

PROPOSAL CONTRACT

FOR THE CONSTRUCTION OF

Contract No. _____

PIN: 115241.09

County: Shelby

Federal Project No.: CM-7900(46)

State Project No.: 79LPLM-F1-280

Local Agency Reference No.: SBI-000283

Description Of Project: Congestion Management Program – Signal
System Set #3

Project Length: N/A

Completion Time: 730 days from contractor receiving NTP from Shelby
County

By: _____
City, _____
St.: _____
Surety: _____

**Roads, Bridges & Engineering Section
6449 Haley Road
Memphis, Tennessee 38134**

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SHELBY COUNTY
INSTRUCTIONS TO BIDDERS
BIDS TO BE RECEIVED

November 13, 2014

Sealed bids for the construction of the following projects will be received by the **SHELBY COUNTY**, at the office of the **Administrator of Purchasing**, located at, **160 North Main Street, Suite 900, Memphis, Tennessee** until **2:30 PM, November 13, 2014** and will be opened publicly at that time. The reading of the bids will begin at **2:30 PM**.

The proposed construction shall be performed in accordance with the most current version of the Standard Specifications for Road and Bridge Construction of the Tennessee Department of Transportation, and the Standard Roadway and Structures Drawings of the Tennessee Department of Transportation which are incorporated herein by reference and made a part hereof. In addition, only the Special Provisions contained within the applicable Contract Proposal will be considered binding. Any reference to any Special Provision not contained within the applicable Contract Proposal shall be disregarded. All questions related to the Contract Proposal, Plans, Specifications or Special Provisions shall be directed to **Nelson Fowler, Manager A, Shelby County Government, 160 North Main Street, Suite 900, Memphis, Tennessee, (901) 222-2250**. Information received from other offices of the **COUNTY** strictly advisory.

IMPORTANT NOTICE TO BIDDERS:

Prospective bidders should read the following instructions carefully before submitting their bids. Special attention is called to the regulations of the **COUNTY** that total bids, rather than unit prices, will be read. Proposals shall be rejected as being irregular if they fail to contain a unit price for each item listed. Extensions of the various items must be sub-totaled, carried forward, and shown as a grand total following the last proposal item. All entries must be in ink.

After a bidder has deposited a proposal with the **COUNTY**, he can withdraw it only on written request in accordance with Subsection 102.07 of the Tennessee Department of Transportation Standard Specifications.

Totals read at the opening of the bids are not guaranteed to be correct and no final award of the contract will be made until bids and extensions have been checked and re-checked.

On all projects which are financed in whole or in part by funds received through Federal agencies and/or the Tennessee Department of Transportation, the awarding of contracts by the **COUNTY** will be subject to approval by the Tennessee Department of Transportation. The **COUNTY** reserves the right to reject any bid proposal which is not acceptable to the parties as listed, although such bid proposal would otherwise qualify as the lowest and best bid under the Tennessee Department of Transportation Standard Specifications.

The **COUNTY** reserves the right to reject any or all Proposals, to waive technicalities or to advertise for new Proposals, if in the judgment of the awarding authority, the best interest of the **COUNTY** will be promoted thereby.

The **COUNTY** reserves the right to cancel the award of any Contract, at any time prior to execution of said Contract by all parties without any liability against the **COUNTY**.

The awarding of the contract or rejection of all proposals will be made within 30 days after the formal opening of the proposals. Upon award, a detailed letter of instructions will be forwarded along with appropriate documents to the low bidder.

The **COUNTY** 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 basis of age, race, color, religion, national origin, sex or disability in consideration for an award.

The **COUNTY** is an equal opportunity affirmative action employer, drug-free, with policies of nondiscrimination on the basis of race, sex, religion, color, national or ethnic origin, age, disability, or military service.

PREQUALIFICATION OF BIDDERS:

Each prospective bidder and subcontractor will be required to file a document entitled "Prequalification Questionnaire." The foregoing shall be filed on a form provided by the Tennessee Department of Transportation. The form must be filled out completely, and the truth and accuracy of the information provided must be certified by a sworn affidavit signed by an officer, partner, owner or other authorized representative of the applicant who has authority to sign contracts or other legal documents on behalf of the applicant. A prospective bidder must be prequalified by and in good standing with the Tennessee Department of Transportation prior to the issuance of a proposal form. A prospective subcontractor must be prequalified by and in good standing with the Tennessee Department of Transportation prior to being approved as a subcontractor. Each prospective bidder or subcontractor shall notify the Tennessee Department of Transportation if there is any subsequent change in the name, organization or contact information provided.

Prospective bidders' "Prequalification Questionnaire" shall be filed with the Tennessee Department of Transportation at least fourteen (14) days prior to the date of opening bids on any letting in which the applicant intends to submit a bid to the **COUNTY**, or at least fourteen (14) days prior to the date on which the applicant requests approval as a subcontractor under a contract awarded by the **COUNTY**. Bidders intending to submit proposals consistently shall complete and submit the prequalification application annually; however, this document may be changed during such period upon submission of additional favorable reports or upon receipt by the Tennessee Department of Transportation of substantiated evidence of unsatisfactory performance. The Tennessee Department of Transportation reserves the right to request additional information and documentation to clarify and/or verify any information submitted in an applicant's prequalification application.

**The prequalification form can be found at the web address
<http://www.tdot.state.tn.us/construction>**

A proposal to be used for non-bidding purposes may be issued to any interested party regardless of prequalification.

PROPOSAL BOND

Each proposal must be accompanied by a bidder's bond, or Cashier's Check, or Certified Check made payable to the **COUNTY** in an amount equaling not less than five percent (5%) of the amount bid. In the case of optional items in the proposals, the amount of the bidder's bond or check must be in an amount equaling not less than five percent (5%) of the total amount of the bid based on the high option.

If the bidder's bond is offered as guaranty, the bond must be on the form furnished by the **COUNTY** and made by a surety company, qualified and authorized to transact business in the State of Tennessee and must be acceptable to the **COUNTY**.

If a check is offered as guaranty, the check of the successful bidder will be cashable at the discretion of the **COUNTY**, pending the satisfactory execution and acceptance of the contract and the contract bond.

ISSUANCE OF BIDDING DOCUMENTS

The bidding documents are located on the **COUNTY** website at www.shelbycountyttn.gov. Click the link "Department" at the top, then P for the Purchasing Department, then click on the link "Bids." Bidders are required to download the information for submittal.

Tennessee Department of Transportation Standard Drawing Books will be furnished by the Tennessee Department of Transportation at **\$100.00** per book plus **9.25%** sales tax, for in-state delivery. Tennessee Department of Transportation Standard Specifications for Road and Bridge Construction, dated March 1, 2006, will be furnished by the Tennessee Department of Transportation at **\$12.00** per book plus **9.25%** sales tax, for in-state delivery. There will be a minimum charge of \$2.00 on any purchase. All documents will be furnished without refund and transmitted at your risk.

Requests for joint venture proposals may be made in person or by telephone. However, the proposal for said joint venture will not be issued until the request in writing, as set forth above, is received by the **COUNTY**.

REJECTION OF PROPOSALS

Proposals will be rejected as irregular if prior to the formal opening of the Proposal all of the following documents have not been signed: (1) the bidder shall sign by written signature the Proposal form, (2) the bidder shall sign by written signature the Proposal Certification form, (3) the bidder shall sign by written signature the Proposal Bond form or the Proposal Guarantee, whichever is applicable, (4) the Agent or Attorney-in-Fact representing a Surety Company shall sign by written signature the Proposal Bond, if applicable. In addition, Proposals will be rejected if any of the above signatures are a reproduced copy, such as, but not limited to a photostatic copy or a facsimile transmission. An original, dated and valid Power of Attorney for the Attorney-in-Fact must accompany the Proposal and the Contract. The accompanying Power of Attorney must be dated, and the date must be the exact same date as the date on the Proposal Bond. The Proposal and the Proposal Bond, including the attached Power of Attorney, shall be valid and binding for 60 days subsequent to the date of opening bids.

Proposals shall be completed on the forms as issued. Please review a part of Subsection 102.02 of the Tennessee Department of Transportation Standard Specifications stating: "All of the documents that are bound therein are part of the Proposal and shall not be detached." Proposals shall not be taken apart. Proposals taken apart may be subject to rejection. Also, please review a part of Subsection 102.09 of the Tennessee Department of Transportation Standard Specifications stating: "Proposals will be rejected as being irregular if they are not prepared on the prescribed forms; if they show any omissions, alterations of form, additions, or conditions not called for, unauthorized alternate bids, or irregularities of any kind; or if they fail to contain a unit price for each item listed." Proposals shall be completed on the forms as issued. Photostatic or facsimile copies of Proposal sheets may not be attached to the Proposal. Proposals containing forms not issued by the **COUNTY** may be subject to rejection.

ADDENDA

Addenda to the Proposal will be acknowledged by all bidders. Failure to acknowledge receipt of Addendum Letters is grounds for rejection.

RETAINAGE

Effective for all contracts, the COUNTY will not hold retainage. In addition, the Contractor will not be able to hold retainage from the subcontractor.

SUBCONTRACTS

Your special attention is called to Section 105 - Control of Work, and Section 108 - Prosecution and Progress of the Tennessee Department of Transportation Standard Specifications, concerning duties of the contractor and subletting of contracts.

CHANGED CONDITIONS

Your special attention is called to Section 104.02 of the Tennessee Department of Transportation Standard Specifications, concerning changed conditions on this contract.

COUNTY Officer

The following information applies to Federal-Aid construction projects:

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

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

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

SECTION A

**SHELBY COUNTY GOVERNMENT
ENGINEERING DEPARTMENT**

SEALED BID DOCUMENTS

I. INTRODUCTION

Shelby County Government (the “County”), is seeking proposals from interested and qualified firms for traffic signal detection upgrades at various intersections in Shelby County Tennessee.

This Sealed Bid is being released to invite interested and qualified firms to prepare and submit proposals in accordance with instructions provided where the successful candidate will be selected and invited to enter into a contractual relationship with Shelby County for the Services outlined in this Sealed Bid document.

II. MINIMUM PROPOSER REQUIREMENTS

All bidders must:

1. **Apply** for an Equal Opportunity Compliance (EOC) certification number through our EOC Administration **prior to submitting your response**.
2. Meet all other requirements for the Services in accordance with the provisions of this Sealed Bid.
3. Submit a Bid Bond in the amount of 5% of their bid. This bond must be submitted with your bid.
4. Be able to submit a performance/labor material bond separate bonds each in the amount of 100% of the amount of the contract.
5. Be able to secure all appropriate licenses and certifications required in the State of Tennessee to perform the Services **before award of the contract**.
6. Submit a written statement of compliance to Title VI **before award of the contract**. Please see item “H” for Title VI.
7. Adhere to State of Tennessee Public Chapter No. 436, know as the “Tennessee Lawful Employment Act (effective date of 1/1/2012). Independent contractors (sole proprietors) must include proof and documentation of employment eligibility with the proposal.
8. Be TDOT Pre-Qualified.

Please Note: *As a part of doing business with Shelby County, each individual, company or organization is required to apply for a vendor number and an “Equal Opportunity Compliance” certification number. The successful bidder must obtain these numbers prior to executing the contract with Shelby County.*

You can access the online application to receive the numbers indicated above at www.shelbycountyttn.gov and click the link “Department” at the top, then P for Purchasing Department, then click on the link “Conducting business with Shelby County”. Please download the application instructions and read thoroughly prior to accessing the application.

III. CORRESPONDENCE

All correspondence, proposals, and questions concerning the Sealed Bid are to be submitted to:

Nelson Fowler, Manager A
Shelby County Government
160 N. Main St. Suite 900
Memphis, TN 38103
(901) 222-2250

Respondents requesting additional information or clarification are to contact Nelson Fowler in writing at nelson.fowler@shelbycountyttn.gov or at the address listed above. Questions should reference the section of the SEALED BID to which the question pertains and all contact information for the person submitting the questions. ***IN ORDER TO PREVENT AN UNFAIR ADVANTAGE TO ANY RESPONDENT, VERBAL QUESTIONS WILL NOT BE ANSWERED. The deadline for submitting questions will be November 7, 2014 @ 12:00 p.m.***

Note: All written questions submitted by the deadline indicated above will be answered and posted on the County's website at www.shelbycountyttn.gov within forty eight (48) hours of the above cut-off date.

These guidelines for communication have been established to ensure a fair and equitable process for all respondents. Please be aware that contact with any other personnel (other than the person clearly identified in this document) within Shelby County or its benefit administrators regarding this Sealed Bid may disqualify your company from further consideration.

Respondents requesting additional information or clarification are to contact Mr. Nelson Fowler in writing at nelson.fowler@shelbycountyttn.gov or at the address listed above. Questions should reference the section of the Sealed Bid to which the question pertains and all contact information for the person submitting the questions.

The vendor number is obtained through the Purchasing Department and the EOC certification is obtained through the Shelby County EOC Administration.

If you have any questions regarding the vendor number, please call the Purchasing Department @ 901-222-2250 or download the Bidder's List Application & W-9 form at www.shelbycountyttn.gov and click the link "Department" at the top, then P for the Purchasing Department, then click on the link "Conducting business with Shelby County" and then select, "Vendor Registration."

If you have any questions regarding the EOC qualification, please call 901-222-1100.

IV. PROPOSAL SUBMISSION DEADLINE

All proposals must be received at the address listed above no later than **November 13, 2014 @ 2:30 PM. (CST)**. Facsimile or electronically transmitted proposals will not be accepted since they do not contain original signatures. Postmarks will not be accepted in lieu of actual receipt. Late or incomplete proposals may not be opened and considered. Under no circumstances, regardless of weather conditions, transportation delays, or any other circumstance, will extend this deadline.

V. PROPOSAL TIMELINE

Shelby County reserves the right to modify this timeline at any time. If the due date for proposals is changed, all prospective Bidders shall be notified.

Sealed Bid Released	October 9, 2014
Pre-Bid Conference	October 16, 2014 at 11:00 a.m.
Deadline for Questions	November 7, 2014 at 12:00 p.m.
Proposal Due Date	November 13, 2014 at 2:30 p.m.
Notification of Award	February 2015

The County may reproduce any of the Bidders proposal and supporting documents for internal use or for any other purpose required by law.

VI. PROPOSAL CONDITIONS

A. Contingencies

This Sealed Bid does not commit the County to award a contract. The County reserves the right to accept or reject any or all proposals if the County determines it is in the best interest of the County to do so. The County will notify all Bidders, in writing, if the County rejects all proposals.

B. Modifications

The County reserves the right to issue addenda or amendments to this Sealed Bid.

C. Proposal Submission

To be considered, all proposals must be submitted in the manner set forth in this Sealed Bid. It is the Bidders responsibility to ensure that its proposals arrive on or before the specified time.

D. Incurred Costs

This Sealed Bid does not commit the County to pay any costs incurred in the preparation of a proposal in response to this Sealed Bid and Bidders agree that all costs incurred in developing this Sealed Bid are the Bidders responsibility.

E. Final Authority

The final authority to award a contract rests solely with the Shelby County Purchasing Department.

F. Proposal Validity

Proposals submitted hereunder will be firm for one hundred twenty (120) calendar days from the due date unless otherwise qualified.

G. Disclosure of Proposal Contents

Proposer understands and acknowledges that the County is a governmental entity subject to the laws of the State of Tennessee and that any reports, data or other information supplied to the County is subject to being disclosed as a public record in accordance with the laws of the State of Tennessee. All proposals and other materials submitted become the property of Shelby County Government.

H. Non-discrimination and Title VI

The contractor hereby agrees, warrants, and assures compliance with the provisions of Title VI and VII of the Civil Rights Act of 1964 and all other federal statutory laws which provide in whole or in part that no person shall be excluded from participation or be denied benefits of or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the contractor on the grounds of handicap and/or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal, Tennessee State Constitutional or statutory law. The contractor shall upon request show proof of such non-discrimination and shall post in conspicuous places available to all employees and applicants notices of non-discrimination.

Any recipient entity shall be subject to the requirements of Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et seq., and regulations promulgated pursuant thereto. It shall develop a Title VI implementation plan with participation by protected beneficiaries as may be required by such law or regulations. To the extent applicable, such plan shall include Title VI implementation plans sub-recipients of federal funds through the entity. The contractor shall produce the plan upon request of Shelby County Government. Failure to provide same shall constitute a material breach of contract.

I. DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____

COUNTY OF _____

The undersigned, principal officer of _____, an employer of five (5) or more employees contracting with _____ County government to provide construction services, here states under oath as follows:

1. The undersigned is a principal officer of _____ (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
3. The Company is in compliance with T.C.A. ~ 50-9-113. Further affiant smith not.
Principal Officer

STATE OF _____

COUNTY OF _____

Before me personally appeared with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained. Witness my hand and seal at office this day of _____.

Notary Public

My commission expires:

J. GRATUITY DISCLOSURE FORM:

**CODE OF ETHICS
Section 18-59**

**SHELBY COUNTY GOVERNMENT
GRATUITY DISCLOSURE FORM**

INSTRUCTIONS: *This form is for all persons receiving any Shelby County Government contract, subcontract, land use approval or financial grant of money to report any gratuity that has been given, directly or indirectly, to any elected official, employee or appointee (including their spouses and immediate family members) who is involved in the decision regarding the contract, land use approval, or financial grant of money.*

1. NAME:

2. DATE OF GRATUITY:

3. NATURE AND PURPOSE OF THE GRATUITY:

4. NAME OF THE OFFICIAL, EMPLOYEE, APPOINTEE, OR FAMILY MEMBER WHO RECEIVED THE GRATUITY:

5. NAME OF THE PERSON OR ENTITY THAT PROVIDED THE GRATUITY:

6. ADDRESS OF THE PERSON OR ENTITY THAT PROVIDED THE GRATUITY:

7. DESCRIPTION OF THE GRATUITY:

8. COST OF THE GRATUITY: (If cost is unknown and not reasonably discernible by the person giving the gratuity, then the person giving the gratuity shall report a good faith estimate of the cost of the gratuity.)

9. AFFIDAVIT:

The information contained in this Gratuity Disclosure Form, and any supporting documentation or materials referenced herein or submitted herewith, is true and correct to the best of my knowledge, information and belief and affirm that I have not given, directly or indirectly, any gratuity to any elected official, employee or appointee (including spouse and immediate family members) that has not been disclosed and I affirm that I have not violated the provisions of the Shelby County Government Code of Ethics.

Signature

Date

Print Name

A copy of your completed form will be placed on the Shelby County Internet Website.

K. FORMS TO BE SUBMITTED WITH YOUR BID:

- **DRUG FREE WORKPLACE AFFIDAVIT**
- **PROPOSAL**
- **PROPOSAL CERTIFICATION**
- **PROPOSAL BOND – ALL BIDS MUST BE ACCOMPANIED BY A BANK CERTIFIED CHECK OF BANK DRAFT, LETTER OF CREDIT ISSUED BY ANY NATIONAL BANK OR APPROVED BID BOND FOR NOT LESS THAN 5% (PERCENT) OF THE AMOUNT OF THE BID. ALL PROPOSAL GUARANTEES SHALL BE MADE OUT TO THE COUNTY OF SHELBY.**
- **DBE PARTICIPATION – CONTRACTORS MUST SUBMIT TDOT FORM 1247A WITHIN THREE (3) BUSINESS DAYS OF BID OPENING. THIS FORM SHALL LIST THE FOLLOWING INFORMATION:**
 - All DBE firms being used or being considered for use as part of the bidder's DBE commitment.
 - The type of work items on the contract for which the DBE will be used.
 - The "Amount to DBE" which has been committed to each DBE firm which will be used on the contract.

FAILURE TO SUBMIT THE REQUIRED FORMS MAY RESULT IN YOUR BID BEING REJECTED AS BEING IN NON-COMPLIANCE WITH BID REQUIREMENTS.

VII. General Requirements:

A. Scope of Work

The County proposes the installation vehicle video detection, emergency vehicle preemption, conduit, fiber optic communication cables, interconnecting existing signal controllers, installing non-intrusive system detectors, and replacing signal control equipment and cabinets.

B. Project Time Frame

The Provider must be prepared to begin immediately upon receipt of a Notice to Proceed. The work under this contract shall be substantially completed within seven hundred thirty (730) calendar days.

C. Selection Criteria

Contract(s) will be awarded based on the lowest responsive proposals received. The contents of the proposal of the successful Bidders will become contractual obligations and failure to accept these obligations in a contractual agreement may result in cancellation of the award.

D. Additional Information and References

Any additional information that would be helpful to the County evaluating your proposal, including a list of current and former clients with a similar profile to Shelby County should be submitted.

The Contract Documents are intended to be complementary and to describe and provide for a complete work. Requirements in one of these are as binding as if occurring in all of them. In case of discrepancy, Supplemental Specifications will govern over TDOT Standard Specifications; the TDOT Standard Specifications will govern over the local governmental standard specifications; the Contract Plans will govern over both Supplemental and Standard Specifications, and Special Provisions will govern over both Plans and Specifications. In interpreting Plans, calculated dimensions will govern over scaled dimensions. Contract Plans, typical cross sections and approved working drawings will govern over Standard Drawings.

VIII. Award of contract:

Bidders are advised that the lowest responsive proposal per set will be awarded the contract.

IX. NOTICE TO BIDDERS

Time and Place of Opening Bids:

**November 13, 2014 at 2:30 p.m.
Shelby County Government
160 North Main Street, Suite 900
Memphis, Tennessee 38103**

Receipt of Bids:

Sealed Bid's for the improvements described herein will be received at THE OFFICE OF THE SHELBY COUNTY ADMINISTRATOR OF PURCHASING, SUITE 900, SHELBY COUNTY ADMINISTRATION BUILDING, 160 NORTH MAIN, MEMPHIS, TENNESSEE 38103, until **November 13, 2014 @ 2:30 PM.**

Description of Work:

The proposed work is officially known as: **CONGESTION MANAGEMENT PROGRAM – SIGNAL SYSTEM SET #3**

Pre-Bid Meeting:

Bidders are encouraged to attend a pre-bid meeting to be held on **October 16, 2014 @ 11:00 A.M.** at the office of the Shelby County Road, Bridges, and Engineering Conference Room, 6449 Haley Road, Memphis, Tennessee 38134.

Instruction to Bidders:

- (a) The SEALED BID MUST BE DOWNLOADED FROM THE SHELBY COUNTY GOVERNMENT WEBSITE at www.shelbycountyttn.gov and click the link "Department" at the top, then P for the Purchasing Department, then click on the link "Bids."
- (b) All bids must be accompanied by a bank cashier's check or bank draft, letter of credit issued by any national bank or certificate of deposit therein, duly assigned, or certified check or approved bid bond for not less than five (5) percent of the amount of the bid. All proposal guarantees shall be made out to the COUNTY OF SHELBY.
- (c) Prime Contractors will not be required to have a license to bid; however, prior to recommending award of the Contract, The local government will confirm that the lowest responsible bidder is licensed. The Contractor will be considered for award for twenty-one (21) days after the letting date (bid submittal). If the Contractor does not have a license, on or before 21 days, the Contractor will be considered non-responsive, and the next lowest responsible bidder will be considered for award.

EOC Requirements:

As a condition precedent to bidding, bidders shall have applied for an “Equal Opportunity Compliance Eligibility Number”. To receive an E.O.C. Eligibility Number, specific information must be received by the E.O.C. Department at least 48 hours prior to the bid opening. To verify your E.O.C. Number or to receive information for obtaining a number, contact the E.O.C. Department, 222-1100.

Rejection of Bids:

The **COUNTY OF SHELBY** reserves the right to reject any and all proposals and to waive technicalities in any proposal.

BY ORDER OF:

CLIFTON DAVIS

**PURCHASING ADMINISTRATOR
SHELBY COUNTY GOVERNMENT**

_____, 2014

SECTION B

**SHELBY COUNTY GOVERNMENT
ENGINEERING DEPARTMENT**

PROPOSAL AND CONTRACT

PROPOSAL

By submitting this Proposal, the undersigned bidder represents that it has carefully examined the site of the work described herein, has become familiar with local conditions and the character and extent of the work; has carefully examined the Plans, the most current version of the Standard Specifications for Road and Bridge Construction and the Standard Roadway and Structures Drawings adopted by the State of Tennessee, Department of Transportation, with subsequent revisions which are acknowledged to be a part of this Proposal, the Special Provisions, the Proposal Form, the Form of Contract, and the Form of Contract Payment and Performance Bond; and thoroughly understands their stipulations, requirements, and provisions.

