

SM No. CNH999900331CT1

# PROPOSAL AND CONTRACT DOCUMENTS

# FOR THE CONSTRUCTION OF (NONEXEMPT)

6

The installation of Dynamic Message Signs in the Jackson Area, known as Federal Aid Project Nos. NH-9999-00(331) CT3N / 103811303, 304 & 305, in the Counties of Hinds, Madison and Rankin, State of Mississippi.

Project Completion: February 27, 2009

#### 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
(2004) STANDARD SPECIFICATIONS
FOR ROAD AND BRIDGE CONSTRUCTION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
JACKSON, MISSISSIPPI

# BIDDER CHECK LIST (FOR INFORMATION ONLY)

 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 905PROPOSAL has been completed.
 Second sheet of SECTION 905PROPOSAL 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, <u>signed</u> , 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 905PROPOSAL has been signed.
 Combination Bid Proposal of SECTION 905PROPOSAL has been completed for each project which is to be considered in combination (See Subsection 102.11).
 Equal Opportunity Clause Certification, when included in contract, has been completed and <u>signed</u> .
 Subcontract Certificate, when included in contract, has been completed and <u>signed</u> .
 The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been <u>executed in duplicate</u> .
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 with project number identified on same. Bid bond has been <u>signed by the bidder</u> and has also been <u>signed or countersigned by a Mississippi Resident Agent for the Surety</u> 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. <u>DO NOT</u> 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.

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SECTION 905 - PROPOSAL,

PROPOSAL SHEET NOS. 2-1 THRU 2-7,

COMBINATION BID PROPOSAL,

CERTIFICATE OF PERFORMANCE - PRIOR FEDERAL-AID CONTRACTS,

NON-COLLUSION CERTIFICATE,

SECTION 902 - CONTRACT FORM, AND SECTION 903 - CONTRACT BOND 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)

#### **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, June 26, 2007; 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, June 26, 2007, and shortly thereafter publicly opened for:

The installation of Dynamic Message Signs in the Jackson Area, known as Federal Aid Project Nos. NH-9999-00(331) CT3N / 103811303, 304 & 305, in the Counties of Hinds, Madison and Rankin, 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 87-58 1, 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, age, disability, religion or national origin in consideration for an award.

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

Bid proposals must be acquired from the MDOT Contract Administration Division. These proposal 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 <a href="https://www.gomdot.com">www.gomdot.com</a>.

Plans may be acquired on a cost per sheet basis from MDOT Plans Print Shop, Room 1100, MDOT Administration Building, 401 North West Street, Jackson, Mississippi, 39201, Telephone (601) 359-7460 or e-mail at <a href="mailto:plans@mdot.state.ms.us">plans@mdot.state.ms.us</a> or FAX (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.

The 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

CODE: (IS)

#### **SECTION 904 - NOTICE TO BIDDERS NO. 1**

**DATE:** 05/03/2004

**SUBJECT:** Governing Specifications

The current (2004) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation 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 MDOT 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 1990 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 2004 Edition of the Standard Specifications.

SECTION 904 - NOTICE TO BIDDERS NO. 2 CODE: (IS)

**DATE:** 05/03/2004

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 <u>ALL</u> 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

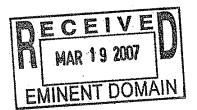
NH-9999-00(331)CT3N 103811/303000 HINDS COUNTY 103811/304000 MADISON COUNTY 103811/30500 RANKIN COUNTY March 28, 2007

All rights of way and legal rights of entry have been acquired except:

NONE.

STATUS OF POTENTIALLY CONTAMINATED SITES
NH-9999-00(331)CT3N
103811-303000
HINDS COUNTY
March 19, 2007

THERE IS NO RIGHT OF WAY REQUIRED FOR THIS PROJECT. NO INITIAL SITE ASSESSMENT WILL BE PERFORMED. IF CONTAMINATION ON EXISTING RIGHT OF WAY IS DISCOVERED, IT WILL BE HANDLED BY THE DEPARTMENT.



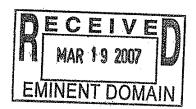
STATUS OF POTENTIALLY CONTAMINATED SITES
NH-9999-00(331)CT3N
103811-304000
MADISON COUNTY
March 19, 2007

THERE IS NO RIGHT OF WAY REQUIRED FOR THIS PROJECT. NO INITIAL SITE ASSESSMENT WILL BE PERFORMED. IF CONTAMINATION ON EXISTING RIGHT OF WAY IS DISCOVERED, IT WILL BE HANDLED BY THE DEPARTMENT.



STATUS OF POTENTIALLY CONTAMINATED SITES
NH-9999-00(331)CT3N
103811-305000
RANKIN COUNTY
March 19, 2007

THERE IS NO RIGHT OF WAY REQUIRED FOR THIS PROJECT. NO INITIAL SITE ASSESSMENT WILL BE PERFORMED. IF CONTAMINATION ON EXISTING RIGHT OF WAY IS DISCOVERED, IT WILL BE HANDLED BY THE DEPARTMENT.

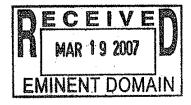


ASBESTOS CONTAMINATION STATUS OF BUILDINGS TO BE REMOVED BY THE CONTRACTOR NH-9999-00(331)CT3N 103811-303000 HINDS COUNTY March 19, 2007

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 is no Right of Way required for this project. There are no buildings to be removed by the contractor.



ASBESTOS CONTAMINATION STATUS OF BUILDINGS TO BE REMOVED BY THE CONTRACTOR NH-9999-00(331)CT3N 103811-304000 MADISON COUNTY March 19, 2007

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 is no Right of Way required for this project. There are no buildings to be removed by the contractor.

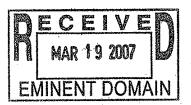


ASBESTOS CONTAMINATION STATUS OF BUILDINGS
TO BE REMOVED BY THE CONTRACTOR
NH-9999-00(331)CT3N
103811-305000
RANKIN COUNTY
March 19, 2007

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 is no Right of Way required for this project. There are no buildings to be removed by the contractor.



# **STATUS OF UTILITIES**

NH-9999-00(331)CT3N 103811/303000 NH-9999-00(331)CT3N 103811/304000 NH-9999-00(331)CT3N 103811/305000 Hinds, Madison & Rankin

March 28, 2007

No utilities were found that will conflict with construction.

CODE: (SP)

#### **SECTION 904 - NOTICE TO BIDDERS NO. 3**

**DATE:** 05/03/2004

**SUBJECT:** Final Clean-Up

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such a glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

CODE: (IS)

SECTION 904 - NOTICE TO BIDDERS NO. 12

**DATE:** 05/03/2004

**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 7<sup>th</sup> Street, SW Washington, DC 20590 (202) 366-2212

or

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

SECTION 904 - NOTICE TO BIDDERS NO. 13 CODE: (IS)

**DATE:** 05/03/2004

**SUBJECT:** Submission of Form OCR-485

Bidders are hereby advised that Form OCR-485 will be completed by <u>ALL BIDDERS</u> submitting a bid proposal and <u>must be included in the bid proposal package</u>. Failure to include Form OCR-485 in the bid proposal package will cause the Contractor's bid to be considered <u>irregular</u>.

SECTION 904 - NOTICE TO BIDDERS NO. 640 CODE: (IS)

**DATE:** 09/26/2005

**SUBJECT:** Fiber Reinforced Concrete

Bidders are hereby advised that synthetic structural fibers meeting the requirements of Subsection 907-711.04 may be used in lieu of wire mesh in some items of construction. Substitution of fibers for wire mesh will be allowed in the construction of paved ditches, paved flumes, paved inlet apron, driveways, guard rail anchors and pile encasements. Substitution in any other items of work must be approved by the State Construction Engineer prior to use.

#### SUPPLEMENT TO NOTICE TO BIDDERS NO. 696

**DATE: 08/17/2006** 

The goal is <u>5</u> percent for the Disadvantaged Business Enterprise. The low bidder is required to submit Form OCR-481 for all DBEs. Bidders are advised to check the bid tabulation link for this project on the MDOT website (<a href="http://www.gomdot.com/bidsystem/">http://www.gomdot.com/bidsystem/</a>) for results. Bid tabulations are usually posted by 3:00 pm on Letting Day.

Form OCR-481 is available at <a href="http://www.gomdot.com/business/dbe/pdf/OCR\_481.pdf">http://www.gomdot.com/business/dbe/pdf/OCR\_481.pdf</a> or by calling 601-359-7466.

All OCR-481s must be returned within 10 days following the bid letting to the MDOT Office of Civil Rights, P.O. Box 1850, Jackson, MS 39215-1850.

For answers to questions, contact the MDOT Office of Civil Rights at (601) 359-7466.

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 "Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy For Users (SAFETEA-LU)" 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 Amphitheater 1 & 2 of the Hilton Jackson located at I-55 and County Line Road, 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.

**SECTION 904 - NOTICE TO BIDDERS NO. 696** 

CODE: (IS)

**DATE:** 12/20/2005

SUBJECT: DISADVANTAGED BUSINESS ENTERPRISES IN FEDERAL-AID

**HIGHWAY CONSTRUCTION** 

This contract is subject to the 'Safe, Accountable, Flexible, Efficient Transportation Equity Act, A Legacy For Users (SAFETEA-LU)" 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. In this case, 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.

#### **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 Form OCR-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 <u>with the bid proposal</u>, 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 and other Unified Certification Partners (UCP).

The DBE firm must be on the Department's list of "Certified DBE Contractors" that is attached to this proposal and approved by MDOT to count towards meeting the DBE goal.

# **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. The replacement DBE must be a DBE who was on the Department's list of "Certified DBE Contractors" when the job was awarded, and who is still active. All DBE replacements must be approved by the Department.

Under no circumstances shall the <u>Prime</u> or any Subcontractor perform the DBE's work (as shown on the OCR-481) without prior written approval from the Department. See "Sanctions" at the end of this document 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.
- (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 <u>by actually performing, managing, and supervising the work involved.</u>

- (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 <u>actually paid</u> 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 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.

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**

The <u>contract goal established</u> by MDOT in this proposal must be met 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 <u>will</u> meet the terms of the contract as long as it <u>meets</u> or <u>exceeds MDOT's Contract</u> Goal. For additional information, refer to "Replacement" section of this Notice.

# DBE REPORTS

- (1) OCR-481: Refer to 'CONTRACT GOAL" section 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 Contractor / Supplier. 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 bidder must submit <u>with the bid proposal</u> 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).

#### **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.

Percentage of the monetary amount disallowed

Offense	from (1) above	Lump Sum
# 1	10%	\$ 5,000 or both
# 2	20%	\$ 10,000 or both
# 3	40%	\$ 20.000 & debarment

SECTION 904 - NOTICE TO BIDDERS NO. 777

CODE: (IS)

**DATE:** 04/13/2006

**SUBJECT: On-The-Job Training Program** 

Payment for training hours will be handled as outlined in Special Provision 906-6. A pay item for trainees will not 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 906-6).

On Federal-Aid projects, failure on the part of the Contractor to carryout the terms of the Alternate Training Special Provision (Special Provision 906-6) 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.

**SECTION 904 - NOTICE TO BIDDERS NO. 882** 

CODE: (IS)

**DATE:** 04/06/2006

**SUBJECT: DBE Participation and Payment** 

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-482 has been developed to comply with this requirement. Bidders are hereby advised that at the end of the job, the Prime Contractor will submit this form to the Project Engineer before the final estimate is paid and the project is closed out. This form certifies payments to all DBE Subcontractors over the life of the contract.

Form OCR-484 has also been developed to comply with this requirement. Bidders are hereby advised that each month, the Prime Contractors will submit this form to the Project Engineer no later than the 20<sup>th</sup> of each month. This form certifies payments to all Subcontractors and shows all firms even if the Prime 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.

Forms OCR-482 and OCR-484 can be obtained from the Office of Civil Rights Division, MDOT Administration Building, 401 North West Street, Jackson, MS, or at <a href="https://www.gomdot.com">www.gomdot.com</a> under the Business Section, DBE Information, Applications and Forms for the DBE Program, Monthly Certification Of Payment To Subcontractors (OCR-484)(MDOT).

CODE: (IS)

#### **SECTION 904 - NOTICE TO BIDDERS NO. 883**

**DATE:** 04/28/2006

**SUBJECT:** Payroll Requirements

Bidders are hereby advised that the Contractor and Subcontractor(s) are required to submit payroll information to the Project Engineers on a weekly basis.

On Federal-Aid Projects, CAD-880, CAD-881 and certified payroll submissions are required each week the Contractor or a Subcontractor performs work on the project. This is addressed in Section V, page 6 of Form FHWA-1273.

On State-Funded Projects, CAD-880 is required each week the Contractor or a Subcontractor performs work on the project.

When no work is performed on either Federal-Aid and State-Funded Projects, the Contractor should only submit CAD-880 showing no work activities.

The Contractor shall make all efforts necessary to submit this information to the Project Engineer in a timely manner. The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to submit the required information. Submission of forms and payrolls shall be current through the first full week of the month for the estimate period in order for the Project Engineer to process an estimate.

Bidders are advised to review the requirements regarding payroll submissions in Section 110 of the Standard Specifications.

CODE: (SP)

**SECTION 904 - NOTICE TO BIDDERS NO. 1354** 

**DATE:** 3/14/2007

**SUBJECT:** Dynamic Message Sign Communications Interface Equipment

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

Bidders are hereby advised that the following Dynamic Message Sign (DMS) communications interface equipment and related items will be required on this project.

#### **Dynamic Message Sign Communications Interface Equipment**

This project includes different communication interfaces and equipment requirements at the various Dynamic Message Sign locations. The related communications equipment required at each site shall be included in the cost of the Dynamic Message Sign pay item described in Special Provision 907-656-1. This includes supplying, installing, configuring and testing all equipment.

**DMS Site #1:** This DMS shall connect to existing MDOT fiber optic cable that is routed to a Communications OTN Hut. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

- Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.
- Ethernet Switch, Type A installed in the nearby Communications Hut (located at I-20 and Valley Street) that meets the requirements outlined later in the Notice.

**DMS Site #2:** This DMS shall connect to existing MDOT fiber optic cable that is routed to a Communications OTN Hut. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

• Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.

**DMS Site #3:** This DMS shall connect to existing City of Jackson fiber optic cable that is routed to the City of Jackson TMC. Only one spare fiber is available, therefore, the equipment provided at this site shall operate on one fiber in RS232 mode. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

- Fiber Optic Modem, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.
- Fiber Optic Modem, Type A installed in the Traffic Control cabinet at Meadowbrook Drive/State Street intersection that meets the requirements outlined later in this Notice.

**DMS Site #4:** This DMS shall connect to existing MDOT fiber optic cable that is routed to a Communications OTN Hut. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

- Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.
- Ethernet Switch, Type A installed in the nearby Communications Hut (shown on plan sheet #10) that meets the requirements outlined later in the Notice.

**DMS Site #5:** This DMS shall connect to leased T1 communications provided by BellSouth at the demarcation point. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

- Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.
- Cisco 1841 T1 Router, or approved equivalent, in the demarcation point cabinet.

**DMS Site #6:** This DMS shall connect to existing MDOT fiber optic cable that is routed to a Communications OTN Hut. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

• Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.

**DMS Site #7:** This DMS shall connect to leased T1 communications provided by BellSouth at the demarcation point. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

- Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.
- Cisco 1841 T1 Router, or approved equivalent, in the demarcation point cabinet.

**DMS Site #8:** This DMS shall connect to leased T1 communications provided by BellSouth at the demarcation point. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

- Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.
- Cisco 1841T1 Router, or approved equivalent, in the demarcation point cabinet.

**DMS Site #9:** This DMS shall connect to leased T1 communications provided by BellSouth at the demarcation point. In addition to the items described in Special Provision 907-656-1, the DMS pay item at this site shall also include the following communications equipment:

- Ethernet Switch, Type A installed in the DMS Roadside Cabinet that meets the requirements outlined later in this Notice.
- Cisco 1841 T1 Router, or approved equivalent, in the demarcation point cabinet.

**Requirements for Ethernet Switch, Type A:** Where listed above, an Ethernet Switch, Type A shall be provided, installed, configured and tested that meets the following requirements:

- Minimum of six 10/100 Base-TX ports. Each port shall connect via RJ-45 connector.
- Minimum of two 100 Base FX ports with the following optical requirements:
  - o The minimum optical budget between transmit and received ports shall be 25dB.
  - Optical receiver maximum input power level shall not be exceeded. Optical attenuators shall be added as needed; fiber optic attenuator patch cords shall be in accordance with Section 4 of this TSP. It is the contractor's responsibility to determine where attenuators are needed and shall be included in the cost of the switch.
  - o Each port shall connect via duplex small form-factor connectors.
- Rack, shelf or DIN Rail mountable. If shelf mounted, the Contractor must furnish and install the shelf. The shelf shall be ventilated as per the Network Switch manufacturer recommendation.
- Operate between -34° to +74°C, including power supply.
- Operate from 100 VAC to 200 VAC.
- Operate from 10% to 90% non-condensing humidity
- Meet the IEEE 802.3 (10Mbps Ethernet) standard.
- Meet the IEEE 802.3u (Fast Ethernet 100 Mbps) standard.
- Meet the IEEE 802.3x (Full Duplex with Flow Control) standard.
- Meet the IEEE 802.1p (Priority Queuing) standard.
- Meet the IEEE 802.1Q (VLAN) standard per port for up to four VLAN's.
- The switch shall meet the IEEE 802.1D (Spanning Tree Protocol) and IEEE 802.1w (Rapid Spanning Tree Protocol) standards.
- Meet the IEEE 802.3ad (Port Trunking) standard for a minimum of two groups of four ports.
- Capable of mirroring any port to any other port within the switch.
- Password manageable through:
  - o SNMP
  - o Telnet/CLI
  - o HTTP (Embedded Web Server) with Secure Sockets Layer (SSL)
- Full implementation of SNMPv1 and SNMPv2c.
- Full implementation of RMON I and RMON II.
- Full implementation of GVRP (Generic VLAN Registration Protocol).
- Full implementation of IGMP and IGMP snooping.

- Minimum MTBF of 100,000 hrs using Bellcore TS-332 standard.
- Full implementation of RFC 783 (TFTP) to allow remote firmware upgrades.
- UL approved
- All power transformers provided shall be "fastening mechanism" type. No plug-in types shall be permitted. All corded transformers shall be mountable with the ability to neatly secure power cords.
- The field switch shall provide status indicators as follows: 1) power on an off, 2) network status per port (transmit, receive, link, speed), and 3) status indicators shall be LED.
- Unused ports (copper and optical) shall be covered with rubber or plastic dust caps/cover.

**Requirements for Fiber Optic Modem, Type A:** Where listed above, an Ethernet Switch, Type B shall be provided, installed, configured and tested that meets the following requirements:

- RS-232 with full Handshake Capability
- Data Reat DC to 50 kbps
- Signals Supported
  - o Transmit Data (TD)
  - o Receive Data (RD)
  - o Signal Return/Ground (SG)
  - o Request to Send (RTS)
  - o Clear to Send (CTS)
  - o Data Terminal Ready (DSR)
  - o Data Set Ready (DSR)
  - o Data Carries Detect (DCD)
- Operating Mode Asynchronous or Full Duplex
- Wavelength 1310/1550 nc Single Mode WDM
- Operate on 1 fiber
- LED Indicators
  - o Transmitted Data
  - Received Data
  - o Power
  - Optical Transmit Link Valid
  - o Optical Receive Link Valid
- Conformably Coated Printed Circuit Board
- Power plug with mechanical locking
- Automatic Resettable Solid-State Current Limiters
- MTBF greater than 100,000 hours
- Operating Temp. -40° to 74°C
- NTCIP Compatible
- Selectable DTE or DCE
- Optical Power Budget 20 db
- Warranty 10 years or greater

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• All patch cords, power supply ,cables and accessories to be included in the price of the modem making a complete system.

**Testing:** As noted in Special Provision 907-656-1, the Contractor shall perform a series of tests including Factory Acceptance Tests, Pre-Installation Tests, Stand Alone Site Tests and Sub-System Tests from the TMC.

Once the Contractor completes Stand Alone Testing at the site, it is understood that the communications back to the TMC is the responsibility of others (MDOT, City of Jackson or BellSouth). The contractor shall not be held liable if there are problems with these existing communication systems that prevent the data from getting back to the TMC. However, the Contractor is required to coordinate with MDOT and help provide troubleshooting to determine where a problem may exist.

**Cost of Equipment:** As noted previously, no additional payment will be made for the equipment listed in this Notice To Bidders. All equipment shall be included in the bid price for the Dynamic Message Sign, 907-656-A and 907-656-B.

**Training:** 40 hours of training and assistance shall be provided for operations, testing, and maintenance of the Dynamic Message Signs. .

