



**REQUEST FOR BID  
FOR  
General Construction Support**

**Bid No. 193449.71.0399**

**August 23, 2016**



**City of Memphis, Tennessee**

Black & Veatch and Overland Contracting Inc. (OCI), a subsidiary of Black & Veatch, are the Program Manager and Construction Manager respectively, for the SARP10 Program for the City of Memphis.

Overland Contracting Inc.  
3485 Poplar Avenue, Suite 230, Memphis, TN, 38111

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## 00170 - Request for Bid

### 00170.1 Introduction

Sealed bids will be received at the Office of the City of Memphis Environmental Administration, Room 620, City Hall, 125 N. Main, Memphis, TN 38103, until **3:00 p.m. local time, September 29, 2016** for furnishing the City of Memphis with the following:

FOR THE DIVISION OF: PUBLIC WORKS FOR THE CONSTRUCTION OF:  
SARP10 Program **General Construction Support**

**The Sealed Bid envelope must be labeled with the project name, bidder's name, license bidder number, license expiration date, license classification. The Sealed Bid envelope must contain one (1) hardcopy of the bid and one (1) electronic CD copy of the bid.**

Sealed Bids that are sent through the mail or other such delivery service shall be sent in such a manner so as to allow the opening of the "Mailing Container" and still have intact the sealed Bid. On the Mailing Container the sender shall state the words that a **"SEALED RESPONSE IS ENCLOSED"** and the Bid number.

Subcontractors intending to bid on this project must follow the instructions for Registration as stated in the Advertisement Legal Notice Request for Bid No. **193449.71.0399** (dated August 23, 2016). Registration information must be submitted by **September 13, 2016**.

### 00170.2 Program Overview

The Program consists of the management of the capital program needed to bring the City's wastewater and sewer system into compliance with federal and state regulations per The City of Memphis Wastewater Collection and Transmission System (WCTS) Condition Assessment and Rehabilitation Program Consent Decree signed on September 21, 2012, including the procurement of studies, design and construction services associated with the City of Memphis SARP10 Program.

### 00170.3 Scope of Work

The Scope of work for this bid consist of indefinite delivery indefinite quantity of construction work to support the sanitary sewer evaluation contractors. The work can include, but is not limited to tree clearing, gravel road building, removal and replacement of manhole cones, removal and replacement of asphalt, installing drain culverts, and all equipment needed to perform these tasks.

### 00170.4 Bid Guarantee Requirements

Guarantee Requirements:

- (a) Bidder will not withdraw bid for one hundred eighty (180) calendar days after opening of bids without Purchaser's written consent.
- (b) If bid is accepted, bidder will enter into formal Subcontract with Purchaser, within five (5) calendar days after receipt of Subcontract documents for execution.
- (c) If bid is accepted, bidder will execute required 100% Performance/Payment Bond in accordance with Article 00571.4 and will obtain required insurance coverage in accordance with Article 00572.21 within ten (10) calendar days after receipt of Subcontract.
- (d) All bids will require a bidder's bond or certified or cashier check made payable to the Purchaser on a solvent bank in the amount of 5% of the bid. Said instrument to remain in effect and will be returned only after the Subcontract has been fully executed and secured. Additionally, the successful bidder shall execute a performance bond in an amount equal to 100% of the Subcontract sum as security for the faithful performance of



the Subcontract and for the payment of labor and material furnished and incorporated into the Work. The only acceptable form of instrument for this bid bond is bound herein, Article 00672.7.

Bidder shall be liable to the Purchaser for full amount of proposal guarantee as representing damage to the Purchaser on account of default of bidder if:

- (a) Bid is withdrawn within one hundred eighty (180) calendar days after receipt of bids without approval by Purchaser.
- (b) Bidder fails to enter into contract with Purchaser and execute required Performance Bond and provide required insurance coverage within ten (10) calendar days subsequent to notice of award of the Subcontract.

**Firms desiring to submit a Bid should carefully review these instructions. Compliance with all requirements will be solely the responsibility of the Respondent.**

### **00170.5 Request for Bid Definitions**

Terms used in this Request for Bid documents are defined and have the meanings assigned to them as follows. The term "OCI", "Purchaser" or "Program Manager" means Overland Contracting Inc. The term "Respondent", "Firm", "Company", "Subcontractor" or "Bidder" means one who submits a Response for the purpose stated in this Solicitation Request for Bid documents. The terms "BID", "Response" or "Respondent's Response" mean all submittal documents provided by the Respondent as required by this Request for Bid. The terms "Request for Bid" or "Bid Documents" mean the documents included in this Request for Bid.

Every effort has been made to use industry-accepted terminology in this Request for Bid. Any statement in this document, which uses words such as "must", "shall", "should", "provide for" or "have/provide the capability of/for", means that compliance with the intent of the statement is mandatory and that failure by the Respondent to satisfy that intent may be cause for the Response to be rejected.

### **00170.6 Minority / Women Business Enterprise (M/WBE) Requirements**

This section shall set forth the respondent's M/WBE Participation Plan that must be submitted and include: (1) the level and dollar amount of participation your firm anticipates to achieve in the performance of the Subcontract resulting from this RFB; (2) the type of Work to be performed by the M/WBE firms participating; and (3) the names of the M/WBE firms the Respondent plans to utilize in the performance of the Subcontract resulting from this RFB.

SRF Fair Share Goals:

MBE goal - Construction 2.6%

WBE goal - Construction 2.6%

(Vendors from the TDOT TNUCP DBE list, other State or Federal DBE lists, or the City of Memphis EBO list)

SARP10 DBE Participation goal: 15%

(Vendors from the City of Memphis EBO list only)

### **00170.7 Clarification of Bid**

Purchaser reserves the right to obtain clarification of any point in a Response or to obtain additional information as necessary to properly evaluate a particular Response. Failure to respond to such request for additional information or clarification in a timely manner may result in rejection of the Response.

### **00170.8 Responsiveness**

Respondents should respond to all requirements of the Bid to the maximum extent possible and are required to clearly identify any limitations or exceptions to the requirements.

### 00170.9 Examination of Request for Bid Documents

Before submitting a Response, each Respondent must:

Study and carefully correlate the Respondent's observations and responses with the Bid Documents.

Notify Purchaser, of all conflicts, errors and discrepancies, if any, in the Bid Document submitted.

Review the Loss Control Manual and State Revolving Fund (SRF) Documents.

Respondents by and through the submission of their Response, agree that they shall be held responsible for having therefore familiarized themselves with the nature and extent of the requirements in the Bid Documents.

### 00170.10 Interpretations and Addenda

If any prospective Firm is in doubt as to the true meaning of any part of the Requirements For Preparing and Submitting Bid Submittal for the requested services, they may submit a written request (verbal requests will not be accepted) for an interpretation before the Last Date for Bidder Questions as stated in 00170.15. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum transmitted to each party receiving a set of such documents. Purchaser will not be responsible for any other explanations or interpretations of the proposed documents. Any requests not submitted within this time period will be deemed waived.

#### **SUBMIT ALL QUESTIONS BY E-MAIL TO:**

Attn: Ginny Dorsey

[DorseyV@bv.com](mailto:DorseyV@bv.com)

Cc: Justin Avent

[justin\\_avent@gspnet.com](mailto:justin_avent@gspnet.com)

Cc: Brad Davis

[DavisBJ@bv.com](mailto:DavisBJ@bv.com)

(Reference: *SARP10 Program General Construction Support, Bid No. 193449.71.0399*)

All requests or questions should be clearly marked and must be received by Last Date for Bidder Questions as stated in 00170.15.

A response will be returned via Addendum to all Firms along with the original question(s).

There shall be no communication between the Firm, their employees or subcontractors concerning this Bid to anyone within Black & Veatch, OCI, Allen & Hoshall, Allworld Project Management, Gresham Smith and Partners, Integrated Circles Technologies, Tamco, Carter-Malone Group, Rohadfox Construction Control Services Corporation, or City of Memphis employee or any such person's spouse, child, parent, brother, sister, dependent or person assuming a relationship being the substantially equivalent of the above except through Brad Davis. **Failure to comply with this requirement will be grounds for disqualification.**

### 00170.11 Modification or Withdrawal of Bid Submittals

Responses may be modified or withdrawn by an appropriate document duly executed (in the same manner that a Response must be executed) and delivered to the place where Responses are to be submitted at any time prior to the submission deadline. A request for withdrawal or a modification must be in writing and signed by an authorized person. Evidence of such authority must accompany the request for withdrawal or modification. Withdrawal of a Response will not prejudice the rights of a Responder to submit a new Response prior to the Response deadline. After expiration of the period for receiving Responses, only Purchaser may request clarifications or additional information.





**00170.12 Rejection of Responses**

To the extent permitted by applicable local, state and federal laws and regulations, Purchaser reserves the right to reject any and all Responses, to waive any and all informalities not involving price, time, or changes in the Work with the successful Respondent, and the right to disregard all non-conforming, non-responsive, unbalanced or conditional Responses. Also, Purchaser reserves the right to reject a Response, in its sole discretion, if the City of Memphis believes that it would not be in its best interest to make an award to that Respondent.

Purchaser reserves the right to reject any Response if the evidence submitted by the Responder or if the investigation of such Respondent fails to satisfy Purchaser that such Respondent is properly qualified to carry out the obligations and to complete the Work contemplated therein. All Responses will be rejected if there is reason to believe that collusion exists among Respondents. Responses will be considered irregular and may be rejected if they show serious omissions, alterations in form, additions not called for, conditions or unauthorized alterations, or irregularities of any kind.

**00170.13 Other Items**

This Bid does not commit Purchaser to enter into a Subcontract, nor does it obligate Purchaser to pay for any costs incurred in the preparation and submission of Responses or in anticipation of a Subcontract. Costs of preparing the Bid in response to this request are solely the responsibility of the Respondent.

By responding to this solicitation, the respondent attests that no employee of Black & Veatch, OCI, Allen & Hoshall, Allworld Project Management, Gresham Smith and Partners, Integrated Circles Technologies, Carter-Malone Group, Rohadfox Construction Control Services Corporation, or City of Memphis employee or any such person's spouse, child, parent, brother, sister, dependent or person assuming a relationship being the substantially equivalent of the above, has an existing or pending, direct or indirect, financial interest in the respondent's business.

No Respondents to this solicitation shall discriminate against any employee or applicant for employment because of race, religion, color, sex, age, or national origin.

**00170.14 Selection Process**

Purchaser intends to select one Firm based on price and successful completion and approval of the OCI Registration process. There is a local contractor preference of 5%. For evaluation purposes the 5% will be applied to the Total Estimated Unit Price Value.

**00170.15 Selection Schedule**

The following schedule will be adhered to during the selection process. It is subject to change at the sole discretion of OCI.

<u>Event</u>	<u>Completed By</u>
Advertising Date	<b>August 23, 2016</b>
Pre-Bid Meeting	<b>September 6, 2016</b> 1:00PM local time
Registration Information submitted per 193449.71.0399 Advertisement	<b>September 13, 2016</b>
Last Date for Bidder Questions	<b>September 13, 2016</b>
Issue Addendum for answers to questions	<b>September 20, 2016</b>
Receive all Bids	<b>September 29, 2016</b> by 3:00PM local time
Public Opening	<b>September 29, 2016</b> immediately following receipt of Bids
Public Notice of Intent to Award	<b>October 5, 2016</b>



<u>Event</u>	<u>Completed By</u>
Preconstruction Meeting with Subcontractor	<b>October 21, 2016</b>
Tentative Notice to Proceed	<b>October 21, 2016</b>

**00170.16 Mandatory Pre-Bid Meeting**

A mandatory pre-bid meeting will be held at **1:00 PM (local time)** at the **Benjamin Hooks Central Library 3030 Poplar Avenue Memphis, TN 38111** on **September 6, 2016**. Bidders are required to attend at their own cost.



## 00270 - Instructions to Bidders

### 00270.1 Bidder's Compliance with Request for Bid

Provide the information requested and any supporting information necessary to permit a complete analysis of your bid. You acknowledge that preparation and submission of a bid will be at your sole cost and that you will treat this RFB and any resulting discussions as confidential. If you do not agree to treat this RFB and associated discussions as confidential, return the complete RFB to Purchaser and delete or destroy any copies you made.

### 00270.2 General Bid Parameters

Provide the information requested in Section 00270 and Section 00370 in the appropriate fields of Section 00370. Complete each line of Section 00370 in its entirety and submit it with your bid in accordance with Section 00170. Do not alter Section 00370 forms in any way or deviate from the terminology used or the unit of measure indicated when completing Section 00370. Submit Section 00370 forms in their original core application software, with no embedded programming and no permissive encoding restricting access to the data provided.

#### 00270.2.1 Bidder's Contact Information

Include contact information for your representative in Article 00370.2.1. Your representative must have the appropriate expertise and authority to negotiate on behalf of your company.

#### 00270.2.2 Addenda to Request for Bid

In Article 00370.2.2, list all addenda received from Purchaser and indicate "Yes" to show your receipt of and incorporation of the listed addenda into the proposal. Address any exceptions or clarifications to addenda in accordance with Article 00270.6.

### 00270.3 Bid Pricing

You must include numerical values in the applicable fields of Table 00370.3.1. Non-numerical values, such as "included" or "not applicable," are not acceptable. Purchaser will evaluate fields left blank or filled with a zero as scope included in your bid at no cost.

#### 00270.3.1 Unit Pricing

Provide the unit prices to perform the Work in accordance with this RFB in Table 00370.3.1. A unit price is the total amount to be billed to Purchaser for a specific unit of work. Unit pricing includes all costs, overhead, profit and mark-up associated with delivering the complete unit.

### 00270.4 Supplemental Bid Information

#### 00270.4.1 Company Status

In Article 00370.4.1, indicate the type of your organization's legal entity and the state and country in which it is organized.

#### 00270.4.2 Contractor License

If you are not licensed to perform the Work, indicate "No" in Article 00370.4.2. If you indicate "No," declare an exception in accordance with Article 00270.6.

#### 00270.4.3 Not Used

#### 00270.4.4 Bid Validity Period

Indicate "Yes" in Article 00370.4.4 if your proposal is valid for one hundred eighty calendar days after the Proposal Due Date (the "Proposal Validity Period"). If you indicate "No" in Article 00370.4.4, provide the number of calendar days that your proposal is valid in Article 00370.4.4 and declare an exception in accordance with Article 00270.6. Purchaser may reject your proposal without prior notice if your proposal is not valid for the full Bid Validity Period.

#### **00270.4.5 Firm Non-Escalatable Pricing**

Indicate "Yes" in Article 00370.4.5 if the proposal pricing is firm and not subject to escalation. If you indicate "No," declare an exception in accordance with Article 00270.6 and include the terms of escalation in your exception.

#### **00270.4.6 Taxes**

Tax requirements are identified in Article 00571.6. Indicate "Included" in Article 00370.4.6 if your proposal includes the tax requirements. If you indicate "Excluded" in Article 00370.4.6, declare an exception in accordance with Article 00270.6.

#### **00270.4.7 Work at Jobsite**

Identify the type of craft labor. If you plan to subcontract any of the Work, indicate "Yes" in the appropriate section of Article 00370.4.7 and complete Table 00370.4.7.

#### **00270.5 Schedule Compliance**

Indicate "Yes" in Article 00370.5 if you can meet the schedule dates included in Table 00370.5. If you indicate "No," submit an alternative summary level schedule with your proposal.

#### **00270.6 Compliance with Request for Bid**

##### **00270.6.1 Declared Exceptions to RFB Requirements**

An exception is any variation from an express RFB requirement. Declare all exceptions, whether commercial or technical in nature, in Table 00370.6.1. Provide specific exceptions and accurately reference the article number to which each exception applies. Exceptions of a general nature or that refer to your standard specifications or terms are not acceptable and may result in Purchaser rejecting your bid without prior notice.

##### **00270.6.2 Declared Clarifications to RFB Requirements**

A clarification is the means by which you offer to meet an RFB requirement if the RFB does not identify the specific means by which the RFB requirement must be met. Declare any clarifications, whether commercial or technical in nature, in Table 00370.6.2. Reference the article number to which each clarification applies.

#### **00270.7 Bid Attachments**

List any supplemental documents included in your bid in Article 00370.7.

#### **00270.8 Declarations**

Indicate "Yes" in Article 00370.8 to confirm you have familiarized yourself with the conditions affecting the Work. If you indicate "No," declare an exception in accordance with Article 00270.6.

#### **00270.9 Nondiscrimination**

All entities contracting with the Purchaser agree to abide by and to take affirmative action when necessary to ensure compliance with the nondiscrimination clauses set out below, and agree to show proof of non-discrimination upon request and to post in conspicuous places available to all associate agents and their employees. In the event of non-compliance with nondiscrimination clauses, or with provisions of Executive Orders 11141 (age), 11246, 11375 (women), 12086 (Vietnam veterans), 11478 (federal employees), 11625 (minority business) 11701 (veterans), Title 41, Chapter 60 (handicapped) and specifically the handicapped affirmative action clause in Section 60-741.6.9 of OFCCP Rules, and any and all other federal laws prohibiting discrimination, contracts may be canceled, terminated, or suspended in whole or in part by the Purchaser.

The Bidder shall execute the specified Nondiscrimination Certificate (see Section 00672.3) agreeing that, if awarded the Subcontract, he/she shall not discriminate against any Sub-subcontractor, employee, or applicant for employment on the grounds of race, color, national origin or sex, in accordance with the citations listed in the above paragraph; and shall require the execution of such a certificate for each Sub-

subcontractor prior to award of any subcontract with the further requirement that each subcontractor shall include identical requirements in any lower tier subcontracts which might in turn be made. FAILURE TO EXECUTE AND SUBMIT SUCH CERTIFICATE WITH THE BID MAY CAUSE THE BID TO BE REJECTED AS NON-CONFORMING. The successful Bidder and all Sub-subcontractors under the general contract shall maintain copies of their payrolls and all subcontracts for each weekly payroll period for the life of the construction and for a period of **SEVEN (7) YEARS** after final release and payment is made by the Purchaser to the contractor.

**00270.10 Equal Business Opportunity Program (EBO)**

The Bidder must complete and return the Equal Business Opportunity Program Compliance Form included in Section 00672.4 of this RFB.

**00370 – Commercial Bid Form (10 pages)**



**00370 - Commercial Bid Form**

**Bidder should refer to Section 00270, Instructions to Bidders, when completing this Bid Form. Bidder shall complete this form entirely and return it with Bidder's Bid.**

00370.1 Bid Submitted by	Bidder Response Column
Company Name	
Mailing Address/Number, Street	
Mailing Address/State, Zip Code	
Country	
Taxpayer ID Number (or EIN)	
Bidder's Bid Date	
Bidder's Bid No.	

**00370.2 General Bid Parameters**  
**Bidder is providing the information defined by the articles comprising Section 00270, INSTRUCTIONS TO BIDDERS, in the corresponding fields of this Section 00370, COMMERCIAL BID FORM.**

00370.2.1 Bidder's Contact Information	Bidder Response Column
Bidder's Representative Name	
Title	
Mailing Address/Number, Street	
Mailing Address/City	
Mailing Address/State, Zip Code	
Delivery Address/Number, Street	
Delivery Address/State, Zip Code	
Country	
Email Address	
Phone Number ( ) - ( )	
Mobile Phone Number ( ) - ( )	
Fax Number ( ) - ( )	

**Business Interruption Plan**  
 Confirm that Bidder maintains a Business Interruption/Disaster Recovery Plan that documents how Bidder will respond to disaster or pandemic to help minimize impact - **Yes/No** If Yes, plan should be submitted with RFB.

00370.2.2 Addenda to Request for Bid			Bidder Response Column
Bidder acknowledges receipt and inclusion of the following Addenda to the RFB - <b>Yes/No</b>			Received and Incorporated
	Addenda Number	Date Issued	

00370.3 Bid Pricing Information	
00370.3.1 Bid Prices	See Attached Pricing Table(s) [Bidder to List Tables Used]

**00370.4 Supplemental Bid Information**  
 Bidder provides the following information to supplement the Bidder's bid pricing.

00370.4.1 Company Status	Bidder Response Column
Bidder's company status is: (i.e. partnership, individual owned, joint venture, corporation, etc.)	
in State of	
in Country of	

00370.4.2 Contractor License	Bidder Response Column
Bidder certifies that it is licensed, as required, to engage in the RFB Work scope in the State/Province/Country the RFB Work is to be performed. - <b>Yes/No</b>	
1st License Title	
in State/Province of	
License Number	
2nd License Title	
in State/Province of	
License Number	

<b>00370.4.3 Not Used</b>	
<b>00370.4.4 Bid Validity Duration</b>	<b>Bidder Response Column</b>
Bidder's bid is valid for acceptance by the Purchaser for a period of 180 days from the bid due date. - <b>Yes/No</b>	
If no, Bidder's bid is valid for indicated days from bid due date. - <b>No. Days</b>	
<b>00370.4.5 Firm Non-Escalatable Pricing</b>	<b>Bidder Response Column</b>
All of Bidder's prices herein bid are firm and are non-escalatable. - <b>Yes/No</b>	
If No, explanation is included as an Exception.	
<b>00370.4.6 Taxes</b>	<b>Bidder Response Column</b>
Bidder's prices included herein are in accordance with Article 00571.6 Taxes. - <b>Yes/No</b>	
If No, explanation is included as an Exception.	
<b>00370.4.7 Work at Jobsite</b>	<b>Bidder Response Column</b>
Bidder's source of craft labor to be utilized in the performance of the Work is - <b>Open-Shop/Merit-shop/Union-shop</b>	
If applicable, identify the local union(s) used for hiring craft labor: 1st Local Union Name	
Address/Number, Street	
Address/City, State, Zip Code	
Phone	
Email	
2nd Local Union Name	
Address/Number, Street	
Address/City, State, Zip Code	
Phone	
Email	
Bidder has accounted for all Jobsite existing and controlling conditions and limitations which may affect the Work performance and the Bidder's Bid. - <b>Yes/No</b> If No, explanation is included in Exception.	
Bidder proposes that it will perform all the Work at the Jobsite with its own forces. - <b>Yes/No</b>	
Bidder has indicated proposed sub-subcontracted Work in attached Table 00370.4.7. - <b>Yes/No</b>	
Bidder has provided proposed Small Business/Minority/Disadvantaged Entrepreneur Participation Plan with its bid. - <b>Yes/No</b>	
<b>00370.5 Schedule Compliance</b>	
Bidder agrees to meet the schedule dates indicated in the RFB documents: - <b>Yes/No</b> If No, explanation is included in Exception.	
If No, Bidder has completed and submitted an attached alternative summary level schedule: - <b>Yes/No</b>	
<b>00370.6 Compliance with Request for Bid</b>	
NOTE: A bid based on Bidder's standard terms and conditions will not be considered. The bid must address specific exceptions, if any, to Purchaser's terms and conditions.	
Bidder certifies that its bid complies with all RFB commercial and technical requirements without exception and clarification. - <b>Yes/No</b>	
<b>00370.6.1 Exceptions</b>	
Bidder certifies that its bid complies with all RFB commercial and technical requirements except for the following:	<b>Bidder Response Column</b>
Bid is based on acceptance of all commercial requirements of this RFB. - <b>Yes/No</b>	
If No, all Commercial Exceptions have been accurately defined and identified as "Commercial Exceptions" on the Purchaser provided and Bidder attached Exceptions Form: - <b>Yes/No</b>	
Bid is based on acceptance of all technical requirements of this RFB. - <b>Yes/No</b>	
If No, all Technical Exceptions have been accurately defined and identified as "Technical Exceptions" on the Purchaser provided and Bidder attached Exceptions Form. - <b>Yes/No</b>	
<b>00370.6.2 Clarifications</b>	
Bidder certifies that its bid complies with all RFB commercial and technical requirements without clarification. - <b>Yes/No</b>	<b>Bidder Response Column</b>
If No, all Commercial Clarifications have been accurately defined and identified as "Commercial Clarifications" on the Purchaser provided and Bidder attached Clarification Form. - <b>Yes/No</b>	
If No, all Technical Clarification have been accurately defined and identified as "Technical Clarifications" on the Purchaser provided and Bidder attached Clarification Form. - <b>Yes/No</b>	

00370.7 Bid Attachments	
In addition to this Commercial Bid Form and Tables indicated herein, the Bidder's Bid contains supplemental information and details attached to this bid consisting of the following:	<b>Bidder Response Column</b>
(Attachment 1)	
(Attachment 2)	
(Attachment 3)	
(Attachment 4)	
(Attachment 5) (Add additional lines as needed)	

00370.8 Declarations	
The Bidder declares that it has familiarized itself with the conditions affecting the Work. The Bidder also declares that only the persons or firms interested in the bid as principal or principals are named herein; that no other persons or firms have any interest in this bid or in the Subcontract to be entered into; that this bid is made without connection with any person, company, or party likewise submitting a bid; and that it is in all respects for and in good faith, without collusion or fraud. - <b>Yes/No</b>	
If written notice of acceptance of this bid is delivered to the Bidder within "Bid Validity" days after the date set for receipt of bid, or any time thereafter before the bid validity expires, the Bidder will, within 5 days after receipt of a formal Subcontract for signature, exercise and deliver to Purchaser a signed Subcontract in the form provided by the Purchaser in accordance with the documents provided herein. - <b>Yes/No</b>	

**Bidder Authorized Signature:**



**Table 00370.3.1 - Unit Price Bid Form**

**Bidder should refer to Section 00270, Instructions to Bidders, when completing this Bid Form. Bidder shall complete this form entirely and return it with Bidder's Bid.**

**Bid Submitted by:** (Company Name)

**00370.3 Bid Pricing Information**

**00370.3.1 Unit Pricing**

Bidder proposes to complete the RFB Work based on firm, fixed, unit prices (US dollars), which prices multiplied by the final Work quantities would represent the full consideration to Bidder for its complete and satisfactory performance of the Work in compliance with all the terms and conditions of the RFB Documents. The Unit Prices in this Table include the cost of all the work which is required or implied by the RFB documents or which may be inferred therefrom, and which is customarily provided in furnishing a complete and finished work item of its kind. Further, any and all alterations, modifications, and adjustments to the work item, which is reasonably foreseeable or customarily encountered in providing and installing equipment, material, and services of the work item kind, will be performed without additional compensation.

In the event of a Purchaser-approved change in the scope of Work for which a unit price from this Table is not applicable, as determined by the Purchaser, the Subcontractor shall provide a new unit price for review and acceptance by the Purchaser. Subcontractor shall provide all information requested by the Purchaser to substantiate the value of the new unit price.

00370.3.1.1 Unit Prices				Bidder Response	
Item Number	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Extension Price
00899.01	Silt Fence	LF	25,000		\$ -
00990.01	Mini excavator with hydraulic hammer and tamp attachments with operator (e.g. CAT 308)	Day	45		\$ -
00991.01	Mini excavator with hydraulic hammer and tamp attachments with operator (e.g. CAT 314)	Day	45		\$ -
00992.01	Excavator with operator (e.g. CAT 336)	Day	30		\$ -
00993.01	Dozer (e.g. CAT D6 XL)	Day	30		\$ -
00994.01	Skidsteer Compact Track (e.g. CAT 249D)	Day	90		\$ -
00995.01	Security Gate	EA	10		\$ -
00996.01	Dump Truck with operator minimum of 10 CY	Day	90		\$ -
00997.01	Front End loader with operator (e.g. Case 580N)	Day	30		\$ -
00998.01	Vibratory Plate Compactor (e.g. WP1550)	Day	25		\$ -
00999.01	Concrete Flat Saw (e.g. Husqvarna #FS400)	Day	25		\$ -
01010.01	Saw, Cutoff Gas 14" (e.g. TS420)	Day	25		\$ -
01001.01	Geotextile Fabric at 12.5-foot width	LF	75,000		\$ -
01002.01	Traffic Control (static signs, cones and barrels only)	EA	30		\$ -
01002.02	Traffic Control (cones, barrels and up to 2 electronic signs)	EA	30		\$ -
01000.01.15	Culvert 15-inch CMP Per 20-foot section	EA	10		\$ -
01000.01.24	Culvert 24-inch CMP Per 20-foot section	EA	10		\$ -
01000.01.36	Culvert 36-inch CMP Per 20-foot section	EA	10		\$ -
01000.01.48	Culvert 48-inch CMP Per 20-foot section	EA	10		\$ -
02230-01	Clearing and Grubbing	SF	360,000		\$ -
02370-01B	Rip Rap (Class B)	Ton	20		\$ -
02370-01C	Rip Rap (Class C)	Ton	30		\$ -
02370-01D	Rip Rap (Class D)	Ton	40		\$ -
02534-5.01	Manhole Modification	EA	15		\$ -
02730-5.01	Limestone CR610	Ton	7,500		\$ -
02730-5.02	Fill Dirt	CY	9,000		\$ -
02920-5.01	Seeding with mulch	Per 1000 SF	480		\$ -
02920-5.02	Seeding without mulch	Per 1000 SF	120		\$ -
02921-5.01	Sodding	SY	18,000		\$ -
02950-5.01.01	Asphaltic Concrete Pavement Removal and Replacement	CY	100		\$ -
02950-5.01.02	Concrete removal and replacement	CY	25		\$ -
02950-5.02	Sidewalk removal and replacement	SF	600		\$ -
02950-5.03	Concrete curb and gutter removal and replacement	LF	150		\$ -
02950-5.04	Gravel Driveway and Gravel Removal and Replacement with Crushed Stone	Ton	20		\$ -
02950-5.05	Pavement Backfill	Ton	500		\$ -
	Superintendent	Day	100		\$ -
	Laborer per each	Day	500		\$ -
<b>Total Estimated Unit Price Value</b>					<b>\$ -</b>



**Table 00370.6.1 - Exceptions Form**

**Bidder should refer to Section 00270, Instructions to Bidders, when completing this Bid Form. Bidder shall complete this form entirely and return it with Bidder's Bid.**

**Bid Submitted by:** (Company Name)

**00370.6.1 Exceptions**

The Bidder's specific Exceptions herein itemized and included with the bid represent an exhaustive list of any and all explicit variations or deviations from the requirements of the RFB documents. Bidder confirms that otherwise, it is the intent of Bidder's bid that the Work will be performed in strict accordance with the requirements of the RFB documents.

**00370.6.1.1 Commercial Exceptions**

Count	Reference Article	Stated Commercial Exception
CE1		
CE2		
CE3		
CE4		
CE5		
CE6		
CE7		
CE8		
CE9		

**00370.6.1.2 Technical Exceptions**

Count	Reference	Stated Technical Exceptions
TE1		
TE2		
TE3		
TE4		
TE5		
TE6		
TE7		
TE8		
TE9		
TE10		
TE11		
TE12		
TE13		
TE14		
TE15		
TE16		
TE17		
TE18		
TE19		
TE20		

**Table 00370.6.2 - Clarifications Form**

**Bidder should refer to Section 00270, Instructions to Bidders, when completing this Bid Form. Bidder shall complete this form entirely and return it with Bidder's Bid.**

**Bid Submitted by:** (Company Name)

**00370.6.2 Clarifications**

All of Bidder's Clarifications herein itemized and included with the bid **do not** constitute explicit variation or deviation from performance of the Work by the Bidder in strict accordance with the requirements of RFB documents.

**00370.6.2.1 Commercial Clarifications**

Count	Reference Article	Stated Commercial Clarification
CC1		
CC2		
CC3		
CC4		
CC5		
CC6		
CC7		
CC8		
CC9		

**00370.6.2.2 Technical Clarifications**

Count	Reference	Stated Technical Clarification
TC1		
TC2		
TC3		
TC4		
TC5		
TC6		
TC7		
TC8		
TC9		
TC10		
TC11		
TC12		
TC13		
TC14		
TC15		
TC16		
TC17		
TC18		
TC19		
TC20		

**00370.7 Schedule Compliance**  
State any exceptions in 00370.6.1.

**00370.7.1 Construction Milestone Completion Dates**

Item	Milestone Description	Construction Milestone Completion Date	*LDs Apply ?	Bidder Complies? (Yes/No)
1	Mobilization in response to Notice to Proceed, on each Task Order	7 days after receiving the Notice to Proceed from Purchaser	Yes	

\*LD indicates that completion of the Work after the "Construction Milestone Completion Date" is subject to liquidated damages per applicable Articles of Section 00571.

\*Note Subcontractor performance will directly impact future procurements for the SARP10 Program, schedule is critical and must be maintained.

00370.8 Schedule of Submittals							
Effective Date: <b>TBD</b>							
The following are post-award Subcontract submittals. This list is not all-inclusive. The RFB documents contain submittal requirements that are not included in this list. It will, however, remain the successful Bidder's responsibility to comply with submittal requirements whether or not the submittal is included in the following list:							
If Bidder does not agree, state an exception in 00370.6.1.							
Item	Reference Section	Submittal Item	Submittal Dates			Due Date	Bidder Agrees? Yes/No
			Calendar Days	Event			
<b>00370.8.1 Commercial Submittals</b>							
C01	None	Executed Subcontract in the form provided by the Purchaser	5	After	Receipt of Subcontract for Signature		
C02	00571	Payment Estimate Breakdown	10	After	Effective Date and Prior to First Payment with monthly updates		
C03	00571	Security Instruments	10	After	Effective Date		
C04	00572	Lien Waivers and Report of Disadvantaged Business Enterprise Participation Form		With	Each Invoice		
C05	00572	Final Lien Waivers from Subcontractor and Sub-subcontractors and Sub-subcontractors and Report of Disadvantaged Business Enterprise Participation Form		With	Final Invoice		
C06	00571	Final Payment Invoice and Report of Disadvantaged Business Enterprise Participation Form	45	After	Issuance of the Notice Of Final Completion and Acceptance		
C07	00572	Contractor Licenses	14	Before	Mobilization Onsite		
C08	00572	Written Notice and Supporting Documentation, of all Claims	5	After	Occurrence of Event Giving Rise to the Claim		
C09	00572	Insurance Certificates for Purchaser Approval		Prior to	Mobilization		
C10	00572	Initial Issue Subcontractor's Work Execution Schedule	30	After	Effective Date		
C11	00571	Subcontractor Actual Man-hours Expended and Quantities Installed	Weekly	After	Mobilization Onsite		
C12	00575	Subcontractor's Daily Report	Daily	After	Mobilization Onsite		
C13	00575	Signed Daily Reports		Daily	After Mobilization Onsite		
C14	00575	Weekly Coordination Meeting Agenda Input	Weekly	Prior to	Weekly Coordination Meeting		
C15	00575	Subcontractor's Safety, Health and Accident Prevention Program		Prior to	Mobilization Onsite		
C16	00575	Subcontractor's Hazardous Waste Project Health and Safety Plan		Prior to	Mobilization Onsite		
C17	00575	Safety and Health Representative Resume		Prior to	Assignment and Mobilization		
C18	00575	Verification of meeting Hazardous Waste Requirements of 29CFR1910.120	5	Prior to	Mobilization Onsite		
C19	00575	Hazardous Materials Documentation		With	Each Hazmat Shipment		
C20	00575	Safety and Health Records	Monthly	After	Mobilization Onsite		
C21	00575	Evidence that Jobsite Personnel have Passed Drug Testing	10	Prior to	Mobilization Onsite		
C22	Loss Control Manual	Fall Protection Plan	5	Prior to	Starting Work Operations		
C23	Loss Control Manual	Chemical Hazard Communication Plan, as applicable	5	Prior to	Mobilization Onsite		
C24	Loss Control Manual	Substance Abuse Program	5	Prior to	Mobilization Onsite		
C25	SRF	W-9 of Subcontractor and Sub-subcontractors also include Contact Information for each including email, phone number, and address		With	Bid		
C26	00672.3	Certificate of Nondiscrimination for Subcontractor and Sub-subcontractors		With	Bid		
C27	00672.4	Equal Business Opportunity Program Compliance Form for Subcontractor and Sub-subcontractors		With	Bid		
C28	00672.6	Certification Regarding Debarment Subcontractor and Sub-subcontractors		With	Bid		

00370.8 Schedule of Submittals							
Effective Date: <b>TBD</b>							Bidder Agrees? Yes/No
The following are post-award Subcontract submittals. This list is not all-inclusive. The RFB documents contain submittal requirements that are not included in this list. It will, however, remain the successful Bidder's responsibility to comply with submittal requirements whether or not the submittal is included in the following list:							
If Bidder does not agree, state an exception in 00370.6.1.							
Item	Reference Section	Submittal Item	Submittal Dates			Due Date	
			Calendar Days		Event		
C29	00672.6	Certification Regarding Equal Employment Opportunity for Subcontractor and Sub-subcontractors		With	Bid		
C30	SRF	M/WBE Certificates for both Subcontractor and Sub-subcontractors as applicable		With	Bid		
C31	00170.4	Bid Bond		With	Bid		
C32	SRF	Employee Rights under the Davis-Bacon Act Poster (English and Spanish)		Posted	All Sites to be easily accessed/viewed and protected from weather		
C33	SRF	WH-1321 poster		Posted	All Sites to be easily accessed/viewed and protected from weather		
C34	SRF	Wage Decision		Posted	All Sites to be easily accessed/viewed and protected from weather		



## 00571 - Supplementary Terms and Conditions

### 00571.1 Notices and Correspondence

The parties agree to send all notices arising out of or related to this Subcontract by one of the following methods: (a) personal delivery; (b) certified mail with return receipt; (c) nationally recognized overnight mail or courier service, with delivery receipt requested; or (d) email. The parties may send routine correspondence by email or first class mail, each without confirmation of receipt. The parties agree to address notices and correspondence as indicated in this article. Subcontractor agrees that delivery of a notice or of correspondence by Purchaser to Subcontractor's at the jobsite constitutes personal delivery.

