitted only if specified in the contract or if authorized by the Engineer. The equipment shall be so arranged that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by pneumatic means the equipment shall be suitable in kind and adequate in capacity for the work. The machine shall be located as close as practicable to the place of deposit. The position of the discharge end of the line shall not be more than 10 feet from the point of deposit. The discharge lines shall be horizontal or inclined upwards from the machine. At the conclusion of placement the entire equipment shall be thoroughly cleaned.

907-804.03.8--Pumping Concrete. Placement of concrete by pumping will be permitted only if specified in the contract or if authorized in writing by the Engineer. If used, the equipment shall be arranged so that no vibrations result which might damage freshly placed concrete.

Where concrete is conveyed and placed by mechanically applied pressure, the equipment shall be suitable in kind and adequate in capacity for the work. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe line, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients. After this operation, the entire equipment shall be thoroughly cleaned.

The use of aluminum pipe as a conveyance for the concrete will not be permitted.

907-804.03.9--Depositing Concrete Under Water. Concrete shall not be deposited in water except with the approval of the Engineer.

Concrete deposited under water shall be Class S.

Concrete deposited under water shall be carefully placed in a compact mass in its final position by means of a tremie, a bottom dump bucket, or other approved method and shall not be disturbed after being deposited. Special care shall be exercised to maintain still water at the point of deposit. No concrete shall be placed in running water and all form work designed to retain concrete under water shall be water-tight. The consistency of the concrete shall be carefully regulated, and special care shall be exercised to prevent segregation of materials.

Concrete seals shall be placed continuously from start to finish, and the surface of the concrete shall be kept as nearly horizontal as practicable at all times. To insure thorough

bonding, each succeeding layer of a seal shall be placed before the preceding layer has taken initial set.

When a tremie is used, it shall consist of a tube having a diameter of at least 10 inches and constructed in sections having flanged couplings fitted with gaskets. The means of supporting the tremie shall be such as to permit the free movement of the discharge over the entire top surface of the work and to permit it to be lowered rapidly when necessary to choke off or retard the flow of concrete. The discharge end shall be closed at the start of the work so as to prevent water entering the tube and shall be entirely sealed. The tremie tube shall be kept full to the bottom of the hopper. When a batch is dumped into the hopper, the flow of concrete shall be induced by slightly raising the discharge end, always keeping it in the deposited concrete. The flow is then stopped by lowering the tremie. The flow shall be continuous until the work is completed.

Depositing of concrete by the drop bottom bucket method shall conform to the following: The top of the bucket shall be open. The bottom doors shall open freely downward and outward when tripped. The bucket shall be completely filled and slowly lowered to avoid backwash. It shall not be dumped until it rests on the surface upon which the concrete is to be deposited and when discharged shall be withdrawn slowly until well above the concrete.

Dewatering may proceed when the concrete seal is sufficiently hard and strong. As a general rule, this time will be 48 hours for concrete made with high-early-strength cement and three days for concrete made with other types of cement. All laitance and other unsatisfactory material shall be removed from the exposed surface by scraping, chipping, or other means which will not injure the surface of the concrete.

907-804.03.10--Construction Joints.

907-804.03.10.1--General. Unless otherwise approved by the Engineer, construction joints shall be made only where located on the plans or shown in the pouring schedule.

In the event the Contractor plans to deviate from the pouring schedule for spans as shown on the plans, the Contractor shall submit a proposed pouring schedule to the Bridge Engineer for approval prior to commencing the pour.

If not detailed on the plans, or in the case of emergency, construction joints shall be placed as directed by the Engineer. Shear keys or inclined reinforcement shall be used where necessary to transmit shear or to bond the two sections together.

907-804.03.10.2--Bonding. Before depositing new concrete on or against concrete which has hardened, the forms shall be retightened. The surface of the hardened concrete shall be roughened as required by the Engineer and in a manner that will not leave loosened particles of aggregate or damaged concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance and saturated with water. When directed by the Engineer, the cleaned and saturated surfaces, including vertical and inclined surfaces, shall first be thoroughly covered with a coating of mortar or neat cement grout against which the new concrete shall be placed before the grout has attained its initial set.

The placing of concrete shall be carried continuously from joint to joint. The face edges of all joints which are exposed to view shall be carefully finished, true to line and elevation.

In order to bond successive courses suitable depressed or raised keys of the designated size shall be constructed. Raised keys shall be monolithic with the concrete of the lower course.

907-804.03.11--Concrete Exposed to Seawater. Unless otherwise specifically provided, concrete for structures exposed to seawater shall be Class AA concrete (Reference 907-

804.02.10). The clear distance from the face of the concrete to the nearest face of reinforcing steel shall be at least four inches. The mixing time and the water content shall be carefully controlled and regulated so as to produce concrete of maximum impermeability. The concrete shall be thoroughly compacted, and stone pockets shall be avoided. No construction joints shall be formed between the levels of extreme low water and extreme high water as determined by the Engineer. Between these levels, seawater shall not come in direct contact with the new concrete until at least 30 days have elapsed. The surface concrete as left by the forms shall be left undisturbed.

907-804.03.12--Blank.

907-804.03.13--Falsework. The Contractor shall submit to the Engineer four copies of structural design analysis and detail drawings, which show the method of falsework or centering. These designs and detail plans shall be prepared and bear the seal of a Registered Professional Engineer with experience in falsework design.

Falsework plans shall include falsework elevations together with all other dimensions and details which is considered necessary for the construction.

Other pertinent data needed is size and spacing of all falsework members and minimum bearing requirements for false piles.

Upon completion of falsework erection, the Registered Professional Engineer shall certify that the erected falsework is capable of supporting the load for construction.

Falsework piling shall be spaced and driven so that the bearing value of each pile is sufficient to support the load that will be imposed upon it. The bearing value of the piles should be calculated according to the appropriate formula given in Section 803.

For designing falsework and centering, a weight of 150 pounds per cubic foot shall be assumed for green concrete. All falsework shall be designed and constructed to provide the necessary rigidity and to support the loads without appreciable settlement or deformation. The Contractor may be required to employ screw jacks or hardwood wedges to take up slight settlement in the falsework either before or during the placing of concrete. An allowance shall be made for anticipated compressibility of falsework and for the placement of shims, wedges, or jacks to produce the permanent structural camber shown on the plans. If during construction, any weakness develops and the falsework shows any undue settlement or distortion, the work shall be stopped, the part of the structure affected removed, and the falsework strengthened before work is resumed. Falsework which cannot be founded on a satisfactory footing shall be supported on piling, which shall be spaced, driven, and removed (reference 907-804.03.15) in a manner approved by the Engineer.

All structures built across a public street or highway on which maintenance of traffic is required, shall have falsework so arranged that a vertical clearance of at least 12'-6" is provided. Unless otherwise specified, a horizontal clearance of at least the width of the traveled way shall be provided at all times. If the vertical clearance is less than 13'-6" or the horizontal clearance is less than the full crown width of the roadway, the Contractor shall install and maintain appropriate safety devices, clearance signs and warning lights, and shall notify the Engineer sufficiently in advance of restricting the clearance for the Engineer to advise both the Traffic Engineering and the Maintenance Divisions. All traffic control and safety devices shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).

907-804.03.14--Forms.

907-804.03.14.1--General. Forms shall be wood, metal, or other material approved by the Engineer. All forms shall be built mortar-tight and sufficiently rigid to prevent distortion due to pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the opening of joints due to shrinkage. The forms shall be substantial and unyielding and shall be so designed that the finished concrete will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

Minimum requirements for slab overhang forms shall be 3/4-inch plywood supported on 2" x 6" S4S wood timbers placed flatwise on 16-inch centers.

Adjustable brackets for support of slab overhang forms shall be spaced at a maximum distance of 3'-0" center to center unless specifically approved otherwise. Grade points for forms shall coincide with the location of the adjustable form brackets.

Forms for surfaces exposed to view shall be of uniform thickness with a smooth inside surface of an approved type. Joints in forms for exposed surfaces shall be closely fitted to eliminate fins, stone pockets, or other variations in the surface of the concrete which would mar a smooth and uniform texture.

Forms shall be filleted at all sharp corners and shall be given a bevel or draft in the case of all projections, such as girders and copings, to insure easy removal.

Metal ties or anchorages within the forms shall be so constructed as to permit their removal, without injury to the concrete, to a depth of at least the reinforcing steel clearance shown on the plans. In case ordinary wire ties are permitted, all wires, upon removal of the forms, shall be cut back at least 1/4 inch from the face of the concrete with chisels or nippers. Nippers shall be used for green concrete. All fittings for metal ties shall be designed so that upon their removal the cavities which are left will be the smallest practicable size. The cavities shall be filled with cement mortar and the surface left sound, smooth, even, and uniform in color.

Forms shall be set and maintained to the lines designated until the concrete is sufficiently cured for form removal. Forms shall remain in place for periods which shall be determined as hereinafter specified. If forms are deemed to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer will order the work stopped until the defects have been corrected.

The shape, strength, rigidity, water-tightness, and surface smoothness of reused forms shall be maintained at all times. Warped or bulged lumber shall be resized before being reused. Forms which are unsatisfactory in any respect shall not be reused.

Access to the lower portions of forms for narrow walls and columns shall be provided for cleaning out extraneous material immediately before placing the concrete.

All forms shall be treated with an approved oil or saturated with water immediately before placing the concrete. For rail members or other members with exposed faces, the forms shall be treated only with an approved oil to prevent the adherence of concrete. Any material which will adhere to or discolor the concrete shall not be used.

When metal forms are used they shall be kept free from rust, grease, or other foreign matter which will discolor the concrete. They shall be of sufficient thickness and so connected that they will remain true to shape and line, and shall conform in all respects as herein prescribed for mortar tightness, filleted corners, beveled projections, etc. They shall be constructed so as to insure easy removal without injury to concrete. All inside bolt and rivet heads shall be countersunk.

All chamfer strips shall be dressed, straight, and of uniform width and shall be maintained as such at all times.

907-804.03.14.2--Stay-In-Place Metal Forms. The use of stay-in-place metal forms will not be allowed.

907-804.03.15--Removal of Falsework, Forms, and Housing. In the determination of the time for the removal of falsework, forms, and housing and the discontinuance of heating, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete, and the materials used in the mix. No forms or supports shall be removed prior to approval by the Engineer. During cold weather, removal of housing and the discontinuance of heating shall be in accordance with 907-804.03.16.1.

Concrete in the last pour of a continuous superstructure shall have attained a compressive strength of 2,400 psi, as determined by cylinder tests, prior to striking any falsework. It is important that falsework be removed as evenly as possible to prevent excessive deflection stresses in the spans.

At the Contractor's option and with the approval of the Engineer, the time for removal of forms may be determined by cylinder tests, in which case the Contractor shall furnish facilities for testing the cylinders. The facilities shall include an approved concrete testing machine of sufficient capacity and calibrated by an acceptable commercial laboratory. Tests shall be conducted in the presence of a Department representative to witness and record strengths obtained on each break or performed by a Department certified technician in an approved testing laboratory.

When form removal or placing of beams is not controlled by cylinder tests, Column A (exclusive of the days when the ambient temperature is below 40°F) herein shall apply as a guide for removal of forms and falsework. When cylinder tests are used, Column B shall be used. The cylinders shall be cured under conditions which are not more favorable than those existing for the portions of the structure which they represent.

If Type IP cement or Type I or II Portland cement plus fly ash is used, only Column B will be applicable.

| | Column A (Minimum Cure) | Column B (Minimum psi) |
|-----------------------------------|----------------------------|---------------------------|
| Forms: | | |
| Columns | 24 Hours | 1000 |
| Side of Beams | 24 Hours | 1000 |
| Walls (not under pressure) | 24 Hours | 1000 |
| Floor Slabs (overhead) | 7 Days | 2000 |
| Floor Slabs (between beams) | 7 Days | 2000 |
| Slab Spans | 14 Days | 2400 |
| Other Parts | 24 Hours | 1000 |
| Centering: | | |
| Under Beams | 14 Days | 2400 |
| Under Bent Caps | 7 Days | 2000 |
| Limitation for Placing Beams on: | | |
| Pile Bents (pile under beam) | 3 Days | 2000 |
| Frame Bents (two or more columns) | 7 Days | 2200 |
| Frame Bents (single column) | 14 Days | 2400 |

Methods of form removal likely to cause overstressing of the concrete shall not be used. Forms and supports shall be removed in a manner that will permit the concrete to uniformly and gradually take the stresses due to its own weight. Centers shall be gradually and uniformly lowered in a manner that will avoid injurious stresses in any part of the structure.

As soon as concrete for railings, ornamental work, parapets and vertical faces which require a rubbed finish has attained a safe strength, the forms shall be carefully removed without marring the surfaces and corners, the required finishing performed, and the required curing continued.

Prior to final inspection of the work, the Contractor shall remove all falsework, forms, excavated material or other material placed in the stream channel during construction. Falsework piles may be cut or broken off at least one foot below the mudline or ground line unless the plans specifically indicate that they are to be pulled and completely removed from the channel.