CODE: (SP)

**SECTION 904 - NOTICE TO BIDDERS NO. 1355** 

**DATE:** 3/14/2007

**SUBJECT:** Fiber Optic Communications

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

Bidders are hereby advised that the following additional requirements for Fiber Optic Communications shall be required on this project and shall be included in the price bid for Pay Item Numbers 657-A and 657-B.

# **Fiber Optic Communications Equipment**

# **Fiber Optic Connectors**

- Provide fiber optic connectors for all fiber optic infrastructures including but not limited to fiber optic termination cabinets, fiber optic drop panels, and fiber optic patch cords.
- Provide only factory-installed keyed ST compatible connectors for all fiber optic infrastructures. Provide only factory-installed connectors of a type other than ST when required by the Network Switches Type A. Do not use field-installed connectors. Do not use adapter couplers to change connector types.
- Use ceramic ferule connectors factory-installed with a thermal-set heat-cured epoxy and machine polished mating face. Install connectors as per manufacturer application and recommendations, including proper termination to the outer-tubing (900 micron tubing, 3 mm fan out tubing, etc.) required for the application.
- Use connectors rated for an operating temperature of -40°C to +75°C.
- Use simplex connectors for all male ST connectors. Provide latching cover for two male connectors being used in a duplex configuration. Female couplers may be duplex but must allow simplex mating connectors.
- Provide dust caps for all exposed male connectors and female couplers at all times until permanent connector installation.
- Use fiber optic termination cabinets providing 72 fiber connectors and capable of storing 72 fusion splices in splice trays.
- Use termination cabinets that integrate the splice trays and connector modules into one compartment within one cabinet, or houses the splice trays and connector modules in separate compartments integrated into one cabinet.
- Provide factory-assembled 12 fiber termination interconnect cables (pigtail cables) to be fusion spliced to the outside plant cable and connected to the rear of the connector modules.

# **Project Submittal Program Requirements**

• General Requirements

- o The Contractor shall provide project submittals for all fiber optic infrastructures. The project submittals for fiber optic infrastructure shall include but are not limited to the additional specific requirements in this notice to bidders.
- Fiber Optic Installation and Testing Tools
  - o Provide project submittals including manufacturer-recommended operations, maintenance and calibration procedures for the following equipment:
    - Fusion splicers
    - Cable pulling strain dynamometers and breakaway links
    - Cable air jetting/blowing systems
    - OTDR's
    - Optical attenuation testers (light sources and power meters)
  - o Submit documentation and proof of manufacturer-recommended operator training and certification for the following equipment:
    - Fusion splicers
    - Cable air jetting/blowing systems
    - OTDR's
    - Optical attenuation testers (light sources and power meters)

#### **Cable Labels**

- Install cable labels on all trunk cables. Clean the installed cable of all dirt and grease before applying any label.
- Provide cable labels that meet the following requirements:
  - o self-coiling wrap-around type
  - o PVC or equivalent plastic material with UV and fungus inhibitors
  - Base materials and graphics/printing inks/materials designed for underground outside plant use including solvent resistance, abrasion resistance and water absorption
  - o minimum size of 2.5 inches wide by 2.5 inches long
  - o minimum thickness of 0.010 inches
  - o orange label body with pre-printed text in bold black block-style font with minimum text height of 0.375 inches.
  - o Pre-print the following text legibly on labels used for all fiber optic trunk cables (FO Cable):
    - MDOT
    - OPTICAL CABLE
  - o Pre-print the following text legibly on labels used for all fiber optic drop cables (FO Drop Cable):
    - MDOT
    - OPTICAL DROP CABLE
  - o On all cable labels, print the text specified above twice on the label with the text of the second image inverted. The end result shall be text which "reads correctly" when the label is coiled onto a cable.
- Label all cables in or at every location where the cable is exposed outside of a conduit, innerduct or pole, using the cable IDs for trunk cables. As a minimum, install cable labels in the following locations:

- o Within 12 inches of every cable entry to a pull box, equipment cabinet, communications hub, or the TMC.
- Within 12 inches of the exterior entry point of every fiber optic splice closure, termination cabinet, and drop panel.
- o Every 30 feet for the entire length of cable in any storage coil in pull boxes.
- o Within two (2) feet of each pole attachment
- o On every riser
- o On every splice enclosure

#### **Conduit Detection Wire**

The conduit detection wire shall meet the following requirements

- Conduit detection wire shall be #10 AWG stranded copper orange-insulated THHN-THWN conductor.
- Install one conduit detection wire in all conduits. Conduit detection wire is required in all
  conduits installed by any installation method, including trenching, directional boring, or
  plowing.
- Only one conduit detection wire is required per installed conduit segment regardless of the number of conduits installed in that segment.
- Conduit detection wire shall be installed inside the conduit,
- Conduit detection wire is not required for structure mounted conduit, except where underground segments of structure mounted conduit are greater than 20 feet in length.
- The conduit detection wire shall be continuous and unspliced between pull boxes and shall enter the pull boxes at the same location as the conduit with which it is installed, entering under the lower edge of the pull box.
- Coil and secure four (4) feet of conduit detection wire in each pull box or vault.
- When two or more detection wires are in any pull box mechanically splice all detection wire together.
- Conduit detection wire is required in drop cable conduits
- Testing
  - o Perform a continuity or tone test after installation to confirm that a continuous run of conduit detection wire was installed between pull boxes or vaults.
  - o Prepare a test plan, supplying equipment, conducting the test and documenting the results. Submit a test plan at least 15 working days prior to the desired testing date. Testing shall not begin until the Engineer has approved the test plan, and all tests shall be conducted in the presence of the Engineer.

# **Splicing into Existing Fiber Optic Cable:**

- At some locations, the contractor shall be required to splice new drop cable into existing
  fiber optic cable at existing pull boxes. The Contractor is responsible to protect all
  existing fiber during this work.
- No separate payment shall be made for splicing into the existing fiber. The cost for all fiber optic work and equipment shall be included in the bid price for pay items 657-A and 657-B.

#### **Fiber Optic Connections at Existing OTN Node Huts:**

- At the I-55/County Line Road location, the contractor is required to pull new fiber optic cable into an existing communications hut.
- No separate payment will be made for this work. The cost for pulling the fiber into the hut, providing and installing the termination equipment, and <u>terminating</u> all the fibers shall be included in the cost of pay items 657-A and 657-B

# **Patch Cords and Jumper Cables**

Any patch cords or jumper cables required to connect the new fiber and equipment at
existing locations shall be considered incidental and shall be included in the cost of pay
items 657-A and 657-B.

#### **Installation:**

- Fiber optic cable slack requirements for this project are
  - o Store 75 feet of slack in all pull boxes not containing a splice enclosure
  - o Store 100 feet of slack on each side of any splice enclosure made in a pull box
  - o Store 100 feet of slack on each side of any aerial splice enclosure
- Bond the aerial messenger cable to the Multi Grounded Neutral Vertical (MGNV) on all poles having a MGNV.
- Install all fiber on MDOT right-of-way not less than 36 inches below finished grade.
- Install all fiber on City of Jackson right-of-way below all utilities and not less than 48 inches below finished grade.

#### **Testing**

# **General Requirements:**

- The project testing program for fiber optic infrastructure shall include but is not limited to the specific requirements in this subsection.
- All test results shall confirm physical and performance compliance with this TSP including but not limited to optical fibers and fusion splices. No event in any given fiber may exceed 0.10 dB. Any event measured above 0.10 dB shall be replaced or repaired at the event point.
- Contractor shall provide the tentative date, time and location of fiber optic infrastructure testing no less than 7 days in advance of the test. Provide confirmed date, time and location of fiber optic infrastructure testing no less than 48 hours before conducting the test.
- Provide test results documentation in electronic format (1 copy) and printed (3 copies) format. Electronic formats shall be readable in Microsoft Excel or other approved application. Printed copies shall be bound and organized by cable segment.
- Provide all test results in English units of measure of length.
- Submit all test results documentation to the Engineer within 14 days of completion of the tests.

#### **Pre-Installation Test (PIT):**

- Perform a PIT on all FO Cable prior to any cable removal from the shipping reels.
- Perform a PIT on each cable reel delivered to the job site.
- The PIT for FO Cable shall include but is not limited to:
  - A visual inspection of each cable and reel
  - An OTDR Test and documentation as required in the SAT below, for three randomly selected fibers from each buffer tube.
  - An Optical Attenuation Test is not required. If the contractor decides to perform one for their own protection, said test should be documented and provided to the engineer.

# **Standalone Acceptance Test (SAT)**

- Perform an SAT on all fiber optic infrastructures on this project after field installation is complete, including but not limited to all splicing and terminations.
- An SAT for each fiber in each cable shall include OTDR Tests and Optical
- Attenuation Tests.
- All fibers in all FO Cables and FO Drop Cables shall be tested from termination point to termination point, including:
  - o fibers from FO Termination Cabinet to FO Termination Cabinet
  - o fibers from FO Termination Cabinet to FO Drop Panel
  - o fiber from FO Drop Panel to FO Drop Panel
  - o fibers from FO Termination Cabinet to the end of the cable run in the last FO Closure.
- All test results shall confirm compliance with this TSP including but not limited to optical fibers and fusion splices. No event in any given fiber may exceed 0.10 dB. Any event measured above 0.10 dB shall be replaced or repaired at the event point.

Test documentation shall include but is not limited to:

Cable & Fiber Identification

- Cable & Fiber ID and Location Physical location (device ID and station number of FO Termination Cabinet, FO Drop Panel, or cable end FO closure), fiber number, and truck or drop cable ID for both the beginning and end point.
- Operator Name
- Engineer's Representative
- Date & Time

Setup and Test Conditions Parameters

- Wavelength
- Pulse width Optical Time Domain Reflectometer (OTDR)
- Refractory index (OTDR)
- Range (OTDR)
- Scale (OTDR)
- Ambient Temperature

Test Results for OTDR Test (each direction and averaged)

- Total Fiber Trace (miles)
- Splice Loss/Gain (dB)

- Events > 0.05 dB
- Measured Length (Cable Marking)
- Total Length (OTDR Measurement)

Test Results for Attenuation Test (each direction and averaged)

- Measured Cable Length (Cable Marking)
- Total Length (OTDR Measurement from OTDR Test)
- Number of Splices (Determined from As-Builts)
- Total Link Attenuation

#### **OTDR** Test

- Conduct the OTDR Test using the standard operating procedure and recommended materials as defined by the manufacturer of the test equipment.
- Use a factory patch cord ("launch cable") of a length equal to the "dead zone" of the OTDR to connect the OTDR and the fiber under test.
- Conduct bi-directional OTDR Tests for each fiber. Calculate bi-directional averages.
- Conduct all tests at 1310 and 1550 nm for single mode cable.

# **Optical Attenuation Test**

- Conduct the Optical Attenuation Test using the standard operating procedure and recommended materials as defined by the manufacturer of the test equipment.
- Conduct bi-directional Optical Attenuation Tests for each fiber. Calculate bi-directional averages.
- Conduct all tests at 1310 and 1550 nm for single mode cable.

# **Documentation**

#### **As Built Plans:**

- Shall include GPS locations of all pull boxes, splices, terminations, and pole locations.
- The sequential footage markers from the fiber optic trunk and drop cables will be recorded for each GPS location.

CODE: (SP)

**SECTION 904 - NOTICE TO BIDDERS NO. 1356** 

**DATE:** 03/14/2007

**SUBJECT:** Traffic Management Center (TMC) Modifications

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

Bidders are hereby advised that the following Traffic Management Center (TMC) Modifications specifications will be required on this project.

# **MDOT TMC Modifications**

The MDOT TMC is located at 2567 North West Street, Jackson, MS, 39216. The center is in the MDOT Shop Complex, Building A, on the 3<sup>rd</sup> Floor.

**Software:** The contractor shall initially use vendor supplied software to test the DMS and demonstrate full compliance with the contract requirements. A minimum of four (4) licenses of the vendor supplied software must be provided to MDOT upon completion of the testing.

In addition to the vendor supplied software, MDOT currently has the 360 Surveillance ITS Software Suite installed at the TMC. The software is currently controlling cameras only, but will be utilized to operate the DMS once this project is complete.

The Contractor is required to fully configure the existing 360 Surveillance software for operation of the DMSs. At a minimum, this shall include:

- Update and configure the existing map to show the locations of the DMSs with dynamic icons.
- Install and configure all DMSs into the software's database.
- Configure a database of up to 50 preprogrammed messages into the software.

The Contractor is required to arrange for the 360 surveillance vendor to on-site to complete this configuration and provide the required testing to show that the software is fully functioning for each dynamic message sign.

**Equipment:** This project does not require any additional equipment at the TMC.

**Testing:** The Contractor shall submit a proposed test plan for review and approval by MDOT. The Test plan shall demonstrate full compliance with all requirements in the plans and specifications.

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**Training:** 64 hours of training and assistance shall be provided for operations, testing, and maintenance of the TMC Systems. This includes training on the DMS module of the 360 Surveillance software and the training must be provided by a representative of the 360 surveillance vendor.

**SECTION 904 - NOTICE TO BIDDERS NO. 1395** 

CODE: (SP)

**DATE:** 03/14/2007

**SUBJECT:** Location & Configuration of OTN Nodes

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

Bidders are hereby advised of the following OTN Node Location and Interface Card configuration for the OTN Node.

OTN Node Locations & Configurations  Item Description	Total #					I-20 @ Hwy 49
	1	l		I I	ı	
NODE CHASSIS & POWER SUPPLIES			1		-	
Chassis - OTN-N42 Node (S30826-B16-X)	1					1
Power Supply (V30812-A5020-A42)	2					2
COMMON LOGIC CARDS & OPTICAL TRANSCEIVERS  Common Logic Card – BORA2500-ETX (S30824-Q106-X101)  TRM (Transmitter/Receiver Module) Multi-mode (V30813-S1-A1)  TRM (Transmitter/Receiver Module) (V30813-S3-A1)	1 0 2					1 0 2
INTERFACE CARDS	]					
RS485/422 Interface Card (FB-52429-A)	1					1
MPEG Video Interface Card (S30824-Q107-X101)	7					7
CABLES FOR INTERFACE CARDS						
Fiber Patch Cables for Logic Interface Cards	2					2
NETWORK MANAGEMENT/MAINTENANCE SOFTWARE	]					
OMS Network Protocol License	1					1
OMS Video Switching License	1					1

Part Numbers are provided for informational purposes and are subject to change by the manufacturer. Any part substitutions due to revision or version changes must be approved by the MDOT Project Manager. All required OTN components shall be included the price bid for Item No. 907-660-A.

CODE: (IS)

# SECTION 904 - NOTICE TO BIDDERS NO. 1405

DATE: 03/15/2007

# SUBJECT: ERRATA AND MODIFICATIONS TO THE 2004 STANDARD SPECIFICATIONS

<u>Page</u>	Subsection	<u>Change</u>
101	201.01	In the second sentence of the first paragraph, change "salvable" to "salvageable".
107	202.04	In the fourth sentence of the fourth paragraph, change "yard" to "feet".
107	202.05	In the list of units measurements for 202-B, add "square foot".
132	211.03.4	In the second sentence of the second paragraph, change "planted" to "plated".
192	306.02.4	In the first line of the first paragraph, delete the word "be".
200	307.03.7	In the fourth sentence of the second paragraph, change "lime-fly ash" to "treated".
236	401.01	Change the header from "Section 403" to "Section 401".
242	401.02.3.2	In the first sentence of the third full paragraph, add "1/8" in the blank before the inch mark.
250	401.02.6.3	In the second sentence of the first paragraph on page 250, change "rutting over" to "rutting over 1/8"".
253	401.02.6.4.2	In the paragraph preceding the table, change "91.0" to "89.0".
259	401.03.1.4	In the first paragraph, change "92.0 percent" to "the specified percentage (92.0 or 93.0)".
269	403.03.2	In the table at the top of page 269, change the PI requirement from "=" to " $\leq$ ".

278	404.04	In the second sentence, change the subsection from "401.04" to "403.04".
283	409.02.2	Change "PG 64-22" to "PG 67-22".
294	413.02	In the first sentence of the second paragraph, change "707.02.1.3" to "Subsection 707.02.1.3".
340	511.04	In the second sentence of the second paragraph, change "412" to "512".
349	601.03.3	In the first sentence, change "804.03.2" to "804.03.5".
355	603.02	Change the subsection reference for Joint mortar from "707.03" to "714.11".
369	604.04	In the first sentence, change "601.04" to "Subsection 601.04".
427	619.04	Delete the second paragraph.
442	625.04	In the third paragraph, change "626.04" to "Subsection 626.04".
444	626.03.1.2	Delete the third sentence of the first paragraph.
464	631.02	Change the subsection reference for Water from "714.01.0" to "714.01.1".
570	682.03	Change the subsection number from "682-03" to "682.03".
575	683.10.4	Change the subsection number from "683.10.4" to "683.04".
575	683.10.5	Change the subsection number from "683.10.5" to "683.05".
596	701.02	In the table under the column titled "Cementations material required", change Class F, FA" to "Class F FA,".
603	702.11	In the first sentence, change "702.12" to "Subsection 702.12".
612	703.04.2	In the fifth paragraph, delete "Subsection 703.11 and".
616	703.07.2	In the Percentage By Weight Passing Square Mesh Sieves table, change the No. 10 requirement for Class 7 material from "30 - 10" to "30 - 100".

618	703.13.1	In the first sentence of the first paragraph, change "703.09" to "703.06".
618	703.13.2	In the first sentence, change "703.09" to "703.06".
671	712.06.2.2	In the first sentence, change "712.05.1" to "Subsection 712.05.1".
689	714.11.2	In the first sentence, change "412" to "512".
709	715.09.5	In the first sentence of the first paragraph, change "guage" to "gauge".
717	717.02.3.4	In the top line of the tension table, change "1 $1/2$ " to "1 $1/8$ " and change "1 $1/8$ " to "1 $1/2$ ".
741	720.05.2.2	In the last sentence of this subsection, change "720.05.2.1" to "Subsection 720.05.2.1".
827	803.03.2.3.7.5.2	In the first sentence of the second paragraph, change "803.03.5.4" to "803.03.2.3.4".
833	803.03.2.6	In the first sentence, change "803.03.7" to "803.03.2.5".
854	804.02.11	In the last sentence of the first paragraph, change "automatically" to "automatic".
859	804.02.13.1.3	In the last sentence, change Subsection "804.02.12.1" to "804.02.12".
879	804.03.19.3.2	In the first sentence of the third paragraph, change "listed on of Approved" to "listed on the Approved".
879	804.03.19.3.2	In the last sentence of the last paragraph, change "804.03.19.3.1" to "Subsection 804.03.19.3.1".
962	814.02.3	In the first sentence, change "710.03" to "Subsection 710.03".
976	820.03.2.1	In the first sentence, change "803.02.6" to "803.03.1.7".
976	820.03.2.2	In the first sentence, change "803.03.9.6" to "803.03.1.9.2".
985	Index	Change the subsection reference for Petroleum Asphalt Cement from "702.5" to "702.05".

985	Index	Change the subsection reference for the Definition of Asphaltic Cement or Petroleum Asphalt from "700.2" to "700.02".
985	Index	Change the subsection reference for Automatic Batchers from "501.03.2.4" to "804.02.10.4".
986	Index	Delete "501.03.2" as a subsection reference for Batching Plant & Equipment.
988	Index	Change the subsection reference for the Central Mixed Concrete from "501.03.3.2" to "804.02.11".
988	Index	Change the subsection reference for the Concrete Batching Plant & Equipment from "501.03.2" to "804.02.11".
999	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers.
1001	Index	Change the subsection reference for Edge Drain Pipes from "605.3.5" to "605.03.5".
1002	Index	Change the subsection reference for Metal Posts from "713.05.2" to "712.05.2".
1007	Index	Change the subsection reference for Coarse Aggregate of Cement Concrete Table from "703.3" to "703.03".
1007	Index	Change the subsection reference for Composite Gradation for Mechanically Stabilized Courses Table from "703.8" to "703.08".
1009	Index	Delete "501.03.3.3" as a subsection reference for Truck Mixers and Truck Agitators.
1010	Index	Delete reference to "Working Day, Definition of".

CODE: (SP)

SECTION 904 - NOTICE TO BIDDERS NO. 1496

**DATE:** 05/08/2007

**SUBJECT:** Railway-Highway Provisions

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison and

**Rankin Counties** 

Prior to bidding, the Contractor shall contact the <u>Kansas City Southern and the Canadian National / Illinois Central Railroads</u> 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 the work and designation of the job site to be shown on the Policy are as follows:

Name Insured: Kansas City Southern

Description and

Designation: Construction of Conduit on Overhead Bridge

Mile Post: I-20 Eastbound Ramp to U.S. Highway 49 South

Intersection of the centerline of I-20 Ramp G-1 at Station 890+00±,

Mile Post 93.20, near Pearl, Mississippi.