#### Electronic Technical Correspondence

**Addressed to Purchaser:**

To: Brad Davis  
[DavisBJ@bv.com](mailto:DavisBJ@bv.com)  
Cc: Gary Older  
[OlderGS@bv.com](mailto:OlderGS@bv.com)

**Addressed to Subcontractor:**

To: [[ name ]]  
[[ email address ]]  
Cc: [[ name ]]  
[[ email address ]]

#### Non-Electronic Technical Correspondence

**Addressed to Purchaser:**

Overland Contracting Inc.  
3485 Poplar Avenue, Suite 230  
Memphis, TN 38111  
Attention: Brad Davis  
193449.71.0399

**Addressed to Subcontractor:**

[[ subcontractor entity ]]  
[[ street address ]]  
[[ city, state, zip code ]]  
Attention: [[ name ]]  
193449.71.0399

#### Electronic Commercial Correspondence (excluding invoices)

**Addressed to Purchaser:**

To: Ginny Dorsey  
[Dorsey@bv.com](mailto:Dorsey@bv.com)

**Addressed to Subcontractor:**

To: [[ name ]]  
[[ email address ]]  
Cc: [[ name ]]  
[[ email address ]]

#### Non-Electronic Commercial Correspondence (excluding invoices)

**Addressed to Purchaser:**

Overland Contracting Inc.  
8400 Ward Parkway  
Kansas City, MO 64114  
Attention: Ginny Dorsey  
193449.71.0399

**Addressed to Subcontractor:**

[[ subcontractor entity ]]  
[[ street address ]]  
[[ city, state, zip code ]]  
Attention:  
193449.71.0399

### Electronic Invoices

Subcontractor will submit invoices via email to [sarp10invoices@bv.com](mailto:sarp10invoices@bv.com). Subcontractor shall utilize the AIA form, available upon request. Invoices will be reviewed, and either approved or returned to Subcontractor for correction. The Black & Veatch Project Manager will forward invoices to Black & Veatch Accounts Payable, once they are approved.

#### All Subcontractor Invoice Submittals:

To: Overland Contracting, Inc.

[sarp10invoices@bv.com](mailto:sarp10invoices@bv.com)

Attention: BVAP

193449.71.0399

### 00571.2 Not Used

#### 00571.3 Payment Terms

The following payment terms shall apply in addition to the corresponding provisions contained in Article 00572.4 Invoicing and Payment.

The Parties will meet each month at an agreed time in order to determine the quantity of materials used and man-hours expended during the invoice period. The Parties will use the field progress measurement system to calculate that month's payment total by adding the Subcontract unit price totals based on actual Work completed.

#### 00571.4 Security Instruments

Subcontractor shall give Purchaser separate performance and payment bonds in the format of AIA Document 312 - 2010 Performance Bond and Payment Bond, each in the amount of the Subcontract Price. Subcontractor shall submit the bonds to Purchaser by the due date specified in the Article titled "Schedule of Submittals and Applicable Liquidated Damages". The bonding company must be licensed to bond in the state in which the Project is located and must be rated "A" or better by A.M. Best and included in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570).

#### 00571.5 Liquidated Damages

##### 00571.5.1 General

Subcontractor's failure to meet the requirements identified in this Article 00571.5 will cause Purchaser to incur harm that will be very difficult to ascertain with certainty. The Parties therefore agree the liquidated damages specified in this Article 00571.5 represent a reasonable estimate of Purchaser's harm and are not intended as a penalty. Subcontractor's obligation to pay liquidated damages for breach of one specified requirement does not relieve Subcontractor of its obligation to pay liquidated damages for breach of another specified requirement. Subcontractor's payment of liquidated damages for breach of the specified requirement is Purchaser's sole and exclusive remedy with regard to Subcontractor's breach of that requirement, except for any other express remedies stated in the Subcontract. If Purchaser terminates the Subcontract for cause, liquidated damages will cease to accrue after the termination date and Subcontractor's remaining liability will be calculated in accordance with Article 00572.17.

##### 00571.5.2 Not Used

##### 00571.5.3 Construction Milestone Dates

Each construction milestone subject to liquidated damages for late completion is listed in the article titled "Construction Milestone Completion Dates and Applicable Liquidated Damages". If all portions of the Work comprising the construction milestone do not meet the Subcontract requirements on the construction milestone completion date, liquidated damages will accrue for each failure as shown below.

Beginning on the first calendar day after the specified construction milestone completion date for each construction milestone and continuing until the construction milestone is completed, delay liquidated damages will be assessed at the rate of five hundred (\$500) dollars per calendar day.

#### **00571.6 Taxes**

Subcontractor shall pay all payroll and other related employment compensation taxes for Subcontractor's employees, federal, state and other taxes which may be assessed on Subcontractor's income from the Project, engineering and business license costs (collectively, the "Subcontractor Taxes"). Subcontractor shall administer and pay all sales, use, gross receipts and excise taxes (collectively, the "Project Taxes"). Subcontract price includes Subcontractor Taxes and all Project Taxes. Purchaser will not be responsible for any additional charges related to tax that were not included as part of the Subcontract Price. Where applicable, Purchaser shall furnish to Subcontractor a certificate complying with state and local governmental laws, regulations and ordinances identifying any components of the Work to be considered exempt from the Project Taxes. Subcontractor shall cooperate with Purchaser to establish appropriate procedures and minimize the amount of such taxes to the extent reasonable and practical. Subcontractor is responsible for all property taxes on the construction equipment; Owner is responsible for property taxes on all other items incorporated into the project. Subcontractor shall notify Purchaser, and Purchaser shall have the right to review prior to Subcontractor's response to such document, of any correspondence with a federal or local taxing authority as it relates to sales and use, gross receipts, or excise taxes.

## 00572 - General Terms and Conditions

### 00572.1 Definitions

The terms below have the following definitions when used in this Subcontract:

"Applicable Laws" means all laws, statutes, regulations, codes, rules, treaties, ordinances, judgments, permits, decrees, approvals, interpretations, injunctions, writs, orders, or other legal requirements of a governmental body entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing power and having jurisdiction over the jobsite or performance of the Work.

"Claims" means claims, actions, suits, liabilities, demands, damages, losses, costs, expenses (including reasonable attorneys' fees), impacts to price, impacts to schedule, awards, fines and judgments, of every kind and nature.

"Consent Decree" means the negotiated plan between Owner, Department of Justice, Environmental Protection Agency, Tennessee department of Environment and Conservation, and the Tennessee Clean Water Network that requires Owner to develop and implement plans to improve its wastewater systems.

"Final Completion" means: (a) the Work is complete and complies with the requirements of this Subcontract; and (b) Subcontractor has fulfilled all of its obligations under this Subcontract except obligations that survive completion of the Work.

"Indemnified Parties" means Owner and its officials, Purchaser, Purchaser's engineer, and the parent companies, related companies, affiliated companies, subsidiaries, successors, and assigns of each, including the shareholders, officers, directors, partners, employees, and agents of each of the above firms. "Indemnified Parties" does not include Subcontractor or any Sub-subcontractor.

"Notice to Proceed" means to written notice provided by Purchaser to Subcontractor releasing Subcontractor to proceed with all or part of the Work.

"Owner" means the City of Memphis, Tennessee.

"Program Manager" means Black & Veatch Corporation or Overland Contracting Inc. (OCI).

"Purchaser" means the party so identified in the Subcontract Agreement.

"SARP10 Program Office" 3485 Poplar Avenue, Suite 230, Memphis, TN 38111.

"Subcontract" means the agreement between Purchaser and Subcontractor consisting of: (a) the Subcontract Agreement; (b) the documents listed in the Subcontract Agreement; (c) written Subcontract revisions; (d) attachments, appendices and exhibits to the Subcontract documents; (e) documents expressly incorporated by reference into the Subcontract; and (e) any requirements that can be reasonably inferred from any of the foregoing.

"Subcontract Agreement" means the Subcontract form executed by Purchaser and Subcontractor.

"Subcontractor" means the party so identified in the Subcontract Agreement.

"Sub-subcontractor" means any party, at any tier, having an agreement with Subcontractor or with a Sub-subcontractor, to perform a portion of the Work.

"Work" means that which Subcontractor is to perform or provide under this Subcontract.

## 00572.2 Interpretation

00572.2.1 This Subcontract is the complete and final agreement between the parties relating to the Work. All prior or contemporaneous negotiations and agreements relating to the Work are superseded by this Subcontract. Exceptions or terms submitted by Subcontractor in the course of accepting this Subcontract are void.

00572.2.2 Provisions of this Subcontract that contemplate performance or obligations subsequent to completion or termination of the Work or contain waivers or limitations of liability will survive such completion or termination. Termination of the Work will not affect the rights and obligations that arose before termination.

00572.2.3 If any provision of this Subcontract is held to be unenforceable, the remaining provisions of this Subcontract will remain in effect.

## 00572.3 Subcontractor's Status

Subcontractor is an independent contractor in the performance of the Work. Subcontractor is solely responsible for the means, methods, sequences, procedures, and safety precautions used or adopted by Subcontractor and any Sub-subcontractor in the performance of the Work. Except as provided in Article 00574.2 and 00574.3, Subcontractor has sole authority and responsibility to employ, manage, discharge, and otherwise control its employees.

## 00572.4 Invoicing and Payment

00572.4.1 Subcontractor shall submit invoices to Purchaser with all documentation required to be submitted with the invoice. Each invoice must be itemized by the Subcontract line number. Each invoice must also clearly show the Subcontract number, the invoice number, the billing period (if applicable), the invoiced amount, retention (if applicable), and the net amount due. The final invoice must contain a copy of Purchaser's notice of Final Completion.

00572.4.2 Subcontractor agrees to provide additional itemization of the Subcontract price as Purchaser reasonably requests. If payment to Subcontractor will be on a time and material basis or a unit price basis, or if Subcontractor files a Claim under Article 00572.13, Subcontractor shall furnish Purchaser complete breakdowns and supporting information in the detail required by Purchaser to verify the accuracy of the invoiced or claimed amounts. Purchaser or Purchaser's designee may audit the aforementioned records at Purchaser's expense.

00572.4.3 Purchaser will withhold five percent retention from all invoices except the final invoice. Payment by Purchaser does not: (a) constitute approval or acceptance of any portion of the Work; (b) waive any of Purchaser's rights; or (c) relieve Subcontractor from responsibility or liability arising out of or related to this Subcontract. Acceptance by Subcontractor of final payment constitutes a release and waiver of all Claims by Subcontractor against Indemnified Parties.

00572.4.4 Purchaser may withhold or set-off amounts due under this Subcontract on account of Claims arising out of or related to Subcontractor's breach or reasonably anticipated breach of this Subcontract.

00572.4.5 Once Work that has undergone specified QA/QC is submitted, reviewed and approved by the Program Manager, the Subcontractor's invoice will be submitted along with the Program Manager's next invoice to the Owner. The Program Manager's invoice is typically submitted during the second week of each month for work performed during the previous month. Typical payment from the Owner to the Program Manager is anticipated to be forty five (45) calendar days upon Owner's acceptance of invoice, and the Program Manager will cause the Purchaser to pay the Service Contractor within two weeks of Program Manager's receipt of payment from the Owner.

### **00572.5 Schedule**

Performance of the Work as scheduled under this Subcontract is of the essence. Subcontractor shall give Purchaser written notice of any delay or anticipated delay within three calendar days after the occurrence of the event giving rise to the delay. Subcontractor's notice must identify the cause of the delay or the anticipated delay and the actions Subcontractor is undertaking to recover from or avoid the delay.

### **00572.6 Waivers of Lien**

As a condition precedent to payment, Subcontractor shall furnish a lien waiver in the form of Article 00672.1 with each invoice except the final invoice. As a condition precedent to payment of the final invoice, Subcontractor shall furnish a lien waiver in the form of Article 00672.2 with the final invoice. If a lien is filed and Subcontractor does not remove or bond around the lien within seven calendar days after receipt of written notice from Purchaser or Owner, Purchaser or Owner may remove the lien. Subcontractor shall reimburse Purchaser or Owner, as applicable, for all costs and expenses incurred by Purchaser or Owner in removing the lien, including reasonable attorneys' fees and court costs.

### **00572.7 Assignment and Subcontracting**

00572.7.1 Subcontractor may not assign all or part of this Subcontract voluntarily, by operation of law, or otherwise, nor may Subcontractor assign any of the money payable under this Subcontract, without obtaining Purchaser's prior written consent.

00572.7.2 Except for the supply of expendable materials and minor components or the supply of a portion of the Work for which a Sub-subcontractor is named in this Subcontract, Subcontractor may not subcontract the Work without first obtaining Purchaser's written consent. In addition, Subcontractor must obtain a safety prequalification for any Sub-subcontractor that will be performing any portion of the Work at the Jobsite, as outlined in Article 00575.9. If Subcontractor subcontracts any portion of the Work, Subcontractor remains responsible for complying with the Subcontract requirements and is liable to Purchaser for the acts and omissions of Sub-subcontractors, including their failure to comply with the requirements of this Subcontract or fulfill the obligations imposed on Subcontractor by this Subcontract, as if the acts and omissions were those of Subcontractor. Purchaser has the right to contact Sub-subcontractors to discuss their progress of the Work.

### **00572.8 Passage of Title, Risk of Loss, and Delivery**

Subcontractor warrants that the Work (excluding Subcontractor-furnished items that are not intended to become a permanent part of the project) will be free of all liens, claims, charges, security interests, encumbrances or defects in title. Title to the Work (excluding Subcontractor-furnished items that are not intended to become a permanent part of the project) will pass to Purchaser upon the earlier of Subcontractor's receipt of payment or delivery of the Work to the jobsite. Subcontractor retains the risk of loss of the Work until Purchaser issues the notice of Final Completion. The terms of delivery have the meanings assigned them in the 2010 edition of the Incoterms published by the International Chamber of Commerce, except as modified in this Subcontract.

### **00572.9 Final Completion**

Subcontractor shall notify Purchaser in writing when Subcontractor believes the Work meets the requirements for Final Completion. Purchaser will inspect the Work within ten calendar days after Purchaser's receipt of Subcontractor's notice. If Purchaser identifies any defective or non-conforming Work, Subcontractor shall correct that Work in accordance with Article 00572.10. Purchaser will issue a notice that Final Completion has been achieved when the Work meets the requirements for Final Completion. Purchaser's issuance of the notice of Final Completion does not relieve Subcontractor of its obligations under this Subcontract.



## 00572.10 Warranty

00572.10.1 Subcontractor warrants to Purchaser and Owner that the Work: (a) will be new when delivered to the jobsite; (b) will be free from defects in design, material, and workmanship; (c) will comply with Applicable Laws; (d) will comply with the requirements of this Subcontract; and (e) will be fit for the purposes specified. Subcontractor also warrants to Purchaser and Owner that elements of the Work for which this Subcontract does not establish express standards of quality and fitness will comply with good industry practices for the specific application. Subcontractor agrees that Owner may directly enforce the warranties of this Article 00572.10.1.

00572.10.2 Subcontractor shall correct any breach of this warranty within five calendar days after Purchaser gives Subcontractor written notice of the breach. The cost of warranty work and removal or replacement of other work will be at Subcontractor's expense. Subcontractor shall work diligently and without interruption to correct the breach. In the case of emergency where, in the reasonable judgment of Purchaser, delay could result in serious loss or damage to persons or property, Purchaser may correct the defect or nonconformity at Subcontractor's expense.

00572.10.3 The warranty for the Work extends until one year after Final Completion. The warranty applies to all repairs and replacements to the same extent the warranty applies to the original Work. The warranty period for repaired Work or replacements will be extended for a period of one year after the repair or replacement is complete or until the original warranty period expires, whichever occurs later.

00572.10.4 Subcontractor acknowledges that Owner's failure to achieve 100 percent compliance with the Consent Decree requirements may result in the imposition of penalties, costs, and other damages imposed against the Owner and Purchaser. To the extent caused by Subcontractor's failure to perform the Work in accordance with this Subcontract or to the extent caused by the negligence of Subcontractor or any Sub-subcontractor. Subcontractor agrees to pay penalties and costs incurred by Owner and Purchaser under the Consent Decree.

## 00572.11 Compliance with Laws

00572.11.1 Subcontractor shall comply with all Applicable Laws in effect during its performance of Work, including but not limited to the City of Memphis Prevailing Wage Ordinance, Davis Bacon, the Fair Labor Standards Act, Occupational Safety and Health Administration (OSHA), and the Americans with Disabilities Act (ADA). Subcontractor shall obtain all licenses, permits, and inspections applicable to the Work except for licenses, permits, and inspections identified in this Subcontract as Purchaser's or Owner's responsibility. Subcontractor shall also comply with the USA's Foreign Corrupt Practices Act.

00572.11.2 Purchaser and Subcontractor shall abide by the requirements of 41 CFR §§ 60-1.4(a), 60-4.3(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

00572.11.3 Neither party shall engage in any conduct or activity in the performance of this Subcontract that constitutes a conflict of interest under Applicable Laws.

## 00572.12 Business Practices

00572.12.1 Subcontractor shall uphold the good name and reputation of Purchaser and shall not take any action which is intended to or which causes damage to or discredits Purchaser. Subcontractor shall not:



- (a) offer to give or agree to give any director, officer, employee or agent of any potential client a gift or consideration of any kind as an inducement or reward for: (i) doing or declining to do, or for having done or declined to do, any action in relation to obtaining or executing any contract or (ii) for showing or declining to show any favor or disfavor to any person in relation to any possible project; or
- (b) induce or attempt to induce any officer, servant, or agent of any private or public body to depart from his or her duties to his or her client or, in the case of any officer, servant or agent of a public body, his or her duties to the applicable public body, the applicable body politic, or both.

00572.12.2 Subcontractor shall not engage or employ, on a full, part-time or any other basis during the term of the Prime Agreement and for a period of one year after the termination or expiration, any professional or technical personnel who are or have been at any time during the term of the Prime Agreement in the employ of Owner with the explicit written consent of Owner.

00572.12.3 Nondiscrimination:

(a) Subcontractor certifies and agrees that all persons employed by it, its affiliates, subsidiaries, or holding companies are and will be treated equally without regard to or because of race, creed, color, religion, ancestry, national origin, sexual orientation, sex, age, condition of physical or mental handicap, marital status, or political affiliation, in compliance with all Applicable Laws. Subcontractor shall certify, at Purchaser's request that it is in full compliance with all applicable EEO rules and laws.

(b) Purchaser and Owner reserve the right to investigate any claims of illegal discrimination by Subcontractor and in the event a finding of discrimination is made and upon written notification thereof, Subcontractor shall take all necessary steps to cure and rectify such action to the reasonable satisfaction of Purchaser and Owner. Subcontractor's failure or refusal to do so shall be cause for termination of this Subcontract in accordance with the terms of this Subcontract.

00572.12.4 Purchaser is an affirmative action employer. Accordingly, the parties hereby incorporate by reference the requirements of Executive Order 11246, as amended, and the applicable regulations contained in 41 C.F.R. Parts 60-1 through 60-60; 29 U.S.C. Section 793 and the applicable regulations contained in 41 C.F.R. Part 60-741; 38 U.S.C. Section 4212 and the applicable regulations contained in 41 C.F.R. Part 60-250 and/or 60-300; and 29 C.F.R. Part 471, Appendix A to Subpart A.

00572.12.5 Subcontractor represents and warrants that it has a code of conduct or other set of compliance requirements that is at least as broad as Purchaser's Code of Conduct for Global Business Relationships (refer to Article 00672.9, hereinafter "Code of Conduct"), or that it will comply with Purchaser's Code of Conduct in all dealings that affect Purchaser.

### **00572.13 Claims**

Subcontractor must give written notice, with appropriate supporting documentation, of all Claims for extra compensation or additional time for performance of the Work within three calendar days after occurrence of the event giving rise to the Claim. Subcontractor acknowledges that failure of Subcontractor to give Purchaser notice and appropriate supporting documentation within the required time frame constitutes a waiver of all Claims arising out of or related to the event.

### **00572.14 Subcontract Revisions and Work Authorizations**

00572.14.1 Purchaser may make additions, deletions, reductions in scope, or other changes to the Work. If a proposed change will cause a material increase or decrease in Subcontractor's cost or time for performance, Subcontractor shall so notify Purchaser in writing, accompanied by supporting documentation, within three calendar days after Subcontractor's receipt of Purchaser's notice of change.

If Purchaser agrees with Subcontractor's notice, the parties will negotiate an equitable adjustment to the Subcontract price, to the schedule, or both, in accordance with the Subcontractor's fee for overhead and profit as listed in Article 00572.14.2 below. These adjustments will be reflected in a written Subcontract revision.

00572.14.2 The Subcontractor's fee for overhead and profit shall be determined as follows:

For costs incurred for labor the maximum fee shall be fifteen percent to the Subcontractor or the Sub-subcontractor performing the Work.

For costs incurred for materials and equipment the maximum fee shall be five percent to the Subcontractor or the Sub-subcontractor providing the materials and equipment.

If applicable, the Subcontractor may receive an additional fee of five percent on labor or materials and equipment performed or provided by a Sub-subcontractor, as long as the total combined fee does not exceed fifteen percent.

00572.14.3 A written Subcontract revision is required before Subcontractor is entitled to payment for the Work performed under the Work authorization. Subcontractor will bear the expense of performing any change not supported by a written Work authorization or written Subcontract revision. Purchaser will not be liable to Subcontractor for Claims arising from a decrease in the Work. No change is effective without a written Work authorization or a written Subcontract revision issued by Purchaser.

#### **00572.15 Non-Disclosure**

Subcontractor shall not make any news releases, authorize or participate in any interview concerning this Subcontract, or issue other advertising pertaining to the project or this Subcontract without the prior written approval of Purchaser. Subcontractor shall treat all information provided by Purchaser as confidential and only disclose such information as necessary to perform the Work, and will require the employees, agents, and Subcontractors who need to know to adhere to the terms of this provision.

#### **00572.16 Suspension of Work**

Purchaser may, at any time and in its sole discretion, suspend performance of all or part of the Work by written notice to Subcontractor. If the suspension is unrelated to Subcontractor's failure to comply with this Subcontract, Purchaser will adjust the schedule to reflect the reasonable delay due to the suspension and will reimburse Subcontractor for the reasonable and direct additional costs incurred by Subcontractor due solely to the suspension. Subcontractor shall promptly resume performance of all or part of the suspended Work in accordance with Purchaser's written authorization to resume the Work.

#### **00572.17 Termination for Cause**

If Subcontractor defaults in any obligation under this Subcontract and does not cure the default within ten calendar days after receipt of Purchaser's written notice identifying the default, Purchaser may terminate all or part of the Work.

#### **00572.18 Termination Without Cause**

Purchaser may, at any time and in its sole discretion, terminate all or part of the Work. Subject to Subcontractor's compliance with this Subcontract, Subcontractor will recover from Purchaser, as the complete and final settlement for the terminated Work and all related Claims, a sum equal to Subcontractor's direct cost for the terminated Work satisfactorily performed as of the effective date of termination, plus an allowance for reasonable overhead and profit on such direct cost.

#### **00572.19 Purchaser's Remedies**

If Subcontractor by its action or inaction indicates that it is unable or unwilling to proceed with the Work in accordance with the schedule or if Purchaser intends to perform any corrective work under Article 00572.10, Purchaser may, upon written notice to Subcontractor, accomplish the Work in question by the most expeditious means available and back-charge Subcontractor for the costs incurred. Subcontractor

shall pay all direct costs incurred by Purchaser under this Article 00572.19, including engineering (charged at \$100/hour), labor, material, transportation, insurance, subcontracts, tools, and equipment. Subcontractor shall also pay twenty-five percent of the direct costs incurred by Purchaser under this Article 00572.19 for Purchaser's overhead and general and administrative costs.

### **00572.20 Indemnity**

00572.20.1 SUBCONTRACTOR AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE INDEMNIFIED PARTIES AGAINST ANY CLAIM, LOSS, DAMAGE, EXPENSE, OR LIABILITY (INCLUDING ATTORNEYS' FEES AND COSTS OF ANY SUCCESSFUL ENFORCEMENT OF THIS INDEMNITY ARTICLE) ARISING OUT OF THE PERFORMANCE OR NON-PERFORMANCE BY SUBCONTRACTOR OR ITS SUB-SUBCONTRACTORS, OR THEIR OFFICERS, EMPLOYEES, OR AGENTS.

00572.20.2 Providing that Purchaser is not in breach of its obligation to make payments to Subcontractor for the Work, Subcontractor shall indemnify, defend and hold harmless the Indemnified Parties from any claims or mechanic's liens brought against the Indemnified Parties or against the Project as a result of the failure of Subcontractor, or those for whose acts it is responsible, to pay for any services, materials, labor, equipment, taxes or other items or obligations furnished or incurred for or in connection with the Work. Within three (3) days of receiving written notice from Purchaser that such a claim or mechanic's lien has been filed, Subcontractor shall commence to take the steps necessary to discharge said claim or lien, including, if necessary, the furnishing of a mechanic's lien bond. If Subcontractor fails to do so, Purchaser will have the right to discharge the claim or lien and hold Subcontractor liable for costs and expenses incurred, including attorneys' fees.

00572.20.3 Subcontractor will immediately notify Purchaser of any claim or suit made or filed against Subcontractor or its Sub-subcontractors in which Purchaser or Owner is named as a co-defendant.

### **00572.21 Insurance Requirements**

00572.21.1 Subcontractor shall, at its sole cost, maintain insurance as required by this Subcontract and shall impose the obligations of this Article 00572.21.1 on all Sub-subcontractors. Subcontractor shall give Purchaser ACORD insurance certificates evidencing the required coverage by the due date identified in article titled "Schedule of Submittals" and as Purchaser may request from time to time. Subcontractor shall ensure the policies:

- (a) Contain a provision or endorsement that the coverage will not be cancelled materially changed, or renewal refused unless the insurer gives at least thirty calendar days prior written notice to Purchaser.
- (b) Remain in effect through the warranty period if coverage is occurrence-based and remain in effect at least one year after expiration of the warranty period if coverage is claims-based.
- (c) Are primary with respect to insurance covering Indemnified Parties as additional insureds. All insurance carried by Indemnified Parties will be excess insurance.
- (d) Contain a waiver of all rights of subrogation by the insurance carriers in favor of Indemnified Parties.
- (e) Comply with all Applicable Laws of the jurisdiction in which any part of the Work is to be performed including, but not limited to, admitted and compulsory coverage.
- (f) Are rated "A-" or better by A.M. Best's "Insurance Guide and Ratings."

00572.21.2 Subcontractor shall maintain broad form commercial general liability insurance protecting Subcontractor, and Indemnified Parties as additional insureds (using endorsements CG 20 10 and CG 20 37 or their equivalent), against claims arising out of bodily injury or property damage arising from the Work. The policy must include a cross-liability or severability of interest clause, a per project aggregate endorsement, and coverage for personal injury liability, contractual liability, products and completed operations (covering lawsuits brought in the USA and the country of the jobsite), explosion, building collapse, and damage to underground property. The policy must include coverage for riggers liability if applicable to the Work. Subcontractor shall maintain policy limits of at least one million dollars for each occurrence.

00572.21.3 Subcontractor shall maintain worker's compensation insurance protecting Subcontractor against all claims under applicable worker's compensation laws, including, but not limited to, the United States Longshoremen's and Harbor Worker's Act and the Jones Act. If Subcontractor is required to maintain worker's compensation insurance in the USA, the worker's compensation insurance must contain an "all states" or "other states" endorsement. For Work performed in the USA, Subcontractor shall also maintain employer's liability insurance protecting Subcontractor against claims for injury, disease or death of employees which are not covered by the worker's compensation insurance. Subcontractor shall maintain worker's compensation policy limits as required by statute and, if applicable to this Subcontract, employer's liability policy limits of at least one million dollars for each occurrence.

00572.21.4 Subcontractor shall maintain comprehensive automobile liability insurance protecting Subcontractor, and Indemnified Parties as additional insureds, against all claims for injuries to members of the public and damage to property of others arising from the use of motor vehicles, whether owned, non-owned, or hired. Subcontractor shall maintain policy limits of at least one million dollars for each occurrence.

00572.21.5 Subcontractor shall maintain umbrella liability insurance that follows the form of the commercial general liability insurance, the employer's liability insurance and the automobile liability insurance. The umbrella liability insurance must protect Subcontractor, and Indemnified Parties as additional insureds, against claims in excess of the limits of the commercial general liability insurance, the employer's liability insurance, and the automobile liability insurance. Subcontractor shall maintain policy limits of at least four million dollars for each occurrence.

00572.21.6 Subcontractor is responsible for maintaining any and all property insurance on their own equipment and shall require all Sub-subcontractors to do likewise.

#### **00572.22 Audit**

Purchaser reserves the right to audit the records of Subcontractor. Accordingly, Subcontractor shall make and keep as the same accrue, full and complete records and books of accounts of revenue and income, and costs and expenses that specifically relate to performance under this Subcontract. Records and books of account, together with any or all memoranda pertaining thereto that may be kept, maintained, or possessed by Subcontractor, shall be opened to examination during regular business hours by Purchaser or its representatives for the purposes of inspecting, auditing, verifying, or copying the same or making extracts therefrom. Subcontractor shall make and keep said records and books of account for a period of seven (7) years after the completion of the contract obligations of the final payment under the Subcontract, whichever is later.

#### **00572.23 Governing Law and Disputes**

Claims and disputes arising out of or relating to this Subcontract will be governed by the law of the State of Missouri, USA, excluding provisions that would apply the law of another jurisdiction. Pending resolution of any claim or dispute, and without prejudice to Subcontractor's rights, Subcontractor shall continue to perform as directed by Purchaser.

#### **00572.24 Hazardous Conditions**

00572.24.1 Subcontractor is not responsible for any Hazardous Conditions encountered in the performance of the Work at the Jobsite. Upon encountering any Hazardous Conditions, Subcontractor will stop services immediately in the affected area and duly notify Purchaser. For purposes of this Subcontract, Hazardous Conditions is defined as any materials, wastes, substances and chemicals deemed to be hazardous under any Applicable Law or the handling, storage, remediation, or disposal of which are regulated by Applicable Laws and applies to any hazardous or toxic substance, material, or condition present at the locations in which the Work is performed which was not brought onto such site or sites by Service Contractor for the exclusive benefit of Subcontractor.

00572.24.2 Subcontractor shall be obligated to resume the Work at the affected areas only after Owner's expert provides it with written certification that (i) the Hazardous Conditions have been removed or rendered harmless and (ii) all necessary approvals have been obtained from all Governmental Authority having jurisdiction over the location.

00572.24.3 Subcontractor will be entitled, to an adjustment in its compensation and all times for performance of the Work to the extent Subcontractor cost or time of performance have been adversely impacted by the presence of Hazardous Conditions, subject to submission of appropriate documentation by Subcontractor and Subcontractor's duty to mitigate.

#### **00572.25 Force Majeure**

00572.25.1 If Subcontractor is delayed in the performance of the Work due to acts, omissions, conditions, events, or circumstances beyond its control, the times for performance shall be reasonably extended by on a not less than day for day basis. By way of example and not of limitation, events that will entitle Subcontractor to an extension of the times for performance include without limitation acts or omissions of Owner or Purchaser, or anyone under Owner's control (including separate contractors), Hazardous Conditions, wars, terrorism, civil unrest, actions and inactions of delay of Governmental Authorities, floods, labor disputes and unrest, unusual delay in transportation, epidemics, earthquakes, tsunami, adverse weather conditions, and acts of God.

00572.25.2 In addition to Subcontractor's right to a time extension for those events set forth above, Subcontractor shall also be entitled to an appropriate increase in the compensation due to the impacts or delays arising from such events. Subcontractor will file all claims in accordance with Article 00572.13.



## 00574 – Jobsite Operations Terms and Conditions

### 00574.1 Subcontractor Scope of Work

Except as expressly provided in this Subcontract, Subcontractor shall furnish all materials, tools, equipment, vehicles, supplies, services, labor and supervision required to perform the Work. Unless otherwise stated in this Subcontract, the Work includes unloading, off transport, hauling, receiving, storing, maintaining, protecting, erecting, installing, cleaning, adjusting, and all other work required to make the Work ready for use.

### 00574.2 Safety Requirements

00574.2.1 Subcontractor shall conduct all operations under this Subcontract in a manner that avoids the risk of bodily harm and damage to property. At a minimum, Subcontractor shall comply with the requirements of this Article 00574.2, Section 00575, the Loss Control Manual, and Owner's safety requirements. Subcontractor's failure to comply with the requirements of this Article 00574.2, Section 00575, the Loss Control Manual, or Owner's safety requirements constitutes a material breach of this Subcontract.

00574.2.2 When at the jobsite, Subcontractor shall continuously inspect all Work and conduct surveys of all Work areas to identify any unsafe condition and shall immediately take adequate precautions against any unsafe condition identified. Subcontractor is solely and exclusively responsible for the discovery and correction of such conditions. Subcontractor agrees that nothing contained in this Article 00574.2, Section 00575, the Loss Control Manual, or Owner's safety requirements shifts responsibility for bodily harm or damage to property sustained resulting from violation of those provisions from Subcontractor to Owner or Purchaser. Subcontractor remains solely and exclusively responsible for compliance with all safety requirements.

00574.2.3 Subcontractor shall immediately correct any unsafe condition identified by Purchaser. If, in Purchaser's sole discretion, Subcontractor has not taken sufficient precautions for the avoidance of bodily harm and damage to property, or in response to Purchaser's identification of an unsafe condition, Purchaser may stop the Work at Subcontractor's expense or implement suitable precautions at Subcontractor's expense, or both. Purchaser's right to stop the Work and to implement suitable precautions does not impose on Purchaser a duty to exercise those rights and does not relieve Subcontractor of responsibility for damage resulting from violation of this Article 00574.2, Section 00575, the Loss Control Manual, or Owner's safety requirements.

00574.2.4 Compliance with this Article 00574.2, Section 00575, the Loss Control Manual, and Owner's safety requirements is the minimum standard required of Subcontractor. Subcontractor is responsible for examining all Work-related requirements and determining whether additional or more stringent health and safety provisions are required or appropriate for the Work. Subcontractor shall notify Purchaser promptly in writing if a charge of noncompliance with this Article 00574.2, Section 00575, the Loss Control Manual or Owner's safety requirements has been filed against Subcontractor or a Sub-subcontractor in connection with the performance of the Work.