The undersigned bidder has determined the quality and quantity of materials required; has investigated the location and determined the sources of supply of the materials required; has investigated labor conditions; and, has arranged for the continuous prosecution of the work herein described.

By submitting this Proposal, the undersigned bidder agrees to provide all necessary equipment, tools, labor, incidentals, and other means of construction, to do all the work, and furnish all the materials of the specified requirements which are necessary to complete the work in accordance with the Plans, and the Specifications, and agrees to accept as payment in full the unit prices for the various items described in the Specifications that are set forth in this Proposal. The bidder understands that the quantities of work specified are approximate only and are subject to increase or decrease and that any such increase or decrease will not affect the unit prices set forth in this Proposal. Compensation for "extra work" which may be required by **SHELBY COUNTY** in connection with the construction and completion of the work but which was not reflected in the Plans and Specifications at the time of bidding, will be made in the following manner: work for which there is a unit price set forth in this Proposal will be compensated at that unit price; work for which there is no unit price set forth in this Proposal will be compensated in accordance with the applicable Tennessee Department of Transportation Standard Specifications.

By submitting this Proposal, the undersigned bidder hereby agrees to be bound by the award of the Contract and, if awarded the Contract on this Proposal, to execute the required Contract and the required Contract Payment and Performance Bond within ten (14) days after receipt of notice of the award. The undersigned bidder submits herewith the required Proposal guaranty in an amount of not less than five percent (5%) of the total amount of the Proposal offered and agrees and consents that the Proposal guaranty shall immediately be at the disposal of **SHELBY COUNTY**, not as a penalty, but as an agreed liquidated damage if the required Contract and Contract Payment and Performance Bond are not executed within ten (14) days from receipt of the notice of award.

TO THE SHELBY COUNTY ADMINISTRATOR OF PURCHASING, SHELBY COUNTY,
TENNESSEE.

1. Name of Bidder: _____
Business Address: _____
Federal I.D. Number _____
Phone Number: _____

BID FORM					
CONGESTION MANAGEMENT PROGRAM (SIGNAL SYSTEM SET #3)					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
	105-01 CONSTRUCTION STAKES, LINES AND GRADES	L.S.	1		
	202-03 REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	S.Y.	330		
1,2	209-05 SEDIMENT REMOVAL	C.Y.	15		
1,2	209-08.02 TEMPORARY SILT FENCE (WITH BACKING)	L.F.	300		
1,2	209-09-43 CURB INLET PROTECTION (TYPE 4)	EACH	100		
26	701-01.01 CONCRETE SIDEWALK (4 ")	S.F.	2360		
	701-01.02 CONCRETE SIDEWALK (6 ")	S.F.	1470		
	701-02.03 CONCRETE CURB RAMP	S.F.	660		
3	712-01 TRAFFIC CONTROL	L.S.	1		
4	713-13.03 FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	18		
5	713-15.07 SUSPENDED FLAT SHEET ALUMINUM SIGN (0.080" THICK)	EACH	3		
6	713-15.40 SIGN INSTALLATION (MAST ARM MOUNTED STREET NAME SIGN)	L.S.	1		
7	714-25.09 ELECTRICAL CONNECTION (FOR MLGW COST ONLY)	EACH	4	\$5,000.00	\$20,000.00
	716-02.01 PLASTIC PAVEMENT MARKING (LINE)	L.M.	1.1		
	716-02.03 PLASTIC PAVEMENT MARKING (CROSS-WALK)	L.F.	730		
	716-02.05 PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	330		
	716-02.06 PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	7		
	716-03.02 PLASTIC WORD PAVEMENT MARKING (RXR)	EACH	4		
	716-04.01 PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	1		
	716-04.05 PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	1		
	717-01 MOBILIZATION	L.S.	1		
	725-02.79 FIBER SPLICE ENCLOSURE(WEATHER PROOF)	EACH	20		
8	725-03.09 ETHERNET SWITCH (TYPE A)	EACH	18		
9	725-03.10 ETHERNET SWITCH (TYPE B)	EACH	1		
	725-03.28 RAILROAD FLAGMAN	DAY	20	\$1,000.00	\$20,000.00
10	725-21.22 TERMINAL SERVER (SERIAL DEVICE SERVER)	EACH	9		
11	725-21.91 RADAR DETECTION SYSTEM	EACH	5		
11	725-21.96 RDS COMM CABLE	EACH	5		
12	725-24.01 CABINET (TYPE A)	EACH	4		
12	725-24.04 CABINET (TYPE D)	EACH	1		
13	725-24.51 SYSTEM INTEGRATION	L.S.	1		
	730-01.02 REMOVAL OF SIGNAL EQUIPMENT	EACH	1		
	730-02.08 SIGNAL HEAD ASSEMBLY (130 POLE MOUNTED)	EACH	2		
	730-02.09 SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	5		
	730-02.10 SIGNAL HEAD ASSEMBLY (130 A2 WITH BACKPLATE)	EACH	2		
	730-02.13 SIGNAL HEAD ASSEMBLY (140 A1 WITH BACKPLATE)	EACH	1		
	730-02.17 SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH	1		
	730-02.18 SIGNAL HEAD ASSEMBLY (150 A2V)	EACH	1		
	730-02.30 SIGNAL HEAD ASSEMBLY (140 A1 POLE MOUNTED)	EACH	1		
	730-03.21 INSTALL PULL BOX (TRAFFIC SIGNAL TYPE B)	EACH	27		
14	730-03.23 INSTALL PULL BOX (FIBER OPTIC-TYPE A)	EACH	69		
14	730-03.24 INSTALL PULL BOX (FIBER OPTIC-TYPE B)	EACH	20		
	730-03.31 FIBER DISTRIBUTION BOX	EACH	16		
15	730-05.01 ELECTRICAL SERVICE CONNECTION	EACH	1		
	730-08.01 SIGNAL CABLE - 3 CONDUCTOR	L.F.	140		
	730-08.02 SIGNAL CABLE - 5 CONDUCTOR	L.F.	630		
	730-08.03 SIGNAL CABLE - 7 CONDUCTOR	L.F.	2240		
16	730-08.40 INTERCONNECT CABLE - FIBER OPTIC (36-FIBER, SINGLE MODE)	L.F.	45715		
16	730-08.41 INTERCONNECT CABLE - FIBER OPTIC (DROP CABLE, 6-FIBER, SINGLE MODE)	L.F.	2380		
17	730-09.01 SPAN WIRE ASSEMBLY (9000 LBS.MIN.BRK STRENGTH)	L.F.	150		
	730-11.10 RISER ASSEMBLY (2" WEATHERHEAD)	EACH	4		
	730-11.11 RISER ASSEMBLY (2")	EACH	12		
	730-12.02 CONDUIT 2" DIAMETER (PVC)	L.F.	18565		
18	730-12.09 CONDUIT 3" DIAMETER (RGS)	L.F.	100		
	730-12.13 CONDUIT 2" DIAMETER (JACK AND BORE)	L.F.	26870		
	730-12.14 CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	750		
	730-12.42 CURB MARKER (CURB MOUNTED CABLE MARKER)	EACH	220		
19	730-13.02 VEHICLE DETECTOR (VIDEO)	EACH	12		
	730-13.03 VEHICLE DETECTOR (4-CHANNEL, RACK-MOUNT)	EACH	7		
	730-14.01 SHIELDED DETECTOR CABLE	L.F.	6735		
	730-14.02 SAW SLOT	L.F.	1055		
	730-14.03 LOOP WIRE	L.F.	3155		
	730-15.11 MODIFY CABINET (BASE-MOUNT ENTRANCE)	EACH	8		
	730-15.12 MODIFY CABINET (POLE-MOUNT ENTRANCE)	EACH	3		
	730-15.32 CABINET (EIGHT PHASE BASE MOUNTED)	EACH	2		
20	730-16.02 EIGHT PHASE ACTUATED CONTROLLER	EACH	7		
21	730-23.30 PEDESTAL POLE (@ 14')	EACH	1		
21	730-23.31 PEDESTAL POLE (ALUMINUM, 20' LENGTH)	EACH	5		
22	730-23.96 CANTILEVER SIGNAL SUPPORT (1 @ 50')	EACH	1		
22	730-23.97 CANTILEVER SIGNAL SUPPORT (1 @ 27')	EACH	1		
22	730-23.98 CANTILEVER SIGNAL SUPPORT (2 @ 31' & 49')	EACH	1		
23	730-26.05 COUNTDOWN PEDESTRIAN SIGNAL	EACH	8		
9	730-30.02 COMPUTER FOR SIGNAL SYSTEM (RACK MOUNTED)	EACH	1		
	801-03 WATER (SEEDING & SODDING)	M.G.	2		
	803-01 SODDING (NEW SOD)	S.Y.	155		
24	920-02.08 BRICK PAVING	S.F.	500		
	920-10.01 RAILROAD PROTECTIVE INSURANCE	EACH	1	\$5,000.00	\$5,000.00
25	920-13.04 VIDEO DETECTION REMOTE MANAGEMENT CARD	EACH	1		
				TOTAL BID	

FOOTNOTES:

- 1 TO BE USED AS DIRECTED BY THE ENGINEER.
- 2 SEE SUBSECTION 209.07 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
- 3 TO INCLUDE ALL MATERIALS NECESSARY TO PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH TDOT STANDARD DRAWINGS.
- 4 TO INCLUDE ALL HARDWARE, MATERIALS, AND SUPPORTS TO INSTALL SIGN. TO BE THREE (3) TOTAL SIGNS. SEE SHEET CL-10 FOR SIGN DETAILS AND PLACEMENT.
 - 1 - "GRADE CROSSING ADVANCE WARNING" W10-1
 - 2 - "GRADE CROSSING ADVANCE WARNING" W10-2L
 - 3 - "GRADE CROSSING ADVANCE WARNING" W10-2R
- 5 TO INCLUDE ALL HARDWARE AND MATERIALS NECESSARY TO ATTACH SIGNS TO PROPOSED MAST ARM. TO BE THREE (3) TOTAL SIGNS. SEE SHEET IL-05 FOR SIGN DETAILS AND PLACEMENT.
 - 1 - "THRU-LEFT TURN OPTIONAL MOVEMENT LANE CONTROL" R3-6
 - 2 - "LEFT TURN ONLY" R3-5L
- 6 TO INCLUDE ALL HARDWARE AND MATERIALS NECESSARY TO ATTACH STREET NAME SIGNS TO PROPOSED MAST ARM. TO BE SIX (6) TOTAL SIGNS. SEE SHEETS IL-05 FOR SIGN DETAILS AND PLACEMENT.
 - 2 - "US HWY 51."
 - 2 - "NAVY RD."
 - 2 - "MARTHA ST."
- 7 ALLOWANCE TO COVER THE COST ASSOCIATED WITH POWER CONNECTION FOR THE TRAFFIC SIGNAL OR RDS UNIT FROM THE TRANSFORMER TO THE DEMARCATION POINT.
- 8 SEE CITY OF MEMPHIS STANDARD SPECIFICATIONS FOR "RUGGEDIZED ETHERNET CABINET SWITCH."
- 9 SEE PROJECT SPECIAL PROVISIONS FOR SPECIFICATIONS.
- 10 SEE CITY OF MEMPHIS STANDARD SPECIFICATIONS FOR "SERIAL DEVICE SERVER."
- 11 SEE PROJECT SPECIAL PROVISIONS FOR RADAR DETECTION EQUIPMENT. ITEM TO INCLUDE RDS POWER CABLE AT LOCATIONS WHERE SECONDARY RDS CABINET IS PRESENT.
- 12 SEE PROJECT SPECIAL PROVISIONS FOR UTILITY CABINETS. TYPE A CABINETS ARE FOR PRIMARY CABINETS. TYPE D CABINETS ARE FOR SECONDARY CABINETS. TYPE D CABINET TO INCLUDE ALL NECESSARY CABLING TO CONNECT TO TYPE A CABINET.
- 13 SEE PROJECT SPECIAL PROVISIONS FOR SYSTEM INTEGRATION.
- 14 COST INCLUDES ALL LABOR AND MATERIALS (REPAIR LANDSCAPING, REMOVING EXISTING PULL BOX, AND OTHER MISCELLANEOUS MATERIALS) TO COMPLETE PULL BOX INSTALLATION.
- 15 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH POWER CONNECTION FOR TRAFFIC SIGNAL OR RDS UNIT FROM THE DEMARCATION POINT TO THE CABINET.
- 16 CONTRACTOR SHALL INSTALL A TRACER WIRE WITH THE FIBER OPTIC CABLE FOR ALL CONDUIT ROUTING. TRACER WIRE SHALL BE 10 AWG STRANDED COPPER CONDUCTOR CABLE WITH BOTH THHN AND THWN RATINGS AND YELLOW IN COLOR.
- 17 TO INCLUDE ALL MATERIALS NECESSARY TO ATTACH SPAN WIRE TO EXISTING POLE AND CITY HALL BUILDING AND MATERIALS NECESSARY IN ROUTING CABLES TO CITY HALL BUILDING.
- 18 SEE CONSTRUCTION DETAIL SHEETS FOR BRIDGE ATTACHEMENT DETAILS. ITEM TO INCLUDE ALL MATERIALS NECESSARY TO ATTACH CONDUIT TO BRIDGE.
- 19 TO BE ITERIS VANTAGE SYSTEM OR APPROVED EQUIVALENT. INCLUDES DETECTION CAMERAS, PROCESSOR UNIT, CARD RACK, VIDEO DETECTION REMOTE MANAGEMENT CARD WITH ETHERNET INTERFACE, POWER SUPPLY UNIT, SURGE PROTECTION EQUIPMENT (AN EDCO HSP-121BT1RU SERIES SURGE PROTECTION), 10" LCD COLOR MONITOR, MOUSE AND ALL CABLING, CONNECTIONS AND HARDWARE TO COMPLETE THE INSTALLATION OF A FULLY FUNCTIONAL VIDEO DETECTION SYSTEM. (TO BE VANTAGE VECTOR SYSTEM FOR MAST ARM MOUNTED CAMERAS WITH ADVANCE DETECTION. SEE TABULATED QUANTITIES SHEET FOR MOUNT TYPE.)
- 20 THE TRAFFIC SIGNAL CONTROLLER SHALL BE AN EAGLE EPAC M52 KEYBOARD UNIT OR APPROVED EQUIVALENT WITH NTCIP COMPLIANT SOFTWARE AND SEPAC, BUILT-IN ETHERNET PORT, AND BUILT-IN STRETCH AND DELAY FEATURES FOR EACH PHASE. THE TRAFFIC CONTROLLER INSTALLATION ALONG WITH ALL AUXILIARY EQUIPMENT TO BE INSTALLED IN THE CABINET SHALL BE MANUFACTURED, SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST CITY OF MEMPHIS TRAFFIC SIGNAL CONTROLLER AND CABINET SPECIFICATIONS. THE INSTALLATION SHALL HAVE A 12-CHANNEL MALFUNCTION MONITOR UNIT INSTALLED AS MODEL EDI SSM12LE-P. EACH NEW CONTROLLER CABINET SHALL INCLUDE 4 VEHICLE DETECTOR CARDS (4-CHANNEL) SEPARATE FROM THE QUANTITIES OF ITEM NUMBER 730-13.02.
- 21 INCLUDES CONCRETE FOUNDATION OR SCREW DOWN ANCHOR FOUNDATION AS APPROVED BY THE ENGINEER.
- 22 INCLUDES CONCRETE FOUNDATION AS APPROVED BY THE ENGINEER.
- 23 TO INCLUDE SIGNS AND PUSHBUTTONS.
- 24 FOR REPAIR OF EXISTING BRICK PAVING DAMAGED BY THE REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT OR THE INSTALLATION OF NEW TRAFFIC SIGNAL EQUIPMENT.
- 25 QUANTITY IS IN ADDITION TO THE VIDEO DETECTION REMOTE MANAGEMENT CARDS REQUIRED IN ITEM NO. 730-13.02.
- 26 TO BE USED FOR THE INSTALLATION OF PULLBOXES.

IF AN INDIVIDUAL:

SIGNATURE OF BIDDER: _____

BUSINESS ADDRESS: _____

IF A CO-PARTNERSHIP:

FIRM NAME: _____

BY: _____

BUSINESS ADDRESS: _____

NAME AND ADDRESS
OF ALL MEMBERS OF
FIRM

IF A CORPORATION:

CORPORATE NAME _____

SIGNED BY: _____
President

BUSINESS ADDRESS: _____

(Corporate Seal)

NAME OF OFFICERS _____
President

Secretary

Treasurer

ATTEST: _____
Secretary

PROPOSAL CERTIFICATION

The undersigned, being first duly sworn, certifies on behalf of the bidder that it has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this Proposal or Contract. This is an official document that is required or authorized by law to be made under oath and is presented in an official proceeding. A person who makes a false statement in this certification is subject to the penalties of perjury.

The undersigned further certifies that said bidder is not under the control of any person, firm, partnership, or corporation, which has or exercises any control of any other person, firm, partnership, or corporation, which is submitting a bid on this Contract.

_____	Sworn to and subscribed before me
Bidder (1)	
	this _____ day of _____, ____.
By: _____	
_____	_____
Printed Name and Title	Notary Public
	My commission expires _____.

(Seal)

_____	Sworn to and subscribed before me
Bidder (2)	
	this _____ day of _____, ____.
By: _____	
_____	_____
Printed Name and Title	Notary Public
	My commission expires _____.

(Seal)

***NOTE: The signature and information for Bidder (2) is to be provided when there is a joint venture.**

SHELBY COUNTY
PROPOSAL BOND
CONTRACT NO. _____

Principal:

Print Name of Principal

Surety:

Print Name of Surety

KNOW ALL MEN BY THESE PRESENTS, that we, the Principal and Surety above named, are held and firmly bound unto **SHELBY COUNTY** in the full and just sum of five percent (5%) of the total amount bid by the Principal for the project stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

NOW, THEREFORE, the condition of this obligation is: the Principal shall not withdraw its bid within sixty (60) days after the opening of the bids, or within such other time period as may be provided in the Proposal, and if **SHELBY COUNTY** shall award a Contract to the Principal, the Principal shall, within ten (10) days after written notice of the award is received by him, fully execute a Contract on the basis of the terms, conditions and unit prices set forth in his Proposal or bid and provide bonds with good and sufficient surety, as required for the faithful performance of the Contract and for the protection of all persons supplying labor, material, and equipment for the prosecution of the work. In the event the Principal withdraws its bid after bids are opened, or after award of the Contract has been made fails to execute such the Contract and/or such additional documents as may be required and to provide the required bonds within the time period specified above, then the amount of the Proposal Bond shall be immediately paid to **SHELBY COUNTY**, not as a penalty, but as agreed upon liquidated damages.

IN WITNESS WHEREOF, the Principal has caused these presents to be signed by a duly authorized official and the Surety has caused these presents to be duly signed and sealed by an authorized agent or attorney-in-fact.

Principal (1)

Surety (1)

By: _____

By: _____
General Agent or Attorney-in-Fact

Print Name and Title

Date

Date

(Seal)

Principal (2)

By: _____

Print Name and Title

Date

Surety (2)

By: _____
General Agent or Attorney-in-Fact

Date

(Seal)

***NOTE: The signature and information for Principal (2) and Surety (2) is to be provided when there is a joint venture.**

SHELBY COUNTY

PROPOSAL GUARANTEE

CONTRACT NO. _____

Bidder: _____
Print Name of Bidder

KNOW ALL MEN BY THESE PRESENTS, that the above-named Bidder has tendered the attached cashier's or certified check in an amount equal to five percent (5%) of the total amount it bid for the project stated above, payable to **SHELBY COUNTY**, to be held pending the fulfillment of the following obligation conditions.

NOW, THEREFORE, the condition of this obligation is: the Bidder shall not withdraw its bid within sixty (60) days after the opening of the bids, or within such other time period as may be provided in the Proposal, and if **SHELBY COUNTY** shall award a Contract to the Bidder, the Bidder shall, within ten (10) days after it receives written notice of the award, fully execute a Contract on the basis of the terms, conditions and unit prices set forth in its Proposal or bid and provide bonds with good and sufficient surety, as required for the faithful performance of the Contract and for the protection of all persons supplying labor, material, and equipment for the prosecution of the work. In the event the Bidder withdraws its bid after bids are opened, or after award of the Contract has been made fails to execute such the Contract and/or such additional documents as may be required and to provide the required bonds within the time period specified above, then **SHELBY COUNTY** shall cash the attached check and retain the funds, not as a penalty, but as agreed upon liquidated damages.

IN WITNESS WHEREOF, the Bidder has caused these presents to be signed by a duly authorized official.

Bidder (1)

Bidder (2)*

By: _____

By: _____

Print Name and Title

Print Name and Title

Date

Date

***NOTE: The signature and information for Bidder (2) is to be provided when there is a joint venture.**

CONTRACT
by and between
SHELBY COUNTY GOVERNMENT
and

for
CONGESTION MANAGEMENT PROGRAM
SIGNAL SYSTEM SET #3 (PIN# 115241.09)

This contract (the "Contract") entered into this _____ day of _____, 2014, and between SHELBY COUNTY GOVERNMENT, hereinafter referred to as "COUNTY" and _____, hereinafter referred to as "CONTRACTOR".

WITNESSETH

WHEREAS, said CONTRACTOR submitted a bid/proposal in accordance with bid specifications, a copy of which is attached hereto as Exhibit "B" and incorporated herein by reference, of which said bid was accepted by COUNTY.

In Consideration of the agreements herein contained, to be performed by the parties hereto and of the payments hereafter agreed to be made, it is mutually agreed by both parties that:

1. The contract between the parties consists of the following "Contract Documents" all of which constitute one instrument:
 - (a.) The Instruction to Bidders
 - (b.) The Proposal
 - (c.) All conditions and terms of this Contract form
 - (d.) The Contract Payment & Performance Bond and/or Letter of Credit, where applicable
 - (e.) The most current version of the Tennessee Department of Transportation Standard Specifications for Road and Bridge Construction (herein referred to as TDOT Standard Specifications)
 - (f.) Supplemental Specifications
 - (g.) Revisions and Additions
 - (h.) Special Provisions
 - (i.) Addenda
 - (j.) The most current version of the TDOT Standard Drawings
 - (k.) The Contract Plans,
 - (l.) The Work Order
 - (m.) Construction Changes
 - (n.) Supplemental Agreements

All of the provisions contained in the listed Contract Documents are incorporated herein by reference with the same force and effect as though set out in full.

2. The Contract Documents are intended to be complementary and to describe and provide for a complete work. Requirements in one of these are as binding as if occurring in all of them. In case of discrepancy, Supplemental Specifications will govern over TDOT Standard Specifications; the TDOT Standard Specifications will govern over the local governmental

standard specifications; the Contract Plans will govern over both Supplemental and Standard Specifications, and Special Provisions will govern over the Plans, Specifications, and Shelby County Special Provisions. In interpreting Plans, calculated dimensions will govern over scaled dimensions. Contract Plans, typical cross sections and approved working drawings will govern over Standard Drawings.

3. The Contractor agrees to furnish all materials, equipment, machinery, tools and labor and to perform the work required to complete the project in a thorough and workmanlike manner, to the satisfaction of the appropriate official of the County.
4. The County agrees to pay to the Contractor such unit prices for the work actually done as are set out in the accompanying proposal, in the manner provided for in TDOT Standard Specifications, Supplemental Specifications and applicable Special Provisions.
5. The Contractor shall, at all times, observe and comply with all applicable federal, state and local laws, ordinances and regulations and shall indemnify and hold harmless the County and all of its officers, agents and servants against any claim of liability or assessment of fines or penalties arising from or based upon the Contractor's and/or its employees' violations of any such law, ordinance or regulation. The Contractor shall maintain documentation for all charges against the County under this Contract. The books, records and documents of the Contractor insofar as they relate to the work performed or money received under this contract shall be maintained for a period of three (3) full years from the date of the final payment and shall be subject to audit at any reasonable time and upon reasonable notice by the County, the State, the Comptroller of the Treasury, the Tennessee Department of Transportation, or their duly appointed representatives.
6. The Contractor shall be responsible for any and all injury or damage to persons or to property arising from the prosecution of the work and due to any act, omission, neglect or misconduct in its manner or method of prosecuting the work or due to its non-execution of the work or due to defective work or materials.
7. The Contractor shall indemnify and hold harmless the COUNTY and all of its officers, agents and employees from all suits, actions or claims of any character arising from the Contractor's acts or omissions in the prosecution of the work, use of unacceptable materials in constructing the work, infringement of patent, trade mark or copyright, or claims for Workers' Compensation. If any such suit, action or claim is filed, the COUNTY may retain from the monies due to the Contractor under this Contract a lump sum deemed sufficient by the COUNTY to protect the COUNTY from loss therefrom. Upon resolution of the suit, action or claim, any remaining retained funds will be released.
8. Upon execution of this Contract, the Contractor shall be prepared to begin the work to be performed under the Contract, but will not proceed until it has received official "Notice to Proceed". This official notice will stipulate the date upon which it is expected that the Contractor will begin his work, and from which date the working days tabulated against its time limit will begin. All other requirements in regard to the beginning of construction set forth in the Proposal and Special Provisions will date from the official notice.