I-55 Northbound

Intersection of the centerline of \_I-55 at Station 30+00±, Mile Post

93.91, near Jackson, Mississippi.

and

Name Insured: Canadian National / Illinois Central

Description and

Designation: Construction of Conduit on Overhead Bridge

Mile Post: I-55 Southbound

Intersection of the centerline of \_I-55 at Station 497+30±, Mile Post

721.25, in Jackson, Mississippi.

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

Kansas City Southern Canadian National / Illinois Central

Ms. Shannon Haas Tom Tucker

4015 South 148<sup>th</sup> Street, Suite 100 2800 Livernois, Suite 220 Omaha, NE 68137 Troy, Michigan 48083 (402) 896-9300 FAX (248) 740-6227

CODE: (SP)

SECTION 904 - NOTICE TO BIDDERS NO. 1497

**DATE:** 05/08/2007

**SUBJECT:** Railroad Flagging and Cable Location Services

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

The Contractor shall not commence, or carry on, any work for installation, maintenance, repair, changing or renewal of any FACILITY, under, over or on RAILROAD property at any location without giving at least ten (10) working days prior notice to the RAILROAD authorized representative at the RAILROAD's office(s) below.

Kansas City SouthernCanadian National / Illinois CentralMs. Shannon HaasTom Tucker4015 South 148th Street, Suite 1002800 Livernois, Suite 220Omaha, NE 68137Troy, Michigan 48083(402) 896-9300 FAX(248) 740-6227

If in the opinion of the RAILROAD, the presence of an authorized representative of the RAILROAD is required to supervise the same, the RAILROAD shall render bills to the Contractor for all expenses incurred by it for such supervision. This includes all labor costs for flagmen or cable locate supplied by the RAILROAD to protect RAILROAD operation, and for the full cost of furnishing, installation and later removal of any temporary supports for said tracks, as the RAILROAD's Chief Engineer's Office may deem necessary.

It will be the Contractor's responsibility to pay all bills associated with railroad flagging and cable locating. Generally, the flagging rate is \$700.00 per day (1 to 8 hours) plus overtime at \$125.00 per hour, however, the Contractor shall contact the RAILROAD to verify all rates.

A flagman is required anytime a Contractor does any work on or near RAILROAD property within twenty-five (25) feet horizontally of the centerline or any work over any railroad track. The RAILROAD, however, also reserves the right to require a flagman for work on RAILROAD property, which is more than twenty-five (25) feet from the centerline of a railroad track when there are other conditions. or considerations that would dictate the need for a flagman to safeguard the RAILROAD's operations, property and safety of working personnel.

A cable locate of RAILROAD owned facilities may be required to identify and protect Signal & Communication cables that have been installed to provide power, signal control, wayside communications. These cables are vital to a safe and reliable railway operation. The cable locate will be performed by a qualified RAILROAD employee.

- 2 -

Outside Contractors are prohibited from driving on, along, or across <u>any</u> track that does not have a RAILROAD installed crossing. They may utilize an existing public crossing. The practice of allowing rubber tired equipment to operate over track with no crossing has been banned.

Exceptions to this rule will require the express approval from the RAILROAD Engineers.

Prior to any project being started. the RAILROAD requires a form to be completed and submitted. including check for prepayment for a minimum of one day flagman protection.

Attached is the Canadian National / Illinois Central form. Contractor shall contact the Kansas City Southern Railroad to get a copy of their form.

# Request for flagging services Southern Region

TO:	Tom Tucker	Date submitted:
	Audit Officer	
	CN	
	2800 Livernois, Suite 220	
	Troy, Michigan 48083 (248) 740-6227	
	(248) 740-6031 fax	
	tom.tucker@cn.ca	
	0	
FROM	[:	
	Y	(Name)
in hof		following project. All blanks below must be completely filled nored. Proof of Insurance must accompany this form.
		business days, at your cost, depending on availability.
	your calls concerning availability	
	•	-
Projec	t Location:	
RR mi	lepost, Street, etc.	
Comp	24357	
Compa	any.	
Billing	g Address:	
City:		State: Zip:
~	n:	C
Comp	any Phone:	Company Fax:
** A or	eement or Authorization No :	Dated:
2 161		
With:		
Contra	actor's Contact Person:	Phone:
Data/a	A Thereine and A	
Date(s	s) Flagging needed:	
Startin	ng time:	Ending Time:
Locati	on for flagman to report:	
\$700.0 receive	0 per day $(1-8)$ hours) plus overtime and prior to beginning of this project.	quired, prepayment for flagman protection, at the base rate of at \$125.00 per hour, any hours in excess of eight (8) hours must be at the minimum rate of eight hours (8) at \$125.00 per hour.
Agree. prope	ment or State, County, City Project i	ailroad subsidiary, such as a Right of Entry Permit, Formal Number and proof of insurance before you can enter the
Desci	ipiton of note to be personned.	
I agre	ee to pay for flagging services as re	quested:
	n map or other location info and fax	completed form with cover letter on your company's letterhead 8) 740-6031

SECTION 904- NOTICE TO BIDDERS NO. 1503 CODE: (SP)

**DATE:** May 9, 2007

**SUBJECT:** Contract Time

PROJECT: NH-9999-00(331) CT3N / 103811303, 304 & 305 Hinds, Madison

&Rankin Counties

The calendar date for completion of work to be performed by the Contractor for this project shall be <u>February 27, 2009</u>, which date or extended date as provided in Subsection 108.06 shall be the end of contract time. It is anticipated that the Notice to Proceed/Beginning of Contract Time will be no later than <u>August 9, 2007</u>.

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

The contract time includes time for the **6-month Burn-in Period** as set out in Special Provision 907-656-1.

SECTION 904 - NOTICE TO BIDDERS NO. 1504

DATE: MAY 23, 2007 SUBJECT: Specialty Items

PROJECT: NH-9999-00(331) CT3N/103811303, NH-9999-00(331) CT3N/103811304, & NH-9999-00(331)

CT3N/103811305 - Hinds, Madison & Rankin Counties

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: GUARDRAIL, GUIDERAIL

Line No	Pay Item	Description
0040	606-B001	Guard Rail, Class A, Type 1
0050	606-C003	Guard Rail, Cable Anchor, Type 1
0060	606-E001	Guard Rail, Terminal End Section

# CATEGORY: TRAFFIC CONTROL - PERMANENT

Line No	Pay Item	Description
0130	630-B002	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Overhead Mounted
0140	630-F001	Delineators, Guard Rail, White
0150	630-F002	Delineators, Guard Rail, Yellow
0160	647-A003	Pullbox, Type 4
0170	647-A004	Pullbox, Type 5
0180	647-A005	Pullbox, Type 2
0190	657-A006	Fiber Optic Cable, 72 SM
0200	657-B003	Fiber Optic Drop Cable, 12 SM
0210	666-B019	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 2, 4Conductor
0220	666-B033	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 4, 3 Conductor
0230	666-B034	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 1/0, 4 Conductor
0240	666-B035	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 4, 4 Conductor
0250	666-B036	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 6, 4 Conductor
0260	668-A029	Traffic Signal Conduit, Underground, Rolled Pipe, 2"
0270	668-B024	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"
0280	668-C005	Traffic Signal Conduit, Aerial Supported, Type 1, 2"
0300	907-630-I003	Metal Overhead Sign Supports, Assembly No. 3, Contractor Designed
0310	907-630-I004	Metal Overhead Sign Supports, Assembly No. 4, Contractor Designed
0320	907-630-I006	Metal Overhead Sign Supports, Assembly No. 6, Contractor Designed
0330	907-630-I007	Metal Overhead Sign Supports, Assembly No. 7, Contractor Designed
0340	907-630-M001	Pedestal Sign Support, Assembly No 1, Contractor Designed
0350	907-630-M002	Pedestal Sign Support, Assembly No 2, Contractor Designed
0360	907-630-M003	Pedestal Sign Support, Assembly No 5, Contractor Designed
0370	907-630-M004	Pedestal Sign Support, Assembly No 8, Contractor Designed
0380	907-630-M005	Pedestal Sign Support, Assembly No 9, Contractor Designed
0390	907-630-0002	Remove and Reset Sign Assembly

# CATEGORY: TRAFFIC CONTROL - TEMPORARY

Line No	Pay Item	Description
0100	619-E1001	Flashing Arrow Panel, Type C
0110	619-F1001	Concrete Median Barrier, Precast
0290	907-619-E3001	Changeable Message Sign

SECTION 904 – NOTICE TO BIDDERS NO. 1517

CODE: (SP)

**DATE:** 5/10/2007

**SUBJECT:** Petroleum Products Base Prices For Contracts Let in June, 2007

**REFERENCE:** Subsection 109.07

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

<b>FUEL</b>	S
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	Per Gallon	Per Liter
Gasoline	\$2.7658	\$0.7306
Diesel	\$2.5783	\$0.6811

# MATERIALS OF CONSTRUCTION

ASPHALT CEMENT	Per Gallon	Per Ton	Per Liter	Per Metric Ton
Viscosity Grade AC-5	\$1.3614	\$323.00	\$0.3597	\$356.04
Viscosity Grade AC-10	\$1.3759	\$326.43	\$0.3635	\$359.82
Viscosity Grade AC-20	\$1.3669	\$324.29	\$0.3611	\$357.46
Viscosity Grade AC-30	\$1.3638	\$323.57	\$0.3603	\$356.67
Grade PG 64-22	\$1.3578	\$322.14	\$0.3587	\$355.09
Grade PG 67-22	\$1.3453	\$319.17	\$0.3554	\$351.82
Grade PG 76-22	\$1.7633	\$418.33	\$0.4658	\$461.12
Grade PG 82-22	\$1.9652	\$466.25	\$0.5192	\$513.94
EMULSIFIED ASPHALTS				
Grade EA-4 (SS-1)	\$1.3453		\$0.3554	
Grade RS-2C (CRS-2)	\$1.3180		\$0.3482	
Grade CRS-2P	\$1.5632		\$0.4130	
<u>PRIMES</u>				
Grade EA-1 & MC-70	\$1.7511		\$0.4626	

SECTION 904- NOTICE TO BIDDERS NO. 1542 CODE: (SP)

**DATE:** May 22, 2007

**SUBJECT:** Pre-Bid Conference

PROJECT: NH-9999-00(331) CT3N / 103811303, 304& 305 Hinds, Madison

&Rankin Counties

A Pre-Bid meeting will be held in the 1<sup>st</sup> Floor Auditorium of the Mississippi Department of Transportation Office Building located at 401 North West Street in Jackson, Mississippi at 10:00 A.M. on Tuesday, June 12, 2007.

SECTION 904- NOTICE TO BIDDERS NO. 1566 CODE: (SP)

**DATE:** May 23, 2007

**SUBJECT:** Lane Closure Restrictions

PROJECT: NH-9999-00(331) CT3N / 103811303, 304& 305 Hinds, Madison

&Rankin Counties

Bidders are hereby advised of the lane closure restriction requirements as set out in the "Traffic Control Plan" section of the plans.

Also, bidders are hereby advised that if any of the lane closure restriction requirements are violated, a penalty of \$2,500.00 for each full or partial five (5) minute period will be charged to the contractor.

SECTION 904- NOTICE TO BIDDERS NO. 1567 CODE: (SP)

**DATE:** May 23, 2007

**SUBJECT:** Cooperation Between Contractors

PROJECT: NH-9999-00(331) CT3N / 103811303, 304& 305 Hinds, Madison

&Rankin Counties

The bidder's attention is hereby called to Subsection 105.07, Cooperation Between Contractors, of the 2204 Mississippi Standard Specifications for Road and Bridge Construction.

The Contractor shall cooperate in all respects and shall coordinate construction on this project with construction of adjacent projects if necessary.

# **SUPPLEMENT TO FORM FHWA-1273**

The following MINIMUM HOURLY WAGE RATES have been predetermined by the Secretary of Labor in Wage Determination Decision No. MS20070026 dated February 9, 2007.

# AREA 3A - COUNTIES HINDS, MADISON AND RANKIN

PAYROLL CODE  100 105 108 110 120 130 131 135 140 145 150 155 160 165	CLASSIFICATION Air Tool Operator (Jack Hammer/Air Comp.) Asphalt Raker Mason Tender (Cement Mason Helper) Carpenter Cement Mason (Finisher) Electrician Mechanic (Heavy Equipment) Oiler-Greaser Form Setter Grade Checker (Asphalt Crew) Ironworker, Reinforcing (Tie Steel) Ironworker, Structural Laborer, Unskilled Pipelayer	MINIMUM HOURLY WAGE RATE \$6.33 6.55 7.27 8.70 8.14 12.15 9.20 7.71 7.47 8.00 9.67 7.30 6.37 7.31
175 180 185 190 195 197	Painter (Structural Steel) Piledriverman Truck Driver (All Types) Joint Filler Joint Setter Welder	12.00 8.50 6.77 5.15 5.15 11.00
205 212 214 215 216 220 225 235 240 250 255 270 275 280 285 290 295 300 305 310 315 320 325 330 350 360 365	Aggregate Spreader Operator Asphalt Broom (Sweeper) Operator Asphalt Paving Machine/Spreader Operator Asphalt Distributor Operator Asphalt Plant Operator Backhoe (Shovel) Operator Bulldozer Operator Concrete Finishing/Curing Machine Operator Concrete Paving Machine Operator (Spreader) Concrete Breaker/Hydro-Hammer Operator Concrete Breaker/Hydro-Hammer Operator Loader (All Types) Milling Machine Operator Mixer Operator (All Types) Motor Patrol (Grader) Operator Mulcher Machine Operator Earth Auger Operator Piledriver Machine Operator Roller Operator (Self-Propelled) Scraper Operator (All Types) Striping Machine Operator Tractor Operator (Track Type) Tractor Operator (Wheel Type) Trenching Machine Operator Crusher Feeder Machine Operator Crusher Feeder Machine Operator Guardrail Post Driver	6.53 6.51 7.40 7.30 8.65 8.50 8.70 9.00 8.75 8.24 7.22 8.46 7.01 6.04 8.96 5.17 8.00 8.71 6.66 6.50 15.00 9.24 5.92 8.01 5.50 10.20 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

	P	age
	General	1
II.	Nondiscrimination	1
III.	Nonsegregated Facilities	3
IV.	Payment of Predetermined Minimum Wage	3
V.	Statements and Payrolls	6
VI.	Record of Materials, Supplies, and Labor	7
VII.	Subletting or Assigning the Contract	7
VIII.	Safety: Accident Prevention	7
IX.	False Statements Concerning Highway Projects	8
X.	Implementation of Clean Air Act and Federal	
	Water Pollution Control Act	8
XI.	Certification Regarding Debarment, Suspension,	
	Ineligibility, and Voluntary Exclusion	8
XII.	Certification Regarding Use of Contract Funds for	
	Lobbying	10

#### **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 takecorrective 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 thetime 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 journeymanlevel 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 ofprogress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.
- (4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

#### b. Trainees:

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

- (2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.
- (3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.
- (4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

#### c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wagedetermination 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 that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.
- e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.
- f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.
- g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

- 1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:
- a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.
- b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.
- c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.
- 2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

#### VII. SUBLETTING OR ASSIGNING THE CONTRACT

- 1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).
- a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.
- b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.
- 2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
- 3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.
- 4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

#### **VIII. SAFETY: ACCIDENT PREVENTION**

- 1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provideall 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 represen-tation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

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

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

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

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

- 1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 <a href="extraction-red">et seq.</a>, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 <a href="extraction-red">et seq.</a>, 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 knowinglyrendered 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 From April 1, 1979 until March 31, 1980 From April 1, 1980 until March 31, 1981	3.1 5.1 6.9
Until further notice	Goals for minority participation for each trade (percent)
SHSA Cities:	
Pascagoula - Moss Point	16.9
Biloxi - Gulfport	10.9
Jackson	
Jackson	30.3
GN KG L G	
SMSA Counties:	22.2
Desoto	
Hancock, Harrison, Stone	
Hinds, Rankin	
Jackson	16.9
Non-SMSA Counties:	
George, Greene	26.4
<i>5</i> ,	
Alcorn, Benton, Bolivar, Calhoun, Carroll,	Chickasaw.
Clay, Coahoma, Grenada, Itawamba, Lafayette, Lee,	
Leflore, Marshall, Monroe, Montgomery, P	
Pontotoc, Prentiss, Quitman, Sunflower, Ta	
Tate, Tippah, Tishomingo, Tunica, Union	
Washington, Webster, Yalobusha	
wasnington, webster, raiobusna	20.3
Attala, Choctaw, Claiborne, Clarke, Copia Franklin, Holmes, Humphreys, Issaquena,	
Jefferson Davis, Jones Kemper, Lauderdale	
Leake, Lincoln, Lowndes, Madison, Nesho	
	, ,
Noxubee, Oktibbeha, Scott, Sharkey, Simp	
Warren, Wayne, Winston, Yazoo	32.0
F . 1 . 1 . 1	D'1
Forrest, Lamar, Marion, Pearl River, Perry	
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

CODE: (IS)

# SPECIAL PROVISION NO. 907-104-1

**DATE:** 05/03/2004

**SUBJECT: Partnering Process** 

Section 104, Scope of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

<u>907-104.01--Intent of Contract.</u> At the end of Subsection 104.01 on Page 24, add the following:

# 907-104.01.1--Partnering Process.

#### COVENANT OF GOOD FAITH AND FAIR DEALING:

This contract imposes an obligation of good faith and fair dealing in its performance and enforcement.

The contractor and the Department, with a positive commitment to honesty and integrity, agree to the following mutual duties:

- A. Each will function within the laws and statutes applicable to their duties and responsibilities.
- B. Each will assist in the other's performance.
- C. Each will avoid hindering the other's performance.
- D. Each will proceed to fulfill its obligations diligently.
- E. Each will cooperate in the common endeavor of the contract.

# **VOLUNTARY PARTNERING:**

The Mississippi Department of Transportation intends to encourage the foundation of a cohesive partnership with the contractor and its principal subcontractors and supplier. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance and completion within budget, on schedule, and in accordance with plans and specifications.

This partnership will be bilateral in make-up, and participation will be totally voluntary. Any cost associated with effectuating this partnering will be agreed to by both parties and will be shared equally.

To implement this partnering initiative prior to starting of work in accordance with the requirements of Subsection 108.02 Notice to Proceed and prior to the preconstruction conference, the contractor's management personnel and MDOT's District Engineer, will initiate a partnering development seminar/team building workshop. The Contractor working with the assistance of the District and the State Construction Engineer will make arrangements to determine attendees for the workshop, agenda of the workshop, duration, and location. Persons required to be in attendance will be the MDOT key project personnel, the contractor's on-site project manager and key project supervision personnel of both the prime and principal subcontractors and suppliers. The project design engineers, FHWA and key local government personnel will be also be invited to attend as necessary. The contractors and MDOT will also be required to have Regional/District and Corporate/State level managers on the project team.

Follow-up workshops may be held periodically throughout the duration of the contract as agreed by the contractor and Mississippi Department of Transportation.

The establishment of a partnership charter on a project will not change the legal relationship of the parties to the contract nor relieve either party from any of the terms of the contract.

CODE: (IS)

SPECIAL PROVISION NO. 907-105-3

**DATE:** 02/14/2006

**SUBJECT:** Cooperation By Contractor

Section 105, Control of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is modified as follows:

<u>907-105.05--Cooperation by Contractor.</u> In the third sentence of the second paragraph of Subsection 105.05 on page 35, change "Notice to Proceed" to "Notice of Award".

Delete the fourth paragraph of Subsection 105.05 on page 35, and substitute the following.

The Contractor shall also designate a responsible person whose primary duty shall be to monitor and maintain the effectiveness of the erosion control plan, including NPDES permit requirements. This responsible person must be a Certified Erosion Control Person certified by an organization approved by the Department. Prior to or at the pre-construction conference, the Contractor shall designate in writing the Certified Erosion Control Person to the Project Engineer. The designated Certified Erosion Control Person shall be assigned to only one (1) project. When special conditions exist, such as two (2) adjoining projects or two (2) projects in close proximity, the Contractor may request in writing that the State Construction Engineer approve the use of one (1) Certified Erosion Control Person for both projects. The Contractor may request in writing that the Engineer authorize a substitute Certified Erosion Control Person to act in the absence of the Certified Erosion Control Person. The substitute Certified Erosion Control Person must also be certified by an organization approved by the Department. of the Certified Erosion Control Person's certification must be included in the Contractor's Protection Plan as outlined in Subsection 907-107.22.1. This in no way modifies the requirements regarding the assignment and availability of the superintendent.

# SUPPLEMENT TO SPECIAL PROVISION NO. 907-107-1

**DATE:** 03/21/2006

**SUBJECT:** Liability Insurance

In the first sentence of the first paragraph of Subsection 907-107.14.2.1 on page 1, change "\$300,000 each occurrence" to "\$500,000 each occurrence".

CODE: (IS)

SPECIAL PROVISION NO. 907-107-1

**DATE:** 05/03/2004

**SUBJECT:** Liability Insurance

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

<u>907-107.14.2--Liability Insurance</u>. Delete in toto Subsection 107.14.2 beginning on page 60 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.

