



Specifications

For

Turtle Creek Greenway Phase I Section V

(Bid #2011:14)

Jonesboro, Arkansas



City of Jonesboro • Engineering Department

P.O. Box 1845 • 307 Vine Street • Jonesboro, AR 72403 • 870.932.2438

TABLE OF CONTENTS

I. ADVERTISEMENT FOR BIDS

II. INSTRUCTIONS TO BIDDERS

III. PROPOSAL

IV. UNIT PRICE SCHEDULE

V. BID BOND

VI. STATEMENT OF BIDDER'S QUALIFICATIONS

VII. CONTRACT

VIII. PERFORMANCE AND PAYMENT BOND

IX. GENERAL CONDITIONS

X. SUPPLEMENTAL GENERAL CONDITIONS

XI. SPECIAL CONDITIONS

XII. TECHNICAL SPECIFICATIONS

ADVERTISEMENT FOR BIDS

Sealed bids for the Turtle Creek Greenway Phase I Section V will be received at the Purchasing Department of the City of Jonesboro City Hall, 515 West Washington Ave., Jonesboro, Arkansas until 2:00 P.M. (Local Time) on May 25, 2011 and then publicly opened and read for furnishing all labor, material, and equipment, and performing all work required to construct the Turtle Creek Greenway Phase I Section V. All Submissions shall be annotated on the outside of the envelope with the bid number 2011:14.

The project consists of the construction and installation of 541 L.F. 10' wide asphalt walking trail.

Proposals shall be accompanied by a cashier's or certified check upon a national or state bank in an amount not less than five percent (5%) of the total maximum bid price payable without recourse to the City of Jonesboro or a bid bond in the same amount from a reliable surety company, as a guarantee that the Bidder will enter into a contract and execute performance and payment bonds within ten (10) days after notice of award of Contract to him. The notice of award of Contract shall be given by the Owner within sixty (60) days following the opening of bids.

The successful Bidder must furnish a performance and payment bond upon the form provided in the amount of one hundred percent (100%) of the contract price from an approved surety company holding a permit from the State of Arkansas to act as surety, or other surety or sureties acceptable to the Owner.

The attention of bidders is called to the fact that Act 150 of 1965 (as amended), Arkansas Statutes, states that under certain conditions a Contractor must be licensed by the State Licensing Board for Contractors before he may undertake work in Arkansas. The Bidder shall comply with requirements of this Arkansas Law.

Plans, specifications, proposal forms and other contract documents may be examined at City of Jonesboro Engineering Department, 307 Vine Street, Jonesboro, Arkansas 72401 and Civil Engineering Associates, 2114 East Matthews Avenue, Jonesboro, Arkansas 72401. Bid Documents may be secured at the cost of \$50.00 Dollars per set from Civil Engineering Associates, 2114 East Matthews Avenue, Jonesboro Arkansas 72401. No refunds will be made. Any addendum to this bid will be posted no later than 5 days before bid opening by clicking on "Purchasing" at www.jonesboro.org.

Proposals will be considered on the basis of cost, the bidder's financial responsibility, his equipment, and his past performance in completing similar work. The City of Jonesboro reserves the right to reject any or all bids, to waive any informalities, and to accept the proposal deemed to be for their best interest.

The City of Jonesboro hereby notifies all bidders that this contract is subject to applicable labor laws, non-discrimination provisions, wage rate laws and other federal laws including the Fair Labor Standards Acts of 1938. The Work Hours Act of 1962 and Title VI or the Civil Rights Act of 1964 also apply.

The City of Jonesboro encourages participation of small, minority, and woman owned business enterprises in the procurement of goods, services, and construction, either as a general contractor or subcontractor. It is further requested that whenever possible, majority contractors who require sub-contractors seek qualified small, minority, and women owned businesses to partner with them.