IN WITNESS WHEREOF, the parties hereto have set their signatures for the purposes contained herein, on the day and date first above written.

**APPROVED AS TO FORM
AND LEGALITY:**

SHELBY COUNTY GOVERNMENT

Contract Administrator/
Assistant County Attorney

Mark H. Luttrell, Jr., Mayor

CONTRACTOR

BY: _____

TITLE: _____

CORPORATE ACKNOWLEDGMENT

STATE OF _____

COUNTY OF _____

Before me, the undersigned Notary Public, in and for the State and County aforesaid, personally appeared _____, with whom I am personally acquainted or proved to me on the basis of satisfactory evidence, and who, upon oath, acknowledged himself/herself to be president or other officer authorized by appropriate Corporate action and/or Resolution to execute the preceding instrument of the _____, the within named bargainor, a corporation, and that he as such _____, executed the foregoing instrument for the purpose herein contained, by signing the name of the corporation by himself/herself as _____.

Witness my hand and official seal at office this _____ day of _____, 2014.

Notary Public

CONTRACT PAYMENT AND PERFORMANCE BOND

CONTRACT NO. _____

Be it known that _____, as Principal, and _____, as Surety(ies), all authorized to do business in the State of Tennessee, hereby bind themselves to **SHELBY COUNTY**, and other potential claimants, for all obligations incurred by the Principal under its contract with **SHELBY COUNTY**, for the construction of the above identified contract; in the full contract amount of _____ (\$_____).

The obligations of the Principal and Surety(ies) under these payment and performance bonds shall continue in full force and effect until all materials, equipment and labor have been provided AND all requirements contained in the contract, plans and specifications have been completed in a timely, thorough and workmanlike manner. The parties agree that these bonds are statutory in nature and are governed by the provisions contained in Title 12, chapter 4 and Title 54, chapter 5 of the Tennessee Code Annotated relating to bonds required of contractors and that those provisions constitute a part of this bond.

By this instrument, the Principal and Surety(ies) specifically bind themselves, their heirs, successors, and assigns, *in solido*, under the following bonds:

Payment Bond. To **SHELBY COUNTY** and all "Claimants," as contemplated by T.C.A. Title 54, chapter 5, in the full contract amount of _____

_____ (\$_____), in order to secure the payment in full of all timely claims under the project.

Performance Bond. To **SHELBY COUNTY** in the full contract amount of _____

_____ (\$_____), in order to secure the full and faithful performance and timely completion of the project according to its plans and specifications, inclusive of overpayments to the contractor and liquidated damages as assessed.

Upon receipt of notice that the Principal is in default under the contract, the Surety(ies) shall undertake to complete performance, without regard to cost. If the Surety(ies) fail or refuse to complete performance of the contract, the **SHELBY COUNTY** may then proceed with the work in any lawful manner that it may elect until it is finally completed. When the work is thus finally completed, the total cost of the same will be computed. All costs and charges incurred by the **SHELBY COUNTY** in completing the Work will be deducted from any monies due or which may become due to the Principal. If the total costs of completion exceeds the sum which would have been payable under the Contract, then the Principal and the Surety(ies), *in solido*, shall be liable for and shall pay to the **SHELBY COUNTY** the amount of such excess.

In witness whereof we have signed this instrument as dated.

Principal/Contractor 1_____

By: _____

Date _____

Printed Name and Title

(For Joint Venture)

Principal/Contractor 2_____

By: _____

Date _____

Printed Name and Title

Surety 1_____

By: _____

Attorney-in-Fact

Printed Name

Agency Name

Street Address

City/State/Zip

(Seal)

Surety 2_____

By: _____

Attorney-in-Fact

Printed Name

Agency Name

Street Address

City/State/Zip

(Seal)

Subsequent correspondence/communication from **SHELBY COUNTY** with respect to monthly progress reports and/or the contract bonds should be directed to:

For Surety 1:

Name

Address

City

State/Zip

Phone Number

Fax Number

For Surety 2:

Name

Address

City

State/Zip

Phone Number

Fax Number

SECTION C

SHELBY COUNTY GOVERNMENT

ENGINEERING DEPARTMENT

TDOT SPECIAL PROVISIONS

SECTION C

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Supplemental Specifications to The Standard Specifications	Revision Date
Supplemental Specification to Section 100-----	09/10/14
Supplemental Specification to Section 200-----	08/06/12
Supplemental Specification to Section 300-----	12/09/13
Supplemental Specification to Section 400-----	12/09/13
Supplemental Specification to Section 500-----	12/13/10
Supplemental Specification to Section 600-----	04/07/14
Supplemental Specification to Section 700-----	06/12/13
Supplemental Specification to Section 800-----	09/10/14
Supplemental Specification to Section 900-----	06/12/13

The above Supplemental Specifications, revised as noted, are incorporated by reference for bidding purposes and will be printed with the contract after awards. These Supplemental Specifications may be obtained from the Department at Suite 700, James K. Polk Bldg., Nashville, Tennessee or viewed on the Department's website at <http://www.tdot.state.tn.us/construction>.

Special Provision Regarding:	Special Provision No.	Revision Date
Unbalanced Bids	102 B	
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Records Retention, Procurement and Auditing

FHWA Part 635.106 – Use of publicly owned equipment
FHWA Part 635.109 – Standardized changed condition clauses
FHWA Part 635.119 – False statements
FHWA Part 635.125 – Termination of contract
FHWA Part 635.127 – Agreement provisions regarding overruns in contract time
FHWA Part 635.407 – Use of materials made available by a public agency
FHWA Part 635.410 – Buy America requirements

A T T E N T I O N

It shall be the bidders' responsibility to confirm that the Contract Proposal contains all the documents indicated on the Table of Contents.

Should any omissions occur, the appropriate documents may be obtained from the Shelby County Government, upon request.

S T A T E**O F****T E N N E S S E E**

March 1, 2006

SPECIAL PROVISION**REGARDING****UNBALANCED BIDS**

The Department will review all unit prices submitted by the apparently lowest responsible bidder and will decide whether any of the unit prices are excessively above or below a reasonable cost analysis value determined by the Engineer.

In the event any unit prices are determined to be unbalanced and contrary to the interest of the Department, the right is reserved to reject such bid at the discretion of the Department or to award the Contract and limit progress payments on units of work performed on any excessively priced items to costs that are satisfactorily documented by the Contractor plus 20 percent, until 85 percent of the Contract has been completed. Upon completion of 85 percent of the Contract, the Contractor will be reimbursed in accordance with **Subsection 109.06** of the Standard Specifications for the accepted quantities of work performed on the excessively priced items.

S T A T E**O F****T E N N E S S E E**

October 1, 2006

REV: February 5, 2007

SPECIAL PROVISION**REGARDING****EMPLOYING AND CONTRACTING WITH ILLEGAL IMMIGRANTS**

The State shall endeavor to do business only with those contractors and subcontractors that are in compliance with the Federal Immigration and Nationality Act. This policy shall apply to all State Contractors including subcontractors. This policy statement is issued to establish implementation guidance to procuring state agencies and contractors reflecting the requirements of Governor's Executive Order #41, An Order Regarding Compliance with Federal and State Laws Related to Employing and Contracting with Illegal Immigrants, and the requirements of Public Acts of 2006, Chapter Number 878 of the State of Tennessee (codified at *Tennessee Code Annotated*, Title 12, Chapter 4, Part 1).

1. The Contractor hereby attests, certifies, warrants, and assures that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract. The Contractor shall reaffirm this attestation, in writing, by submitting to the State a completed and signed copy of the "Attestation form" provided by the Department, semi-annually during the period of this Contract.
2. Prior to the use of any subcontractor in the performance of this Contract, and semi-annually thereafter, during the period of this Contract, the Contractor shall obtain and retain a current, written attestation that the subcontractor shall not knowingly utilize the services of an illegal immigrant to perform work relative to this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant to perform work relative to this Contract.
3. The Contractor shall maintain records for its employees used in the performance of this Contract. Said records shall include a completed federal Department of Homeland Security Form I-9, *Employment Eligibility Verification*, for each employee and shall be subject to review and random inspection at any reasonable time upon reasonable notice by the State.

4. The Contractor understands and agrees that failure to comply with this section will be subject to the sanctions of Public Chapter 878 of 2006 for acts or omissions occurring after its effective date. This law requires the Commissioner of Finance and Administration to prohibit a contractor from contracting with, or submitting an offer, proposal, or bid to contract with the State of Tennessee to supply goods or services for a period of one year after a contractor is discovered to have knowingly used the services of illegal immigrants during the performance of this contract.

For the Purposes of this policy, “illegal immigrant” shall be defined as a non-citizen who has entered the United State of America without federal government permission or stayed in this country beyond the period allowed by a federal government-issued visa authorizing the non-citizen to enter the country for specific purposes and a particular time period.

Compliance and non-compliance procedures will be as specified in the Tennessee Department of Finance and Administration’s Policy on “Ensuring Compliance with Federal Immigration Laws by State Contractors and Subcontractors”.

STATE**OF****TENNESSEE**

(Rev. 6-19-95)

March 1, 2006

(Rev. 6-1-04)

(Rev. 06-20-2011)

SPECIAL PROVISION**REGARDING****BUY AMERICA REQUIREMENTS**

All manufacturing processes for iron and steel products, and coatings applied thereon, used in this project shall occur in the United States except that if the proposal has bid items for furnishing domestic and foreign iron and steel, the bidder will have the option of (1) submitting a bid for furnishing domestic iron and steel, or (2) submitting a bid for furnishing domestic iron and steel and a bid for furnishing foreign iron and steel. If option (2) is chosen the bid will be tabulated on the basis of (a) the total bid price using the bid price for furnishing domestic iron and steel and, (b) the total bid price using the bid price for furnishing foreign iron and steel.

For the total bid based on furnishing foreign iron and steel to be considered for award, the lowest total bid based on furnishing domestic iron and steel must exceed the lowest total bid based on furnishing foreign iron and steel by more than 25 percent. The 25 percent differential applies to the total bid for the entire project, not just the bid prices for the steel or iron products.

Iron and steel products are defined as products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed from iron and steel made in the United States. Iron products are included, however, pig iron and processed, pelletized, and reduced iron ore may be purchased outside the United States.

Manufacturing begins with initial melting and continues through the coating stage. Any process which modifies chemical content, physical size or shape, or the final finish is considered a manufacturing process. Coatings include epoxy, galvanizing, painting or any other surface protection that enhances the value and/or durability of a material.

The contractor shall provide a certification to the Engineer with each shipment of iron and steel products to the project site that the manufacturing processes for the iron and steel products occurred in the United States. No steel shall be placed until the contractor ensures the requirements of this Special Provision are met.

The above requirements do not prevent a minimal use of foreign materials, if the cost of such materials used does not exceed 0.1 percent of the total contract cost or \$2,500.00, whichever is greater. If steel not meeting the requirements of this Special Provision is used, the contractor

shall provide a written statement to the Department prior to its use indicating where the steel will be incorporated in the work, the value of the steel, the percentage of the contract amount, and the appropriate invoices shall be submitted as documentation.

The contractor shall be responsible for all cost associated with any steel that is permanently incorporated into the project that does not meet the requirements of this Special Provision without prior written approval from the Department, up to and including removal and replacement.

S T A T E

Rev. 04-03-2006

Rev. 11-22-2011

Rev. 02-13-2012

O F**T E N N E S S E E**

March 1, 2006

SPECIAL PROVISION**REGARDING****WATER QUALITY AND STORM WATER PERMITS****Scope**

The conditions of this Special Provision apply to all construction on this project pursuant to the following:

1. Section 404 of the Federal Clean Water Act (33 U.S.C. §1344), and all implementing regulations, including without limitation regulations of the U.S. Army Corps of Engineers governing permits for discharges of dredged or fill material into waters of the United States in 33 CFR Part 323; and
2. The Tennessee Water Quality Control Act (T.C.A. §69-3-101, et seq.) and all implementing regulations, including without limitation the Rules of the Tennessee Department of Environment and Conservation governing NPDES permits in Chapter 1200-4-10, and Aquatic Resource Alteration permits in Chapter 1200-4-7; and
3. Section 26a of the TVA Act of 1933 as amended (49 Stat. 1079, 16 U. S. C. sec. 831y1.) and all implementing regulations, including without limitation the regulations of the Tennessee Valley Authority governing construction in the Tennessee River System in 18 C.F.R., Part 1304; and
4. The Tennessee Wildlife Resources Agency Reelfoot Lake Watershed Management permit program (T.C.A. section 70-5-1.), and all implementing regulations, including without limitation regulations authorizing any activity, practice, or project which has or is likely to have the effect of diverting surface or subsurface water from the Lake or have the effect of draining or otherwise removing water from Reelfoot Lake; and
5. Coast Guard Bridge Permit (USCG) (Section 9 of the Rivers and Harbors Appropriation Act of 1899) and all implementing regulations, including but not without limitation for projects which impact streams deemed navigable by the U.S. Coast Guard.

Responsibility

It is understood and agreed that the Contractor assumes all responsibilities of the permittee as indicated in the permit that relates to protection of the "waters of the United States" and/or "waters of the State of Tennessee."

It is also understood and agreed that the Contractor shall be responsible for obtaining any additional permits required by the Contractor's method of construction, including without limitation haul roads, temporary channels or temporary ditches, or off-site waste and/or borrow areas.

It is also understood that the Contractor shall be responsible for implementing the provisions of the Water Quality (including, but not limited to, TDEC ARAP, USACE 404, TVA Section 26a, Coast Guard, TWRA) and Storm Water [including, but not limited to, National Pollution Discharge Elimination System (NPDES), Statewide Stormwater Management Plan (SSWMP)] Permits and requirements that pertain to construction activities.

The Contractor by signing this contract is indicating that the Contractor has reviewed a copy of the permit provisions, including NPDES Permit provisions at <http://www.tdot.state.tn.us/construction/permits/npdes.pdf>, the site specific SWPPP, the contract plans, Standard Specifications and contract Special Provisions and finds the permit requirements and erosion prevention and sediment control (EPSC) procedures to be reasonable, workable, and binding.

It is also understood that the Contractor shall not be released from the project site responsibilities under the NPDES permit provisions until the Notice of Termination (NOT) is submitted to TDEC by the TDOT Regional Construction Supervisor. The NOT is a certification that the construction project site is permanently stabilized and that all construction related discharges have ceased. This means that the use of EPSC measures to alleviate concerns of surface erosion and transport of sediment to surface water conveyances or to waters of the state is no longer necessary. Furthermore, it means that permanent controls, hard surfaces and/or vegetation, employed at the site are deemed adequate to prevent erosion and sediment transport and no other potential sources of construction-related pollution are on the project.

It is also understood that the Contractor shall not be released from any warranty provided for EPSC plantings, including sod and trees. If the entire project is complete as outlined in **Subsection 105.15** of the **Standard Specifications**, the Contractor shall be required to supply a performance bond as outlined in **Subsection 802.15** of the **Standard Specifications** to cover any warranty for EPSC plantings.

NPDES Permit Required Action

The Contractor (or their representative) shall accompany the EPSC inspector (TDOT personnel or TDOT hired consultant) on all EPSC inspections of the entire construction project including permitted locations and potentially impacted streams as well as attend all QA/QC Project Assessments.

EPSC Inspections shall be conducted as required in the most current TN Construction General Permit.

EPSC inspections shall be performed on the schedule established in the TN Construction General Permit until the site is permanently stabilized to determine if the permit requirements are being met. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g. site covered with snow or ice), such inspection only has to be conducted once per month until thawing or precipitation results in runoff or construction activity resumes. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the TDOT Project Supervisor and the TDEC Central Office before proceeding.

An individual representing the Contractor, who holds a current TDEC “*Fundamentals of Erosion Prevention and Sediment Control Level I*” certification shall accompany the EPSC inspector on all required EPSC inspections. The Contractors project supervisor(s) shall also hold a current TDEC “*Fundamentals of Erosion Prevention and Sediment Control Level I*”

certification. Proof of required personnel training for the individual(s) shall be provided to the TDOT Project Supervisor prior to beginning of construction.

The TDOT EPSC inspector shall document all deficiencies on the required TDOT EPSC Inspection Report form (provided in the SWPPP). The Contractor (or their representative) shall sign the TDOT EPSC Inspection Report form and any supporting documentation indicating that he is in agreement with the report, recommendations and repair schedule as stated within the documentation.

Additionally, the Contractor shall make necessary maintenance and repairs relative to deficiencies in these permit conditions or requirements within twenty-four (24) hours after an inspection identifies the maintenance or repair need, and/or when directed to do so by the TDOT Project Supervisor, unless conditions make a particular activity impracticable. Any such conditions that make immediate repairs impracticable shall be documented and provided to the TDOT Project Supervisor, via the inspection report, and be accompanied by an expected repair schedule based on forecasted weather conditions.

The Contractor further agrees that he will execute two (2) copies of the Notice of Intent (NOI) form of the permit (provided by the Department), indicating his acceptance of the stipulations contained therein. The Contractor further agrees, that should he fail to execute said copies and return them to the TDOT Construction Division within ten (10) calendar days after submittal of the contract proposal to him, that the Department may at its discretion cancel the award with the Contractor forfeiting his bid bond.

Further, the Contractor agrees to review the site specific Stormwater Pollution Prevention Plan (SWPPP) that will be made available prior to or at the pre-construction conference, for any additional EPSC requirements. The Contractor shall sign and submit two copies of the SWPPP signature page (provided by the Department within the site specific SWPPP). The Contractor may submit for review and approval changes/revisions to the SWPPP to better prevent erosion and sediment transport at any time after contract execution. Rejection of any submittals does not relieve the contractor of any liability for appropriate Best Management Practices (BMPs).

If at any time during this contract, the requirements for the Water Quality Permits and/or the Storm Water Permits for Construction Related Activities are changed/revised/updated, the Contractor shall be notified in writing by the Department of such requirements. The Contractor shall comply with the new requirements within thirty (30) days of the Department notification.

If at any time the Contractor becomes aware that sedimentation is occurring or has occurred in streams impacted by the specified project, the Contractor shall immediately notify the TDOT Project Supervisor to evaluate the EPSC measures employed. A determination of the cause for sedimentation will be made by the Department. The Contractor shall immediately repair or replace defective EPSC measures, and install, as applicable, additional or other EPSC measures with the goal of eliminating future sedimentation. Once a remediation plan is provided by the Department, the Contractor shall, within twenty-four (24) hours after notification, begin the remediation as required. Based on the cause of sedimentation, the Department will determine if the cost of remediation will be performed at the Contractor's expense.

Failure to Comply

In the event a Notice of Violation (NOV) or Order pursuant to the Tennessee Water Quality Control Act or the Federal Clean Water Act is issued on this project, any and all fines will be the sole responsibility of the Contractor as outlined in **Subsection 107.01 of the Standard Specifications for Road and Bridge Construction.**

Failure of the Contractor to comply with this Special Provision or take immediate corrective actions required within twenty-four (24) hours (unless documented conditions make a particular maintenance or repair activity impracticable immediately) shall be reason for the TDOT Project Supervisor to suspend all other work on the Project, except erosion prevention and sediment control (EPSC) and traffic control, applying non-refundable deductions of monies from the Contract per calendar day from monies due to the Contractor for any EPSC work on the Project. This deduction can be made for each location, as determined by the TDOT Project Supervisor, for each calendar day that the deficiency is allowed to remain and charged as item description "*Failure to Comply with Permit Deduction*". A deduction shall be made from monies due the Contractor, not as a penalty, but as liquidated damages, as indicated in **Subsection 108.07** of the **Standard Specifications for Road and Bridge Construction March 1, 2006**, as amended.

If the Contractor does not make necessary corrections/adjustments in a timely manner as required above, the Department will implement the provisions of **Subsection 209.07 and Subsection 109.08** of the **Standard Specifications for Road and Bridge Construction** that provides for the Department making repairs and recovering the costs thereof from the Contractor.

The Department will not participate in any payment or reimbursement for fines and will not authorize time extensions due to delays in project progress for work stoppage, to remedy the violations stated within the NOV, required by the TDOT Project Supervisor as stated in **Subsection 105.01** of the **Standard Specifications for Road and Bridge Construction**.

STATE OF TENNESSEE
SPECIAL PROVISION 108A
SPECIALTY ITEMS

In accordance with the provisions of Subsection 108.01, Standard Specifications for Road and Bridge Construction, 2006, all construction items included in the following described work are hereby designated as "Specialty Items:"

All bid items beginning with the numbers "730" are considered Specialty Items as defined in Special Provision 1320, Part 635 Construction and Maintenance.

STATE**OF****TENNESSEE**

(Rev. 02-03-07)

March 1, 2006

SPECIAL PROVISION**REGARDING****HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS****Scope:**

The design requirements of this Special Provision shall apply to Section 713-Highway Signing, Section 714-Roadway and Structure Lighting, and Section 730-Traffic Signals of the Standard Specifications for Road and Bridge Construction, March 1, 2006.

Description:

The design of the supports for overhead sign bridges, cantilever and butterfly configurations, high mast lighting, luminaires and traffic signals shall be in accordance with the American Association of Highway and Transportation Officials (AASHTO) Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, current edition, with addenda.

General Conditions:

All overhead sign bridge, cantilever and butterfly sign structures, traffic signal mast arm structures and high mast light poles, as well as any luminaire poles 90-ft or greater in height, shall be designed using the Fatigue Category 1 provisions found in the subject specifications except that, design for galloping-induced fatigue, is excluded. Fatigue designs are not required for luminaire poles less than 90-ft in height, span-wire poles or roadside sign poles.

In lieu of designing for galloping-induced fatigue in mast arm pole assemblies, a 60-inch by 16-inch by 0.125 gauge aluminum or galvanized steel panel shall be installed near the end of the mast arm with the long axis of the panel collinear with the long axis of the mast. The panel shall be mounted at such a height as to provide a least a 6-inch clearance from the top of the signal assembly or sign blank located on the mast arm within the length of the anti-galloping panel. The panel and attachment hardware shall be shown on the shop drawings, and is considered an item included in the price bid for the mast arm assembly.

Additionally, all mast arm connections to the support pole shall be accomplished using a wrap-around ring stiffener assembly.

The following design coordinating instructions are as follows:

- The Basic Wind Speed shall be 90 mph.
- The Design Life/Recurrence Interval shall be 50-years.
- The speed for calculating Truck-induced gust loads shall be 65 mph.

S T A T E**O F****T E N N E S S E E**

March 1, 2006

SPECIAL PROVISION**REGARDING****EQUAL EMPLOYMENT OPPORTUNITY**

Reference:

Federal-Aid Highway Program Manual

Transmittal 147, June 26, 1975

Replaces FHWA Order Interim 7-2(1)

Specific Equal Employment Opportunity Responsibilities**GENERAL**

- a) Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form FHWA-1273 or PR-1316, as appropriate) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.
- b) The contractor will work with the Tennessee Department of Transportation and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.
- c) The contractor and all his/her subcontractors holding subcontracts not including material suppliers, exceeding \$10,000, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors). The contractor will include these requirements in every subcontract exceeding \$10,000 with such modification of language as is necessary to make them binding on the subcontractor.

Equal Employment Opportunity Policy

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

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

Equal Employment Opportunity Officer

The contractor will designate and make known to the Tennessee Department of Transportation contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

Dissemination of Policy

- (a) 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 equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity 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:
 - (1) 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 equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.
 - (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.
 - (3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the contractor's procedures for locating and hiring minority group employees.