<u>907-107.14.2.2--Railroad Protective.</u> The following provisions are applicable to all work performed under a contract on, over or under the rights-of-way of each railroad shown on the plans.

The Contractor shall assume all liability for any and all damages to work, employees, servants, equipment and materials caused by railroad traffic.

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. Also, the Contractor shall furnish similar evidence to the Railroad Company that insurance has been obtained in accordance with the Standard Provisions for General Liability Policies and the Railroad Protective Liability Form as published in the Code of Federal Regulations, 23 CFR 646, Subpart A. 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).

All insurance herein specified shall be carried until the contract is satisfactorily complete as evidenced by a release of maintenance from the Department.

The Railroad Company shall be given at least 30 days notice prior to cancellation of the Railroad Protective Liability Insurance policy.

For work within the limits set out in Subsection 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). Bodily injury shall mean bodily injury, sickness, or disease, including death at anytime resulting therefrom. Property damage shall mean damages because of physical injury to or destruction of property, including loss of use of any property due to such injury or destruction. Physical damage shall mean direct and accidental loss of or damage to rolling stock and their contents, mechanical construction equipment or motive power equipment.

(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 the Contractor's 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 or 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 the Contractor's 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.

CODE: (IS)

#### SPECIAL PROVISION NO. 907-107-2

DATE: 08/12/2005

**SUBJECT:** Permits, Licenses and Taxes

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

<u>907-107.02--Permits, Licenses and Taxes</u>. Delete in toto Subsection 107.02 on page 49 and substitute the following:

The Contractor or any Subcontractor shall have the duty to determine any and all permits and licenses required and to procure all permits and licenses, pay all charges, fees and taxes and issue all notices necessary and incidental to the due and lawful prosecution of the work. At any time during the life of this contract, the Department may audit the Contractor's or Subcontractor's compliance with the requirements of this section.

The Contractor or any Subcontractor is advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq. and the Mississippi Use Tax Law, Section 27-67-1, et seq., and their requirements and penalties, apply to any contract or subcontract for construction, reconstruction, maintenance or repairs, for contracts or subcontracts 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 Contractor or any Subcontractor will be subject to one or more audits by the Department during the life of this contract to make certain that all applicable fuel taxes, as outlined in Section 27-55-501, et seq., and any sales and/or use taxes, as outlined in Section 27-67-1, et seq. are being paid in compliance with the law. The Department will notify the Mississippi State Tax Commission of the names and addresses of any Contractors or Subcontractors.

#### SPECIAL PROVISION NO. 907-108-11

CODE: (IS)

**DATE:** 04/21/2006

**SUBJECT: Prosecution and Progress** 

Section 108, Prosecution and Progress, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

# 907-108.01--Subletting of Contract.

**907-108.01.1--General**. At the end of the last paragraph of Subsection 108.01.1 on page 73, add the following:

The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to make prompt payment within 15 calendar days as required above, or failure to submit the required OCR-484 Form, Certification of Payments to Subcontractors, which is also designed to comply with prompt payment requirements.

<u>907-108.02--Notice To Proceed</u>. Delete the fourth paragraph of Subsection 108.02 on page 75 and substitute the following:

Upon written request from the Contractor and if circumstances permit, the Notice to Proceed may be issued at an earlier date subject to the conditions stated therein. The Contractor shall not be entitled to any monetary damages or extension of contract time for any delay claim or claim of inefficiency occurring between the early issuance Notice To Proceed date and the Notice to Proceed date stated in the contract.

**907-108.06.1.2--Contract Time Assessment.** At the end of the eighth paragraph of Subsection 108.06.1.2 on page 81, add the following:

When the approved progress schedule indicates that a controlling phase(s) is to be completed prior to December 1 and the physical features of the phase(s) have not been satisfactorily completed, beginning on December 1 the miscellaneous phase will be shown as the only active phase during the months of December, January, and February. Under this condition, time units, monthly time units divided by monthly calendar days, will be assessed in accordance with the applicable column in the TABLE OF TIME UNITS. If the physical features of the phase(s) have not been completed by March 1, the phase will resume as a controlling phase and time assessment will be made accordingly.

Delete the fourth and fifth sentence of the thirteenth paragraph of Subsection 108.06.1.2 on page 82, and substitute the following:

In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 25 calendar days following the Contractor's receipt of the monthly report in question to file a protest Notice of Claim in accordance with the provisions of Subsection 105.17. Otherwise, the Engineer's assessment shall be final unless mathematical errors of assessment are subsequently found to exist.

# SUPPLEMENT TO SPECIAL PROVISION NO. 907-109-3

**DATE:** 11/21/2006

**SUBJECT:** Changes in Material Costs

After the last paragraph of Subsection 907-109.06.1 on page 1, add the following:

<u>907-109.07--Changes in Material Costs.</u> Delete the second sentence of the first paragraph of Subsection 109.07 on page 95, and substitute the following:

When a pay item on the bid sheets indicate that an adjustment is allowed and when a notice to bidders is included in the contract showing current monthly base prices, an adjustment will be provided as follows:

CODE: (IS)

#### SPECIAL PROVISION NO. 907-109-3

**DATE:** 04/06/2006

**SUBJECT:** Partial Payment

Section 109, Measurement and Payment, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

<u>907-109.04--Extra</u> and <u>Force Account Work</u>. Delete the first sentence of the second paragraph of Subsection 109.04 under (d) on page 92 and substitute the following:

In the event an agreement cannot be reached for a particular piece of equipment, the book entitled "Rental Rate Blue Book For Construction Equipment" as published by EquipmentWatch® and is current at the time the force account work is authorized will be used to determine equipment ownership and operating expense rates.

# **907-109.06--Partial Payment**.

<u>907-109.06.1--General</u>. In the fourth sentence of the third paragraph of Subsection 109.06.1 on page 94, change "15 calendar days" to "25 calendar Days".

CODE: (SP)

SPECIAL PROVISION NO. 907-619-1

**DATE:** 06/02/2004

**SUBJECT:** Changeable Message Signs

Section 619, Traffic Control for Construction Zones, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-619.02--Material Requirements.** After Subsection 619.02.13 on page 424, add the following:

907-619.02.12--Changeable Message Sign. The changeable message sign shall be trailer-mounted, full size, LED, full matrix, solar powered, portable changeable message sign. The sign shall be capable of on-site operation via onboard keyboard/keypad, and when specified, remote operation via software compatible with Windows 2000 / Windows XP operating system. The entire sign assembly shall be designed and constructed to withstand and operate during a minimum of 75 MPH wind gusts with all outriggers and/or leveling jacks in place. The entire sign assembly, including each component exposed to weather, shall be sealed and water-proofed to prevent water penetration when subjected to rain and gusting winds of 75 MPH. If more than one changeable message sign is specified, they shall all be of the same model and from the same manufacturer. All parts and materials used to construct the changeable message sign shall be new.

When specified, each sign shall be provided either with or without the necessary hardware to control the sign remotely. If provided without the hardware, the sign shall be constructed with wiring in place to provide the connections for the necessary onboard hardware to control the sign remotely. The manufacturer shall supply a serial and/or USB connection within the sign control cabinet so that a laptop computer using the remote software can communicate directly with the sign CPU.

When specified, the sign shall be capable of displaying dynamic, in-situ traffic speeds through the use of an optional traffic radar transducer. The sign shall also be capable of radar interrupt. This option shall interrupt the original user-specified sequence of messages to display the approaching vehicle speeds and/or an alternate sequence of messages as determined by the user. This option shall also have the functionality to display the speeds of the approaching vehicles as a stand-alone sequence.

When specified, each sign shall be NTCIP compliant/compatible.

When specified, each sign shall be provided either with or without the necessary hardware to operate a Highway Advisory Radio (HAR) system. If provided without the hardware, the sign shall be constructed to provide the required connections to easily add the necessary onboard hardware to operate the HAR.

General. The sign shall be mounted on a portable trailer containing the necessary solar panels, deep-cycle heavy-duty batteries, and battery charger. When specified, gel-type batteries shall be a replacement for deep-cycle heavy-duty batteries. In the event of prolonged lack of sufficient sunlight, the sign batteries shall be capable of being charged while the sign is operating by the use of a standard 120 Volt AC generator. The sign shall be equipped with a male plug-in and a 50-foot long extension cord constructed of a minimum 12-guage wire for this purpose. This plug-in shall also be capable of charging the sign batteries using standard 120 Volt AC current when the sign is not in use.

When specified, the sign shall be supplied with either the necessary onboard hardware to control the sign remotely, or the required connections to easily add the necessary onboard hardware to control the sign remotely. This hardware shall consist of, but is not limited to, a cellular telephone capable of operating in digital mode, and/or analog mode when specified, the necessary external antenna, communications cables, and the necessary modem for communicating with the sign operating software. The sign shall also be supplied with the necessary software to control the sign from a remote location. This software shall be Windows 2000 / Windows XP operating system compatible for use on any desktop or laptop equipped with a Hayes Compatible Modem, and any necessary software which must be installed on the sign for communication with a remote computer. The cell phone and/or modem shall be capable of communication using the MDOT cell service provider and it shall be the responsibility of the manufacturer/contractor to demonstrate this service. The sign shall be capable of data communications at a minimum transmission speed of 40 kilobytes per second. The sign shall not be dependent on cellular digital packet data type technology for wireless communications.

The software for controlling the sign and sign messages shall be password protected to safeguard against unauthorized use. There shall be a minimum of three (3) levels of password protection. The most restrictive level shall allow an operator to select a preprogrammed sequence of messages for display while restricting access to the computer's sign and sequence programming. The next restrictive level shall allow the operator to access the sign's primary controls such as sign brightness, message and sequence editing, and establishing schedules. The least restrictive level shall allow full access to all controls, passwords, signs parameter display, and diagnostic display.

Sign diagnostics shall include, but not be limited to, LED brightness controls, internal operating temperature, sign status, communications status, radar status and solar status via onboard display and/or when specified, remote software. The sign status shall provide information on the sign operation that includes CPU inputs and outputs, battery voltage, 110 VAC service indicator, low voltage indicator, and photocell ambient light level. The solar status shall provide information on voltage level from the batteries, voltage level for the LED display, sign brightness level, percent of maximum brightness for LED's, and photocell ambient light level.

The sign software shall be capable of scheduling predetermined sequences of messages based on a programmed time and date.

There shall be a minimum of 180 pre-stored, standard signs and messages as detailed in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD), all capable of being displayed. There shall also be storage space provided for an additional 150 user-programmed signs and/or messages. Each sign CPU shall have the capacity to store a minimum of 150 programmable sequences. Each sequence shall be capable of displaying up to six (6) programmed signs, symbols, or messages. There shall also be provided, as stored data, and capable of being displayed, all graphical symbols of regulatory and warning symbols detailed in the latest edition of the MUTCD.

The sign display shall be capable of displaying both static and dynamic graphics/messages. The sign display shall also be capable of displaying messages in full size to utilize the maximum area of display. It shall also be capable of displaying conventional one, two, or three-line messages for display with a choice of a minimum of nine (9) font sizes.

At least two copies of user manuals shall be provided with each sign. Each manual shall include all operational functions and software required to operate the sign on site and remotely. This manual shall include all wiring diagrams, parts lists, and sign specifications as well as component warranty information. Each copy shall be bound and shall contain laminated sheets.

Trailer Control Cabinet. The control cabinet shall be constructed of aluminum and shall receive an automotive grade protective coating as should the rest of the trailer. The sign cabinet shall be manufactured to withstand all types of adverse weather conditions and shall have screens or filters installed to keep insects out. This control cabinet shall be lockable, internally illuminated, and house the keyboard terminal and control panel. Lighted keys and terminal displays are acceptable. This control cabinet shall be manufactured in accordance with the latest NEMA 3R/4 standards. The control cabinet shall contain all controls and the necessary gauges for monitoring sign activity. All controls shall be labeled using engraved laminated plastic that is a minimum of 1/16-inch thick. These gauges shall include, but are not limited to, a voltmeter, which indicates current battery charge status, and an amp meter, which indicates current/charging status. The provision of this information via digital readout on a control console or panel is acceptable.

Sign Display. The sign display housing shall be constructed of aluminum and shall be composed of a full matrix of LED's. The sign display housing shall be manufactured in accordance with the latest NEMA 3R/4 standards. The sign shall be comprised of easily interchangeable modules that may be individually replaced in the event of failure or damage. The sign display shall have the minimum capability of displaying three lines of 18-inch nominal high text with eight characters per line. The sign display shall be capable of displaying preprogrammed Manual on Uniform Traffic Control Devices (MUTCD) symbolic messages and standard arrows. This sign shall be a full matrix type, not a fixed matrix type. The sign display shall also be capable of displaying user-defined custom messages and graphics. These messages shall be capable of saving for later recall and use. The sign shall be capable of displaying a preprogrammed default message, or no message at all, in the event of a power failure. When displaying text messages, the spacing between lines of text shall be a minimum of six (6) inches and the inter-character spacing shall be a minimum of three (3) inches. The sign shall be capable of shutting down its LED display if internal cabinet temperatures reach a level that is determined

unsafe by the manufacturer. The LED's shall be ITE amber wide angle for both daytime and nighttime viewing at an angle of 17 degrees, shall be rated for a service life of 100,000 hours, and shall have an operating temperature range of between -22°F to +165°F. The associated electronics for operation of display power supply shall be fully operational in the temperature range of -30°F to +165°F. The sign display shall be protected by a non-glaring polycarbonite material of at least ¼ inch thickness. The display shall provide easy access to all components contained within the display housing.

**LED Brightness Control.** The sign shall be equipped with both automatic and manual controls to adjust the brightness of the LEDs. The automatic control shall be capable of varying the LED brightness by sensing the ambient light level using photocells. The manual brightness control shall be password protected to safeguard against unauthorized use. LED brightness control shall also be contained within the remote operational software.

<u>Sign Trailer</u>. The trailer shall be equipped with a minimum of two wheels with heavy-duty radial tires. It shall be constructed using a minimum of ASTM A36, 3-inch by 3-inch and 3-inch by 5-inch steel tubing both with a minimum of 3/16-inch wall thickness. Each wheel shall be equipped with one locking lug nut. A minimum of four keys for the locking lug nuts shall be supplied for each trailer. The trailer spring leafs shall be rated for 3500 pounds. The wheels shall be 15-inch steel wheels with five lug bolts per wheel. The wheels shall each be fitted with new P 205-75-15B rated tires.

The trailer shall be provided with a minimum of four outriggers or leveling jacks. One outrigger or leveling jack shall be mounted near each corner of the trailer. The length of the leveling jacks shall be such that when the trailer is level, all four jacks and the tongue jack can be lowered into the vertical position. The trailer shall also be provided with a trailer stand mounted on the tongue of the trailer. The trailer stand shall be a corrosion resistant, screw type jack stand which provides up to a 25-inch lift with a pull-pin swivel release that enables the jack to swing up to a horizontal position for towing. The stand shall also include a 6-inch wheel that allows horizontal positioning of the trailer. The jack stand shall be welded, not bolted, to the tongue of the trailer. The trailer shall be provided with legal tail/brake lights, signals, and license plate mounting bracket. The trailer shall be provided with a 2-inch "hammer blow coupler" style hitch capable of being reversible with a 2½-inch Pintle ring. The trailer shall contain the batteries, solar panels, display lift, and control console.

The trailer shall be equipped with an electric or hydraulic lift, or combination thereof, for the sign display. The sign shall also be equipped with a manual backup lift. The display lift shall raise the sign to a minimum of seven feet above the roadway surface. The sign display shall be capable of rotating and locking at any selected angle up to 360 degrees. A positive brake assembly with lockable control arm shall be provided to position the sign display in the desired position. A mast safety pin shall be provided to prevent the sign display from falling in the event of an electric or hydraulic system failure.

All welding shall be performed by certified welders and in accordance to applicable American Welding Society standards. All metal surfaces shall receive a protective coating such as powder

coating, two coats of primer and two coats of finish/color. The finished coating shall be automotive grade.

All cabinets, display cases, battery cabinets and connections shall be NEMA 3R/4 compliant. All cabinets must be completely encased and lockable with a standard padlock. A lockable storage cabinet shall be provided to house various accessories.

The trailer shall have a 6,000-pound capacity hydraulic surge brake system along with a breakaway latch.

**Radar**. When specified, the sign shall be equipped with a traffic radar operating in the "K" band, in an "approach only" mode. In conjunction with the radar, the sign shall be capable of displaying dynamic, in-situ vehicle speeds. The radar shall be able to interface directly with the CPU and operational software for applications such as vehicle speeds. The unit shall be programmable to allow the interruption of user-defined messages to display vehicle speed and/or alternate messages whenever a settable speed threshold is exceeded. The radar unit shall be encased in an aluminum enclosure with a polycarbonate lens, and the metal portion shall receive the same protective coating, priming, and painting as the rest of the sign.

**<u>907-619.03--Construction Requirements.</u>** After Subsection 619.03.9 on page 427, add the following:

907-619.03.10--Changeable Message Sign. Each changeable message sign shall be installed and continuously operated at the location selected by the Engineer on State right-of-way. The Contractor is advised that selected locations may be outside the planned indicated limits of the project. The Contractor shall perform all work necessary for preparation of the site selected and approved by the Engineer, to insure maximum safety for and sign visibility of the traveling public; and may be required to remove any temporary work at a later date as directed by the Engineer. The Contractor will also place a minimum of two plastic drums in advance of the sign and one beside the sign as long as it is in use. The Contractor shall be required to move the sign to a new location if directed by the Engineer.

The Contractor may be permitted to bring electric power from outside the normal right-of-way for operation of the equipment if the Department determines that the installation operation will not be hazardous to the traveling public. The Contractor will be required to secure a permit from the Department prior to any work by the power company on the right-of-way. The entire cost of providing electrical service, power to operate the equipment, and removal of the power source from the right-of-way shall be borne by the Contractor.

The changeable message sign(s) will remain the property of the Contractor after the Engineer determines that there is no further need for the sign(s) on the project.

**<u>907-619.04--Method of Measurement.</u>** After the last paragraph of Subsection 428 on page 619-7, add the following:

Changeable message signs, as described above, will be measured by the unit. When directed, separate measurements will be made for items included in the contract and required for temporary site preparation for the sign as referenced in Subsection 907-619.03.10. Materials for which no pay items are included in the contract will not be measured for separate payment. Separate measurements will not be made for moving the changeable message sign to a new location, but materials used for which pay items are included in the contract and are necessary for repositioning the sign as directed by the Engineer will be measured for separate payment. Removal of materials used for site preparation for changeable message signs will not be measured for separate payment.

<u>907-619.05--Basis of Payment.</u> After the second paragraph of Subsection 619.05 on page 428, add the following:

Payment for items required by the Engineer for temporary location of the changeable message sign, and for which pay items are included in the contract, will be made by the individual pay item. No additional payment will be made for having to work outside the planned indicated project limits.

Payment for removal of materials used for site preparation at changeable message sign locations shall be included in the contract bid price for Maintenance of Traffic.

Between pay item nos. 619-E2 and 619-F1 on page 429, insert the following:

907-619-E3: Changeable Message Sign (\_\_\_\_\*\_\_) - per each

\* Indicate when the sign is "With Remote" and/or "With Radar"

CODE: (SP)

# SPECIAL PROVISION NO. 907-630-2

**DATE:** 6/30/2003

**SUBJECT:** Remove and Reset Ground Mounted Signs

Section 630, Traffic Signs and Delineators of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition, is hereby amended as follows:

**<u>907-630.01--Description.</u>** After the last paragraph of Subsection 630.01 on page 454, add the following:

Selected existing, temporarily installed, and/or permanently installed ground mounted sign assemblies other than construction traffic control sign assemblies shall be removed and reset as directed by the Engineer. Removing and resetting of ground mounted sign assemblies shall include provision of continuous sign visibility by the traveling public before, during, and after the operation. The Contractor shall provide all materials necessary to effect the removal and resetting, including footings, supports, brackets, hardware, breakaway features and other incidentals. All installations within 30 feet of the pavement edge of temporary or permanent through lanes shall include breakaway support features certified to meet NCHRP Report 350 prior to the removal and resetting of the sign assembly.

**907-630.04--Method of Measurement.** After the last paragraph of Subsection 630.04 on page 463, add the following:

Removing and resetting existing, temporarily installed, and/or permanently installed ground mounted sign assemblies will be measured as a unit quantity per each consisting of work as described above. Each removal and resetting of a sign assembly as described herein will be measured for payment. No separate measurement will be made for removal only of a sign assembly, as said removal shall be included in the appropriate pay item for removal of signs. If a sign assembly is removed and temporarily placed in storage, then later reset as directed by the Engineer, measurement for payment will be made one time only, after the stored sign is reset. No separate measurement will be made for any materials necessary to effect the removal and resetting, including footings, supports, brackets, hardware, breakaway features and other incidentals.