907-804.03.16--Cold or Hot Weather Concreting.

907-804.03.16.1--Cold Weather Concreting. In cold weather, the temperature of the concrete when delivered to the job site shall conform to the temperature limitations of "Temperature Limitations on Concrete when Delivered to Job Site" listed in Table 6 below.

When the Contractor proposes to place concrete during seasons when there is a probability of ambient temperatures lower than 40°F, the Contractor shall have available on the project the approved facilities necessary to enclose uncured concrete and to keep the temperature of the air inside the enclosure within the ranges and for the minimum periods specified herein.

When there are indications of temperatures of less than 40°F during the first four days after placement of the concrete, the concrete shall be protected from cold temperatures by maintaining a temperature between 50°F and 100°F for at least four days after placement and between 40°F and 100°F for at least three additional days. The Contractor shall use such heating equipment such as stoves, salamanders, or steam equipment as deemed necessary to protect the concrete. When dry heat is used, means of maintaining atmospheric moisture shall be provided.

One or more of the aggregates and/or mixing water may be heated. The aggregates may be heated by steam, dry heat or by placing in the mixing water which has been heated. Frozen aggregates shall not be used. When either aggregates or water are heated above 100°F, the aggregates and water shall be combined first in the mixer before the cement is added to avoid flash set. Cement shall not be mixed with water or with a mixture of water and aggregate having a temperature greater than 100°F.

The use of salt or other chemical admixtures in lieu of heating will not be permitted.

Before placing concrete, all ice or frost shall be removed from the forms and reinforcement.

In the case of concrete placed directly on or in the ground, such as for footings or bottom slabs, protection and curing during cold weather may be provided as set for concrete pavement under 501.03.20.3.

The Contractor shall assume all risk and added cost connected with the placing and protecting of concrete during cold weather. Permission given by the Engineer to place concrete during such time will in no way relieve the Contractor of responsibility for satisfactory results. Should it be determined at any time that the concrete placed under such conditions is

unsatisfactory, it shall be removed and replaced with satisfactory concrete by the Contractor without extra compensation.

TABLE 6
TEMPERATURE LIMITATIONS ON CONCRETE WHEN DELIVERED TO JOB SITE

| Ambient Temperature °F | Minimum Concrete Temperature °F | |
|---------------------------|---|---|
| | For sections with least dimension less than 12 in. | For sections with least dimensions 12 in. or greater |
| 30 to 45 | 60 | 50 |
| 0 to 30 | 65 | 55 |
| Below 0 | 70 | 60 |

907-804.03.16.2--Hot Weather Concreting. The manufacture, placement, and protection of concrete during hot weather requires special attention to insure that uniform slump ranges and satisfactory placement qualities are maintained, that surface cracking is held to a minimum, and that design strengths are produced.

907-804.03.17--Curing Concrete. Concrete surfaces shall be protected from premature drying by covering as soon as possible with a satisfactory curing material. When wetted burlap is used, it shall be not less than two thicknesses of Class 3 burlap or its equivalent, and the burlap shall be kept continuously and thoroughly wet. Careful attention shall be given to the proper curing and protection of concrete, and curing by the wetting method shall continue for a period of at least seven days after placing the concrete. If high-early-strength cement is used, this period may be reduced to four days.

Surfaces to have a Class 2 rubbed or sprayed finish and bridge deck surfaces when the atmospheric temperature is 90°F or above shall be cured only by wetting methods. The curing of concrete bridges with membrane curing will be permitted only under the conditions specified herein.

Surfaces on which curing is to be by liquid membrane shall be given the required surface finish prior to the application of curing compound. During the finishing period the concrete shall be protected by the water method of curing. Concrete surfaces cured by the liquid membrane method shall receive two applications of curing compound. The first application shall be applied immediately after the finishing is completed and accepted. Prior to applying the first application, the concrete shall be thoroughly wetted with water and the liquid membrane applied just as the surface film of water disappears. The second application shall be applied immediately after the first application has set. The rate of application of curing compound will be as prescribed by the Engineer with a minimum spreading rate per application of one gallon per 200 square feet of concrete surface. The coating shall be protected against marring for at least 10 days after the application of the curing compound. The coating on bridge decks shall receive extra attention and may require additional protection as required by the Engineer. All membrane marred or otherwise disturbed shall be given an additional coating. Should the surface coating be subjected repeatedly to injury, the Engineer may require that the water curing method be applied at once.

When using curing compound, the compound should be thoroughly mixed within an hour before use. If the use of curing compound results in a streaked or blotched appearance, the method shall be stopped and water curing applied until the cause of defective appearance is corrected.

Other precautions to insure the development of strength shall be taken as directed.

Adequate tarpaulins of ample size shall be on the project and used as necessary to protect the work in case of rain or other emergencies.

Conditions governing the placement of concrete and the requirements for the placement, protection, and curing of concrete during cold or hot weather shall conform to the limitations, conditions, and requirements stipulated in 907-804.03.16 as applicable.

907-804.03.18--Expansion and Fixed Joints, Bearings, Anchor Bolts, Plates, Castings, Pipes, Drains, Conduits, Etc. All joints shall be constructed according to details shown on the plans. The edges of the concrete at open or filled joints shall be chamfered or edged as indicated on the plans.

907-804.03.18.1--Open Joints. Open joints shall be placed in the locations shown on the plans and shall be constructed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material. The insertion and removal of the template shall be accomplished without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint unless so specified on the plans.

907-804.03.18.2--Filled Joints. Poured expansion joints and joints to be sealed with premolded materials shall be constructed similar to open joints. When premolded types are specified, the filler shall be placed in correct position as the concrete on one side of the joint is placed. When the form is removed, the concrete on the other side shall be placed. Adequate water stops of metal, rubber, or plastic shall be carefully placed as shown on the plans.

907-804.03.18.3--Premolded and Preformed Joint Seals. When preformed elastomeric compressive joint seals are specified, the previously formed and cured open joint shall be thoroughly cleaned of all foreign matter, the required adhesive uniformly applied, and the seal installed in accordance with the recommendations of the manufacturer of the seal.

When premolded filler is used for the joints in the roadway slab, the tops shall be adequately sealed with poured joint filler in accordance with details on the plans. Premolded filler shall be permanently fastened to an adjacent concrete surface by appropriate use of copper wire, copper nails, or galvanized nails.

907-804.03.18.4--Steel Joints. The plates, angles, or other structural shapes shall be accurately shaped at the shop to conform to the section of the concrete floor. Fabrication and painting shall conform to the specifications covering those items. When called for on the plans or in the special provisions, the material shall be galvanized in lieu of painting. Care shall be taken to insure that the surface in the finished plane is true and free of warping. Positive methods shall be employed in placing the joints to keep them in correct position during the placing of the concrete. The opening at expansion joints shall be that designated on the plans at normal temperature, and care shall be taken to avoid impairment of the clearance in any manner.

907-804.03.18.5--Water Stops. Adequate water stops of metal, rubber, or plastic shall be placed as shown on the plans. Where movement at the joint is provided for, the water stops shall be of a type permitting movement without injury. They shall be spliced, welded, or soldered to form continuous watertight joints.

907-804.03.18.6--Bearing Devices. Bearing plates, rockers, and other bearing devices shall be constructed according to details shown on the plans. Unless otherwise specified or set in plastic concrete, they shall be set in grout to insure uniform bearing. Structural steel and painting shall conform to the requirements of Section 810 and 814. When specified, the material shall be galvanized in lieu of painting. The rockers or other expansion bearing devices shall be set, considering the temperature at the time of erection, so that the required position of the device is provided.

At all points of bearing contact, concrete members shall be separated from underlying members by dimensioned bearing pads or by methods and/or materials specified on the plans.

When not otherwise specifically provided, contact areas between concrete super-structures and substructures shall be separated by three layers of [No. 15 \(Type I\)](#) roofing felt.

907-804.03.18.7--Friction Joints. Metal friction joints shall consist of plates as indicated on the plans and shall be securely anchored in correct position. All sliding surfaces shall be thoroughly coated with an approved graphite grease. Movement shall not be impeded by the concrete in which the plates are embedded.

907-804.03.18.8--Placing Anchor Bolts, Plates, Castings, Grillage, Conduits, Etc. All anchor bolts, plates, castings, grillage, conduits, etc. indicated on the plans to be placed in or on the concrete shall be placed, set, or embedded as indicated or as directed. These items of the construction shall be set in Portland cement mortar ([Subsection 714.11.5](#)) except that anchor bolts may, as permitted by the Engineer, be built into the masonry, set in drilled holes, or placed as the concrete is being constructed by inserting encasing pipe or oiled wooden forms of sufficient size to allow for adjustment of the bolts. After removal of the pipe or forms, the space around the bolts shall be filled with Portland cement mortar ([Subsection 714.11.5](#)) completely filling the holes. The bolt shall be set accurately and perpendicular to the plane of the seat.

Anchor bolts which are to be set in the masonry prior to the erection of the superstructure shall be carefully set to proper location and elevation with a template or by other suitable means.

When bed plates are set in mortar, no superstructure or other load shall be placed thereon until this mortar has been allowed to set for a period of at least 96 hours (subject to the restrictions for cold weather concreting in [907-804.03.16.1](#)). The mortar shall be kept well moistened during this period.

Weep hole drains shall be installed in abutments and retaining walls, and roadway drains or scuppers shall be installed in the roadway slabs in accordance with the details shown on the plans.

Where backfill is to be made at weep holes or openings in the structure, sand or stone chimneys or French drains shall be constructed as specified and shall extend through the portion of the backfill to be drained. Except as otherwise provided, the sand, stone, or slag used in this construction shall meet the requirements of [Subsection 704.04](#).

907-804.03.19--Finishing Concrete Surfaces.

907-804.03.19.1--Classes of Finishes. Surface finishes of exposed concrete surfaces shall be classified as follows:

- Class 1 - Ordinary Surface Finish
- Class 2 - Rubbed or spray Finish
- Class 3 - Tooled Finish
- Class 4 - Sand-Blast Finish
- Class 5 - Wirebrush or Scrubbed Finish
- Class 6 - Floated Surface Finish

907-804.03.19.2--Class 1, Ordinary Surface Finish. Immediately following the removal of forms, all fins and irregular projections shall be removed from all surfaces except from those which are not to be exposed or not to be waterproofed. On all surfaces, the cavities produced

by form ties and all other holes, honeycomb spots, broken corners or edges, and other defects shall be thoroughly cleaned, and after having been kept saturated with water for at least three hours shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportions used in the class of the concrete being finished. Mortar used in pointing shall be not more than one hour old. The mortar patches shall be cured as specified under 907-804.03.17. All construction and expansion joints shall be left carefully tooled and free of mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges.

The resulting surfaces shall be true and uniform. All surfaces which cannot be repaired to the satisfaction of the Engineer shall be given a Class 2 rubbed finish.

907-804.03.19.3--Class 2, Rubbed or Spray Finish.

907-804.03.19.3.1--Rubbed Finish. After removal of forms, the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as its condition will permit. Immediately before starting this work, the concrete shall be kept thoroughly saturated with water for at least three hours. Surfaces shall be rubbed with a medium course Carborundum stone using a small amount of mortar on its face. The mortar shall be composed of cement and sand mixed in the proportions used in the concrete being finished. Rubbing shall be continued until all form marks, projections, and irregularities have been removed, all voids are filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this time.

After all concrete above the surface being treated has been cast, the final finish shall be obtained by rubbing with a fine carborundum stone and water. This rubbing shall continue until the entire surface is of a smooth texture and uniform color.

After the final rubbing is completed and the surface has dried, it shall be rubbed with burlap to remove loose powder and objectionable marks.

907-804.03.19.3.2--Spray Finish. Prior to the spray finish, the concrete shall be given a Class 1 finish in accordance with 907-804.03.19.2, supplemented if necessary with a grout meeting the requirements of [Subsection 714.11](#) with fine aggregate modified to require 100 percent passing the No. 16 Sieve.

Grout shall be applied with burlap pads or float sponges, and as soon as the grout has dried the surface shall be brushed to remove all loose grout and the surface left smooth and free of air holes. Surfaces to be sprayed shall be free of efflorescence, flaking coatings, dirt, oil, and other foreign substances. Prior to application of the spray finish, the surfaces shall be free of moisture, as determined by sight and touch, and in a condition consistent with the manufacturer's published recommendations.

The spray finish shall be applied with heavy duty spray equipment capable of maintaining a constant pressure as necessary for proper application. The material shall be applied as recommended by the manufacturer except the rate of application shall not be less than one gallon per 50 square feet of surface area without prior written approval of the Engineer.