II. INSTRUCTION TO BIDDERS

1. PREPARATION OF BID

Each bid must be submitted on the prescribed form (Proposal) and Unit Price Schedule. All blank spaces must be filled in legibly with ink or typed. All blank spaces for bid prices on the Unit Price Schedule must be filled in with figures; the extended total for each item shall be entered. If the unit price and the extended total of any item are not in agreement, the unit price shall govern and the extended total be corrected to conform thereto. Erasures or other corrections on the Proposal form or Unit Price Schedule shall be initialed by the signer of the bid. All bids must be signed in ink by an individual authorized to bind the Bidder. All bids must be regular in every respect and no interlineations, excisions or special conditions shall be made or included in the Proposal by the Bidder.

There must be a bid on all items which may appear on the Unit Price Schedule. No bid will be considered which covers only a part of the work. A conditional bid will not be considered.

The bid form and Unit Price Schedule shall not be detached, but shall be submitted in the original binding as furnished by the Engineer. Submission must be at the place, and at or prior to the time specified in the Advertisement for Bids.

Each bid must be submitted in a sealed envelope clearly marked on the outside that it contains a bid for the Turtle Creek Greenway Phase I Section V, Bid Number 2011:14 and with the hour and date of bid opening shown thereon. The name, address, and Arkansas Contractor's License Number of the Bidder shall appear in the upper left hand corner of the envelope. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope properly addressed as noted in the NOTICE TO CONTRACTORS.

A bid which obviously is unbalanced may be rejected.

2. INTERPRETATIONS AND ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the City of Jonesboro Engineering Department. Any inquiry received up to five (5) days prior to the opening of bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the contract Documents. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

3. INSPECTION OF SITE

Each Bidder shall visit the site of the proposed work and fully acquaint himself with the existing conditions there relating to construction and labor, and shall fully inform himself as to the facilities involved, and the difficulties and restrictions attending the performance of the Contract. The Bidder shall thoroughly examine and familiarize himself with the Plans, Technical Specifications, and other Contract Documents. The Contractor by the execution of the Contract shall not be relieved of any

obligation under it due to his failure to receive or examine any form or legal instrument or to visit the site and acquaint himself with the conditions there existing. The Owner will be justified in rejecting any claim based on facts regarding which the contractor should have been on notice as a result thereof.

4. BID GUARANTY

The bids must be accompanied by a Bid Guaranty which shall not be less than five percent (5%) of the amount of the bid. At the option of the Bidder, the guaranty may be a certified check, or may be a bid bond (substantially in the form attached). No bid will be considered unless it is accompanied by the required guaranty. Certified check must be payable to the City of Jonesboro, Arkansas. Cash deposits will not be accepted. The Bid Guaranty shall insure the execution of the Contract and the furnishing of the surety bond or bonds by the successful Bidder, all as required by the Contract Documents.

Certified checks, or bid bonds, of unsuccessful Bidders, will be returned upon request as soon as feasible after the opening of the bids.

5. COLLUSION; SUBCONTRACTS

A Bidder submitting a Proposal to the Owner for the work contemplated by the Documents on which bidding is based shall not collude with any other person, firm, or corporation in regard to any bid submitted.

Before executing any subcontract, the successful Bidder shall submit the name of any proposed Subcontractor for prior approval of the Owner.

6. STATEMENT OF BIDDER'S QUALIFICATIONS

Each Bidder shall submit on the form furnished for that purpose (a copy of which is included in the Contract Documents), a statement of the Bidder's qualifications, his experience record in construction of work similar to that which here is involved, and his organization and equipment available for the work contemplated; and when specifically requested by the Owner, the Bidder shall provide a detailed financial statement. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform his obligations under the Contract, and the Bidder shall furnish the Owner all such information and data for this purpose as it may request. The right is reserved to reject any bid where an investigation of the available evidence or information does not satisfy the Owner that the Bidder is qualified to carry out properly the terms of the Contract.

7. BALANCED BIDS; VARIATIONS IN QUANTITIES

The lump sum price and unit price for each of the several items in the Proposal of each Bidder shall be balanced and shall include its pro rata share of overhead.