**907-630.05--Basis of Payment.** After the first paragraph of Subsection 630.05 on page 463, add the following:

Removing and resetting existing, temporarily installed, and/or permanently installed ground mounted sign assemblies, measured as prescribed above, will be paid for at the respective contract unit price per each, which price shall be full compensation for furnishing and placing all materials necessary to effect the removal and resetting, including footings, supports, brackets,

hardware, breakaway features; and for all labor, equipment, tools and incidentals necessary to complete the work.

Add the following to the list of pay items on page 463.

907-630-O: Remove and Reset Signs, <u>Description</u>

- per each

CODE: (SP)

# SPECIAL PROVISION NO. 907-630-4

**DATE:** 08/14/06

**SUBJECT:** Contractor Designed Overhead Sign Supports

Section 630, Traffic Signs and Delineators, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

<u>**907-630.01--Description.**</u> Delete the last two paragraphs of Subsection 630.01 on page 454 and substitute the following:

The Contractor shall submit to the Bridge Engineer a design using steel. The design shall be a rectangular box truss connected at both the top and bottom to the vertical support posts. With the exception of cantilever mounts, overhead support structures shall have two vertical support posts at each end of the truss. Design drawings, calculations and other necessary supporting data shall be submitted as soon as possible after the Pre-Construction Conference. The design shall be prepared by a Professional Engineer registered in the State of Mississippi proficient in the design of overhead sign structures.

The design wind speed shall be as shown in the design specifications with a minimum of 90 mph. In addition to the loads required in the design specifications, overhead sign supports shall be designed to support a uniform load of 40 pounds per linear foot applied to the vertical truss to which the signs are attached, extending along the truss across the roadway below from points four feet outside each outer edge of pavement, unless otherwise specified. Appropriate damping or energy absorbing devices shall be installed in the event that an overhead structure is erected without installation of the permanent sign panels or if the area of permanent sign panels installed is not sufficient to prevent detrimental wind-induced vibration.

The larger of the following sign configurations shall be used in the design of overhead sign support structures:

- 1) The sign dimensions and configuration shown in the contract plans
- 2) Sign Height: 20 feet; Sign Width: Pavement Edge to Pavement Edge plus 16 feet
- 3) Sign Height: 20 feet; Sign Width: Post to Post Clear Spacing minus 44 feet

The sign widths in configurations 2) and 3) should be located symmetrically about the center of the truss.

<u>901-630.01.1--Dynamic Message Sign Supports.</u> In addition to the requirements above, supports for Dynamic Message Signs (DMS) shall also meet the following requirements.

The sign structure manufacturer shall consider truck induced wind loading in deflection calculations. The natural frequency response of the structure to truck induced wind loads when span type DMS structure are used shall be considered. More information can be obtained on this subject in the Transportation Research Board (National Research Council) "Truck Induced Wind Loads on Variable Message Signs", Research Record No. 1594, published in 1997.

The Contractor shall be responsible for the complete design of the structure, catwalk, footing, median barrier replacement, DMS attachments and all other related hardware.

Each structure shall be fully warranted for but not limited to rust, corrosion and structural failure as a complete assembly by the manufacturer.

The Contractor shall determine the actual span length and the actual length of support columns for all sign structures on the basis of existing field conditions and detailed survey completed by the Contractor.

All DMS over the roadway sign structures shall include a catwalk. The Contractor shall be responsible for the catwalk design and shall submit the design calculations to the Bridge Engineer for approval. For over the roadway signs, the catwalk shall span from the outside edge of the shoulder to the door o the DMS. The bottom of the catwalk shall be covered with a heavy galvanized wire mesh which shall have openings no larger than <sup>1</sup>/<sub>4</sub>".

All parts of the structure shall be designed using a wind velocity of 90 mph.

All pedestal mounted DMS sign structures shall consist of a single steel pole with the DMS centered over the front face of the pole. The top of the pole shall not extend above the top of the DMS.

The Contractor shall be responsible for performing soil borings at each location to be used in the design of the foundations and sign supports. If soil conditions required the use of any shoring, casings, or sonotube for proper installation of the foundations, the cost of the shoring, casings or sonotube shall be included in the price of the structure.

<u>907-630.04--Method of Measurement.</u> After the last paragraph of Subsection 630.04 on page 463, add the following:

Pedestal Sign Supports will be measured per lump sum for each specific assembly.

**907-630.05--Basis of Payment.** After the first paragraph of Subsection 630.05 on page 463, add the following:

Pedestal Sign Supports will be paid for at the contract bid price per lump sum, which price shall include the support structure, foundations, catwalk, connection hardware, conduit on the structure and foundation, soil borings, sign and footing design, connections to the support structure, median barrier repair, required repaving around median barrier foundations and all

work, equipment and appurtenances as required to have the structure complete, in place and ready for use. This price shall be full compensation for all labor, tools, materials, equipment and incidentals necessary to complete the work.

Add the "907" prefix to pay item nos. 630-I and 630-J on page 463.

After the last pay item listed on page 463, add the following:

907-630-M: Pedestal Sign Support, Assembly No. \_\_\_\_\_, Contractor Designed

- lump sum

CODE: (SP)

#### SPECIAL PROVISION NO. 907-656-1

DATE: 05/24/2007

**SUBJECT:** Dynamic Message Sign

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

Section 907-656, Dynamic Message Sign, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows

# **SECTION 907-656 -- DYNAMIC MESSAGE SIGN**

<u>907-656.01--Description.</u> This Special provision describes furnishing, installing and integrating a stationary electronic Dynamic Message Sign (DMS) assembly. The Contractor shall supply a complete operating Light Emitting Diode (LED) sign including the sign housing, sign controller unit (SCU), roadside DMS controller cabinet, all cabling, conduits, electrical service, surge suppression and all hardware associated with a complete installation as required by these Special Provisions.

The DMS assemblies will provide MDOT personnel with a means to visually communicate with motorists regarding any incidents, accidents, special events, travel times, etc., that may impact travel on the roadway network.

#### 907-656.02--Materials.

# 907-656.02.1--Types of DMS. Each DMS shall be one of the following types:

- 1) DMS Type I shall meet the following requirements:
  - a) Shall be full matrix sign with a minimum of 125-pixel column and 27-pixel rows.
  - b) Pixel spacing shall be such that three lines of text (7x5 font characters) shall each have a nominal height of 18 inches.
  - c) The signs housing shall be a walk-in enclosure.
- 2) DMS Type 2 shall meet the following requirements:
  - a) Shall be full matrix sign with a minimum of 125-pixel column and 27-pixel rows.
  - b) Pixel spacing shall be such that three lines of text (7x5 font characters) shall each have a nominal height of 18 inches.
  - c) The signs housing shall be a front access enclosure.
- 3) DMS Type 3 shall meet the following requirements:
  - a) Shall be full matrix sign with a minimum of 75-pixel columns and 18-pixel rows.
  - b) Pixel spacing shall be such that three lines of text (7x5 font characters) shall each have a nominal height of 12 inches.
  - c) The signs housing shall be a front access enclosure.

# <u>907-656.02.2--DMS Components.</u> Each DMS shall include the following main components:

- 1) Sign Housing (walk-in or front access).
- 2) LED Modules.
- 3) LED Drivers.
- 4) Power Supplies
- 5) Roadside Cabinet.
- 6) Sign Controller
- 7) Transient Voltage Surge Suppression (TVSS)

<u>907-656.02.3--References</u>. This special provisions incorporates nonnative references to other standards as listed bellow. If a conflict between the standards referenced and this special provision, this special provision shall govern.

- 1) NEMA TS-4: NEMA TS4-2004, Hardware Standards for Dynan1ic Message Signs (DMS) with NTCIP Requirements. For this special provision only NEMA TS-4 requirements that apply to fixed signs locations shall be used.
- 2) NTCIP

<u>907-656.02.4--Glossary of DMS Terms.</u> The definitions of the terms used within this special provision are those terms defined in NEMA TS-4.

**907-656.02.5--Environmental Requirements.** Each DMS shall meet all of the performance and testing requirements as outline in Section 2 of NEMA TS-4 standard in addition to the following requirements:

- 1) TVSS shall be install at each of the following locations:
  - a) AC power service entrance into the DMS Cabinet before the main cabinet breaker.
  - b) AC power out to the DMS housing after the branch breaker.
  - c) AC power entrance into the DMS Housing before the main housing breaker.
- 2) The TVSS shall be designed meet IEEE C62.41 C3 conditions.
- 3) The TVSS shall provide
- 4) Each TVSS as a complete unit shall meet the following minimum electrical requirements:
  - a) Maximum Single Pulse Surge Current (8x20µs): 150kA (L-N), 150kA (L-G), 150kA (N-G)
  - b) UL 1449 SVR: 400v pk L-N and N-G.

<u>907-656.02.6--Mechanical Construction.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 3 of NEMA TS-4 standard in addition to the following requirements:

<u>907-656.02.6.1--Vents and Filters.</u> Each DMS vent and air filters shall meet the following requirements:

1) Air filters shall be installed between the intake vent and the fan.

- 2) Air filters must be replaceable, industrial grade, and pleated.
- 3) Shall completely cover the vent opening area.
- 4) Shall be manufactured per ASHRAE Standard 52.2P or Standard 52.1.
- 5) Shall be of fire retardant and water resistant construction, able to withstand temperatures up to 300° F.
- 6) Filter replacement is to be accomplished without tools with easy access.

# <u>907-656.02.6.2--Ventilation System</u>. Each DMS shall incorporate a ventilation system meeting the following requirements:

- 1) The electric fans shall be designed for continuous duty.
- 2) Sign housing venting fan(s) shall have a minimum combined capacity to keep the signs housing internal temperature to a maximum of thirty (30) degrees Fahrenheit above external ambient temperature under the following conditions:
  - a) All pixels are on at maximum illumination level.
  - b) Maximum solar loading for the state of Mississippi.
  - c) Worse case humidity for the State of Mississippi.
- 3) LED cooling fans shall be provided to vent the air between the display module and the sign face cover.
- 4) Sufficient LED cooling fans shall be provided to keep the air surrounding the LEDs to a maximum temperature not exceeding the rated temperature for the LEDs.
- 5) Provide sign housing ventilation calculations and LED cooling calculations to show sufficient air circulation is provided to meet the special provision requirements.
- 6) The fan(s) shall be mounted within the housing.
- 7) The fan(s) shall be down stream from the air filters.
- 8) The sign housing venting fan(s) shall blow the air into the sign housing.
- 9) The DMS manufacturer shall determine the number, placement, and size of the electric fans.
- 10) The fans shall be thermostatically controlled.
- 11) The thermostat shall have a minimum adjustable range between  $77^{\circ}$  to  $122^{\circ}$ F ( $25^{\circ}$  to  $50^{\circ}$ C).

<u>907-656.02.6.3--Sign Face Material.</u> The sign face material shall be replaceable from within the sign housing.

# <u>907-656.02.6.4--Sign Housing Construction.</u> The DMS housing shall meet the following requirements:

- 1) Engineer shall approve sign housing dimensions.
- 2) The sign housing shall present a clean, unbroken, neat appearance.
- 3) The sign housing shall not have any visible text or logos on it.
- 4) The angular alignment of the sign housing shall be adjusted in the vertical direction down by three (3) degrees.
- 5) The sign housing shall be constructed of aluminum sheeting to be 5052-H32 and structural members to be 6061-T6, per ASTM Specifications.
- 6) Aluminum sheeting shall be not less than 1/8 inch thick with all seams continuously

- welded by MIG (metal inert gas) welding or other approved method of similar strength.
- 7) The front of the sign housing shall have a flat black matte finish.
- 8) All other surfaces shall have a bare aluminum mill finish.
- 9) Weep holes shall be provided to allow moisture to escape.
- 10) The sign housing shall have an interior, non-skid walkway where the walkway shall extend the entire length of the sign housing.

<u>907-656.02.6.5--Access Door</u>. Walk in DMS housing shall include an access door meeting the following requirements:

- 1) Access to the interior of the sign case shall be via a gasketed door.
- 2) Gasketing shall be provided on all door openings and shall meet the following requirements:
  - a) Be dust-tight.
  - b) Meet NEMA 3R requirements
  - c) Permanently bonded to the door metal.
  - d) Shall not stick to the mating metal surface.
- 3) A gasket top channel shall be provided to support the top gasket on the door (in order to prevent gasket gravitational fatigue).
- 4) When the door is closed and latched, the door shall be locked. The lock shall meet the following requirements:
  - a) The lock and lock support shall be rigidly mounted on the door.
  - b) In the locked position, the bolt throw shall extend a nominal 0.25-inch into the latch cam area.
  - c) A lid or seal shall be provided to prevent dust or water entry through the lock opening.
  - d) The locks shall be Corbin # type and shall match the master number of the existing signs.
  - e) Two keys shall be supplied with each lock.
  - f) The keys shall be removable in the locked position only.
  - g) The locks shall have rectangular, spring loaded bolts.

<u>907-656.02.7--Controller to Sign Interface.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 4 of NEMA TS-4 standard.

<u>907-656.02.8--Display Properties.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 5 of NEMA TS-4 standard for outdoor sign using light emitting yellow color pixels in addition to the following requirements:

**<u>Pixels.</u>** Each pixel shall meet the following requirements:

- 1) DMS pixel shall be manufacture using Light Emitting Diodes (LED).
- 2) Pixels shall be replaceable either individually or in groupings. Groupings with three or more pixels shall be permitted only if bench level repairs and replacements to individual pixels are possible.
- 3) The failure of an LED in one string within a pixel shall not affect the operation of any other string or pixel.

4) Pixel power shall not exceed 1.5 watts per pixel, including the driving circuitry.

<u>907-656.02.9--Optical Components.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 6 of NEMA TS-4 standard in addition to the following requirements:

**LED Technology**. LEDs used to form each pixel shall meet the following minimum requirements:

- 1) The discrete, LED shall be a untinted, non-diffused, solid-state lamp that use Aluminum Indium Gallium Phosphide (AlInGap) technology manufactured by Avago Technologies (formerly Agilent Technologies), Toshiba Corporation, Nichia Corporation, or functional equivalent.
- 2) LED lenses shall be UV light resistant.
- 3) Each LED pixel shall be water resistant.
- 4) The manufacturer shall be the same for all LED's in all signs.
- 5) The LED's shall display an amber color at a wavelength of 590 nm ( $\pm 7$  nm).
- 6) The LED shall have a 15° viewing angle with the half-power viewing angle defined such that at a given distance from the LED, luminous intensity measured at any point at an angle of 7.5 degrees from the LED's center axis is no less than half the luminous intensity measured directly on the LED's center axis.
- 7) All LEDs used in all DMS provided for this contract shall be from the same manufacturer and of the same part number, except for the variations in the part number due to the intensity and color bins.
- 8) LED life shall be nominally rated for 100,000 hours of operation under field conditions, which shall include operating temperatures between -22° and + 185° F (-30° and +85°C). LED life shall be defined as time it takes for the LED light output to degrade to half of the LED's initial light output.

<u>907-656.02.10--DMS Controller Cabinet.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 7 of NEMA TS-4 standard.

<u>907-656.02.11--Electronics and Electrical.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 8 of NEMA TS-4 standard in addition to the following requirements:

<u>907-656.02.11.1--Communication Interfaces</u>. The DMS controller shall support two Central Communication Ports (CCPs). One CCP shall be an Ethernet port, an the second CCP shall be a serial RS232 port..

<u>907-656.02.11.2--Brightness Controls.</u> The DMS light sensing and dimming control shall meet the following minimum requirements:

- 1) Sixteen (16) user selectable brightness levels shall be provided.
- 2) The controller shall monitor ambient light levels through a photo sensor assembly that senses the ambient illumination level using three (3) photodiodes oriented as follows:

- a) Cell 1 Monitors the change from "day" to "night".
- b) Cell 2 Facing towards oncoming traffic; monitors prevailing ambient light levels in the upstream traffic.
- c) Cell 3 Facing passed traffic; monitors prevailing ambient light levels in the downstream traffic.

<u>907-656.02.11.3--NTCIP Protocol and Command Sets.</u> As a minimum, the DMS hardware and software shall support the following NTCIP objects:

- 1) This specification references several standards through their NTCIP designated names and numbers. Each NTCIP Component covered by these project specifications shall implement the most recent version of the standard that is available as of project advertisement date, including any and all prepared Amendments to these standards as of the same date
- 2) Profile Implementation Conformance Specifications (PICS) for each NTCIP standard required shall be submitted for review and approval to the Department.

<u>907-656.02.11.3.1--Ethernet Interface.</u> Communication interfaces using Ethernet shall conform at a minimum with all mandatory objects of all mandatory Conformance Groups of the following standards:

- 1) 1101 -NTCIP Simple Transportation Management Framework (STMF)
- 2) 1203 -NTCIP Object Definition for Dynamic Message Signs
- 3) 2301 -NTCIP AP-STMF
- 4) 2202 -NTCIP TP-Internet
- 5) 2104 -NTCIP SP-Ethernet

<u>907-656.02.11.3.2--RS-232 Interface.</u> Communication interfaces using RS-232 shall conform at a minimum with all standards:

- 1) 1101 -NTCIP Simple Transportation Management Framework (STMF)
- 2) 1203 -NTCIP Object Definition for Dynamic Message Signs
- 3) 2301 -NTCIP AP-STMF
- 4) 2201 -NTCIP TP-Transportation Transport Profile
- 5) 2104 -NTCIP SP-PMPP/RS232

<u>907-656.02.11.3.3--Subnet Level.</u> For each communication interface, the Subnet Level shall meet the following minimum requirements:

- 1) NTCIP Components may support additional Subnet Profiles at the manufacturer's option.
- 2) At anyone time, only one Subnet Profile shall be active on a given communication interface.
- 3) The NTCIP Component shall be configurable to allow the field technician to activate the desired Subnet Profile.

<u>907-656.02.11.3.4--Transport Level.</u> For each communication interface, the Transport Level shall meet the following minimum requirements:

- 1) Communication interfaces may support additional Transport Profiles at the manufacturer's option.
- 2) Response datagrams shall use the same Transport Profile used in the request.
- 3) Each communication interface shall support the receipt of diagrams conforming to any of the identified Transport Profiles at any time.

<u>907-656.02.11.3.5--Application Level.</u> For each communication interface, the Application Level shall meet the following minimum requirements:

- 1) All communication interfaces shall comply with NTCIP 1101 and shall meet the requirements for Conformance Level 1 (NOTE -See Amendment to standard).
- 2) Optionally, the NTCIP Component may support SNMP traps.
- 3) A communication interface may support additional Application Profiles at the manufacturer's option.
- 4) Responses shall use the same Application Profile used by the request.
- 5) Each communication interface shall support the receipt of Application data packets at any time allowed by the subject standards.

<u>907-656.02.11.3.6--Information Level.</u> All communication interfaces Information level protocol shall meet the following minimum requirements:

- 1) All communication interfaces shall provide Full, Standardized Object Range Support of all objects required by these procurement specifications unless otherwise indicated below.
- 2) The maximum Response Time for any object or group of objects shall be 200 milliseconds.
- 3) All communication interfaces shall implement all mandatory objects of all mandatory Conformance Groups as defined in NTCIP 1203 and their respective Amendments.
- 4) Table 1 indicates the modified object requirements for these mandatory objects.
- 5) Table 2 shows the required minimum support of messages that are to be stored in permanent memory.
- 6) The sign shall blank if a command to display a message contains an invalid Message CRC value for the desired message.
- 7) Table 3 specifies the support of the required MULTI tags and their ranges.
- 8) Shall also implement all mandatory objects of the following optional conformance groups of NTCIP 1201.
  - a) Time Management Conformal Group
  - b) Report Conformal Group. Table 4 indicates the modified object requirements.
- 9) Implement all objects of the Font Configuration Conformance Group, as defined in NTCIP 1203. Table 5 indicates the modified object requirements for this conformance group.
- 10) Implement all objects of the DMS Configuration Conformance Group, as defined in NTCIP 1203.
- 11) Implement all objects of the Multi Configuration Conformance Group, as defined in NTCIP 1203. Table 6 indicates the modified object requirements for this conformance group.

- 12) Implement all objects of the Multi Error Configuration, as defined in NTCIP 1203.
- 13) Implement all objects of the Illumination/Brightness.
- 14) Sign Status, as defined in NTCIP 1203.
- 15) Status Error, as defined in NTCIP 1203.
- 16) Pixel Error Status, as defined in NTCIP 1203.
- 17) Since the display of graphics is currently not defined within the NTCIP Standards or their amendments, the vendor shall propose, and provide detailed documentation (i.e., interface protocol description level), how the specified graphical shapes can be displayed.
- 18) Implement the optional objects listed in Table 7.