The completed finish shall be tightly bonded to the structure and present a uniform appearance and texture equal to or better than a rubbed finish. If necessary, additional coats shall be sprayed to produce the desired surface texture and uniformity. Upon failure to adhere positively to the structure without chipping or cracking or to attain the desired surface appearance, the coatings shall be completely removed and the surface given a rubbed finish in accordance with 907-804.03.19.3.1, or other approved methods shall be used to obtain the desired surface finish to the satisfaction of the Engineer without additional cost to the State.

907-804.03.19.4--Classes 3, 4, and 5 Finishes. If required, specifications for these finishes will be contained in the special provisions.

907-804.03.19.5--Class 6, Floated Surface Finish. After the concrete has been deposited in place, it shall be consolidated and the surface shall be struck off by means of a strike board and floated with a wooden or cork float. An edging tool shall be used on edges and expansion joints. The surface shall not vary more than 1/8 inch under a 10-foot straightedge. The surface shall have a granular or matte texture which will not be slick when wet.

907-804.03.19.6--Required Finishes for Various Surfaces.

907-804.03.19.6.1--General. Unless otherwise specified, the top surface of sidewalks, the top horizontal surfaces of footings, and top slabs of box bridges, box culverts, or other structures shall be given a Class 6 finish. All formed concrete surfaces shall be given a Class 1 finish, except on surfaces which are completely enclosed, such as the inside surfaces of cells of box girders, the removal of fins and form marks and the rubbing of mortared surfaces to a uniform color will not be required.

In reference to finishing, exposed surfaces are surfaces or faces which may be seen after all backfill has been placed. Exposed surfaces requiring a Class 2 finish shall be finished at least one foot below the ground line or the low water elevation, whichever is higher.

The Class 2 finish shall be made upon a Class 1 finish. After the removal of forms the Class 1 finish shall be completed and the rubbing of concrete shall be started as soon as the condition of the concrete will permit.

Bridge floors shall be finished in accordance with 907-804.03.19.7.

907-804.03.19.6.2--Finishing Formed Concrete Surfaces of Box Bridges, Box Culverts, Pipe Headwalls, and Minor Structures. The exposed surfaces of wing walls and parapets of box bridges and box culverts to be used as vehicular or pedestrian underpasses shall be given a Class 2 finish. Exposed surfaces of other box culverts or box bridges, pipe culvert headwalls, and other minor structures shall be given a Class 1 finish unless otherwise indicated on the plans.

The exposed surfaces of retaining walls including copings and parapets shall receive a Class 2 finish.

907-804.03.19.6.3--Finishing Formed Concrete Surface of Bridges. All formed concrete bridge surfaces which are exposed shall have a Class 1 or 2 finish as set forth herein unless designated otherwise on the plans.

Bridges with designated surfaces for Class 2 finish are classified as follows:

- Group A - Bridges over highways, roads and streets.
- Group B - Bridges over waterways and railroads.
- Group BB - Twin or adjacent bridges of Group B category.

When a Group B or BB bridge also spans a highway, road or street, exposed concrete surfaces shall be finished in accordance with Group A requirements.

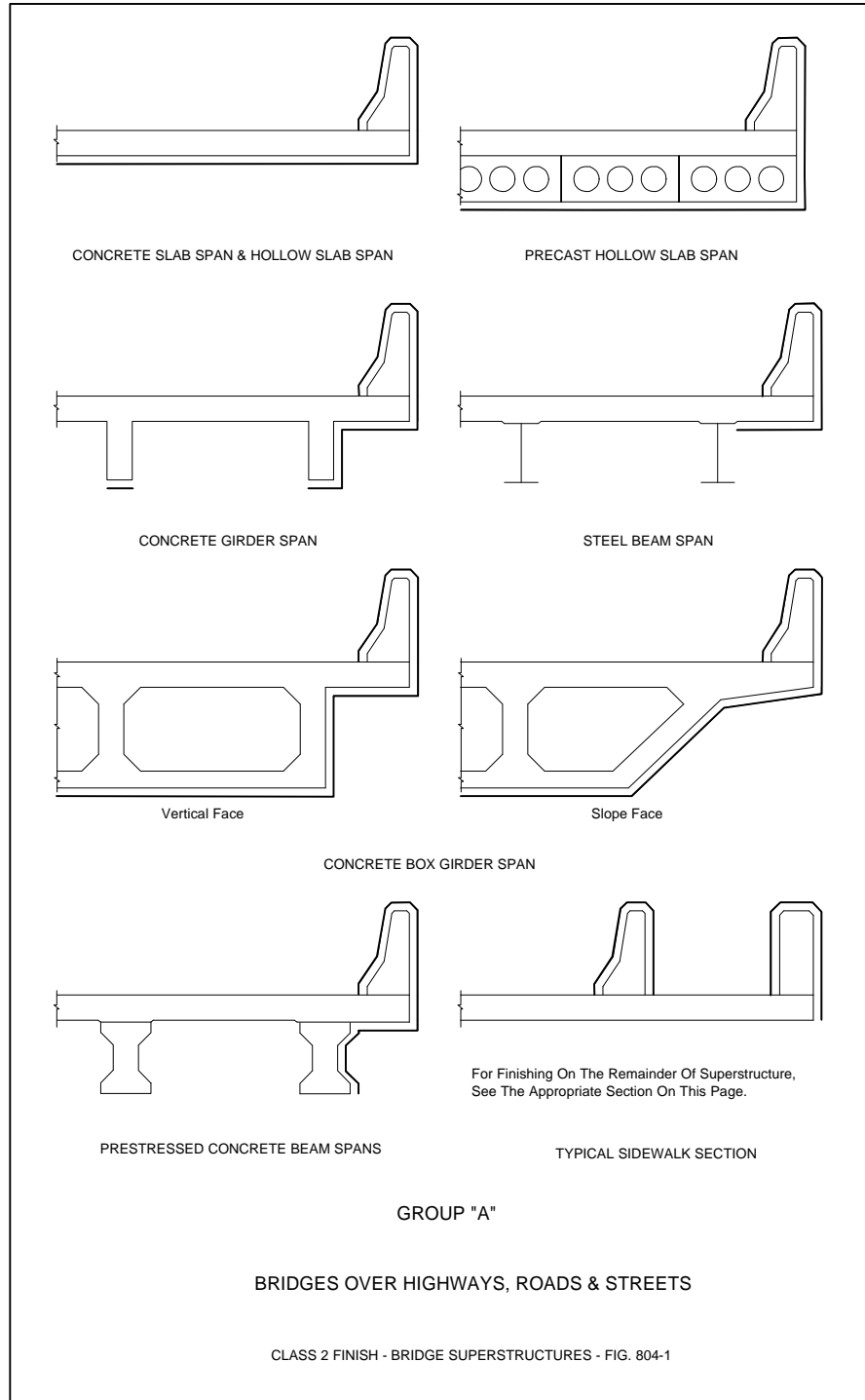
(A) Superstructures. Concrete surfaces to be given a Class 2 finish shall be the exposed surfaces of wings and rails and other exposed surfaces indicated by a double line in Figures 804-1, 804-2, and 804-3.

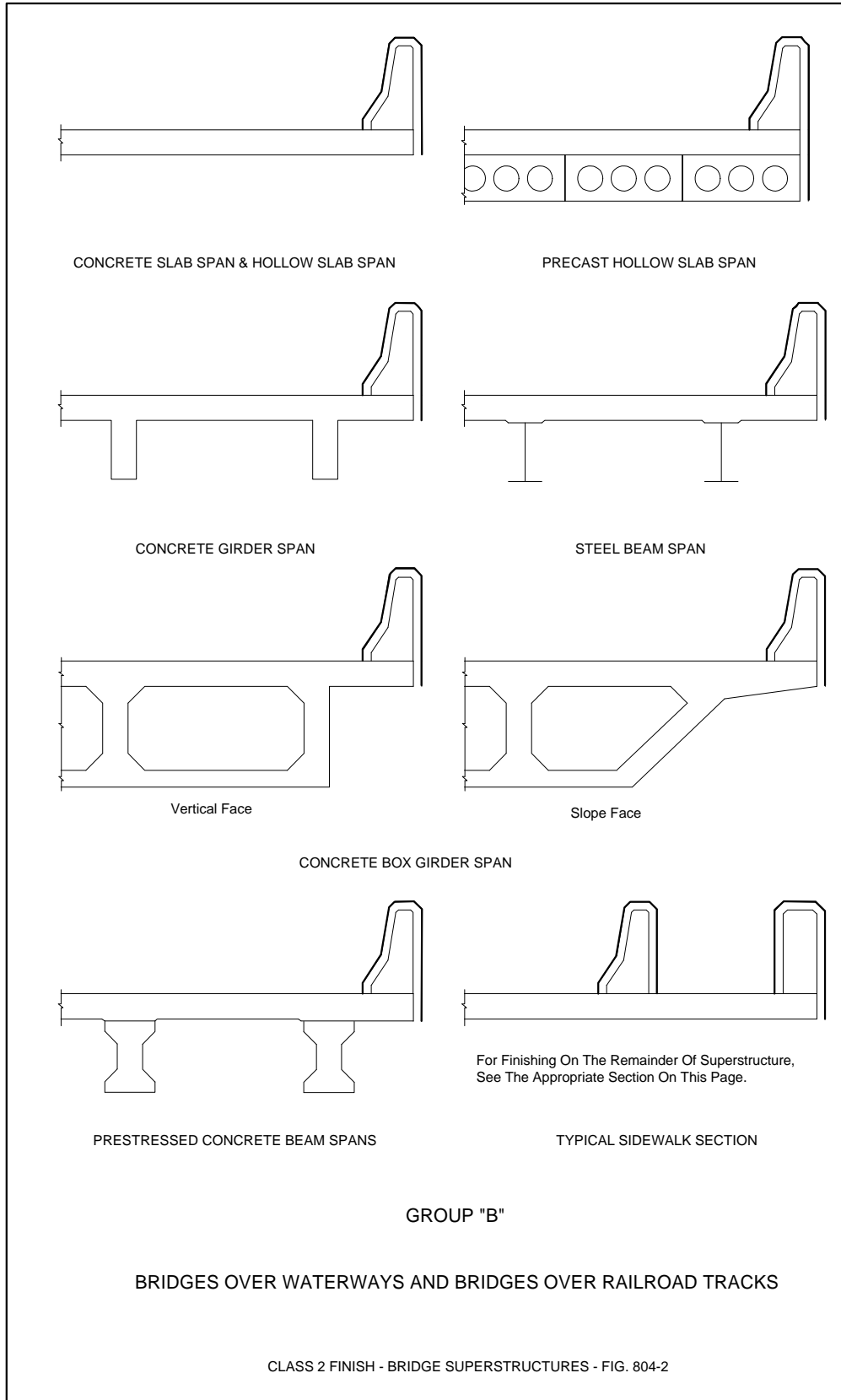
When a Group B or BB also spans a highway, road or street, the superstructure of spans over and extending one span in each direction beyond the lower level highway, road or street shall be given a Class 2 finish as shown for Group A.

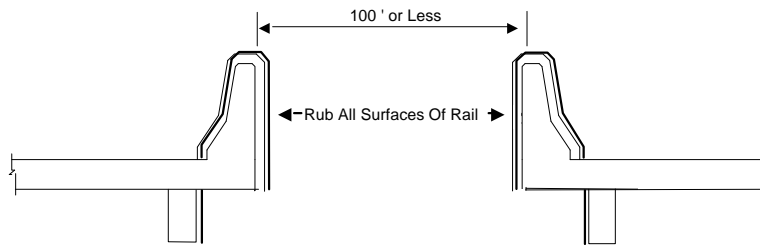
(B) Substructures. Concrete surfaces to be given a Class 2 finish are as follows:

Group A. Exposed surfaces of abutments, end bents, end bent posts, wing walls, railing, retaining walls, parapets, copings, piers, columns, piles, caps, struts or walls between columns or piles, encasement of steel piles, arch rings and spandrel walls.

Group B and BB. Exposed surfaces of abutments, wing walls, end bent posts, railing, retaining walls, parapets and copings.







GROUP "B B" - ADJACENT BRIDGES

GROUP "B B"

TWIN or DUAL BRIDGES

CLASS 2 FINISH - BRIDGE SUPERSTRUCTURES - FIG. 804-3

907-804.03.19.7--Finishing Bridge Floors.

907-804.03.19.7.1--General. Concrete bridge decks shall be struck off and finished by the method(s) designated on the plans.

In the event a method is not designated, the Contractor may use either the longitudinal or transverse method subject to the requirements contained in these specifications.

Except when indicated otherwise on the plans, the final surface texture of the bridge floor shall be either a drag, belt or broom finish. The surface texture specified and surface requirements shall be in accordance with the applicable requirements of 501.03.17 and 501.03.18 modified only as the Engineer deems necessary for bridge deck construction operations.

907-804.03.19.7.2--Longitudinal Method. The longitudinal method requires that the strike-off screed be supported on accurately graded and supported bulkheads or templates placed across the full width at the end(s) of the pour. Before the concrete is placed, approved fixed templates or wooden bulkheads of not less than 1 ¼-inch lumber shall be placed perpendicular to the centerline of the roadway, or in the case of skew bridges at the angle of skew. The upper surface of the template or bulkheads shall be accurately set to conform to the required grade and crown.