The Owner shall have the right to increase or decrease the extent of the work or to change the location, gradient, or the dimensions of any part of the work, provided that the length of the

improvement is not increased or decreased in excess of 25% of the contract length, or that the quantities of work to be done or the materials to be furnished are not increased or decreased in money value in excess of 25% of the total Contract. Such changes shall not be considered as a waiver of any conditions of the Contract nor invalidate any of the provisions thereof. The Contractor shall perform the work as increased or decreased within the qualifying limits named and no allowance will be made for anticipated profits on increases or decreases so incurred.

Increases or decreases in items of work, and the cost thereof, shall be done in accordance with the Section entitled, CHANGES IN THE WORK under GENERAL CONDITIONS.

8. TIME FOR RECEIVING BIDS

A bid received prior to the advertised time of opening will be kept securely, and will remain sealed until the time of opening. The officer whose duty it is to open them will decide when the specified time has arrived, and any bid received subsequent to that time will be returned unopened.

9. OPENING OF BIDS

At the time and place fixed for the opening of bids, the Owner first will cause the bid guarantees to be checked as stipulated above. The Owner then will cause the qualified bids to be opened and publicly read aloud, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

10. WITHDRAWAL OF BIDS

Bids may be withdrawn on written request if the request is received prior to the time fixed for the opening of bids.

11. AWARD OF CONTRACT; REJECTION OF BIDS

The Contract will be awarded to the responsible Bidder submitting the lowest total bid complying with the conditions of the Notice to Contractors and other parts of these Contract Documents. The Bidder to whom the award is made will be notified at the earliest possible date. The Owner, however, reserves the right to reject any or all bids and to waive any informality in bids received whenever such rejection or waiver is in its interests.

The Owner reserves the right to consider as unqualified to do the work any Bidder who does not habitually perform with his own forces the major portions of such work as is involved in construction of these improvements.

12. EXECUTION OF AGREEMENT; PERFORMANCE AND PAYMENT BOND

Subsequent to the award and within ten (10) days after the prescribed forms are presented for signature, the successful Bidder shall execute and deliver to the Owner a Contract in the form included in the Contract Documents in such number of copies as the Owner may require.

Having satisfied all conditions of award as set forth elsewhere in these Documents, the successful Bidder shall, within the period specified above, furnish a surety bond in a penal sum not less than the amount of the Contract as awarded, as security for the faithful performance of the Contract, and for the payment of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services of any nature, including utility and transportation services employed or used by him in performing the work. Such bond shall be as included in the Contract Documents and shall bear the same date as, or a date subsequent to, that of the Contract. The current power of attorney for the person who signs for any surety company shall be attached to such bond.

The failure of the successful Bidder to execute such Contract and to supply the required bond or bonds within ten (10) days after the prescribed forms are presented for signature, or within such extended period as the Owner may grant, based upon reasons determined insufficient by the Owner, shall constitute a default, and the Owner may either award the Contract to the next lowest responsible Bidder or readvertise for bids.

13. BONDS AND INSURANCE

Attention of Bidders is called to Act 82 of the 1935 Acts of the Arkansas General Assembly, which has certain requirements pertaining to performance bonds, labor bonds, employer's liability insurance, public liability insurance, workmen's collective insurance, and property damage insurance.

All companies furnishing bid bonds and performance bonds shall furnish evidence of being on the U.S. Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the State of Arkansas.

14. LEGAL QUALIFICATIONS

All Bidders, in order to submit a bonafide Proposal, must comply with the terms of Act 150 of the 1965 Acts of the Arkansas General Assembly, as amended.

The successful Bidder, if a corporation created under the laws of a state other than the State of Arkansas, will be required to qualify, or to have qualified, with the Secretary of State of Arkansas to do business in the State of Arkansas.

15. MODIFICATION OF BID

No modification of any bid already submitted will be considered unless such modification is received prior to the time set for opening of bids.