**Table 1: Modified Object Ranges for Mandatory Objects** 

Object	Reference	Project Requirement
ModuleTableEntry	NTCIP 1201 Clause 2.2.3	Shall contain at least one row with module Type equal to 3 (software). The module Make shall specify the name of the manufacturer, the module Model shall specify the manufacturer's name of the component and the model Version shall indicate the model version number of the component.
MaxGroupAddresses	NTCIP 1201 Clause 2.7.1	Shall be at least 1
CommunityNamesMax	NTCIP 1201 Clause 2.8.2	Shall be at least 3
DmsNumPermanentMsg	NTCIP 1203 Clause 2.6.1.1.1.1	Shall be at least 1*
DmsMaxChangeableMsg	NTCIP 1203 Clause 2.6.1.1.1.3	Shall be at least 60. Each message shall support at least three pages per message.
DmsFreeChangeableMemory	NTCIP 1203 Clause 2.6.1.1.1.4	Shall be at least 20 when no messages are stored.
DmsMessageMultiString	NTCIP 1203 Clause 2.6.1.1.1.8.3	The DMS shall support any valid MULTI string containing any subset of those MULTI tags listed in Table 4.
DmsControlMode	NTCIP 1203 Clause 2.7.1.1.1.1	Shall support at least the following modes:  local external central central

**Table 2: Content of Permanent Messages** 

Perm Msg. Num.	Section 12 Description	
1	Permanent Message #1 shall blank the display (i.e., command the sign to use dmsMessageType 7). It shall have a run-time priority of 50.	

**Table 3: Required MULTI Tags** 

Code	Feature
f1	Field 1 - time (12hr)
f2	Field 2 - time (24hr)
f8	Field 8 - day of month
f9	Field 9 - month
f10	Field 10 - 2-digit year
f11	Field 11 - 4-digit year
Fl (and /fl)	flashing text on a line by line basis with flash rates controllable in 0.5 second increments.
Fo	Font
J12	justification - line - left
J13	justification - line - center
J14	justification - line - right
J15	justification - line - full
Jp2	justification - page - top
Jp3	justification - page - middle
Jp4	justification - page - bottom
Mv	moving text
Nl	New line
Np	New page, up to two instances in a message (i.e., up to four pages/frames in a message counting first page)
Pt	page times controllable in 0.5 second increments.

Table 4: Modified Object Ranges for the Report Conformance Group

Object	Reference	Project Requirement
maxEventLogConfigs	NTCIP 1201 Clause 2.5.1	Shall be at least 50
eventConfigurationMode	NTCIP 1201 Clause 2.4.3.1	The NTCIP Component shall support the following Event Configuration Modes:  onChange greaterThanValue smallerThanValue
maxEventLogSize	NTCIP 1201 Clause 2.5.3	Shall be at least 200
maxEventClasses	NTCIP 1201 Clause 2.5.5	Shall be at least 16

**Table 5: Modified Object Ranges for the Font Configuration Conformance Group** 

Object	Reference	Project Requirement
numfont	NTCIP 1203 Clause 2.4.1.1.1.1	Shall be at least 4*
maxFontCharacters	NTCIP 1203 Clause 2.4.1.1.1.3	Shall be at least 127**

<sup>\*</sup> Upon delivery, the first font shall be a standard 18" font. The second font shall be a double- stroke 18" font. The third font shall be a 28" font. The fourth font shall be empty.

- a) "A" thru "2" All upper case letters.
- b) "a" thru "z" All lower case letters.
- c) "0" thru "9" All decimal digits.
- d) Space (i.e., ASCII code 0x20).
- e) Punctuation marks shown in brackets [.,!?-',""/()]
- f) Special characters shown in brackets [# & \* + < >]

<sup>\*\*</sup> Upon delivery, the first three font sets shall be configured in accordance with the ASCII character set for the following characters:

**Table 6: Modified Object Ranges for the MULTI Configuration Conformance Group** 

Object	Reference	Project Requirement
defaultBackgroundColor	NTCIP 1203 Clause 2.5.1.1.1.1	The DMS shall support the following background colors:
		■ black
defaultForegroundColor	NTCIP 1203 Clause 2.5.1.1.1.2	The DMS shall support the following foreground colors:  • amber
defaultJustificationLine	NTCIP 1203 Clause 2.5.1.1.1.6	The DMS shall support the following line justification:
		■ Left
		<ul><li>Center</li></ul>
		■ Right
		• Full
defaultJustificationPage	NTCIP 1203 Clause 2.5.1.1.1.7	The DMS shall support the
		following forms of page
		justification:
		<ul><li>Top</li><li>Middle</li></ul>
		Bottom
I C I/D O T'	NTCID 1202 Cl 2 5 1 1 1 0	The DMS shall support the
defaultPageOnTime	NTCIP 1203 Clause 2.5.1.1.1.8	full range of these objects with
		step sizes no larger than 0.5
		seconds
defaultPageOffTime	NTCIP 1203 Clause 2.5.1.1.1.9	The DMS shall support the
		full range of these objects with
		step sizes no larger than 0.5 seconds
defaultCharacterSet	NTCIP 1203 Clause 2.5.1.1.1.10	The DMS shall support the
		following character sets:
		■ eightBit

**Table 7: Optional Object Requirements** 

Object	Reference	•	Project Requirement
globalSetIDParameter	NTCIP 1201 Clau	se 2.2.1	
eventConfigLogOID	NTCIP 1201 2.5.2.7	Clause	
eventConfigAction	NTCIP 1201 2.5.2.8	Clause	
eventClassDescription	NTCIP 1201 2.5.6.4	Clause	
defaultFlashOn	NTCIP 1203 2.5.1.1.1.3	Clause	The DMS shall support the full range of these objects with step sizes no larger than 0.5 seconds
defaultFlashOff	NTCIP 1203 2.5.1.1.1.4	Clause	The DMS shall support the full range of these objects with step sizes no larger than 0.5 seconds
dmsSWReset	NTCIP 1203 2.7.1.1.1.2	Clause	
dmsMessageTimeRemaining	NTCIP 1203 2.7.1.1.1.4	Clause	
dmsShortPowerRecoveryMessage	NTCIP 1203 2.7.1.1.1.8	Clause	
dmsLongPowerRecoveryMessage	NTCIP 1203 2.7.1.1.1.9	Clause	
dmsShortPowerLossTime	NTCIP 1203 2.7.1.1.1.10	Clause	
dmsResetMessage	NTCIP 1203 2.7.1.1.1.11	Clause	
DmsCommunicationsLossMessage	NTCIP 1203 2.7.1.1.1.12	Clause	
dmsTimeCommLoss	NTCIP 1203 2.7.1.1.1.13	Clause	
dmsEndDurationMessage	NTCIP 1203 2.7.1.1.1.15	Clause	
dmsMemoryMgmt	NTCIP 1203 2.7.1.1.1.16	Clause	The DMS shall support the following Memory management Modes:

			<ul><li>normal</li><li>clearChangeableMessage</li><li>clearVolatileMessages</li></ul>
dmsMultiOtherErrorDescription	NTCIP 1203 C. 2.7.1.1.1.20	lause	If the vendor implements any vendor-specific MULTI tags, the DMS shall be provided with documentation that includes meaningful error messages within this object whenever one of these tags generates an error.
dmsIllumLightOutputStatus	NTCIP 1203 C 2.8.1.1.1.9	lause	
watchdogFailureCount	NTCIP 1203 C 2.11.1.1.5	lause	
dmsStatDoorOpen	NTCIP 1203 C 2.11.1.1.1.6	lause	
fanFailure	NTCIP 1203 C 2.11.2.1.1.8	lause	
fanTestActivation	NTCIP 1203 C 2.11.2.1.1.9	lause	
tempMinCtrlCabinet	NTCIP 1203 C 2.11.4.1.1.1	lause	
tempMaxCtrlCabinet	NTCIP 1203 C 2.11.4.1.1.2	lause	
tempMinSignHousing	NTCIP 1203 C 2.11.4.1.1.5	lause	
tempMaxSignHousing	NTCIP 1203 C 2.11.4.1.1.6	lause	

<u>907-656.02.11.4--NTCIP Compliance Documentation</u>. Software shall be supplied with full documentation, including 3.5" floppy disk(s) and a CD-ROM containing ASCII versions of the following Management Information Base (Mill) files in Abstract Syntax Notation 1 (ASN.1) format:

- 1) The relevant version of each official standard Mill Module referenced by the device functionality.
- 2) If the device does not support the full range of any given object within a Standard Mill Module, a manufacturer specific version of the official Standard Mill Module with the supported range indicated in ASN.1 format in the SYNTAX and/or DESCRIPTION fields

- of the associated OBJECT TYPE macro. The filename of this file shall be identical to the standard MIB Module, except that it will have the extension ".man".
- 3) A MIB Module in ASN.1 format containing any and all manufacturer-specific objects supported by the device with accurate and meaningful DESCRIPTION fields and supported ranges indicated in the SYNTAX field of the OBJECT-TYPE macros.
- 4) A MIB containing any other objects supported by the device.
- 5) Additionally, the manufacturer shall provide a test procedure that demonstrates how the NTCIP compliance of both, the data dictionaries (NTCIP 1201, 1203, and their amendments) and the communications protocols have been tested.
- 6) The manufacturer shall allow the use of any and all of this documentation by any party authorized by the Procuring Agency for systems integration purposes at any time initially or in the future, regardless of what parties are involved in the systems integration effort.

<u>907-656.02.12--Performance Monitoring.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 9 of NEMA TS-4 standard.

<u>907-656.02.13--Power Requirements.</u> Each DMS shall meet all of the performance and testing requirements as outline in Section 10 of NEMA TS-4 standard.

## 907-656.03--Construction Requirements.

<u>907-656.03.1--Certified Installation.</u> Installation of the Dynamic Message Signs shall be performed by the supplier or a Contractor trained and certified by the supplier. If a certified Contractor performs the installation and configuration, supplier factory representative shall supervise and assist a Contractor during installation and configuration

<u>907-656.03.2--Conformance / Testing</u>. Each DMS shall undergo testing to verify conformance to special provision as follows. The Contractor shall conduct a Project Testing Program as required below. All costs associated with the Project Testing Program shall be included in overall contract prices; no separate payment will be made for any testing.

## **907-656.03.2.1--General Requirements**.

- a) The Contractor is responsible for planning, coordinating, conducting and documenting all aspects of the Project Testing Program. The Project Engineer and/or the Project Engineer's representatives are only responsible for attending and observing each test, and reviewing and approving the Contractor's test results documentation. The Project Engineer and/or the Project Engineer's representatives reserve the right to attend and observe all tests.
- b) Each test shall fully demonstrate that the equipment being tested is clearly and definitely in full compliance with all project requirements that can feasibly be tested at that stage.
- c) Test procedures shall be submitted and approved for each test as part of the project submittals. Test procedures shall include every action necessary to fully demonstrate that the equipment being tested is clearly and definitively in full compliance with all project requirements. Test procedures shall cross-reference to these specifications or the project plans. Test procedures shall contain documentation regarding the equipment configurations and programming.

- d) No testing shall be scheduled until approval of all project submittals and approval of the test procedures for the given test.
- e) The Contractor shall provide all ancillary equipment and materials as required in the approved test procedures.
- f) The Contractor shall request in writing the Project Engineer's approval for each test occurrence a minimum of 14 days prior to the requested test date. Test requests shall include the test to be performed and the equipment to be tested. The Project Engineer reserves the right to reschedule test request if needed.
- g) All tests shall be documented in writing by the Contractor in accordance with the test procedure and submitted to the Project Engineer within seven (7) days of the test. Any given test session is considered incomplete until the Project Engineer has approved the documentation for that test session.
- h) All tests deemed by the Project Engineer to be unsatisfactorily completed shall be repeated by the Contractor. In the written request for each test occurrence that is a repeat of a previous test, the Contractor shall summarize the diagnosis and correction of each aspect of the previous test. The Contractor shall summarize the diagnosis and correction of each aspect of the previous test that was deemed unsatisfactory. The test procedures for a repeated test occurrence shall meet all the requirements of the original test procedures, including review and approval by the Project Engineer and ITS Manager.
- i) The satisfactory completion of any test shall not relieve the Contractor of responsibility to provide a completely acceptable and operating system that meets all requirements of this project.
- j) A technical representative from the Dynamic Message Sign manufacturer MUST be present on-site during all tests including the Factory Acceptance Test, Stand Alone Site Test and SubSystem Test at the TMC.

<u>907-656.03.2.2--DMS Factory Acceptance Test (FAT).</u> The Contractor shall perform FAT on the DMS prior to shipping from the factory. The goal of the DMS FAT is to verify that the DMS meets the requirements of this special provision.

Factory Acceptance Tests shall be conducted at the Manufacturer or Contractor facility or at a facility acceptable to all parties. All equipment to be utilized for this project shall be subject to tests that demonstrate the suitability of the design and compliance with the contract requirements, unless an exception for an equipment item is granted by the Project Engineer. The tests shall be performed on production units identified to be delivered under this contract.

The FAT procedure shall demonstrate all requirements defined in these specifications are met, including, but not limited to: functional/system performance requirements, electrical requirements, data transmission/communication requirements, safety/password requirements, environmental requirements, and interface requirements with other components of the project system.

The Project Engineer reserves the right to waive FATs which are deemed to be unnecessary and reserves the right to witness all FATs that are determined to be critical to the project. At a minimum, the Project Engineer and/or the Project Engineer's representative, will be in attendance at the FAT for the first three (3) units tested. The FAT for the first three (3) units

shall be conducted during the same period. The Project Engineer shall be notified a minimum of forty- five (45) calendar days in advance of such tests. Salary and travel expenses of the Project Engineer and the Project Engineer representatives will be the responsibility of MDOT. In case of equipment or other failures that make a retest necessary, travel expenses of the Project Engineer and the Project Engineer's representatives shall be the responsibility of the Contractor. This shall include all costs including, but not limited to, airfare, automobile rental, lodging, and per diem. These costs, excluding airfare shall not exceed \$500.00, per representative, per day. These costs shall be deducted from payment due or charged to the withholding account of the Contractor when the project is terminated.

The vendor must complete the FAT on all remaining units on their own and submit documentation to the Project Engineer that the FATs were completed. The Project Engineer reserves the right to randomly attend those FAT tests.

No equipment for which a FAT is required shall be shipped to the project site without successful completion of factory acceptance testing as approved by the Project Engineer and the Engineer's approval to ship.

**907-656.03.2.3--DMS Pre-Installation Test (PIT).** The Contractor shall perform PIT on the DMS as they arrive from the factory. The goal of the DMS PIT is to verify that the DMS were not damaged during shipping. The PIT shall test or inspect the following DMS components:

- 1) External or internal visible damage
- 2) DMS display damage
- 3) Verify all pixels are operational
- 4) Verify the ventilation system works
- 5) Verify all equipment is secured
- 6) Verify sign configurations

<u>907-656.03.2.4--DMS Stand Alone Test (SAT).</u> The Contractor shall perform SAT on the DMS as they arrive from the factory. The goal of the SAT is to verify that the DMS has been properly installed and commissioned according to the manufacturer requirements and that all operating requirements have been met. The SAT shall include at minimum the following tests and inspections:

- 1) Verify the signs have been attached properly to the structure.
- 2) Verify the sign case and roadside cabinet have been grounded.
- 3) Verify the sign has been properly connected to the power.
- 4) Verify the sign case has no structural damage or deformities.
- 5) Verify all pixels are operational
- 6) Verify local sign control through the serial port
- 7) Verify local sign control through the Ethernet port.
- 8) Verify that all requirements defined in these specifications have been met.

<u>907-656.03.2.5--DMS Sub-System Test (SST).</u> The Contractor shall perform SST on the DMS to very that the sign is operational from central. The goal of the SST is to verify that all remote

DMS functions and alarms are operational.

907-656.03.2.6--Conditional System Acceptance Test. The Contractor shall perform a complete conditional system acceptance test on all equipment and materials in the project. The Contractor shall not request the conditional system acceptance test for a phase until the SATs have been satisfactorily completed, all as-built documentation has been submitted and approved, and all other project work has been completed to the satisfaction of the Engineer. Prior to a Conditional System Acceptance Test, the Contractor shall provide advance notice of and written test results documentation that the Contractor has performed a dry-run of the conditional system acceptance test, and the Engineer reserves the right to require attendance of a dry-run test session.

The Contractor shall test all project systems simultaneously from the TMC in a manner equivalent to the normal day-to-day operation of the system. The Conditional System Acceptance Test shall demonstrate that all equipment and materials in the network are in full compliance with all project requirements and fully functional as installed and in final configuration, communicating with and being controlled through the control center at the TMC. Upon completion and full approval of the Conditional System Acceptance Test for all equipment, Conditional System Acceptance will be given and the Burn-in Period will begin.

**907-656.03.2.7--Burn-In Period.** Following the Engineer's written notice of successful completion of the Conditional System Acceptance Test, the entire newly installed system must operate successfully for a six (6) month burn-in period. During this burn-in period the Contractor shall be responsible for the full maintenance of the newly installed equipment. However, no separate payment will be made for the burn-in period activities and shall be included in the cost of other items. Successful completion of the burn-in period will occur at the end of six complete months of operation without a major system failure attributable to hardware, software or communications components. Each system failure during the burn-in period will require an additional month of successful operation prior to being eligible for Final Acceptance. (i.e., if there are two system failures during the initial six month period, the burn-in period would be increased to eight (8) months.)

## **Burn-In General Requirements**

- Determination of a system failure shall be at the sole discretion of the Engineer. System failure is defined as a condition under which the system is unable to function as a whole or in significant part to provide the services as designed. While a single component failure will not constitute a system failure, chronic failure of that component or component type may be sufficient to be considered a system failure. Chronic failure of a component or component type is defined as three (3) or more failures for the same component during the burn-in period.
- Components are defined as contract items or major material elements in a contract item. For electrical and electronic contract items, components are defined as the complete assembly of materials that makes up the contract item.
- Specifically exempted as system failures are failures caused by accident, acts of God, or other external forces that are beyond the control of the Contractor. However, failure of

the contractor to respond to the repair request for that failure within 24 hours may be considered a system failure.

- The Department will advise the Contractor in writing when it considers that a system failure has occurred or chronic failure exists.
- If multiple system and/or chronic failures continue to occur throughout the burn-in period due to a single component type, the Contractor may be required to replace all units of that component type with a different model or manufacturer.
- The Contractor shall document all failures and subsequent diagnosis and repair. The repair documentation shall include as a minimum:
  - Description of the problem
  - o Troubleshooting and diagnosis steps
  - o Repairs made
  - o List of all equipment and materials changed including serial numbers.
  - o Update of the equipment inventory where needed.
- The Contractor shall provide the repair documentation to the Engineer within two (2) days of completing the repair; failure to provide acceptable documentation as required shall be reason to not approve the repair as complete. The Engineer will provide acceptance or rejection of the repair and documentation within seven (7) days.
- The Engineer reserves the right to require, at no additional expense to the State, the presence of a qualified technical representative of the equipment and/or software manufacturers as related to the diagnosis and/or repair of any system failure.
- During the burn-in period the Contractor shall perform incidental work such as touching up, cleaning of exposed surfaces, leveling and repair of sites, sodding/grassing and other maintenance work as may be deemed necessary by the Engineer to insure the effectiveness and neat appearance of the work sites.
- During the burn-in period the Engineer shall maintain a "burn-in period punch list" that contains required Contractor actions but that the Engineer does not define as a system failure. Each burn-in period punch list action item shall be completed by the Contractor to the Engineer's satisfaction within seven (7) days of Contractor notification of the action item.
- During the burn-in period the Contractor is required to meet the following response times once notified there is a problem. A response is defined as being on-site to begin diagnosing the problem.
  - o Monday thru Friday: The Contractor shall respond no later than 9:00 a.m. the following morning after being notified.
  - o Weekends: If the Contractor is notified on Friday afternoon or during the weekend, the Contractor shall response by 9:00 a.m. on Monday morning.
- During the burn-in period the Contractor shall provide all labor, materials, equipment and replacement parts to completely maintain, troubleshoot and repair all items installed

under this contract. No separate payment will be made for any labor, materials, equipment or replacement parts needed during the burn-in period.

• The overall burn-in period will be considered complete upon the successful completion of the burn-in time periods, the Engineer's acceptance of all repairs and repair documentation, completion of all burn-in period punch list actions and a final inspection as described below.

<u>907-656.03.2.8--DMS Final Inspection.</u> Upon successful completion of the burn-in period, the project shall be eligible for the DMS final inspection. The DMS final inspection will be conducted provided the burn-in period has demonstrated the entire system is operating successfully. The DMS final inspection shall include but is not limited to;

- monitoring of all system functions at the TMC to demonstrate the overall system is operational
- a field visit to each site to ensure all field components are in their correct final configuration
- verification that all burn-in punch list items have been completed
- verification that all final cleanup requirements have been completed
- approval of final as-built documentation

Prior to conducting the DMS final inspection, the burn-in period shall demonstrate that all requirements defined in this Special Provision have been met.

The Contractor shall request in writing the Engineer's approval to start the DMS final inspection a minimum of 14 days prior to the requested start date. The Engineer reserves the right to reschedule the start date if needed. The start date for the DMS final inspection cannot be prior to the successful completion of the overall burn-in period.