- (b) In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:
 - (1) Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - (2) The contractor's equal employment opportunity 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.

Recruitment

- (a) When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- (b) 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, including, but not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, 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.
- (c) 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 equal employment opportunity contract provisions. (The U.S. Department of Labor 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).
- (d) The contractor will encourage his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

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 age, race, color, religion, sex, national origin or disability. The following procedures shall be followed:

- (a) The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- (b) The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- (c) The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- (d) The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

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 the Special Provision Regarding Training Program Requirements is provided under this contract, this subparagraph will be superseded as indicated therein.
- (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.

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 equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their age, race, color, religion, sex, national origin 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 Tennessee Department of Transportation and shall set forth what efforts have been made to obtain such information.
- (d) In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to age, race, color, religion, sex, national origin or disability, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor 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 Tennessee Department of Transportation.

Subcontracting

- (a) The contractor will use his best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from the Tennessee Department of Transportation.

- (b) The contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

Records and Reports

- (a) The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:
 - (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 to increase employment opportunities for minorities and women. (Applicable only to contractors who rely in whole or in part on unions as a source for their work force).
 - (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees.
 - (4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.
- (b) All such records must be retained for a period of 3 years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the of the Tennessee Department of Transportation and the Federal Highway Administration.
- (c) Each contractor and subcontractor shall submit to the Tennessee Department of Transportation an annual report for every July during which work is performed 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 PR 1391 and is to be received by the Department not later than the 20th of the month following the reporting period.
- (d) The contractor and/or sub-contractor will be required to complete other reports as instructed by the Engineer.
- (e) Current estimates may be withheld by the Project Engineer when reports are not received within the above specified time limits.

S T A T E**O F****T E N N E S S E E**

March 1, 2006

SPECIAL PROVISION**REGARDING****STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY****CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)**

- 1) As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941
 - d. "Minority" includes:
 - I. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - II. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish or Portuguese Culture or origin, regardless of race);
 - III. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - IV. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining indentifiable tribal affiliations through membership and participation or community identification).
- 2) Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

- 3) If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals (including goals and time tables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
- 4) The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goal set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
- 5) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specification, Executive Order 11246, or the regulations promulgated pursuant thereto.
- 6) In order for the nonworking training hours of apprentices and the trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
- 7) The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - (a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- (b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available and maintain a record of the organization's responses.
- (c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- (d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- (e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources complied under 7b above.
- (f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- (g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- (h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
 - (i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screenings procedures, and tests to be used in the selection process.
 - (j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
 - (k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - (l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriation training, etc., such opportunities.
 - (m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - (n) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - (o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - (p) Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- 8) Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor

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

- 9) A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women, generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- 10) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of age, race, color, religion, sex, national origin or disability.
- 11) The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
- 12) The Contractor shall carry out such sanctions and penalties for violations of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- 13) The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- 14) The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records

shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

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

STATE**OF****TENNESSEE**

Revised 10-19-2012

March 1, 2006 |

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

1. The 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 for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work are as follows:

<u>County</u>	Goals for Female Participation <u>in each Trade</u>
All Counties	6.9
<u>County</u>	Goals for Minority Participation <u>for each Trade</u>
Lincoln	11.2
Hamilton, Marion, Sequatchie	12.5
Bledsoe, Bradley, Grundy, McMinn, Meigs, Monroe, Polk, Rhea	8.6
Carter, Hawkins, Sullivan, Unicoi, Washington	2.6
Greene, Hancock, Johnson	3.2
Anderson, Blount, Knox, Union	6.6
Campbell, Claiborne, Cocke, Cumberland, Fentress, Grainger, Hamblen, Jefferson, Loudon, Morgan, Roane, Scott, Sevier	4.5

<u>County</u>	<u>Goals for Minority Participation for each Trade</u>
Montgomery	18.2
Davidson, Cheatham, Dickson, Robertson, Sumner, Williamson, Wilson, Rutherford	15.8
Bedford, Cannon, Clay, Coffee, DeKalb, Franklin, Giles, Hickman, Houston, Humphreys, Jackson, Lawrence, Lewis, Macon, Marshall, Maury, Moore, Overton, Perry, Pickett, Putnam, Smith, Stewart, Trousdale, Van Buren, Warren, Wayne, White	12.0
Shelby, Tipton	32.3
Benton, Carroll, Chester, Crockett, Decatur, Dyer, Fayette, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, McNairy, Madison, Obion, Weakley	26.5

These goals are applicable to all the Contractor's construction work whether or not it is Federal or federally assisted.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in CFR Part 60-4.3(a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. 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 Office of Federal Contract Compliance Programs at the following address 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:

U.S. Department of Labor – Regional Office
Office of Federal Contract Compliance Program
61 Forsyth Street, Room 7B75
Atlanta, GA 30303

The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

STATE**OF**Sheet 1 of 1
TENNESSEE

(Rev. 06-01-03)

(Rev. 06-23-08)

(Rev. 11-10-08)

March 1, 2006

SPECIAL PROVISION**REGARDING****DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION**

Disadvantaged Business Enterprises (DBE) as defined in 49 CFR Part 23/26 shall have the maximum opportunity to participate in the performance of contracts let by the Department. Consequently, the disadvantaged business enterprise requirements of 49 CFR Part 23/26 apply to this contract.

Disadvantaged Business Enterprises (DBE) as defined in 49 CFR Part 23/26 shall have the maximum opportunity to participate in the performance of this contract or in the performance of subcontracts to this contract. In this latter regard, the Contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 23/26 to ensure that disadvantaged enterprises, including enterprises owned and controlled by women, have the maximum opportunity to compete for and perform subcontracts. The Contractor shall not discriminate on the basis of age, race, color, religion, national origin, sex or disability in the award of subcontracts.

The Contractor shall submit to the Civil Rights Office Small Business Development Program copies of any agreements with DBE/WBEs upon execution.

The Contractor is advised that failure to carry out the requirements as set forth above shall constitute a breach of contract, and after notification by the Department, may result in termination of the contract or other remedy deemed appropriate by the Department.

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S T A T EO FT E N N E S S E E

(Rev. 12-01-06)

(Rev. 11-10-08)

(Rev. 9-17-11)

March 1, 2006

SPECIAL PROVISIONREGARDINGDBE CONTRACT GOAL

All contractors shall pursue affirmative action requirements to encourage and increase participation of disadvantaged individuals in business enterprises as set forth in this specification which is imposed pursuant to 49 CFR 26. The bidder shall arrange for 5.5 percent of the work to be performed by Disadvantaged Business Enterprises (DBEs) or clearly demonstrate adequate good faith efforts as described herein.

A. Disadvantaged Business Enterprise Policy.

The Contractor shall accept as operating policy and include in all subcontract agreements the following statement, which is designed to promote full participation of DBEs as suppliers and subcontractors through a continuous, positive result-oriented program on contracts let by the Department:

The Contractor, sub recipient 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 part 26 in the award and administration of Department 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 the Department deems appropriate.

B. Counting DBE Participation Toward Meeting Goals.

The Contractor shall count DBE participation toward goals in accordance with 49 CFR 26. The Contractor may count toward the goals only expenditures to DBEs that perform a commercially useful function of a contract, including those functions as a subcontractor. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. Work performed by a DBE firm

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in a particular transaction may be counted toward the goal only if the Department determines that it involves a commercially useful function. The work performed by the DBE firm shall be necessary and useful to the completion of the contract, and consistent with normal highway construction industry practices in Tennessee. The bidder may count the following DBE expenditures towards the DBE commitment:

- 1. Projects where the DBE is the Prime Contractor** - The portions of the contract to be completed by certified DBE firms will be counted toward meeting the goal. Items of the contract subcontracted to non-DBE firms will not be counted in the commitment.
- 2. Portions of a bid from a Joint Venture** - A bid from a joint venture, between a DBE and non-DBE Contractor, shall include a "Statement of DBE Commitments" which must be approved by the Department prior to the Letting. Only the DBE's portion will be counted toward the goal. Joint venture agreements have to be approved separately from the bid documents, prior to the awarding of the contract.
- 3. DBE Subcontractors** - The DBE subcontractor shall assume actual and contractual responsibility for provision of materials and supplies, subcontracted work, or other commercially useful functions of the items of work subcontracted to them. Cost of materials purchased from or the cost of equipment leased from the Contractor will not count toward the project DBE commitment. Prior written approval must be obtained from the Department's Civil Rights Office - Small Business Development Program (CRO - SBDP) for any DBE use of prime contractor's personnel or equipment.
- 4. Manufacturers** - The Contractor may count toward the DBE commitment 100% of its expenditures for materials and supplies required under a contract and obtained from a DBE manufacturer only if the DBE firm produces and supplies goods manufactured from raw materials or substantially alters them before resale.
- 5. Regular Dealers (e.g. Material Suppliers)** - The Contractor may count toward the DBE goal 60% of its expenditures for materials and supplies required under a contract and obtained from a DBE regular dealer only if the DBE firm performs a commercially useful function in the supply process. For purposes of this section, a regular dealer is a firm that owns; operates; or maintains a store, warehouse, or other establishment in which materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular dealer, the firm shall engage in, as its principal business and in its own name, the purchase and sale of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock if it owns or operates the distribution equipment. If the DBE supplier does not own the distribution equipment, a lease containing the terms of the agreement shall be available and must be approved in writing by the CRO - SBDP.

- 6. Brokers and Packagers** - Brokers and packagers will not be regarded as regular dealers within the meaning of this section. Only the cost of the service performed may be used towards meeting the DBE commitment.
- 7. Transportation or Hauling of Materials** –The Department will continue to utilize the trucking regulations, under 49 CFR 26.55. This regulation allows for DBE goal hauling-credit in either DBE trucks or in trucks leased to or by DBE firms. The verification of truck drivers employed by DBE firms will continue to be by submission of payrolls independent from any Davis-Bacon regulations.
- a) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
 - b) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
 - c) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
 - d) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - e) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to the total value of transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement.
 - f) For purposes of this paragraph a lease must indicate that the DBE has exclusive use of and control over the truck. Leases cannot be Department contract-specific, must be long term, and must be approved by the CRO - SBDP Staff. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.
 - g) Prior to hauling, the Contractor and DBE shall provide the Department's Project Supervisor a complete list of trucks that will be used on the project for DBE goal participation. The Department will provide a form that shall be used by the Contractor and DBE to identify the trucks. A revised list will be required any time the trucks used changes. The Contractor and DBE must be able to adequately document the actual amount of hauling eligible for DBE goal participation.

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7. **Contracted Labor / Temporary Employment Agencies** – utilization of these services via subcontract will be allowed to count toward DBE goal commitment, in accordance with 49 CFR part 26.55. The Department will count the entire amount of fees or commissions charged by a DBE for providing a bona fide service. Provided, the Department must find the fee to be reasonable and not excessive as compared to the fees customarily allowed for similar services.
8. **Other Commercially Useful Functions** - The fees paid to certified DBE firms, which are necessary for the completion of the contract and commonplace outside of the DBE program, may be counted towards the commitment.

C. Contract Award Procedures

The established DBE goal will be shown on the proposal as a percent of the total amount bid. If the total proposed DBE work submitted with the bid is less than the percentage of participation goals set by the Department, the bidder shall, within three (3) business days from the bid openings, propose sufficient additional DBE participation to meet the goal or shall clearly demonstrate by documentation that good faith efforts were made to meet the goal.

1. Bidder' Responsibility.

It is the bidder's responsibility to determine the level of professional competence and financial responsibility of any proposed DBE subcontractor. The bidder shall ascertain that the proposed DBE subcontractor has suitable experience and equipment to perform a commercially useful function for work that is common industry practice in the Tennessee highway construction industry.

Contractor shall develop and maintain records of negotiations with DBEs to reach agreeable prices, quotations and work schedules, including but not limited to a record of dates when the Contractor first contacted each DBE.

2. Proposals With Established Project DBE Goals.

For proposals with established project goals, the bidder will be required to complete computer generated Form 1247A. The bidder shall list the following information on Form 1247A that is submitted:

- a. All DBE firms being used or being considered for use as part of the bidder's DBE commitment.
- b. The type of work items on the contract for which the DBE will be used.
- c. The "Amount to DBE" which has been committed to each DBE firm which will be used on the contract.

The completed 1247A form shall be submitted within three (3) business days of the Letting. Failure to provide a completed form or documentation clearly evidencing a good faith effort, as detailed in C.3. below, within three (3) business days of the Letting may cause the bid to be rejected as irregular. Only certified DBE firms may

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be used. Contractor may access this information on the DBE list by viewing the Department's website or the certified DBE listing.

When DBE goal projects are involved and the prime contractor subcontracts to a non DBE, and the non-DBE subcontractor in turn subcontracts to a DBE as a second tier subcontractor, the prime contractor must affirm in writing his/her knowledge and approval of such an arrangement. Recognition of a second tier arrangement with a DBE subcontractor for goal work must be forwarded to the Director of the CRO - SBDP for verification, in writing, prior to any work performed by the DBE being counted toward the goal.

3. Bidder Selection and Good Faith Efforts

- a.** Bidders shall submit proposals that meet the DBE goal or shall submit documentation clearly evidencing that they made good faith effort to meet the DBE goal. Contractors who meet or exceed the contract goal will be assumed to have made good faith efforts to utilize DBE firms. DBE firms who bid as prime contractors will be considered to have met the goal.
- b.** The following are illustrative of factors which will be considered in determining whether the bidder has made adequate good faith efforts:
 - 1) Whether the bidder selected portions of the work likely to attract DBE participation. The total dollar value of the portions selected should meet or exceed the contract DBE goal. If it is necessary, the bidder should break down subcontracts into economically feasible units in order to facilitate participation.
 - 2) Whether the bidder provided notice to a reasonable number of specific DBEs, including those not regularly used by the bidder, that their participation in the contract is being solicited in sufficient time to allow them to participate effectively.
 - 3) Whether the bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the contract.
 - 4) Whether the bidder advertised in general circulation, trade association, or minority-focus media concerning participation opportunities or effectively used the services of available minority, community organizations, minority contractors groups, local, state or federal minority business assistance offices, or other organizations that provide assistance in the recruitment and placement of DBEs.
 - 5) Whether the bidder negotiated in good faith with interested DBEs, not rejecting DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities.

- 6) Whether the bidder made efforts to assist interested DBEs in obtaining bonding or insurance required by the bidder.
 - 7) Whether the bidder submitted all quotations received from DBEs, and for those quotations not accepted, an explanation of why the DBE was not accepted including price comparisons. Receipt of a lower quotation from a non-DBE will not in itself excuse a bidder's failure to meet contract goal.
 - 8) Whether the bidder has adequate records of its contacts and negotiations with DBEs
- c) If the Contractor has not met the DBE goal or submitted documentation clearly evidencing good faith efforts within three (3) business days after the bid opening, the Contractor's bid will be considered non-responsive and the Department may consider the next lowest responsive bid for award.
 - d) Failure of the bidder to meet the DBE goal in its bid or failure to provide documentation clearly evidencing good faith efforts to meet the goal, may be cause for the forfeiture of the Proposal Guaranty which shall become the property of the Department, not as penalty, but in liquidation of damages sustained.

As soon as practical after award of the contract, the contractor shall submit copies of all binding subcontracts and purchase orders with DBEs to the Project Supervisor and the CRO - SBDP Director. No progress estimate shall be processed until this information is received.

4. Joint Checking Allowance for DBE

A DBE must receive pre-approval by the Department before using a joint check. Joint check requests shall be submitted, by the DBE, to the CRO - SBDP prior to the contract agreement.

The following are some general conditions that must be met regarding joint check use:

- a. The second party (typically the prime contractor) acts solely as a guarantor.
- b. The DBE must release the check to the supplier.
- c. The use of joint checks must be a commonly recognized business practice in the industry.
- d. The DBE remains responsible for all other elements of 49 CFR 26.55(c)(1)
- e. The DBE is not required to use a specific supplier nor the prime contractor's negotiated unit price.
- f. The DBE shall submit receipt/copy of cancelled checks to the CRO - SBDP.

D. Construction Period Requirements.

1. After adequate notice by the Contractor, if any DBE is unable to perform work committed toward the goal, the DBE shall provide to the CRO - SBDP a signed statement saying why they are unable to complete the work. The Contractor shall document their efforts to have another DBE perform the item or to have a DBE perform other items to replace the original DBE commitment amounts. In the event the Contractor is not able to find replacement DBE work, the Contractor must provide the CRO - SBDP documentation clearly evidencing good faith efforts, as detailed in C.3. above. Any request for substitution of a DBE subcontractor shall be made to the Department and approved by the CRO - SBDP.
2. Brokering of work by DBEs is not allowed and is a material breach of contract. A DBE firm involved in brokering of work may have their certification removed or suspended. Any firm involved in brokering of work that engages in willful falsification distortion, or misrepresentation with respect to any facts related to the project shall be referred to the U. S. Department of Transportation's Office of the Inspector General for prosecution under Title 18, U. S. Code, Section 100.20. Contractor shall place this provision in all subcontracts with DBEs.
3. A Department Project Supervisor/Inspector shall complete a Commercially Useful Function (CUF) Checklist to document the first date of work, work items, equipment, and forces of each DBE.
4. The Contractor shall provide monthly payment certification to the Department entitled "Prompt Payment Certification Form." The Department shall provide Contractor with the Prompt Payment Certification Form. An officer of the contractor shall sign the Prompt Payment Certification Form. The Department will hold estimate payments if information is not submitted. Reasons for non payment to a DBE could include the following:
 - a) Whether the DBE is performing satisfactorily;
 - b) Whether Contractor has reason to believe the DBE is not performing a commercially useful function, and if so, why and what steps Contractor is taking to rectify the situation.

In the event the Contractor promptly reports questions on the Prompt Payment Certification Form regarding whether a DBE is independent and performing a commercially useful function and takes appropriate steps promptly to address the issue, then the Department will take this effort into account when considering contractor compliance measures as described below.

E. Post Construction Requirements.

Prior to receiving final payment, the Contractor shall provide to the Engineer certification of the dollars paid to each DBE firm, using Form CC3, Certification of DBE Accomplishment. The certification shall be dated and signed by a responsible officer of the contractor and by the DBE. Falsification of this certification will result in suspension of bidder qualifications.

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The final estimate will not be paid to the Contractor until proper certifications have been made.

F. Required Records.

The Prime Contractor and all subcontractors shall retain, for a period of not less than 3 years after final acceptance of a project, copies of canceled checks or other documentation that substantiates payments to DBE firms. These records shall be available at reasonable times and places for inspection by authorized representatives of the Department and Federal Agencies.

G. Contractor Compliance

1. It is the intent of this Special Provision to require the Contractor to take full responsibility for the performance of a commercially useful function by all DBE subcontractors, manufacturers and materials suppliers who work on the project and are counted by the Contractor toward the project DBE goal. A DBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing and supervising the work involved (49 CFR Part 26).
2. If the Contractor fails to comply with this Special Provision 1247, the Department may take one or a combination of the following steps:
 - 1) Require the Contractor to have its entire management staff attend DBE training arranged by the Department and paid by the Contractor.
 - 2) The next bid when Contractor is the low bidder on a DBE goal project, require that Contractor shall achieve a DBE participation that is twice the stated goals.
 - 3) For the Contractor's failure to find another DBE subcontractor to substitute for a DBE that is terminated or fails to complete its work on the contract for any reason or to provide the CRO - SBDP documentation clearly evidencing good faith efforts, as detailed in D.1. above, then the Department may withhold from the Contractor an amount not to exceed the amount of money originally committed to the non-complying DBE subcontractor, not as a penalty but as liquidated damages.
 - 4) Suspend the Contractor from participation in Department bid lettings pursuant to rules promulgated by the Department.
 - 5) For repeated failures to comply, debar the Contractor pursuant to rules promulgated by the Department.
 - 6) Invoke other remedies available by law and/or in the contract.
 - 7) Invoke remedy agreed upon by the Commissioner and Contractor in writing.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, 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.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

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, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) 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 provisions of the Americans with 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 contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program 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 minorities and women.

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 minorities and women 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 minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women 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, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

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

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

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

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

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its 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 their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

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. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

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 employees who are minorities and women 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 good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 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 good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith 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 contracting agency 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 referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. 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 contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. 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. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 Part 26 in the award and administration of DOT-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 the contracting agency deems appropriate.

11. 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 the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

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

(1) The number and work hours 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; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency 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](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics 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 issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, 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 29 CFR 5.5(a)(4). 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. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) 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.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), 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 Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The 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.

(3) In the event the contractor, the laborers or mechanics to be employed in the 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. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. 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 shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as 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.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor 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, so 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 contracting agency 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.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of 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. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) 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 shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

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

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each 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 Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) 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 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action 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.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or 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 Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen 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 worker 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 on 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 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's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

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 U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman 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 wage rate on the wage determination which provides for less than full fringe benefits for apprentices. 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.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor 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. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. 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.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 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 U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the 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 or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys 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 (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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 contracting agency. 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 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased 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 or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

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 or propose 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 VI 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 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 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 contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the 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. 3704).

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.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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, Form FHWA-1022 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:

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

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

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

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

Shall be fined under this title or imprisoned not more than 5 years or both."

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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

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

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier 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 first tier 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 first tier 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 contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier 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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first 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 entering into this transaction.

g. The prospective first tier 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 Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective 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.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) 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;

(3) 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 (a)(2) of this certification; and

(4) 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.

b. Where the prospective 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 Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

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," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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 exceeding the \$25,000 threshold.

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 is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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 Participants:

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 participating in covered transactions 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.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is 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 its bid or proposal that the participant 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.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

S T A T E**O F****T E N N E S S E E**

March 1, 2006

CERTIFICATION REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS
PRIMARY AND LOWER TIER COVERED TRANSACTIONS

The prospective Primary and/or Lower Tier participant certifies, by signing and submitting this proposal, to the best of its knowledge and belief, that it and its principals:

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

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.

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 the preceding paragraph of this certification; and

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.

Where the prospective Primary and/or 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.

(Exceptions to the above are to be submitted on a separate sheet with the bid proposal)

For any exception noted, indicate to whom it applies, initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions.

STATE**OF****TENNESSEE**

March 1, 2006

SPECIAL PROVISION**REGARDING****NON-DISCRIMINATION IN EMPLOYMENT**

Bidders are cautioned as follows:

By signing this bid, the bidder will be deemed to have signed and agreed that all persons, firms or corporations supplying goods, material, equipment or service of any kind to the State of Tennessee will not discriminate against any employee or applicant for employment on the basis of handicap, race, religion, national origin or sex and further, that while under contract with the State will show proof upon request that all employment practices including, but not limited to, promotion, rates of pay, transfers, recruitment, recruitment advertising, terminations, layoffs and training and apprenticeship programs are not discriminatory in nature. Each contractor shall be required to post in conspicuous places, available to all employees and applicants for employment, notices of non-discrimination.

S T A T E

O F

T E N N E S S E E

March 1, 2006

(Rev. 12-15-11)

(Rev. 01-11-12)

(Rev. 01-09-13)

(Rev. 01-03-14)

SPECIAL PROVISION

REGARDING

TENNESSEE DEPARTMENT OF TRANSPORTATION

2014 MINIMUM WAGE SCALES FOR FEDERAL-AID CONSTRUCTION

& 2014 MINIMUM WAGE SCALES FOR STATE FUNDED CONSTRUCTION

This Contract contains "Tennessee Department of Transportation 2014 Minimum Wage Scales for State Funded Construction", Tennessee Department of Labor Decision No. T-40056, dated January 1, 2014, and Tennessee Department of Transportation 2014 Minimum Wage Scales for Federal-Aid Highway Construction, U. S. Department of Labor Decision No. TN140002 (dated January 3, 2014).

The Contractor is required to pay the greater of the two (2) rates for each classification.

Note: Minimum Wage Scales for Federal-Aid Heavy Construction are on file with the Department, and will be included in all applicable Contract Proposals.