Special attention shall be given to the gutter lines where the strike-off screed cannot reach. The gutters shall be finished by hand and tested with the straight edge. Floor drains shall be set lower than the finished gutter line and finished over. After initial set, the concrete shall be dished out and finished around the drains to form an outlet.

After the concrete has been deposited and rough graded, it shall be struck off by means of a strike-off screed resting on the bulkheads or fixed templates. The strike-off screed shall be of a type satisfactory to the Engineer and shall have sufficient strength to retain its shape under all working conditions. The final surface shall comply with the applicable requirements of [Subsections 501.03.17.6 and 501.03.18](#), and unless otherwise specified in the contract, the final finish under this method shall be the belt finish.

In general, the overall strike-off screed should be trussed, with bracing heavy enough to support the weight of a man without deflecting, and should be adjustable for camber and correction of sag.

The strike-off screed will ride on the bulkheads or fixed templates at the ends of the section being finished. Care shall be taken to see that the bulkhead or fixed template elevations are accurately set since the entire span surface will be controlled by them. The manipulation of the screed shall be such that neither end is raised from the bulkheads or templates during the process.

The concrete shall be struck off by beginning at one curb and proceeding entirely across the span. A slight excess of concrete shall be kept in front of the cutting edge at all times. This operation shall be repeated at least three times. In each case, the strike-off screed shall be picked up and carried back to the point of beginning. No backward strokes will be allowed. The strike-off screed shall be moved along the bulkheads or fixed templates with a combined longitudinal and transverse motion. This operation may be manual or mechanical. Standing or walking in the fresh concrete ahead of the strike-off screed will not be permitted.

907-804.03.19.7.3--Transverse Method. The transverse method requires that the screeding equipment be supported on accurately graded and supported rails placed beyond the gutter lines and parallel with the centerline of the bridge.

The machine shall be so constructed and operated as to produce a bridge floor of uniform density with minimum manipulation of the fresh concrete and achieved in the shortest possible time. Manual transverse methods of screeding will not be permitted.

The finishing machine shall be supported on vertically adjustable rails set a sufficient distance from the gutter line to allow free movement of the screed from gutter line to gutter line. Satisfactory means of load distribution with minimum rail deflection shall be provided. The screed rails for a deck pour shall be completely in place for the full length of the pour and shall be firmly secured prior to placing concrete. The screed rails shall be adjusted as necessary to compensate for settlement and deflection occurring during the screeding operations. Supports for the screed rail shall be located directly over slab overhang support brackets (reference 907-804.03.14.1).

At least one dry run shall be made the length of each pour with a "tell-tail" device attached to the screed carriage to assure the specified clearance to the reinforcing steel.

The screed shall be equipped with a metal cutting edge or other approved mechanical means for accurately fine grading the plastic concrete to the required grade and surface smoothness and shall be supported by a bridging structure sufficiently rigid and heavy to perform operations satisfactorily on concrete of minimum slump without vibration, distortion, and wrecking of forms. The screed shall be mechanically actuated to deliver the screeding action and for travel in a longitudinal direction at a uniform rate along the bridge floor.

The screed shall complete sufficient passes to strike off all of the excess concrete with ample mortar along the entire leading edge to assure filling of low spots. Care shall be taken to remove all objectionable material from the gutters where final hand finishing will be required.

The selection of the transverse method may require the Contractor to furnish bridge deck concrete which contains an approved water-reducing set retarding admixture in the quantities approved by the Engineer at no additional cost to the State. (Reference Subsection 713.02)

Other finishing requirements shall be in accordance with the general requirements in 907-804.03.19.7.1 and as specified on the plans.

907-804.03.19.7.4--Acceptance Procedure for Bridge Deck Smoothness. After the bridge decks and bridge end slabs are completed [and preferably before the construction of the bridge railing](#), they shall be tested for ride quality using a Contractor furnished profilograph. Profile Index Values shall be determined in accordance with Department SOPs and these specifications. The profilograph shall meet the requirements of 907-401.02.6.5. Profiles will be obtained in the wheel paths of the main thru lanes and, where conditions allow, in the wheel paths of any auxiliary lanes or tapers. Profile Index Values for bridge decks and bridge end slabs shall be obtained for all state roads with four lanes or more, on state roads three lanes or less where the current traffic count is 2,000 ADT or higher, or as designated on the plans. Ride quality tests will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge end slab as possible and shall proceed forward across the remainder of the bridge end slab, across the bridge deck and continue across the next bridge end slab to a point where the frontmost wheel of the profilograph reaches the farthest edge of the bridge end slab. Bridges and bridge end slabs not requiring a ride quality test must meet a 1/8 inch in 10-foot straightedge requirement in longitudinal and transverse directions. Bridges in horizontal curves having a radius of less than 1,000 feet at the centerline and bridges within the superelevation transition of such curves are excluded from a test with the profilograph.

The Profile Index Value for bridge decks including the bridge end slabs shall be averaged for the left and right wheel path for each lane and where applicable, each auxiliary lane and taper,

and shall not exceed 65 inches per mile for each lane. In addition, individual bumps or depressions exceeding 0.3 of an inch, when measured from a chord length of 25 feet, shall be corrected and the surface shall meet a 1/8 inch in 10-foot straightedge check made transversely across the deck or slab.

Bridge decks and bridge end slabs not meeting the preceding requirements shall be corrected. Corrective work shall be done at no additional cost to the Department. Corrective work shall consist of grinding the bridge deck in accordance with this specification. All corrective work shall precede final surface texturing. All surface areas, corrected by grinding, shall be sealed with a sealant approved by the Bridge Engineer.

In case the bridge end slabs are to be constructed on a future project, the bridge deck(s) alone shall be tested for ride quality using the acceptance procedure outlined above, except that the ride quality test will begin at a point where the rearmost wheel of the profilograph is as close to the beginning of the bridge as possible and shall proceed forward across the bridge deck to a point where the frontmost wheel of the profilograph reaches the farthest edge of the bridge.

Expansion joint installation shall be delayed and the joint temporarily bridged to facilitate operation of the profilograph and grinding equipment across the joint wherever feasible.

It shall be the Contractor's responsibility to schedule profilograph testing. The Contractor shall notify the Department at least five (5) days in advance of profilograph testing. The Contractor shall ensure that the area to be tested has been cleaned and cleared of all obstructions. Profilograph testing of bridge decks and bridge end slabs shall be performed by the Contractor under supervision of the Engineer. All profilograph testing shall be performed at no additional cost to the Department. The Contractor will be responsible for traffic control associated with this testing operation.

907-804.03.19.7.4.1--Grinding Bridge Decks.

907-804.03.19.7.4.1.1--Equipment. The grinding equipment shall be a power driven, self-propelled machine that is specifically designed to smooth and texture portland cement concrete pavement with diamond blades. The effective wheel base of the machine shall not be less than 12.0 feet. It shall have a set of pivoting tandem bogey wheels at the front of the machine and the rear wheels shall be arranged to travel in the track of the fresh cut pavement. The center of the grinding head shall be no further than 3.0 feet forward from the center of the back wheels.

The equipment shall be of a size that will cut or plane at least 3.0 feet wide. It shall also be of a shape and dimension that does not encroach on traffic movement outside of the work area. The equipment shall be capable of grinding the surface without causing spalls at cracks, joints, or other locations.

907-804.03.19.7.4.1.2--Grinding. The grinding areas will be determined by the Contractor and approved by the Engineer. The Contractor shall develop and submit to the Engineer for approval a Grinding Plan. The Contractor shall allow up to 45 days for the Department to review the Plan prior to starting any grinding operations. This plan shall include as a minimum:

1. Name of the project superintendent in responsible charge of the grinding operation.
2. List and description of all equipment to be used.
3. Maximum depth of each pass allowed by the grinding equipment.
4. Maximum width of each pass allowed by the grinding equipment.
5. Details of a sequence of the grinding operation.
6. Complete data from Profilograph runs, based on a 0.3 inch bump height, for each wheel path over the entire bridge including bridge end slabs, which shall include profile

- index, bump locations (in stations), bump heights and proposed final cross-slopes. When a computerized profilograph is used, a complete printout of the profile including the header information for each wheel path will be required.
7. Data showing reinforcing steel clearance in all areas to be ground.
 8. A detailed drawing of the deck showing areas to be ground with station numbers and grinding depths clearly indicated.
 9. A description of grinding in areas where drains are in conflict with grind areas.
 10. Details of any changes in deck drainage (anticipated ponding, etc.)

The Engineer will evaluate the grinding plan for conformance with the plans and specifications, after which the Engineer will notify the Contractor of any additional information required and/or changes that may be needed. Any part of the plan that is unacceptable will be rejected and the Contractor shall submit changes for reevaluation. All approvals given by the Engineer shall be subject to trial and satisfactory performance in the field, and shall not relieve the Contractor of the responsibility to satisfactorily complete the work.

The construction operation shall be scheduled and proceed in a manner that produces a uniform finished surface. Grinding will be accomplished in a manner that eliminates joint or crack faults while providing positive lateral drainage by maintaining a constant cross-slope between grinding extremities in each lane. Auxiliary or ramp lane grinding shall transition as required from the mainline edge to provide positive drainage and acceptable riding surface.

The operation shall result in a finished surface that conforms as close as possible to the typical cross-section and the requirements specified in Subsection 907-804.03.19.7.4.1.3.

The Contractor shall establish positive means for removal of grinding residue. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities.

907-804.03.19.7.4.1.3--Final Surface Finish. The grinding process shall produce a finish surface that is as close as possible to grade and uniform in appearance with a longitudinal line type texture. The line type texture shall contain parallel longitudinal corrugations that present a narrow ridge corduroy type appearance. The peaks of the ridges shall be approximately 1/16 inch higher than the bottoms of the grooves with approximately 53 to 57 evenly spaced grooves per foot. Grinding chip thickness shall be a minimum of 0.080 inches thick.

The finished bridge decks and bridge end slabs shall be retested for riding quality using a Contractor furnished profilograph meeting the requirements of 907-401.02.6.5. The finished results shall meet the following conditions:

- (a) Individual bumps or depressions shall not exceed 0.3 inches when measured from a chord length of 25 feet.
- (b) The final index value for the bridge deck and bridge end slabs shall be an average of both the right and left wheel paths of each lane and shall not exceed 65 inches per mile.

The final profilogram will be furnished to the Engineer for informational purposes.

907-804.03.19.8--Finishing Horizontal Surfaces of Footings or Top Slabs of Box Bridges, Culverts, or Other Structures. The finishing of horizontal surfaces of footing or top slabs of box bridges, culverts, or other structures shall be achieved by placing an excess of material in the form and removing or striking off the excess with a template, forcing the coarse aggregate below the mortar surface. After the concrete has been struck off the surface shall be given a Class 6 finish.

907-804.03.19.9--Finishing Exposed Surfaces of Sidewalks. After the concrete has been deposited in place it shall be consolidated and the exposed surface shall be given a Class 6 finish. An edging tool of the required radius shall be used on all edges and at all expansion joints. The surface shall have a granular texture which will not be slick when wet.

Sidewalk surfaces shall be laid out in blocks with an approved grooving tool as shown on the plans or as directed.

907-804.03.20--Opening Bridges.

907-804.03.20.1--Public Traffic. Unless otherwise specified, concrete bridge floors shall be closed to public highway traffic for a period of at least 21 days after placing concrete.

907-804.03.20.2--Construction Traffic. Unless otherwise specified, concrete bridge floors shall be closed to construction traffic for a period of 7 days after placing concrete and the minimum required compressive strength for the concrete placed is obtained.

907-804.03.21--Final Cleanup. Upon completion of the work all equipment, surplus materials, forms, and waste material shall be removed, the bridge cleaned, and the site of the work given a final cleanup.

907-804.03.22--Precast-Prestressed Concrete Bridge Members.

907-804.03.22.1--General. All installations and plants for the manufacture of precast-prestressed bridge members shall be PCI (Prestressed Concrete Institute) Certified. Bridge members manufactured in plants or installations not so approved will not be accepted for use in the work. The Contractor or other manufacturer shall employ a technician skilled in the adopted system of prestressing to supervise the manufacturing operations. This technician shall be certified according to the guidelines of this specification. The Contractor shall develop and implement a Quality Control Program as per Division I of PCI Quality Control Manual, 3rd Edition. The Quality Control Program shall be submitted to the District Materials Engineer for approval.

907-804.03.22.2--Stressing Requirements. The jacks for stressing shall be equipped with accurate calibrated gages for registering the jacking pressure. Means shall be provided for measuring elongation of strands to at least the nearest 1/16 inch.

Prior to beginning work, the Contractor or manufacturer shall have all jacks to be used, together with their gages, calibrated by an approved laboratory. All jacks and gages shall have an accuracy of reading within two percent. The testing agency shall furnish the Engineer a statement certifying that the jacks and gages meet this requirement. During the progress of the work, if a gage appears to be giving erratic results or if the gage pressure and elongations indicate materially differing stresses, recalibration will be required.