An unsuccessful or incomplete DMS final inspection shall require a new DMS final inspection after the Contractor has made the necessary corrections. Up to 14 days shall be allowed for the Engineer to conduct a DMS final inspection.

The Engineer reserves the right to require, at no additional expense to the State, the attendance of a qualified technical representative of the equipment and/or software manufacturers to attend a portion of a DMS final inspection.

The Contractor shall be responsible for the full maintenance of all project equipment and materials during the entire time period from the successful completion of the burn-in period until Final System Acceptance is granted.

<u>907-656.03.2.9--Final System Acceptance</u> Upon successful completion of the DMS final inspection, the Engineer will conduct a project final inspection in accordance with Subsection 105.16.2 of the Standard Specifications.

907-656.03.3--Documentation. DMS documentation shall meet all of the performance and

testing requirements as outline in Section 12 of NEMA TS-4 standard.

907-656.03.4--Warranty. The DMS shall be warranted to be free of manufacturer defects in materials and workmanship for a period of one year from the date of Final Acceptance. Equipment covered by the manufacturer's warranties shall have the registration of that component placed in MDOT's name prior to the DMS final inspection. The Contractor is responsible for ensuring that the vendors and/or manufacturers supplying the components and providing the equipment warranties recognize MDOT as the original purchaser and owner/end user of the components from new. During the warranty period, the supplier shall repair or replace with new or refurbished material, at no additional cost to the State, any product containing a warranty defect, provided the product is returned postage-paid by the Department to the supplier's factory or authorized warranty site. Products repaired or replaced under warranty by the supplier shall be returned prepaid by the supplier. During the warranty period, technical support shall be available from the supplier via telephone within four hours of the time a call is made by the Department, and this support shall be available from factory certified personnel. During the warranty period, updates and corrections to control unit software shall be made available to the Department by the supplier at no additional cost.

<u>907-656.03.5--MDOT Employee Training.</u> The Contractor shall submit to the Project Engineer for approval a detailed Training Plan including course agendas, detailed description of functions to be demonstrated and a schedule. The Contractor must also submit the Trainer's qualifications to the Project Engineer for approval prior to scheduling any training. The training must include both classroom style training and hands-on training in the field of the maintenance and troubleshooting procedures required for each component. The training should also consist of a hands-on demonstration of all software configuration and functionality where applicable.

The supplier of the dynamic message sign shall, at a minimum, provide operations and maintenance training classes as defined in the Notice to Bidders with suitable documentation for up to eight (8) persons selected by the Department. The operations and maintenance class shall be scheduled at a mutually acceptable time and location.

<u>907-656.03.6--Maintenance and Technical Support</u>. The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the DMS. Spare parts shall be available for delivery within 30 days of placement of an acceptable order at the supplier's then current pricing and terms of sale of said spare parts.

The suppliers shall maintain an ongoing program of technical support for the video detection system. This technical support shall be available via telephone or via personnel sent to the installation site upon placement of an acceptable order at the supplier's then current pricing and terms of sale of said technical support services.

<u>907-656.04--Method of Measurement.</u> Dynamic Message Sign will be measured in units of each.

Dynamic message sign shall be measured for payment as follows:

- 1) 20% of the contract unit price upon completion of the Factory Acceptance Test and Pre-Installation Test.
- 2) 40% of the contract price upon delivery to the site. Delivery cannot be more than 60 days before anticipated installations.
- 3) 90% of the contract unit price upon complete installation and stand alone testing of the dynamic message sign.
- 4) 100% of the contract unit price upon completion of Burn-in Period and Final System Acceptance.

907-656.05--Basis of Payment. Dynamic Message Sign, measured as prescribed above, will be paid for at the contract unit price per each, which shall include furnishing, installing, system integration and testing of the complete dynamic message sign including the sign case, light sources, display apparatus, wiring, controller, roadside DMS cabinet, communications interface, wiring between the sign case and DMS cabinet, structure mounted conduit, fittings, and junction boxes, sign case support connections to the sign support structure, satisfactory completion of testing and training requirements, burn-in period, and all work, equipment and appurtenances as required to effect the full operation including remote and local control of the sign complete in place and ready for use. The price bid shall also include all system documentation including: shop drawings, operations and maintenance manuals, wiring diagran1s, block diagrams, and other material necessary to document the operation of the DMS. This price shall be full compensation for all labor, tools, materials, equipment, and incidentals necessary to complete the work for a complete and functional DMS.

This work does not include the sign support structure.

Payment will be made under:

907-656-A: Dynamic Message Sign \*

- per each

907-656-B: Dynamic Message Sign Training

- lump sum

\* Type may be specified

CODE: (SP)

## SPECIAL PROVISION NO. 907-659-2

**DATE:** 06/01/2007

**SUBJECT:** Traffic Management Center (TMC) Modifications

PROJECT: NH-9999-00(331)CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

Section 907-659, Traffic Management Center (TMC) Modifications, is hereby added to and becomes part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

## SECTION 907-659 -- TRAFFIC MANAGEMENT CENTER (TMC) MODIFICATIONS

**907-659.01--Description.** The MDOT Central Traffic Management Center (TMC) is located in the Traffic Engineering Division in the MDOT Shop Complex at 2567 North West Street, Jackson, Mississippi. Regional and City Traffic Management Centers may be located statewide. The following is a list of existing/planned centers and their addresses:

City of Jackson TMC – 300 North State Street, Jackson, Mississippi (basement)

Southaven Combined TMC – 8791 Northwest Drive, Southaven, Mississippi (Police Department)

City of Ridgeland TMC – 304 Hwy 51, Ridgeland, Mississippi (City Hall)

Oxford Combined TMC – 715 Mollybarr Road, Oxford, Mississippi (Oxford Police Department) Hattiesburg Regional TMC/EOC – 6356 Hwy 49N, Hattiesburg, Mississippi (MDOT District 6 Headquarters)

Batesville Regional TMC/EOC – 150 Hwy 51N, Batesville, Mississippi (MDOT District 2 Headquarters)

Natchez Combined TMC – 233 Devereaux Drive, Natchez, Mississippi (Police Department) Gulf Coast TMC – 16499 Hwy 49, Saucier, Mississippi (MDOT Lyman Project Office)

Additional Traffic Management Centers may be added as needed.

#### 907-659.02--Materials.

## 907-659.03--Construction and Operation Requirements.

<u>907-659-03.1--TMC Modifications</u>. The MDOT TMC modifications required to integrate and operate the traffic systems and devices shall be provided. These include, but are not limited to, expanding the central video management system, interconnecting the appropriate number of video interfaces to the TMC video management systems, expanding the MSTraffic backbone network through radio communications, wireless communications, T1 lines or fiber communications, expanding the Advanced Central Traffic Response Algorithm (ACTRA) signal

system, expanding the Automated Traffic Management System (ATMS), and integrating all the existing computing facilities. All TMC modifications must meet U.S. Department of Transportation Intelligent Transportation System (ITS) Standards, Policies, and Architectures.

907-659.03.2--TMC Modifications - Monitor Systems. Roadway traffic monitor locations shall provide local control functions related to traffic slowdowns and other congestion monitors as defined by MDOT Traffic Engineering. Additionally, the traffic monitor systems shall provide on-line data for use by the existing MDOT ATMS for engineering, operations, planning, incident, and mstraffic.com purposes. This data shall include, but is not limited to, per vehicle data raw data which shall be transmitted to and stored and managed by the ATMS. The traffic monitor systems shall be capable of utilizing both or either loop, microloop, radar, and/or video detection information. The system shall provide a consistent communication and management system regardless of detection methods used. All Traffic Monitoring Systems must meet U.S. Department of Transportation Intelligent Transportation System (ITS) Standards, Policies, and Architectures.

<u>907-659.03.3--TMC Modifications – Installation & Training.</u> Installation of all equipment and software shall be included. The Contractor must provide the MDOT ITS Manager with an Installation Schedule. The Installation Schedule must be approved by the State Traffic Engineer. All equipment and software must be fully functional and pass a Final Inspection by the ITS Manager and Project Engineer before being accepted by MDOT.

Training shall be provided covering the system architecture, operations, and maintenance of the TMC systems. If training requirements include travel on the part of training participants then the cost of travel shall be included.

<u>907-659.04--Method of Measurement.</u> Traffic Management Center Modifications, Traffic Management Center Modifications – Monitor Systems, and Traffic Management Center Modifications – Training, complete in place, tested and accepted, will be measured on a lump sum basis.

<u>907-659.05--Basis of Payment.</u> Traffic Management Center Modifications, Traffic Management Center Modifications – Monitor Systems, and Traffic Management Center Modifications - Training, measured as prescribed above, will be paid for at the contract lump sum price, which price shall be full compensation for furnishing all materials for all installing, connecting, cutting, pulling and testing and for all equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

907-659-A: Traffic Management Center Modifications - lump sum

907-659-B: Traffic Management Center Modifications – Monitor Systems - lump sum

907-659-C: Traffic Management Center Modifications – Training - lump sum

CODE: (SP)

## SPECIAL PROVISION NO. 907-660-1

DATE: 07/22/2005

**SUBJECT: OTN Node** 

PROJECT: NH-9999-00(331) CT3N / 103811303, 304 & 305 -- Hinds, Madison &

**Rankin Counties** 

Section 907-660, OTN Node, is hereby added to and becomes part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

## SECTION 907-660--OTN NODE

<u>907-660.01--Description.</u> Open Transport Network (OTN) is a network transmission system based on the latest fiber optics technology. It is characterized by the dual ring approach, resulting in high network availability, self-healing fault tolerance/recovery, and the integration of different types of services in one network. OTN supports almost all standard and/or customized transmission requirements for voice, data, LAN and video.

OTN nodes can be configured with a range of interface cards which allows them to be used for diverse applications. This diversity of interface cards saves on all kinds of transmission equipment such as protocol converters and conversion equipment. Interface cards available for OTN nodes are:

- Video applications (video distribution and monitoring, CCTV, MPEG4, M-JPEG)
- Data transport (e.g. RS232, RS422, and RS485)
- Telephony purposes (e.g. analog and digital 2-wire and 4-wire voice links, E1, T1)
- Local Area Networks (e.g. Fast Ethernet)

OTN nodes will be installed in Traffic Management Centers (TMC) and climate controlled OTN Node Communication Huts. A list of OTN node installation locations and specific interface card configurations is shown in Notice To Bidders No. 1395.

## 907-660.02--Materials.

<u>907-660.02.1--OTN Node.</u> The OTN node will be a modular 19-inch rack mountable chassis with two redundant power supply units and a hot-swappable common logic card. Each OTN chassis must have eight universal interface slots for interface modules in any combination. A maximum 196 Mbps capacity per interface and 100% user bandwidth utilization shall be provided with a total add-drop capacity of 1.5 Gbps. Two extra slots are required for auxiliary cards. Each node must have three intelligent (temperature switched and fail detect) fan modules to regulate the temperature inside the node. The dual power supply units shall be a minimum

270-Watt System, 10 TE width, with a supply voltage of 90 to 264 VAC (including 125 VDC) or 18 to 60 VDC, or any combination of both.

<u>907-660.02.2--OTN Node Communication Hut.</u> The equipment building shall be of a modular, prefabricated type construction. The walls shall be concrete with reinforcing steel, polypropylene fiber reinforced, 4,000 PSI minimum at 28 days compressive strength. The building size shall be a minimum of 8' x 8' x 8'6" for the outside dimensions.

## Minimum design loads shall be:

- Seismic load performance category "C", Exposure Group III
- Standard Live Roof Load 60 PSF
- Standard Floor Load 250 PSF
- Standard Wind Loading 130 MPH

The roof panel shall slope 1" from center to sides. The roof shall extend a minimum of  $1\frac{1}{2}$ " beyond the wall panel on each side.

Roof, floor, and wall panels must each be produced as single component monolithic panels. No roof, floor, or vertical wall joints will be allowed except at corners. Wall panels shall set on top of floor panel.

## Included in the building are:

- 3'0" x 7'0" x 13/4" galvanized steel door and frame with dead bolt lock and three (3) keys,
- Distribution panel board, 120/240 VAC interior, single phase, three wire, 125 amp main including breakers,
- 4-foot fluorescent ceiling mount fixture with two 40-watt cool white lamps,
- HPS exterior light with photocell, 120 VAC,
- 800 CFM minimum fan, 20 AMP with thermostat control, air damper, and rainhood,
- 1½ ton, 17,000 BTU, 5-kw unit, 30 AMP, 120 VAC AC unit,
- Minimum of three 120 VAC grounded duplex receptacles and all conduit and wiring,
- Finished walls and ceiling with insulation and vinyl floor tiles,
- Exposed aggregate finish or comparable finish as directed by Engineer,
- 10" x 20" opening in the floor for conduit risers, location to be determined by Engineer; and,
- Halo ground system.

## 907-660.03--Construction and Operation Requirements.

<u>907-660-03.1--OTN Node.</u> OTN nodes will be installed in Traffic Management Centers (TMC) or in climate controlled OTN Communication Huts. All OTN nodes in the MSTraffic network must be interconnected by dual point-to-point optical fiber links, where available. These fibers will form two (2) counter-rotating, redundant rings. The second ring will serve as a backup and should be able to, either partly or completely take, over all data transport. Installation will

include, but is not limited to, expanding the central video management system & interconnecting the appropriate number of video interfaces between networked Traffic Management Centers (TMC) located across the State. Nodes should be installed in 19" equipment cabinets and all interface cables must be labeled. Video that is placed on the MDOT OTN Node fiber ring or any city/agency traffic cameras must be available/delivered to a monitoring wall in the TMC.

<u>907-660.03.2--OTN Node Communication Hut.</u> The installation of the modular, prefabricated building shall consist of installing the leveling crushed gravel pad, providing 120/240 power to the building and connecting the distribution panel to the power supply, and testing the equipment for proper working/running condition. The building shall be placed closer than 2' 0" to an existing structure.

The building shall be set on a four inch (4") minimum depth, level, crushed gravel base, with that base being at least one foot longer than the length and width of the building. Conduit for the fiber interconnect system is to be in place before the building is set on the gravel base.

The halo ground system shall be connected to four 5/8" x 10' ground rods installed outside each corner of the building. The ground rods are connected with AWG #6 copper ground wire.

<u>907-660.03.3--OTN Node Installation & Training.</u> Installation of all equipment and software shall be included. The Contractor must provide the MDOT ITS Manager with an Installation Schedule. The Installation Schedule must be approved by the State Traffic Engineer. All equipment and software must be fully functional and pass a Final Inspection by the ITS Manager and Project Engineer before being accepted by MDOT.

Training shall be provided covering the system architecture, operations, and maintenance of the OTN Nodes and MSTraffic network. If training requirements include travel on the part of training participants then the cost of travel shall be included.

<u>907-660.04--Method of Measurement.</u> OTN Node and OTN Node Communication Hut, complete in place, will be measured per each, inclusive of all wiring, hardware, and incidentals necessary to complete the work.

OTN Training will be measured per lump sum.

<u>907-660.05--Basis of Payment.</u> OTN Node and OTN Node Communication Hut, measured as prescribed above, will be paid for at the contract unit price per each, which price shall be full compensation for furnishing all materials, construction installation, connecting, testing, for all equipment, tools, labor, and incidentals required to complete the work.

The OTN Node Training, measured as prescribed above, will be paid for at the contract lump sum price, which price shall be full compensation for all materials and software for all equipment, travel expenses, software and incidentals necessary to complete the work.

Payment will be made under:

907-660-A: OTN Node - per each

907-660-B: OTN Node Communications Hut - per each

907-660-C: OTN Node Training - lump sum

CODE: (IS)

## SPECIAL PROVISION NO. 907-701-2

**DATE:** 01/12/2006

**SUBJECT: Portland Cement** 

Section 701, Hydraulic Cement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-701.02--Portland Cement**. Delete the third paragraph and table in Subsection 701.02 on page 596, and substitute the following:

When Portland cement concrete or cement for soil stabilization is exposed to moderate or severe soluble sulfate conditions, or to seawater, cement types and replacement of cement by Class F fly ash (FA), ground granulated blast furnace slag (GGBFS), or metakaolin shall be as follows:

## **Cementitious Materials for Soluble Sulfate Conditions**

Sulfate Exposure	Water-soluble sulfate (SO <sub>4</sub> ) in soil, % by mass	Sulfate (SO <sub>4</sub> ) in water, ppm	Cementitious material required
Moderate and Seawater	0.10 - 0.20	150 - 1500	Type II*, ** cement, or Type I cement with one of the following replacements of cement:  25% Class F, FA, or 50% GGBFS, or 10% metakaolin
Severe	0.20 - 2.00	1500 - 10,000	Type II* cement with one of the following replacements of cement:  25% Class F, FA, or 50% GGBFS, or 10% metakaolin

<sup>\*</sup> Type I cement with a maximum 8% tricalcium aluminate may be used in lieu of Type II cement.

Class C fly ash shall not be used as a replacement for Portland cement in any of the sulfate exposure conditions listed above.

<sup>\*\*</sup> Class F, FA or GGBFS may be added as a replacement for Portland cement in accordance the proportions as listed in this table.

CODE: (IS)

## SPECIAL PROVISION NO. 907-711-3

DATE: 09/26/2005

**SUBJECT:** Synthetic Structural Fiber Reinforcement

Section 711, Reinforcement and Wire Rope, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

After Subsection 711.03.4.3 on page 665, add the following:

**907-711.04--Synthetic Structural Fiber.** Synthetic structural fibers shall meet the requirements of ASTM Designation: C 1116, Section 4.1.3, Note 3. The fibers shall be monofilament made of polypropylene or polypropylene/polyethylene blend meeting the following conditions:

<u>Property</u>	Results
Length, minimum	1.5 inches
Aspect Ratio (length / equivalent diameter)	90
Breaking tenacity, minimum *	530 mN/tex
(Tensile Strength, minimum	70 ksi)
Chord modulus, minimum *	980 cN/tex
(Modulus of Elasticity, minimum	1,300 ksi)

<sup>\*</sup> When tested in accordance with ASTM Designation: D 3822

The dosage rate for the fibers shall be a minimum of three pounds per cubic yard (3 lb / yd $^3$ ). The dosage rate for the fibers when used in pile encasements shall be a minimum of four pounds per cubic yard (4 lb / yd $^3$ ).

The manufacturer shall furnish the Engineer three copies of the certified test report(s) showing results of all required tests, and certification that the material meets the specifications.

CODE: (IS)

#### SPECIAL PROVISION NO. 907-714-2

**DATE:** 1/23/2006

**SUBJECT:** Miscellaneous Materials

Section 714, Miscellaneous Materials, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete Subsection 714.07 on page 682 and substitute the following:

## 907-714.07--Other Cementitious Materials.

## 907-714.07.1--Metakaolin.

<u>907-714.07.1.1--General.</u> Metakaolin shall only be used to bring the cementitious materials in Portland cement concrete and cement for soil stabilization into compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. The approval of each metakaolin source shall be on a case by case basis as determined by the State Materials Engineer. Source approval will be based on, but not limited to, review of the proposed source's quality control program, production history, certified test reports, certification of shipment from the supplier, and job control sampling and testing requirements.

The Contractor shall provide suitable means for storing and protecting the metakaolin against dampness and contamination. Metakaolin which has become partially set, caked, or contains lumps shall not be used.

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

Metakaolin from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. In addition to these requirements, metakaolin shall meet the following specific requirements.

<u>907-714.07.1.2--Specific Requirements</u>. Metakaolin shall meet the requirements of AASHTO Designation: M 295 Class N with the following modifications:

- 1. The sum of SiO<sub>2</sub> + Al<sub>2</sub>O<sub>3</sub> + Fe<sub>2</sub>O<sub>3</sub> shall be at least 85%. The Material Safety Data Sheet shall indicate that the amount of crystalline silica, as measured by National Institute of Occupation Safety and Health (NIOSH) 7500 method, after removal of the mica interference, is less than 1.0%.
- 2. The loss on ignition shall be less than 3.0%.
- 3. The available alkalies, as equivalent Na<sub>2</sub>O, shall not exceed 1.0%.
- 4. The amount of material retained on a No. 325 mesh sieve shall not exceed 1.0%.
- 5. The strength activity index at seven (7) days shall be at least 85%.