(Rev. 01-03-14)

STATEOFTENNESSEE**TENNESSEE DEPARTMENT OF TRANSPORTATION****MINIMUM WAGE SCALES FOR FEDERAL AID HIGHWAY CONSTRUCTION**

General Decision Number: TN140002 01/03/2014 TN2

Superseded General Decision Number: TN20130002

State: Tennessee

Construction Type: Highway

Counties: Tennessee Statewide.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number	Publication Date
0	01/03/2014

SUTN2010-002 05/06/2010

	Rates	Fringes
BRICKLAYER.....	\$ 16.62	
CARPENTER.....	\$ 16.10	
CEMENT MASON/CONCRETE FINISHER...	\$ 13.91	
ELECTRICIAN.....	\$ 21.62	
IRONWORKER		
Reinforcing.....	\$ 15.90	
Structural.....	\$ 17.15	

LABORER

Common/Unskilled.....\$ 11.50

Skilled

Air Tool Operator,
 Asphalt Raker, Chain Saw
 Operator, Concrete Mixer
 (less than 1 yd),
 Concrete Rubber, Edger,
 Fence Erector, Form
 Setter (steel), Guard
 Rail Erector, Mechanic's
 Tender (tire changer or
 oiler), Mortar Mixer,
 Nozzleman or Gun Operator
 (gunite), Pipelayer,
 Sign Erector.....\$ 13.34

OPERATOR: Power Equipment

Drill Operator (Caisson)....\$ 18.43

Farm Tractor Operator
 (Power Broom).....\$ 12.58

Group 1

Backhoe/Hydraulic
 Excavator (3/4 yd &
 over), Crane, End Loader
 (3 yd & over), Motor
 Patrol (rough), Tractor
 (crawler/ utility),
 Scraper, Shovel,
 Trenching Machine.....\$ 17.14

Group 2

Backhoe/Hydraulic
 Excavator (less than 3/4
 yd), Bulldozer or Push
 Dozer, End Loader (less
 than 3 yd), Motor Patrol
 (rough), Tractor
 (crawler/ utility),
 Scraper, Shovel, or
 Trenching Machine.....\$ 15.26

Group 3

Asphalt Paver, Concrete
 Finishing Machine,
 Concrete Paver, Scale,
 Spreader (self-
 propelled), Concrete
 Grinder, Asphalt Milling
 Machine, Boring Machine
 (horizontal).....\$ 15.75

Group 4

Bobcat, Central Mining
 Plant, Concrete Pump,
 Concrete Saw, Curb
 Machine (automatic or

manual), Dozer or Loader
 (stockpile), Drill
 (piling), Mulcher or
 Seeder, Rock Drill (truck
 mounted), Roller
 (asphalt), Roller
 (compaction self-
 propelled), Soil
 Stabilization Machine,
 Tractor (boom and hoist),
 Bituminous Distributor
 Machine, pump, Track
 Drill, Striping Machine....\$ 14.19
 Heavy Duty Mechanic.....\$ 18.04
 Light Duty Mechanic.....\$ 16.27
 Sweeping Machine (Vacuum)
 Operator.....\$ 13.39

 Painter & Sandblaster.....\$ 21.54

 Powder Person.....\$ 17.79

 Traffic Controller.....\$ 16.98

 TRUCK DRIVER
 2 axles.....\$ 13.02
 3-4 axles.....\$ 12.91
 5 or more axles.....\$ 15.24
 Heavy Duty Off Road.....\$ 12.98

 WELDERS - Receive rate prescribed for craft performing
 operation to which welding is incidental.
 =====

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

The body of each wage determination lists the classification
 and wage rates that have been found to be prevailing for the
 cited type(s) of construction in the area covered by the wage
 determination. The classifications are listed in alphabetical
 order of "identifiers" that indicate whether the particular
 rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

STATEOFTENNESSEETENNESSEE DEPARTMENT OF TRANSPORTATION2014 MINIMUM WAGE SCALES FOR STATE FUNDED CONSTRUCTION

January 1, 2014

Tenn. DOL Decision No. T-40056

CLASSIFICATION (ENGLISH)	CLASSIFICATION (SPANISH)	Basic Hourly Rates	Craft No.
Bricklayer	Ladrillero	21.99	01
Carpenter / Leadsperson	Carpintero o Lider	16.85	02
Class "A" Operators	Operador Clase A	18.62	03
Class "B" Operators	Operador Clase B	16.51	04
Class "C" Operators	Operador Clase C	17.10	05
Class "D" Operators	Operador Clase D	16.02	06
Concrete Finisher	Terminador de Cemento	15.22	07
Drill Operator (Caisson)	Operador de Perfordora	25.04	08
Electrician	Electricista	24.69	09
Farm Tractor Operator (Power Broom)	Operador de Tractor de Rancho	13.21	10
Ironworkers (Reinforcing)	Herrero	15.91	11
Ironworkers (Structural)	Herrero de Estructura	17.97	12
Mechanic (Class I) Heavy Duty	Mecanico Clase 1	20.88	13
Mechanic (Class II) Light Duty	Mecanico Clase 2	17.04	14
Painter / Sandblaster	Pintor o Lajador	26.23	15
Powder Person / Blaster	Proveedor de Explosivos	19.60	16
Skilled Laborer	Obrero Diestro	14.88	17
Survey Instrument Operator	Operador de Agrimensor	22.39	18
Sweeping Machine (Vacuum) Operator	Operador de Barredora	15.54	19
Truck Driver (2 axles)	Camionero (2 ejes)	14.17	20
Truck Driver (3/4 axles)	Camionero (3 o 4 ejes)	14.33	21
Truck Driver (5 or more axles)	Camionero (5 o más ejes)	16.93	22
Laborer /Unskilled , Flagger, Traffic Control, Pickup Driver	Obrero no Diestro	12.89	23
Worksite Traffic Coordinator	Coordinar de Trafico en el Lugar de Trabajo	19.08	24
Crane Operator	Operador de la Grúa	19.02	25

CLASSIFICATION**CRAFT NO.****SKILLED LABORER:****17**

Air Tool Operator, Asphalt Raker, Chain Saw Operator, Concrete Mixer Operator (less than 1 yard), Concrete Rubber/Edger, Fence Erector, Form Setter (Steel Road), Guardrail Erector, Mechanic's Helper (Tire Changer or Oiler), Mortar Mixer, Nozzelman or Gun Operator (Gunitite), *Pipelayer, Sign Erector

CLASS "A" OPERATORS:**03**

Backhoe/Hydraulic Excavator (3/4 yard and over), Crane (less than 20 tons see Crane Operator below), End Loader (3 yards and over), Motor Patrol (Finish), Pile Driver, Dragline

CLASS "B" OPERATORS:**04**

Backhoe/Hydraulic Excavator (less than 3/4 yard), Bull Dozer or Push Dozer, End Loader (less than 3 yards), Motor Patrol (Rough), Tractor (Crawler/Utility), Scraper, Shovel, Trenching Machine

CLASS "C" OPERATORS:**05**

Asphalt Paver, Concrete Finishing Machine, Concrete Paver, Scale, Spreader (Self-Propelled), Concrete Grinder, Asphalt Milling Machine, Boring Machine Operator (Horizontal)

CLASS "D" OPERATORS:**06**

Bobcat, Central Mixing Plant, Concrete Pump, Concrete Saw, Curb Machine (Automatic or Manual), Dozer or Loader (Stockpile), Drill (Piling), Mulcher or Seeder, Rock Drill (Truck Mounted), Roller (Asphalt), Roller (Compaction Self-Propelled), Soil Stabilization Machine, Tractor (Boom & Hoist), Bituminous Distributor Machine, Pump, Track Drill, Striping Machine Operator, Ditch Paving Machine

CRANE OPERATOR:**25**

Means one who operates boom-type equipment equal to or greater than 20 tons to hoist and move materials, raise and lower heavy weights and perform other related operations; may oil, grease or otherwise service and make necessary adjustments to equipment as needed; and may perform other related duties. (Note: The equipment is used for such work as pouring concrete and setting steel. This work is subject to strict inspection and must conform closely to specifications. The equipment may also be used for other miscellaneous tasks for which crane or stick-type equipment is required which may include hoist operations and pile driving operations.)

***Skilled Laborer - Pipelayer Classification**

For any work where prevailing wage rates apply which is located five feet or more outside the actual building if building construction is involved:

AND

- (a) which consists of the building, rebuilding, locating, relocating or repairing any street, highway, bridges, water lines, sewer lines, gas lines, force mains or other related utilities

OR

- (b) which involves the construction or upgrading of industrial parks or sites and is located outside the five foot limitation.

The classification of pipelayer shall be applicable and the description of work under this classification shall be as follows:

Lays, connects, inspects and tests water lines, force mains, gas lines, sanitary or storm sewers and drains, underground telephone and electric ducts or other utilities manufactured from clay, concrete, steel, plastic, cast iron pipe or other similar materials.

May smooth bottom of trench to proper elevation by scooping with a shovel; receives pipe lowered from top of trench; inserts spigot end of pipe into bell end of last laid pipe; adjusts pipe to line and grades, caulks and seals joint with cement or other sealing compound; may connect threaded or flanged joint pipe; may assemble and place corrugated metal or plastic pipe and performs other related duties.

Additional Information :

Wage Rates : <http://www.tennessee.gov/labor-wfd/prevail.html>

Poster Page : <http://www.state.tn.us/labor-wfd/poster.htm>

Note: Adobe Acrobat Reader is required in order to download & print. If you do not have this software a link is provided at the bottom of the Poster Page for a free download.

Tenn.Dept. of Labor & Workforce Development (Labor Standards Division) : (615) 741-2858.

APPRENTICESHIP REGULATIONS:

Under T.C.A., §12-449, the Prevailing Wage Commission has promulgated Rule 0800-3-2-.04 which provides that: "Apprentices shall mean those persons registered individually under a bona fide apprenticeship program registered with the Bureau of Apprenticeship and Training in the United States Department of Labor. The state agency contracting officer shall require the contractor or sub-contractor using the apprentice to submit evidence of his indenture and/or apprenticeship registration when the apprentice's name first appears on a submitting payroll."

AUTHORITY: T.C.A., §12-449. Administrative History: Original Rule filed June 4, 1976. Effective: July 14, 1976.

§18.42 Retention and access requirements for records.

a. *Applicability.*

1. This section applies to all financial and programmatic records, supporting documents, statistical records, and other records of grantees or subgrantees which are:
 - i. Required to be maintained by the terms of this part, program regulations or the grant agreement, or
 - ii. Otherwise reasonably considered as pertinent to program regulations or the grant agreement.
2. This section does not apply to records maintained by contractors or subcontractors. For a requirement to place a provision concerning records in certain kinds of contracts, see §18.36(i)(10).

b. *Length of retention period.*

1. Except as otherwise provided, records must be retained for three years from the starting date specified in paragraph (c) of this section.
2. If any litigation, claim, negotiation, audit or other action involving the records has been started before the expiration of the 3-year period, the records must be retained until completion of the action and resolution of all issues which arise from it, or until the end of the regular 3-year period, whichever is later.
3. To avoid duplicate recordkeeping, awarding agencies may make special arrangements with grantees and subgrantees to retain any records which are continuously needed for joint use. The awarding agency will request transfer of records to its custody when it determines that the records possess long-term retention value. When the records are transferred to or maintained by the Federal agency, the 3-year retention requirement is not applicable to the grantee or subgrantee.

c. *Starting date of retention period --*

1. *General.* When grant support is continued or renewed at annual or other intervals, the retention period for the records of each funding period starts on the day the grantee or subgrantee submits to the awarding agency its single or last expenditure report for that period. However, if grant support is continued or renewed quarterly, the retention period for each year's records starts on the day the grantee submits its expenditure report for the last quarter of the Federal fiscal year. In all other cases, the retention period starts on the day the grantee submits its final expenditure report. If an expenditure report has been waived, the retention period starts on the day the report would have been due.
2. *Real property and equipment records.* The retention period for real property and equipment records starts from the date of the disposition or replacement or transfer at the direction of the awarding agency.
3. *Records for income transactions after grant or subgrant support.* In some cases grantees must report income after the period of grant support. Where there is such a requirement, the retention period for the records pertaining to the earning of the income starts from the end of the grantee's fiscal year in which the income is earned.
4. *Indirect cost rate proposals, cost allocations plans, etc.* This paragraph applies to the following types of documents, and their supporting records: indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates).
 - i. *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the grantee) to form the basis for negotiation of the rate, then the 3-year retention period for its supporting records starts from the date of such submission.
 - ii. *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the grantee) for negotiation purposes, then the 3-year retention period for the proposal plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation.

d. *Substitution of microfilm.* Copies made by microfilming, photocopying, or similar methods may be substituted for the original records.

e. *Access to records --*

1. *Records of grantees and subgrantees.* The awarding agency and the Comptroller General of the United States, or any of their authorized representatives, shall have the right of access to any pertinent books, documents, papers, or other records of grantees

- and subgrantees which are pertinent to the grant, in order to make audits, examinations, excerpts, and transcripts.
- 2. *Expiration of right of access.* The right of access in this section must not be limited to the required retention period but shall last as long as the records are retained.
- f. *Restrictions on public access.* The Federal Freedom of Information Act (5 U.S.C. 552) does not apply to records unless required by Federal, State, or local law, grantees and subgrantees are not required to permit public access to their records.

§18.36 Procurement.

- i. *Contract provisions.* A grantee's and subgrantee's contracts must contain provisions in paragraph (i) of this section. Federal agencies are permitted to require changes, remedies, changed conditions, access and records retention, suspension of work, and other clauses approved by the Office of Federal Procurement Policy.
 - 1. Administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate. (Contracts more than the simplified acquisition threshold)
 - 2. Termination for cause and for convenience by the grantee or subgrantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of \$10,000)
 - 3. Compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of \$10,000 by grantees and their contractors or subgrantees)
 - 4. Compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR part 3). (All contracts and subgrants for construction or repair)
 - 5. Compliance with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts in excess of \$2000 awarded by grantees and subgrantees when required by Federal grant program legislation)
 - 6. Compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR part 5). (Construction contracts awarded by grantees and subgrantees in excess of \$2000, and in excess of \$2500 for other contracts which involve the employment of mechanics or laborers)
 - 7. Notice of awarding agency requirements and regulations pertaining to reporting.
 - 8. Notice of awarding agency requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.
 - 9. Awarding agency requirements and regulations pertaining to copyrights and rights in data.
 - 10. Access by the grantee, the subgrantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.
 - 11. Retention of all required records for three years after grantees or subgrantees make final payments and all other pending matters are closed.
 - 12. Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (Contracts, subcontracts, and subgrants of amounts in excess of \$100,000)
 - 13. Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

§18.26 Non-Federal audits.

- a. *Basic rule.* Grantees and subgrantees are responsible for obtaining audits in accordance with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507) and revised OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations." The audits shall be made by an independent auditor in accordance with generally accepted government auditing standards covering financial audits.
- b. *Subgrantees.* State or local governments, as those terms are defined for purposes of the Single Audit Act Amendments of 1996, that provide Federal awards to a subgrantee, which expends \$300,000 or more (or other amount as specified by OMB) in Federal awards in a fiscal year, shall:
 1. Determine whether State or local subgrantees have met the audit requirements of the Act and whether subgrantees covered by OMB Circular A-110, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations," have met the audit requirements of the Act. Commercial contractors (private for-profit and private and governmental organizations) providing goods and services to State and local governments are not required to have a single audit performed. State and local governments should use their own procedures to ensure that the contractor has complied with laws and regulations affecting the expenditure of Federal funds;
 2. Determine whether the subgrantee spent Federal assistance funds provided in accordance with applicable laws and regulations. This may be accomplished by reviewing an audit of the subgrantee made in accordance with the Act, Circular A-110, or through other means (e.g., program reviews) if the subgrantee has not had such an audit;
 3. Ensure that appropriate corrective action is taken within six months after receipt of the audit report in instance of noncompliance with Federal laws and regulations;
 4. Consider whether subgrantee audits necessitate adjustment of the grantee's own records; and
 5. Require each subgrantee to permit independent auditors to have access to the records and financial statements.
- c. *Auditor selection.* In arranging for audit services, §18.36 shall be followed.

Federal Highway Administration
Department of Transportation
Required Contract Provisions

PART 635-CONSTRUCTION AND MAINTENANCE

§ 635.108 Health and safety.

Contracts for projects shall include provisions designed:

- (a) To insure full compliance with all applicable Federal, State, and local laws governing safety, health and sanitation; and
- (b) To require that the contractor shall provide all safeguards, safety devices, and protective equipment and shall take any other actions reasonably necessary to protect the life and health of persons working at the site of the project and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

§635.109 Standardized changed condition clauses.

(a) Except as provided in paragraph (b) of this section, the following changed conditions contract clauses shall be made part of, and incorporated in, each highway construction project approved under 23 U.S.C. 106:

(1) Differing site conditions.

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

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

(iii) No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.

(iv) No contract adjustment will be allowed under this clause for any effects caused on unchanged work. (This provision may be omitted by the STD's at their option.)

(2) Suspensions of work ordered by the engineer.

(i) If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/ or contract time is due as a result of such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within 7 calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

(ii) Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.

(iii) No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.

(iv) No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(3) Significant changes in the character of work.

(i) The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.

(ii) If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.

(iii) If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

(iv) The term "significant change" shall be construed to apply only to the following circumstances:

(A) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or

(B) When a major item of work, as defined elsewhere in the contract, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed.

(b) The provisions of this section shall be governed by the following:

(1) Where State statute does not permit one or more of the contract clauses included in paragraph (2) of this section, the State statute shall prevail and such clause or clauses need not be made applicable to Federal-aid highway contracts.

(2) Where the State transportation department has developed and implemented one or more of the contract clauses included in paragraph (a) of this section, such clause or clauses, as developed by the State transportation department may be included in Federal-aid highway contracts in lieu of the

corresponding clause or clauses in paragraph (a) of this section. The State's action must be pursuant to a specific State statute requiring differing contract conditions clauses. Such State developed clause or clauses, however, must be in conformance with 23 U.S.C., 23 CFR and other applicable Federal statutes and regulations as appropriate and shall be subject to the Division Administrator's approval as part of the PS&E.

(c) In the case of a design-build project, STDs are strongly encouraged to use "suspensions of work ordered by the engineer" clauses, and may consider "differing site condition" clauses and "significant changes in the character of work" clauses which are appropriate for the risk and responsibilities that are shared with the design-builder.

§635.112 Advertising for bids and proposals.

f) The STD shall include a noncollusion provision substantially as follows in the bidding documents:

Each bidder shall file a statement executed by, or on behalf of the person, firm, association, or corporation submitting the bid certifying that such person, firm, association, or corporation has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted bid. Failure to submit the executed statement as part of the bidding documents will make the bid nonresponsive and not eligible for award consideration.

§635.116 Subcontracting and contractor responsibilities.

(a) Contracts for projects shall specify the minimum percentage of work that a contractor must perform with its own organization. This percentage shall be not less than 30 percent of the total original contract price excluding any identified specialty items. Specialty items may be performed by subcontract and the amount of any such specialty items so performed may be deducted from the total original contract before computing the amount of work required to be performed by the contractor's own organization. The contract amount upon which the above requirement is computed includes the cost of materials and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

(b) The STD shall not permit any of the contract work to be performed under a subcontract, unless such arrangement has been authorized by the STD in writing. Prior to authorizing a subcontract, the STD shall assure that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. The Division Administrator may permit the STD to satisfy the subcontract assurance requirements by concurrence in a STD process which requires the contractor to certify that each subcontract arrangement will be in the form of a written agreement containing all the requirements and pertinent provisions of the prime contract. Prior to the Division Administrator's concurrence, the STD must demonstrate that it has an acceptable plan for monitoring such certifications.

(c) To assure that all work (including subcontract work) is performed in accordance with the contract requirements, the contractor shall be required to furnish:

(1) 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;

(2) Such other of its own organizational resources (supervision, management, and engineering services) as the STD contracting officer determines are necessary to assure the performance of the contract.

(d) In the case of a design-build project, the following requirements apply:

(1) The provisions of paragraph (a) of this section are not applicable to design-build contracts;

(2) At their discretion, the STDs may establish a minimum percentage of work that must be done by the design-builder. For the purpose of this section, the term design-builder may include any firms that are equity participants in the design-builder, their sister and parent companies, and their wholly owned subsidiaries;

(3) No procedure, requirement or preference shall be imposed which prescribes minimum subcontracting requirements or goals (other than those necessary to meet the Disadvantaged Business Enterprise program requirements of 49 CFR part 26).

§ 635.117 Labor and employment.

(a) No construction work shall be performed by convict labor at the work site or within the limits of any Federal-aid highway construction project from the time of award of the contract or the start of work on force account until final acceptance of the work by the STD unless it is labor performed by convicts who are on parole, supervised release, or probation.

(b) No procedures or requirement shall be imposed by any State which will operate to discriminate against the employment of labor from any other State, possession or territory of the United States, in the construction of a Federal-aid project.

(c) The selection of labor to be employed by the contractor on any Federal-aid project shall be by the contractor without regard to race, color, religion, sex, national origin, age, or handicap and in accordance with 23 CFR part 230, 41 CFR part 60 and Exec. Order No. 11246 (Sept. 24, 1965), 3 CFR 339 (1964-1965), as amended.

(d) Pursuant to 23 U.S.C. 140(d), it is permissible for STD's to implement procedures or requirements which will extend preferential employment to Indians living on or near a reservation on eligible projects as defined in paragraph (e) of this section. Indian preference shall be applied without regard to tribal affiliation or place of enrollment. In no instance should a contractor be compelled to layoff or terminate a permanent core-crew employee to meet a preference goal.

(e) Projects eligible for Indian employment preference consideration are projects located on roads within or providing access to an Indian reservation or other Indian lands as defined under the term "Indian Reservation Roads" in 23 U.S.C. 101 and regulations issued there under. The terminus of a road "providing access to" is that point at which it intersects with a road functionally classified as a collector or higher classification (outside the reservation boundary) in both urban and rural areas. In the case of an Interstate highway, the terminus is the first interchange outside the reservation.

(f) The advertisement or call for bids on any contract for the construction of a project located on the Federal-aid system either shall include the minimum wage rates determined by the Secretary of Labor to be prevailing on the same type of work on similar construction in the immediate locality or shall provide that such rates are set out in the bidding documents and shall further specify that such rates are a part of the contract covering the project.

§ 635.125 Termination of contract.

(a) All contracts exceeding \$10,000 shall contain suitable provisions for termination by the State, including the manner by which the termination will be effected and the basis for settlement. In addition, such contracts shall describe conditions under which the contract may be terminated for default as well as conditions where the contract may be terminated because of circumstances beyond the control of the contractor.

(b) The STD prior to termination of a Federal-aid contract shall consult with and receive the concurrence of the Division Administrator. The extent of Federal-aid participation in contract termination costs, including final settlement, will depend upon the merits of the individual case. However, under no circumstances shall Federal funds participate in anticipated profit on work not performed.

(c) Except as provided for in paragraph (e) of this section, normal Federal-aid plans, specifications, and estimates, advertising, and award procedures are to be followed when a STD awards the contract for completion of a terminated Federal-aid contract.

(d) When a STD awards the contract for completion of a Federal-aid contract previously terminated for default, the construction amount eligible for Federal participation on the project should not exceed whichever amount is the lesser, either:

(1) The amount representing the payments made under the original contract plus payments made under the new contract; or

(2) The amount representing what the cost would have been if the construction had been completed as contemplated by the plans and specifications under the original contract.

(e) If the surety awards a contract for completion of a defaulted Federal-aid contract or completes it by some other acceptable means, the FHWA will consider the terms of the original contract to be in effect and that the work will be completed in accordance with the approved plans and specifications included therein. No further FHWA approval or concurrence action will therefore be needed in connection with any defaulted Federal-aid contract awarded by a surety. Under this procedure, the construction amount eligible for Federal participation on the project should not exceed the amount representing what the cost would have been if the construction had been completed as contemplated by the plans and specifications under the original contract.

§635.127 Agreement provisions regarding overruns in contract time.

(a) Each State transportation department (STD) shall establish specific liquidated damages rates applicable to projects in that State. The rates may be project-specific or may be in the form of a table or schedule developed for a range of project costs and/or project types. These rates shall, as a minimum, be established to cover the estimated average daily construction engineering (CE) costs associated with the type of work encountered on the project. The amounts shall be assessed by means of deductions, for each calendar day or workday overrun in contract time, from payments otherwise due to the contractor for performance in accordance with the contract terms.