III. PROPOSAL

Place Jonesboro AR
Date MAY 25, 2011

Proposal of Gillis Inc

a corporation organized and existing under the laws of the State of Arkansas.

or

Proposal of _____

a partnership consisting of _____

or

Proposal of _____

an individual doing business as _____

TO: City of Jonesboro

This bid results from your advertisement for bids for the Turtle Creek Greenway Phase I Section V

The undersigned Bidder, having visited the site of the work, having examined the Plans, Specifications, and other Contract Documents including all Addenda, and being familiar with all of the conditions relating to the construction of the proposed project, hereby agrees to comply with all other conditions or requirements set forth in the Plans, Specifications, and other Contract Documents, and further proposes to furnish all material, supplies, equipment, and appliances specified for incorporation into the project and to furnish all labor, tools, equipment, and incidentals to complete the work in accordance with the Plans, Specifications, and other Contract Documents at and for the lump sum and unit prices proposed in the attached Unit Price Schedule.

The undersigned Bidder agrees to begin work within ten (10) calendar days after the issuance by the Owner of a "Work Order" or "Notice to Proceed" and to complete the work within Ninety (90) calendar days thereafter (except as modified in the GENERAL CONDITIONS of these Contract Documents). Should the work fail to be completed within the time herein stated, the Contractor shall pay to the Owner, as fixed and agreed liquidated damages, and not as a penalty, the sum, for each day of delay until the work is completed and accepted, as stipulated in the SPECIAL CONDITIONS of these Contract Documents. It is understood that additional time for the completion of the project is to be allowed only for delays as stipulated in the GENERAL CONDITIONS of these Contract Documents.

Bidder acknowledges receipt of the following addendum (addenda):

_____ Dated _____

_____ Dated _____

The undersigned Bidder agrees that this bid shall be good and shall not be withdrawn for a period of sixty (60) calendar days after the opening thereof. If written notice of the acceptance of this Proposal is mailed, telegraphed, or delivered to the undersigned within sixty (60) days after the opening thereof, or at any time thereafter before this Proposal is withdrawn, the undersigned agrees to execute and deliver a Contract in the prescribed form, and furnish the required Performance and Payment Bond, within ten (10) days after the Contract is presented to him for signature.

It is understood by the undersigned Bidder that the Owner reserves the right to reject any or all bids.

Accompanying this Proposal as bid security is certified check/bid bond (Strike One) in the amount of Five Percent Dollars (\$ 5%), being not less than five percent (5%) of the total of the bid. If the undersigned Bidder is the successful Bidder, but fails or refuses to execute the contract and furnish the required bond within the prescribed ten (10) days of the notification of award, then this bid security is to become the property of the Owner as liquidated damages for the delay and additional expense to the Owner caused by such failure or refusal.

Opdet Biven
(Witness)

1335 E. Pocter
Jonesboro NC 72404
(Address)

Gillis Inc
(Name of Bidder)

By Jim Gillis
Jim Gillis, Pres
(Print Name and Title)

1335 E. Pocter
Jonesboro, NC 72404
(Office Address of Bidder)

NOTES: Sign in ink. Do not detach.
Items must be bid upon as specified in the Unit Price Schedule.

TURTLE CREEK GREENWAY
 PHASE I SECTION V
 CITY OF JONESBORO, ARKANSAS

BASE BID PROPOSAL

<u>ITEM</u>	<u>QTY/UNIT</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
1.	541 L.F.	For furnishing all labor, tools, materials, equipment and incidentals for constructing the 10-foot wide, Asphalt Walking Trail as shown on the Drawings and described in the Specifications for the unit price of <u>Forty-three</u> — Dollars and <u>Forty-five</u> — Cents/L.F.	\$ <u>43.45</u>	\$ <u>23,506.45</u>
2.	1 L.S.	For furnishing all labor, tools, materials, equipment and incidentals for constructing Retaining Walls as shown on the Drawings and described in the Specifications for the lump sum price of <u>Twenty-Seven Thousand</u> Dollars and <u>no/100</u> — Cents/L.S.	\$ XXXXX	\$ <u>27,000.00</u>