Calibration of jacks and gages shall be repeated at intervals deemed necessary by the Engineer. These intervals for calibration shall not exceed one year.

Shop drawings of prestressed beams, including an erection plan, shall be submitted in duplicate to the Bridge Engineer for approval prior to manufacture of members.

907-804.03.22.2.1--Methods. Plans for the particular bridge members will show prestressing by one of the following methods:

(A) **Pretensioning.** The prestressing strands are stressed initially. After the concrete is placed, cured, and has attained the compressive strength shown on the plans, the stress is

transferred to the member. The method used for pretensions shall be in accordance to Division II of PCI Quality Control Manual, 3rd Edition.

(B) Posttensioning. The posttensioning tendons are installed in voids or ducts and are stressed and anchored after development of the compressive strength specified on the plans. The voids or ducts are then pressure grouted.

(C) Combined Method. Part of the reinforcing is pretensioned and part posttensioned. Under this method all applicable requirements for the two methods specified shall apply to the respective stressing elements being used.

907-804.03.22.2.2--Alternate Details for Prestressed Members. In the event that the Contractor (Manufacturer) desires to use materials or methods that differ in any respect from those shown on the plans or described in these specifications, **the Contractor** shall submit for approval full plan details (on acceptable tracings suitable for reproduction) and specifications, and these shall become the property of the Department. In order for alternate materials and/or methods to be considered, they will be required to comply fully with the following:

- A. Provisions equal to those stipulated in these specifications.
- B. Current AASHTO Specifications.
- C. Recommendations of materials manufacturer.
- D. Camber tolerance of beams and spans shown on plans.

(Note: Alternate materials and methods will not be authorized on Federal-Aid Projects.)

The Engineer shall be the sole judge as to the adequacy and propriety of any variation of materials or methods.

907-804.03.22.2.3--Stressing Procedure.

(A) General. Stressing shall be performed by suitable jacks working against unyielding anchorages and capable of maintaining the required stress for an indefinite period without movement or yielding. Strands may be stressed singularly or in a group.

The tension to be applied to each strand shall be as shown on the plans. The tension shall be measured by both jacking gages and elongations in the strands and the result shall check within close limits.

It is anticipated that there will possibly be a difference in indicated tension between jack pressure and elongation of about five (5) percent. In this event, the discrepancy shall be placed on the side of slight overstress rather than understress.

In the event of an apparent discrepancy between gage pressure and elongation of as much as five (5) percent, the entire operation shall be carefully checked, and the source of error determined before proceeding further.

Elongation is to be measured after the strands have been suitably anchored, and all possible slippage at the anchorages has been eliminated.

In all stressing operations, the stressing force shall be kept as nearly symmetrical about the vertical axis of the member as practicable.

(B) Pretensioning. All strands to be prestressed shall be brought to a uniform initial tension prior to being given their full pretensioning. This uniform initial tension of approximately 1000 to 2000 pounds shall be measured by suitable means such as a dynamometer so that its value can be used as a check against elongation computed and measured.

After the initial tensioning, the strand or group shall be stressed until the required elongation and jacking pressure is within the limits specified.

When the strands are stressed in accordance with the plan requirements and these specifications and all other reinforcing is in place, the concrete shall be placed in the prepared forms.

Strand stress shall be maintained until the concrete between anchorages has attained the required compressive strength as determined by cylinder tests, after which the strands shall be cut off flush with the ends of column members, and cut as shown on the plans for beams, girders, etc. Strands shall be cut or released in such a manner that eccentricity of prestress will be kept to a minimum and no damage to the member will result. The strand cutting pattern shall be as shown on the plans or as approved by the Bridge Engineer.

(C) Posttensioning. For all posttensioning tendons/bars the anchor plates shall set exactly normal in all directions to the axis of the tendon/bar. Parallel wire anchorage cones shall be recessed within the beams. Tensioning shall not take place until the concrete has reached the compressive strength shown on the plans.

Elongation and jacking pressures shall make appropriate allowance for all possible slippage or relaxation of the anchorage. Posttensioning tendons/bars shall be stressed in the order and manner shown on the plans.

The units shall be tensioned until the required elongations and jacking pressures are attained and reconciled within the limits specified in 907-804.03.22.2.3(A) with such overstresses as approved by the Engineer for anchorage relaxation.

Independent references shall be established adjacent to each anchorage to indicate any yielding or slippage that may occur between the time of initial stressing and final release of the strands.

Straight tendons/bars may be tensioned from one end. Unless otherwise specified, curved tendons shall be stressed by jacking from both ends of the tendons.

(D) Combined Method. In the event that girders are manufactured with part of the reinforcement pretensioned and part posttensioned, the applicable portions of the requirements listed herein shall apply to each type.

907-804.03.22.3--Manufacture.

907-804.03.22.3.1--Forms. The forms used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 3rd Edition.

907-804.03.22.3.2--Placing and Fastening Steel. Placing and fastening of all steel used for precast-prestressed bridge members shall meet the requirements of Division V of the PCI Quality Control Manual, 3rd Edition.

907-804.03.22.3.3--Holes for Prestressing Tendons/Bars. Holes provided in girders for prestressing tendons/bars shall be formed by means of inflatable rubber tubing, flexible metal conduit, metal tubing, or other approved means.

907-804.03.22.4--Placing and Curing Concrete.

907-804.03.22.4.1--Placing. The placing of concrete shall meet the applicable requirements of Division III of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.4.2--Curing. Initial curing of all members shall be accomplished by fogging, wet burlap, or other approved methods and shall begin as soon as the concrete has hardened sufficiently to withstand surface damage. This curing shall continue until the concrete has attained its initial set; however, the minimum initial curing period shall be three hours and the maximum, five hours. If a retarding agent is used, the minimum period shall be five hours and the maximum seven hours. Following the initial curing, curing shall be resumed by steam, specified as follows.

In steam curing the member shall be enclosed in a suitable enclosure. The enclosure shall be of sturdy construction to withstand wind and shall be weather-tight to minimize moisture and heat losses. There shall be at least six inches of space between the enclosure and concrete for proper circulation of steam. Application of the steam shall not be directly on the surface of the concrete.

The steam shall be completely saturated in order to prevent loss of humidity and to provide excess moisture for proper hydration of the cement. When weather conditions require, and when directed, additional moisture shall be applied during steam curing in order that the surface of the concrete will show free moisture. This can be accomplished by use of fogging, spraying, wet burlap, or other approved methods.

The temperature of the interior of the enclosure shall be at least 80°F and not more than 160°F. The ideal temperature is 100° to 130°F. During initial application of the steam, the ambient air temperature within the enclosure shall increase at a rate not exceeding 40°F per hour.

At least one recording thermometer for each enclosure shall be furnished by the producer. If the enclosure is longer than 300 feet, an additional recording thermometer shall be furnished for each additional 300 feet of length or fraction thereof. Each recording thermometer shall be placed within the enclosure at a point designated by the inspector. An approved portable thermometer shall be furnished by the producer for use by the producer and the Inspector in determining the temperature(s) at other points within the enclosure. The temperature at any point within the enclosure shall not vary more than 10°F from that of the recording thermometer or the average of the recording thermometers if more than one is used.

An alternate means of determining and recording temperatures may consist of the use of temperature bulbs connected electrically to a central recorder. The same number of such bulbs will be required as specified above for recording thermometers, and the central recorder shall record the temperature of each bulb.

Steam may be temporarily suspended, if necessary, during removal of side forms. This operation shall be performed in such a manner that the concrete in any portion of the member shall not be exposed for more than one hour. If directed, due to low humidity or temperature, the exposed concrete shall be kept wet. In discontinuing the steam, it shall be cut off for at least one hour before uncovering the member. No restrictions as to the rate of increase of temperature are applicable for applying steam after this operation is completed.

Steam may be suspended, if necessary, during transfer of the tensioning load (detensioning or posttensioning). No restrictions as to rate of increase or decrease of temperature are applicable to discontinuing or re-applying steam for this operation. However, the concrete shall be kept wet during exposure.

After the stress-transfer operation, curing may be resumed either by steam, cotton mats, wetted burlap, constant fogging, or liquid membrane. When used, liquid membrane shall be white pigmented and shall be applied at the rate of one gallon per 150 square feet of surface.

Membrane shall not be applied to portions of units designated to be bonded to other concrete or which are to receive a Class 2 finish. Such portions shall be cured by other methods.

907-804.03.22.4.3--Removal of Side Forms. Side forms may be removed after the concrete has attained sufficient strength to maintain a true section. In order to obtain "sufficient strength", it may be necessary to cure members for 12 hours or more as prescribed in 907-804.03.22.4.2, or to attain a minimum compressive strength of 1,000 psi.

If high-early-strength concrete is obtained by use of low slump (0 to 1.5 inch) concrete, vacuum process, or other approved methods, side forms may be removed earlier; however, approval of the methods and revision from normal schedules will be made only after inspections by the District and Jackson Laboratories have determined that satisfactory results will be attained by the methods and schedules proposed.

907-804.03.22.4.4--Grouting. The holes through posttensioned members in which the tendons are installed shall be equipped with approved grouting vents. All prestressing tendons to be bonded shall be free of dirt, loose rust, grease, or other deleterious substances. Before grouting, the ducts shall be free of water, dirt, and other foreign substances. The ducts shall be blown out with compressed air until no water comes through the ducts. For long members with draped tendons an open tap at low points may be necessary. After completion of stressing, the annular space between sides of tendon and sides of hole shall be grouted as set in the following paragraphs.

With the grouting vent open at one end of the core hole, grout shall be applied continuously under moderate pressure at the other end until all entrapped air is forced out through the open grout vent, as evidenced by a steady stream of grout at the vent. Whereupon, the open vent shall be closed under pressure. The grouting pressure shall be gradually increased to refusal (at least 75 psi) and held at this pressure for approximately 10 seconds, and the vent shall then be closed under this pressure.

Portland cement grout shall consist of a mixture of:

- 1 part Type 1 Portland cement
- 1/4 part fly ash
- 3/4 part washed sand (all passing No. 16 sieve and not more than five percent retained on No. 30)
- 4 to 6 gallons of water per bag of cement.

A plasticizing admixture, subject to approval by the Engineer, shall be used in accordance with the manufacturer's recommendations.

The grout shall be mixed in a mechanical mixer, shall have the consistency of heavy paint, and shall be kept agitated until placed.

Members shall not be moved before the grout has set, ordinarily at least 24 hours at 80°F or higher.

907-804.03.22.5--Finishing and Marking. Units shall be given a Class 1 finish at the plant and shall be given a Class 2 finish after erection when required.

Recesses in girders at end of diaphragm bars, holes left by form ties, and other surface irregularities shall be carefully cleaned and patched with an approved non-shrink commercial grout or a non-shrinkage mortar of the following composition:

- 1 part Type 1 cement
- 1 1/2 to 2 parts fine sand

1/2 to 3/4 ounces aluminum powder per bag of cement
Approved admixture per Subsection 713.02.
Sufficient water to produce a workable but rather stiff mix.

The units shall be clearly marked in accordance with Department SOP.

907-804.03.22.6--Handling, Storage, and Installation. Posttensioned members may be handled immediately after completion of stressing and grout has set. Pretensioned members may be handled immediately after release of tensioning. In either case, the members shall have developed a minimum compressive strength of 4000 psi prior to handling. In the event stressing is not done in a continuous operation, members shall not be handled before they are sufficiently stressed, as determined by the Engineer, to sustain all forces and bending moments due to handling. In the handling, storage, and transporting of beams or girders, they shall be maintained in an upright position (position as cast) at all times and shall be picked up from points within distance from beam ends equal to beam depth or at pick-up points designated on the plans. Disregard of this requirement and dropping of units may be cause for rejection, whether or not injury to the unit is apparent. Piles shall be picked up and loaded for shipment at points shown by the suspension diagram on the plans. Extreme care shall be used in handling and storing piles to prevent damage. The dropping of a pile may be cause for rejection of same, whether or not there is apparent injury to the member.

Care shall be exercised during the storage, hoisting, and handling of precast units to prevent damage. Damaged units shall be replaced by the Contractor at **no additional costs to the State.**

When members are stacked for storage, each layer shall be supported at or near the pick-up points. Supports shall be carefully placed in a vertical line in order that the weight of any member will not stress an underlying member. To prevent damage in moving members it is suggested that rigid supports be covered with a cushion of wood or other resilient material.

Members shall not be transported until at least one day after the concrete has reached a compressive strength of 5,000 psi or greater strength when shown on the plans.

Piles used in salt water shall not be driven until concrete is seven days old, and air-entrained concrete shall be used in such piles.

After prestressed concrete voided slab units are set, doweled and bolted in their final position the keyways and dowel holes shall be filled with an approved non-shrink grout. Traffic shall not be permitted on the spans for 24 hours after grouting, and heavy construction equipment exceeding 15 tons will not be permitted on the spans for a period of 72 hours after grouting.