(b) The rates established shall be subject to FHWA approval either on a project-by-project basis, in the case of project-specific rates, or on a periodic basis after initial approval where a rate table or schedule is used. In the latter case, the STD shall periodically review its cost data to ascertain if the rate table/schedule closely approximates, at a minimum, the actual average daily CE costs associated with the type and size of the projects in the State. Where rate schedules or other means are already included in the STD specifications or standard special provisions, verification by the STD that the amounts are adequate shall be submitted to the FHWA for review and approval. After initial approval by the FHWA of the rates, the STD shall review the rates at least every 2 years and provide updated rates, when necessary, for FHWA approval. If updated rates are not warranted, justification of this fact is to be sent to the FHWA for review and acceptance.

(c) The STD may, with FHWA concurrence, include additional amounts as liquidated damages in each contract to cover other anticipated costs of project related delays or inconveniences to the STD or the public. Costs resulting from winter shutdowns, retaining detours for an extended time, additional demurrage, or similar costs as well as road user delay costs may be included.

(d) In addition to the liquidated damages provisions, the STD may also include incentive/disincentive for early completion provisions in the contract. The incentive/disincentive amounts shall be shown separately from the liquidated damages amounts.

(e) Where there has been an overrun in contract time, the following principles shall apply in determining the cost of a project that is eligible for Federal-aid reimbursement:

(1) A proportional share, as used in this section, is the ratio of the final contract construction costs eligible for Federal participation to the final total contract construction costs of the project.

(2) Where CE costs are claimed as a participating item based upon actual expenses incurred or where CE costs are not claimed as a participating item, and where the liquidated damages rates cover only CE expenses, the total CE costs for the project shall be reduced by the assessed liquidated damages amounts prior to figuring any Federal pro rata share payable. If the amount of liquidated damages assessed is more than the actual CE totals for the project, a proportional share of the excess shall be deducted from the federally participating contract construction cost before determining the final Federal share.

(3) Where the STD is being reimbursed for CE costs on the basis of an approved percentage of the participating construction cost, the total contract construction amount that would be eligible for Federal participation shall be reduced by a proportional share of the total liquidated damages amounts assessed on the project.

(4) Where liquidated damages include extra anticipated non-CE costs due to contractor caused delays, the amount assessed shall be used to pay for the actual non-CE expenses incurred by the STD, and, if a Federal participating item(s) is involved, to reduce the Federal share payable for that item(s). If the amount assessed is more than the actual expenses incurred by the STD, a proportional share of the excess shall be deducted from the federally participating contract construction cost of the project before the Federal share is figured.

(f) When provisions for incentive/disincentive for early completion are used in the contract, a proportion of the increased project costs due to any incentive payments to the contractor shall be added to the federally participating contract construction cost before calculating the Federal share. When the disincentive provision is applicable, a proportion of the amount assessed the contractor shall be deducted from the federally participating contract construction cost before the Federal share calculation. Proportions are to be calculated in the same manner as set forth in paragraph (e)(1) of this section.

SECTION D

SHELBY COUNTY GOVERNMENT

ENGINEERING DEPARTMENT

SHELBY COUNTY SPECIAL PROVISIONS

S E C T I O N D
T A B L E O F C O N T E N T S

Shelby County Special Provisions

Special Provision Regarding:	Special Provision	Revision Date
Additional Requirements	A	
Approval of Shop Drawings	B	
Pre-Construction Submittal Requirement	C	
Schedule of Work	D	
Damage to Service Lines	E	
Control of Work Construction Stakes, Lines and Grades	F	
Complaints	G	
Traffic Signal Technician	H	
Radar Detection Equipment	I	
Utility Cabinet	J	
Central Hardware, Software and Communications Equipment	K	

A T T E N T I O N

It shall be the bidders' responsibility to confirm that the Contract Proposal contains all the documents indicated on the Table of Contents.

Should any omissions occur, the appropriate documents may be obtained from the Shelby County Government, upon request.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION A
ADDITIONAL REQUIREMENTS

DEFINITION OF TERMS

Whenever in the Specifications and Contract the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

- a. County: Shall be interpreted to mean THE COUNTY OF SHELBY, TENNESSEE, or its authorized representative.
- b. Director: Shall be interpreted to mean THE SHELBY COUNTY DIRECTOR OF PUBLIC WORKS.
- c. Engineer: Shall be interpreted to mean The SHELBY COUNTY ENGINEER, and/or the Project Manager delegated by the County Engineer to act as the County's authorized representative.
- d. Project Manager: The representative of the SHELBY COUNTY ENGINEER who has been delegated to act with the authority of the Engineer.
- e. Contractor: The successful bidder to whom the contract is awarded.

1. INDEPENDENT STATUS:

- a. Nothing in this Contract shall be deemed to represent that the CONTRACTOR, or any of the CONTRACTOR's employees or agents, are the agents, representatives, or employees of the COUNTY. The CONTRACTOR will be an independent CONTRACTOR over the details and means for performing the Services under this Contract. Anything in this Contract which may appear to give the COUNTY the right to direct the CONTRACTOR as to the details of the performance of the Services under this Contract or to exercise a measure of control over the CONTRACTOR is solely for purposes of compliance with local, state and federal regulations and means that the CONTRACTOR will follow the desires of the COUNTY only as to the intended results of the scope of this Contract.
- b. It is further expressly agreed and understood by CONTRACTOR that neither it nor its employees or agents are entitled to any benefits which normally accrue to employees of the COUNTY; that CONTRACTOR has been retained by the COUNTY to perform the Services specified

herein (not hired) and that the remuneration specified herein is considered fees for the Services performed (not wages) and that invoices submitted to the COUNTY by CONTRACTOR for the Services performed shall be on the CONTRACTOR's letterhead.

2. CONFLICT OF INTEREST:

The CONTRACTOR covenants that it has no public or private interest, and will not acquire directly or indirectly any interest which would conflict in any manner with the performance of the Services. The CONTRACTOR warrants that no part of the total Contract Fee shall be paid directly or indirectly to any officer or employee of the COUNTY as wages, compensation, or gifts in exchange for acting as officer, agent, employee, subcontractor or consultant to the CONTRACTOR in connection with any work contemplated or performed relative to this Contract.

3. CONTINGENT FEES:

The CONTRACTOR warrants that it has not employed or retained any company or person other than a bona fide employee working solely for the CONTRACTOR, to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONTRACTOR any fee, commission, percentage, brokerage fee, gift, or any other consideration contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, the COUNTY will have the right to recover the full amount of such fee, commission, percentage, brokerage fee, gift, or other consideration.

4. EMPLOYMENT OF COUNTY WORKERS:

The CONTRACTOR will not engage, on a full, part-time, or any other basis during the Term of the Contract, any professional or technical personnel who are or have been at any time during the Term of the Contract in the employ of the COUNTY.

5. ACCESS TO RECORDS:

During all phases of the work and Services to be provided hereunder, CONTRACTOR agrees to permit duly authorized agents and employees of the COUNTY to enter CONTRACTOR's offices for the purpose of inspections, reviews and audits during normal working hours. Reviews may also be accomplished at meetings that are arranged at mutually agreeable times and places. The CONTRACTOR will maintain all books, documents, papers, accounting records, and other evidence pertaining to the Fee paid under this

Contract and make such materials available at their offices at all reasonable times during the Term of this Contract and for three (3) years from the date of payment under this Contract for inspection by the COUNTY or by any other governmental entity or agency participating in the funding of this Contract, or any authorized agents thereof. Copies of said records shall be furnished to the COUNTY upon request.

6. RESPONSIBILITIES FOR CLAIMS AND LIABILITIES:

- a. CONTRACTOR expressly understands and agrees that any insurance protection required by this Contract or otherwise provided by the CONTRACTOR shall in no way limit the responsibility to indemnify, defend, save and hold harmless the COUNTY or its elected officials, officers, employees, agents, assigns, and instrumentalities as herein provided.
- b. The COUNTY has no obligation to provide legal counsel or defense to CONTRACTOR or its subcontractors in the event that a suit, claim or action of any character is brought by any person not a party to this agreement against CONTRACTOR as a result of or relating to performance of the Services under this Contract.
- c. Except as expressly provided herein, the COUNTY has no obligation for the payment of any judgment or the settlement of any claims against CONTRACTOR as a result of or relating to performance of the Services under this Contract.
- d. CONTRACTOR shall immediately notify the COUNTY of any claim or suit made or filed against CONSULTANT or its subcontractors regarding any matter resulting from or relating to CONTRACTOR's performance of the Services under this Contract and will cooperate, assist and consult with the COUNTY in the defense or investigation thereof.

7. SEVERABILITY:

If any provision of this Contract is held to be unlawful, invalid or unenforceable under any present or future laws, such provision shall be fully severable; and this Contract shall then be construed and enforced as if such unlawful, invalid or unenforceable provision had not been a part hereof. The remaining provisions of this Contract shall remain in full force and effect and shall not be affected by such unlawful, invalid or unenforceable provision or by its severance here from. Furthermore, in lieu of such unlawful, invalid, or unenforceable provision, there shall be added automatically as a part of this Contract a legal, valid and enforceable provision as similar in terms to such unlawful, invalid or

unenforceable provision as possible.

8. NON-LIABILITY FOR CONSULTANT EMPLOYEE TAXES:

Neither CONTRACTOR nor its personnel are COUNTY's employees, and COUNTY shall not take any action or provide CONTRACTOR's personnel with any benefits and shall have no liability for the following:

- a. Withholding FICA (Social Security) from CONTRACTOR's payments;
- b. Making state or federal unemployment insurance contributions on behalf of CONTRACTOR or its personnel;
- c. Withholding state and federal income tax from payment to CONTRACTOR;
- d. Making disability insurance contributions on behalf of CONTRACTOR;
- e. Obtaining workers' compensation insurance on behalf of CONTRACTOR or CONTRACTOR's personnel.

9. ADDITIONAL INSURANCE REQUIREMENTS:

- a. The CONTRACTOR shall purchase and maintain, in a company or companies licensed to do business in the State of Tennessee, such insurance as will protect the COUNTY from claims which may arise out of or result from the CONTRACTOR'S operations under the Contract, whether such operations are performed by himself or by any subcontractors or by anyone directly or indirectly employed by any of them, or by anyone for whose acts the CONTRACTOR or subcontractor may be liable.
- b. The insurance required shall be written for not less than any limits of liability specified or required by law, whichever is greater. Shelby County Government, its elected officials, appointees and employees will be named as additional insured. The CONTRACTOR will maintain throughout the life of this Contract insurance, through insurers rated A- or better by A.M. Best, in the following minimum requirements. All policies shall provide for thirty (30) days written notice to COUNTY of cancellation or material change in coverage provided:
 - i) Commercial General Liability Insurance - \$1,000,000.00 limit per occurrence bodily injury and property damage/\$1,000,000.00 personal and advertising injury/\$2,000,000.00 General Aggregate/\$2,000,000.00 Products-completed Operations Aggregate, indicating the coverage is provided on a claims-made or on an occurrence basis. The insurance shall include coverage for the following:

- a. Premises/Operation;
 - b. XCU coverage, where applicable;
 - c. Products/Completed Operations;
 - d. Contractual Liability;
 - e. Independent Contractors;
 - f. Broad Form Property Coverage;
 - g. Personal Injury.
 - ii) Workers Compensation and Employers' Liability Insurance – Workers Compensation statutory limits as required by Tennessee. This policy should include Employers' Liability Coverage for \$1,000,000.00 per accident.
 - iii) Business Automobile Liability Insurance - \$1,000,000.00 each accident for property damage and personal injury. Coverage is to be provided on all owned/leased autos, non-owned autos and hired autos.
- c. CONTRACTOR shall provide County with a current copy of the Certificate of Insurance at the time of contracting and shall maintain said insurance during the entire Contract period as well as provide renewal copies on each anniversary date. The certificate holder is to read:

Shelby County Government
Purchasing Department
160 N. Main, Suite 550
Memphis, TN 38103

- d. Upon termination or cancellation of insurance currently in effect under this Contract, the CONTRACTOR shall purchase an extended reporting endorsement and furnish evidence of same to the County.
- e. All policies maintained by the Contractor shall provide that insurance as applying to Shelby County shall be primary and non-contributing irrespective of such insurance or self-insurance as Shelby County may maintain in its own name and on its own behalf.

10. NOTICE:

Any notices required or permitted to be given under the provisions of this Contract shall be effective only if in writing and delivered either in person to the COUNTY's authorized agent or by First Class or U.S. Mail to the addresses set forth below, or to such other person or address as either party may

designate in writing and deliver as herein provided:

COUNTY: Shelby County Government
Roads and Bridges Department
6449 Haley Road
Memphis, Tennessee 38134
Attn.: Mr. Darren Sanders, P.E

and

Shelby County Government
Contract Administration
160 N. Main St., Suite 950
Memphis, Tennessee 38103

11. AUTHORITY AND DUTIES OF PROJECT MANAGER:

The Project Manager's authority has been limited only as to final resolution of disputes. The Project Manager has full authority to permit changes in cost and time. Any cost or time increase authorized by anyone other than the Project Manager or the County Engineer will be disallowed. Any such increase will be authorized in writing except in unusual cases in which undue delay or cost may be occasioned in which a verbal "Notice to Proceed" will be issued followed as soon as possible by written confirmation.

12. WARRENTY AND GUARANTEES:

All work performed under this contract shall be constructed in accordance with the plans, specifications, general requirements and conditions, special provisions, and/or standard construction codes, and shall be guaranteed against defective material and workmanship by the Contractor and the Surety for a period of one year from the date of final acceptance.

The Contractor and the Surety shall guarantee that the type, quality, design, and performance of all items and equipment to be incorporated into the completed project meet all requirements of the contract documents and any other provisions provided by the Engineer.

The Contractor shall require of all equipment and material manufacturers and suppliers a written guarantee that all equipment and material shall function satisfactorily as an integral part of the completed project in accordance with the contract documents and any and all other provisions as supplied by the Engineer. This guarantee shall insure that the manufacturer or supplier will replace or repair, to the satisfaction of the Engineer, any and all defects in equipment and materials, which may develop within a period of one year from the date of final acceptance.

This guarantee shall be submitted to the Engineer prior to incorporation of the equipment, material or supplies into the project.

This guarantee shall in no way relieve the Contractor of any responsibility for providing for satisfactory completion of the project in accordance with the contract documents and any other provisions as supplied by the Engineer. Enforcement of this guarantee shall be the responsibility of the Contractor.

13. WORKMEN'S COMPENSATION INSURANCE:

Prior to the approval of the contract by the County, the Contractor shall furnish to the County, certificates of insurance covering Workmen's Compensation or satisfactory evidence that this liability is otherwise satisfactorily addressed in accordance with the Tennessee Code Annotated, 50-6-101 et. seq., State of Tennessee.

Such insurance or other means of protection as herein provided shall remain in force until all work to be performed under the terms of the contract has been completed and accepted in accordance with the contract. It is hereby understood and agreed that the maintenance of such insurance or other protection, until acceptance of the work by the County, is a part of the contract. Failure to maintain such insurance, cancellation by the Industrial Commission of its approval of such other means of protection as might have been elected, or any other act which results in lack of protection under said "Workmen's Compensation Act" may be considered as a breach of the Contract.

14. USE OF FIRE HYDRANTS:

If the Contractor desires to use water from fire hydrants, application shall be made by the Contractor to the proper authorities and shall conform to the municipal ordinances, rules or regulations concerning their use. Metering devices shall be used unless specifically exempted by the appropriate authorities.

Access to fire hydrants shall be maintained at all times for the use of the Fire Department. No material or other obstruction shall be placed closer to a fire hydrant than permitted by municipal ordinances, rules or regulations, or within 5 feet of a fire hydrant, in the absence of such ordinances, rules or regulations. Under no circumstances shall metering devices or other connectors remain affixed to fire hydrants except when the hydrant is actually being used.

15. AS-BUILT DRAWINGS:

The Contractor shall, prior to request for final payment, provide the Engineer one set of the construction plans amended to indicate the actual improvements constructed during the term of this Contract. The "as-built" drawings will depict

any changes made in plan or elevation and will be sealed by a Professional Engineer licensed by the State of Tennessee and acceptable to the Engineer. The Engineer will review these plans within thirty (30) days of receipt to determine whether any corrections or re-work will be required prior to final payment and release of retainage.

16. ACCEPTANCE AND FINAL PAYMENT:

Whenever the improvement(s) provided for, and all conditions called for, by the contract have been completely performed and/or met on the part of the Contractor, and all parts of the improvement have been approved by the Engineer and accepted by the County, a final estimate showing the value of the work will be prepared by the Engineer as soon as the necessary measurements and computations can be made. All prior estimates upon which approximate payments have been made shall be corrected in the final payment. The amount of this estimate will be paid the Contractor as soon as practicable after the final acceptance and the period of necessary advertisement has expired; provided the Contractor has furnished the County satisfactory evidence that all sums of money due for labor, materials, equipment, fixtures, or machinery furnished for the purpose of such improvements have been paid or that the person or persons to whom the same may be due have consented to such final payment.

The acceptance by the Contractor of the final payment shall constitute a release and waiver of any and all rights and privileges under the terms of the contract; further, the acceptance by the Contractor of final payment shall relieve the County from any and all claims or liabilities from any person or entity, regardless of where situated, for anything done or furnished to the work or in connection with the work or any act or neglect on the part of the County relating to or connected with the contract.

17. AUDIT AND INSPECTION RECORDS:

The Contractor agrees to maintain books, records and accounts pertaining to the contracted improvements for a period of not less than three (3) years from the date of final payment, and to make these records available to authorized representatives of the County. Should State or Federal funds be used in the project, Contractor agrees to make these records available to the authorized representatives of the State of Tennessee or the Federal Government as necessary.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION B
APPROVAL OF SHOP DRAWINGS

As soon as possible after naming the fabricator of a steel structure and before the shop drawings are prepared, the Contractor shall require the fabricator to submit prints of the shop drawing Title Sheet directly to the Shelby County Engineering Department. Shop drawings for all types of structures shall be submitted directly to the Engineering Department for handling with the checking agency and for distribution. A copy of the letter transmitting the shop drawings to the Engineering Department shall be furnished the project engineer.

Each shop drawing sheet shall contain in the title block the following:

The location, project number, and contract number. Shop drawings shall be submitted in sets with the drawing numbers running consecutively in each set, and if more than five (5) sheets in a set, shall be appropriately bound. Shop drawings marked "APPROVED" or "APPROVED AS NOTED" need not be resubmitted unless specifically asked for. The following minimum number of sets of shop drawings shall be submitted for approval.

Strain Poles and Mast Arm Poles - six (6) sets; Conventional Street Lighting Poles - six (6) sets.

It is recommended that a heading similar to the following be used in all correspondence:

Project Number

Location

Contract Number

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION C
PRE-CONSTRUCTION SUBMITTAL REQUIREMENT

The Contractor shall be responsible for submitting asphalt mix design(s), concrete mix design(s), shop drawing(s), certification report(s), etc. for approval at the preconstruction conference or no later than thirty (30) days after the preconstruction conference. This is to allow sufficient time for review and approval.

Under no circumstances shall any materials be used or construction begin using any mix design or shop drawing prior to approval of submittals.

CONCRETE PLANTS, ASPHALT PLANTS, CEMENT TREATED BASE PLANTS, ETC.:

Regarding mix design submittal(s): The Contractor shall designate the plant location for the item(s) to be produced as per the mix design. The designated location shall not be changed by the Contractor without prior approval of Shelby County. The Contractor shall not be permitted to send any item(s) to the project without this approval. Any approved change(s) in plant location(s) shall require a mix design for that specific location. Any change(s) shall have prior approval and the approved design shall be on file with Shelby County per the requirements for the item(s) being produced per the mix design. Contractor(s) shall not change plant locations at will. Any change(s) shall only be made for an emergency type situation or with prior approval and a notification that such change is to take place. Convenience or poor planning shall not constitute being a valid reason for plant change(s). It shall be the Contractor's responsibility for coordinating the project work with the item(s) being produced and shipped.

REGARDING PROCESS CONTROL PLAN(S):

The Contractor shall submit a process control plan, with mix design submittals, which shall be approved by the Engineer. This process control plan shall be used by the Contractor per the specification requirements of the item being produced or supplied. This plan shall not be changed or otherwise altered without submittal and approval of a "new" plan.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION D
SCHEDULE OF WORK

The Contractor shall, in coordination with the Engineer, develop a proposed work schedule showing estimated work times for all major construction tasks. The schedule shall be updated as needed to afford the Engineer a view as to the progress and completion time. This schedule shall be submitted at the pre-construction conference and shall include a list of suppliers.

The Contractor shall follow this schedule unless a change is necessary. The Contractor shall notify the Engineer in advance of any deviation from this schedule. The plan of operations shall show the controlling item of work during each phase and a revised schedule shall be submitted when changed conditions warrant.

Sub-contractor notification: The successful Contractor shall submit to the Engineer at the pre-construction conference a list of any and all sub-contractor(s) that will be performing work under his supervision. The contractor shall also notify the Engineer before any change is made in sub-contractor(s) or suppliers of materials to the project.

Notification of sub-contractor(s) or suppliers shall in no way release the Contractor from any or all responsibility relating to work or liabilities relating to this contract.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION E
DAMAGE TO SERVICE LINES

The Contractor shall immediately stop all work to repair any service lines that are damaged during construction. The construction process shall not commence until the damaged lines are satisfactorily repaired and the repair approved by the Engineer or his representative.

The Contractor shall also be responsible for any plumbing damage caused by foreign objects entering a broken water line.

The Contractor shall also be responsible for other damage caused by broken service lines including, but not limited to, damage to equipment due to interrupted service. This does not apply to cable television deemed by the Engineer to have been incorrectly installed.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION F
CONTROL OF WORK
CONSTRUCTION STAKES, LINES AND GRADES

In the context of this Special Provision, the word "Engineer" is used to mean The Shelby County Engineer or a duly assigned designee.

The word "**Department**" is used to mean The Shelby County Engineering Department or its assigned designee.

The Contractor shall be required to make all calculations involved and to furnish and place all layout stakes, including those required for the location of public utility service lines (waterlines, sewer lines, gas lines, etc.) utility fixtures and right-of-way, as shown on the plans or as directed by the Engineer.

The Contractor shall be responsible for the placement and preservation of adequate ties to all control points, whether established by the Contractor or found on the project, which are necessary for the accurate re-establishment of all base lines or center lines shown on the plans. The contractor shall also be required to provide ROW or slope stakes, ditch or stream bed grades, or other essential survey staking as directed by the Engineer.

Dimensional details, including elevations, shown on the plans shall be checked by the Contractor to assure accuracy of the required layout. Any errors and apparent discrepancies found in previous surveys, or in either the specifications or the special provisions, shall be called to the Engineer's attention by the Contractor for correction or interpretation prior to proceeding with the work. All stakes, references and batter boards, including original, additional or replacement, which may be required for the construction operations, shall be furnished, set and properly referenced by the Contractor. The Contractor shall be solely and completely responsible for the accuracy of the line and grade of all features of the work.

The County reserves to itself the responsibility for making all measurements and surveys that involve the determination of final pay quantities, including original and final cross-sections for all earthwork.

The Contractor shall furnish to the Engineer copies of all data used in establishing line and grade for all features of work, including, but not limited to, the data used in setting and referencing all stakes and layout marking used by the Contractor.

When requested by the Engineer, the Contractor shall provide safe facilities for convenient access by the Department forces to control points, batter boards and references.

All staking shall be performed by qualified engineering or surveying personnel who are trained, experienced and skilled in construction layout and staking of the type required under the contract and who are acceptable to the Engineer. The personnel shall perform this staking under the direct supervision of a Tennessee licensed professional engineer, of engineering background experienced in the direction of such work and acceptable to the Engineer. A certified listing of all personnel

used in the performance of the lines and grades on the project shall be submitted to the Engineer before any staking commences.

The Contractor shall not engage the services of any person or persons who are or have been, during the period of the contract, in the employment of the Shelby County Engineer's Office (except regularly retired employees) without the written consent of the Engineer. In addition, the Contractor shall not engage the services of any firm or any principal officer or employee of a firm that participated in the development of the design of the project to be constructed under this contract.

The Engineer may check the control of work, as established by the Contractor, at any time during the progress of the work. The Contractor will be informed of the results of these checks, but the County, by so doing, in no way relieves the Contractor of responsibility for the accuracy of the layout work. The Contractor shall correct or replace, as required, any deficient layout and construction work which may be the result of inaccuracies in layout operations or of failure to report inaccuracies in layout operations or failure to report inaccuracies found in work done by the Department or by others. If, as a result of these inaccuracies, the Department is required to make further studies, redesign, or both, all expenses incurred by the Department due to such inaccuracies may be deducted from any monies due the Contractor.