<u>ITEM</u>	<u>QTY/UNIT</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
3.	1 EA.	For furnishing all labor, tools, materials, equipment and incidentals for constructing Concrete Drainage Box as shown on the Drawings and described in the Specifications for the unit price of <u>Three thousand</u> Dollars and <u>no/100</u> Cents/EA.	\$ <u>3000.00</u>	\$ <u>3000.00</u>
4.	13 L.F.	For furnishing all labor, tools, materials, equipment and incidentals for installing 18" Reinforced Concrete Pipe as shown on the Drawings and described in the Specifications for the unit price of <u>Forty-seven</u> Dollars and <u>fifty</u> Cents/L.F.	\$ <u>57.50</u>	\$ <u>747.50</u>
5.	1 L.S.	For furnishing all labor, tools, materials, equipment and incidentals for Stormwater Pollution Prevention Plan as shown on the Drawings and described in the Specifications for the lump sum price of <u>Six Thousand Five Hundred</u> Dollars and <u>no/100</u> Cents/L.S.	\$ <u>XXXX</u>	\$ <u>6500.00</u>

<u>ITEM</u>	<u>QTY/UNIT</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
6.	419 SqYd.	For furnishing all labor, tools, materials, equipment and incidentals for installing 90 lb Rip-Rap and 8 oz non-woven fabric as shown on the Drawings and described in the Specifications for the unit price of <u>Twenty-two</u> Dollars and <u>thirty-seven</u> Cents/Sq.YD	\$ <u>22.37</u>	\$ <u>9373.03</u>
7.	1 LS.	Act 291, 1993 Trench and Excavation Safety System <u>five hundred</u> Dollars and <u>no/100</u> Cents/L.S.	\$ <u>XXXXXX</u>	\$ <u>500.00</u>
TOTAL BASE BID			\$	<u>70,626.98</u>

V. BID BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT we the undersigned, Gillis, Inc., as PRINCIPAL, and

Merchants Bonding Company as SURETY, are held and firmly bound unto the

City of Jonesboro, hereinafter called the OWNER in the penal sum of _____

5% of amount bid

(\$ _____), lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these Presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT WHEREAS, the Principal has submitted the accompanying Proposal, dated May 25, 2011, for the

Turtle Creek Greenway Phase I Section V

NOW, THEREFORE, if the Principal shall not withdraw said Proposal within sixty (60) days after the opening of same, and shall within ten (10) days after the prescribed forms are presented to him for signature, enter into a written Contract with the Owner in accordance with the Proposal as accepted, and give bond with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such Contract, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument, under their several seals this 25th day of May, 2011, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representatives, pursuant to authority of its governing body.

Jacut Butch
(Witness)
1335 E. Parker
Jonesboro AR 72404

Gillis, Inc.
Jim Gillis
(Principal)
By Jim Gillis
President
(Title)
1335 E Parker Rd
Jonesboro, AR 72404
(Address)

SEAL

Glen Arthur

Western Surety Company
John D Pollock
(Corporate Surety)
By John D Pollock
PO Box 1270
Mount Ida, AR 71957
(Address)

NOTE: Power-of-attorney for person signing for surety company must be attached to bond.

MERCHANTS
BONDING COMPANY
POWER OF ATTORNEY

Bond #: 157469

Know All Persons By These Presents, that the MERCHANTS BONDING COMPANY (MUTUAL), a corporation duly organized under the laws of the State of Iowa, and having its principal office in the City of Des Moines, County of Polk, State of Iowa, hath made, constituted and appointed, and does by these presents make, constitute and appoint

John David Pollock

of **Mount Ida** and State of **AR** its true and lawful Attorney-in-Fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its behalf as surety any and all bonds, undertakings, recognizances or other written obligations in the nature thereof, subject to the limitation that any such instrument shall not exceed the amount of:

One Million (\$1,000,000.00) Dollars

and to bind the MERCHANTS BONDING COMPANY (MUTUAL) thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officers of the MERCHANTS BONDING COMPANY (MUTUAL), and all the acts of said Attorney-in-Fact, pursuant to the authority herein given, are hereby ratified and confirmed.

This Power-of-Attorney is made and executed pursuant to and by authority of the following Amended Substituted and Restated By-Laws adopted by the Board of Directors of the MERCHANTS BONDING COMPANY (MUTUAL) on November 16, 2002.