### 00574.3 Labor

Subcontractor shall designate a supervisor at the jobsite who has the authority to act on behalf of and to bind Subcontractor in all matters relating to or arising out of this Subcontract. The supervisor must be fluent in English. Subcontractor agrees to replace, at no cost to Purchaser, any Sub-subcontractor or any personnel of Subcontractor or Sub-subcontractor who Purchaser reasonably requests be replaced.

### 00574.4 Protection and Restoration of Property

00574.4.1 Subcontractor shall, at its expense, protect the Work, the environment, and all other property from hazards arising out of or relating to the Work and from natural elements. Subcontractor shall, at its expense, promptly repair or remove and replace any damage or loss and, to the extent practicable,



restore property affected by the Work to its original condition, as determined by Purchaser. Subcontractor is solely responsible for protection of the Work until Final Completion.

00574.4.2 At the completion of the Work, Subcontractor shall remove all Subcontractor-furnished items that are not intended to become a permanent part of the project from the jobsite and shall remove and deposit in Subcontractor-furnished waste facilities all scrap, trash, waste materials, and debris resulting from the Work. Subcontractor shall thoroughly remove all accumulations of dust, scraps, waste, oil, grease, weld spatter, insulation, paint, and other foreign substances resulting from performance of the Work and shall restore all surfaces affected by those substances.



## 00575 - Safety, Health and Accident Prevention

### 00575.1 Project Safety and Health Program

Purchaser will implement and coordinate the overall Project Safety and Health Program as defined in the Loss Control Manual which is available for inspection at the SARP10 Program Office.

### 00575.2 Safety, Health, and Accident Prevention Program

00575.2.1 Subcontractor shall implement and maintain a written Safety, Health and Accident Prevention Program specifically applicable to the Work. Subcontractor's Safety, Health and Accident Prevention Program must meet the requirements of Applicable Laws and adhere to the Project Safety and Health Program, if implemented by Purchaser. Subcontractor shall submit Subcontractor's Safety, Health and Accident Prevention Program for Purchaser's review at least thirty calendar days before starting Work at the jobsite. Purchaser's review does not relieve Subcontractor of Subcontractor's sole responsibility for safety and health in relation to the Work, nor does Purchaser's review limit Subcontractor's obligation to undertake any action necessary to establish and maintain safe working conditions relating to the Work at the jobsite.

00575.2.2 Purchaser may monitor Subcontractor's safety and health performance and may require changes to Subcontractor's Safety, Health and Accident Prevention Program during the performance of the Work. Purchaser's monitoring and requirement of changes does not relieve Subcontractor of Subcontractor's sole responsibility for safety and health in relation to the Work, nor does Purchaser's monitoring and requirement of changes limit Subcontractor's obligation to undertake any action necessary to establish and maintain safe working conditions relating to the Work at the jobsite.

### 00575.3 Hazardous Waste Project Health and Safety Plan

00575.3.1 Subcontractor understands that the Work involves hazardous substances or hazardous wastes. Subcontractor shall comply with all Applicable Laws, Owner's facility rules and regulations, and applicable guidance documents. Subcontractor shall prepare and implement a jobsite-specific Hazardous Waste Project Health and Safety Plan, based on Subcontractor's Safety, Health and Accident Prevention Program and all written programs required by Applicable Laws. Subcontractor is responsible for the completeness and accuracy of Subcontractor's Hazardous Waste Project Health and Safety Plan. Subcontractor shall submit Subcontractor's Hazardous Waste Project Health and Safety Plan to Purchaser at least thirty calendar days before starting Work at the jobsite and shall maintain a copy at the jobsite for review by Purchaser, Owner, and regulatory personnel.

00575.3.2 Before starting Work at the jobsite, Subcontractor shall submit written verification that:

- (a) personnel assigned to the Work have received forty hour health and safety training that meets the requirements of 29 CFR 1910.120(e) or 1926.65(e);
- (b) the assigned field supervisor has completed eight hours of supervisor training that meets the requirements of 29 CFR 1910.120(e)(4) or 1926.65(e)(4); and
- (c) personnel assigned to the Work are participating in a medical surveillance program that meets the requirements of 29 CFR 1910.120(f) or 1926.65(f).

### 00575.4 Protective Clothing, Equipment and Instrumentation

Subcontractor agrees to furnish special protective clothing, respiratory protective equipment, and monitoring instrumentation as required by Applicable Laws, the project's safety-related plans and programs, and Purchaser's and Owner's rules and regulations. Subcontractor shall ensure that personnel performing Work at the jobsite properly use the clothing, equipment, and instrumentation. Subcontractor shall furnish and maintain all safety equipment, including but not limited to, barriers, signs, warning lights, and guards necessary for adequate protection of persons and property.



### 00575.5 Safety and Health Representative

The Subcontractor shall identify a qualified person to be its representative for Environmental, Safety, Health & Security matter and make this person available as needed and requested by the Purchaser. The representative must have authority to correct unsafe conditions and to stop Work in the area of an unsafe condition. In addition, the representative shall routinely visit the jobsite.

### 00575.6 Safety and Health Goal

Subcontractor shall endeavor to attain the project's safety goal of zero injuries. Subcontractor shall maintain accurate accident and injury reports and shall furnish Purchaser a monthly summary of injuries and man-hours lost due to injuries by the third of each month. Subcontractor accident rates must be calculated monthly in accordance with the Bureau of Labor Statistics incident rate, frequency rate, and days away from work rate methods. If Subcontractor or Sub-subcontractor accident rates exceed the project's safety goal, Subcontractor shall take immediate corrective action, which may include, but is not limited to:

- (a) submittal of a written corrective action plan to Purchaser by Subcontractor;
- (b) additions or modifications to Subcontractor's Safety, Health and Accident Prevention Program;
- (c) removal from the jobsite of any Subcontractor or Sub-subcontractor personnel not implementing or following the necessary safety and health measures; and
- (d) increasing the amount of Subcontractor safety and health training.

### 00575.7 Drug Prevention Program

As part of the Work, Subcontractor shall assist Purchaser in administering the project requirements for a drug detection and prevention program. Subcontractor agrees that all costs for drug testing and alcohol testing are included in the Subcontract price. Subcontractor must provide evidence to Purchaser that all personnel assigned to the Work at the jobsite have passed the drug test within three calendar days of completion of the test. The drug detection and prevention program will include, but will not be limited to, the following: (a) a pre-jobsite assignment test; and (b) post-jobsite assignment tests, such as reasonable suspicion tests, post-accident tests, and unannounced random drug tests of ten percent of the workforce on a monthly basis.

### 00575.8 Fall Protection

The OSHA Fall Protection Standard 29 CFR 1926 Subpart M shall be strictly adhered to by the Subcontractor. Fall protection is required for all of Subcontractor's Work operations one hundred percent of the time, whether climbing, traveling, or working. NO WORK OPERATION is exempt from the six (6) foot fall protection requirement.

Prior to starting work operations requiring fall protection, Subcontractor shall submit to Purchaser a fall protection plan. The fall protection plan shall include, but not be limited to, the following:

Name of qualified person in charge of operation.

Description of work operation.

List of fall exposures.

Description of fall protection methods used to eliminate fall exposures.

Training and enforcement methods used to ensure employee compliance with the plan.

Fall protection body harnesses, lanyards, and lifelines shall be used in accordance with OSHA Standard



1926 Subpart 502D, with the following exceptions:

Full body harnesses shall be used in lieu of safety belts.

Only lanyards with shock absorbers and locking type snap hooks shall be used.

At least two lanyards shall be used to provide one hundred percent fall protection when moving around obstructions, connection points, or other similar items.

Fall protection guardrail systems shall comply with OSHA Standard 1926 Subpart 502(b) except manila, plastic, or synthetic rope shall not be used as guardrails.

#### **00575.9 Sub-subcontractor Safety Prequalification**

Prior to any Sub-subcontractor performing Work on the Jobsite the Sub-subcontractor must obtain a Sub-subcontractor safety prequalification from Purchaser. In order to obtain the safety prequalification, Subcontractor or its Sub-subcontractor shall submit to Purchaser evidence that the Sub-subcontract has an Experience Modification Rating or equivalent rating of 1.0 or less and that incident rates (Recordable Incident Rate, Loss Time Incident Rate, and Days Away/Restricted or Job Transfer rate) are below the national average during the last three years. In addition, Subcontractor or Sub-subcontractor must submit sufficient information to allow Purchaser to evaluate any Occupational Safety and Health Administration (OSHA) violations received by Sub-subcontractor within the last three years and any other documentation Purchaser may reasonably require. Purchaser's safety manager will review the submission and provide a safety prequalification if Purchaser, in its sole discretion, determines the Sub-subcontractor meets Purchaser's safety requirements. Subcontractor or its Sub-subcontractor must submit the requirements prior to Sub-subcontractor first mobilizing to the Jobsite.

#### **00575.10 Confined Spaces**

All employees entering confined spaces and all attendants for such entries including supervisors shall receive confined space entry training and emergency rescue training at a minimum of once per year.

**00672 - General Conditions Attachments**

**00672.1 Partial Waiver and Release of Lien Rights**

**AFFIDAVIT AND PARTIAL WAIVER OF CLAIMS AND LIENS  
AND RELEASE OF RIGHTS FOR SUBCONTRACTORS**

The undersigned, who is the \_\_\_\_\_ (designate title) of \_\_\_\_\_ which is the \_\_\_\_\_ (designate whether subcontractor, supplier or otherwise) for the \_\_\_\_\_ (designate the type of work, supplies or services rendered) on the improvements constructed on the premises hereafter identified, declares that his contract with \_\_\_\_\_ (General Contractor) is in the total amount of \$ \_\_\_\_\_, which includes extras and all change orders to the date hereof.

The undersigned further states that as of \_\_\_\_\_ (date) the total value of work completed and material stored is \$ \_\_\_\_\_. Of this amount \$ \_\_\_\_\_ has been received (the receipt and sufficiency of which is hereby acknowledged by the undersigned including \$ \_\_\_\_\_ in payment of Payment Application or Invoice Number \_\_\_\_\_). A total of \$ \_\_\_\_\_ is being held as retainage.

In consideration of the amounts and sums received, the undersigned does hereby waive and release to the **City of Memphis (Owner)** and to \_\_\_\_\_ (General Contractor) any and all claims and liens and rights to liens upon the premises described below and upon improvements now thereon, and upon the monies or other considerations (due as of the date of the aforesaid payment application or invoices from the **City of Memphis (Owner)** or \_\_\_\_\_ (General Contractor) or from any other person, firm or corporation), said claims and liens and rights to liens being on account of labor, services, materials, fixtures or apparatus heretofore furnished by or at the request of the undersigned. The premises as to which said claims and liens and rights to liens are hereby released are identified as follows:

**Project Name:**

**Address of Project:**

**City: Memphis** \_\_\_\_\_ **County: Shelby** \_\_\_\_\_ **State: TN** **Zip Code:** \_\_\_\_\_

The undersigned further represents and warrants that he is duly authorized and empowered to sign and execute this waiver on his own behalf and on behalf of the company or business for which he is signing; that he has properly performed all work and furnished all the materials of the specified quality per plans and specifications and in a good and workmanlike manner through the date of said payment application or invoice; that he has paid for all the labor, materials, equipment, and services that he has used or supplied to the above premises through the date of said payment application or invoice; that he has no other outstanding and unpaid payment applications, invoices, retentions, holdbacks, chargebacks or unbilled work or materials against \_\_\_\_\_ (General Contractor) as of the date of the aforementioned payment application; and that any materials which have been supplied or incorporated into the above premises were either taken from his fully-paid or open stock or were fully paid for and supplied as stated on the payment application or invoice.

The undersigned further agrees to reimburse and does hold harmless and fully indemnify the **City of Memphis (Owner)** and \_\_\_\_\_ (General Contractor) for any losses or expenses should any such claims, lien or right to a lien be asserted (by the undersigned or by any laborer, materialman or subcontractor of the undersigned), including, without implied limitation, attorneys' fees incurred in the defense thereof.



The undersigned further accepts and acknowledges the receipt of the aforesaid sums in full accord and satisfaction for the aforementioned claims with full knowledge that the contractors, **City of Memphis (Owner)** and \_\_\_\_\_ (General Contractor), their successors and assigns, are relying thereon; and furthermore, the undersigned agrees to perform, now and in the future, each and every covenant and provision of this written contract or supplier's agreement (as the case may be) as modified or changed in writing with \_\_\_\_\_ (General Contractor) or any subcontractor of \_\_\_\_\_ (General Contractor) hereby acknowledging that said contract or supplier's agreement is now in full force and effect.

In addition, for and in consideration of the amounts and sums received, the undersigned hereby waives, releases and relinquishes any and all claims, rights or causes of action whatsoever arising out of or in the course of the work performed on the above-mentioned project, contract or event transpiring prior to the date hereof, excepting the right to receive payment for work performed and properly completed and retainage, if any, after the date of the above-mentioned payment application or invoices.

Signed and delivered the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Company \_\_\_\_\_

By: \_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Signature)

Title: \_\_\_\_\_

Before me, the undersigned Notary Public in and for the said County and State, personally appeared \_\_\_\_\_, and acknowledged execution of the foregoing affidavit as his voluntary act and deed and further stated that the facts recited are true of his personal knowledge.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

Residence County/State: \_\_\_\_\_

**00672.2 Final Waiver and Release of Lien Rights**

**AFFIDAVIT AND FINAL WAIVER OF CLAIMS AND LIENS  
AND RELEASE OF RIGHTS FOR SUBCONTRACTORS**

The undersigned, who is the \_\_\_\_\_ (designate title) of \_\_\_\_\_ which is the \_\_\_\_\_ (designate whether subcontractor, supplier or otherwise) for the \_\_\_\_\_ (designate the type of work, supplies or services rendered) on the improvements constructed on the premises hereafter identified, declares that his contract with \_\_\_\_\_ (General Contractor) is in the total amount of \$ \_\_\_\_\_, which includes extras and all change orders to the date hereof.

The undersigned further states that as of \_\_\_\_\_ (date) all work on said project has been performed and completed in accordance with the plans and specifications for the project, and said work has been accomplished in accordance with the terms and conditions of his subcontract and those documents which, by reference, are a part of said subcontract. The total value of work completed and material stored is \$ \_\_\_\_\_. Of this amount \$ \_\_\_\_\_ has been received (the receipt and sufficiency of which is hereby acknowledged by the undersigned including \$ \_\_\_\_\_ in payment of Payment Application or Invoice Number \_\_\_\_\_. A total of \$ \_\_\_\_\_ is being held as retainage.

In consideration of the amounts and sums received, the undersigned does hereby waive and release to the **City of Memphis (Owner)** and to \_\_\_\_\_ (General Contractor) any and all claims and liens and rights to liens upon the premises described below and upon improvements now thereon, and upon the monies or other considerations (due as of the date of the aforesaid payment application or invoices from the **City of Memphis (Owner)** or \_\_\_\_\_ (General Contractor) or from any other person, firm or corporation), said claims and liens and rights to liens being on account of labor, services, materials, fixtures or apparatus heretofore furnished by or at the request of the undersigned. The premises as to which said claims and liens and rights to liens are hereby released are identified as follows:

**Project Name:**  
**Address of Project:**  
**City:** Memphis **County:** Shelby **State:** TN **Zip Code:** \_\_\_\_\_

The undersigned further represents and warrants that he is duly authorized and empowered to sign and execute this waiver on his own behalf and on behalf of the company or business for which he is signing; that he has properly performed all work and furnished all the materials of the specified quality per plans and specifications and in a good and workmanlike manner as required by the contract; that he has paid for all the labor, materials, equipment, and services that he has used or supplied to the above premises as required by the contract; that he has no other outstanding and unpaid payment applications, invoices, retentions, holdbacks, chargebacks or unbilled work or materials against \_\_\_\_\_ (General Contractor); and that any materials which have been supplied or incorporated into the above premises were either taken from his fully-paid or open stock or were fully paid for and supplied as stated on the payment application or invoice.

The undersigned further agrees to reimburse and does hold harmless and fully indemnify the **City of Memphis (Owner)** and \_\_\_\_\_ (General Contractor) for any losses or expenses should any such claims, lien or right to a lien be asserted (by the undersigned or by any laborer, materialman or subcontractor of the undersigned), including, without implied limitation, attorneys' fees incurred in the defense thereof.



The undersigned further accepts and acknowledges the receipt of the aforesaid sums in full accord and satisfaction for the aforementioned claims with full knowledge that the contractors, **City of Memphis (Owner)** and \_\_\_\_\_ (General Contractor), their successors and assigns, are relying thereon; and furthermore, the undersigned agrees to perform, now and in the future, each and every covenant and provision of this written contract or supplier's agreement (as the case may be) as modified or changed in writing with \_\_\_\_\_ (General Contractor) or any subcontractor of \_\_\_\_\_ (General Contractor) hereby acknowledging that said contract or supplier's agreement is now in full force and effect.

In addition, for and in consideration of the amounts and sums received, the undersigned hereby waives, releases and relinquishes any and all claims, rights or causes of action whatsoever arising out of or in the course of the work performed on the above-mentioned project, contract or event transpiring prior to the date hereof, except retainage, if any, after the date of the above-mentioned payment application or invoices.

Signed and delivered the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Company \_\_\_\_\_

By: \_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Signature)

Title: \_\_\_\_\_

Before me, the undersigned Notary Public in and for the said County and State, personally appeared \_\_\_\_\_, and acknowledged execution of the foregoing affidavit as his voluntary act and deed and further stated that the facts recited are true of his personal knowledge.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

Residence County/State: \_\_\_\_\_

**00672.3 Certificate of Nondiscrimination (1 page)**





As Bidder, Contractor, or Subcontractor on Purchaser's Contract, General Construction Support

The undersigned states that it does not discriminate against any subcontractor, employee, or applicant for employment on the grounds of race, color, national origin or sex and, if awarded a contract for this project, agrees in performance of work:

1. Not to discriminate against any subcontractor, employee, or applicant for employment on the grounds of race, color, national original or sex;
2. To maintain payrolls of laborers and mechanics employed on this contract until seven (7) years after final release and final payment by the City;
3. To require a similar certificate to be executed by each subcontractor at the time a subcontract is executed under the contract with the requirement that such subcontractor agrees to require a similar certificate of requirement on any lower tiers of subcontracts.
4. To conform to federal law, state statutes, executive orders, and local ordinances identified and listed under Non-discrimination, Section 00280.7.

\_\_\_\_\_  
Service Contractor's Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed or Typed Name and Title

**THIS FORM MUST BE SUBMITTED WITH THE PROPOSAL OR**  
**THE PROPOSAL MAY BE CONSIDERED NON-CONFORMING.**

#### 00672.4 Equal Business Opportunity Program

*This form must be submitted with Bidder's bid. Failure to execute and submit this document with Bidder's bid may cause the Bid to be rejected as non-conforming. In addition, each Sub-Subcontractor must execute the form.*

This Subcontract will be subject to the requirements of the City of Memphis Ordinance #5384 which establishes the Equal Business Opportunity ("EBO") Program. It is up to the Respondent to ensure that all requirements of this ordinance are met. The Ordinance may be accessed on the City's website at [www.memphistn.gov](http://www.memphistn.gov) under "Office of Contract Compliance". The intent of the EBO Program is to increase the participation of locally owned minority and women owned business enterprises ("M/WBE"). Toward achieving this objective, the overall M/WBE participation goal for this solicitation is 15%. The percentage of overall M/WBE participation is defined as the dollar value of subcontracts awarded to certified (as identified by the City of Memphis EBO list) minority and/or women business enterprises divided by the total proposed base bid amount.

Additionally, in accordance with federal executive Order 11625 and 12138, the local government must make a good faith effort to include participation from Disadvantage Business enterprises (DBE) in sub-agreement awards. The SRF Fair Share DBE goal for this project is a minimum of **2.6%** WBE and minimum of **2.6%** MBE (as identified by the Tennessee Uniform Certification Program list, other State or Federal DBE lists, or the City of Memphis EBO list).

SRF Fair Share Goals:

MBE goal – Construction **2.6%**

WBE goal – Construction **2.6%**

(Vendors from the TDOT TNUCP DBE list, other State or Federal DBE lists, or the City of Memphis EBO list)

SARP10 DBE Participation goal: **15%**

(Vendors from the City of Memphis EBO list only)

#### Participation Plan

The Participation Plan must include: (1) level and dollar amount of participation your firm anticipates to achieve in the performance of contract resulting from this RFB; (2) the type of work to be performed by the M/WBE participation; and (3) the names of the M/WBE and/or DBE firm(s) the Respondent plans to utilize in the performance of the contract resulting from this RFB.

#### Eligible M/WBE and/or DBE Firms

To qualify as a M/WBE firm, per the requirements of City of Memphis Ordinance #5384, a firm must be included on the City's EBO list of certified M/WBE firms. All contractors identified as an SRF Fair Share M/WBE firm must be on the Tennessee Uniform Certification Program (TNUCP) list, other State or Federal DBE lists, or the City of Memphis EBO list at the time of the bid opening.

A list of the City's eligible M/WBE firms may be requested from Purchaser as a guide only. If a Bidder desires to utilize an M/WBE firm not included on the list, it is the Bidder's responsibility to confirm that the desired firm is certified by the City of Memphis. Such confirmation must be obtained from the City's Contract Compliance Office, in writing, before the bid/response due date. Requests for verification must be submitted to the City's Contract Compliance Office listed below:

Joann Massey  
City of Memphis, Contract Compliance Office  
125 North Main Street, Suite 546  
Memphis, TN 38103  
Phone: (901) 576-6210 - Fax: (901) 576-6560  
Email: [joann.massey@memphistn.gov](mailto:joann.massey@memphistn.gov)

**MINORITY/WOMEN BUSINESS ENTERPRISE COMPLIANCE FORM**

**SUBCONTRACT TITLE: General Construction Support**

Project M/WBE Goal: MBE minimum **2.6%**  
 WBE minimum **2.6%**  
 DBE minimum **15%**

The following sections must be completed by Bidder. A certified subcontractor or supplier is defined as a firm from the list of certified firms provided with this specification.

\_\_\_\_\_  
 Bidder's Name

Section A - If the Bidder is a certified firm, so indicate here with a check mark.

\_\_\_\_\_ MBE      \_\_\_\_\_ WBE      \_\_\_\_\_ DBE

Section B - Identify below those certified firms that will be employed as subcontractors or suppliers on this Project. By submitting this Proposal, the Bidder commits to the use of the firms listed below.

- \$ = Show the dollar value of the subcontract to be awarded to this firm
- % = Show the percentage this subcontract is of your base Proposal
- M/WBE = Show by inserting an M or W whether the subcontractor is an MBE or WBE

\$	%	M/WBE	DBE	CERTIFIED SUBCONTRACTOR NAME, ADDRESS, TEL #
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

\$ \_\_\_\_\_ % \_\_\_\_\_ = **Total M/WBE and/or DBE**

**THIS FORM MUST BE SUBMITTED WITH THE PROPOSAL OR THE PROPOSAL MAY BE CONSIDERED NON-CONFORMING**

**00672.5 Report of Disadvantaged Business Enterprise Participation Form (1 page)**





**00672.6 State Revolving Fund (SRF) Front-Ends (48 pages)**

This Project 193449.71.0399 must maintain SRF compliance for the SARP10 Program, the SRF "Front-Ends" consisting of various forms and documents are attached herein. Furthermore, Davis Bacon is referenced within these SRF Front-Ends, and applies to the Scope of Work. As a special note, the Bidder's Requirements on page 15 of 48 of the SRF Front-Ends, outlines Pre-Bid Requirements where all bidders must send certified mail and return receipts to a minimum of 10 certified DBE subcontractors, soliciting their service.

The following SRF Forms are to be submitted with your Bid and will be attached to the Subcontract:  
*(Please also include a signed form from each Sub-subcontractor as applicable. Refer to Table 00370.8 Schedule of Submittals)*

1. Certification Regarding Debarment (page 2 of 48)
2. Certification Regarding Equal Employment Opportunity (page 3 of 48)

# STATE REVOLVING FUND LOAN PROGRAM

## Inserts for Specifications

### Clean Water – Unsubsidized

#### Projects Funded with FY 2010 and After Funds

Subject	File Name
Certification Regarding Debarment	02_CertificationRegardingDebarment.pdf
Certification Regarding Equal Employment Opportunity	03_CertificationRegardingEqualEmploymentOps.pdf
Retainage – TCAs 66-34-104, 203,103	04_RetainageTCAs.pdf
Advertisement for Bids Example – DBE	05_AdvertisementForBidsExample_DBE.pdf
DBE-Guidance Document	06_DBE01_GuidanceDocument.pdf
DBE-Loan Recipient’s Requirements	06_DBE02_LoanRecip_Requirements.pdf
DBE-Loan Recipient’s Good Faith Effort Letter	06_DBE03_LoanRecip_GoodFaithEffortLtr.pdf
DBE-Loan Recipient’s Certification Summary Form	06_DBE04_LoanRecip_CertificationSummaryForm.pdf
DBE-Bidder’s Requirements	06_DBE05_BidderRequirements.pdf
DBE-Certified List	06_DBE10_CertifiedList.pdf
Davis Bacon Poster - English	08_DavisBacon_Poster_English.pdf
Davis Bacon Poster - Spanish	08_DavisBaconsigninSpanish.pdf
Project Wage Sheet - HUD-4720	08_ProjectWageSheet_HUD-4720.pdf
Wage Rate - Bidder’s Guidance to Davis Bacon	08_WageRates_BidderGuidanceToDavisBacon_20110215.pdf
Wage Rate – Loan Recipient’s Guidance to DavisBacon	08_WageRates_LoanRecipGuidanceToDavisBacon_20110215.pdf
Tracking and Reporting – Loan Recipient’s and Contractor’s Guidance	09_TrackingAndReporting_LoanRecipAndBidderGuidance_FY2010andAfter.pdf
Storm Water General Permit NOI	11_StormWater_NOI.pdf
Storm Water General Permit NOT	11_StormWater_NOT.pdf
Project Sign Detail - Clean Water – Unsubsidized	14_CWSRF_ProjectSign_Color_Unsubsidized.pdf
Project Sign Detail - Clean Water – Unsubsidized	14_CWSRF_ProjectSign_NoColor_Unsubsidized.pdf
Project Sign Detail - Clean Water – Unsubsidized	15_BidPackageSubmittalRequirements.pdf
Bid Package Submittal Requirements	16_LetterInLieuofaSiteCertificate.pdf
Letter In Lieu of a Site Certificate	16_SiteCertificate.pdf
Site Certificate	

# U.S. Environmental Protection Agency

## CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

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

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

---

Typed Name & Title of Authorized Representative

---

Signature of Authorized Representative

---

Date

I am unable to certify to the above statements. My explanation is attached.



**CERTIFICATION BY PROPOSED PRIME OR SUBCONTRACTOR REGARDING  
EQUAL EMPLOYMENT OPPORTUNITY**

---

**Name of Prime Contractor**

**Project Number**

**INSTRUCTIONS**

This certification is required pursuant to Executive Order 11246, Part II, Section 203 (b), 30 F.R. 12319-25). Any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicated that the prime or subcontractor has not filed a compliance report due under applicable instruction, such contractor shall be required to submit a compliance report.

---

**CONTRACTOR'S CERTIFICATION**

**Contractor's Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause. Yes  No
2. Compliance Reports were required to be filed in connection with such contract or subcontract. Yes  No

If yes, state what reports were filed and with what agency.

\_\_\_\_\_

3. Bidder has filed all compliance reports due under applicable instructions, including SF-100. Yes  No
4. If answer to Item 3 is NO, please explain in detail on reverse side of this certification.

---

Certification - The information above is true and complete to the best of my knowledge and belief. (A willfully false statement is punishable by law-U.S. Code, Title 18, Section 1001.)

---

**Name and title of signer (Please type)**

---

**Signature**

---

**Date**

\*\*\* Current through the 2015 Regular Session \*\*\*

Title 66 Property  
Chapter 34 Prompt Pay Act  
Part 1 General Provisions

Tenn. Code Ann. § 66-34-103 (2016)

**66-34-103. Withholding of retainage -- Violations -- Penalties.**

(a) All construction contracts on any project in this state, both public and private, may provide for the withholding of retainage; provided, however, that the retainage amount may not exceed five percent (5%) of the amount of the contract.

(b) The owner, whether public or private, shall release and pay all retainages for work completed pursuant to the terms of any contract to the prime contractor within ninety (90) days after completion of the work or within ninety (90) days after substantial completion of the project for work completed, whichever occurs first. As used in this subsection (b), work completed shall be construed to mean the completion of the scope of the work and all terms and conditions covered by the contract under which the retainage is being held. The prime contractor shall pay all retainages due any subcontractor within ten (10) days after receipt of the retainages from the owner. Any subcontractor receiving the retainage from the prime contractor shall pay to any subsubcontractor or material supplier all retainages due the subsubcontractor or material supplier within ten (10) days after receipt of the retainages.

(c) Any default in the making of the payments shall be subject to those remedies provided in this part.

(d) In the event that an owner or prime contractor withholds retainage that is for the use and benefit of the prime contractor or its subcontractors pursuant to § 66-34-104(a) and (b), neither the prime contractor nor any of its subcontractors shall be required to deposit additional retained funds into an escrow account in accordance with § 66-34-104(a) and (b).

(e) (1) It is an offense for a person, firm or corporation to fail to comply with subsection (a) or (b) or § 66-34-104(a).

(2) (A) A violation of this subsection (e) is a Class A misdemeanor, subject to a fine only of three thousand dollars (\$3,000).

(B) Each day a person, firm or corporation fails to comply with subsection (a) or (b) or § 66-34-104(a) is a separate violation of this subsection (e).

(C) Until the violation of this subsection (e) is remediated by compliance, the punishment for each violation shall be consecutive to all other such violations.

(3) In addition to the fine imposed pursuant to subdivisions (e)(2)(A) and (B), the court shall order restitution be made to the owner of the retained funds. In determining the appropriate amount of restitution, the formula stated in § 40-35-304 shall be used.

HISTORY: Acts 2007, ch. 201, § 3; 2008, ch. 804, § 3; 2012, ch. 609, § 1.

Tenn. Code Ann. § 66-34-103

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\*\*\* Current through the 2015 Regular Session \*\*\*

Title 66 Property  
Chapter 34 Prompt Pay Act  
Part 1 General Provisions

Tenn. Code Ann. § 66-34-104 (2016)

**66-34-104. Retention of portion of contract price in escrow -- Applicability -- Mandatory compliance.**

(a) Whenever, in any contract for the improvement of real property, a certain amount or percentage of the contract price is retained, that retained amount shall be deposited in a separate, interest-bearing, escrow account with a third party which must be established upon the withholding of any retainage.

(b) As of the time of the withholding of the retained funds, the funds shall become the sole and separate property of the prime contractor or remote contractor to whom they are owed, subject to the rights of the person withholding the retainage in the event the prime contractor or remote contractor otherwise entitled to the funds defaults on or does not complete its contract.

(c) In the event that the party withholding the retained funds fails to deposit the funds into an escrow account as provided herein, such party shall be responsible for paying the owner of the retained funds an additional three hundred dollar (\$300) penalty per day for each and every day that such retained funds are not deposited into such escrow account.

(d) The party with the responsibility for depositing the retained amount in a separate, interest-bearing, escrow account with a third party shall have the affirmative duty to provide written notice that it has complied with the requirements of this section to any prime contractor upon withholding the amount of retained funds from each and every application for payment, including:

(1) Identification of the name of the financial institution with whom the escrow account has been established;

(2) Account number; and

(3) Amount of retained funds that are deposited in the escrow account with the third party.

(e) Upon satisfactory completion of the contract, to be evidenced by a written release by the owner or prime contractor owing the retainage, all funds accumulated in the escrow account together with all interest on the account shall be paid immediately to the prime contractor or remote contractor to whom the funds and interest are owed.

(f) In the event the owner or prime contractor, as applicable, fails or refuses to execute the release provided for in subsection (c), then the prime contractor or remote contractor, as applicable, may seek any remedy in a court of proper jurisdiction and the person holding the fund as escrow agent shall bear no liability for the nonpayment of the fund to the prime contractor or remote contractor; provided, however, that all claims, demands, disputes, controversies, and differences that may arise between the owner, prime contractor or prime contractors, and remote contractor or remote contractors regarding the funds may be, upon written agreement of all parties concerned, settled by arbitration conducted pursuant to the Tennessee Uniform Arbitration Act, compiled in title 4, chapter 5, part 3, or the Federal Arbitration Act (9 U.S.C. § 1, et seq.), as may be applicable.

(g) In contracts to which the state or any department, board or agency of the state, including the University of Tennessee, is a party, interest shall be paid on the retained amounts at the same rate interest is paid on the funds of local governments participating in the local government investment pool established pursuant to § 9-4-704, for the contract period.

(h) This section shall be applicable to the state, any department, board or agency of the state, including the University of Tennessee, and all counties and municipalities and all departments, boards or agencies of the counties and municipalities, including all school and education boards, and any other subdivision of the state.

(i) This section shall be applicable to all prime contracts and all subcontracts thereunder for the improvement of real property when the contract amount of such prime contract is five hundred thousand dollars (\$500,000) or greater, notwithstanding the amount of such subcontracts.

(j) Compliance with this section shall be mandatory, and may not be waived by contract.

(k) Failure to deposit the retained funds into an escrow account as provided herein, within seven (7) days' receipt of written notice regarding such failure, is a Class A misdemeanor.

HISTORY: Acts 1975, ch. 345, §§ 1-4; T.C.A., §§ 64-1148 -- 64-1151; Acts 1985, ch. 340, §§ 1, 2; 1986, ch. 551, § 9; 2007, ch. 189, § 43; 2007, ch. 201, §§ 1, 2; T.C.A. § 66-11-144; Acts 2008, ch. 804, §§ 1, 2; 2010, ch. 875, §§ 1, 2; 2012, ch. 609, §§ 2-5.

**Tenn. Code Ann. § 66-34-104**

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\*\*\* Current through the 2015 Regular Session \*\*\*

Title 66 Property  
Chapter 34 Prompt Pay Act  
Part 2 Owner/Contractor Payment

Tenn. Code Ann. § 66-34-203 (2016)

**66-34-203. Withholding of payment or retainage by owner.**

Nothing in this chapter shall prevent the owner from reasonably withholding payment or a portion of a payment to the contractor; provided, that such withholding is in accordance with the written contract between the owner and the contractor. The owner may also withhold a reasonable amount of retainage as specified in the written contract between the owner and the contractor; provided, however, that the retainage amount may not exceed five percent (5%) of the amount of the contract.

HISTORY: Acts 1991, ch. 45, § 1; 2007, ch. 201, § 4.

**Tenn. Code Ann. § 66-34-203**

## ADVERTISEMENT FOR BIDS EXAMPLE – DBE

The {City/Town/County/Utility District/Authority} will receive separate sealed BIDS for the construction of a {water or wastewater} project at {location to deliver bid proposal} until {closing time}, local time, on {date}, and, then, at said time, publicly open and read the BIDS aloud.

The work to be bid on is as follows: {Description of work to be performed here.}

The allotted time for construction is {# of days for work to be performed} calendar days.

The information for Bidders; Bid Form; Form of Agreement; Drawings; Specifications information; Bid Bond, Performance Bond, and Payment Bond information; and other contract documents may be examined at the addresses below:

{Please type address of consulting engineer's office}

{Please type address of City/Town/Utility District/Authority}

Builder's Exchange of Tennessee

Nashville Office

Knoxville Office

2322 Winford Ave.

300 Clark Street

Nashville, TN 37211

Knoxville, TN 37921

Copies of the CONTRACT DOCUMENTS may be obtained at the {name of office to pick up contract documents} Office, located at {address of office}, upon payment of \$ {Amount} for each set.

Any BIDDER, upon returning the CONTRACT DOCUMENTS within {number of days} days after BID opening and in good condition, will be refunded {his/her payment or \$ amount} and any non-bidder will be refunded \$ {Amount}.

No bid may be withdrawn within (#) days after the scheduled time for receipt of bids.