The Contractor shall furnish all necessary personnel, engineering equipment and supplies, materials, transportation, and work incidental to the accurate and satisfactory completion of this work.

Basis of Payment

No separate payment will be made for these services. The costs of these services are to be included in the cost of other items contained within the bid.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION G
COMPLAINTS

The Contractor shall ensure that all complaints are resolved promptly. Upon notification by the Engineer or his representative, the Contractor shall respond immediately to correct the problem, regardless of severity.

The Contractor shall inform the Engineer in writing as to when and how the complaint was resolved.

If any complaint is not resolved to the satisfaction of the Engineer within 48 hours of receipt of the complaint by the Contractor, then all other work shall cease upon order of the Engineer or his representative until the complaint is resolved to the satisfaction of the Engineer.

It will be the Engineer's responsibility to handle all communication with private property owners and residents.

The Engineer will have the authority to schedule a conference involving the Contractor, the property owner, and the Engineer for the purpose of clarifying the nature of the complaint.

The Engineer will mediate all disputes and his decision will be final. Under no circumstances shall the Contractor negotiate directly with a property owner.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION H
TRAFFIC SIGNAL TECHNICIAN

At the preconstruction conference the Contractor shall identify the Traffic Signal Technician(s) to be on site during the installation, start up, and field testing of all traffic control devices on this project.

Qualifications. The Traffic Signal Technician(s) shall be certified by the International Municipal Signal Association (IMSA) Traffic Signal Certification Program as Traffic Signals Level 1 or higher, indicating they are qualified to perform the specific technical tasks associated with that certification by virtue of their technical knowledge and experiences.

Responsibilities. The Traffic Signal Technician(s) shall:

1. Conduct or oversee all installation and testing of traffic signal equipment.
2. During the 30 day Operational Testing period, before the traffic signal equipment has been accepted but is operational, be available on a twenty-four hour basis with access to all manpower, equipment and materials needed to maintain and repair traffic signal devices. In addition, during this period be available on the site within 45 minutes after notification of an emergency situation, prepared to effect corrective measures immediately.
3. Maintain documentation to become part of the final project records of the traffic signal equipment installed including equipment settings, field modifications of factory equipment, and deficiencies found and how they were corrected.
4. Prepare and submit for approval proposed major revisions to the plans or specifications in accordance with the procedures outlined in the contract documents.
5. Prepare and submit as-built plans indicating any changes to the traffic signal equipment made during construction, implementation, or testing.
6. Be present at all traffic signal acceptance testing and field tests.
7. Work cooperatively with the Engineer or Inspector throughout the project and in accordance with Subsection 730.23.

Failure to Comply. Any work that is performed or constructed during the absence of Engineer or Inspector, without such permission having been so granted, either expressly or by implication, will be subject to rejection.

Any work that is performed or constructed during the absence of the Traffic Signal Technician without the permission of the Engineer or Inspector will be subject to rejection.

In the event that immediate action is not taken to correct an emergency situation, a deduction shall be made from monies due the Contractor. In addition, if deemed necessary by the Engineer due to lack of response by the Contractor, City Maintenance Forces may be mobilized to correct the emergency situation with all costs of the corrective action being assessed against monies due the Contractor. The preceding assessments shall be in addition to any liquidated damages which may be assessed in accordance with Subsection 108.07.

Basis of Payment. All cost for the Traffic Signal Technician is to be included in the cost for other traffic signal items.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION I
RADAR DETECTION EQUIPMENT

I. DESCRIPTION

This section specifies the minimum requirements for Radar Detection Systems (RDS) furnished and installed on this project. The work shall consist of providing all labor, materials, equipment, and incidentals necessary to furnish, install, test, and operate a RDS System.

The RDS will provide roadway monitoring capabilities via microwave radar detectors transmitting data over wireline network equipment specified in these project special provisions. The data provided includes, but is not limited to, lane occupancy, speeds, classification, and volume.

II. MATERIALS

A. Microwave Transmission

- 1) The microwave radar detector shall transmit on a frequency band of 24.125 GHz \pm 25 MHz or another approved spectral band. It shall comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules or the appropriate Spectrum Management Authority. The RDS shall not interfere with any known equipment. Transmitter power shall not exceed 5 watts.

B. Area of Coverage

The field of view of the RDS shall cover an area defined by a beam its maximum detection range shall be as follows:

- | | |
|-------------------------|--------------------|
| 1) Elevation Beam Width | 40 degrees or more |
| 2) Azimuth Beam Width | 10 degrees or less |
| 3) Range | 10 to 250 feet |

C. Detection Zones

- 1) The minimum number of detection zones defined shall be no less than eight (8) lanes simultaneously.
- 2) For zero setback configurations, the minimum number of detection zones defined shall be no less than four (4) lanes simultaneously.

D. Capabilities

The RDS shall be a true presence detector. It shall be suitable for mounting on roadside poles or on overhead structures and provide the following:

- 1) Presence indication of moving or stopped vehicles in either direction in its detection zones, provided by contact closure to existing controllers.
- 2) Traffic data, periodically accumulated over user defined time intervals in a 30 to 900 sec range, shall be transmitted via 10/100 Base-T Ethernet over IP communications lines to an Ethernet switch at a controller location or Ethernet terminal server as shown in the Plans.
- 3) Traffic data shall be available simultaneously with detection zone contact closures and IP communications.

- 4) Side-fired configuration data shall include the following in each of up to eight (8) detection zones (lanes):
 - a) Volume
 - b) Lane occupancy
 - c) Average speed
 - d) Vehicle classification by length in a minimum of 3 user defined classes.
- 5) Side-fired configuration at zero setback shall include the following in each of up to four (4) detection zones (lanes):
 - a) Volume
 - b) Lane occupancy
 - c) Average speed
 - d) Vehicle classification by length in a minimum of 3 user defined classes.
- 6) RDS in forward-looking configuration shall monitor traffic in one lane and be capable of providing the following data:
 - a) Volume, occupancy, average speed and travel direction in the lane b) Per vehicle speed and direction
 - c) Binning of Volume data in up to 7 speed bins
- 7) RDS shall allow the user to define the contents of transmitted data.
- 8) RDS shall provide Fail-Safe indication by a contact pair over IP communications.
- 9) Minimum 4 Mb of internal data storage capacity
- 10) The RDS unit shall have an integrated TCP/IP Ethernet communication interface
- 11) The RDS unit shall support the latest NTCIP 1209 protocol.
- 12) Furnish the unit with the required software for data collection, processing, configuration and set-up, and data logging and retrieval. An operator shall be able to use the software to set detector count periods, sensitivities, and other operational features and parameters. The software must be capable of providing both manual and automatic setup and calibration.

E. Measurement Accuracy

- 1) The following error levels shall be achievable and demonstrated during testing: Parameter

	<u>Error Percentage</u>
Presence	<input type="checkbox"/> 5%
Volume	<input type="checkbox"/> 8%
Lane Occupancy	<input type="checkbox"/> 10%
Average Speed	<input type="checkbox"/> 10%
Length Classification limits	<input type="checkbox"/> 10%
Time event	5 ms
Input Voltage	<input type="checkbox"/> 2%

F. Environmental Conditions and Protection

Except as stated otherwise herein, the equipment shall meet all its specified requirements

during and after subjecting to any combination of the following:

- 1) Ambient temperature range of -37°C to +74° C
- 2) Relative humidity from 5 to 95 percent, non-condensing
- 3) Winds up to 100 mph (sustained) with a 30% gust factor
- 4) Rain and other precipitation up to 4 inches/hr
- 5) Power surge of □ 1kV (rise time = 1.2 □sec, hold = 50□sec) applied in differential mode to all lines, power and output, as defined by IEC 1000-4-5 and EN 61000-4-5 standards.
- 6) Printed circuit boards shall be conformal coated for protection against humidity.
- 7) Except as may be otherwise stated herein for a particular item, no item, component, or subassembly shall emit a noise level exceeding the peak level of 55 dB when measured at a distance of three feet away from its surface.
- 8) The microwave radar detector shall be resistant to vibration in accordance with IEC 68-2-30 (test Fc), NEMA TS-1 (Section 2.1.12), or approved equivalent.
- 9) The microwave detector shall be resistant to shock in accordance with IEC 68-2-27 (test a), NEMA TS-1 (Section 2.1.13), or approved equivalent.

G. Mechanical

- 1) The microwave radar detector shall be enclosed in a rugged weatherproof box and sealed to protect the unit from wind up to 100 mph, dust and airborne particles, and exposure to moisture (NEMA Type 3R or 4X enclosure; IP-65).
- 2) Max. weight of the microwave radar detector assembly: 7 pounds
- 3) The mounting assembly shall have all coated steel, stainless steel, or aluminium construction, and shall support a load of 20 pounds or more. The mounting assembly shall incorporate a ball-joint, or other approved mechanism that can be tilted in both axes and then locked into place, to provide the optimum area of coverage.

H. Electrical

- 1) The RDS unit shall be operable from 12 - 24 VDC.
- 2) The RDS unit shall include Power Management features, allowing remote shutdown or cyclical shutdown of the unit.
- 3) The RDS unit shall include a Low-Voltage disconnect feature for battery protection.

I. Cables

- 1) Cable connection and termination pin-out on all cables shall be in accordance with the manufacturer's recommendations.
- 2) Connection between the RDS and the cabinet equipment shall be provided by a single RDS harness cable that is MS-connector terminated at the RDS and terminated to the RDS communications wiring module in the equipment cabinets. No splices are permitted in the harness cable. The cable shall provide power, RS-232 or RS-485 serial data, and CAT5e interface to the RDS unit.
- 3) The RDS harness cable shall be outdoor wet/dry rated UV-resistant and provide multiple twisted pairs of stranded AWG #22 wire for RS-232 or RS-485 serial data and AWG #24 wire for CAT5e data. Both shall have a common shield rated at 300V with a temperature rating of 105°C.

- 4) The MS connector pins must be crimped to the cable conductors and assembled and tested by the manufacturer prior to installation and pulling of cable on site.

J. Electrical Isolation and Surge Protection

- 1) All power lines, contact closures, serial and Ethernet ports shall be surge protected within the unit. Contact closures and the serial and Ethernet ports shall be isolated.

K. Data Interface

Data communications shall be full duplex asynchronous, configurable as:

- 1) RS-232/485 port at rates from 2,400 up to 115,200 bits per second.
- 2) CAT5e transmission over 10/100 Base-T Ethernet
- 3) Serial data format shall be standard binary 8 bits data, 1 stop bit, No parity.
- 4) Both point-to-point and multi-dropped configurations shall be supported.

L. RDS Cable

- 1) Provide RDS Cable that is a composite power/CAT5e/RS-232 or RS-485 limited tray cable with UV-resistant PVC or polyethylene outer jacket rated for wet/dry underground use when RDS poles are separated from an equipment cabinet, as shown in the Plans. RDS Cable shall contain a minimum of two shielded twisted pairs of communications conductors designed for RS-232/485 data signaling, two low voltage power conductors, and a standard CAT5e cable with four twisted pairs of communications conductors. Individual conductor insulation ratings shall be equal or greater than the outer jacket ratings.
- 2) Communications conductors shall be a minimum of two twisted pairs and one shield drain wire of #22 AWG 7-strand tinned copper conductors with a continuous foil or braid shield. RS-232/485 signal ground shall be provided by the shield drain wire, an additional conductor, or an additional shielded pair, in accordance with the RDS unit manufacturer's recommendations. Twisted pairs shall be identified by separate insulation colors. Communications pairs shall be individually or commonly shielded.
- 3) CAT5e conductors shall consist of four twisted pairs of #24 AWG strand tinned copper conductors with a continuous foil or braid shield. Twisted pairs shall be identified by separate insulation colors.
- 4) Low voltage power conductors shall be two #14 AWG 19-strand tinned copper conductors. One conductor shall have red insulation and the other conductor shall have a black insulation. Low voltage power conductors shall not be shielded in common with the communications pairs.
- 5) Provide RDS cable that is 43 to 50 feet in length.
- 6) Provide cable labels that meet the following requirements:
 - a) Self-coiling wrap-around type
 - b) PVC or equivalent plastic material with UV and fungus inhibitors
 - c) Base materials and graphics/printing inks/materials designed for underground outside plant use including solvent resistance, abrasion resistance, and water absorption
 - d) Minimum size of 2.5 inches wide by 2.5 inches long
 - e) Minimum thickness of 0.010 inches
 - f) Orange label body with pre-printed text in bold black block-style font with minimum text height of 0.375 inches.

III. Installation Requirements

A. RDS Unit

- 1) The RDS shall be mounted in side-fired configuration on poles as shown in the Plans, using mounting brackets. The brackets shall be attached with approved 3/4-inch wide stainless steel bands. Unless otherwise noted, RDS shall be mounted on new aluminum poles.
- 2) The Contractor shall install the detector unit on a pole at the manufacturer's recommended height above the road surface so that the masking of vehicles is minimized and that all detection zones are contained within the specified elevation angle as suggested by the manufacturer. Where mounting on poles adjacent to the roadway, the detector unit shall be mounted for zero-setback configuration as suggested by the manufacturer.
- 3) When installing a detector near metal structures, such as building, bridges, or sign supports, the sensor shall be mounted and aimed so that the detection zone is not under and does not pass through any structure to avoid distortion and reflection.
- 4) The RDS mode of operation, detection zones, and other calibration and set up will be performed using a Microsoft Windows-based software and a Notebook PC. The software shall allow verification of correct setup and diagnostics. It shall include facilities for saving verification data and collected data as well as saving and retrieving sensor setup from disk file.
- 5) Composite RS-232/CAT5e/power or RS-485/CAT5e/power cable shall be run from the detector to the cabinet through the aluminum pole. As per the City of Memphis standard specifications for metal poles, a 2 inch hole shall be installed 2 feet 6 inches from the top of the pole and shall be used for running composite cable. Should the location of the pre-installed hole not satisfy the mounting height of the detector, the Contractor shall drill a minimum 2 inch hole and install grommet at 4 inches below the mounting bracket of the detector. The composite cable shall enter the pole mounted cabinet through a 2 inch conduit into the cabinet base as detailed in the cabinet specifications. For base mounted cabinets, the composite cable shall enter through the conduit stubout as detailed in the cabinet specifications.
- 6) Composite RS-232/CAT5e/power cable shall be used for cable runs that are less than or equal to 50 feet in distance. Composite RS-485/CAT5e/power cable shall be used for cable runs that are more than 50 feet in distance.
- 7) Unused conductors in the RDS unit harness cable shall be grounded or un-terminated in the cabinet in accordance with the manufacturer's recommendations. Un-terminated conductors shall be individually doubled back and taped, then loosely bundled and secured.
- 8) Contractor shall install a local / remote disconnect switch or a RDS communications wiring module.

B. RDS Cable Shipping and Delivery

- 1) Package the cable for shipment on reels. Each package shall contain only one continuous length of cable. Construct the packaging so as to prevent damage to the cable during shipping and handling.
- 2) Seal both ends of the cable to prevent the ingress of moisture.
- 3) Include with each reel a weatherproof reel tag attached identifying the reel and cable that can be used by the manufacturer to trace the manufacturing history of the cable. Include with each cable a cable data sheet containing the following information:
 - a) Manufacturer name
 - b) Cable part number
 - c) Factory order number
 - d) Cable length

- e) Factory measured continuity and attenuation of each conductor and shield

C. RDS Cable Installation

- 1) Do not exceed the maximum recommended pulling tension during installation as specified by the cable manufacturer. Continuously monitor pulling tensions with calibrated measuring devices, such as a strain dynamometer.
- 2) Before cable installation, carefully inspect the cable reels and reel stands for imperfections or faults such as nails that might cause damage to the cable as it is unreeled.
- 3) Take all necessary precautions to protect reeled cable from vandals or other sources of possible damage while unattended. Any damage to reeled cable or the reel itself shall necessitate replacement of the entire cable section.
- 4) Whenever unreeled cable is placed on the pavement or surface above a pull box, provide means of preventing vehicular or pedestrian traffic through the area in accordance with the approved Maintenance of Traffic provisions.
- 5) Keep the cable continuous throughout the pull. Terminate the cable only in equipment cabinets on terminal blocks. Cable splices are not permitted.

D. RDS Cable Storage and Labeling

- 1) Properly store all cable to minimize susceptibility to damage. Maintain proper bend radius, both short and long term, during cable storage. Storage coils shall be neat in even length coils, with no cross over or tangling. Storage coils of different cables shall be kept completely separate. Storage coils shall be secured to cable racking hardware with tie wraps, Velcro straps, or non-metallic cable straps with locking/buckling mechanism. Do not use adhesive or self-adhering tapes, metal wires and straps, or rope/cord.
- 2) Unless otherwise noted on the plans, the following are the requirements for cable storage for underground applications:
 - a) Cable in pull box – 20 feet
- 3) Install cable labels on all RDS Cables. Clean the installed cable of all dirt and grease before applying any label.
- 4) Label all cables in or at every location where the cable is exposed outside of a conduit, inner-duct, or pole. As a minimum, install cable labels in the following locations:
 - a) Within 12 inches of every cable entry to a pull box or equipment cabinet.
 - b) Every 10 feet for the entire length of cable in any storage coil in pull boxes.

E. RDS Test Requirements

- 1) General Requirements
 - a) The Contractor shall conduct a project testing program for RDS units as required in Section 1.5 of this TSP. The project testing program for RDS units shall include but is not limited to the additional specific requirements in this subsection.
 - b) All test results shall confirm physical and performance compliance with this TSP.
- 2) Bench Test Component (BTC)
 - a) During the bench test, the contractor must demonstrate proper operation of the RDS through the 2nd serial port on the CCTV Video Encoders. Contractor is responsible for ensuring compatibility between the devices and for ensuring the data can be transmitted from the RDS to the encoder at the distances shown on the plans.
- 3) Bench Test System (BTS)

- a) During the bench test system, the contractor must demonstrate the configuration of the device and demonstrate the required operational characteristics of the device including the counting of volume and speed. The bench test system must include operation through the maximum total length of RDS Cable required in this project.
- 4) Standalone Acceptance Test (SAT)
 - a) During the standalone tests, the contractor must demonstrate the accuracy requirements specified in Section II E.

F. RDS Cable Test Requirements

- 1) General Requirements
 - a) The Contractor shall conduct a project testing program for all RDS Cable. The project testing program for RDS Cable shall include but is not limited to the additional specific requirements in this subsection.
 - b) All test results shall confirm physical and performance compliance with this TSP.
 - c) Provide the tentative date, time and location of RDS comm. cable testing no less than 7 days in advance to the test. Provide confirmed date, time and location of RDS Cable testing no less than 48 hours before conducting the test.
 - d) Provide test results documentation in printed (3 copies) format. Printed copies shall be bound and organized by cable segment.
 - e) Provide all test results in English units of measure of length.
 - f) Submit all test results documentation to the Engineer within 14 days of completion of the tests. The Engineer will review test documentation in accordance with the Submittal Review Process.
 - g) All RDS Cables under test shall be removed from all wiring termination devices until testing is completed. All RDS Cables conductors shall be connected to ground immediately after testing to ensure elimination of all capacitive charges and potentials.
- 2) Pre-Installation Test (PIT)
 - a) Perform a PIT on all RDS Cables prior to any cable removal from the shipping reels. Perform a PIT on each cable reel delivered to the job site.
 - b) The PIT for RDS Cables shall include but is not limited to:
 - i) A visual inspection of each cable and reel
 - ii) A Continuity Test on all conductors and shield in the cable.
- 3) Standalone Acceptance Test (SAT)
 - a) Perform a SAT on all RDS Cables on this project after field installation is complete but without cable termination.
 - b) An SAT for each conductor and each shield in each cable shall include but is not limited to Continuity Tests and Insulation Resistance Tests.
 - c) All RDS comm. cables shall be tested from termination point to termination point. Complete all RDS Cable SATs for all cables prior to implementing any RDS communications or power service.
 - d) All test results shall confirm compliance with this TSP and the manufacturer's published specifications.
 - e) Test documentation shall include but is not limited to:
 - i) RDS Cable Identification

- ☐ Cable ID and Location – physical location (device ID and station number of equipment cabinet) and conductor/pair/shield ID for both the beginning and ending point.
 - ☐ Operator Name
 - ☐ Engineer's Representative
 - ☐ Date & Time
- iii) Setup and Test Conditions Parameters
- ☐ Battery charge and proper operation of ohmmeter
 - ☐ Battery charge and proper operation of insulation resistance tester
 - ☐ Ambient Temperature
- iv) Test Results for Continuity Test
- ☐ Conductor continuity
 - ☐ Resistance (ohms)
 - ☐ Measured Length
- v) Test Results for Insulation Resistance Test
- ☐ Measured Cable Length
 - ☐ Insulation resistance (exceeds manufacturer's specifications for at least 60 seconds.)

G. RDS Software Integration

For each supplied RDS unit, the contractor is responsible for adding the RDS unit to the Central Data Collection software located at the City Hall server room. The central software shall communicate with the installed RDS unit successfully and reliably.

IV. Measurement

A. Radar Detection System

The Radar Detection System (RDS) will be measured in units of each and paid for at the contract price per each. The price bid shall include furnishing, installing, system integration, and testing of a complete RDS including the unit, the RDS harness cabling, interconnection wiring to the Ethernet switch or terminal server port, connections to support structures (includes all incidental components, attachment hardware, mounting brackets, mounting arms, bolts, or any other items to mount the RDS as intended), satisfactory completion of testing and training requirements and all work, equipment, and appurtenances as required to effect the full operation including remote and local control of the RDS site complete in place and ready for use. The price bid shall also include all system documentation including: shop drawings, operations and maintenance manuals, wiring diagrams, block diagrams, and other material necessary to document the operation of the RDS. This price shall be full compensation for all labor, tools, materials, equipment, and incidentals necessary to complete the work.

B. RDS Cable

RDS Cable will be measured in units of each and paid for at the contract price per each. The price bid shall include furnishing, installing, system integration, and testing of a complete RDS cable installation with operational RDS units and shall include cable labels and all ancillary and incidental materials, testing, documentation and all labor and equipment necessary to complete the work. No measurement for payment will be made for cable storage amounts in excess of that required in these special provisions or the Plans. This price shall be full compensation for all labor, tools, materials, equipment, and incidentals necessary to complete the work.

V. Payment

The contract unit price shall be full compensation for all work specified in this section.

Payment will be made under:

Item Number	Description	Unit
725-10.12	Radar Detection System	EACH
725-10.13A	RDS Cable (Power, Cat5e, and RS-232 Composite)	EACH

Radar Detection System (RDS) will be paid per each as follows:

- 1) 60% of the contract unit price upon completion of field installation.
- 2) Additional 30% of the contract unit price upon approval of Stand Alone Site Test results.
- 3) Final 10% of the contract unit price upon Final System Acceptance.

RDS Cable will be paid per each as follows:

- 1) 90% of the contract unit price for complete installation of cables.
- 2) Final 10% of the contract unit price upon Final System Acceptance.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION J
UTILITY CABINET

I. Description

This section specifies the minimum requirements for equipment cabinets furnished and installed on this project as shown in the Plans. The cabinet will provide a protective outdoor housing enclosure in which to install field hardware required for ITS devices to communicate with the TOC. Major elements of the equipment cabinet include the cabinet housing and equipment mounting hardware, interior wiring and termination facilities, power supplies, electrical accessories, and field installation.