ARTICLE II, SECTION 8 - The Chairman of the Board or President or any Vice President or Secretary shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof.

ARTICLE II, SECTION 9 - The signature of any authorized officer and the Seal of the Company may be affixed by facsimile to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed.

In Witness Whereof, MERCHANTS BONDING COMPANY (MUTUAL) has caused these presents to be signed by its President and its corporate seal to be hereto affixed, this 23rd day of March, 2011.



MERCHANTS BONDING COMPANY (MUTUAL)

By

Larry Taylor
President

STATE OF IOWA
COUNTY OF POLK ss.

On this 23rd day of March, 2011, before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of the MERCHANTS BONDING COMPANY (MUTUAL), the corporation described in the foregoing instrument, and that the Seal affixed to the said instrument is the Corporate Seal of the said Corporation and that the said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors.

In Testimony Whereof, I have hereunto set my hand and affixed my Official Seal at the City of Des Moines, Iowa, the day and year first above written.

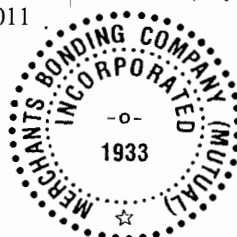


Cindy Smyth
Notary Public, Polk County, Iowa

STATE OF IOWA
COUNTY OF POLK ss.

I, William Warner, Jr., Secretary of the MERCHANTS BONDING COMPANY (MUTUAL), do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said MERCHANTS BONDING COMPANY (MUTUAL), which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Company on this 25th day of May, 2011.



William Warner Jr.
Secretary

VI. STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires.

1. Name of Bidder.
2. Are you currently a licensed contractor by the State of Arkansas?

If so, what is your contractor's license number and expiration date?
3. Permanent main office address.
4. When organized.
5. If a corporation, where incorporated.
6. How many years have been engaged in the contracting business under your present firm or trade name?
7. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion).
8. General character of work performed by your company.
9. Have you ever failed to complete any work awarded to you?
10. Have you ever defaulted on a Contract?

If so, where and why?
11. Have you ever been fined or had your license suspended by a Contractor's Licensing Board?

If so, where and why?
12. List the more important projects recently completed by your company, stating the approximate cost for each, and the month and year completed.
13. List your major equipment available for this Contract.
14. Experience in construction work similar in importance to this project.
15. Background and experience of the principal members of your organization, including the officers.

- 16. Credit available: \$ _____.
- 17. Give Bank reference: _____.
- 18. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?
- 19. The undersigned hereby authorizes and requests any person, firm, or corporation to furnish any information requested by the Owner, in verification of the recitals comprising this statement of Bidder's Qualifications.

Dated at Jonesboro AR this 25th
 day of May, 2011.

Gillis Inc
 (Name of Bidder)
 By Jim Gillis
 Title Pres

STATE OF Arkansas
 COUNTY OF Craighead) SS.

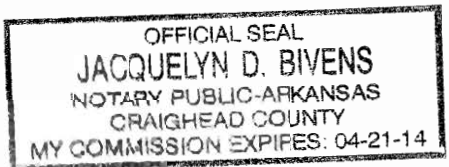
Jim Gillis being duly sworn deposes and says that
 he is Pres of Gillis Inc
 (Name of Organization)

and that the answers to the foregoing questions and all statements therein contained are true and correct.

SUBSCRIBED AND SWORN TO BEFORE ME this 25 day of May, 2011.

Jacquelyn D. Bivens
 (Notary Public)

My Commission Expires:
4-21-14



ANSWERS TO
STATEMENT OF BIDDER'S QUALIFICATIONS
TURTLE CREEK GREENWAY PHASE I, SECTION V

1. GILLIS, INC.

2. YES. CL# 0077450511 EXP 05-31-11. CL# 0077450512 EXP 5-31-12

3. 1335 E PARKER RD., JONESBORO, AR 72404

4. 1979

5. ARKANSAS

6. SINCE 1996. 14 YEARS.

7. DOLLAR GENERAL/MAYNARD	05/10/11	\$132,000
RITTER CENTRE/BUILDING	07/15/11	\$125,000
TEAM CLEAN CARWASH	06/15/11	\$ 49,000
FIRST CHRISTIAN CHURCH	07/01/11	\$242,000