Adjacent slab units that mismatch more than one-fourth inch shall be adjusted prior to grouting of the shear keys. The maximum deviation from cross-section and grade (exclusive of camber) at any point shall not exceed one-fourth inch; and when the surface is checked with a ten-foot straightedge applied both parallel and perpendicular to the centerline, the variance shall not exceed one-fourth inch.

In addition to the requirements set out in this section, the applicable requirements of Section 803 shall apply.

907-804.03.22.7--Tolerances for Accepting Precast Prestressed Concrete. Member shall meet the dimension tolerances set by Division VI of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.8--Testing of Materials. The frequency of testing shall meet the requirements of Table 4 of this Special Provision, "CONTRACTOR'S MINIMUM REQUIREMENTS

FOR QUALITY CONTROL”, except the minimum requirements of plastic concrete shall meet those in Division VI of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.9--Testing Personnel. Technicians testing Portland cement concrete used in the production of precast-prestressed members shall be PCI Quality Control Technician/Inspector Certified. Each producer of precast-prestressed members shall have at least one PCI Level II certified technician on site during production for Department projects.

907-804.03.22.10--Documentation. The Precast-Prestressed Producer for each Precast-Prestressed concrete bridge member shall maintain documentation as set forth in Department SOPs. Testing and inspection record forms shall be approved by the Central Laboratory and as a minimum contain information listed in Division VI of PCI Quality Control Manual, 3rd Edition.

907-804.03.22.11--Use in the Work. Before any Precast-Prestressed member is incorporated into the work, documentation as described in 907-804.03.22.10 is required along with visual inspection of the member at the bridge construction site. Project Office personnel as per Department SOP will make visual inspection of the prestressed member at the bridge construction site.

907-804.04--Method of Measurement. The volume of concrete, complete and accepted, will be measured in cubic yards. In computing the volume, the neat dimensions shown on the plans will be used, except for such variations as may be ordered in writing by the Engineer. The quantity of concrete involved in fillets, scorings, and chamfers one square inch or less in cross-sectional area will be neglected. Deductions shall be made for the following:

- (1) The volume of structural steel, including steel piling encased in concrete.
- (2) The volume of timber piles encased in concrete, assuming the volume to be 0.80 cubic foot per linear foot of pile.
- (3) The volume of concrete piles encased in concrete.
- (4) Any deductions in total pay as a result of the formula shown in 907-804.02.13.1, Basis of Acceptance.

No deduction will be made for the volume of concrete displaced by steel reinforcement, floor drains, or expansion joint material that is one inch or less in width normal to the centerline of the joint. Where railing is bid as a separate item, that portion of the railing above the top of the curb, above the surface of the sidewalk, or above the bridge roadway, as the case may be, will not be included in the measurement of concrete, but will be measured as railing. Massive pylons or posts which are to be excepted from payment for railing and are intended to be measured for as concrete will be so noted on the plans.

When shown on the plans or directed by the Engineer, concrete placed as a seal for cofferdams will be measured by the cubic yard actually in place, except that no measurement will be made of seal concrete placed outside of an area bounded by vertical planes 18 inches outside the neat lines of the footing as shown on the plans or as directed and parallel thereto.

Reinforcing steel will be measured and paid for in pounds as set out in Section 805.

Unless otherwise specified, structural steel will be measured and paid for as set out in Section 810.

Excavation for bridges will be measured and paid for as in Section 801.

Piling will be measured and paid for as set out in Sections 802 and 803.

Railing will be measured and paid for as set out in Section 813.

Prestressed concrete beams and plank will be measured by the linear foot.

Prestressed concrete voided slab units (interior and exterior with railing) and precast concrete caps (intermediate and end cap with winged abutment wall) of the size and type specified will be measured by the unit complete in place and accepted. Railing, winged abutment walls, grout, tie rods, nuts, washers, bearing pads and other appurtenances will not be measured for separate payment.

907-804.05--Basis of Payment. Concrete will be paid for at the contract unit price per cubic yard for the class or classes specified, complete in place. Prestressed concrete beams and plank will be paid for at the contract unit per linear foot of specified size and type.

Prestressed concrete voided slab units and precast caps will be paid for at the contract unit price per each for the specified types and sizes, complete in place and accepted; which price shall be full compensation for furnishing, hauling and erecting the members; including all prestressing reinforcement and other reinforcement in the members. Payment at the contract unit prices bid shall be full compensation for furnishing all materials, equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

- 907-804-A: Bridge Concrete (Class ____) - per cubic yard
- 907-804-B: Box Bridge Concrete (Class ____) - per cubic yard
- 907-804-C: _____ Prestressed Concrete Beam, Type _____ - per linear foot
(Length)
- 907-804-D: _____ Prestressed Concrete Plank - per linear foot
(Length)
- 907-804-E: _____ Prestressed Concrete Voided Slab (* Int.) - per each
(Length)
- 907-804-F: _____ Prestressed Concrete Voided Slab (* Ext.) - per each
(Length)
- 907-804-G: _____ Precast Concrete Caps (End Unit with Wall) - per each
(Length)
- 907-804-H: _____ Precast Concrete Caps (Intermediate Unit) - per each
(Length)

*Description

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-810-7

CODE: (IS)

DATE: 9/3/96

SUBJECT: Steel Structures

Section 810, Steel Structures, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

907-810.02--Materials.

907-810.02.1--General. Delete the first sentence of Subsection 810.02.1 on page 810-1 and substitute the following:

Unless otherwise specified, structural steel, miscellaneous metals, and paints shall conform to the applicable requirements of this section, Sections 716, 717 and Sections 710 and 814 as amended by Special Provision Nos. 907-710 and and 907-814 respectively.

907-810.02.3--Shop Painting. Delete in toto Subsection 810.02.3 on pages 810-1 and 810-2 and substitute the following:

Shop painting, unless otherwise designated or permitted, shall consist of inorganic zinc primer, Section 710 as amended by Special Provision No. 907-710, applied as specified in Section 814 as amended by Special Provision No. 907-814. Machine-finished surfaces of pins, pin rollers and bores shall be coated as soon as practicable after acceptance with a heavy coat of Petrolatum meeting the requirements of ASTM **Designation:** D 217, NLGI Consistency Grade 2 or 3 or other approved coating prior to removal from the shop.

907-810.02.21.2--Bolted Parts. Delete sub-paragraph "B." of Subsection 810.02.21.2 on page 810-11.

907-810.03--Construction Requirements.

907-810.03.1--Installation.

907-810.03.1.1--Bolt Tension.

After the table entitled "Bolt Tension" on page 810-11, add the following paragraphs:

The rotational-capacity test described in subsection 717.02.3.4 shall be performed on each rotational-capacity lot prior to the start of bolt installation. Hardened steel washers are required as part of the test although they may not be required in the actual installation procedure.

A Skidmore-Wilhelm Calibrator or an equivalent tension measuring device shall be required at each job site during erection. Periodic testing (at least one each working day when the calibrated wrench method is used) shall be performed to assure compliance with the installation requirements for calibrated wrench tightening, turn-of nut tightening or direct tension indicators (DTI) tightening.

907-810.03.5--Welds. After the first sentence of the second paragraph of Subsection 810.03.5 on page 810-16, add the following:

Edge blocks shall be used when radiographing butt welds greater than 1/2 in. thickness. The edge blocks shall have a length sufficient to extend beyond each side of the weld centerline for a minimum distance equal to the weld thickness, but no less than 2 inches, and shall have a thickness equal to or greater than the thickness of the weld. The minimum width of the edge blocks shall be equal to half the weld thickness, but not less than 1 inch. The edge blocks shall be centered on the weld with a snug fit against the plate being radiographed, allowing no more than 1/16 in. gap. Edge blocks shall be made of radiographically clean steel and the surface shall have a finish of ANSI 125 μ in. or smoother.

907-810.04--Method of Measurement.

After the last paragraph of Subsection 810.04.4 on page 810-29, add the following:

907-810.04.5--Deduction for Fabrication Inspection Cost Overruns. Under separate agreement, the Department will contract with a private company to provide inspection services for structural steel fabrication on this project. By this agreement a maximum amount payable, including a fixed fee will be established beyond which no funds will be authorized for payment without a Supplemental Agreement to this agreement.

The Department will be responsible for structural steel fabrication inspection costs not to exceed the established maximum amount payable including the fixed fee and any additional amount authorized for payment by Supplemental Agreement.

Structural steel fabrication inspection costs exceeding the above described amount will be deducted from monies due the Contractor under Pay Item Nos. 907-810-A, Structural Steel; 907-810-B, Steel Superstructure and/or 907-810-C, Miscellaneous Bridge Appurtenances, as the case may be.

Ninety percent (90%) of the amount bid for structural steel items listed above will be the maximum amount paid the Contractor until such time final fabrication inspection costs have been determined and the Bridge Engineer notifies the Project Engineer to release full payment to the Contractor; otherwise, the Bridge Engineer will advise the Project Engineer of the amount to withhold from the Contractor's estimate to cover structural steel fabrication inspection costs that exceed the amount approved for payment by the Department.

Delete in toto Subsection 810.05 on page 810-29 and substitute the following:

907-810.05--Basis of Payment. Subject to the deductions set out in Subsection 907-810.04.5, accepted structural steel will be paid for at the contract unit price per pound and accepted steel superstructure and miscellaneous bridge appurtenances when shown as a pay item will be paid for at the contract lump sum price. The prices thus paid shall be full compensation for completing the work.

Payment will be made under:

- 907-810-A: Structural Steel - per pound
- 907-810-B: Steel Superstructure - lump sum
- 907-810-C: Miscellaneous Bridge Appurtenances - lump sum

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-815-4

CODE: (IS)

DATE: 12/10/2001

SUBJECT: Geotextile for RipRap

Section 907-815, RipRap and Slope Paving, of the 1990 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby modified as follows:

907-815.05--Basis of Payment. Delete the last pay item number, description and unit in Subsection 815.05 on page 815-5 and substitute the following:

907-815-E: Geotextile Fabric under _____

Description

(Type ___*) (AOS ___*) - per square yard

* When not designated, see 714.13.

SPECIAL PROVISION NO. 906-3

Training Special Provisions

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities," (Attachment 1), and is in implementation of 23 U.S.C. 140(a).

As part of the Contractor's equal employment opportunity affirmative action program training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of trainees to be trained under this special provision will be as indicated in the bid schedule of the contract.

In the event that a Contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The Contractor shall also insure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the State highway agency for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

Training and upgrading of minorities and women toward journeymen status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The Contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a

journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the State highway agency and the Federal Highway Administration. The State highway agency and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the Contractor will be reimbursed 80 cents per hour of training given an employee on this contract in accordance with an approved training program. As approved by the engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other does not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the Contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A

Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

SPECIAL PROVISION NO. 906-4

2000 MISSISSIPPI DEPARTMENT OF TRANSPORTATION ON-THE-JOB TRAINING PROGRAM

ALTERNATE TRAINING SPECIAL PROVISION

PURPOSE

The purpose of the On-The-Job Training (OJT) Program is to provide training for minority, female and economically disadvantaged individuals in order that they may develop marketable skills and gain journey status in the skilled craft classifications in which they are being trained.

INTRODUCTION

The Year 2000 OJT Program has been developed through the partnering efforts of the Road Builders of Mississippi, the Federal Highway Administration (FHWA) and the Mississippi Department of Transportation (MDOT).

The OJT Program has been designed for use by participating contractors and subcontractors in meeting their training needs. The objective of the OJT Program is to develop skilled workers in the skilled craft trade areas of highway construction who are sufficiently trained to be productive employees in the highway construction industry work force.

The success of the OJT Program will require that contractors and subcontractors follow uniform and basic procedures in training in keeping records of trainees' progress toward journey status, and in reporting trainees' successful completion or termination from the program.

FUNDING

MDOT will establish an annual OJT Fund in which, contractors and subcontractors may bill the Department directly for hours worked by trainees. The funding source of this money will be state and federal funds for MDOT's OJT Program, with a cap of \$50,000.00.

PROCEDURE

Trainee positions will be selected by prime and sub contractors and will not be project specific. Provided below are some of the factors that will be used to establish the number of trainee positions each contracting year, they are:

- number of contracts let during a contracting year
- dollar volume
- type of project
- location
- available trainees
- training program(s) submitted by contractor

Each contractor will submit a yearly certification with regard to their participation in the OJT Program. This certification will also identify the number of trainees each prime or sub contractor intends to train on either federal or state funded highway projects.

DISBURSEMENT OF FUNDS

Contractors will be paid \$3.00 rate for each hour of training performed by all trainees in an approved training program. Program reimbursements will be made directly to the prime or sub contractor. Request for payment will be submitted to the Contract Administration Office for approval.

Contractors must complete the form providing the following information to be reimbursed.