II. Materials

A. General

- 1) Furnish only new equipment and materials.
- 2) Furnish equipment cabinets and integral materials recommended by the manufacturers for outside plant use and the intended application. This requirement includes wiring and electrical materials and configurations (including connector pin-outs) that are wholly or partially related to the field device applications (Solar School Flashers, Radar Detection Systems (RDS), etc.).
- 3) Furnish and configure equipment cabinets to be installed at locations as shown in the Plans. Furnish and configure all equipment and materials for each specific location as shown in the Plans.
- 4) Provide electrical system and components with UL-listings.
- 5) Unless otherwise specified, provide wire and cable with stranded copper conductors, 75°/90° Celsius wet/dry rated insulation, and sized for the maximum voltage and current in the circuit.
- 6) Terminal blocks and component terminals shall be nickel-plated copper, copper alloy, or brass.
- 7) Terminal blocks shall have voltage and current ratings greater than the ratings of the wires that are terminated, be able to terminate wires from #8 AWG to #4 AWG wiring, and shall be assembled into housing enclosures such that all exposed surfaces are touch-safe. Conductor fastening screws shall be captive. Terminal block housings shall be colored as follows:
 - a) 120 VAC line/hot: black
 - b) 120 VAC neutral: white
 - c) 24 VDC positive: red
 - d) TCP/IP Ethernet communications: blue
 - e) Ground: green or green/yellow
- 8) Provide door locks for all cabinet doors. Provide one key with each cabinet.
- 9) Fans and Ventilation (For Primary RDS Cabinet Only).
 - a) All primary RDS cabinets shall be furnished with a thermostatically operated roof-mounted electric exhaust fan. All cabinets shall have fans rates at 200 cubic feet per minute at 100 degrees F. The fan shall be equipped with long-lasting permanently lubricated bearings for constant unattended operation. The exhaust fan shall be mounted

in a rain-tight housing attached to the cabinet top. The thermostat shall have an adjustable turn on at temperatures ranging from 70 to 160 degrees F.

- b) In all primary RDS cabinets, the inlet ventilation openings shall be located in the lower part of the cabinet door, shall be screened and fitted with a fiberglass, furnace-type replaceable air filter of adequate size and capacity to pass a volume of air equal to or greater than the rated capacity of the fan. The air filter supplied shall be a type and size which is readily available commercially.
- 10) Provide cabinet ID labels on all cabinets inside and outside. Labels shall meet the following minimum requirements:
- a) Labels shall be flat black lettering on a white background. Lettering shall be a minimum of 1/2 inch in height for inside the cabinet door, and 1 inch in height for outside the cabinet door.
 - b) Labels shall be manufactured from pre-coated adhesive backed reflective sheeting material meeting the minimum requirements of AASHTO M268 Type 1.
 - c) The cabinet ID labels shall be one continuous adhesive sheet. Contact City of Memphis Traffic Signal Maintenance Department for cabinet ID and wording.
 - d) Inside the cabinet, cabinet ID sticker shall be installed on the inside of the cabinet door. The cabinet ID sticker shall be printed on labeling tape using labeling machine.
 - e) Outside the cabinet, the Contractor shall use pre-made mailbox letters/numbers. The cabinet ID sticker shall be installed on the outside, lower-left corner of the cabinet door.
- 11) Provide a voltage label on all cabinets or enclosures in accordance with the NEC labeling requirements. Voltage labels shall meet the following minimum requirements:
- a) Labels shall be flat black lettering on a reflective yellow background. Lettering shall be a minimum of 1 inch in height.
 - b) Labels shall be manufactured from pre-coated adhesive backed reflective sheeting material meeting the minimum requirements of AASHTO M268 Type 1.
 - c) Labels shall include the voltages entering the cabinet and shall be one continuous adhesive sheet. Examples are "120VAC" or "24VDC".
 - d) Labels shall be installed on all cabinet doors.

B. Cabinet

- 1) Cabinets will be used to support RDS units and be of a battery compartment design. The primary RDS cabinet shall have one center mount shelf.
- 2) Provide a cabinet intended for outdoor use with a minimum NEMA 3R rating.
- 3) The cabinet enclosure shall be manufactured from 0.125-inch aluminum.
- 4) The primary RDS cabinet shall provide a minimum of one ventilation louver on at least two sides. Any louver opening greater than 3/16 inch in any dimension shall be screened to prevent insect entry.

- 5) The cabinet shall be intended for strapped pole-mounting; provide all mounting hardware necessary including 1/2-inch stainless steel mounting straps.
- 6) For primary RDS cabinet, provide a cabinet enclosure with a maximum dimensions of 26 inches (H) by 16 inches (W) by 14 inches (D).
- 7) Cabinet door shall reveal the entire front opening of the cabinet for accessibility. The hinge shall be a piano hinge with stainless steel pin and installed on the right side of cabinet.
- 8) Include a single-piece 0.125-inch aluminum back panel covering no less than 90% of the cabinet back wall. Back panel shall be affixed to the enclosure with threaded fasteners and shall be removable from the enclosure with hand tools only and without requirement to remove the cabinet door, mounting straps, or any other components other than communications or device wiring.
- 9) Provide on the back panel a grounding lug capable of terminating #6 AWG wire and directly bonded to the back panel.
- 10) All cabinets supporting RDS units shall be identical in manufacture and assembly regardless of the number of RDS units shown in the Plans at a specific location.
- 11) All cabinets supporting RDS units shall provide a remote RDS communications wiring module that includes the following:
 - a) Component installed on the center mount cabinet shelf (for primary RDS cabinet only)
 - b) Strain relief brackets for the RDS cable(s) and the RDS unit harness cables
 - c) Parallel-connection single-stage surge suppressors for the RS-232/CAT5 data signal for the RDS units with integral or separate terminals for a minimum of three RDS cables and connection wiring to the RDS local/remote communications disconnect module.
 - d) Parallel-connection zero-power dissipation surge suppressor for the 12-24VDC power supply for the RDS units with integral or separate terminals for a minimum of three RDS cables and two RDS unit harness cables.
 - e) Local/remote communications disconnect module for the RS-232 data signal that includes the following:
 - i) Terminal facilities for one remote RDS cable connection from the surge suppressor, bus-connected to two separate local/remote disconnect switches, one for each RDS unit that simultaneously makes/breaks all of the RS-232/CAT5 signal lines for a given RDS unit.
 - ii) Separate terminal facilities for each of the RDS unit harness cables on the local side of the local/remote disconnect switch.
 - iii) Separate DB9 connectors with gold-plated pins/sockets and shell for each of the RDS units, bus-connected with the RDS unit harness cable terminals on the local side of the local/remote disconnect switches. Provide protective covers for DB9 connectors.
 - iv) Provision for installing RS-232/CAT5 terminating resistors on the terminals on the remote side of the local/remote disconnect switch. Provide terminating resistors at cabinet locations in accordance with the RDS manufacturer's recommendations.

- v) Alternately, provide two separate local/remote communications disconnect modules, one per RDS unit, with jumper wiring between the remote side terminals of the two modules.
- f) Connection/jumper wiring between the surge suppressors and the local/remote communications disconnect module(s) shall be of the same conductor size, type, and insulation color as in the RDS cable.

III. Installation Requirements

A. General

- 1) Install and configure cabinets as shown in the Plans, including installations and dimensions given for pole-mounting in relationship to the surrounding grade.
- 2) Bond all cabinets to the pole grounding lug with minimum #6 AWG stranded copper bare or green-insulated cabinet grounding wire.
- 3) Do not install electrical service or electronic devices in the cabinet or connect to the cabinet until ground testing for the pole or structure has been successfully completed and accepted, and the cabinet ground connection has been installed.
- 4) Drill a 2 inch hole in the new metal pole a minimum of 6 inches below the bottom of the pole mounted cabinet. Install a flexible 2 inch conduit run from the hole into the base of the cabinet. The flexible 2 inch conduit is to be installed at a radius that accommodates a minimum 6 strand fiber optic cable. A grommet or similar finishing is to be installed around the 2 inch hole to create a weatherproof seal between the conduit and the pole.

B. Project Testing

- 1) General Requirements
 - a) The Contractor shall conduct a project testing program for all equipment cabinets. The project testing program for equipment cabinets shall include but is not limited to, the additional specific requirements in this subsection.
 - b) All test results shall confirm physical and performance compliance with this TSP.
 - c) Submit all test results documentation to the Engineer within 14 days of completion of the tests. The Engineer will review test documentation in accordance with the Submittal Review Process.
- 2) Standalone Acceptance Test (SAT)
 - a) Perform a SAT on all equipment cabinets on this project after field installation is complete, including, but not limited to, all field devices to be installed in or connected to that given cabinet.
 - b) A SAT for a given equipment cabinet shall only be performed in conjunction with the SAT for all devices installed in or connected to that given cabinet.
 - i) Visual inspection of installation.
 - ii) Inspection of cabinet documentation.
 - iii) Functional test of all cabinet equipment, including circuit breaker, receptacles, fan and thermostat, and lights and door switches.
 - iv) Measurement of DC power supply operating under full load.

IV. Measurement

Cabinets will be measured in units of each and paid for at the contract price per each. The price bid shall include furnishing and installing the equipment cabinet and all related material and equipment specified in the Plans and this TSP, and all labor, system integration, testing, system documentation and miscellaneous materials necessary for a complete and accepted installation. The unit price shall also include but is not limited to, the cabinet and all interior materials, mounting hardware foundations, protection bollards, external conduit entrances including conduit bodies and nipples, electrical service and pole grounding terminations. This price shall be full compensation for all labor, tools, materials, equipment and incidentals necessary to complete the work.

V. Payment

The contract unit price shall be full compensation for all work specified in this section.

Payment will be made under:

Item Number	Description	Unit
725-10.11	Utility Cabinet (RDS, Primary)	EACH
725-10.14	Utility Cabinet (RDS, on Secondary Pole)	EACH

Equipment Cabinet will be paid per each as follows:

- 1) 70% of the contract unit price for complete installation of equipment cabinet and all interior components, electrical service feed (activated), interior cabinet components, all conduit entrances, grounding connection, and testing.
- 2) Additional 20% of the contract unit price for completion of Stand Alone Site Test of all field devices housed or connected to the equipment cabinet.
- 3) Final 10% of the contract unit price upon Final System Acceptance.

SHELBY COUNTY, TENNESSEE
SPECIAL PROVISION K
CENTRAL HARDWARE, SOFTWARE AND COMMUNICATIONS EQUIPMENT

I. DESCRIPTION

This special provision describes central hardware, software, and communications equipment to be installed in the City of Millington Traffic Management Center (TMC) in the Economic Development Building. The work in this item includes all integration and configuration required to produce an end-to-end working system that will function and communicate with all of the devices on the fiber optic network installed and connected to as part of this project.

II. MATERIALS

A. Rack Mounted Workstation Computer

The Contractor shall furnish and install a rack mounted workstation computer in the City of Millington TMC in the Economic Development Building. The workstation computer will allow the City Engineer to manage and monitor the field equipment installed as part of this project. The workstation shall have the following minimum hardware and software configuration. Exceptions shall be approved in advance by the Engineer:

- Rack mountable in standard EIA 19" equipment rack (maximum 3RU)
- Intel Xeon Processor E5-2637 at 3.5 GHz (minimum)
- 16 GB of RAM
- Operating system: Windows 7 professional 64-bit, with installation media
- Two 1TB 7200RPM SATA 2.5" hard drives in RAID 1 configuration
- Two Gigabit Ethernet Network Interfaces (RJ-45)
- DVD-RW Drive
- Monitor, Keyboard, and mouse
- Rack mountable Power Backup UPS system rated 550VA or higher
- Microsoft Office license
- 3-year warranty

B. Managed Fiber Network Switch – "Ethernet Switch (Type B)"

The contractor shall provide a layer 3 Ethernet core switch. The core switch shall be modular. The rack mounted switch shall be installed in the City of Millington TMC in the Economic Development Building. The switch shall meet or exceed the following minimum requirements.

- Layer 3 core modular switch equipped with redundant fans and power supplies.
- Single-mode fiber Ethernet switch with at minimum the following ports: Twelve 10/100/1000 Base-T RJ-45 Ethernet ports, four 1000BASE-LX Single-Mode fiber optic ports with minimum transmitting distance of 10 km (LC connectors), and four 1000Base-LX Single-Mode fiber optic ports with minimum transmitting distance of 25 km (LC connectors).
- A minimum of four slots for switch/routing processor modules.
- Security:
 - a) DHCP Snooping
 - b) Dynamic ARP Inspection (DAI)
 - c) Secure Shell (SSH) Protocol, Kerberos, and Simple Network Management Protocol Version 3 (SNMPv3)
 - d) Bidirectional data support on the Switched Port Analyzer (SPAN) port
 - e) TACACS+ and RADIUS authentication
 - f) MAC Address Notification

- g) Port Security
- h) Bridge protocol data unit (BPDU) guard
- i) Spanning Tree Root Guard (STRG)
- j) IGMP filtering
- k) Dynamic VLAN assignment
- Standards: Supply a Layer 3 Ethernet switch that meets or exceeds the following standards:
 - a) IEEE 802.1s Multiple Spanning Tree Protocol
 - b) IEEE 802.1w Rapid Reconfiguration Spanning Tree Protocol
 - c) IEEE 802.1x
 - d) IEEE 802.3ad
 - e) IEEE 802.3af
 - f) IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports
 - g) IEEE 802.1D Spanning Tree Protocol
 - h) IEEE 802.1p CoS Prioritization
 - i) IEEE 802.1Q VLAN
 - j) IEEE 802.3 10BASE-T specification
 - k) IEEE 802.3u 100BASE-TX specification
 - l) IEEE 802.3ab 1000BASE-T specification
 - m) IEEE 802.3z 1000BASE-X specification
- Supply a Layer 3 Switch with the following Indications:
 - a) Per-port status LEDs: link integrity, disabled, activity, speed, and full-duplex indications
 - b) System-status LEDs: system, power supplies, fans, and bandwidth-utilization indications
- Backplane Bandwidth: 720-Gbps switch fabric, with an equivalent virtual switch processor supervisor engine
- Layer 3 Forwarding Performance: up to 400 mpps
- Redundant Components
 - a) Power supplies (1+1)
 - b) Replaceable clock
 - c) Replaceable fan tray
- High-Availability Features
 - a) Hot Standby Router Protocol (HSRP)
 - b) Rapid Spanning Tree Protocol (RSTP)
 - c) Multiple Spanning Tree Protocol (MSTP)
 - d) Per-VLAN Rapid Spanning Tree
 - e) Rapid Convergence Layer 3 protocols
- Environmental Parameters
 - a) Operating Temperature: 32 to 104°F (0 to 40°)

- b) Storage Temperature: -4 to 149°F (-20 to 65°C)
- c) Relative Humidity: 10 to 90%, non-condensing
- Mean Time Between Failure (MTBF): 7 years for system configuration
- Power Supply
 - a) Rated to handle input power of 115 VAC/60Hz (± 10%)
- 3 year warranty

III. PROCEDURES

A. Software and Hardware Integration

1) General Requirements

The contractor shall provide all incidental parts, including but not limited to Ethernet patch cables, fiber jumper cables, splice trays, fiber splicing, and fiber connectors, which are necessary to complete the system integration. Costs of such incidentals shall be included in bid price for item 725-24.51 – System Integration.

To minimize the down time of the traffic management software and equipment, the contractor shall submit a draft document to outline the construction sequences and anticipated construction durations for each individual step of the installation and integration process. The draft document shall be approved by the Engineer. The Contractor shall give two weeks of advance notice to the City of Millington Engineer and the City of Memphis Traffic Signal Maintenance Department before taking any active equipment off-line. The Contractor shall coordinate with City of Millington Information Technology representatives and the City of Millington Engineer for equipment installation locations.

Final location and mounting of all equipment shall be approved by the Engineer. When inside the building, the contractor shall route all cabling in raised floor, drop ceiling, cable raceways, or as approved by the Engineer.

The Contractor shall effectively ground all provided equipment in accordance with City of Memphis and City of Millington specifications and as approved by the Engineer.

2) Fiber Optic Cable Entrance and Routing

The Contractor shall install the proposed fiber optic cables to the City of Millington Economic Development building as detailed on the plans. The Contractor shall install the proposed fiber aerially from the existing utility pole adjacent to the building. The proposed cable shall enter the building through an existing entry. The contractor shall install risers and conduit as necessary to run the proposed fiber cable to the Server Room in the Economic Development building. The conduit and risers shall be included and paid for under 725-24.51 – System Integration.

Inside the Economic Development building, the contractor shall terminate the proposed 36-fiber cable at the proposed termination unit in the Server Room. Inactive fibers shall be capped and sealed in splice trays, and active fibers shall be terminated at the front panel with LC connectors. Any existing fiber optic or other type of communication lines in the Server Room shall not be disrupted and shall remain fully operational throughout the construction process.

3) TMC Hardware Installation and Integration

In the Server room, the contractor shall provide a new rack enclosure with front and rear doors, wheels, and a minimum size of 24U. The proposed rack shall be included in the bid price for item 725-24.51 – System Integration.

The Contractor shall install the proposed Fiber Termination Unit and Ethernet Core Switch on the proposed rack at the location specified by the IT representative or City Engineer. The Contractor shall terminate all strands of the 36-fiber drop cable at the proposed fiber termination unit on the rack. Active fibers shall be

clearly labeled on the front panel. The Contractor shall connect, configure, and fully integrate the new equipment. The proposed fiber termination unit shall have a minimum of four splice trays and 48 LC fiber connectors on the front panel. The Fiber Termination Unit shall be included in the bid price for item 725-24.51 – System Integration.

The Contractor shall connect, configure, and fully integrate the new Managed Fiber Ethernet Switch with the equipment rack and proposed fiber termination unit.

The Contractor shall install the new rack mounted workstation computer in the Server room. The Contractor shall fully integrate the Ethernet Core Switch and Terminal Port Server with the workstation. The Contractor shall obtain IP addressing and LAN parameters from the Engineer prior to installation of Ethernet switch equipment.

The Contractor shall establish communications between the new workstation computer and the proposed rack equipment and all existing and proposed field equipment.

4) TMC Software Installation and Integration

The Contractor shall provide, install, and configure virtual serial port software on the proposed workstation computer to redirect COM ports over TCP/IP connections. This software shall be Digi RealPort or equivalent as approved by the Engineer. The software shall allow a minimum of 64 COM ports to share a single TCP/IP connection. An alternative approach to achieve the same communications results is acceptable if approved by the Engineer. The contractor shall modify all IP addresses and configurations to satisfy the communication needs.

The Contractor shall provide, install, and configure the ECcom Signal Monitor Communication Software from EDI on the workstation computer to display and diagnose malfunction events. The ECcom software shall communicate with all conflict monitors successfully and reliably. All required software functions must be tested and completely operational. The contractor is responsible for adding the conflict monitors to the ECcom software, configuring, and testing the communications.

The Contractor shall provide, install, and configure the Radar Detection System (RDS) central data collection software on the proposed workstation computer. The RDS central software shall communicate with all proposed RDS field devices successfully and reliably. All required software functions must be tested and completely operational. For each supplied RDS unit, the contractor is responsible for adding the RDS unit to the Central Data Collection software.

The contractor shall contact the City of Memphis Division of Engineering to obtain an existing TACTICS software license. The Contractor shall install all required TACTICS software on the proposed workstation computer.

The Contractor shall coordinate with the City of Millington IS representatives to establish the internet connection for communication with the TACTICS server database at the City of Memphis TMC. The City of Millington IS representative will be responsible for providing the internet connection. The Contractor is responsible for setting up the VPN connection and establishing the connection with the City of Memphis TACTICS server database.

The contractor shall configure and test the TACTICS software. The contractor shall update the TACTICS database to reflect the changes to the traffic signal controller COM port or IP addressing requirements. All timing plans and other parameters in the database for the affected intersections shall be unmodified. The configuration of the TACTICS software shall include the setup of local intersection graphics and signal and detector status indication overlaid on aerial photography.

The Contractor shall configure and test communications with the proposed video detection remote management cards. This includes field installation, setting the IP addresses, and the software setup at the City of Millington TMC.

The Contractor shall provide a list of MAC addresses for all proposed devices. The Contractor shall obtain a list of MAC addresses for all existing IP-enabled field devices, including M52 controllers, conflict monitors, and video remote management cards up to a maximum of 30 devices. The Contractor shall enter all MAC addresses into the RADIUS server database located in the City of Memphis TACTICS central server in order to deploy MAC authentication bypassing for network security.

At the end of the software and hardware integration, the following communication requirements shall be satisfied:

1) Serial-over-IP communications for traffic signal controllers:

At the following intersections, the existing Port 3 fiber communication interface on the local controllers will be disabled. A serial device server and Ethernet cabinet switch will be installed in the cabinets. The controller shall communicate with the serial device server via Port 2. The serial device server will communicate with the Ethernet cabinet switch. The Ethernet cabinet switch will communicate with the proposed City of Millington TMC.

- Highway 51 at Ingram Micro Drive
- Highway 51 at Babe Howard Parkway / Biloxi Street
- Highway 51 at Shelby Road / Easley Street
- Navy Road at Church Street
- Navy Road at Wasp Avenue / Astoria Avenue

2) Pure Ethernet IP communications for traffic signal controllers:

At the following intersections, existing Port 3 fiber communication interface on the local controllers will be disabled and the native Ethernet Port on the local controllers will be enabled. An Ethernet cabinet switch will be installed in these cabinets. The controller shall communicate with the Ethernet cabinet switch via the native Ethernet port. The Ethernet cabinet switch will communicate with the proposed Ethernet hub switches.

- Highway 51 at EB S.R. 385
- Highway 51 at WB S.R. 385
- Highway 51 at Navy Road / Martha Street
- Highway 51 at Cuba Millington Road
- Highway 51 at Wilkinsville Road
- Navy Road at Rockford Street / Nelson Street
- Navy Road at Easley Street
- Navy Road at Veterans Parkway
- Navy Road at Hornet Avenue

3) Communications for conflict monitors

For all intersections in this project, the signal conflict monitors shall communicate successfully with the ECom software at the workstation computer. If the existing conflict monitor is IP enabled with RJ-45 Ethernet port, the conflict monitor shall communicate with the Ethernet cabinet switch via the native Ethernet port. If the existing conflict monitor is not IP enabled, the conflict monitor shall communicate with the serial device server via RS-232 port and the serial device server will communicate with the Ethernet cabinet switch. If the conflict monitor does not have a RS-232 port and is not IP enabled, it will not be integrated into the network.

The following intersections contain IP enabled conflict monitors that will communicate directly with the Ethernet cabinet switch:

- Highway 51 at Navy Road / Martha Street
- Navy Road at Rockford Street / Nelson Street
- Navy Road at Easley Street

The following intersections contain conflict monitors that will communicate with the serial device server:

- Highway 51 at Shelby Road / Easley Street

- Navy Road at Church Street
- Navy Road at Veterans Parkway
- Navy Road at Wasp Avenue / Astoria Avenue
- Navy Road at Hornet Avenue

The remaining intersections within the scope of this project contain conflict monitors that do not have a RS-232 port and are not IP enabled and will not be integrated into the network.

4) Communications for RDS units

The RDS central software shall communicate with all proposed RDS field devices successfully and reliably. All required software functions must be tested and completely operational.

5) Communications for Video Detection Remote Management Cards

At all intersections, video detection remote management cards shall communicate successfully with software on the workstation computer:

6) TACTICS software and access privileges:

The TACTICS software installed at the City of Millington TMC shall be configured and tested. At the end of the software and hardware integration:

- The TACTICS user account for the City of Millington TMC shall have full access to and shall communicate successfully with all traffic signal controllers and system detectors inside the City of Millington which are connected to the Millington signal system.
- The TACTICS user account for the City of Memphis Signal Shop shall be capable of having full access to all traffic signal controllers and system detectors inside the City of Millington.

IV. MEASUREMENT AND PAYMENT

Ethernet Switch (Type B) will be measured per each and paid for at the contract unit price per each. This price shall include all cables, adapters, or converters that are necessary to provide a fully operational layer 3 Ethernet switch in the City of Millington TMC. Payment will be made as follows: 25% upon delivery of equipment; 50% upon installation and integration testing; and 25% upon final project acceptance.

System Integration shall be measured and paid on a lump sum basis. This item shall include all work, testing, and documentation required to fully integrate the central traffic control system. This includes all the construction requirements described in the "Procedures" section of this special provision. Payment will be made as follows: 25% upon hardware installation; 50% upon software installation and integration testing; and 25% upon final project acceptance.

Computer for Signal System (Rack Mounted) will be measured per each and paid for at the contract unit price per each. This price shall include the furnishing, installation, and all materials, equipment, labor, tools, storage, shipping, and incidentals necessary to install and make the unit fully operational. Payment will be made as follows: 25% upon delivery of equipment; 50% upon installation and integration; 25% upon final project acceptance.

Item Number	Description	Pay Unit
725-03.10	Ethernet Switch (Type B)	Each
725-24.51	System Integration	LS
730-30.02	Computer for Signal System (Rack Mounted)	Each