### **DAVIS-BACON ACT REQUIREMENTS**

This project is being funded by a State Revolving Fund loan on or after 2010 EPA Fiscal Year. The loan recipient must be in compliance with all applicable Davis-Bacon Act.

### **DISADVANTAGED BUSINESS ENTERPRISES (DBE) REQUIREMENTS**

Any contract or contracts awarded by the Owner through this invitation for bids will be funded by a State Revolving Fund (SRF) loan from the State of Tennessee. State and Federal funds will be involved in this project, and, as a result, Bidders must comply with the SRF Loan Program's Disadvantaged Business Enterprises (DBE) requirements including contacting a minimum of 10 qualified DBE sub-contractors, professional service providers, vendors, and/or suppliers by certified mail to solicit bids. The apparent successful Bidder must submit to the Owner copies of the certified letters and return receipts prior to contract award. Neither the State of Tennessee nor any of its departments, agencies, or employees is or will be a party to this Invitation for Bids or any resulting contract(s) awarded by the Owner.

### **SPECIAL NOTICE TO DISADVANTAGED BUSINESS ENTERPRISES (DBE) FIRMS**

All qualified Disadvantaged Business Enterprises (DBE) firms desiring to bid as a General Contractor, sub-contractor, professional service provider, supplier, or equipment vendor are encouraged to contact {Name of the Engineer, office address, and phone number}, in order to obtain a list of prospective bidding General Contractors or to obtain copies of bidding/contract documents.

**Disadvantaged Business Enterprise (DBE) Requirements  
for**

State Revolving Fund Loans Awarded after March 7, 2016

**GUIDANCE DOCUMENT**

**Items included in the Guidance Document:**

- **General Contract Administration Provisions Table**
- **Six Good Faith Efforts, Purpose and Definitions Table**
- **List of DBE Forms for Loans Awarded After March 7, 2016**

<b>GENERAL CONTRACT ADMINISTRATION PROVISIONS—www.epa.gov</b>			
<b>Requirement</b>	<b>Circumstance</b>	<b>Responsible Party:</b>	<b>Submitted To:</b>
A <b>Loan Recipient</b> must be notified in writing by its <b>Prime Contractor</b> prior to any termination of a <b>DBE Subcontractor</b> for convenience by the <b>Prime Contractor</b> .	Termination of a <b>DBE Subcontractor</b> for convenience by the <b>Prime Contractor</b>	<b>Prime Contractor</b>	<b>Loan Recipient</b>
A <b>Loan Recipient</b> must require its <b>Prime Contractor</b> to pay its <b>Subcontractor</b> for satisfactory performance no more than 30 days from the <b>Prime Contractor's</b> receipt of payment from the <b>Loan Recipient</b> .	<b>DBE Subcontractor's</b> satisfactory performance	<b>Loan Recipient</b> <b>Prime Contractor</b>	<b>DBE Subcontractor</b>
If a <b>DBE Subcontractor</b> fails to complete work under the subcontract for any reason, the <b>Loan Recipient</b> must require the <b>Prime Contractor</b> to employ the <b>Six Good Faith Efforts</b> (see Table below) if soliciting a replacement <b>Subcontractor</b> .	<b>DBE Subcontractor</b> fails to complete work under the subcontract for any reason and will be replaced	<b>Loan Recipient</b> <b>Prime Contractor</b>	<b>SRF Loan Program</b>
A <b>Loan Recipient</b> must require its <b>Prime Contractor</b> to employ the <b>Six Good Faith Efforts</b> (see Table below) even if the <b>Prime Contractor</b> has achieved its fair share objectives.	Employment of the <b>Six Good Faith Efforts</b>	<b>Loan Recipient</b> <b>Prime Contractor</b>	<b>SRF Loan Program</b>
Inclusion, completion, and/or transmittal of required <b>DBE Forms</b> as instructed below: <b>Loan Recipient Requirements</b> <b>Bidder Requirements</b> <b>DBE Participation/Certification Summary</b> <b>Advertisement for Bids and Publisher's Affidavit</b> 10 Certified Letters and Return Receipts to certified <b>DBEs</b> <b>Good Faith Letter</b> <b>Prime Contractor's Notice Letter</b> for	---	<b>Loan Recipient</b> <b>Prime Contractor</b> <b>DBE Subcontractor</b>	See instructions below and on Forms

**Disadvantaged Business Enterprise (DBE) Requirements  
for**

State Revolving Fund Loans Awarded after March 7, 2016

**GUIDANCE DOCUMENT**

<b>SIX GOOD FAITH EFFORTS—www.epa.gov</b>	
<b>PURPOSE</b>	The Good Faith Efforts are required methods employed by all EPA financial assistance agreement recipients to ensure that all disadvantaged business enterprises (DBEs) have the opportunity to compete for procurements funded by EPA financial assistance dollars.
<b>Definitions</b>	
<b>EFFORT 1</b>	Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
<b>EFFORT 2</b>	Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
<b>EFFORT 3</b>	Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
<b>EFFORT 4</b>	Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
<b>EFFORT 5</b>	Use the services and assistance of the Small Business Administration (SBA) and the Minority Business Development Agency of the Department of Commerce.
<b>EFFORT 6</b>	If the <b>Prime Contractor</b> awards subcontracts, require the <b>Prime Contractor</b> to take the steps in the Good Faith Efforts 1 through 5 (above) and in the <u>General Contract Administration Provisions</u> (above).



**Disadvantaged Business Enterprise (DBE) Requirements  
for**

State Revolving Fund Loans Awarded after March 7, 2016

**GUIDANCE DOCUMENT**

<b>DBE FORMS FOR SRF LOANS AWARDED AFTER MARCH 7, 2016—www.epa.gov</b>				
<b>Form</b>	<b>Requirement</b>	<b>Provided By:</b>	<b>Completed By:</b>	<b>Submitted To:</b>
List of certified <b>DBE</b> contractors, subcontractors, supplies vendors, equipment vendors, and service providers	Keep list with project files/information for duration of project	<b>SRF Loan Program</b>	---	---
<b>Loan Recipient's Requirements</b> regarding DBEs	Include this information sheet in the Information for Bidders section of bid documents	<b>SRF Loan Program</b>	---	To be included in the contract specifications book
<b>Bidder's Requirements</b> regarding DBEs	Include this information sheet in the Information for Bidders section of bid documents	<b>SRF Loan Program</b>	---	To be included in the contract specifications book
<b>Loan Recipient's Certification and Summary of DBE Participation</b>	To be completed and submitted with the Authority-to-Award/ Bid Package.  The SRF Loan Program must be notified of any changes, additions, or deletions to the contract during construction.	<b>SRF Loan Program</b>	<b>Loan Recipient</b>	<b>SRF Loan Program</b>
<b>Advertisement for Bids and Publisher's Affidavit</b>	<b>DBE</b> solicitation information must be included in the actual advertisement for bids.  A Publisher's Affidavit (signed, original, notarized certification of publication) denoting the actual published date of the advertisement will be submitted to the SRF Loan Program as part of the Authority-to-Award/Bid Package documents.	An example advertisement with appropriate <b>DBE</b> language is supplied to the Loan Recipient by the <b>SRF Loan Program</b>	<b>Loan Recipient</b>	A copy of the actual advertisement and a Publisher's Affidavit will be submitted to the <b>SRF Loan Program</b> as part of the Authority-to-Award/Bid Package documents
<b>10 Certified Letters and Return Receipts</b> to potential certified DBE subcontractors, supplies vendors, service providers, and/or equipment vendors	These certified letters and copies of the corresponding return mail receipts are submitted with the completed <b>Loan Recipient's DBE Participation and Certification Summary Form.</b>	<b>Prime Contractor and/or Loan Recipient</b>	<b>Loan Recipient</b>	SRF Loan Program as part of the Authority-to-Award/Bid Package documents
<b>Good Faith Letter</b>	If <b>no</b> <b>DBE</b> participation is obtained for the contract, the "Good Faith" letter must be written.	Form letter provided by the <b>SRF Loan Program</b>	<b>Loan Recipient</b>	<b>SRF Loan Program</b>



## STATE REVOLVING FUND LOAN PROGRAM

### Loan Recipient's Requirements for Solicitation and Documentation of **Disadvantaged Business Enterprises (DBE) Participation** on State Revolving Fund (SRF) Projects

A goal-oriented system has been established to promote **Disadvantaged Business Enterprises (DBE)** participation by providing construction services, professional services, supplies, and/or equipment on SRF Loan-funded water and wastewater projects. It is the Loan Recipient's responsibility to ensure that Bidders make a good faith effort during the bidding phase to solicit for subcontractor participation by **DBE** subcontractors, service professionals, suppliers, and/or equipment vendors on all SRF-funded projects.

#### DEFINITIONS

**DBE - Minority Business Enterprise (MBE):** A qualified socially and economically disadvantaged minority-owned business certified by any State or Federal agency, such as the Tennessee Department of Transportation, U.S. EPA's Office of Small and Disadvantaged Business Utilization, or the U.S. Small Business Administration.

**DBE - Women's Business Enterprise (WBE):** A qualified independent business at least 51% owned by a woman or women and certified by any State or Federal agency such as the Tennessee Department of Transportation, U.S. EPA's Office of Small and Disadvantaged Business Utilization, or the U.S. Small Business Administration.

**Fair-Share Goals:** The MBE fair-share goal is 2.6% for construction and 5.2% for supplies, services, and equipment. The WBE fair share goal is 2.6% for construction and 5.2% for supplies, services, and equipment.

#### INSTRUCTIONS TO LOAN RECIPIENTS

##### Pre-Bid Requirements

Loan Recipients must include the SRF Loan Program's "Bidder's Requirements for Solicitation and Documentation of **DBE** Participation on SRF-Funded Projects" information sheet in the Information for Bidders section of bid documents. Loan Recipients must also ensure that Bidders take the following affirmative steps that constitute a good-faith effort to secure **DBE** participation:

- Include certified **DBEs** on solicitation lists whenever they are potential sources,
- Divide construction contracts into subcontracts, when economically feasible, to encourage maximum participation by **DBEs**,
- Establish delivery schedules, where requirements of the work permit, that encourage participation by **DBEs**,
- Use the services and assistance of the Office of Minority Business Enterprises of the U.S. Department of Commerce, or the U.S. EPA's Office of Small and Disadvantaged Business Utilization. For assistance or information, Bidders may be referred to:

Tennessee Department of Transportation  
Small Business Development  
505 Deaderick Street, Suite 1800  
Nashville, TN 37243-0347  
(615) 741-3681

[http://www.tdot.state.tn.us/construction/DBE%20list/dbe\\_list.pdf](http://www.tdot.state.tn.us/construction/DBE%20list/dbe_list.pdf)

Mr. W. Clinton Smith, District Director  
U.S. Small Business Administration  
50 Vantage Way, Suite 201  
Nashville, TN 37228  
(615) 736-5881

<http://pro-net.sba.gov/>

Ms. Jeanette L. Brown, Director  
U.S. Environmental Protection Agency  
Office of Small and Disadvantaged Business Utilization  
1200 Pennsylvania Avenue, N.W. (1230A)  
Washington, D.C. 20460  
(202) 564-4100

<http://www.epa.gov/osdbu/>

#### POST-BID REQUIREMENTS

Whether or not **DBE** participation was obtained, the Loan Recipient must complete the "**Loan Recipient's Certification and Summary**" form for every contract detailing whether or not **DBE** participation of subcontractors, professional service providers, suppliers, and/or equipment vendors was obtained. The "**Loan Recipient's Certification and Summary**" form must be submitted to the Administrative Section of the SRF Loan Program prior to the award of any construction contract(s) along with the newspaper **advertisement**, a **Publisher's Affidavit**, and **return receipts** and copies of the **certified letters** that were mailed to a minimum of 10 qualified **DBEs**.

STATE REVOLVING FUND LOAN PROGRAM

**Loan Recipient's Requirements for Solicitation and Documentation**  
**of**  
**Disadvantaged Business Enterprises (DBE) Participation**  
on State Revolving Fund (SRF) Projects

**If DBE participation was obtained**, the “**Loan Recipient's Certification and Summary**” form must clearly indicate whether **DBE** participation was obtained from either a subcontractor, professional service provider, supplier, and/or equipment vendor participation; identify the **DBE** firm(s) to be used; and certify that the **DBE** firm(s) is a certified **DBE**.

**If no DBE participation was obtained**, the Loan Recipient must submit a separate letter documenting that a “**good-faith effort**” was made to secure **DBE** participation. This letter is submitted along with the above-mentioned “**Loan Recipient's Certification and Summary**” form, newspaper **advertisement**, **Publisher's Affidavit**, **return receipts**, and copies of the **certified letters**. The SRF Loan Program provides a template to the Loan Recipient for this letter.

*This documentation is the only form of documentation that will be accepted by the SRF Loan Program. Failure to provide the required documentation may result in a delay of the SRF Loan Program's approval of the Authority-to-Award/Bid Package, thereby delaying the award of the construction contract(s).*

The Loan Recipient should direct all inquiries regarding the SRF Loan Program's requirements for **DBE** solicitation and documentation to Dr. Bagher Sami at (615) 532-0501, [bagher.sami@tn.gov](mailto:bagher.sami@tn.gov), or the following address:

Dr. Bagher Sami, Manager  
Administrative and Financial Section  
Tennessee State Revolving Fund Loan Program  
WRS - Tennessee Tower, 12th Floor  
312 Rosa L. Parks Avenue  
Nashville, TN 37243

## STATE REVOLVING FUND LOAN PROGRAM

### Loan Recipient's Good Faith Effort Letter for DBE Participation

**(Insert on Loan Recipient's Letterhead)**

**(Date)**

Dr. Bagher Sami, Manager  
Administrative and Financial Sections  
State Revolving Fund Loan Program  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 12<sup>th</sup> Floor  
Nashville, TN 37243

RE: Good Faith Effort – Disadvantaged Business Enterprises (DBE) Participation  
City/County/UD/Authority (?? County), Tennessee  
Loan No. SRF/CWA/CGA/DWF/DWA/DGA 20??-??  
Contract No. ????, Contract Description

Dear Dr. Sami:

This letter is to inform you that the City/County/UD/Authority did, in good faith, encourage Disadvantaged Business Enterprises (DBE) to participate in the above referenced project by placing a special notice to Disadvantaged Business Enterprises (DBE) firms in both the invitation to bid and the public advertisement for bids. The City/County/UD/Authority, through the consulting engineer, (A/E Consulting Firm), sent a copy of the invitation to bid and a set of contract documents to the Office of Minority Business Enterprises. The City/County/UD/Authority also sent certified letters, return receipts requested, to a minimum of ten (10) DBE potential subcontractors, professional service providers, suppliers, and equipment vendors requesting DBE participation through their office, A/E, or their contractor. The consulting engineer on this project is (Name), (Firm).

We have not received any DBE participation; we believe we have done a good faith effort.

If you have any questions, please don't hesitate to contact us.

Sincerely,

(Authorized Representative Name)

(Authorized Representative Title)

cc: (A/E Consultant Name and Firm)

# STATE REVOLVING FUND LOAN PROGRAM

## Loan Recipient's Certification and Summary

of

### **Disadvantaged Business Enterprises (DBE) Participation**

SRF Loan Recipient: \_\_\_\_\_ SRF Loan No. \_\_\_\_\_

#### INSTRUCTIONS TO SRF LOAN RECIPIENTS

The SRF Loan Recipient's Authorized Representative must clearly indicate the Contractor's **Disadvantaged Business Enterprises (DBE)** participation results by placing a check in the appropriate box below. The remainder of the form must be completed if **DBE (Minority Business Enterprise-MBE or Women's Business Enterprise -WBE)** participation was obtained. The form must be signed and dated and returned to Dr. Bagher Sami of the Administrative Section of the SRF Loan Program.

The **completed Form** must be accompanied by **copies of the certified letters** sent from the selected Bidder to a minimum of 10 qualified **DBE** potential subcontractors, supplies vendor, services provider, and/or equipment vendors, and **copies of the corresponding return mail receipts**.

The SRF Loan Program must be notified of any changes, additions, or deletions to the contract during construction.

**No, Disadvantaged Business Enterprises (DBE) participation was not obtained for this SRF-funded project.** I certify that a good-faith effort was made to solicit **DBE** participation in accordance with the four affirmative steps outlined in the SRF Loan Program's Requirements for Solicitation and Documentation of **DBE** Participation on SRF-Funded Projects. A letter documenting that a good-faith effort was made to secure **DBE** participation has been provided to the SRF Loan Program.

OR

**Yes, Disadvantaged Business Enterprises (DBE) participation was obtained for this SRF-funded project.** I certify that the **DBE** firms participating in this SRF-funded project are qualified in accordance with the SRF Loan Program's Requirements for Solicitation and Documentation of **DBE** Participation on SRF-Funded Projects. Below is a listing of firms to be utilized and the amounts of their respective participation.

1. **DBE type (circle one):**    Subcontractor,    Supplies Vendor,    Service Provider,    Equipment Vendor  
**DBE Name:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Subcontract Amount:**    \$ \_\_\_\_\_    MBE    \_\_\_    WBE    \_\_\_    % of Contract \$:    \_\_\_\_\_    %
  
2. **DBE type (circle one):**    Subcontractor,    Supplies Vendor,    Service Provider,    Equipment Vendor  
**DBE Name:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Subcontract Amount:**    \$ \_\_\_\_\_    MBE    \_\_\_    WBE    \_\_\_    % of Contract \$:    \_\_\_\_\_    %
  
3. **DBE type (circle one):**    Subcontractor,    Supplies Vendor,    Service Provider,    Equipment Vendor  
**DBE Name:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Subcontract Amount:**    \$ \_\_\_\_\_    MBE    \_\_\_    WBE    \_\_\_    % of Contract \$:    \_\_\_\_\_    %
  
4. **DBE type (circle one):**    Subcontractor,    Supplies Vendor,    Service Provider,    Equipment Vendor  
**DBE Name:** \_\_\_\_\_  
**Address:** \_\_\_\_\_  
**Subcontract Amount:**    \$ \_\_\_\_\_    MBE    \_\_\_    WBE    \_\_\_    % of Contract \$:    \_\_\_\_\_    %

#### PARTICIPATION SUMMARY

**Total SRF Loan Amount:**    \$ \_\_\_\_\_    **Total Construction Contract Amount:**    \$ \_\_\_\_\_  
**Total MBE Participation:**    \$ \_\_\_\_\_    **Total WBE Participation:**    \$ \_\_\_\_\_

\_\_\_\_\_  
Signature and Title of SRF Loan Recipient's Authorized Representative

\_\_\_\_\_  
Date

# STATE REVOLVING FUND LOAN PROGRAM

## **Bidder's Requirements for Solicitation and Documentation** **of** **Disadvantaged Business Enterprises (DBE) Participation**

A goal-oriented system has been established to promote **Disadvantaged Business Enterprises (DBE)** participation by providing construction services, professional services, supplies, and/or equipment on SRF Loan-funded water and wastewater projects. It is the Bidder's responsibility to make a good faith effort to secure participation by **DBE** subcontractors, professional service providers, suppliers, and/or equipment vendors.

### **DEFINITIONS**

**DBE - Minority Business Enterprise (MBE):** A qualified socially and economically disadvantaged minority-owned business certified by any State or Federal agency, such as the Tennessee Department of Transportation, U.S. EPA's Office of Small and Disadvantaged Business Utilization, or the U.S. Small Business Administration.

**DBE - Women's Business Enterprise (WBE):** A qualified independent business at least 51% owned by a woman or women and certified by any State or Federal agency such as the Tennessee Department of Transportation, U.S. EPA's Office of Small and Disadvantaged Business Utilization, or the U.S. Small Business Administration.

**Fair-Share Goals:** The MBE fair-share goal is 2.6% for construction and 5.2% for supplies, services, and equipment. The WBE fair share goal is 2.6% for construction and 5.2% for supplies, services, and equipment.

### **INSTRUCTIONS TO BIDDERS**

#### **Pre-Bid Requirements**

All Bidders must send letters by certified mail with return receipt requested to a minimum of 10 certified **DBE** subcontractors, professional service providers, suppliers, and/or equipment vendors to solicit their subcontract participation in the work. Lists of certified **DBE** firms may be obtained from various State and Federal agencies, including the following:

Tennessee Department of Transportation  
Small Business Development  
505 Deaderick Street, Suite 1800  
Nashville, TN 37243-0347  
(615) 741-3681  
<http://www.tdot.state.tn.us/dbedirectinternet/Vendor.aspx>

Mr. W. Clinton Smith, District Director  
U.S. Small Business Administration  
50 Vantage Way, Suite 201  
Nashville, TN 37228  
(615) 736-5881  
<http://pro-net.sba.gov/>

U.S. Environmental Protection Agency  
Office of Small and Disadvantaged Business Utilization  
1200 Pennsylvania Avenue, N.W. (1230A)  
Washington, D.C. 20460  
(202) 564-4100  
<http://www.epa.gov/osdbu/>

#### **Post-Bid Requirements**

**Whether or not DBE participation was obtained,** the successful Bidder (Prime Contractor) must maintain supporting documents such as certification lists, solicitation documents, letters of intent, contracts, etc., for the duration of the project.

**If DBE participation was obtained,** the apparent successful Bidder must identify to the Loan Recipient all **DBE** firms to be utilized on the contract and the respective **DBE** type--subcontractors, supplies vendors, service providers, and/or equipment vendors (see "Loan Recipient's Certification and Summary" form). Copies of the State's or Federal agency's **DBE** certification list(s) identifying that the **DBE** firms are certified minority or women's business enterprises must be provided to the Loan Recipient.

**If no DBE participation was obtained** by the apparent successful Bidder, it remains the responsibility of the Prime Contractor to provide documentation to the Loan Recipient, prior to contract award, that a good faith effort was made to obtain **DBE** participation. Copies of the **certified letters** sent to a minimum of 10 qualified **DBE** potential subcontractors, supplies vendors, service providers, and/or equipment vendors and the corresponding **return mail receipts** are the only documentation of a good-faith effort that will be acceptable to the Loan Recipient.

*Failure to provide the required certified letters, return receipts, State or Federal agency **DBE** certification list(s), to the Loan Recipient may delay the contract award until the required documentation has been provided to and accepted by the Loan Recipient.*

## Certified Disadvantaged Business Enterprises (DBE) List

Using Governor's Diversity Business Office and State DOT and CCR DBE Directories to Find Certified WBEs and MBEs

Here are the links:

<https://tn.diversitysoftware.com/FrontEnd/VendorSearchPublic.asp?TN=tn&XID=1215>

[www.osdbu.dot.gov/DBEProgram/StateDOTDBESites.cfm](http://www.osdbu.dot.gov/DBEProgram/StateDOTDBESites.cfm)

CCR can be used to search for SBA SDBs. Since the SBA SDB certification is considered acceptable under the EPA DBE Program, firms found using the following search criteria can count toward EPA MBE/WBE fair share objectives.

Access the CCR search page at [www.bpn.gov/CCRSearch/Search.aspx](http://www.bpn.gov/CCRSearch/Search.aspx)

[http://www.epa.gov/osbp/dbe\\_team.htm](http://www.epa.gov/osbp/dbe_team.htm)

General Decision Number: TN160135 03/11/2016 TN135

Superseded General Decision Number: TN20150135

State: Tennessee

Construction Type: Heavy  
Including Water and Sewer Line Construction

County: Shelby County in Tennessee.

HEAVY CONSTRUCTION PROJECTS (including sewer/water construction).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/08/2016
1	03/11/2016

\* ELEC0474-015 08/03/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 25.70	12.41

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ENGI0369-012 05/01/2013

	Rates	Fringes
Operating Engineers: Bulldozer, Crane, and Forklift.....	\$ 24.47	10.85

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LABO0386-001 05/01/2015

	Rates	Fringes
LABORER: Common or General.....	\$ 17.42	6.05

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SUTN2009-133 12/02/2009

	Rates	Fringes
LABORER: Flagger.....	\$ 8.73	0.00
LABORER: Pipelayer.....	\$ 11.68	0.00



OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 16.82	0.00
OPERATOR: Loader.....	\$ 13.50	0.00
TRUCK DRIVER: Dump Truck.....	\$ 10.76	0.00

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

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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)).

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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 a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 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. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all

rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### 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

# EMPLOYEE RIGHTS UNDER THE DAVIS-BACON ACT

## FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

### PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

### OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

### ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

### APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

### PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



For additional information:

**1-866-4-USWAGE**

(1-866-487-9243) TTY: 1-877-889-5627



**WWW.WAGEHOUR.DOL.GOV**

# DERECHOS DEL EMPLEADO BAJO LA LEY DAVIS-BACON

## PARA OBREROS Y MECÁNICOS EMPLEADOS EN PROYECTOS DE CONSTRUCCIÓN FEDERAL O CON ASISTENCIA FEDERAL

LA SECCIÓN DE HORAS Y SUELDOS DEL DEPARTAMENTO DE TRABAJO DE EEUU

### **SALARIOS PREVALECIENTES**

No se le puede pagar menos de la tasa de pago indicada en la Decisión de Salarios Davis-Bacon fijada con este Aviso para el trabajo que Ud. desempeña.

### **SOBRETIEMPO**

Se le ha de pagar no menos de tiempo y medio de su tasa básica de pago por todas las horas trabajadas en exceso de 40 en una semana laboral. Existen pocas excepciones.

### **CUMPLIMIENTO**

Se pueden retener pagos por contratos para asegurarse que los obreros reciban los salarios y el pago de sobretiempo debidos, y se podría aplicar daños y perjuicios si no se cumple con las exigencias del pago de sobretiempo. Las cláusulas contractuales de Davis-Bacon permiten la terminación y exclusión de contratistas para efectuar futuros contratos federales hasta tres años. El contratista que falsifique los registros certificados de las nóminas de pago o induzca devoluciones de salarios puede ser sujeto a procesamiento civil o criminal, multas y/o encarcelamiento.

### **APRENDICES**

Las tasas de aprendices sólo se aplican a aprendices correctamente inscritos bajo programas federales o estatales aprobados.

### **PAGO APROPIADO**

Si Ud. no recibe el pago apropiado, o precisa de información adicional sobre los salarios aplicables, póngase en contacto con el Contratista Oficial que aparece abajo:

o póngase en contacto con la Sección de Horas y Sueldos del Departamento de Trabajo de EEUU.



Para obtener información adicional:

**1-866-4-USWAGE**

(1-866-487-9243) TTY: 1-877-889-5627



**WWW.WAGEHOUR.DOL.GOV**

# Project Wage Rate Sheet

U.S. Department of Housing and Urban Development  
Office of Labor Relations

PROJECT NAME:			WAGE DECISION NUMBER/MODIFICATION NUMBER:			
PROJECT NUMBER:			PROJECT COUNTY:			
WORK CLASSIFICATION	BASIC HOURLY RATE (BHR)	FRINGE BENEFITS	TOTAL HOURLY WAGE RATE	LABORERS FRINGE BENEFITS:		\$ TOTAL WAGE
				GROUP #	BHR	
Bricklayers			\$			\$
Carpenters			\$			\$
Cement Masons			\$			\$
Drywall Hangers			\$			\$
Electricians			\$			\$
Iron Workers			\$			\$
Painters			\$	OPERATORS FRINGE BENEFITS:		\$ TOTAL WAGE
				GROUP #	BHR	
Plumbers			\$			\$
Roofers			\$			\$
Sheet Metal Workers			\$			\$
Soft Floor Layers			\$			\$
Tapers			\$			\$
Tile Setters			\$	TRUCK DRIVERS FRINGE BENEFITS:		\$ TOTAL WAGE
				GROUP #	BHR	
OTHER CLASSIFICATIONS						
			\$			\$
			\$			\$
			\$			\$
<b>ADDITIONAL CLASSIFICATIONS (HUD Form 4230-A)</b>						
WORK CLASSIFICATION	BASIC HOURLY RATE	FRINGE BENEFITS	TOTAL HOURLY WAGE RATE	DATE OF HUD SUBMISSION TO DOL	DATE OF DOL APPROVAL	
			\$			
			\$			
			\$			
			\$			

# STATE REVOLVING FUND LOAN PROGRAM

## Bidder's Requirements

### Davis-Bacon Act Wage Determination

**The Loan Recipient must ensure the bidder is in compliance with the Davis-Bacon Act as outlined below. Additionally, ten (10) days prior to the scheduled bid opening date, the wage rates need to be checked to ensure they have not changed.**

The Davis-Bacon Act as amended, requires that each contract over \$2,000 to which the United States or the District of Columbia is a party for the construction, alteration, or repair of public buildings or public works shall contain a clause setting forth the minimum wages to be paid to various classes of laborers and mechanics employed under the contract. Under the provisions of the Act, contractors or their subcontractors are to pay workers employed directly upon the site of the work no less than the locally prevailing wages and fringe benefits paid on projects of a similar character. The Davis-Bacon Act directs the Secretary of Labor to determine such local prevailing wage rates.

The **wage determination** (including any additional **classifications** and **wage rates** conformed) **and** a Davis-Bacon poster (WH-1321) **must be posted on the work site at all times** by the contractor and its subcontractors in a prominent and accessible place where it can be easily seen. The WH-1321 poster **may be obtained at no charge** from offices of the Wage and Hour Division.

With each **pay estimate** submitted, the contractors **must submit** a certification stating that workers have been paid the current prevailing wage rates for each classification according to the Davis-Bacon wage rate schedule currently in effect for this project.

### Wage Determinations

A "wage determination" is the listing of wage rates and fringe benefit rates for each classification of laborers and mechanics which the Administrator of the Wage and Hour Division of the U.S. Department of Labor has determined to be prevailing in a given area for a particular type of construction (e.g., building, heavy, highway, or residential).

### Extensions of Wage Determinations

When a general wage determination has not been awarded within 90 days after bid opening, the head of the contracting/assisting agency may request an extension of the 90 day period from the Wage and Hour Administrator. When, due to unavoidable circumstances, a project wage determination expires before award but after bid opening, the head of the contracting/assisting agency may request an extension of the expiration date of the project wage determination in the bid specifications instead of issuing a new wage determination.

Extension requests should be supported by a written finding including a brief statement of the factual support, that extension of the expiration date of the determination is necessary and proper in the public interest to prevent injustice or undue hardship or to avoid serious impairment in the conduct of Government business.

The Administrator of the Wage and Hour Division of the U.S. Department of Labor will either grant or deny the request for an extension after consideration of all the circumstances, including an examination to determine if the previously issued rates remain prevailing. If a request for the extension of a project wage determination is denied, a new wage determination will be issued to replace an expired project wage determination.

Additional information concerning the Davis-Bacon Act and current wage rate determinations can be obtained at the following sites: [www.gpo.gov/davisbacon/referencemat.html](http://www.gpo.gov/davisbacon/referencemat.html) and [www.wdol.gov/](http://www.wdol.gov/).

# STATE REVOLVING FUND LOAN PROGRAM

## Wage Rate Requirements Under FY 2010 Appropriations

### 3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2010 appropriation, the following clauses:

(1) Minimum wages.

(i) 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 (a)(1)(iv) 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 § 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 (a)(1)(ii) 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.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, [www.dol.gov](http://www.dol.gov).

(ii)(A) The subrecipient(s), on behalf of EPA, 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 State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

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

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



## STATE REVOLVING FUND LOAN PROGRAM

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) 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.

(iii) 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.

(iv) 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 subrecipient(s), shall upon written request of the EPA Award Official or 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 (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, 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.

## STATE REVOLVING FUND LOAN PROGRAM

(i) 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.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls 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 the weekly payrolls. 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 subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, 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 subrecipient(s).

(B) 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:

(1) 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;

(2) 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

## STATE REVOLVING FUND LOAN PROGRAM

indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) 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.

(C) 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 (a)(3)(ii)(B) of this section.

(D) 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.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA 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 Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, 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--

(i) Apprentices. 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

## STATE REVOLVING FUND LOAN PROGRAM

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.

(ii) Trainees. 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.

(iii) 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.

(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 in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses 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 Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.



## STATE REVOLVING FUND LOAN PROGRAM

(10) Certification of eligibility.

(i) 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).

(ii) 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).

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

### **4. Contract Provision for Contracts in Excess of \$100,000.**

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any 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 Item 3, above 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 (a)(1) of this section the contractor and any subcontractor responsible therefore 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 (a)(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 (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall 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 (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(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 (a)(1) through (4) of this section.

## STATE REVOLVING FUND LOAN PROGRAM

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

# STATE REVOLVING FUND LOAN PROGRAM

## Loan Recipient's Requirements

### Davis-Bacon Act Wage Determination

**The Loan Recipient must ensure the bidder is in compliance with the Davis-Bacon Act as outlined below. Additionally, ten (10) days prior to the scheduled bid opening date, the wage rates need to be checked to ensure they have not changed.**

The Davis-Bacon Act as amended, requires that each contract over \$2,000 to which the United States or the District of Columbia is a party for the construction, alteration, or repair of public buildings or public works shall contain a clause setting forth the minimum wages to be paid to various classes of laborers and mechanics employed under the contract. Under the provisions of the Act, contractors or their subcontractors are to pay workers employed directly upon the site of the work no less than the locally prevailing wages and fringe benefits paid on projects of a similar character. The Davis-Bacon Act directs the Secretary of Labor to determine such local prevailing wage rates.

**The specifications must** incorporate a clause stating that the current Davis-Bacon wage rate is required (with the Davis-Bacon links and information).

The Bid Advertisement **must include** a clause that the **Davis-Bacon wage rates** are a requirement. (Refer to the ADVERTISEMENT FOR BIDS EXAMPLE – DBE, ARRA)

If modifications to the existing **wage rates** occur **ten (10) days** prior to the Bid Opening Date, the Loan Recipient **must** incorporate the proper **wage rates** into the plans and specifications by Addendum. All Bidders **must** be informed that this addendum **must** be incorporated into the plans and specifications that they have received.

However, if these modifications occur **less than ten (10) days** prior to the Bid Opening Date, these modifications **shall be effective unless** the agency **finds** that there is not a reasonable time still available before the Bid Opening to notify bidders of the modifications. (A report of this **finding** shall be inserted in the contract file.)

The **wage determination** (including any additional **classifications** and **wage rates** conformed) **and** a Davis-Bacon poster (WH-1321) **must be posted on the work site at all times** by the contractor and its subcontractors in a prominent and accessible place where it can be easily seen. The WH-1321 poster **may be obtained at no charge** from offices of the Wage and Hour Division.

With each **pay estimate** submitted, the contractors **must** certify that workers have been paid the current prevailing wage rates for each classification according to the Davis-Bacon wage rate schedule currently in effect for this project.

The loan recipients **must keep a file** in which all documentation **must be filed** for the current classifications and wage rates (under the Davis-Bacon Act) for the construction of their projects. This file must be kept for three (3) years after the project is completed and **will** be subject to audit by the State of Tennessee and the Environmental Protection Agency (EPA).

### Wage Determinations

A "wage determination" is the listing of wage rates and fringe benefit rates for each classification of laborers and mechanics which the Administrator of the Wage and Hour Division of the U.S. Department of Labor has determined to be prevailing in a given area for a particular type of construction (e.g., building, heavy, highway, or residential).

# STATE REVOLVING FUND LOAN PROGRAM

## Extensions of Wage Determinations

When a general wage determination has not been awarded within 90 days after bid opening, the head of the contracting/assisting agency may request an extension of the 90 day period from the Wage and Hour Administrator. When, due to unavoidable circumstances, a project wage determination expires before award but after bid opening, the head of the contracting/assisting agency may request an extension of the expiration date of the project wage determination in the bid specifications instead of issuing a new wage determination.

Extension requests should be supported by a written finding including a brief statement of the factual support, that extension of the expiration date of the determination is necessary and proper in the public interest to prevent injustice or undue hardship or to avoid serious impairment in the conduct of Government business.

The Administrator of the Wage and Hour Division of the U.S. Department of Labor will either grant or deny the request for an extension after consideration of all the circumstances, including an examination to determine if the previously issued rates remain prevailing. If a request for the extension of a project wage determination is denied, a new wage determination will be issued to replace an expired project wage determination.