#### SUPPLEMENT TO SPECIAL PROVISION NO. 907-804-2

**DATE:** 12/14/2006

**SUBJECT:** Maturity Meters

After the last paragraph of Subsection 907-804.02.10 on page 1, add the following:

**907-804.03.15--Removal of Falsework, Forms, and Housing.** After the third paragraph of Subsection 804.03.15 on page 871, add the following:

In lieu of using concrete strength cylinders or minimum curing time to determine when falsework, forms, and housing can be removed, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 1. Falsework, forms, and housing may be removed when maturity meter readings indicate that the required concrete strength (Column B) is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO T 325 and ASTM C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

Table 1

Structure Component	Quantity of Concrete	No. of Probes
Slabs, beams, walls, & miscellaneous items	$0 - 30 \text{ yd}^3$	2
	$> 30 \text{ to } 60 \text{ yd}^3$	3
	$> 60 \text{ to } 90 \text{ yd}^3$ $> 90 \text{ yd}^3$	4
		5
Footings, Columns & Caps	$0 - 13 \text{ yd}^3$	2
	$> 13 \text{ yd}^3$	3
Pavement, Pavement Overlays	$1200 \text{ yd}^2$	2
Pavement Repairs	Per repair or 900 yd <sup>2</sup>	2
	Whichever is smaller	

**907-804.03.16.1--Cold Weather Concreting.** After the third paragraph of Subsection 804.03.16.1 on page 873, add the following:

In lieu of the placement, protection and curing of concrete in cold weather as described in the second and third paragraphs of Subsection 804.03.16.1, at the option of the Contractor with the approval of the Engineer, when concrete is placed during cold weather and there is a probability of ambient temperatures lower that 40°F, an approved maturity meter may be used to determine concrete strengths by inserting probes into concrete placed in a structure. The minimum number of maturity meter probes required for each structural component shall be in accordance with Table 1 of Subsection 907-804.03.15. An approved insulating blanketing material shall be used

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to protect the work when ambient temperatures are less than  $40^{\circ}F$  and shall remain in place until the required concrete strength (Column B, Subsection 804.03.15) is achieved. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO T 325 and ASTM C 1074 specifications. Technicians using the maturity meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

**907-804.03.22.6--Handling, Storage, and Installation.** After the fourth paragraph of Subsection 804.03.22.6 on page 895, add the following:

When using maturity meters, concrete piling shall not be shipped to the job site until maturity calculations and/or concrete strength/maturity graphs indicate that piling from a casting bed meets the required design strength. A thermocouple or maturity meter probe shall be inserted into the last concrete placed on the piling casting bed. Procedures for using the maturity meter and developing the strength/maturity relationship shall follow the requirements of AASHTO T 325 and ASTM C 1074 specifications. Technicians using the Maturity Meter or calculating strength/maturity graphs shall be required to have at least two hours of training prior to using the maturity equipment.

CODE: (SP)

#### SPECIAL PROVISION NO. 907-804-2

DATE: 01/20/2006

**SUBJECT:** Concrete Bridges And Structures

Section 804, Concrete Bridges And Structures, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

<u>907-804.02.1--General.</u> Add the following materials to the list of materials in Subsection 804.02.1 on page 847.

Ground Granulated Blast Furnace Slag (GGBFS)	714.06
Metakaolin	714.07.01

<u>907-804.02.10--Portland Cement Concrete Mix Design</u>. Change Note \*\*\*\* of Subsection 804.02.10 on page 851 as follows:

\*\*\*\*\* Class DS Concrete for drilled shafts shall have an 8±1-inch slump. In the event of free fall method of concrete placement is used, the slump shall be 6±1-inch.

Delete the last paragraph of Subsection 804.02.10 on page 851 and substitute the following:

Either Type A, D, F, G or mid-range chemical admixture, shall be used in all classes of concrete. Any combination of water reducing admixtures shall be approved by the Engineer before their use.

907-804.05--Basis of Payment. Add the "907" prefix to the pay items listed on page 898.

#### 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

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S.P. No. 906-3 -- Cont'd.

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

Page 3 of 3

S.P. No. 906-3 -- Cont'd.

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. 906-6

# 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**

This voluntary 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 take part in the program and follow uniform procedures in training and in tracking trainee's progress.

## **FUNDING**

MDOT will establish an annual OJT Fund from 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.

## **DISBURSEMENT OF FUNDS**

MDOT will pay \$3.00 per hour toward the trainee's salary for each hour of training performed by <u>each</u> trainee in an approved training program. Program reimbursements will be made directly to the prime or sub contractor. Requests for payment will be submitted to the Office of Civil Rights for approval.

Contractors must provide a signed invoice providing the following information to be reimbursed.

- Contractor's Name
- Mailing Address
- Trainee Name
- Social Security Number

- Race
- Sex
- Project Number
- Job Classification
- Total Number of Hours Completed

## TRAINING PROGRAM APPROVAL

- A. To use the OJT Program on highway construction projects, the contractor will notify the Department Office of Civil Rights using the On-the-Job Trainee Schedule Form. The notification must include the following information:
  - Trainee Starting Date
  - Project number (s) trainee starting on
  - Training program (classification) to be used; and
  - Number of Training Hours Required
- B. If a contractor chooses to use a training program different from those listed in the OJT Program Manual, 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. No less than minimum wage.
  - 4. Trainee certification of completion.
  - 5. Records and reports submitted to the Office of Civil Rights on a monthly basis.

#### DEPARTMENT RESPONSIBILITY

- Department project staff will monitor trainees on the project. They will monitor payrolls
  for payment of correct wage rates and fringe benefits. The Office of Civil Rights 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 Office of Civil Rights may elect to interview trainees periodically during the training period to assess their performance and training program.

## **CONTRACTOR RESPONSIBILITY**

- 1. Trainees must be identified on payrolls (i.e. dragline trainee).
- 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 OJT Termination Report.
- 3. 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.
- 4. 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 Office of Civil Rights with an explanation (*refer to 2 above*).
- 5. Upon notification from the contractor, the Department will issue a skill verification card and certificate of training to the trainee.
- 6. Trainees may be transferred to state-aid highway construction projects in order to complete the training program. If transfers are made the Office of Civil Rights must be notified on the Monthly Trainee Form. All of the training hours completed by trainees will count toward overall program completion.
- 7. Program reimbursements will be made directly to the prime or sub contractor.

## **WAGE RATE**

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.

## **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 Office of Civil Rights 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.
- 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 Office of Civil Rights with the other required information as part of the approval process for trainees.
- <u>NOTE:</u> 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 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 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 (CONTINUED)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for <u>five percent (5%) of total bid</u> and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

	Respectfully Submitted,				
	DATE				
		Contractor			
	BY	Signature			
	TITLE				
	ADDRESS				
	CITY, STATE, ZIP				
	PHONE				
	FAX				
	E-MAIL				
(To be filled in if a corporation)					
Our corporation is chartered under the Laws of the titles and business addresses of the executives are as follows:			and	the	names,
President		Address			
Secretary		Address			
Treasurer		Address			

The following is my (our) itemized proposal.

NH-9999-00(331) CT3N/103811303 NH-9999-00(331) CT3N/103811304 NH-9999-00(331) CT3N/103811305 Hinds, Madison, Rankin Counties

The installation of Dynamic Message Signs in the Jackson Area, known as Federal Aid Project Nos. NH-9999-00(331) CT3N / 103811303, 304 & 305, in the Counties of Hinds, Madison and Rankin, 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 CERTIFICATION LOCATED AT THE END OF THE BID SHEETS IS SIGNED

## \*\*\*BID SCHEDULE\*\*\*

Line	Item Code	Adj	Quantity	Units	Description	Unit Price	:	Item Amou	nt
No.		Code				Dollar	Ct	Dollar	Ct
			-	-	Roadway Items	-			
0010	202-B022		60	Linear Feet	Removal of Concrete Median Barrier				
0020	202-B063		1	Each	Removal of Overhead Sign Including Panels, Truss, Supports & Footing				
0030	304-A023	(GY)	300	Cubic Yard	Granular Material, LVM, Class 5, Group C				
0040	606-B001		1,800	Linear Feet	Guard Rail, Class A, Type 1				
0050	606-C003		6	Each	Guard Rail, Cable Anchor, Type 1				
0060	606-E001		6	Each	Guard Rail, Terminal End Section				
0070	615-A012	(S)	40	Linear Feet	Concrete Type IV Modified, 42" Height, Cast-in-Place Median Barrier				
0080	618-A001		1	Lump Sum	Maintenance of Traffic	XXXXXXXX	XXX		

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amour	nt
0090	618-B001		1	Square Feet	Additional Construction Signs	10.	00	10.	00
0100	619-E1001		4	Each	Flashing Arrow Panel, Type C				
0110	619-F1001		1,200	Linear Feet	Concrete Median Barrier, Precast				
0120	620-A001		1	Lump Sum	Mobilization	XXXXXXXX	XXX		
0130	630-B002		378	Square Feet	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Overhead Mounted				
0140	630-F001		33	Each	Delineators, Guard Rail, White				
0150	630-F002		5	Each	Delineators, Guard Rail, Yellow				
0160	647-A003		39	Each	Pullbox, Type 4				
0170	647-A004		20	Each	Pullbox, Type 5				
0180	647-A005		27	Each	Pullbox, Type 2				
0190	657-A006		30,620	Linear Feet	Fiber Optic Cable, 72 SM				
0200	657-B003		3,320	Linear Feet	Fiber Optic Drop Cable, 12 SM				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0210	666-B019		590	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 2, 4Conductor				
0220	666-B033		2,080	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 4, 3 Conductor				
0230	666-B034		2,075	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 1/0, 4 Conductor				
0240	666-B035		555	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 4, 4 Conductor				
0250	666-B036		200	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 6, 4 Conductor				
0260	668-A029		30,090	Linear Feet	Traffic Signal Conduit, Underground, Rolled Pipe, 2"				
0270	668-B024		5,980	Linear Feet	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 2"				
0280	668-C005		5,820	Linear Feet	Traffic Signal Conduit, Aerial Supported, Type 1, 2"				
0290	907-619-E300	1	2	Each	Changeable Message Sign				
0300	907-630-I003		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 3, Contractor Designed	XXXXXXXX	XXX		
0310	907-630-I004		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 4, Contractor Designed	XXXXXXXX	XXX		
0320	907-630-I006		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 6, Contractor Designed	XXXXXXXX	XXX		

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0330	907-630-I007		1	Lump Sum	Metal Overhead Sign Supports, Assembly No. 7, Contractor Designed	XXXXXXXX	XXX		
0340	907-630-M001		1	Lump Sum	Pedestal Sign Support, Assembly No 1, Contractor Designed	XXXXXXXX	XXX		
0350	907-630-M002	,	1	Lump Sum	Pedestal Sign Support, Assembly No 2, Contractor Designed	XXXXXXX	XXX		
0360	907-630-M003		1	Lump Sum	Pedestal Sign Support, Assembly No 5, Contractor Designed	XXXXXXXX	XXX		
0370	907-630-M004		1	Lump Sum	Pedestal Sign Support, Assembly No 8, Contractor Designed	XXXXXXXX	XXX		
0380	907-630-M005	i	1	Lump Sum	Pedestal Sign Support, Assembly No 9, Contractor Designed	XXXXXXXX	XXX		
0390	907-630-O001		1	Each	Remove and Reset Signs, Ground Mounted on Round Post(s)				
0400	907-656-A001		4	Each	Dynamic Message Sign, Type 1				
0410	907-656-A002		5	Each	Dynamic Message Sign, Type 2				
0420	907-656-B001		1	Lump Sum	Dynamic Message Sign Training	xxxxxxxx	XXX		
0430	907-659-A001		1	Lump Sum	Traffic Management Center Modifications	xxxxxxxx	XXX		
0440	907-659-C001		1	Lump Sum	Traffic Management Center Modifications - Training	XXXXXXXX	XXX		

NH-9999-00(331) CT3N/103811303 NH-9999-00(331) CT3N/103811304 NH-9999-00(331) CT3N/103811305 Hinds, Madison, Rankin Counties

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price	Bid Amoun	ıt
0450	907-660-A001	-	1	Each	OTN Node			
0460	907-660-B001		1	Each	OTN Node Communications Hut			

#### \*\*\* BID CERTIFICATION \*\*\*

TOTAL BID	\$
	*** DBE/WBE SECTION ***
Complete item nos. 1, 2, and/or 3 as approp	priate. See Notice to Bidders addressing Disadvantaged Business Enterprises in Highway Construction.
I/We agree that no less thaneconomically disadvantaged individual	percent shall be expended with small business concerns owned and controlled by socially and ls (DBE and WBE).
2. Classification of Bidder: Small Busines	ss (DBE) Small Business (WBE)
3. A joint venture with a Small Business (	(DBE/WBE):
BIDDER ACKNOWLEDGES THAT HE/SHE HAS CH THEREIN CONSTITUTE THEIR OFFICIAL BID.	*** SIGNATURE STATEMENT *** IECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFIED THAT THE FIGURES SHOW
-	BIDDER'S SIGNATURE
<u>-</u>	BIDDER'S COMPANY
	BIDDER'S FEDERAL TAX ID NUMBER

Section 905 Proposal (Sheet 2 - 7) NH-9999-00(331) CT3N/103811303 NH-9999-00(331) CT3N/103811304 NH-9999-00(331) CT3N/103811305 Hinds, Madison, Rankin Counties

#### **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).

	Project No.	County	Project No.	<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.

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

II.

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
9.					
10.					
I (We) desire to be  It is understood that the Missi right to award contracts upon t	awarded work no awarded work no ssippi Transporta he basis of lowes reed that the Con	of to excent to	ed a total monetary valued number of number of the control o	of contracts.  erves the right to reject bids most advantageous omparison of bids only	t any and all proposals, but also the
I (We), the undersigned, agree	to complete each	contract	on or before its speci	fied 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

participated in a previous contract or subcontract s	ubject to the Equal Opportunity Clause, as required by
Reporting Committee, the Director of the Office o	that he has, has not, filed with the Join f Federal Contract Compliance, a Federal Government rmer President's Committee on Equal Employment line requirements
Opportunity, an reports due under the applicable in	mig 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)
individu	ually, and in my capacity aso
	(Title)
	(Name of Firm, Partnership, or Corporation) do hereby certify under
	(Name of Firm, Farmership, of Corporation)
penalty	of perjury under the laws of the United States and the State of Mississippi that
	, Bidde
	(Name of Firm, Partnership, or Corporation)
on Proj	ject No. NH-9999-00(331) CT3N / 103811303, 304 & 305
in <u>H</u>	Linds, Madison and Rankin County(ies), Mississippi, has not either
in restra	or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action aint of free competitive bidding in connection with this contract; nor have any of its corporate officers sipal owners.
	as noted hereafter, it is further certified that said legal entity and its corporate officers, principal, 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.
	nere "" if exceptions are attached and made a part thereof. Any exceptions shall address to tapplies, initiating agency and dates of such action.

<u>Note:</u> 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.
--------------------------------------	---------------------------------------

(11/23/92F)

Executed on	
	Signature

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

# <u>CERTIFICATION</u> (Execute in duplicate)

State o	f Mississippi	
County	v of	
I,		
	(Name of person signing certification)	cation)
individ	ually, and in my capacity as	0
	(Title)	
		do hereby certify under
	(Name of Firm, Partnership, or Corporation)	
penalty	of perjury under the laws of the United States and the State	te of Mississippi that
		, Bidde
	(Name of Firm, Partnership, or Co	
on Pro	pject No. NH-9999-00(331) CT3N / 103811303, 304	1 & 305
in <b>Hi</b>	nds, Madison and Rankin	County(ies). Mississippi, has not either
in restr or prin	y or indirectly entered into any agreement, participated in a raint of free competitive bidding in connection with this cocipal owners.  as noted hereafter, it is further certified that said legals, managers, auditors and others in a position of administeri	entity and its corporate officers, principal
	Are not presently debarred, suspended, proposed for voluntarily excluded from covered transactions by any Fe	or debarment, declared ineligible, or
b)	Have not within a three-year period preceding this projudgment rendered against them for commission of fraud obtaining, attempting to obtain, or performing a public contract under a public transaction; violation of Federal of embezzlement, theft, forgery, bribery, falsification of statements, or receiving stolen property;	or a criminal offense in connection with (Federal, State or local) transaction or or State antitrust statutes or commission
c)	Are not presently indicted for or otherwise criminally or (Federal, State or local) with commission of any of the of	
d)	Have not within a three-year period preceding this appli transactions (Federal, State or local) terminated for cause	
Initial whom	here "" if exceptions are attached and made a par it applies, initiating agency and dates of such action.	rt thereof. Any exceptions shall address to

<u>Note:</u> 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.
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(11/23/92F)

Executed on	
	Signature

#### SECTION 902

CONTRACT FOR NH-9999-00(331) CT3N / 103811303, 304 & 305		
LOCATED IN THE COUNTY(IES) OF _	Hinds, Madison and Rankin	
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	N	MISSISSIPPI TRANSPORTATION COMMISSION	
TitleSigned and sealed in the presence of: (names and addresses of witnesses)		Executive Director	
Award authorized by the Mississippi Transport ,, Minute Book N		· · · · · · · · · · · · · · · · · · ·	

Revised 8/06/2003

## SECTION 903

CONTRACT BOND FOR	t: <u>NH-9999-00(331)</u>	CT3N / 103811303, 304 &	<u> </u>
LOCATED IN THE COU	NTY(IES) OF: Hinds,	Madison and Rankin	
STATE OF MISSISSIPPI	,		
COUNTY OF HINDS			
Know all men by these pre	esents: that we,		
residing at		in the State of	
and			
residing at		in the State of	
		, under the laws thereof, as sur	rety, are held and firmly bound
	well and truly to be made	-	ed States of America, to be paid, administrators, successors, or
Signed a	nd sealed this the day	y of A	.D
The conditions of this bon-	d are such, that whereas the	said	
principal, has (have) enter	red into a contract with th	e Mississippi Transportation Co	ommission, bearing the date of
day of	A.D	hereto annexed, for the co	onstruction of certain projects(s)
		atract in accordance with the Coansportation, Jackson, Mississip	ontract Documents therefor, on opi.
Now therefore, if the abov	ve bounden in al		e by and well and truly observe,
contained on his (their) p manner and form and furn the terms of said contract said contract and shall ma Subsection 109.11 of the from any loss or damage a or any other loss or damage the performance of said w action instituted by the Sta authorized in such cases,	and singular the terms, cover to be observed, done, and singular the material and which said plans, specifical intain the said work content approved specifications, and arising out of or occasioned ge whatsoever, on the part of work or in any manner contact at the instance of the Mi for double any amount in	enants, conditions, guarantees a kept and performed and each of equipment specified in said contions and special provisions are aplated until its final completion as ave harmless said Mississip by the negligence, wrongful or f said principal (s), his (their) as a pected therewith, and shall be I saissispip Transportation Commitmoney or property, the State of the said principal (s), the state of the said principal (s) and shall be I saissispip Transportation Commitmoney or property, the State of the said principal (s).	nd agreements in said contract, of them, at the time and in the entract in strict accordance with a included in and form a part of an and acceptance as specified in opi Transportation Commission criminal act, overcharge, fraud, gents, servants, or employees in liable and responsible in a civil ission or any officer of the State may lose or be overcharged or attractor(s), his (their) agents or

#### **SECTION 903 - CONTINUED**

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, licenses, assessments, contributions, damages, any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the Executive Director of the Mississippi Department of Transportation, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

	Witness our signatures and seals this the	day of	A.D
	(Contractors) Principal		Surety
Ву		By	(Signature) Attorney in Fact
Title _	(Contractor's Seal)	(Name and A	Address of Local (Mississippi) Representative (Surety Seal)

OCR-485 REV. 10/02

# 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: NH-9999-00(331) CT3N / 103811303, 304 & 305

County: Hinds, Madison and Rankin

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:		
Phone Number:		
-	DBE Firm	Non-DBE Firm
Firm Name:		
Contact Name/Title:		
Phone Number:		
-	DBE Firm	Non-DBE Firm
Firm Name:		
G		
Phone Number:		
-	DBE Firm	Non-DBE Firm
Firm Name:		
C + 1 NI //TC:41		
Phone Number:		
-	DBE Firm	Non-DBE Firm
Firm Name:		
Contact Name/Title:		
Phone Number:		
_	DBE Firm	Non-DBE Firm
		SUBMITTED BY (Signature)
		FIDM 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.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

## HAUL PERMIT FOR BRIDGES

#### WITH

### POSTED WEIGHT LIMITS

	<b>DATE:</b>
PROJECT:	NH-9999-00(331) CT3N / 103811303, 304 & 305
COUNTIES:	Hinds, Madison and Rankin
LOCATION:	The installation of Dynamic Message Signs in the Jackson Area, known as Federal Aid Project Nos. NH-9999-00(331) CT3N / 103811303, 304 & 305, in the Counties of Hinds, Madison and Rankin, State of Mississippi.
exceeding the	sued to for transporting loads posted limit for any such bridge located on State designated routes within the it provided that such transport vehicles comply with all other governing statutory
for materials contractors an and no other l	valid on all State designated routes from the point of origin to the point of delivery and equipment utilized in construction of said project and also valid for subdivendors upon written permission of the Contractor. The permit is non-transferable naul permit for posted bridges will be issued to other individuals, vendors, or construction of this project.
1.0	s signed permit shall be carried in all vehicles operating under the authority of this so a copy of the Contractor's written permission when the vehicle is other than ned.
	with State law, the above named Contractor will be liable for damages directly vehicles operating under this permit.
	EXECUTIVE DIRECTOR