Contractor's Name _____
 Mailing Address _____

Trainee Name _____

Social Security Number _____

Type of Program _____

Total Number of Training Hours Required _____

Training Hours Completed for Reimbursement _____

Type of Statement: Monthly _____ Quarterly _____ Annual _____

| Work Period or Time Frame | Project Number | Total Hours Worked By Project | Cumulative Hours in Program | Number of Hours to be paid on this Voucher |
|---------------------------|----------------|-------------------------------|-----------------------------|--|
| | | | | |
| | | | | |

I hereby certify that this information is true... (Must have customary certification of information).

Signed by: _____ Date: _____

TRAINING PROGRAM APPROVAL

A. To use the OJT Program on highway construction projects, the contractor will notify the Department Contract Administration Office using the Request for On-the-Job Training Program Approval. The notification must include the following information:

- Trainee Starting Date
- Project number (s) trainee starting on
- Training program (classification) to be used; and
- Anticipated date of trainee employment
- Number of classroom training hours by subject

- B. If a contractor chooses to use a training program different from those listed in the OJT Program, or desires to train in a different classification, the training program must be submitted in its entirety for approval by the Department and FHWA. The training proposal must include the following:
1. The primary objective of the program: To provide training for minority, female and economically disadvantaged individuals for development to full journey status in the work classifications in which they are being trained.
 2. The minimum number of hours and type of training the trainee will receive as it relates to each specific task required to achieve journey status.
 3. Minimum wage.
 4. Trainee certification of completion.
 5. Records and reports submitted to the Contract Administration Office on a quarterly basis.

DEPARTMENT RESPONSIBILITY

1. Department project staff will monitor trainees on the project. They will monitor payrolls for payment of correct wage rates and fringe benefits. The Contract Administration Office will maintain a master list by contractor name, project number, trainee name and trainee social security number to aid project staff in monitoring trainees who work on multiple projects.
2. The Contract Administration Office may elect to interview trainees periodically during the training period to assess their performance and training program. To facilitate the interviews, the Contract Administration Office will contact contractors for the location of the trainees.

CONTRACTOR RESPONSIBILITY

1. Trainees must be identified on payrolls (i.e. dragline trainee).
2. The contractor will submit a quarterly report of training hours completed by trainees to the Contract Administration Office by the tenth working day of the first month of the new quarter using the Federal-Aid Highway Construction Contractors Monthly Training Report form (CAD-322). The trainee must also be provided a copy of the report.
3. When any trainee completes a program, or is terminated for a reason or reasons other than successful completion, the contractor must include the date of completion or an explanation for the termination and date of termination on the quarterly training report.
4. The contractor will assign each trainee to a particular person--either a supervisor or a journeyman/woman who is proficient in the craft the trainee is being trained in, to ensure that timely instructional experience is received by the trainee. This person, cooperating with the appropriate company personnel, will see that proper

records and the total intended training hours are completed during the allocated number of hours set up in the classification criteria.

5. The contractor has the prerogative of terminating the training period of the trainee and advancing the trainee to journey status. Approval requests must be submitted to the Contract Administration Office with an explanation (*refer to 2 above*).
6. Upon notification from the contractor, the Department will issue a certificate of completion to the trainee.
7. Trainees may be transferred to state-aid highway construction projects in order to complete the training program. If transfers are made the Contract Administration Office must be notified on the Quarterly Reporting Form. All of the training hours completed by trainees will count toward overall program completion.
8. Program reimbursements will be made directly to the prime or sub contractor.

CLASSROOM TRAINING

1. Classroom training programs must be pre-approved by the Department, if the contractor wishes to count the hours toward the trainee's training program.
 2. Contractors will be reimbursed for classroom training hours after the trainee has completed 20 hours of work on a highway construction project.
 3. Reimbursement for classroom training will be limited to 40 hours per trainee per construction season.
- **NOTE:** All proposed classroom training must be submitted as part of the trainee's OJT training program.

WAGE RATE

1. The wage rate for all trainees is \$5.15, during their OJT training program. Trainees shall be paid full fringe benefit amounts, where applicable. At the completion of the training program, the trainee shall receive the wages of a skilled journey.
2. For the purpose of this training program, a quarter does not represent three months. The first two quarters of a 500-hour training program would end after 250 hours. On a 750-hour training program, the first two quarters would end after 375 hours, the third quarter after 560 or an additional 186 hours or work and the fourth after 750 hours.

JOURNEY WORKER RATIO

The ratio of trainee to journey will be less than 1:4 and not more than 1:10.

RECRUITMENT AND SELECTION PROCEDURES

A. Prerequisites for Trainees

To be qualified for enrollment in the OJT Program, trainees must possess basic physical fitness for the work to be performed, dependability, willingness to learn and ability to follow instructions.

B. Licenses

Truck driver trainees must possess appropriate driver permits or licenses for the operation of Class A, B and C trucks. However, when an instructional permit is used in lieu of a license, the trainee must be accompanied by an operator who:

1. Holds a license corresponding to the vehicle being operated;
2. Has had at least one year of driving experience; and
3. Is occupying the seat next to the driver.

C. Recruitment

1. Notices and posters setting forth the contractor's Equal Employment Opportunity Policy and availability of training programs will be placed in areas readily accessible to employees, applicants for employment and potential employees.
2. The contractor must target minority, female or economically disadvantaged trainees.
3. The contractor will conduct systematic and direct recruitment through public and private employee referral sources. Contractors must submit the trainee's name and completed application form to the Contract Administration Office for review and approval. Approval must be obtained before the trainee can begin work under the training program.
4. Present employees will be screened for upgrading.

D. Selection

1. The selection and employment of a person by participating contractor shall qualify the person for the OJT Program.
2. Selection will be made without regard to race, color, religion, sex, age or national origin and shall be completely nondiscriminatory.
3. Employment of trainees will be in accordance with the work force requirements of the contractor. Each contractor will hire and train the trainees for uses in their own organization.
4. Written certification of individuals under the category of economically disadvantaged can be provided to the contractor at the time of the interview. This certification must then be provided to the Contract Administration Office with the other required information as part of the approval process for trainees.

- **NOTE:** The OJT Program is to provide training for minority, female and economically disadvantaged individuals in order that they may develop marketable skills and gain journey status in the skilled craft classifications in which they are being trained. However, this program does not exclude trainees that are not members of the above groups.

SECTION 905 - PROPOSAL

Date _____

Mississippi Transportation Commission
Jackson, Mississippi

Sirs: The following proposal is made on behalf of _____
_____ of _____

for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of the Mississippi Department of Transportation, Jackson, Mississippi.

The Specifications are the current Standard Specifications and Supplemental Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

Attached hereto is a certified check, cashier's check or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law).

INSTRUCTION TO BIDDERS: Alternate and Optional Items on Bid Schedule.

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.
2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.
3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 907-102.06 prior to or at the time of execution of the contract.
4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

SECTION 905

PROPOSAL (Sheet No. 2- 1)

CONSTRUCTION OF DRAINAGE CORRECTION ON U.S. 84 IN NATCHEZ FROM THE MISSISSIPPI RIVER BRIDGE TO CANAL STREET, KNOWN AS FEDERAL AID PROJECT STP-0015-01(054) / 103252, IN THE COUNTY OF ADAMS, STATE OF MISSISSIPPI.

I (We) agree to complete the entire project within the specified contract time.

*** SPECIAL NOTICE TO BIDDERS ***

BIDS WILL NOT BE CONSIDERED UNLESS BOTH UNIT PRICES AND ITEM TOTALS ARE ENTERED

BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATE LOCATED AT THE END OF THE BID SHEETS IS SIGNED

BID SCHEDULE

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------------------|--------------|-----------|------------------|----------------|--------------------------------|--------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| <u>DIRECT PAY ITEMS</u> | | | | | | | | | |
| (10) | 201-A | | | lump sum | Clearing and Grubbing | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| (20) | 202-B | | | 1 each | Removal of Junction Box | | | | |
| (30) | 202-B | | | 1 each | Removal of Inlets (All Sizes) | | | | |
| (40) | 202-B | | | 44 linear foot | Removal of Pipe (8" And Above) | | | | |

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 2)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|-----------------------|------|--|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (41) | 907-203-E | (E) | 4,000 cubic yard | | Borrow Excavation (FM) (Class B9) (AH) | | | | |
| (50) | 206-A | (S) | 2,946 cubic yard | | Structure Excavation | | | | |
| (60) | 206-B | (E) | 200 cubic yard | | Select Material for Undercuts (Contractor Furnished) (FM) | | | | |
| (70) | 907-208-A | | 800 linear foot | | Linear Grading | | | | |
| (80) | 212-B | | 13,522 square yard | | Standard Ground Preparation | | | | |
| (90) | 907-213-A | | 6 ton | | Agricultural Limestone | | | | |
| (100) | 213-B | | 2 ton | | Combination Fertilizer (13-13-13) | | | | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 3)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|---------------------|--------------------|--------------------------------|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (110) | 213-C | | | 2 ton | Superphosphate | | | | |
| (120) | 214-A | | | 70 pound | Seeding (Bahagrass) | | | | |
| (130) | 214-A | | | 21 pound | Seeding (Tall Fescue) | | | | |
| (140) | 215-A | | | 6 ton | Vegetative Materials for Mulch | | | | |
| (150) | 216-A | | | 265 square yard | Solid Sodding | | | | |
| (160) | 219-A | | | 6 M/gallon | Watering | 20.0000 | | 120.00 | |
| (170) | 220-A | | | 2 acre | Insect Pest Control | 30.0000 | | 60.00 | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 4)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|---------------------|------|--|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (180) | 907-234-A | | 400 linear foot | | Temporary Silt Fence | | | | |
| (190) | 235-A | | 200 bale | | Temporary Erosion Checks | | | | |
| (200) | 304-C | (GY) | 6,832 cubic yard | | Granular Material (AEA) (Class 6, Group C) | | | | |
| (210) | 304-C | (GY) | 114 cubic yard | | Granular Material (AEA) (Class 4, Group C) | | | | |
| (211) | 412-A | | 20 each | | Holes | | | | |
| (212) | 412-B | | 200 bag | | Portland Cement Pressure Grout Slurry, Type 6 | | | | |
| (220) | 907-418-A | | 332 cubic yard | | Compaction Grouting | | | | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 5)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|---------------------|------|--|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (230) | 601-B | (S) | 186 cubic yard | | Class "B" Structural Concrete, Minor Structures | | | | |
| (240) | 602-A | (S) | 63,232 pound | | Reinforcing Steel | | | | |
| (270) | 603-A | (S) | 86 linear foot | | 54" Steel Pipe, Wall Thickness 0.625" | | | | |
| (280) | 603-C-A | (S) | 40 linear foot | | 18" Reinforced Concrete Pipe, Class III | | | | |
| (290) | 603-C-A | (S) | 12 linear foot | | 24" Reinforced Concrete Pipe, Class III | | | | |
| (300) | 603-C-A | (S) | 100 linear foot | | 30" Reinforced Concrete Pipe, Class III | | | | |
| (310) | 603-C-A | (S) | 312 linear foot | | 36" Reinforced Concrete Pipe, Class III | | | | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 6)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|---------------------|------|--|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (320) | 603-C-A | (S) | 444 linear foot | | 42" Reinforced Concrete Pipe, Class III | | | | |
| (330) | 603-C-A | (S) | 552 linear foot | | 54" Reinforced Concrete Pipe, Class III | | | | |
| (340) | 603-C-B | (S) | 1 each | | 24" Reinforced Concrete End Section | | | | |
| (350) | 603-C-B | (S) | 1 each | | 30" Reinforced Concrete End Section | | | | |
| (360) | 603-C-B | (S) | 1 each | | 36" Reinforced Concrete End Section | | | | |
| (361) | 907-603-J | (S) | 355 linear foot | | Jacked or Bored Pipe (30" Steel) (0.625" minimum thickness) | | | | |
| (362) | 907-603-J | (S) | 100 linear foot | | Jacked or Bored Pipe (42" Steel) (0.500" thickness) | | | | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 7)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|---------------------|----------------|--|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (370) | 604-A | | 2,520 | pound | Castings | | | | |
| (380) | 604-B | | 147 | pound | Gratings | | | | |
| (390) | 907-604-C | (S) | 54 | linear foot | Precast Manhole (Class V, 84" Inside Diameter) | | | | |
| (400) | 907-607-B | | 343 | linear foot | 96" Type IV Chain Link Fence (Class II) (Dark Green Color) | | | | |
| (410) | 907-607-G | | 1 | each | Gate (Type IV Chain Link) (12' Single) (Dark Green Color) | | | | |
| (420) | 907-607-G | | 1 | each | Gate (Type IV Chain Link) (24' Double) (Dark Green Color) | | | | |
| (430) | 907-607-P1 | | 26 | each | Line Posts 11' 0" x 2" Galvanized Steel (Dark Green Color) | | | | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 8)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|---------------------|-------------------|--|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (440) | 907-607-P2 | | | 11 each | Brace Posts 11' 6" x 2 1/2" Galvanized Steel (Dark Green Color) | | | | |
| (450) | 907-607-P3 | | | 2 each | Gate Posts 11' 6" x 2 1/2" Galvanized Steel (Dark Green Color) | | | | |
| (460) | 907-607-P3 | | | 2 each | Gate Posts 11' 6" x 3 1/2" Galvanized Steel (Dark Green Color) | | | | |
| (470) | 619-D1 | | | 32 square foot | Standard Roadside Construction Signs (Less than 10 Sq. Ft.) | | | | |
| (480) | 619-D2 | | | 72 square foot | Standard Roadside Construction Signs (10 Sq. Ft. or More) | | | | |
| (490) | 619-G4 | | | 48 linear foot | Barricades (Type III) (Double Faced) | | | | |
| (500) | 907-631-A | | | 255 cubic yard | Flowable Fill | | | | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 9)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|-------------|-----------------|--------------|----------------------|------|---|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |
| (510) | 907-803-M | (S) | 54 linear foot | | Drill Shaft Excavation For Vertical Drop Inlet | | | | |
| (520) | 907-803-R | (S) | 54 linear foot | | Permanent Casing (108" Diameter) (0.625" Wall Thickness) | | | | |
| (530) | 907-804-A | (S) | 26 cubic yard | | Bridge Concrete (Class S) | | | | |
| (540) | 907-804-B | (S) | 149 cubic yard | | Box Bridge Concrete (Class B) | | | | |
| (550) | 907-810-A | (S) | 1,000 pound | | Structural Steel | | | | |
| (560) | 815-A | (S) | 1,280 ton | | Loose Riprap, (Size 300) | | | | |
| (561) | 907-815-E | (S) | 1,580 square yard | | Geotextile Fabric under Riprap | | | | |