Additional information concerning the Davis-Bacon Act and current wage rate determinations can be obtained at the following sites: [www.gpo.gov/davisbacon/referencemat.html](http://www.gpo.gov/davisbacon/referencemat.html) and [www.wdol.gov/](http://www.wdol.gov/).

## **Wage Rate Requirements Under FY 2010 Appropriations**

### **3. Contract and Subcontract provisions.**

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2010 appropriation, the following clauses:

(1) Minimum wages.

(i) 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 (a)(1)(iv) 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 §



## STATE REVOLVING FUND LOAN PROGRAM

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 (a)(1)(ii) 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.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, [www.dol.gov](http://www.dol.gov).

(ii)(A) The subrecipient(s), on behalf of EPA, 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 State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

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

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

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) 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.

(iii) 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

## STATE REVOLVING FUND LOAN PROGRAM

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.

(iv) 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 subrecipient(s), shall upon written request of the EPA Award Official or 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 (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, 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.

(i) 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.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls 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 the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g.,

## STATE REVOLVING FUND LOAN PROGRAM

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 subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, 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 subrecipient(s).

(B) 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:

(1) 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;

(2) 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;

(3) 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.

(C) 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 (a)(3)(ii)(B) of this section.

(D) 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.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA 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 Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, 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--

(i) Apprentices. 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

## STATE REVOLVING FUND LOAN PROGRAM

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.

(ii) Trainees. 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.



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(iii) 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.

(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 in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses 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 Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) 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).

(ii) 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).

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

### **4. Contract Provision for Contracts in Excess of \$100,000.**

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any 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 Item 3, above 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.

## STATE REVOLVING FUND LOAN PROGRAM

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore 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 (a)(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 (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall 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 (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(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 (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

# STATE REVOLVING FUND LOAN PROGRAM

## Loan Recipient's and Contractor's Guidance

**FY2010 and After**

### Tracking and Reporting

For tracking and reporting purposes, the **Loan Recipient** is responsible for the following:

- Ensuring that the Contractor is in compliance with the Davis Bacon provisions of ARRA
- The loan recipients **must keep a file** in which all documentation **must be stored** for the current classifications and wage rates (under the Davis-Bacon Act) for the construction of their projects. This file must be kept for three (3) years after the project is completed and **will** be subject to audit by the State of Tennessee and the Environmental Protection Agency (EPA).
- Any additional tracking and reporting requirements from EPA

For tracking and reporting purposes, the **Contractor** is responsible for the following:

- Achieving and maintaining compliance with the Davis Bacon provisions of ARRA
- Submitting with each **pay estimate** a certification stating that workers have been paid the current prevailing wage rates for each classification according to the Davis-Bacon wage rate schedule currently in effect for this project
- Any additional tracking and reporting requirements from EPA

Please contact **Dr. Bagher Sami, Administrative Section Manager for the SRF Loan Program**, at 615-532-0501 or [bagher.sami@tn.gov](mailto:bagher.sami@tn.gov) to obtain details.

# NOTICE

THIS ENTITY IS A RECIPIENT OF **STATE AND FEDERAL FUNDS**. IF YOU HAVE KNOWLEDGE OF ANY ACTIVITY WHICH YOU CONSIDER TO BE ILLEGAL, IMPROPER, OR WASTEFUL, PLEASE CALL THE STATE COMPTROLLER'S TOLL-FREE HOTLINE:

**1-800-232-5454**







TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Form with multiple sections: Site or Project Name, Street Address or Location, Site Activity Description, County(ies), MS4 Jurisdiction, Existing NPDES Tracking Number, Start date, Estimated end date, Latitude, Longitude, Acres Disturbed, Total Acres, Receiving waters, Attach the SWPPP with the NOI, Site Owner/Developer Entity, Site Owner/Developer Signatory, Mailing Address, Phone, Fax, E-mail, Optional Contact, Owner or Developer Certification, Contractor(s) Certification, Other Contractor company name.

OFFICIAL STATE USE ONLY

Table with 4 columns: Received Date, Reviewer, Field Office, Permit Number TNR, Exceptional TN Water, Fee(s), T & E Aquatic Flora and Fauna, Impaired Receiving Stream, Notice of Coverage Date.

**Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR10000)**

**Purpose of this form** A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant’s claim of ability to be in compliance with permit terms and conditions.** This permit is required for stormwater discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

**Permit fee** (see table below) must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g. equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites). There is no fee for sites less than 1 acre.

<b>Acres Disturbed</b>	= or > 150 acres	= or > 50 < 150 acres	= or > 5 < 50 acres	= or > 1 < 5 acres
<b>Fee</b>	\$7,500	\$4,000	\$1,000	\$250

**Who must submit the NOI form?** Per Section 2 of the permit, all site operators must submit an NOI form. “Operator” for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site’s previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

**Notice of Coverage** The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Stormwater discharge from the construction site is authorized as of the effective date of the NOC.

**Complete the form** Type or print clearly, using ink and not markers or pencil. Answer each item or enter “NA,” for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

**Describe and locate the project** Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads and structures; e.g. intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at the USGS World Wide Web site: <http://www.usgs.gov/>; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

**MS4 Jurisdiction:** If this construction site is located within a Municipal Separate Storm Sewer System (MS4), please list name of MS4. A current list of MS4s in Tennessee may be found at [http://www.tn.gov/environment/wpc/stormh2o/docs/MS4s\\_Jan2012.pdf](http://www.tn.gov/environment/wpc/stormh2o/docs/MS4s_Jan2012.pdf)

**Give name of the receiving waters** Trace the route of stormwater runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed (“unnamed tributary”), determine the name of the water body that the unnamed tributary enters.

**ARAP permit may be required** **If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP).** If you have a question about the ARAP program or permits, contact your local Environmental Field Office (EFO).

**Submitting the form and obtaining more information** Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing.**

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)**

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243  
1-888-891-TDEC (8332)

**Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)**

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the local WPC Environmental Field Office (EFO) address (see table below). For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

**Type or print clearly, using ink.**

<b>Site or Project Name:</b>	<b>NPDES Tracking Number: TNR</b>
Street Address or Location:	County(ies):

<b>Name of Permittee Requesting Termination of Coverage:</b>			
Permittee Contact Name:		Title or Position:	
Mailing Address:		City:	State: Zip:
Phone: (      )		E-mail:	

**Check the reason(s) for termination of permit coverage:**

<input type="checkbox"/>	Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
<input type="checkbox"/>	You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

**Certification and Signature:** (must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have been eliminated from the portion of the construction site where the operator had control. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control.

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Permittee name (print or type):	Signature:	Date:
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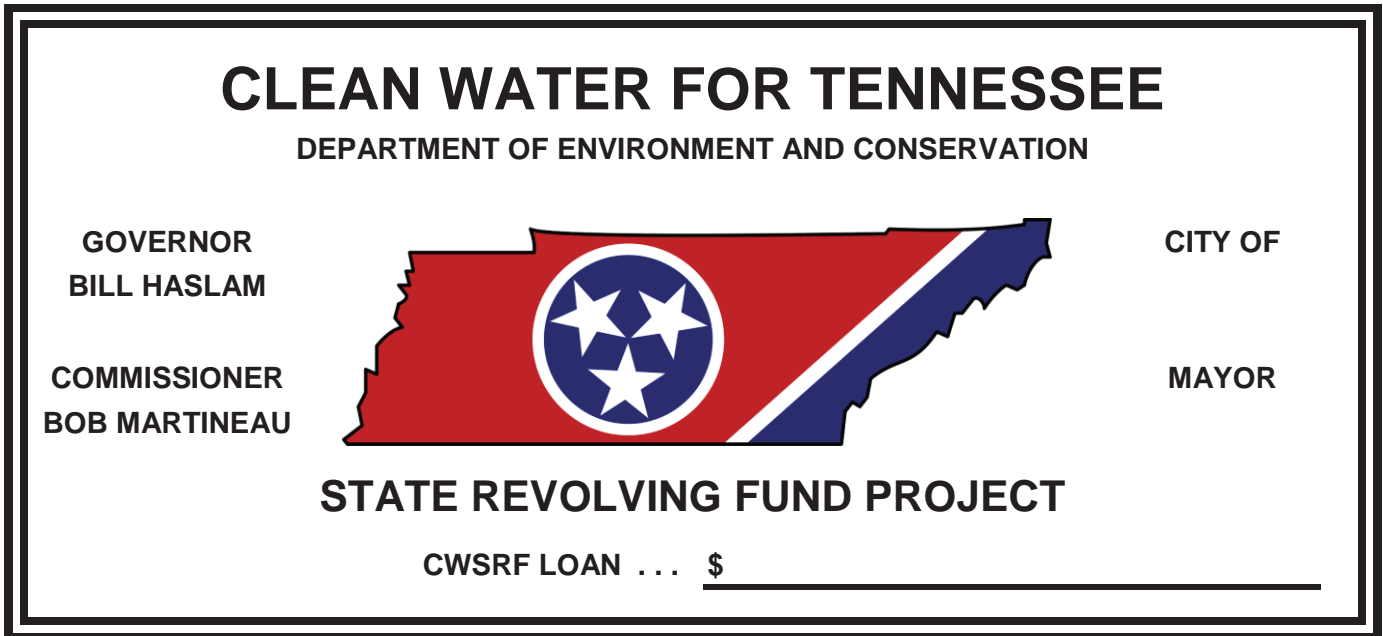
EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett, TN	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	540 McCallie Avenue STE 550	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

# CLEAN WATER STATE REVOLVING FUND

## IDENTIFICATION SIGN

All plans and specifications for each project approved shall contain provisions for requiring the general contractor to provide identification signs. The signs shall conform to the following basic features:

1. The following diagram shall be used as a design:



2. The sign shall be a 4'0" X 8'0" sheet of exterior grade plywood and shall be built so as to remain erected during the entire construction phase of the project.
3. The background of both sides shall be white. The lettering shall be black and shall be large enough to take advantage of the full size of the plywood. The stars shall be white set on a blue field and surrounded by a white ring placed inside a state map in red with a stripe of white and blue on the right side. The sign shall be bordered by a one-inch blue stripe.

Revised: JANUARY 20, 2011

**STATE REVOLVING FUND LOAN PROGRAM**  
**BID PACKAGE SUBMITTAL REQUIREMENTS**

**PRIOR TO FINAL CONTRACT AWARD** by the State Revolving Fund (SRF) Loan Program, the Loan Recipient must prepare and submit a completed Bid Package to the SRF Loan Program for review and **written approval**. An **Authority-to-Award (ATA)** letter from the SRF Loan Program must be obtained prior to the final contract award and the initiation of construction activities.

A completed Bid Package submittal consists of the following:

1. A copy of the **Advertisement for Bids** appearing in a local or major regional newspaper or the Dodge Report (40 CFR 31.36 (d)(2)(ii)(A)). *The project must be advertised for a minimum of 14 days prior to the bid opening.*
2. An original copy of either the **Award Resolution or the minutes** from the meeting of the governing body (or a certified copy of either) that tentatively awards the contract(s) to the lowest, responsible, responsive bidder(s)
3. A **certified bid tabulation** stamped and signed by the consulting engineer reviewing the bids
4. A copy of the **signed Bid Proposal** of the apparent successful bidder
5. **Equal Employment Opportunity (EEO) documentation** signed by the apparent successful bidder
6. **Bid Bond with Power of Attorney** (40 CFR 31.36(h))
7. Signed and dated U.S. EPA (or other agency) **Contractor Debarment Form**, such as the U.S. Environmental Protection Agency Certification Regarding Debarment, Suspension and Other Responsibility Matters
8. An original, notarized certification of publication (**Publisher's Affidavit**) signed by the editor of the newspaper
9. Copies of a minimum of 10 **certified letters** and "**Return Receipt Requested**" forms sent to potential **Disadvantaged Business Enterprises (DBE)** subcontractors, supplies vendors, service providers, and/or equipment vendors
10. A copy of the current **Davis-Bacon** wage rates used on this project (Davis-Bacon Act)
11. A completed **Loan Recipient's Certification and Summary** of DBE Participation on SRF Projects (40 CFR 31.36 (e)(2)(i through vi))
12. If no **DBE** participation was obtained, a "**Good Faith Effort**" letter (See Good Faith Effort Steps at 40 CFR 31.36 (e)(2)(i through vi))
13. Reference documents:
  - **Loan Recipient's Requirements** for Solicitation and Documentation of **DBE** Participation on SRF Projects
  - **Bidder's Requirements** for Solicitation and Documentation of **DBE** Participation on SRF Projects
  - **Loan Recipient's Certification and Summary** of **DBE** Participation on SRF Loan-Funded Projects
  - **Guidance Document** for **DBE** Requirements for SRF loans
14. If applicable, documentation of the justification for not awarding the contract to the lowest bidder if the award is to be made to a bidder other than the low bidder. The justification must indicate why the low bidder is not responsive or responsible and include documentation of any negotiations leading to the determination.
15. Resume of the resident inspector(s)
16. Documentation of the extension of the bid proposal and bid bond expiration dates, if necessary

**If the lowest bid received exceeds the amount budgeted** for construction in the SRF-approved SRF Loan Budget, the loan recipient must choose only from the following options:

- **Re-allocate** SRF funds through a budget revision. A revised Budget/Re-budget Form must be submitted to the SRF for review and approval if the re-budgeting option is chosen.
- **Provide** additional funds needed to pay the contract from **local funds** or funding source(s) other than the SRF loan
- **Apply** for an **SRF loan increase**. Application for a loan increase will require re-evaluation of the loan recipient's user rates to determine if the anticipated revenues will be sufficient to repay the requested loan increase and fund the additional depreciation. **Principal forgiveness does not apply to loan increases.**
- **Reject** all bids and **re-bid the project**

Please contact Dr. Bagher Sami by telephone at (615) 532-0501 or by e-mail at [bagher.sami@tn.gov](mailto:bagher.sami@tn.gov) if you have any questions concerning the contents of the Bid Package submittal for State Revolving Fund projects.

## City Letter Head

Dr. Bagher Sami,  
Administrative and Financial Section Manager  
State Revolving Fund Loan Program  
William R. Snodgrass - Tennessee Tower  
312 Rosa L. Parks Avenue, 12<sup>th</sup> Floor  
Nashville, Tennessee 37243-1102

RE: Property, Easements, Rights-of-Way Certification  
City/County/UD/Authority (xxxx County or xxx and xxxx Counties), Tennessee  
Loan No. SRF CWA CGA DWF DWA DGA 200x-xxx  
Loan Description: xxxxxxxxxx  
Contract No. / Name 1 of 2—Contract Description  
Contract No. / Name 2 of 2—Contract Description

Dear Dr. Sami:

This letter is to certify that all property, easements, and rights-of-way necessary to construct the projects included in the above-referenced contract are owned (or in the case of right-of-way permitted for the use) by the City/County/UD/Authority. And/or The plant improvements are to be constructed on the same site as our existing facility. Based upon this, no "Site Certificate" is required.

Sincerely,

**Authorized Representative, Title**

## SITE CERTIFICATION

I certify that the applicant, the City of ???, ??? County, the ??? Utility District, the ??? Water/Wastewater/Energy Authority has acquired or has entered into condemnation proceedings for all real property including easements and rights-of-way that are or will be required for the construction (erection, extension, modification, addition), operation, and maintenance of the entire wastewater treatment works funded under loan number SRF/CWA/CGA/DWF/DWA/DGA 200?-???

I certify that any deeds or documents required to be recorded in order to protect the title of the owner and the interest of the City of ???, ??? County, the ??? Utility District, the ??? Water/Wastewater/Energy Authority have been duly recorded and filed for record wherever necessary.

I further certify that real property including easements required for the entire wastewater treatment works project was acquired in accordance with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and EPA's regulation 40 CFR Part 4.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

---

Applicants' Authorized Representative

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Title (Mayor, City Manager, Commissioner, etc.)

---

Attorney (Typed and Signed)



**00672.7 Bid Bond**

Know all men by these presents, that we, the undersigned,  
\_\_\_\_\_ as

Principal, and \_\_\_\_\_ as surety,

Hereby held and firmly bound unto \_\_\_\_\_ as Owner on the sum of \_\_\_\_\_ for the payment of which, well and truly to be made, We hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2016

This condition of the above obligation is such that whereas the principal has submitted to the Purchaser a certain bid, attached hereto and hereby made a part of hereof to enter into a contract in writing for the construction of:

**SARP10 Program 193449.71.0399 General Construction Support**

Now therefore,

- A) If said bid shall be rejected, or in the alternative,
- B) If said bid shall be accepted and the principal shall execute and deliver a contract in the form of contract attached hereto (properly completed in accordance with said bid), required insurance certificates, and shall furnish a Bond for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bond,

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall, in no event, exceed the amount of this obligation as herein stated.

The surety, for value received, hereby stipulates and agrees that the obligations of said surety and its bond shall be in no way impaired or affected by any extension of the time within which the Purchaser may accept such bid; and said surety does hereby waive notice of any such extension.

In witness whereof, the principal and the surety hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year set forth above.

**CONTRACTOR**

**SURETY**

\_\_\_\_\_  
Contractor's Company Name

Surety: \_\_\_\_\_  
Name

\_\_\_\_\_  
Signature (principal)

By: \_\_\_\_\_  
Attorney in Fact - Signature

\_\_\_\_\_  
Printed or Typed Name and Title

\_\_\_\_\_  
Printed or Typed Name and Title





### 00672.8 Schedule Impact Due to Weather

Program Manager will determine Contractor's entitlement to an extension of the Contract Time as a result of weather delays, based on the data included in Tables 1 and 2. Extensions of time will be granted at the discretion of the Program Manager for circumstances not covered by the flow chart.

The following rules apply to any analysis for weather related delays to this Project. Weather delay days may be awarded if the first two rules are met. Additional days may be awarded if conditions in Rule 3 are met for unusually heavy precipitation independent of Rules 1 and 2.

- Rule 1:           The average monthly precipitation amount must have been exceeded.
- If the total amount of actual precipitation in a month exceeds the average for that month shown in Table 1, the first test has been met. Go to rule number 2. (Precipitation is defined as the quantity of water deposited by rain, hail, sleet, or snow.)
- Rule 2:           The number of days in a month with actual precipitation greater than the threshold amount shown in Table 2 has been exceeded.
- The numbers of days with actual precipitation greater than the threshold amounts shown in Table 2 are eligible for award as weather delays days.
- Additional days may be awarded for unusually heavy precipitation independent of meeting the rules above.
- Rule 3:           Unusually heavy precipitation has occurred.
- Precipitation greater than one inch in a single day may be justification for an additional day time extension for each precipitation day. This rule may be applied singly but not in addition with any other rule.

## National Weather Service Data for Memphis International Airport – Years 2006-2015

**Table 1**

Average Precipitation by Month (In Inches)											
Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
4.10	3.51	5.19	5.45	6.11	3.61	3.92	3.06	3.38	3.75	4.29	5.16

**Table 2**

Average Number of Days with Precipitation Greater than 0.25 Inches											
Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	4	5	5	5	3	4	3	3	4	4	5

Any weather-related extension of Contract time shall be non-compensable. Efficiencies gained as a result of favorable weather within a calendar month, where the number of days of normally anticipated weather days is less than expected, shall contribute to the project float and shall not affect the Contract Times. Application for a weather related extension of time shall be submitted to the Program Manager, and shall state the extension requested and be supported by the relevant weather data.

## 00672.9 Code of Conduct

### CODE OF CONDUCT FOR GLOBAL BUSINESS RELATIONSHIPS

Black & Veatch Corporation and its subsidiary companies (collectively hereinafter, the "Company") is a global company that conducts business in many countries through subsidiaries, branches, joint ventures, and other business arrangements.

As a responsible corporate citizen, the Company requires that all of its business operations observe certain basic standards of conduct. Also, as a company subject to the laws of the United States, the Company must ensure that its business relationships outside the United States will comply with the requirements of certain U.S. laws that impose on the Company standards of conduct for its business throughout the world.

For all business relationships, it is the policy of the Company that the following standards of conduct and legal requirements shall be observed in every aspect of transactions with the Company:

- 1) Applicable law must be complied with in the conduct of such relationships. If there is a conflict between applicable local law and applicable U.S. law, the guidance of the Company's Law Department will be sought in order to resolve such a conflict. However, the U.S. laws referred to in Paragraphs 4, 5, and 6 below must be complied with without exception.
- 2) The Company, customers, employees, suppliers, and other persons, organizations, and governments will be dealt with in a fair manner with honesty and integrity, observing high standards of personal and business ethics.
- 3) Business books and records will be maintained in a proper, responsible, and honest manner, which will allow the Company to comply with the laws applicable to it.
- 4) All applicable anti-bribery legislation must be complied with, including without limitation, (i) the domestic laws of the country in which operations take place, (ii) the U.S. Foreign Corrupt Practices Act ("FCPA"), (iii) the United Kingdom Bribery Act ("UKBA"), (iv) the national implementing legislation of any relevant jurisdictions under the Organization for Economic Co-operation and Development ("OECD") Anti-Bribery Convention (Convention on Combating Bribery of Foreign Public Officials in International Business Transactions), and (v) any other applicable anti-bribery legislation.
- 5) The laws of the United States regarding boycotts must be complied with.
- 6) The laws of the United States and any other applicable jurisdictions regarding trade sanctions and export administration and control must be complied with for any information or material supplied by the Company.
- 7) Confidential or proprietary information will not be disclosed at any time to persons outside the business relationship without proper authorization.
- 8) Applicable antitrust and competition laws will be complied with.

## 00770 – Loss Control Manual

The Loss Control Manual is available for viewing on the SARP10 website:

<http://www.sarp10.com/facts/>

Contact Riley Thompson, Safety Manager for additional information:

[ThompsonLR@overlandcontracting.com](mailto:ThompsonLR@overlandcontracting.com)

(901) 495-2649



**Technical Specifications (65 pages)**

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02230 SITE CLEARING**

**PART 1 – SCOPE**

This work shall consist of clearing and grubbing, removal, and disposal of all vegetation and debris within the limits of the rights-of-way and easement areas. It shall also include the salvaging of designated materials and backfilling the resulting trenches, holes, and pits; the preservation from injury or defacement of all vegetation and objects designated to remain; and all necessary replacement of fences, trees, hedges, shrubs, and flowers.

**PART 2 – EQUIPMENT**

All equipment for the satisfactory performance of the Work shall be on the project and approved before the Work will be permitted to begin.

**PART 3 – CONSTRUCTION REQUIREMENTS**

**3.01 CLEARING AND GRUBBING**

A. The Purchaser will establish rights-of-way lines and construction limits. All trees, shrubs, edges, fences, and other items to remain shall be as indicated on the Plans or as directed by the Purchaser.

B. The rights-of-way shall be cleared of all vegetation and debris except items designated to remain. All other trees, stumps, roots, brush, hedges, and other protruding obstructions within the excavation area shall be completely grubbed. In embankment areas, sound undisturbed stumps and roots which will be a minimum of five (5) feet below subgrade or slope of embankment will be allowed to remain in place provided undercutting or other corrective measures are not stipulated in the plans or directed by the Purchaser and providing stumps do not extend more than six (6) inches above the ground surface. If excavation is not required, the area shall be grubbed to a minimum depth of six (6) inches below existing grade to remove grass, roots, and other organic material.

C. Low hanging branches and unsound or unsightly branches on trees or shrubs designated to remain shall be removed as directed by the Purchaser. Tree limbs and branches shall be trimmed to provide twenty (20) feet vertical clearance over the entire right-of-way. All trimming shall be done by skilled workmen in accordance with good tree surgery practices, and cut or scarred surfaces of trees or shrubs to remain shall be treated with an approved asphalt base paint prepared especially for tree surgery.

D. Within embankment areas, all depressions resulting from grubbing operations shall be backfilled with suitable material and left uniform. All depressions in excavation areas below subgrade elevation shall be backfilled with suitable material and compacted in accordance with the provisions of Specification Section 02315.

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02230 SITE CLEARING**

E. When specified on the Plans or Right-of-Way Agreement or so directed by the Engineer, all fences removed for construction purposes shall be replaced with salvaged existing materials or with acceptable in-kind new materials to enclose the original enclosed area as nearly as possible and tied back to the old fence.

**3.02 DISPOSAL OF DEBRIS**

All material from removal of structures and obstructions except salvaged items shall be disposed of off the Project and it shall be the Subcontractor's responsibility to secure any permits necessary for the disposal.

**PART 4 – MEASUREMENT**

This item will be paid for on a square foot basis.

**PART 5 – PAYMENT**

5.01 Payment will be made for the work, completed and accepted by the Purchaser, at the contract of per square foot basis, which price will be full compensation for clearing and grubbing vegetation; removal and disposal of vegetation, debris, backfilling of depressions below subgrade elevation, protection of trees to remain; restoration of fences, trees, hedges, shrubs, flowers, or other growth as required; and moving salvageable materials to designated storage locations in accordance with the stipulations and provisions of the contract.

5.02 Payment will be made under:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02230-01	Clearing and Grubbing	Square Foot

**END OF SECTION 02230**

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATION**  
**SECTION 02370 RIP-RAP**  
**Modified by SARP10**

**PART 1 – SCOPE**

Rip-rap shall consist of furnishing and setting or placing, stones or sacked sand cement. The rip-rap shall be constructed in conformity to the lines, grades, and cross-sections, and at the locations indicated on the Plans or as directed by the Purchaser and in accordance with the requirements and provisions of these Specifications.

**PART 2 – MATERIALS AND EQUIPMENT**

2.01 MATERIAL

A. Stone

1. Stone shall be sound, dense and durable, free from cracks, pyrite intrusions and other structural defects and have a density of not less than 150 pounds per solid cubic foot. When tested by the Los Angeles method, the percent of wear shall not exceed 60.
2. When the stone is subjected to five alternations of the sodium sulfate soundness test, the weighted percentage of loss shall be not more than 15.
3. Stone shall conform to one of the following gradations and shall be approximately rectangular in shape:

**RIP-RAP GRADATIONS**

**Grade B**

1,200 pound maximum weight

Weight	Percent
750 lbs. to 1,200 lbs.	27%
400 lbs. to 749 lbs.	25%
200 lbs. to 399 lbs.	25%
50 lbs. to 199 lbs.	15%
10 lbs. to 49 lbs.	5%
Less than 10 lbs.	3%

**Grade C**

400 pound maximum weight

Weight	Percent
250 lbs. to 400 lbs.	30%
50 lbs. to 249 lbs.	20%
30 lbs. to 49 lbs.	25%
10 lbs. to 29 lbs.	20%
Less than 10 lbs.	5%



**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATION**

**SECTION 02370 RIP-RAP**

**Modified by SARP10**

		Grade D
		125 pound maximum weight
Weight		Percent
90 lbs. to	125 lbs.	25%
25 lbs. to	89 lbs.	50%
10 lbs. to	24 lbs.	15%
Less than	10 lbs.	10%

**B. Filter Cloth and Fasteners**

1. The filter cloth material used as a base for rip-rap shall be pervious sheets of strong, rot-proof plastic fabric meeting the following Specifications:

<u>Physical Property</u>	<u>Test Method</u>	<u>Acceptable Test Results</u>
Tensile Strength, wet, lbs.	ASTM D-1682	200 (min)
Elongation, wet, %	ASTM D-1682	40 (min)
Coefficient of Water Permeability, cm/scc	Constant Head	.03 (min)
Puncture Strength, lbs.	ASTM D-751	100 (min)
Pore Size – EOS	Corps of Engineers	40 (max)
U.S. Standard Sieve	CW-02215	

2. The Subcontractor shall furnish a certified laboratory test report from an approved testing laboratory with each shipment of materials. Laboratory test reports shall include actual numerical test data obtained on this product.

3. Pins may be any commercially available pin 6 inches in length capable of retaining a washer.

4. Washers may be any commercially available washer 2 inches in diameter and compatible with the pin.

5. The pins and washers shall be manufactured from corrosion resistant metal material.

**2.02 EQUIPMENT**

A. All equipment necessary for the satisfactory performance of the work shall be on hand and approved by the Purchaser before construction will be permitted to begin.

B. The equipment shall include wooden or metal tamps of sufficient weight and number to properly compact the slopes on which the rip-rap is to be placed.

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATION**

**SECTION 02370 RIP-RAP**

**Modified by SARP10**

C. Wooden hand tamps, having a tamping face not greater than one square foot, and of sufficient weight and number to properly tamp the rip-rap, shall be furnished when sacked sand cement is used.

**PART 3 – CONSTRUCTION REQUIREMENTS**

**3.01 SUBGRADE PREPARATION**

A. The area to be occupied by the rip-rap stabilization shall be cleared of all trees, roots, vegetation, and similar material. Immediately prior to the placement of rip-rap, the slopes or ground surface shall be trimmed in conformity to the lines and grades indicated on the Plans or as directed by the Purchaser and shall be thoroughly compacted by the use of hand or mechanical tamps. Unless otherwise specified herein make all fill with suitable materials excavated from site. All fills in dry areas shall be compacted to a maximum density of 90 percent as determined by ASTM D 698 (Standard Proctor). On slopes, the bottom of the rip-rap shall be placed at least 2 feet below the natural ground surface, unless otherwise directed.

B. Surplus excavated material shall be removed from the site and disposed of as shown on the Plans or as directed by the Purchaser. Spoil material shall not be disposed of in a watercourse or on the banks of a watercourse.

**3.02 PLACING FILTER FABRIC**

Unless otherwise specified, filter fabric shall be placed on the prepared and compacted subgrade within the limits shown on the Plans for stone and sacked sand cement rip-rap. The filter fabric shall be laid loosely without wrinkles or creases. When more than one width or length of filter fabric is necessary, the joints shall be overlapped a minimum of 24 inches. Securing pins with washers shall be inserted through both strips of overlapped material and into the material beneath, until the washer bears against the fabric and secures it firmly to the base material. These securing pins shall be inserted through the overlapped fabric at no greater than 2 foot intervals along a line through the midpoint of the overlap. If the fabric is torn or damaged, a patch overlapping the edges of the damaged area by 2 feet shall be sewn securely to the fabric with a continuous, monofilament, rot-proof material.

**3.03 PLACEMENT OF RIP-RAP**

A. Stone Rip-Rap

1. Stone rip-rap shall be constructed upon the prepared foundation by hand placing, so that the stones shall be as close together as is practicable in order to reduce the voids to a minimum.

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**SECTION 02370 RIP-RAP**

**Modified by SARP10**

2. When rip-rap is constructed in more than one layer, it shall be so placed that it will be thoroughly tied together with the larger stones protruding from one layer into the other.
3. Each stone shall be placed so that the depth will be perpendicular to the surface upon which it is set. The length shall be placed as directed by the Purchaser and each main stone shall be placed so that it will be against the adjoining stones. The stones shall be placed in such a manner as to stagger all joints as far as it is possible and practicable.
4. The main stones shall be thoroughly “chinked” and filled with the smaller stones by throwing them over the surface in any manner that is practicable for the smaller stones to fill the voids. This work shall continue with the progress of the construction. Tamping of the stones will not be required if the stones have been placed in a reasonable and satisfactory manner.
5. Knapping of the stones will not be required, except stones protruding more than 4 inches above the specified grade, in which case, these stones shall be broken down to come within 4 inches of the specified grade.

**B. Sacked Sand Cement Rip-Rap**

1. Sacked sand cement rip-rap shall be constructed by placing sacks, filled approximately  $\frac{3}{4}$  full with a mixture of sand and cement, on the prepared foundation. Sand and cement shall be mixed dry, with a mechanical mixer, in the proportion of one bag (94 pounds) of cement to five cubic feet of dry sand, until the mixture is uniform in color. After the mixing has been completed, the sand cement mixture shall be poured into sacks of approximately one cubic foot capacity until they are approximately three-fourths filled. The sacks shall then be securely fastened with hog rings, by sewing or other suitable methods that prohibit leakage of the mixture from the bags.
2. The sacks of sand cement shall be bedded, by hand, on the prepared grade with all the fastened ends on the grade and with the joints broken.
3. The sacks shall be rammed and packed against each other and tamped on the surface in such a manner as to form close contact and secure a uniform surface. Immediately after placing and tamping the sacks of sand cement, they shall be thoroughly soaked by sprinkling with water. Water shall not be applied under high pressure.
4. Sacks of sand cement ripped or broken in placing shall be removed and replaced before being soaked with water.

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**SECTION 02370 RIP-RAP**  
**Modified by SARP10**

**3.04 DEPTH OF RIP-RAP**

A. The standard depth of stone rip-rap shall be 18 inches unless otherwise indicated or directed. The average depth for each 25 square feet of surface shall be not less than the depth indicated on the Plans or directed by the Purchaser, or the standard depth required in these Specifications.

B. The completed sacked sand cement rip-rap shall have a minimum thickness of 10 inches, measured perpendicular to the slope.

C. In no case shall any part of the finished depth of stone or sacked sand cement rip-rap vary more than 3 inches above or below the specified depth.

**PART 4 – MEASUREMENT**

Stone rip-rap of various gradations will be measured for payment by the ton. Sacked sand cement rip-rap will be measured for payment by the square yard, complete in place. No measurement for payment will be made for excavation embankment construction or grading work required to prepare the foundation or for filter fabric.

**PART 5 – PAYMENT**

**5.01 RIP RAP**

The accepted quantities of stone rip-rap, or sacked sand cement rip-rap will be paid for at the contract unit price per ton specified with price will be full compensation for preparing the foundation, furnishing and placing filter cloth fabric and rip-rap, and furnishing all labor, materials, equipment and incidentals necessary to complete the work.

**5.03 PAYMENT WILL BE MADE UNDER:**

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02370-01	RIP-RAP	Ton

**END OF SECTION 02370**

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02534 SANITARY SEWER MANHOLE MODIFICATION**  
**Modified by SARP10**

**PART 1 – SCOPE**

This Work shall consist of adjusting existing sanitary sewer manhole frames, covers, and cones necessary as directed by the Purchaser and in accordance with these Specifications. These modifications could include street cuts, removal of brick cones to a diameter approved by the Program Manager allowing for the safe entry and emergency extraction of the personal if required.

**PART 2 - MATERIALS AND EQUIPMENT**

2.01 MATERIALS

A. Mortar

1. Mortar shall be composed of the following mixtures by volume: one part Portland cement, twoparts sand, hydrated lime not to exceed 10 percent of the cement used, and four parts water. All ingredients shall be proportioned by measurement and not by estimation. All hydrated lime shall be as specified by ASTM C 6.

2. The mortar shall be hand mixed or machine mixed. In the preparation of hand mixed mortar, the sand, cement and hydrated lime shall be thoroughly mixed together in a clean, tight mortar box until the mixture is of uniform color, after which water shall be added. Machine mixed mortar shall be prepared in an approved mixer and shall be mixed not less than 1 ½ minutes. Mortar shall be used within 30 minutes after mixing.

B. Brick

1. All brick shall conform to the Specifications for Concrete Building Brick, ASTM C55 for Grade A. Bricks shall conform to the following dimensions, unless otherwise approved by the Purchaser.

	Depth	Width	Length
	Inches	Inches	Inches
Standard Size	2 ¼	3 ¾	8
Allowable Variation	+ ¼	+ ¼	+ ½

2. All brick shall be new and whole, of uniform standard size and with substantially straight and parallel edges and square corners. Bricks shall be tough and strong and free from injurious cracks and flaws. Bricks shall be culled after delivery, if required, and all culls shall be removed from the work site.

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02534 SANITARY SEWER MANHOLE MODIFICATION**  
**Modified by SARP10**

3. The Subcontractor may be required to furnish the Purchaser with at least five bricks of the character and make he proposes to use, at least one week before any bricks are delivered for use. Allbricks shall be of the same quality as the accepted samples.

C. Portland Cement Concrete

Portland cement concrete for adjustment of precast or poured-in-place concrete manholes shall be in accordance with Section 03050 Portland Cement Concrete.

D. Steel Reinforcement

Deformed steel reinforcing bar and welded wire fabric shall be of the grades, sizes and dimensions and at the designated spacing's as directed by the Purchaser.

E. Manhole Steps

Manhole steps shall be removed from the manhole for the depth of the scope of work.

F. Grade Adapter Ring

Grade adapter rings shall be of the standard Memphis type as manufactured by Universal Scaffolding, or equal. The Subcontractor shall make arrangements to acquire the Grade Adapter Ring.

G. Manhole Frame & Cover

Manhole Frame & Covers shall be of the standard Memphis type as manufactured by Universal Scaffolding, or equal. The Subcontractor shall make arrangements to acquire the Manhole Frame & Cover.

H. Paving Materials

Flexible pavement (asphaltic concrete) and rigid pavement (Portland cement) shall be restored in kind using materials in accordance with Section 02950 Removal and Replacement of Pavements and Incidentals.

2.02 EQUIPMENT

All equipment necessary for the satisfactory performance of this work shall be on hand and available before work shall be permitted to begin.

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02534 SANITARY SEWER MANHOLE MODIFICATION**  
**Modified by SARP10**

**PART 3 - CONSTRUCTION REQUIREMENTS**

**3.01 MANHOLE MODIFICATION**

Subcontractor shall be responsible for modifying the cone section of the manhole for inspection of the associated interceptor gravity mains. These modifications could include street cuts, removal of brick cones to a diameter approved by the Program Manager allowing for the safe entry and emergency extraction of the personal if required. Steel trench plates shall be installed over the hole to secure the area during non-working hours. Final paving shall be performed once the manholes are reconstructed and the project is complete. The paving shall be completed no later than 7 days after completion of the project.

**A. Poured In Place Manholes**

All existing riser rings and frame shall be removed. The concrete shall be saw cut to depth approved by Program manager. When the cone is replaced, coat exterior with a bituminous coating.

**B. Brick or Pre-Cast Manhole**

All existing riser rings and frame shall be removed and defective courses of brick shall be removed, to the depth approved by Program Manager, and the manhole rebuilt to the final street or easement grade and the rim reset as described above.

**3.02 FALL PROTECTION**

Subcontractor shall install and maintain all fall protection measures in accordance with the SARP10 Loss Control Manual. The Subcontractor shall construct a controlled access zone around the manhole being adjusted. At a minimum, the fall protection zone shall include traffic cones encircled with pennant tape. The controlled access zone must have one point of access with an entrance log.

**3.03 SITE PREPARATION AND RESTORATION**

The Subcontractor shall prepare and restore the site. Remove the vegetated area around a manhole as needed to adjust the manhole frame and cover. All disturbed areas shall be restored as nearly as practical to their original condition. The disturbed area shall be cleared and raked to the level of the existing turf and then watered.

**3.04 REMOVAL & REPLACEMENT OF PAVEMENTS & INCIDENTALS**

The Subcontractor shall remove and replace pavement and incidentals in accordance with requirements of Standard Construction Specifications Section 02950, Removal and Replacement of Pavement and Incidentals.



**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02534 SANITARY SEWER MANHOLE MODIFICATION**  
**Modified by SARP10**

3.05 RESTORATION OF ROAD SURFACES

Flexible pavement (asphaltic concrete) and rigid pavement (Portland cement) shall be restored in kind using materials in accordance with Section 02950 Removal and Replacement of Pavements and Incidentals.

**PART 4 – MEASUREMENT**

4.01 MANHOLE MODIFICATION

Standard manhole adjustments shall be measured per each.

4.03 SITE PREPARATION AND RESTORATION

A. The area to be considered for modification shall be incidental to the construction.

B. When the Proposal Sheet(s) do(es) not contain an item for Site Preparation and Restoration, this work shall be required within the construction limits and shall not be paid for directly but shall be considered as a subsidiary obligation of the Subcontractor under other contract items.

**PART 5 – PAYMENT**

5.01 MANHOLE MODIFICATIONS

The accepted quantities of manholes modified shall be paid for at the contract unit price per each, removal and replacement, which price shall be full compensation for furnishing all labor and materials necessary for the complete adjustment of the frames and covers to the satisfaction of the Purchaser.

5.02 PAYMENT SHALL BE MADE UNDER:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02534-5.01	Manhole Modification	Each

**END OF SECTION 02534**

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02730 TEMPORARY SURFACING**

**PART 1 - SCOPE**

This work shall consist of furnishing and placing of Camden gravel, limestone or pit run gravel for use in providing a temporary surface for driveways and entrances to properties where the permanent driveway or entrance surface has been removed and before such surface has been replaced, as well as providing temporary surfaces in the project area at the discretion of the Purchaser. The work shall be as directed by the Purchaser to meet conditions encountered at the site.

**PART 2 - MATERIALS AND EQUIPMENT**

2.01 MATERIALS

A. Limestone.

Limestone for temporary surfacing of driveways or other areas shall consist of the gradation shown below:

Size No.	Total Percent by Dry Weight, Passing Each Sieve (U.S. Standard)				
	1 ½"	1"	½"	No.4	No. 100
CR-610	100	85 – 100	40 – 75	15 – 40	0 –

10

B. Camden Gravel.

As an alternative to limestone as specified above, gravel known locally as Camden gravel shall be used when directed by the Purchaser.

C. Pit Run Gravel.

As an alternative to limestone or Camden gravel as specified above, gravel known as pit run gravel shall be used when directed by the Purchaser. Gradation shall conform to Specification Section 02720 Paragraph 2.01.A.

2.02 EQUIPMENT

All equipment necessary for the satisfactory performance of this work shall be on hand and inspected before work will be permitted to begin.

**PART 3 - CONSTRUCTION REQUIREMENTS**

3.01 GENERAL

A. The area upon which gravel or limestone is to be placed shall be reasonably dry and free of mud, muck, or organic material so as to form a suitable foundation for placement of temporary surfacing material, to the satisfaction of the Purchaser. The area shall be compacted to 90% modified proctor if it is to remain in place as a base,

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02730 TEMPORARY SURFACING**

or 90% standard proctor if it is to remain in place as a subbase. If necessary, unsuitable material shall be removed to a depth as directed by the Purchaser. This excavation shall be considered incidental to other work and no separate payment will be made.

B. For the area defined to receive aggregate or gravel, the Sub Subcontractor shall place the specified material in lifts not to exceed 12 inches and to a grade conforming with the adjoining driveway or surfaced area and shall properly compact each lift to provide a dense, unyielding surface suitable for temporary use of the street or driveway.

C. For the area defined to receive Fill Dirt, the Subcontractor shall place Non-granular select material to be used for backfill will be free from debris, organic matter and perishable compressible material, and will contain no stones or lumps or rock fragments larger than 6 inches. Rocks or lumps smaller than 6 inches in diameter will not exceed an amount that will interfere with the consolidating properties of the fill material. No rocks or lumps will come in direct contact with the pipe. Stones and lumps will be kept separated and well distributed, and all voids will be completely filled with fine material.

D. At such time as the project has progressed so that permanent driveway surfacing or pavement is to be placed, the material for temporary surfacing use shall remain in place to serve as base or subbase material, or shall be removed as directed by the Purchaser. Any removed material shall be the property of the Subcontractor who shall be responsible for disposing of the material. The removal of such material shall be considered incidental to other work and no separate payment will be made.

**PART 4 – MEASUREMENT**

4.01 LIMESTONE

This material will be measured for payment by the ton of material furnished and placed.

4.02 FILL DIRT

This material will be measured for payment by the cubic yard of material furnished and placed.

**PART 5 – PAYMENT**

5.01 LIMESTONE

The accepted quantities of limestone will be paid for at the contract unit price per ton furnished and placed, which price will be full compensation for removal of unsuitable material, preparation of subgrade, furnishing, placing, and compacting limestone to the required grade, and removal of aggregate form the site, as necessary.

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 02730 TEMPORARY SURFACING**

5.02 FILL DIRT

The accepted quantities of fill dirt will be paid for at the contract unit price per cubic yard furnished and placed, which price will be full compensation for removal of unsuitable material, preparation of subgrade, furnishing, placing, and compacting fill dirt to the required grade, and removal of aggregate from the site, as necessary.

5.04 PAYMENT WILL BE MADE UNDER:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02730-5.01	CR-610 LIMESTONE	Ton
02730-5.02	FILL DIRT	CY

**END OF SECTION 02730**

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**

**SECTION 02920 SEEDING**

**Modified by SARP10**

**PART 1 - SCOPE**

This work shall consist of furnishing and placing seed, commercial fertilizer, agricultural limestone, erosion control fabric, and mulch material when specified, and of caring for such areas until acceptance, all in accordance with these Specifications, on all newly graded earthen areas that are not to be paved, stabilized, or sodded, unless otherwise indicated on the plans or directed by the Purchaser.

**PART 2 - MATERIALS AND EQUIPMENT**

2.01 MATERIALS

A. Grass Seed

1. The seed shall meet the requirements of the Tennessee Department of Agriculture and no "Below Standard" seed will be accepted. Grass seed furnished under these Specifications shall be packed in new bags or bags that are sound and not mended.
2. The Subcontractor shall furnish the Purchaser a certified laboratory report from an accredited commercial seed laboratory or from a State seed laboratory showing the analysis of the seed to be furnished and approving the seed for purity and germination. The report from an accredited commercial seed laboratory shall be signed by a Senior Member of the Society of Commercial Seed Technologists. At the discretion of the Purchaser, samples of the seed may be taken for a check against the certified laboratory report. Sampling and testing will be in accordance with the requirements of the Tennessee Department of Agriculture.
3. When a seed group is used, the percentages forming the group shall be as set out below, unless otherwise specified.

<u>Name</u>	<u>Quantity, Percent by Weight</u>
Group A	
Lespedeza (Common or Korean)	20
Sericea Lespedeza	15
Ky. 31 Fescue	40
English Rye	15
White Dutch Clover	5
Weeping Love Grass	5
Group B	
Ky. 31 Fescue	55
Redtop	15
English Rye	20

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**SECTION 02920 SEEDING**

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White Dutch Clover	5
Weeping Love Grass	5
Group C	
Sericea Lespedeza	50
Ky. 31 Fescue	30
English Rye	15
White Dutch Clover	5

4. In mixing or forming “Groups” of seed, they shall be uniformly mixed. “Group” seed shall not be mixed until after each type seed that is used to form the “Group” has been tested and inspected separately and approved for purity and germination. Seed mixed before tests and inspection are made will not be accepted.

**B. Fertilizer**

Manufactured fertilizer shall be a standard commercial fertilizer containing the specified percentages by weight of nitrogen (N), phosphoric acid (P<sub>2</sub>O<sub>5</sub>) and potash (K<sub>2</sub>O). The fertilizer shall be furnished in standard containers with the name, weight, and guaranteed analysis of the contents clearly marked. The containers shall insure proper protection in handling and transporting the fertilizer. All commercial fertilizer shall comply with local, state, and federal fertilizer laws.

**C. Agricultural Limestone**

Agricultural limestone shall contain not less than eighty-five (85%) of calcium carbonate and magnesium carbonate combined and shall be crushed so that at least 85 percent will pass the No. 10 mesh sieve and 100 percent will pass the 3/8 inch sieve.

**D. Mulch Material**

All mulch material shall be air dried and virtually free of noxious weeds and weed seeds or other materials detrimental to plant growth on the work site or on adjacent agricultural lands. Hay shall be stalks of approved grasses, sedges, or legumes seasoned before baling or loading. Straw shall be stalks of rye, oats, wheat, or other approved grain crops. Both hay and straw shall be suitable for spreading with standard mulch blower equipment. Biodegradable fabric as specified in this section may be used as an alternate to mulch material at the Subcontractor’s option.

**E. Inoculants for Legumes**

Inoculants for treating legume seed shall be standard cultures of nitrogen fixing bacteria that are adapted to the particular kind of seed to be treated. The inoculant shall be supplied in convenient containers of a size sufficient to treat the amount of seed to be planted. The label on the container shall indicate the specified legume seed to be inoculated and the date period to be used.

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**SECTION 02920 SEEDING**

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F. Mulch Binder

Cut back asphalt, Grade RC-70 or RC-250 conforming to AASHTO Specifications shall be used.

G. Water

Water shall be free from any harmful or objectionable qualities or organisms.

H. Biodegradable Fabric

1. Biodegradable fabric shall consist of a knitted or bonded construction of yarn with uniform openings interwoven with strips of biodegradable paper. The fabric shall be degradable by exposure to ultraviolet light. The fabric shall be "Hold/Gro" as manufactured by Gulf States Paper Corporation of Tuscaloosa, Alabama, or equal. The fabric shall be furnished in rolls and shall conform to the following requirements:

- a. Roll Widths: 5 feet minimum and 10 feet maximum.
- b. Roll Length: Approximately 360 feet.
- c. Weight: Approximately 0.2 pounds per square yard of fabric.

2. Fabric shall be secured in a place with wood pegs or other biodegradable materials.

3. The manufacturer shall provide moisture proof bags comparable to 4 to 6 mil opaque polyethylene bags for protection of the fabric prior to installation.

2.02 EQUIPMENT

All equipment necessary for the satisfactory performance of this construction shall be on the project and inspected before work will be permitted to begin.

**PART 3 - CONSTRUCTION REQUIREMENTS**

3.01 GENERAL

The Subcontractor shall notify the Purchaser at least 48 hours in advance of the time he intends to begin sowing seed and shall not proceed with such work until permission to do so has been granted by the Purchaser. Before starting seeding operations on any area, final dressing and the placing of topsoil shall have been completed in accordance with the project requirements. All seeding and related operations shall be continuous operations.

3.02 PREPARING THE SEEDBED

Each area to be seeded shall be scarified, disked, harrowed, raked, or otherwise worked until it has been loosened and pulverized to a depth of not less than one



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**SECTION 02920 SEEDING**

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inch. This operation shall be performed only when the soil is in a tillable and workable condition. Fertilizer, at the rate of not less than 23 pounds of Grade 6-12-12 or equivalent, per 1,000 square feet, and agricultural limestone, at the rate of not less than 100 pounds per 1,000 square feet, shall be distributed evenly over the seedbed, unless other are specified on the plans or in the Contract Documents. The limestone and fertilizer shall be lightly harrowed, raked, or otherwise incorporated into the soil as specified above when mixed with seed in water and applied with power sprayer equipment.

**3.03 TIME OF SEEDING**

Group “A” seed shall be used for seeding from February 1 to August 1, and Group “B” seed shall be used from August 1 to December 1, except that either Group “A” or “B” may be used during the month of August. Group “C” seed shall be used from February 1 to December 1 and only when specified on the Plans or in the Contract Documents. Seeding shall be performed only when the soil is in a tillable and workable condition, and no seeding shall be performed between December 1 and February 1, unless otherwise permitted.

**3.04 SEEDING**

Seed of the specified group shall be sown as soon as preparation of the seedbed has been completed and thoroughly watered after seeding. Care shall be exercised to not wash seeding by over watering. Seed shall be sown uniformly by means of a rotary seeder, wheelbarrow seeders, hydraulic equipment, or other satisfactory means, and unless otherwise specified on the Plans or in the Contract Documents, at the rate of 1 ½ pounds per 1,000 square feet. Group “C” seed and seeds of legumes when sown alone shall be inoculated before sowing in accordance with the recommendations of the manufacturer of the inoculant and as directed by the Purchaser. No seeding shall be done during windy weather, or when the ground surface is frozen, wet, or otherwise nontillable.

**3.05 MULCHING**

When seeding with mulch is specified, the mulch material shall be spread evenly over the seeded areas at an approximate rate of 75 pounds per 1,000 square feet immediately following the seeding operations. This rate may be varied by the Purchaser, depending on the texture and condition of the mulch material and the characteristics of the area seeded. All portions of the seeded areas shall be covered with a uniform layer of mulch, so that approximately 25 percent of the ground is visible. The mulch shall be held in place by the use of an approved mulch binder. Cutback asphalt or emulsified asphalt shall be applied at the approximate rate of 4 gallons per 1,000 square feet as required to hold the mulch in place. Mulch in medians and other areas affected by traffic shall be held in place by applying asphalt binder at the approximate rate of 11 gallons per unit. The Subcontractor shall cover exposed structures, guardrails, signs, and appurtenances, if the mulch binder is applied in such a way that it would come in contact with or discolor the structures.

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**3.06 MAINTENANCE AND REPAIR**

All seeded areas shall be cared for and maintained properly to the Purchaser's satisfaction until Final Acceptance of the Work and for the duration of the warranty period. Such care shall include, but not be limited to watering as necessary, fertilizing, and mowing the seeded areas when required by the Purchaser. When mowing is required, mower blades

shall be set at sufficient height to protect the vitality of the growth. Areas which have been previously seeded and mulched in accordance with this Specification Section but which have been eroded, damaged or failed to successfully establish a stand of grasses or legumes shall be repaired as directed by the Purchaser. All material and labor required to maintain and repair seeded areas shall be furnished by the Subcontractor at no cost to the City. If the Purchaser directs the Subcontractor to place additional fertilizer on the area to be reseeded, and additional 4 pounds of agricultural limestone will be required for each additional pound of fertilizer.

**PART 4 – MEASUREMENT**

The furnishing of seeding as specified herein may be measured and payment made under the Pay Items described herein. If payment is made separately, measurement for the work of this Specification will be as described below.

**4.01 SEEDING (WITH MULCH)**

The area of seeding (with mulch) to be measured for payment will be the number of seeding units, with mulch, in accordance with these Specifications. Each unit will consist of 1,000 square feet measured along the surface.

**4.02 SEEDING (WITHOUT MULCH)**

The area of seeding (without mulch) to be measured for payment will be the number of seeding units in accordance with these Specifications. Each unit will consist of 1,000 square feet measured along the surface.

**4.03 GENERAL**

All work and materials for seed bed preparation, application of fertilizer and limestone, application of mulch binder, watering and maintenance and repair of work, and all other similar items included in this section of the Specifications but not covered by a Pay Item herein will be considered as a subsidiary obligation of the Subcontractor under other items of the Contract.

**PART 5 – PAYMENT**

**5.01 SEEDING (WITH MULCH)**

Seeding (with mulch) will be paid for at the contract unit price per unit (1,000 square feet), for the accepted quantities, which price will be full payment for preparing the seedbed, and for furnishing and placing all materials including fertilizer, water,

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**SECTION 02920 SEEDING**

**Modified by SARP10**

agricultural limestone, seed, mulch materials, mulch binder and inoculant, complete in place; and for maintenance and repair of the seeded and grassed area.

5.02 SEEDING (WITHOUT MULCH)

Seeding (without mulch) will be paid for at the contract unit price per unit (1,000 square feet) for the accepted quantities, which price will be full payment for preparing the seedbed, and for furnishing and placing all materials including fertilizer, water, agricultural limestone, seed, and inoculant, complete in place; and for maintenance and repair of the seeded and grassed areas.

5.04 PAYMENT WILL BE MADE UNDER:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02920-5.01	SEEDING (WITH MULCH)	Unit of 1,000 SF
02920-5.02	SEEDING (WITHOUT MULCH)	Unit of 1,000 SF

**END OF SECTION 02920**

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**

**SECTION 02921 SODDING**

**Modified by SARP10**

**PART 1 - SCOPE**

This work shall consist of furnishing and placing sod at all locations shown on the Plans or where directed by the Purchaser, and in conformity with these Specifications. Ordinarily, the work will consist of the furnishing and placing of new sod originating from sources outside the rights-of-way and easement limits. In some cases, however, the work will include removing sod from areas where the requirements of the project would destroy existing sod, storing the sod so removed, and resetting it in areas shown on the Plans or designated by the Purchaser.

**PART 2 - MATERIALS AND EQUIPMENT**

2.01 MATERIALS

A. Sod

1. New sod shall consist of live, dense, well rooted growth of Bermuda grass, free from Johnson grass, nutgrass, and other obnoxious grasses or weeds, well suited for the intended purpose and for the soil in which it is to be planted. All sod shall be cleanly cut in strips having a reasonably uniform thickness of not less than 2 inches and cut in 10 to 12 inch squares.
2. The sale or movement of sod for propagation is controlled by Tennessee Plant Pest Act of 1955, TCA 43-55 et. Seq., and the Subcontractor shall be responsible for obtaining all inspections, authorizations, and permits which may be required by such law and the Tennessee Department of Agriculture.

B. Fertilizer

1. Manufactured fertilizer shall meet the requirements of Specification Section 02920 Paragraph 2.01.B and shall be Grade 15-15-15 unless otherwise specified on the Plans or in the Contract Documents.

C. Ammonium Nitrate

1. Ammonium nitrate shall be a standard commercial product, shall conform to the requirements for other commercial fertilizers as specified in Specification Section 02920 Paragraph 2.01.B, and shall have a minimum of 33 ½ percent nitrogen.

D. Agricultural Limestone

1. Agricultural limestone shall meet the requirements of Specification Section 02920 Paragraph 2.01.C.

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**

**SECTION 02921 SODDING**

**Modified by SARP10**

**2.02 EQUIPMENT**

All equipment necessary for the satisfactory performance of this work shall be on the project and approved before work will be permitted to begin.

**PART 3 - CONSTRUCTION REQUIREMENTS**

**3.01 WEATHER LIMITATIONS**

Sod shall be set or reset only when the soil is moist and favorable for growth. No setting or resetting shall be done between December 1 and February 1, unless weather and soil conditions are considered favorable and permission is granted by the Purchaser.

**3.02 SODDING**

A. The area to be sodded shall be brought to the lines and grades shown on the Plans or as directed by the Purchaser. The surface of the ground to be sodded shall be loosened to a depth of not less than one inch with a rake or other device. If necessary, it shall be sprinkled until saturated for a minimum depth of one inch and kept moist until the sod is placed. Immediately before placing the sod, fertilizer and lime shall be applied uniformly to the prepared surface of the ground. Fertilizer shall be applied at the rate of 8 pounds of Grade 15-15-15, or equivalent per 1,000 square feet. Agricultural limestone shall be applied at the rate of 100 pounds per 1,000 square feet.

B. Sod shall be placed as soon as practical after removal from the point of origin and shall be kept in a moist condition during the interim. The sod shall be carefully placed by hand on the prepared ground surface with the edges in close contact and, as far as possible, in a position to break joints. Each strip of sod laid shall be fitted and rolled using a roller of sufficient size and weight to fix the sod into place. Immediately after placing, the sod shall be thoroughly wetted and rolled with an approved roller or hand tamped, as approved by the Purchaser. Pinning or pegging shall be required on slopes greater than 2 to 1 to hold the sod in place or in other instances at the direction of the Purchaser.

**3.03 MAINTENANCE AND REPAIR**

The sod shall be watered as frequently as necessary for a period of two weeks, after which, ammonium nitrate shall be applied at the rate of 3.5 pounds per 1,000 square feet, and the sod given an additional watering. The Subcontractor shall not allow any equipment or material placed on any planted area and shall erect suitable barricades and guards to prevent his equipment, labor, or the public from traveling on or over any area planted with sod. Care shall include periodic watering, fertilizing and mowing necessary to maintain the vitality and appearance of the sod. When mowing is required, mower blades shall be set at sufficient height to protect the vitality of the growth. Sodded areas that become eroded, damaged or fail to successfully establish a stand of grass shall be repaired and/or replaced as directed

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**Modified by SARP10**

by the Purchaser. All material and labor required to maintain and repair seeded areas shall be furnished by the Subcontractor at no cost to the City. Sod must be living at the time of final acceptance of the project and through the duration of the warranty period.

**3.04 DISPOSAL OF SURPLUS MATERIAL**

All surplus material shall be disposed of off-site.

**PART 4 – MEASUREMENT**

**4.01 SODDING**

Sod will be measured for payment by the square yard of surface upon which the sod has been set.

**PART 5 – PAYMENT**

**5.01 SODDING**

Sodding will be paid for at the contract unit price per square yard for the accepted quantities, which price will be full payment for furnishing, setting, pinning and pegging if required, fertilizing, watering, mowing, providing and placing agricultural limestone, and for the maintenance and repair of the sodded area.

**5.03 PAYMENT WILL BE MADE UNDER:**

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02921-5.01	SODDING (NEW SOD)	Square Yard

**END OF SECTION 02921**

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**PART 1 – SCOPE**

This Work shall consist of the removal and replacement of pavements, sidewalks, driveway aprons, curbs and gutters, driveways, paved areas, and curbs and other items of construction that require temporary cuts. Such replacement shall be to a condition at least equal to the condition existing prior to removal and of in-kind material and shall be compliance with the Drawings, these Specifications, or as directed by the Purchaser. The Work which will be included in the Subcontract and for which the Subcontractor shall be compensated therefore is limited to that area within the rights-of-way and construction easements for the Project. The Subcontractor will not be compensated for the removal and replacement of facilities outside the rights-of-way, easements, and limits of construction of the Project.

**PART 2 – MATERIALS AND EQUIPMENT**

2.01 MATERIALS

- A. Concrete: Portland cement concrete shall be in accordance with Section 03050 Portland Cement Concrete.
- B. Asphaltic Concrete Pavement: Asphaltic concrete surface courses shall meet the requirements of Mix No. 1 and bases courses shall meet the requirements of Mix No. 2 as described below.
  - 1. The composition of the mixes shall be as follows:

Total Percent Passing by Weight

<u>Sieve Size</u>	<u>Mix No. 1</u>	<u>Mix No. 2</u>
2"	100	100
1-1/2"	100	100
3/4"	100	100
3/8"	76 - 96	65 - 95
No. 4	51 - 76	45 - 70
No. 8	36 - 60	25 - 50
No. 30	16 - 40	12 - 30
No. 100	3 - 12	2 - 12
No. 200	2 - 8	1 - 6



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2. The proportions of the total mixture, in percent by weight, shall be as follows:

<u>Courses</u>	<u>Combined Mineral Aggregate</u>	<u>Asphalt Cement</u>
Mix No. 1, Surface	92.0 – 96.0	4.0 – 8.0
Mix No. 2, Binder	93.0 – 97.5	2.5 – 7.0

3. It is the intent of this Section of the Specifications that the above described mixes shall conform to the following mixtures specified in the Tennessee Department of Transportation Standard Specifications for Road and Bridge construction.

Mix No. 1 – Section 411, Asphaltic Concrete Surface (Hot Mix), Grading E.

Mix No. 2 – Section 307, Bituminous Plant Mix Base (Hot Mix), Aggregate Grading C.

4. For multiple layer construction, succeeding layers shall not be laid until the previous layer has cooled sufficiently to support the construction equipment
5. When Mix No. 1 is to be used as a surface for traffic lanes, the mineral aggregate shall be composed of not less than 50 percent nor more than 55 percent crushed limestone and not more than 50 percent nor less than 45 percent natural sand. When Mix No. 1 is used for surfacing of shoulders or other non-traffic lane construction, the mineral aggregate may be composed entirely of limestone, including screening and manufactured sand, but in no case shall the mineral aggregate for this construction consist of less than 50 percent limestone. The natural sand shall be so graded that not more than 5 percent will be retained on the No. 4 sieve.
- C. Expansion Joint Filler: Preformed expansion joint filler shall be of the bituminous type, shall conform to the requirements of AASHTO M 213 and shall not be more than 1 inch or less than 1/2 inch in thickness. The filler shall be cut to the full depth of pavement, curb and gutter, sidewalk, or driveway being replaced.
- D. Gravel Pavement or Base: Crushed limestone with such material as manufactured sand or other fine materials naturally contained or added thereto as needed to match existing conditions and conform to the gradations shown below:

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Grading Table for Graded Aggregate Base Course  
 Total Percent, by Dry Weight, Passing Each Sieve (U.S. Standard)

<u>Size No.</u>	<u>2 1/2"</u>	<u>2"</u>	<u>1 1/2"</u>	<u>1"</u>	<u>3/8"</u>
<u>No. 40</u>	1	100	95-100	35-65	10-30
	2	100	95-100	40-65	10-30

**2.02 EQUIPMENT**

- A. Equipment and tools necessary for cutting, removal, and hauling of existing items; handling and placement of new material; and all equipment necessary to perform all parts of the Work shall be at the job site sufficiently ahead of the start of construction operations to be examined and approved by the Purchaser.
- B. When saws are used to cut pavement, the Subcontractor shall provide sawing equipment adequate in power to complete the sawing to a minimum of 1-1/2 inches below the pavement surface in one pass. An ample supply of saw blades shall be maintained at the site of the Work at all times during sawing operations.
- C. Other types of pavement cutting equipment shall be capable of cutting the pavement to a neat straight line of 1-1/2 inch minimum depth below the pavement surface in one pass.
- D. The Subcontractor shall provide equipment capable of removal of pavements, sidewalks, driveway aprons, curbs and gutters, driveways, paved areas, and curbs without disturbance of adjacent items to remain in place.

**PART 3 – CONSTRUCTION REQUIREMENTS**

**3.01 REMOVAL OF ASPHALT PAVEMENT**

Asphalt pavement shall be removed to a clean straight line as shown on the drawing details. Pavement shall be cut by saw or other equipment approved by the Purchaser in advance. Edges of existing asphalt pavement adjacent to trenches, where damaged, shall be recut in a clean straight line within the limits of damaged pavement only. Such recuts shall be parallel to the original cuts and perpendicular to the pavement surface.

**3.02 REMOVAL OF CONCRETE PAVEMENT**

Concrete pavement shall be removed to a neat straight line as shown on the drawing details. Care shall be used to avoid damage to pavements and to the pavement base remaining in place.

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3.03 REMOVAL OF CONCRETE SIDEWALK, CURB AND GUTTER, AND DRIVEWAY

Concrete sidewalks, curbs and gutters, and driveways shall be removed to the nearest contraction or expansion joint. Care shall be used to avoid damage to sidewalks, curbs and gutters, and driveways remaining in place.

3.04 REMOVAL OF GRAVEL PAVEMENT

Gravel surfaces encountered in construction shall be removed as needed to allow for the adjustment of the manhole frame and cover.

3.05 BACKFILLING

A. General

1. After project completion and upon permission of the Purchaser, the backfill may be placed. Backfilling operations shall continue following as closely behind pipe installation as practical. All backfill shall be placed in uniform horizontal layers. Pushing backfill material down a ramp into excavated areas will not be permitted. No trash will be allowed to accumulate in the space to be backfilled. Particular care shall be taken to avoid allowing wood to be included in the backfill, other than sheeting and shoring that has been approved by the Purchaser to be left in place.
2. The Subcontractor shall be responsible for the condition of the trenches and filled areas during the contract and warranty period. The Subcontractor shall maintain frequent inspection of the same. If at any time during the 12-month warranty period the trenches or filled areas settle and sunken places appear, the Subcontractor shall be required to refill these sunken places when they are discovered with suitable material and will replace all damaged curb, gutter, and sidewalk. All soft or dangerous trenches shall be marked, barricaded and caution lighted for the protection of the public.
3. Property with an existing dwelling located on it or lots within a developed subdivision or planned development are considered improved property.

B. Street Right-of-Way and Improved Property

1. Backfill Material: Backfill for manhole and pipe trench excavations through pavements in street or highway right-of-way or where the Purchaser orders, shall be made with pit run gravel or other

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acceptable material as approved by the Purchaser. The backfill shall be from the top of the pipe embedment material or manhole foundation to the subgrade elevation of the pavement. Pea gravel or similar granular material approximately uniform in size and without bonding properties will not be used.

2. Backfill for manhole and pipe trench excavations beyond pavements in street or highway right-of-way or outside public right-of-way shall be made with select earth from the top level of the pipe embedment material or foundation to the subgrade elevation in paved area, or within 1 inch of the surface in areas to be sodded, or to the surface in all other areas.
3. Select material shall be free from debris, organic matter, and perishable compressible material and will contain no stones or lumps larger than 6 inches. Rocks and lumps smaller than 6 inches will not exceed an amount that will interfere with the consolidating properties of the fill material. Care shall be taken that stones and lumps are kept separated and well distributed, and that all voids are completely filled with fine material. No rocks or lumps will come in direct contact with the pipe. The upper 3 feet of backfill in sodded or planted areas will be free of rocks or lumps larger than 1 inch in diameter.

**C. Open Areas and Unimproved Property**

1. Backfill Material: Backfill of excavations on unimproved property shall be made with select material from the top level of pipe embedment material or foundation to the surface. Non-granular select material to be used for backfill will be free from debris, organic matter and perishable compressible material, and will contain no stones or lumps or rock fragments larger than 6 inches. Rocks or lumps smaller than 6 inches in diameter will not exceed an amount that will interfere with the consolidating properties of the fill material. No rocks or lumps shall come in direct contact with the pipe. Stones and lumps shall be kept separated and well distributed, and all voids shall be completely filled with fine material.
2. Placement of Backfill: Backfill procedures specified in Specification Section 02530 Paragraph 3.08.B shall apply from the trench bottom to a point 2 feet above the outside of the pipe. From this point to slightly above the surrounding surface elevation, suitable backfill may be placed by bulldozer or other mechanical means.
- 3.

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D. Removal of Excess Material

1. After the trench or excavation has been properly backfilled, all excess dirt shall be removed from the streets, roadways and improved private property so pavements or turfed areas may be replaced and properties cleaned.
2. In open areas and unimproved property, the excess material may be used to fill low spots on property next to the right-of-way/easement. Before spreading excess soil, the Subcontractor shall obtain written permission from the property Purchaser for the spreading of excess soil, and a copy of the written permission shall be submitted to the Purchaser. Such spreading or filling shall not obstruct surface drainage and be to the satisfaction of the property Purchaser. Excess material shall be disposed of by the Subcontractor.

3.06 REPLACEMENT OF PAVEMENT

A. Asphalt Pavements

1. Replace asphalt paving courses to match existing thickness. The minimum surface course thickness shall be 2 inches. Asphalt pavement and base replacement shall be constructed for the entire cross-section of pavement removal area including all areas where pavement was re-cut subsequent to the initial pavement removal.

B. Concrete Pavements

1. Concrete pavement shall be replaced with Class A concrete pavement equal in thickness to the pavement removed but not less than 4 inches thick. Concrete pavement and base replacement shall be constructed for the entire cross-section of pavement removal area including all areas where pavement was re-cut subsequent to the initial pavement removal.
2. Reasonable efforts shall be made to avoid contrast in the color and texture of existing and restored surfaces.

C. Placing, Curing, and Protection of Concrete

1. After the backfill in the trench has been brought to the appropriate subgrade elevation shown on the Plans, compacted to the specified

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density, and permission has been given by the Purchaser, a concrete slab of the appropriate thickness shall be placed within the entire disturbed area.

2. Any loose or disturbed pavement or base shall be removed prior to placement of the concrete. Concrete shall be placed only on a moist subgrade and shall not be placed unless the ambient temperature is 35° F and rising. In no case shall concrete be placed on a frozen or frosty subgrade. After the concrete is placed, it shall be struck off in an approved manner to the appropriate grade as shown on the Plans and shall be finished with floats and straight edges until the required surface texture has been obtained.

3. No vehicles or loads shall be permitted on any concrete until the Purchaser has determined that the concrete has obtained sufficient strength for such loads. The Subcontractor shall construct and place such barricades and protection devices as are necessary to protect the concrete.

**3.07 REPLACEMENT OF SIDEWALKS, DRIVEWAY APRONS, CURBS AND GUTTERS, DRIVEWAYS AND OTHER PAVED AREAS, AND CURBS**

A. Concrete sidewalks and driveway aprons shall be replaced in accordance with the City of Memphis Standard Construction Specifications.

B. Unless otherwise directed, curb and gutter shall be replaced with new concrete curb and gutter of the same cross-section and at the same top of curb elevation and flow line as that removed. Where curb and gutter of a different type than existing is to be used for replacement, the replacement flow line shall match existing and a transitions section provided between the existing and replacement cross-sections. Curb heights shall be transitioned at a rate of 1 inch in 5 feet. Granite curb shall be replaced with new concrete curb whose height matches existing adjacent curb top elevations. Any expansion joint material removed shall be replaced at the original locations. Existing concrete edges shall be cleaned prior to placement of concrete. The finished curb and gutter cross-section, elevations, texture, and color shall conform to the adjacent concrete surfaces.

B. Replacement of paved areas other than street pavement; concrete, asphalt, or gravel driveways; and asphalt or concrete curb within the right-of-way or construction easement limits shall be in kind for those cross-sections removed, unless directed otherwise by the Purchaser.