(03/27/2003)

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 10)

Adams County

| REF. NO. | PAY ITEM NO. | ADJ. CODE | APPROX. QUANTITY | UNIT | DESCRIPTION | UNIT PRICE | | ITEM TOTAL | |
|----------|--------------|-----------|------------------|------|-------------|------------|------|------------|------|
| | | | | | | DOLLAR | CENT | DOLLAR | CENT |

SUBTOTAL - DIRECT PAY ITEMS.....\$ _____

DEPENDENT PAY ITEMS

| | | | | | | | | | |
|-------|-----------|--|--|--|--------------------------------------|--------------|------|--|--|
| (570) | 618-A | | | | lump sum Maintenance of Traffic | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| (580) | 620-A | | | | lump sum Mobilization | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| (590) | 907-699-A | | | | lump sum Roadway Construction Stakes | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |
| | | | | | | XXXXXXXXXXXX | XXXX | | |

SUBTOTAL - DEPENDENT ITEMS.....\$ _____

SECTION 905

STP-0015-01(054) / 103252

PROPOSAL (Sheet No. 2- 11)

Adams County

TOTAL BID - DIRECT AND DEPENDENT ITEMS\$ _____

COMPLETE ITEM NOS. 1, 2, AND/OR 3 AS APPROPRIATE. SEE NOTICE TO BIDDERS NO.5955 AND SUPPLEMENT.

1. I/We agree that no less than _____ percent shall be expended with small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE and WBE).

2. Classification of Bidder: Small Business (DBE) _____ Small Business (WBE) _____

3. A joint venture with a Small Business (DBE/WBE): YES _____

*** SIGNATURE STATEMENT ***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFIED THAT THE FIGURES SHOWN THEREIN CONSTITUTE THEIR OFFICIAL BID.

BIDDER'S SIGNATURE

CONDITIONS FOR COMBINATION BID

If a bidder elects to submit a combined bid for two or more of the contracts listed for this month's letting, the bidder must complete and execute these sheets of the proposal in each of the individual proposals to constitute a combination bid. In addition to this requirement, each individual contract shall be completed, executed and submitted in the usual specified manner.

Failure to execute this Combination Bid Proposal in each of the contracts combined will be just cause for each proposal to be received and evaluated as a separate bid.

COMBINATION BID PROPOSAL

I. This proposal is tendered as one part of a Combination Bid Proposal utilizing option ____* of Subsection 102.11 on the following contracts:

* Option to be shown as either (a), (b), or (c).

| <u>Project No.</u> | <u>County</u> | <u>Project No.</u> | <u>County</u> |
|--------------------|---------------|--------------------|---------------|
| 1. _____ | _____ | 6. _____ | _____ |
| 2. _____ | _____ | 7. _____ | _____ |
| 3. _____ | _____ | 8. _____ | _____ |
| 4. _____ | _____ | 9. _____ | _____ |
| 5. _____ | _____ | 10. _____ | _____ |

A. If option (a) has been selected, then go to II, and sign Combination Bid Proposal.

B. If option (b) has been selected, then complete the following, go to II, and sign Combination Bid Proposal.

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

| Project Number | Pay Item Number | Unit | Unit Price Reduction | Total Item Reduction | Total Contract Reduction |
|----------------|-----------------|----------------|----------------------|----------------------|--------------------------|
| 1. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 2. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 3. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 4. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 5. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 6. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 7. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 8. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

| Project Number | Pay Item Number | Unit | Unit Price Reduction | Total Item Reduction | Total Contract Reduction |
|----------------|-----------------|----------------|----------------------|----------------------|--------------------------|
| 9. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |
| 10. _____ | _____ _____ | _____ _____ | _____ _____ | _____ _____ | |

C. If option (c) has been selected, then initial and complete one of the following, go to II. and sign Combination Bid Proposal.

_____ I (We) desire to be awarded work not to exceed a total monetary value of \$ _____.

_____ I (We) desire to be awarded work not to exceed _____ number of contracts.

II. It is understood that the Mississippi Transportation Commission not only reserves the right to reject any and all proposals, but also the right to award contracts upon the basis of lowest separate bids or combination bids most advantageous to the State.

It is further understood and agreed that the Combination Bid Proposal is for comparison of bids only and that each contract shall operate in every respect as a separate contract in accordance with its proposal and contract documents.

I (We), the undersigned, agree to complete each contract on or before its specified completion date.

SIGNED _____

**Certification with regard to the Performance of Previous
Contracts or Subcontracts subject to the Equal Opportunity
Clause and the filing of Required Reports**

The Bidder _____, proposed Subcontractor _____, hereby certifies that he has _____, has not _____, participated in a previous contract or subcontract subject to the Equal Opportunity Clause, as required by Executive Orders 10925, 11114, or 11246, and that he has _____, has not _____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(COMPANY)

BY _____

(TITLE)

DATE: _____

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and Subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime Contractors and Subcontractors who have participated in a previous contract or subcontract subject to the Executive orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such Contractors submit a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

CERTIFICATION
(Execute in duplicate)

State of Mississippi

County of _____

I, _____,
(Name of person signing certification)

individually, and in my capacity as _____ of
(Title)

_____ do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

_____, Bidder
(Name of Firm, Partnership, or Corporation)

on Project No. _____,

in _____ Count _____, Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

- 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 three-year period preceding this proposal been convicted of or had a civil judgment 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 (b) above; and
- d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently \$25,000) which are excluded from the certification requirements.

The bidder further certifies, to the best of his or her knowledge and belief, that:

- 1) No 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 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 contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000. The bidder shall include the language of the certification in all subcontracts exceeding \$100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on _____
Signature

(11/23/92F)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

CERTIFICATION
(Execute in duplicate)

State of Mississippi

County of _____

I, _____,
(Name of person signing certification)

individually, and in my capacity as _____ of
(Title)

_____ do hereby certify under
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that _____

_____, Bidder
(Name of Firm, Partnership, or Corporation)

on Project No. _____,

in _____ Count _____, Mississippi, has not either

directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds:

- 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 three-year period preceding this proposal been convicted of or had a civil judgment 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 (b) above; and
- d) Have not within a three-year period preceding this application/ proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Initial here "_____" if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

The bidder further certifies that the certification requirements contained in Section XI of Form FHWA 1273, will be or have been included in all subcontracts, material supply agreements, purchase orders, etc. except those procurement contracts for goods or services that are expected to be less than the Federal procurement small purchase threshold fixed at 10 U.S.C. 2304(g) and 41 U.S.C. 253(g) (currently \$25,000) which are excluded from the certification requirements.

The bidder further certifies, to the best of his or her knowledge and belief, that:

- 1) No 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 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 contract, Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions will be completed and submitted.

The certification contained in (1) and (2) above is a material representation of fact upon which reliance is placed and a prerequisite imposed by Section 1352, Title 31, U.S. Code prior to entering into this contract. Failure to comply shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000. The bidder shall include the language of the certification in all subcontracts exceeding \$100,000 and all subcontractors shall certify and disclose accordingly.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on _____
Signature

(11/23/92F)

S E C T I O N 9 0 2

CONTRACT FOR _____

LOCATED IN THE COUNTY OF _____

STATE OF MISSISSIPPI,

COUNTY OF HINDS

This contract entered into by and between the Mississippi Transportation Commission on one hand, and the undersigned contractor, on the other witnesseth;

That, in consideration of the payment by the Mississippi Transportation Commission of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the Mississippi Department of Transportation.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the Executive Director of the Mississippi Department of Transportation, or his authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the _____ day of _____, _____.

Contractor (s)

By _____

MISSISSIPPI TRANSPORTATION COMMISSION

Title _____

By _____

Signed and sealed in the presence of:
(names and addresses of witnesses)

Executive Director

Secretary to the Commission

Award authorized by the Mississippi Transportation Commission in session on the ____ day of _____, _____, Minute Book No. _____, Page No. _____.

S E C T I O N 9 0 3

CONTRACT BOND FOR: _____

LOCATED IN THE COUNTY OF: _____

STATE OF MISSISSIPPI,

COUNTY OF HINDS

Know all men by these presents: that we, _____

_____ Principal, a _____

residing at _____ in the State of _____

and _____

residing at _____ in the State of _____,

authorized to do business in the State of Mississippi, under the laws thereof, as surety, are held and firmly bound unto the

State of Mississippi in the sum of _____

(\$ _____) Dollars, lawful money of the United States of America, to be paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or assigns jointly and severally by these presents.

Signed and sealed this the ____ day of _____ A.D. _____.

The conditions of this bond are such, that whereas the said _____

principal, has (have) entered into a contract with the Mississippi Transportation Commission, bearing the date of ____ day of _____ A.D. _____ hereto annexed, for the construction of certain highways in the State of Mississippi as mentioned in said contract in accordance with the plans, specifications and special provisions therefor, on file in the offices of the Mississippi Department of Transportation, Jackson, Mississippi.

Now therefore, if the above bounden _____

_____ in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said Mississippi Transportation Commission from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the State at the instance of the Mississippi Transportation Commission or any officer of the State authorized in such cases, for double any amount in money or property, the State may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes,

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
OFFICE OF CIVIL RIGHTS
JACKSON, MISSISSIPPI

LIST OF FIRMS SUBMITTING QUOTES

I/we received quotes from the following firms on Project No: _____

County: _____

Disadvantaged Business Enterprise (DBE) Regulations as stated in 49 CFR 26.11 require the Mississippi Department of Transportation (MDOT) to create and maintain a comprehensive list of all firms quoting/bidding subcontracts on prime contracts and quoting/bidding subcontracts on federally-funded transportation projects. For every firm, we require the following information:

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

Firm Name: _____
Contact Name/Title: _____
Firm Mailing Address _____
Phone Number: _____
_____ DBE Firm _____ Non-DBE Firm

SUBMITTED BY (Signature)

FIRM NAME

Submit this form to **Contract Administration as a part of your bid package**. If this form is not included as part of the bid packet, your bid will be deemed irregular. For further information about this form, call Mississippi DOT's Office of Civil Rights at (601) 359-7466; FAX (601) 576-4504. **Please make copies of this form when needed and also add those copies to the bid package.**

**HAUL PERMIT FOR BRIDGES
WITH
POSTED WEIGHT LIMITS**

DATE: _____

PROJECT: NH-0015-01(054) / 103252
COUNTY: ADAMS
LOCATION: U.S. 84 FROM THE MISSISSIPPI RIVER BRIDGE TO
CANAL STREET IN NATCHEZ

A permit is issued to _____ for transporting loads exceeding the posted limit for any such bridge located on State designated routes within the project termini provided that such transport vehicles comply with all other governing statutory weight limits.

This permit is valid on all State designated routes from the point of origin to the point of delivery for materials and equipment utilized in construction of said project and also valid for sub-contractors and vendors upon written permission of the Contractor. The permit is non-transferable and no other haul permit for posted bridges will be issued to other individuals, vendors, or companies for construction of this project.

A copy of this signed permit shall be carried in all vehicles operating under the authority of this permit and also a copy of the Contractor's written permission when the vehicle is other than Contractor owned.

In accordance with State law, the above named Contractor will be liable for damages directly attributable to vehicles operating under this permit.

EXECUTIVE DIRECTOR