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**3.08 DAMAGE DUE TO SETTLEMENT**

A. The Subcontractor shall be responsible for any damage caused by settlement of backfill placed beneath pavements, sidewalks, driveway aprons, curbs, curbs and gutters, driveways, paved areas other than street pavement, and asphalt or concrete curb within the right-of-way or construction easement limits. This includes any damage which may occur at any time prior to, and during a period of one year from the date of Final Completion of the Work covered by the Subcontract.

B. During such period, the Subcontractor shall at his own cost and expense refill all excavations where settlement damage has occurred and replace damaged pavements, sidewalks, driveway aprons, curbs, curbs and gutters, paved areas, driveways, and all other damaged items to the satisfaction of the Purchaser. Should the Subcontractor fail to repair settlement damage which may occur as described above within 5 days after being given notice thereof, the Purchaser shall have the right to repair such settlement and charge the cost of such repairs to the Subcontractor.

**3.09 DAMAGE OUTSIDE CONSTRUCTION EASEMENT LIMITS**

The Subcontractor will be held responsible for all damage to roads, highways, shoulders, curbs and gutters, ditches, embankments, bridges, culverts, and other property, caused by him or any of this Sub-Subcontractors in hauling or otherwise transporting materials to and from the several sites of Work, regardless of the location of such damage. The Subcontractor shall make arrangements relative to the payment for, or repair or replacement of, such damage or damaged surfaces or structures which are satisfactory and acceptable to the Purchaser, at the Subcontractor's cost and expense.

**PART 4 – MEASUREMENT**

**4.01 PAVEMENT REMOVAL AND REPLACEMENT**

Pavement removal and replacement shall be measured for payment by the cubic yard, complete in place.

**4.02 CONCRETE SIDEWALK REMOVAL AND REPLACEMENT**

Sidewalk removal and replacement shall be measured for payment by the square foot, complete in place.

**4.03 CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT**

Curb and gutter removal and replacement shall be measured for payment by the linear foot, complete in place.



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- 4.04 GRAVEL DRIVEWAY AND GRAVEL AREA REMOVAL AND REPLACEMENT  
Gravel driveways and gravel area removal and replacement shall be measured for payment by the ton of crushed limestone, complete in place.
- 4.05 PAVEMENT BACKFILL  
Pavement backfill shall be measured for payment by the Ton, complete in place

**PART 5 – PAYMENT**

- 5.01 PAVEMENT REMOVAL AND REPLACEMENT  
The accepted quantities of pavement removal and replacement shall be paid for at the Subcontract unit price per square yard for the type specified, which price will be full compensation for cutting and recutting pavement; removal and disposal of pavement and base; preparing the subgrade; placing, finishing, curing, and protection of concrete; and placing and compacting asphaltic concrete wearing surfaces, complete in place.
- 5.02 CONCRETE SIDEWALK REMOVAL AND REPLACEMENT  
The accepted quantities of sidewalk removal and replacement shall be paid for at the contract unit price per square foot, which price will be full compensation for removal and disposal of sidewalk; preparing the subgrade; and placing, finishing, curing and protection of concrete, complete in place.
- 5.03 CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT  
The accepted quantities of curb and gutter removal and replacement shall be paid for at the Subcontract unit price per linear foot for the type specified, which price will be full compensation for removal and disposal of curb and gutter; preparing the subgrade; and placing, finishing, curing and protection of concrete, complete in place.
- 5.04 GRAVEL DRIVEWAY AND GRAVEL AREA REMOVAL AND REPLACEMENT  
The accepted quantities of gravel driveway and gravel area removal and replacement shall be paid for at the Subcontract unit price per ton of crushed limestone, which price will be full compensation for preparing the subgrade and replacing the gravel, complete in place.
- 5.05 PAVEMENT BACKFILL  
The accepted quantities of pavement backfill replacement shall be paid for at the Subcontract unit price per ton, which price will be full compensation for preparing the subgrade and replacing the backfill, complete in place.

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5.06 PAYMENT WILL BE MADE UNDER:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02950-5.01.01	Asphaltic Concrete Pavement Removal and Replacement	Cubic Yard
02950-5.01.02	Concrete Pavement Removal and Replacement	Cubic Yard
02950-5.02	Concrete Sidewalk Removal and Replacement	Square Foot
02950-5.03	Concrete Curb And Gutter Removal and Replacement	Linear Foot
02950-5.04	Gravel Driveway And Gravel Area Removal and Replacement with Crushed Stone	Ton
02950-5.05	Pavement Backfill	Ton

**END OF SECTION 02950**

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 03050 PORTLAND CEMENT CONCRETE**

**PART 1 - SCOPE**

This specification covers the classification, materials, proportioning of materials, equipment, mixing requirements, and testing for portland cement concrete to be used for construction of streets, bridges, and miscellaneous structures and facilities as defined in Division 2 – Site Construction of these Specifications. The classification requirements, forming, curing, measurement, and payment for specific uses of concrete are specified and defined in the appropriate sections of Division 2.

**PART 2 – CONCRETE CLASSIFICATION**

**2.01 CONCRETE CLASSIFICATION**

Portland cement concrete used for construction of the various items covered in Division 2 of these Specifications shall be classified by usage as follows:

A. Class A

Class A concrete shall be used as specified for such items as concrete curb, curb and gutter, sidewalks, drainage and sewer structures other than box culverts, ditch paving, bridges (other than superstructure) and similar uses.

B. Class A S

Class A S concrete shall be used for bridge superstructures and channel lining of ditches.

C. Class B

Class B concrete shall be used for roadway base and pavement.

D. Class C

Class C concrete shall be used as specified for such items as concrete cradles, encasements, embankment slope paving at bridge abutments, and other low strength applications.

E. Class P

Class P concrete shall be used for cast-in-place box culverts and precast and precast-prestressed concrete structures or structural members. High-early-strength concrete shall be as specified in Specification Section 03050 Paragraph 6.05.

**PART 3 – MATERIALS**

Materials used in the production of portland cement concrete of the various classifications specified herein shall meet the following requirements.

**3.01 PORTLAND CEMENT**

Portland cement shall be Type I cement conforming to the requirements of AASHTO M 85, except that for high-early-strength concrete, Type III cement may be used.

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**3.02 FINE AGGREGATE**

A. Fine aggregate shall consist of natural sand, clean and free from any surface film or coating and graded from fine to coarse. Fine aggregate shall conform to the requirements of ASTM C 33 and the specifications included herein. The amount of deleterious substance shall not exceed the following percentage by weight:

Removed by decantation.....	3 percent
Coal or lignite.....	1 percent
Clay lumps.....	1 percent
Other local deleterious substances (such as shale, alkali, Mica, coated grains, soft and flaky particles).....	1 percent
Total coal, clay lumps, shale, soft fragments and other local deleterious substances .....	5 percent

B. All fine aggregate shall be free from amounts of organic impurities that would be detrimental to concrete strength and durability. Aggregate shall be subjected to the colorimetric test made in the field as follows:

Fill a 12 oz. graduated bottle to the 4 ½ oz. mark with the sand to be tested. Add a 3% solution of sodium hydroxide until the volume, after shaking, amounts to 7 ounces. Shake thoroughly and let stand for 24 hours. The sample shall then show a practically colorless solution, or at least, a solution not darker than straw color.

C. Fine aggregate shall be well graded from coarse to fine and, when tested by means of laboratory sieves, shall conform to the following requirements:

<u>Passing</u>	<u>Percent</u>
3/8 in. Sieve.....	100
No. 4 Sieve.....	95 to 100
No. 16 Sieve.....	50 to 90
No. 50 Sieve.....	10 to 30
No. 100 Sieve.....	0 to 10
No. 200 Sieve.....	0 to 3

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Note: Not more than 45% should be retained between any two consecutive sieves.

D. Fine aggregate shall be of such quality that mortar composed one (1) part portland cement and three (3) parts fine aggregate, by weight when made into briquets or cylinders, shall show a tensile or compressive strength at seven (7) and twenty-eight (28) days at least equal to the strength of briquets or cylinders composed of one (1) part of the same cement and three (3) parts standard Ottawa sand by weight. The percentage of water used in making the test specimens of cement and fine aggregate shall be such as to produce a mortar of the same consistency as that of the Ottawa sand test specimens of standard consistency.

**3.03 COARSE AGGREGATE**

A. Coarse aggregate for any class of portland cement concrete shall consist of crushed stone or crushed or uncrushed gravel unless otherwise specified.

B. Coarse aggregate for Class A, Class B, or Class C concrete shall be furnished in two sizes: Size No. 4 and Size No. 67 as shown hereinafter in Table 03050.1, Coarse Aggregate Gradation Table. The two sizes shall be manufactured, within the specified limits, to produce Size No. 467 when combined in the proper proportions at the batching plant. If the supplier provides a proper stockpile to prevent segregation, then a combined Size No. 467 can be used in lieu of blending Size No. 4 and Size No. 67.

C. Coarse aggregate for Class AS concrete shall be Size No. 57. Only limestone coarse aggregate will be used for Class AS concrete; gravel coarse aggregate will not be permitted.

D. Coarse aggregate for Class P concrete shall be size No. 57 or Size No. 67 as may be specified or directed. Only limestone coarse aggregate shall be used for Class P concrete; gravel coarse aggregate will not be permitted.

E. Coarse aggregate for concrete curbing placed by machine extrusion methods shall be Size No. 57 or Size No. 67.

F. The coarse aggregates shall otherwise conform to the requirements of AASHTO M 80 and ASTM C 33 with the following exceptions and stipulations:

**1. Deleterious Substances.**

The amount of deleterious substances shall not exceed the following limits:

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Maximum Percent  
by Weight

a.	Soft or nondurable fragments (fragments which are structurally weak such as shale, soft sandstone, limonite concretions, gypsum, weathered schist or cemented gravel) .....	3.0
b.	Coal and lignite .....	1.0
c.	Clay lumps .....	0.25
d.	Material passing the No. 200 sieve .....	1.00
e.	Thin or elongated pieces (length greater than 5 times average thickness).....	10.00
f.	Other local deleterious substances.....	1.00

- Notes:
1. In the case of crushed aggregate, if all the material finer than the 200 mesh sieve consists of the dust of fracture essentially free of clay or shale, Item 4, Maximum Per Cent by Weight, may be increased to 1.5.
  2. The sum of the percentages of Items No. a, b, c, d, and f shall not exceed 5.0.
  3. When the coarse aggregate is subjected to five alternations of the sodium sulfate soundness test, the weighted percentage of loss shall be not more than nine.
  4. Alternate freeze/thaw tests for soundness will not be performed.
  5. The percentage of wear as determined by AASHTO T 96 shall not exceed 40.

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**COARSE AGGREGATE GRADATION TABLE  
Table 03050.1**

Amounts Finer Than Each Lab. Sieve (Sq. Openings), % By Weight

Size Number	2"	1- 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8
4	100	90-100	20-55	0-15	----	0-5	----	----
467	100	95-100	----	35-70	----	10-30	0-5	----
57	----	100	95-100	----	25-60	----	0-10	0-5
67	----	----	100	90-100	----	20-55	0-10	0-5

**3.04 WATER**

The water used in mixing concrete shall be clean, free from oil, acid, strong alkalis, organic or vegetable matter.

**3.05 AIR-ENTRAINING ADMIXTURES**

A. Air-Entraining Admixtures shall conform to the requirements of AASHTO M 154, except that the tests for bleeding, bond strength and volume change will not be required.

B. The Purchaser will maintain a list of qualified products. The Contractor shall be required to furnish a material that appears on this list.

C. A product may become approved by furnishing test data from a recognized laboratory showing that the air-entraining admixture proposed for use conforms to the requirements of these Specifications. A recognized laboratory is defined as one of the following: A State Transportation Department Laboratory; a Federal Highway Administration Laboratory; or other laboratories which are approved by the Purchaser.

**3.06 CHEMICAL ADDITIVES**

A. For portland cement concrete mixtures, these additives shall conform to the requirements of AASHTO M 194 covering the following five types:

1. Type A – Water reducing admixtures
2. Type B – Retarding admixtures
3. Type C – Accelerating admixtures
4. Type D – Water reducing and retarding admixtures
5. Type E – Water reducing and accelerating admixtures



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B. Additionally, admixtures for increasing the flowable characteristics of concrete (super plasticizers) may be used, subject to the approval of the Purchaser for each class and intended use of the concrete. Such admixtures shall meet the applicable requirements of ASTM C 494. The use of a plasticizer shall not change the maximum water requirements for the approved design mix. When approved for use, the admixture shall be introduced into the mix in the manner and quantities recommended by the manufacturer.

C. Additives listed in items A through E above and super plasticizers may only be used with the written approval of the Purchaser. Before any admixture is approved, the manufacturer of the admixture or the Contractor shall furnish the Purchaser documentary evidence that the material proposed for use has been tested in accordance with the methods of test specified in AASHTO M 194 (or ASTM C 494 for super plasticizers) and meets the requirements of the Specification. Documentary evidence for all additives shall be the results of tests conducted by a testing laboratory inspected at regular intervals by the National Bureau of Standards. The Purchaser may require a notarized certification from the manufacturer of any additives used stating that the material is identical with that originally approved and has in no way been changed or altered. Even through additives have been approved by the Purchaser, the Contractor shall be responsible for the successful use of the additives. No reduction in the cement content of the concrete as designed without chemical additives will be made when additives are permitted.

D. Calcium chloride additives will not be permitted.

**3.07 CURING MATERIALS**

Curing materials shall be as specified in the various Specification Sections of Division 2 and as specified below:

A. Water

Water used in curing portland cement concrete shall be free from any substance which may be injurious to concrete when applied on the surface as a curing agent.

B. Burlap

Burlap shall conform to AASHTO M 182, Class 3 or Class 4. If Class 1 or Class 2 burlap is permitted, at least two layers shall be use.

C. Liquid Membrane-Forming Compounds

These compounds shall conform to AASHTO M 148. Where applied texture finish is specified, a Type 1-D, Class B, membrane which is compatible with the texture finish shall be used. Type 2 (white pigmented) membrane shall be used in all other applications, unless otherwise specified.

D. White Polyethylene Sheeting

This material shall conform to AASHTO M 171.

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3.08 FLY ASH

Class C fly ash conforming to the requirements of ASTM C 618-84 may be used as a replacement for portland cement if approved in writing by the Purchaser. The maximum amount of cement being replaced by fly ash shall not exceed 15 percent. Before any fly ash will be approved for use, the Contractor shall furnish the Purchaser documentary evidence that the fly ash proposed for use has been tested in accordance with ASTM C 311-7 and meets the requirements of that specification.

Documentary evidence shall be the results of tests conducted by a testing laboratory inspected at regular intervals by the National Bureau of Standards. Even though the fly ash has been approved by the Purchaser, the Contractor shall be responsible for its successful use. When a specific air content has been required and fly ash is being used, the air content shall be tested on each truck load of concrete at the batch plant and the tested value shall be indicated on the ticket.

**PART 4 – EQUIPMENT**

4.01 GENERAL

Equipment and tools necessary for handling materials and performing all parts of the Work shall be subject to the approval of the Purchaser. The equipment shall be at the job site sufficiently ahead of the start of construction operations to be examined thoroughly and approved. The equipment and organization shall be of sufficient capacity to accomplish the maximum continuous concrete placement, as governed by the construction joints shown on the Plans and Design Standards or as directed by the Purchaser.

4.02 BATCHING PLANT AND EQUIPMENT

A. General

The batching plant shall include bins, weighing hoppers, and scales. If cement is used in bulk, a bin, hopper, and separate scale for cement shall be included. The Contractor shall provide adequate means for cement cut off checks. The weighing hoppers shall be properly sealed and vented to preclude dusting during operation. The bulk cement storage bin or hopper shall be provided with adequate means for sampling the cement in storage.

B. Bins and Hoppers

Bins with adequate separate compartments for fine aggregates, each size of coarse aggregate, and cement shall be provided in the batching plant. Each compartment shall discharge efficiently and freely into the weighing hopper. Means of control shall be provided so that as the quantity desired in the weighing hopper is being approached, the material may be added slowly and shut off with precision. A port or other opening shall be provided for removing an overload of any one of the several

materials from the hopper. Weighing hoppers shall be constructed so as to eliminate accumulations of tare materials and to discharge fully without jarring the

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scales. Partitions between compartments, both in bins and in hoppers, shall be ample to prevent spilling under any working conditions.

C. Scales

1. The scales for weighing aggregates and cement shall be of either the beam type or the springless-dial type. They shall be accurate within 0.5 percent throughout the range of use. The value of the minimum graduation on the scale for weighing cement shall not be greater than 5 pounds. The value of the minimum graduation on the scale for weighing amounts of aggregates up to 10,000 pounds or more shall be not greater than 10 pounds. The value of the minimum graduation of scales used in weighing amounts of aggregate 10,000 pounds or more shall be not greater than 0.1 per cent of the nominal capacity of the scales but shall not exceed 50 pounds. When beam type scales are used, provision, such as a “tell-tale” dial, shall be made for indicating to the operator that the required load in the weighing hopper is being approached. The “tell-tale” device on weighing beams shall indicate critical position clearly. Poises shall be designed so that they cannot be easily removed from the beam and can be held firmly in place. The weigh beams and “tell-tale” device shall be in full view of the operator while charging the hopper, and he shall have convenient access to all controls.

2. Scales shall be tested no less than once monthly by a certified scale testing company. Testing shall meet the requirements of applicable City ordinances and State law. The Contractor shall have available not less than 10 standard 50 pound weights meeting the requirements of the U.S. Bureau of Standards for calibrating and testing weighing equipment. The person dispensing weighed material shall certify that the amounts of materials used is in accordance with quantities shown on the delivery ticket.

D. Equipment For Structural Concrete

1. The requirements for batching plants shall be as prescribed above, except that when approved by the Purchaser, the requirement for storage compartments in addition to weigh bins, for fine and coarse aggregates may be waived, provided the batching tolerances specified in Specification Section 03050 Paragraph 5.02.A are maintained.

2. Ample and satisfactory equipment for conveying concrete from the mixer to final position in the forms shall be provided. Closed chutes or pipes shall be used when concrete is to be dumped or dropped for a distance greater than 5 feet. Where steep slopes are required, the chutes shall be equipped with baffle boards or shall be in short lengths that will enable the direction of movement to be reversed. Tremies for placing seal concrete under water shall consist of a water tight tube 10 inches to 14 inches in diameter. It shall be constructed so

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that the bottom can be sealed and opened after it is in place and fully charged with concrete. It shall be supported so that it can be easily moved horizontally to cover all the work area and vertically to control the concrete flow.

**4.03 MIXERS**

**A. General**

1. Concrete may be mixed at a central point or wholly or in part in truck mixers. Each mixer shall have attached in a prominent place a manufacturer's plate showing the capacity of the drum, in terms of mixing and agitating capacity, and the speed of rotation of the mixing drum or blades for both mixing and agitation.
2. Mixers shall be capable of combining the aggregates, cement, additives when specified, and water into a thoroughly mixed and uniform mass within the specified mixing period. They shall have a minimum capacity sufficient to comply with minimum production requirements.
3. Mixers shall be equipped with an approved device for accurately measuring water within a range of error of not more than one percent. The amount of water used in each batch shall be shown by an indicator which is accurately calibrated and easily read.
4. Central plant mixers shall be equipped with an approved batch meter and timing device which will automatically lock the discharge lever during the full time of mixing and release it at the end of the mixing period. This device shall be equipped with a bell or other suitable warning device that will give a clearly audible signal each time the lock is released. In case of failure of the timing device, the mixer may be used for the balance of the day while it is being repaired, providing the Contractor furnishes a satisfactory means of determining the mixing time.

**B. Mixers At Site Of Construction**

Mixers at the site of construction will not be permitted, unless permitted by the Purchaser.

**C. Truck Mixers And Truck Agitators**

Truck mixers used for mixing and hauling concrete and truck agitators used for hauling central-mixed concrete shall meet all the applicable requirements under Paragraph A above, and in addition, the manufacturer's plate shall indicate the various uses for which the equipment is designed, the gross volume of the drum, and the minimum and maximum speed of rotation of the drum or blades for charging, mixing and agitating. Trucks equipped for mixing shall be equipped with an approved device for recording the number of revolutions of the drum or blades. Mixers or agitators used to mix and transport paving concrete shall be of the

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hydraulic drum lift type or other especially designed types which will discharge low slump concrete (1 – 2 ½ inch) at a satisfactory rate without segregation.

**D. Nonagitator Trucks**

Bodies of nonagitator hauling equipment for concrete shall be smooth, mortar tight, metal containers, and shall be capable of discharging the concrete at a satisfactorily controlled rate without segregation. Covers shall be provided when needed for protection of the concrete. Nonagitator trucks may be used only with approval of the Purchaser.

**E. Admixture Induction**

A satisfactory method and equipment for setting the dosage for admixtures must be furnished and if admixtures other than air entraining agents are used, they shall be added in the manner and in the dosage recommended by the manufacturer.

**F. Vibrators**

Vibrators shall be of an approved type and design, and shall operate under load at the rate as recommended by the manufacturer and approved by the Purchaser. For concrete structures, all concrete to be vibrated shall be compacted by means of approved high frequency internal vibrators or other approved types of vibrators immediately after being deposited in the forms. At least two vibrators in good operating condition and tow sources of power shall be available at the site where more than 25 cubic yards of concrete are to be poured. The use of external vibrators for compacting concrete will be permitted where the concrete is inaccessible for adequate compaction, provided the forms are sufficiently rigid to prevent displacement or damage from external vibration and approved by the Purchaser. For concrete pavement, the frequency of surface vibrators shall not be less than 3,500 impulses per minute and the frequency of the internal type shall not be less than 5,000 impulses per minute for tube vibrators and not less than 7,000 impulses per minute for spud vibrators. When spud type internal vibrators, either hand operated or attached to spreader or finishing machines, are used adjacent to forms, they shall have a frequency not less than 7,000 impulses per minute. For prestressed concrete, all concrete shall be thoroughly compacted with approved high frequency vibrators operating at a minimum of 7,000 vibrations per minute.

**PART 5 – HANDLING, BATCHING AND MIXING**

**5.01 STOCKPILING AGGREGATES**

A. Sites for aggregate stockpiles shall be grubbed and cleaned prior to storing aggregates, and the ground shall be firm and smooth and well drained. A cover of at least three inches of aggregate shall be maintained in order to avoid the inclusion of soil or foreign material. The stockpiles shall be built in layers not exceeding four feet in height, and each layer shall be completely in place before the next layer is started so as to prevent segregation. The material shall be deposited in such

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manner as to prevent coning, except in the case of aggregate composed essentially of material finer than the No. 4 sieve and base material.

B. Dumping, casting or pushing over sides of stockpiles will be prohibited, except in the case of aggregate for base material and fine aggregate materials.

C. Unless otherwise authorized, aggregates from different sources, different gradings or differing in specific gravity by more than 0.03 shall not be stockpiled together. Stockpiles of different types or sizes of aggregates shall be spaced far enough apart, or separated by suitable walls or partitions, to prevent the mixing of the aggregates.

D. When it is necessary to operate trucks or other equipment on a stockpile in the process of building the stockpiles, it shall be done in a manner approved by the Purchaser. Any method of stockpiling aggregate which allows the stockpile to become contaminated with foreign matter or causes excessive degradation of the aggregate will not be permitted. Excessive degradation will be determined by sieve tests of samples taken from any portion of the stockpile over which equipment has operated, and failure of such samples to meet all grading requirements for the aggregate shall be considered cause for discontinuance of such stockpiling procedure.

E. Stockpiles shall be maintained in a saturated surface dry condition to the extent possible.

**5.02 HANDLING, MEASURING AND BATCHING MATERIAL**

**A. General**

1. The batch plant site, layout, equipment and provisions for transporting material shall be such as to assure a continuous supply of material to the Work.

2. Aggregates shall be handled from stockpiles or other sources to the batching plant in such manner as to maintain a uniform grading of the material. Aggregates that have become segregated, or mixed with earth or foreign material, shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Rail shipment requiring more than 12 hours will be accepted as adequate binning only if the car bodies permit free drainage. In case the aggregates contain high or non-uniform moisture content, storage or stockpile periods in excess of 12 hours may be required by the Purchaser. The Purchaser may require sprinkling of aggregate that has dried to the extent that it absorbs mixing water.

3. The fine aggregate and each size of coarse aggregate shall be separately



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weighed into the hopper or hoppers in the respective amounts set by the Contractor and approved by the Purchaser. Cement shall be measured by the sack or weight. Separate scales and hoppers shall be used for weighing the cement. The scales shall be equipped with a device to indicate positively the complete discharge of the batch of cement into the batch box or container. Ninety-four pounds of bulk cement shall be considered one sack. Batches involving fractional sacks will not be allowed except when bulk cement is used.

4. Batching plants equipped to proportion aggregates and bulk cement by weight by means of automatic and interlocked proportioning devices of approved type may be used.

5. Batching shall be so conducted as to result in the required weights of each material being within a tolerance of 1.0 percent for cement and 1.5 percent for aggregates.

6. Water may be measured either by volume or by weight. The accuracy of measuring the water shall be within a range of error of not over 1.0 percent. Unless otherwise permitted, calibrated tanks for measuring water shall include an auxiliary tank from which the measuring tank shall be filled. The measuring tank shall be equipped with an outside tap and valve to provide for checking the setting unless other means are provided for readily and accurately determining the amount of water in the tank. The volume of the auxiliary tank shall be at least equal to that of the measuring tank.

7. The use of chemical additives shall be as prescribed under Paragraph 3.06 of this Specification and they shall be added to the mix using the methods and at the time and in the manner recommended by the manufacturer of the additive, subject to approval by the Purchaser.

8. Unless specifically provided in the contract, the furnishing and use of approved additives or admixtures and the other precautions necessary to provide satisfactory concrete and concrete products shall be considered subsidiary to the furnishing and placement of the concrete and any and all additional costs related thereto and risks resulting there from shall be borne by the Contractor.

9. Different types of cement shall not be mixed, nor shall they be used alternately. Where it is necessary for the color of the concrete to be uniform, only those cements which will produce similar color in concrete may be used alternately. The Purchaser shall designate which cements may be used alternately.

10. Air entraining agents shall be added to the mix by an approved procedure and by the use of an approved dispenser to assure an accurate proportioning of the agent.



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11. All admixtures shall be measured with an accuracy of plus or minus 3.0 percent.

**B. Limitations On Concrete Operations**

1. Mixing of concrete shall be discontinued in time to allow finishing to be completed in daylight hours, unless an adequate and approved artificial lighting system is provided and operated.

2. When concrete is being placed during hot weather, appropriate measures shall be taken to reduce the hazards of increased rate of cement hydration and high concrete temperatures. The temperature of the concrete at point of discharge shall not exceed 90<sup>0</sup> F. The Purchaser may require any or all, but not limited to, the following precautions to reduce the temperature of the concrete:

a. Sprinkle coarse aggregate stockpiles in a manner so as to distribute the water evenly and to prevent a variation of moisture within the stockpile.

b. Use crushed or chipped ice as a portion of the mixing water, or use water cooled by refrigeration or other means. If ice is used, it shall be substituted on a pound for pound basis for water and completely melted before the concrete is discharged from the mixer.

c. The Contractor may employ other means which he may have at his disposal if approved by the Purchaser. In order to minimize the number and extent of precautions as indicated during the production and use of concrete during hot weather, the Contractor may use approved chemical admixtures for set-retarding purposes, with the Purchaser's approval. However, the use of such approved set-retarding admixtures shall not relieve the Contractor of the necessity for other precautions deemed necessary to minimize variability of the physical characteristics, strength, and other requirements of the green concrete.

d. Unless authorized in writing by the Purchaser, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40<sup>0</sup>F (if the temperature is expected to reach 35<sup>0</sup>F or below), and not resumed until an ascending air temperature in the shade and away from artificial heat reaches 35<sup>0</sup>F.

e. When concreting at temperatures above 35<sup>0</sup>F, the aggregates or water shall be heated or cooled if necessary prior to being placed in the mixer so that the temperature of the resultant mixture will be not less than 50<sup>0</sup>F nor more than 90<sup>0</sup>F at the time of placement. If heating is required, the apparatus used shall heat the mass uniformly and shall be so arranged as to preclude the possible occurrence of overheated areas which might injure the concrete.

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f. When concreting is authorized at temperatures 35<sup>0</sup>F or less, the Purchaser will require the water or the aggregates or both to be heated to not less than 70<sup>0</sup>F nor more than 150<sup>0</sup>F. The temperature of the mixed, heated concrete shall be not less than 50<sup>0</sup>F nor more than 100<sup>0</sup>F at the time of placement. No concrete shall be placed on frozen grade nor shall frozen aggregates be used in the concrete.

g. When it is expected that the ambient temperature will drop below 35<sup>0</sup>F, the Contractor shall provide sufficient canvas and framework, other types of housing, or to enclose and protect the concrete in such a way that the air surrounding the fresh concrete can be maintained at a temperature of not less than 45<sup>0</sup>F and the temperature of the concrete shall not exceed 80<sup>0</sup>F. The above conditions shall be maintained for a period of 120 hours after the concrete is placed. The Contractor shall be responsible for the quality of concrete placed during cold weather, and any concrete injured by frost action or freezing shall be removed and replaced at the Contractor's expense. When impending weather conditions indicate the possibility of the need for such temperature protection, all necessary heating and covering material shall be on hand ready for use before the Purchaser's permission is granted to begin placement.

**3.05 MIXING CONCRETE**

**A. General**

1. The concrete may be mixed in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity, and shall comply with the applicable requirements of Paragraph 4.03 of this Specification Section. Mixers shall be cleaned at suitable intervals. Equipment having components made of aluminum or magnesium alloys which would have contact with plastic concrete during mixing, transporting or pumping of portland cement concrete, shall not be used.

2. The batch shall be so charged into the drum that a portion of the mixing water shall enter in advance of the cement and aggregates. Mixing time shall be measured from the time all materials except water are in the drum. The flow of water shall be uniform, and all water shall be in the drum by the end of the first 15 seconds of the mixing period. The throat of the drum shall be kept free of such accumulations as may restrict the flow of materials into the drum.

3. When mixed in a central mixing plant, the mixing time shall not be less than 60 seconds nor more than 90 seconds. Mixing time ends when the discharge chute opens. Transfer time in multiple drum mixers shall be included in the mixing time. The contents of an individual mixer drum shall be removed before a succeeding batch is emptied therein.

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4. The mixer shall be operated at the drum speed recommended by the manufacturer. Any concrete mixed less than the specified time shall be discarded and disposed of by the Contractor at his expense. Mixers for central mix plants shall not be operated at a capacity greater than the manufacturer's guaranteed mixing capacity.

5. Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators or nonagitator trucks having special bodies. The time elapsing from the time water is added to the mix until the concrete is deposited in place at the site of the Work shall not exceed 30 minutes when the concrete is hauled in nonagitator trucks, nor 60 minutes when hauled in truck mixers or truck agitators. When high early strength concrete is used, agitator trucks only shall be used and the concrete shall be deposited in place at the site of the Work within 30 minutes from the time water is added to the mix, regardless of the method of transportation, unless otherwise approved by the Purchaser.

6. Truck mixers and truck agitators used to transport concrete from a central mixing plant and truck mixers used to mix concrete in transit from a central batching plant shall meet all applicable requirements of Paragraph 4.03 of the Specification Section, and in addition, the mixing speed and agitating speed shall be those recommended by the manufacturer of the mixer and the total revolutions at mixing speed shall not be less than 70 nor more than 100. Truck mixers and truck agitators shall be operated within the capacity recommended by the manufacturer.

7. Retempering concrete by adding water or by other means will not be permitted. Concrete that is not within the specified slump limits at time of placement shall not be used. Admixtures for increasing the workability or for accelerating the set will be used only when provided for in the Contract, or permitted by the Purchaser. The addition of admixtures to the mix shall be in accordance with the provisions of Paragraph 5.02.A of this Specification Section.

8. Tests for air content shall be made on samples of fresh concrete when and as directed. The air content shall be that specified under Part 6 of this Specification Section and shall be determined in accordance with AASHTO T 152, T 196 or T 199.

**B. Ready Mixed Concrete**

1. Ready mixed concrete shall fully comply with ASTM C 94 for Ready Mixed Concrete and to the requirements of these Specifications. Ready mixed concrete shall be discharged from the mixer within 1 hour after the introduction of water, provided the air temperature or the concrete temperature does not exceed 70<sup>0</sup>F. When the air temperature or concrete temperature exceeds 70<sup>0</sup>F, the elapsed time between the addition of water to the mix and discharge shall not

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exceed 30 minutes. The 30 minute time limit for temperatures exceeding 70<sup>0</sup>F may be extended to 1 hour, provided an approved admixture is used. The admixture shall be a water reducing and retarding agent meeting the requirements of Paragraph 3.06, Type D of this Specification Section and shall be used in accordance with the provisions of Paragraph 5.02.A of this Specification Section. The ready-mix plant furnishing the concrete shall have been inspected and approved for use as provided for in Part 4 of this Specification Section.

2. The delivery ticket accompanying each load of concrete shall show the class and quantity of concrete, the quantity of cement, aggregates, water, and additive used in the batch, and the time of batching. Materials used in the concrete shall be tested and approved.

**PART 6 – MIX DESIGN AND PROPORTIONING**

6.01 GENERAL

A. A Concrete Classification Table, Table 03050.2 is provided hereinafter to indicate to the Contractor the five classes of concrete to be use. The table contains certain criteria to be met in the design of job mixes for the different classifications of concrete. Data included are the minimum 28 day compressive strength of the concrete (14 day strength for Class B concrete), the range of slum allowed, the minimum cement content of the concrete, and the maximum water allowed. The Contractor shall be responsible for design of the concrete mix to be used for each classification of concrete within the limits of Table 03050.2, and for providing concrete to the City in accordance with the approved design mixes.

B. Unless otherwise specified in the Contract Documents all concrete shall contain an air entraining admixture. The concrete shall contain between 5 percent and 8 percent entrained air. Other admixtures may be used if specifically approved by the Purchaser. The use of calcium chloride will not be allowed.

C. The Purchaser may specify differing compressive strengths for the several classifications by notation on the Plans or in the Special Provisions, and those values shall govern over the values of these Specifications.

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**CONCRETE CLASSIFICATION TABLE**

**Table 03050.2**

Class of Concrete	Minimum 28-Day Compressive Strength (psi)	Slump in Inches	Min. Cement Factor-Sacks/CY <sup>(3)</sup>			Min. Cement Factor-#/CY <sup>(3)</sup>			Net Water Max. Gals./CY <sup>(3)</sup>			Net Water Max-#/CY <sup>(3)</sup>		
			Gravel Course Aggregate	Limestone Course Aggregate	Limestone Course Aggregate	Gravel Course Aggregate	Limestone Course Aggregate	Limestone Course Aggregate	Gravel Course Aggregate	Limestone Course Aggregate	Gravel Course Aggregate	Limestone Course Aggregate	Gravel Course Aggregate	Limestone Course Aggregate
A	3,000	3-5	6.0	5.5	517	564	517	36	33	300	275			
AS	4,000	3-5	(2)	6.2	583	(2)	583	(2)	37.2	(2)	310			
B	3,500 <sup>(1)</sup>	1-2½	6.2	5.8	545	583	545	34.1	31.9	284	266			
C	2,500	2-4	5.0	4.5	423	470	423	34	30.6	283	255			
P	5,000	1-3	(2)	7.0	658	(2)	658	(2)	35.0	(2)	292			

(1) Minimum compressive strength @ 14 days. Minimum flexural strength @ 14 days of 550 psi per AASHTO T 22.

(2) Gravel Coarse Aggregate no permitted.

(3) Tabulated values are for Type I cement conforming to the requirements of AASHTO M 85 only.

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**6.02 MIX DESIGN**

Prior to mixing any concrete for the project, the Contractor shall submit his proposed design mix and reports of tests for each classification of concrete to the Purchaser for approval. The design mix shall be submitted on a form that indicates the supplier and type of the concrete and materials to be used as well as the amounts of materials per cubic yard for at least the following items and units (based upon saturated surface dry aggregate):

- A. Cement-Pounds
- B. Coarse Aggregate-Pounds
- C. Fine Aggregate-Pounds
- D. Air Entraining Admixture – Ounces
- E. Other Admixtures (if allowed) – Ounces
- F. Water – Pounds
- G. Fly Ash (if allowed) – Pounds

**6.03 PROPORTIONING**

A. Each class of concrete shall be manufactured by combining the several materials prescribed in the design mix in the proportions necessary to obtain the specified compressive strength for each class. Proportioning shall be based upon the specified cement content, and the amount of water for each class of concrete shall not exceed the quantity shown in Table 03050.2. Below this limit, the quantity of water shall be adjusted to meet the slump requirements. Aggregate weights shown in the Contractor's mix design(s) shall be based on saturated surface dry aggregate; batch weights shall be corrected to compensate for surface moisture on the aggregate in order to determine the amount of water to be added at the mixer.

B. In addition to the requirements specified herein and on Table 03050.2, portland cement concrete for pavement, Class B, (Specification Section 02750) shall have a flexural strength at 14 days of not less than 550 pounds per square inch when tested in accordance with AASHTO T 22.

**6.04 CHANGES IN MIX**

A. When approved by the Purchaser, the ration of coarse and fine aggregate may be adjusted in order to assure better workability or to accommodate placement by pumping. However, in no case shall the fine aggregate exceed 44 percent of the total aggregate.

B. If during the progress of the Work, the specific gravity of one or both of the aggregates change more than plus or minus 0.03 from those shown on the concrete design, the design weights shall be adjusted by a design change to conform to the new specific gravity.



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**6.05 HIGH-EARLY-STRENGTH CONCRETE**

A. High-early-strength concrete may be required in the Plans and Specifications or substituted at the request of the Contractor, subject to the approval of the Purchaser. When high-early-strength cement concrete is authorized, it shall conform to the requirements of Table 03050.2 except that the 28 day strength (or 14 day strength for Class B concrete) shall be obtained in 7 days. The use of Type I or Type III cement for high-early-strength concrete in lieu of using Type III cement. When type I cement is used, the concrete shall have a minimum of 7.6 sacks (714 pounds) of cement per cubic yard of concrete. If admixtures are used to obtain high-early-strength concrete, such admixtures may only be used if previously approved by the Tennessee Department of Transportation for similar uses of the concrete and if specifically approved for the project by the Purchaser.

B. The gradation of fine and coarse aggregates shall be the same as that approved for the concrete for which the high-early-strength concrete is substituted. All materials entering into the high-early-strength concrete shall be of the same kind and class as the materials entering into the other part or parts of the facility constructed of the class of concrete for which high-early-strength is being substituted.

C. No additional compensation will be made if the Contractor elects to substitute high-early-strength concrete for any class of concrete. The unit price for the class for which the substitution is made shall be full compensation for the concrete.

**PART 7 – TESTING**

**7.01 TEST SAMPLES**

The Purchaser shall provide for all test cylinders. All samples shall be cast, cured and tested by the City at its expense. The Contractor will be required to assist the Purchaser in securing necessary materials for casting the required number of cylinders. Testing ages will be 7 days and 28 days unless otherwise determined by the Purchaser. Laboratory cylinders shall be used to determine the quality of concrete produced. The number of cylinders to be cast daily for any quantity of concrete and laboratory tested, shall be specified by the Purchaser. With prior consent of the Purchaser, the Contractor may prepare field cylinders. These cylinders may be used as a gauge for early safe removal of forms where the Contractor requests earlier removal than set out in the Specifications.

**7.02 CEMENT TESTING**

All cement used in the Work shall be pre-tested before use. Cement may be used upon completion of a satisfactory 3 day physical test made in accordance with current ASTM Specifications. Cement shall be tested by an approved commercial testing laboratory at the Contractor's expense.



**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 03050 PORTLAND CEMENT CONCRETE**

**7.03 CORE SAMPLES**

A. If the Purchaser's testing of cylinders indicates compressive strength less than required in Table 03050.2 for the class of concrete specified, the Contractor may, at his option, elect to drill core samples from the actual concrete placed. If the Contractor elects to drill (or is instructed by the Purchaser to drill) core samples from the hardened concrete, the costs of obtaining the cores and of repairing the core holes with nonshrinking grout shall be borne by the Contractor.

B. The cores shall be drilled as directed by the Purchaser, at the same approximate locations from which the test cylinder concrete was obtained. The locations of the drilled cores shall be selected so that the remaining structure will not be impaired or sustain permanent damage after the holes are repaired by the Contractor. The drilled samples shall be tested for compressive strength by the Purchaser, and the equivalent 28 day strength of the concrete placed and represented by the drilled core samples shall be determined. The Purchaser shall use the test results of the drilled cores to determine the acceptability of the concrete.

**7.04 METHODS OF SAMPLING AND TESTING**

A. Test cylinders cast to determine acceptability for minimum AASHTO strength requirements shall be made and cured in accordance with AASHTO T 23 and tested in accordance with AASHTO T 22. Test cylinders cast to determine when a precast unit or a structure may be put into service or to determine when a tensioning load may be transferred shall be cured by methods identical to those used in curing the concrete member, and tested in accordance with AASHTO T 22.

B. Drilled core samples shall be taken and tested in accordance with AASHTO T 24. Due to possible fracturing effect of the coring operation, drilled core samples having a compressive strength of 85 per cent or more of specified strength will be considered acceptable.

C. Slump shall be determined in accordance with AASHTO T 119 on the job site during each placement.

D. The amount of air entrained shall be determined by pressure or volumetric meters of approved design and in accordance with AASHTO Method T 152 or AASHTO Method T 196, except that AASHTO Method T 199 may be used after the accuracy of the Chace Air Indicator has been determined by comparison tests.

**7.05 CONCRETE FAILING TO MEET STRENGTH REQUIREMENTS**

A. Concrete which has been mixed and placed in accordance with these Specifications, and which fails to meet the minimum 28 day strength requirements shall be removed and disposed of by the Contractor, at his expense, unless

**CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS**  
**SECTION 03050 PORTLAND CEMENT CONCRETE**

specifically authorized by the Purchaser, in writing, to remain in place. The removal shall be in such manner as will not cause damage to the remaining concrete or to other structural units or other facilities and property.

B. The Purchaser may, at his discretion, allow concrete which fails to meet the minimum strength requirement to remain in place. Payment for this concrete will be at a reduced price, to compensate the Purchaser for loss of durability. The amount of the reduction shall be determined by the Purchaser and shall be based on the particular circumstances.

**PART 8 – MISCELLANEOUS**

**8.01 CONCRETE MIXED AND/OR BATCHED OFF PROJECT SITE**

Concrete may be mixed and/or batched off the immediate project site, subject to specific approval of the Purchaser and under the direct supervision of the Contractor. A delivery ticket (certified by the batch plant) showing mix, quantity of cement, quantity of fine and coarse aggregate, moisture content, total water and gallons per cubic yard of concrete shall be furnished to the Purchaser with each delivery of concrete and the Contractor shall show to the satisfaction of the Purchaser that the plant is so located and equipped as to produce and deliver concrete fully meeting the specification requirements.

**8.02 MEASUREMENT AND PAYMENT**

The methods of measurement and payment for concrete shall be as specified in Divisions 2 and 3 of these Specifications for each particular item constructed by the Contractor.

**END OF SECTION 03050**

## MISCELLANEOUS CONTRUCTION REQUIREMENTS

### **I. SCOPE OF THE CONTRACT:**

- A. The work required under this Contract includes Construction support for future projects. This includes furnishing and paying for all necessary materials, labor, tools, equipment, and other items and construction improvements complete in every detail, ready for the Purchaser's beneficial use as specified herein and/or indicated on the construction drawings.

### **2. ADDITIONS TO TECHNICAL SPECIFICATIONS:**

- A. In the event of conflict between the technical specifications, Construction Drawings, the General Provisions, or Special Conditions contained herein, and/or product manufacturer's specifications, the more stringent specs shall apply. However, all conflicts shall be brought to the attention of the Purchaser for approval.
- B. The cost of all required material inspections and testing, including, but not limited to earthwork and concrete testing, shall be paid for by the subcontractor.

#### **C. Item No. 00899.01, Silt Fence**

- 1. This item is not specified in the technical specifications.
- 2. Job Conditions
  - A. All work done as needed to meet the requirements, shall be done in such a manner as to cause the least amount of soil erosion and siltation.
  - B. Appropriate management practices and control structures shall be in place prior to clearing of vegetation for necessary construction activities near streams, rivers, and lakes.
  - C. Provisions required to maintain uninterrupted surface water flow shall be maintained during the work. Storm water flow in existing gutters, surface drains, and swales shall not be interrupted.
  - D. The Purchaser shall be notified of any unexpected subsurface or other unforeseen conditions. Work shall be discontinued until the Purchaser provides notification to resume work.
- 3. Preparation
  - A. The Tennessee Department of Conservation Publication, Tennessee Erosion & Sediment Control Handbook, latest revision, shall be used as a guide for construction of projects that require erosion and sediment controls to protect adjoining property and waters of the state.
- 4. Performance
  - A. The subcontractor shall be responsible for maintaining soil erosion control measures as necessary to prevent sediment from leaving the site. The subcontractor shall also be responsible for satisfying the requirements of the State of Tennessee Department of Water Pollution Control as set forth in the Tennessee Erosion and Sediment Control Handbook.
  - B. Erosion Control measures shall be in place and functional before earth moving operations begin, and must be properly constructed and maintained during the construction period.
  - C. Staked and entrenched straw bales or silt fence shall be installed along the base of all sloped cuts and fills, on the downhill sides of stockpiled

soil, and along stream banks.

- D. All surface water flowing toward the construction area shall be diverted around the area as much as possible to reduce erosion potential by using beams, channels, and/or sediment traps as necessary.
- E. Maintenance of erosion and sediment control methods shall be performed on a regular basis throughout the construction period and until a good vegetative cover is established over the entire disturbed area.
- F. A vegetation buffer strip shall be maintained between any stream and pipe trenching. Excavated material from the trench shall not be placed between the trench and stream.
- G. Trenches or pits shall be backfilled as soon as practicable to reduce erosion potential.
- H. Erosion control measures shall be removed when they have served their useful purpose. The disturbed soil shall be fine graded, top soiled, and planted with permanent vegetation as soon as the construction sequence allows to prevent further potential erosion and sedimentation. Any seeded areas which are eroded shall be reworked as soon as possible.
- I. The subcontractor shall maintain records of inspections, maintenance, and repairs as required by the State of Tennessee Department of Water Pollution Control.

- 5. Payment will be at the contract unit price for installation per Linear Foot (L.F.) Silt Fence, which shall include all material and labor necessary to complete this item.

D. Item No. 0990.01 Mini Excavator with Hydraulic Hammer and Tamp attachments with operator

- 1. This item includes providing a Mini Excavator (CAT 308 or equivalent) with hydraulic hammer, tamp attachments, operator, all construction activities associated with utilizing these items.
- 2. Payment will be at the contract unit price per day.

E. Item No. 0991.01 Mini excavator with hydraulic hammer and tamp attachments with operator

- 1. This includes providing a Mini Excavator (CAT 314 or equivalent) with hydraulic hammer, tamp attachments and operator, all construction activities associated with utilizing these items.
- 2. Payment will be at the contract unit price per day

F. Item No. 0992.01 Excavator with operator

- 1. This includes providing an Excavator (CAT 336 or equivalent), operator and all construction activities associated with utilizing these items.
- 2. Payment will be at the contract unit price per day

G. Item No. 0993.01 Dozer

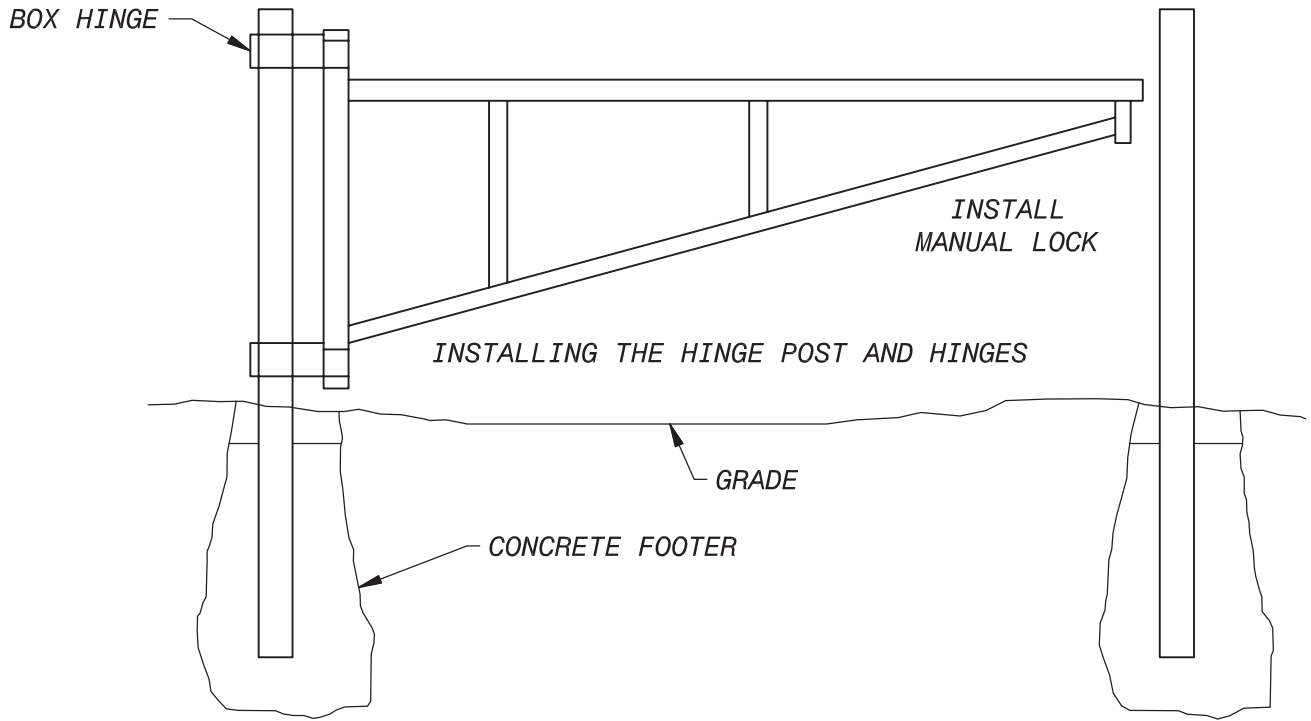
- 1. This includes providing a Dozer (CAT D6 XL or equivalent) all construction activities associated with utilizing these items.
- 2. Payment will be at the contract unit price per day

- H. Item No. 00994.01 Skidsteer Compact Track
1. This includes providing a Compact Skidsteer with Tracks (Cat 249D or equivalent) all construction activities associated with utilizing these items.
  2. Payment will be at the contract unit price per day
- I. Item No. 00995.01 Security Gate
- 1 This includes providing and installing a security gate. (see detail)
  - 2 Contractor shall provide drawing prior to installation
- J. Item No. 00996.01 Dump Truck of 10 CY with operator minimum
1. This includes providing a Dump Truck with a minimum hauling capacity of 10 cubic yards with an operator all construction activities associated with utilizing these items.
  2. Payment will be at the contract unit price per day
- K. Item No. 00997.01 Front End Loader with Operator
1. This includes providing a Front End Loader (Case 580N or equivalent) with operator all construction activities associated with utilizing these items.
  2. Payment will be at the contract unit price per day
- L. Item No. 00998.01 Vibratory Plate Compactor
1. This includes providing a Vibratory Plate Compactor (WP 1550 or equivalent) with operator all construction activities associated with utilizing these items.
  2. Payment will be at the contract unit price per day
- M. Item No. 000999.01 Concrete Flat Saw
1. This includes providing a Concrete Flat Saw (Husqvarna #FS400 or equivalent) and all construction activities associated with utilizing these items.
  2. Payment will be at the contract unit price per day
- N. Item No. 01010.01 Saw Cutoff Gas 14-inch
1. This includes providing a Saw Cutoff Gas 14-inch (TS420 or equivalent) and all construction activities associated with utilizing these items.
  2. Payment will be at the contract unit price per day
- O. Item No 01000.01.x Culvert CMP per 20-foot section
1. This included providing, bedding, installing and backfilling CMP Culvert of set diameter per 20-foot section.
  2. Payment will be at the contract unit price per 20-foot section
- P. Item No. 01001.01 Geotextile Fabric at 12.5-foot width
1. This includes providing and installing Non-Woven Geotextile Fabric that has a minimum width of 12.5 feet.

2. Payment will be at the contract unit price per linear foot

Q. Item No. 01002.0x Traffic Control

1. All signs shall be of the size, dimensions, shape, and legend as indicated on the Plans and/or as shown in the Tennessee Department of Transportation Manual on Uniform Traffic Control Devices, Current Edition (MUTCD). All materials and construction of traffic control signs furnished, fabricated, and/or installed under these Specifications shall be certified and/or guaranteed to the City by the subcontractor.
  - a. Static Signs, cones and Barrels only
    - i. This includes providing and installing static signs, cones and barrels in accordance with MUTCD
  - b. Cones, Barrels and up to 2 Electronic Signs
    - i. This includes providing and installing cones, barrels and up to 2 Electronic signs in accordance with MUTCD.
2. Payment will be at the contract unit price per day



DETAIL 1



**BLACK & VEATCH**  
Building a world of difference.

**SARP10**

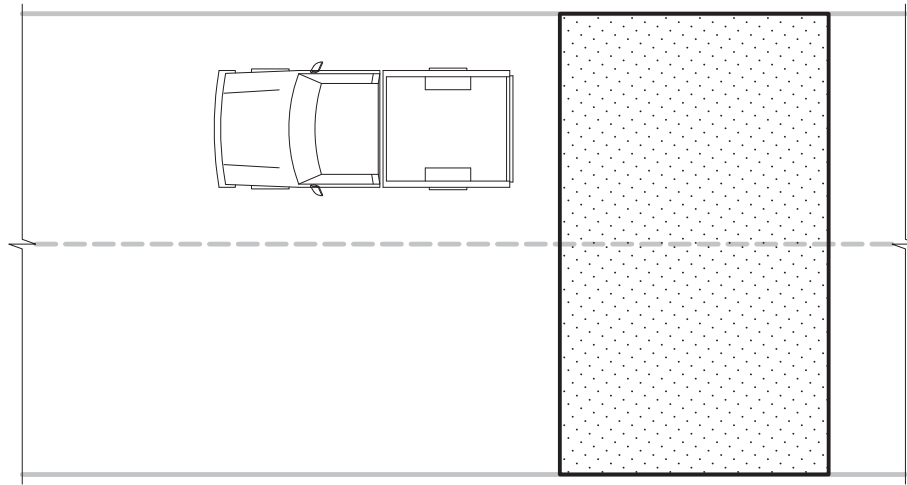
TYPICAL SECURITY GATE

SCALE: NOT TO SCALE

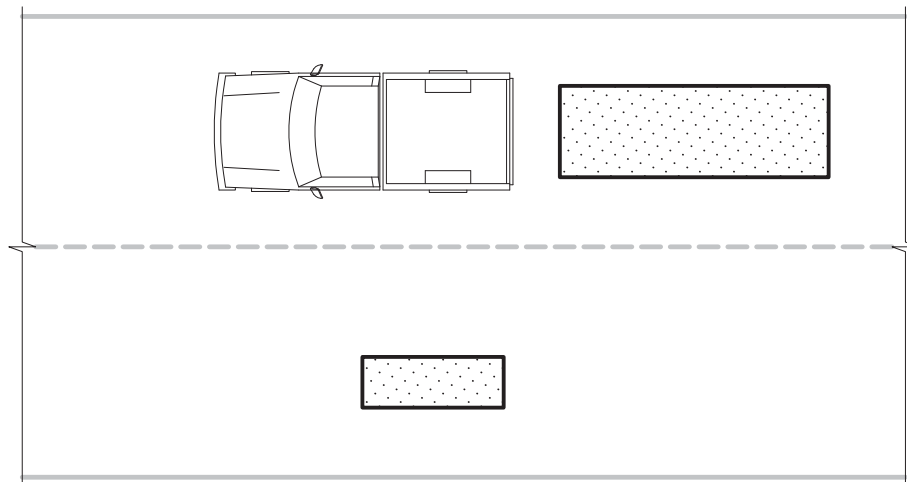
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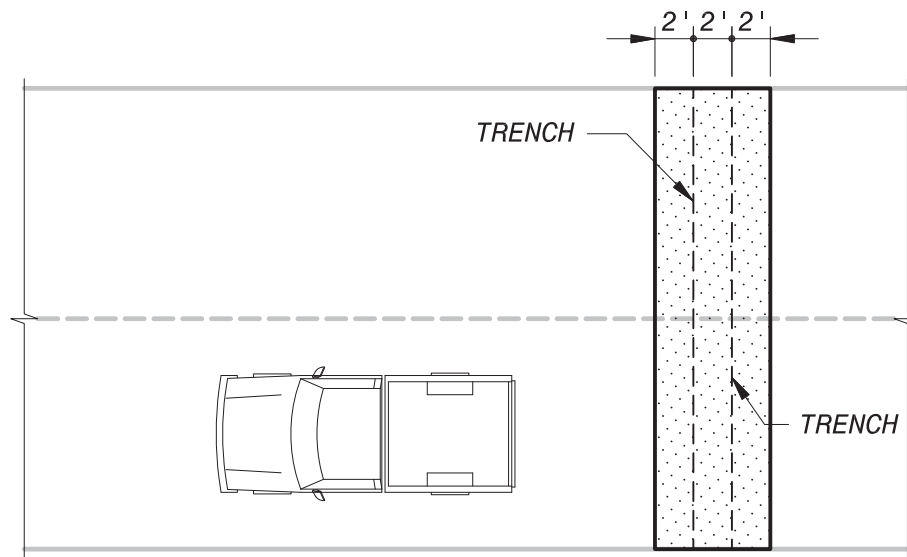
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NOTES

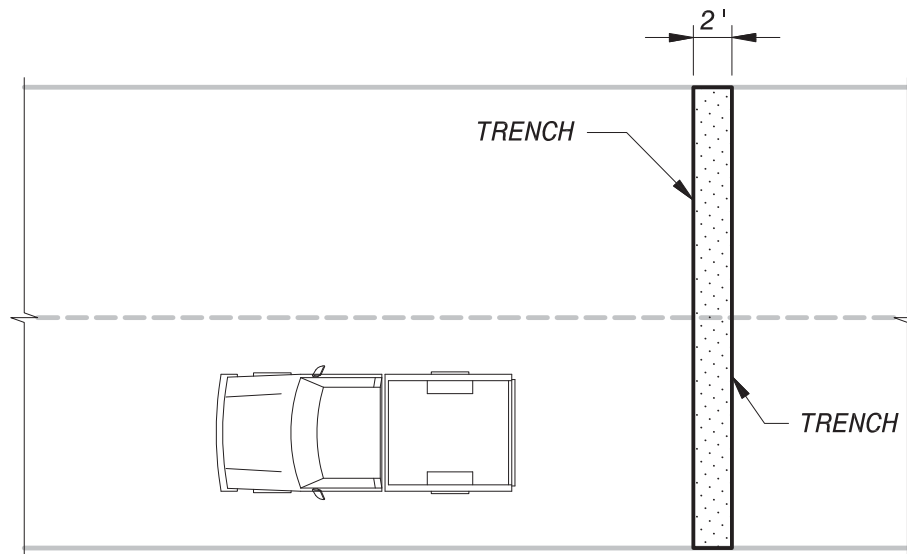
1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. TRAVERSE PATCHES SHALL BE OVERLAID ACROSS THE ENTIRE STREET WIDTH FOR A DISTANCE OF TWO (2) FEET MINIMUM ON ALL SIDES OF THE TRENCH.
7. DO NOT ALLOW THE EDGES OF PATCHES TO FALL IN EXISTING WHEEL PATHS.
8. THE EDGES OF PATCHES PARALLEL TO THE DIRECTION OF TRAFFIC SHALL BE LIMITED TO THE BOUNDARIES OF LANES OR TO THE CENTERLINE OF TRAVEL LANES.



**SARP10**  
 PAVEMENT REPAIR  
 WHEEL PATH  
 DETAILS



ACCEPTABLE



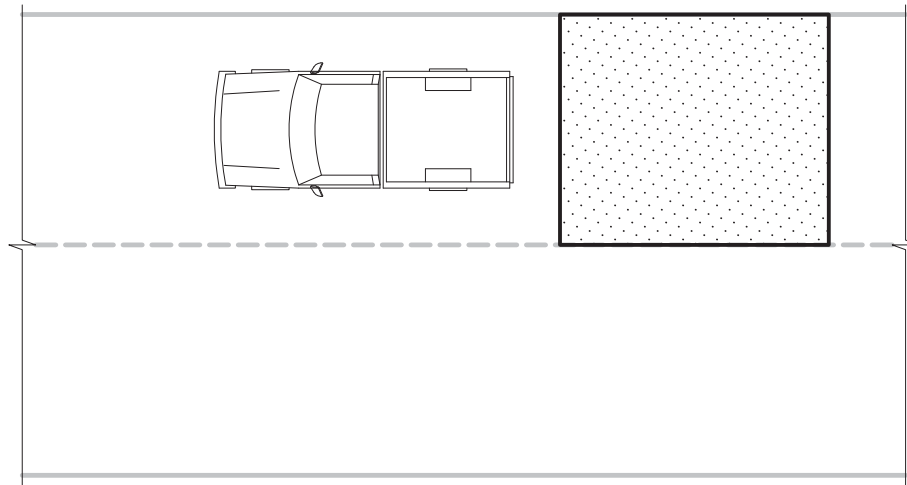
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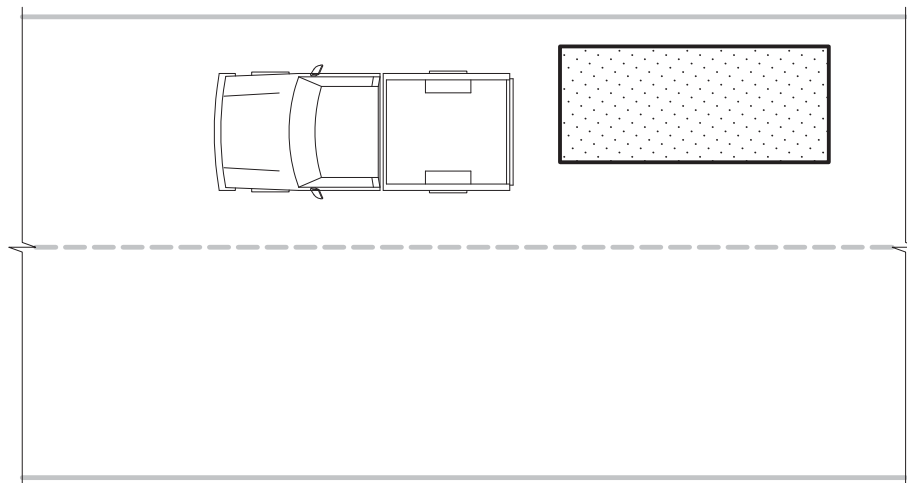
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2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. TRAVERSE PATCHES SHALL BE OVERLAID ACROSS THE ENTIRE STREET WIDTH FOR A DISTANCE OF TWO (2) FEET MINIMUM ON ALL SIDES OF THE TRENCH.



**SARP10**  
 PAVEMENT REPAIR  
 TRAVERSE PATCHES  
 DETAILS



ACCEPTABLE



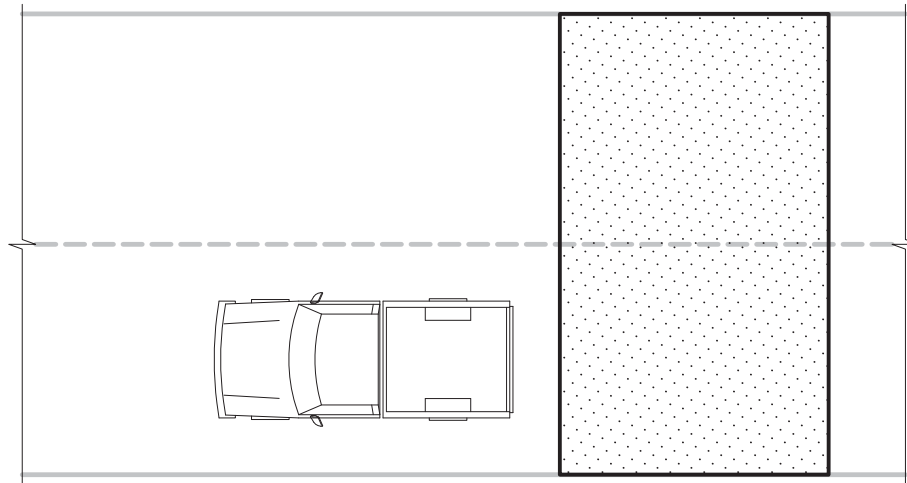
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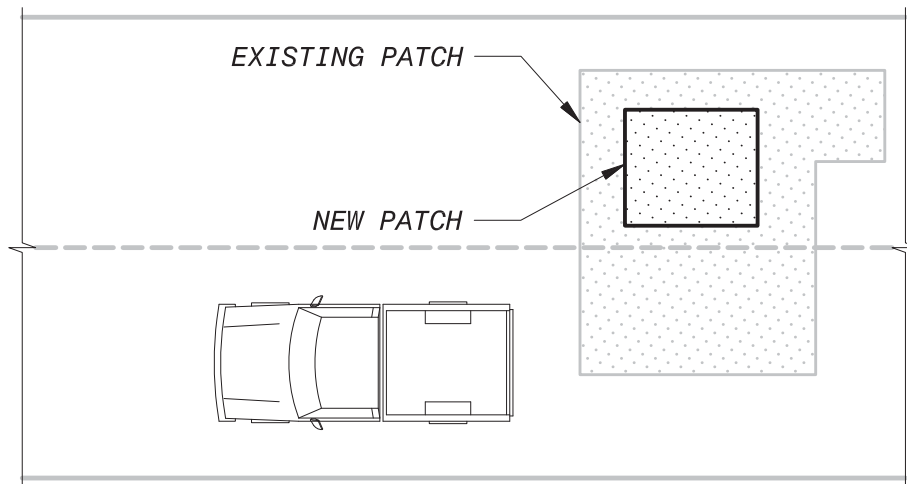
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2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.



**SARP10**  
 PAVEMENT REPAIR  
 SINGLE LANE  
 DETAILS



ACCEPTABLE



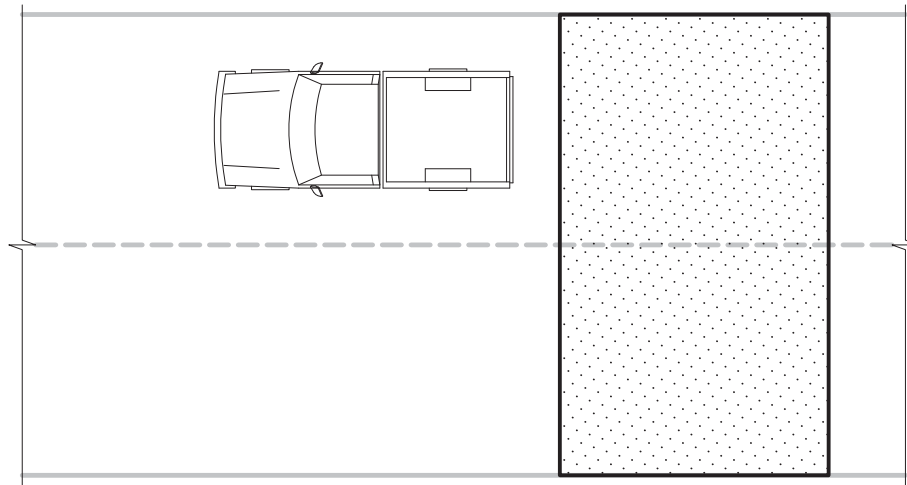
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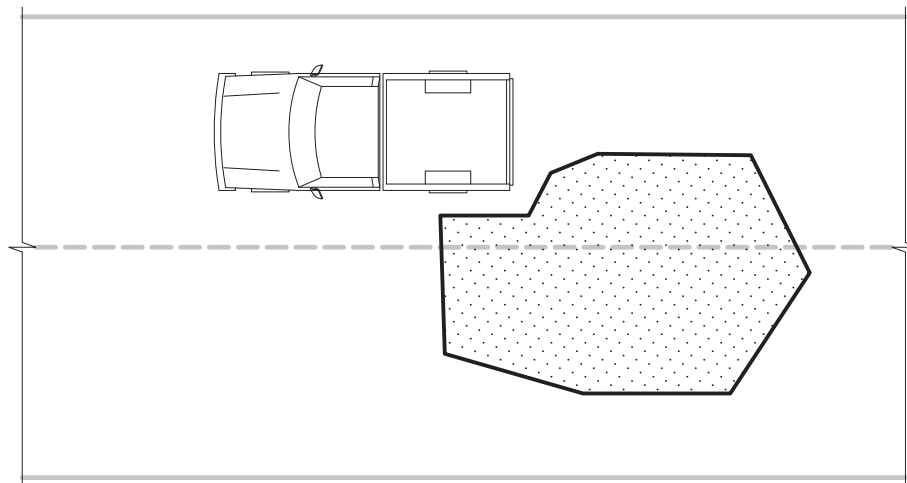
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3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. AVOID PATCHES WITHIN PATCHES. IF THIS CANNOT BE AVOIDED, MAKE THE BOUNDARIES OF THE PATCHES COINCIDE.



**SARP10**  
 PAVEMENT REPAIR  
 PATCH INSIDE A PATCH  
 DETAILS



ACCEPTABLE



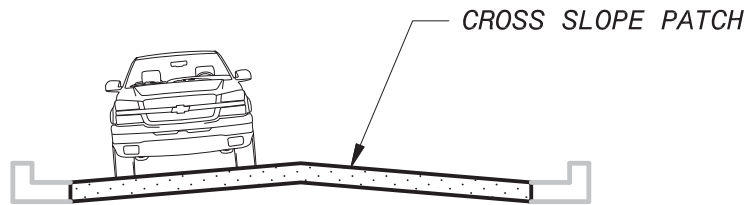
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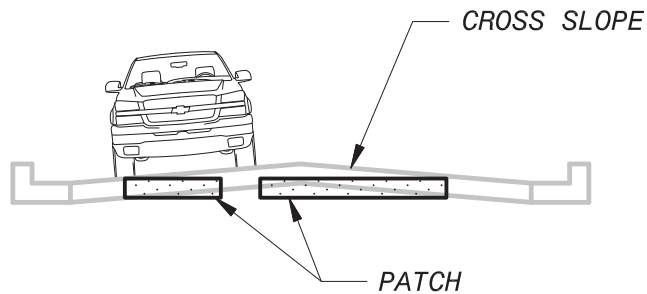
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3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.



**SARP10**  
 PAVEMENT REPAIR  
 MULTI-LANE  
 DETAILS



ACCEPTABLE



NOT ACCEPTABLE

NOTES

1. EXISTING PAVEMENTS SHALL BE REMOVED TO CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
3. ALL REPAIRS SHALL BE FULL LANE WIDTH.
4. FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF THE EXISTING ASPHALT BEFORE PLACING THE NEW PAVEMENT.
5. AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS) BETWEEN THE NEW AND EXISTING PAVEMENTS SHALL BE SEALED WITH AN ASPHALT TACK COAT OR RUBBERIZED CRACK SEAL MATERIAL.
6. PATCHES SHALL HAVE A SMOOTH LONGITUDINAL GRADE CONSISTENT WITH THE EXISTING ROADWAY.
7. PATCHES SHALL ALSO HAVE A CROSS SLOPE OR CROSS SECTION CONSISTENT WITH THE DESIGN OF THE EXISTING ROADWAY.



**SARP10**  
 PAVEMENT REPAIR  
 CROSS SLOPE  
 DETAILS