8. SITEWORK, SUBDIVISIONS, DRAINAGE PROJECTS

9. NO

10. NO

11. NO

12. DRAINAGE DIST 29 IMPROVEMENTS	\$149,900	05/10
ELITE AUTO	83,434	02/10
CENTRAL TOYOTA	94,500	12/09
AUTOWASH CARWASH	141,089	11/09
MARKED TREE FENCING	464,541	07/09
PINES DRAINAGE	276,985	09/08
VALLEY-OWENS (CITY OF JBORO)	403,991	09/08
BROOKSTONE SUBDIVISION	297,473	11/07
SOUTHBEND SUBDIVISION	192,602	10/08
BONO LAKE CLEARING	231,400	09/08

13. 315 CAT EXCAVATOR
D6K
DUMP TRUCKS
14. 13 YEARS CONSTRUCTION WORK INCLUDING SIMILAR JOBS SUCH AS:
CENTRAL BAPTIST CHURCH – SITEWORK, BUILT DETENTION POND,
MOVED APRX 170,000 CY DIRT.
CORP OF ENGINEERS – REBUILD LEVEE AT TULOT ARKANSAS
BARRINGTON PARK – BUILT DETENTION POND, CUT LOTS AND
BUILT STREETS
MARKED TREE RAILROAD – BUILT 1 ½ MILES OF RAILROAD SPUR
15. JIM GILLIS, PRES – 33 YEARS IN BUSINESS. OPERATING/COORDINATING 3 CORPORATIONS
SIMUTANEOUSLY
JEANNIE GILLIS, SEC – RETIRED FROM ARK DEPT OF HEALTH (30+ YEARS), OVERSEES ALL
TRAINING AND SAFETY ASPECS OF BUSINESSES—QUALITY CONTROL AND OFFICE
STAFF
TRAVIS FISCHER, PE CFM - REGISTERED PROFESSIONAL ENGINEER WITH 10+ YEARS IN
ENGINEERING/CONSTRUCTION INDUSTRY. CURRENTLY WORKING AS PROJECT
MANAGER HANDLING DAILY MANAGEMENT OF COMPANY
ROBBIE SMART, JOB SUPERINTENDENT – 9 YEARS IN SUPERVISON OF CONSTRUCTION
AND FARM LEVELING WITH DIRT PANS.
16. \$600,000.00
17. INTEGRITY FIRST BANK. STACI BLANKENSHIP.
18. YES
19. SEE ORIGINAL INSERT PAGE FOR SIGNATURES.

VII. CONTRACT

THIS AGREEMENT made this ____ day of _____, 20____, by and

between _____

(a Corporation organized and existing under the laws of the State of _____)

(a partnership consisting of _____)

(an individual trading as _____)

(Strike out the two terms not applicable)

Hereinafter called the "Contractor" and the City of Jonesboro, Arkansas, hereinafter called the "Owner".

WITNESSETH:

That the Contractor and the Owner for the consideration stated herein mutually agree as follows:

ARTICLE 1. Statement of Work. The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment, incidentals and services, including utility and transportation services and perform and complete all work required for the Turtle Creek Greenway Phase I Section V , in strict accordance with the Contract Documents, including all Addenda thereto

_____ dated _____

_____ dated _____

_____ dated _____

as prepared by the Engineer.

ARTICLE 2. The Contract Price. The Owner will pay the Contractor, because of his performance of the Contract, for the total quantities of work performed at the lump sum and unit prices stipulated in the Proposal, subject to additions and deductions as provided in the Section entitled "CHANGES IN THE WORK" under the GENERAL CONDITIONS.

ARTICLE 3. Contract Time. The Contractor agrees to begin work within ten (10) calendar days after issuance by the Owner of a "Work Order" or "Notice to Proceed" and to complete the work

within Ninety (90) calendar days thereafter (except as modified in the GENERAL CONDITIONS of these Contract Documents). If the Contractor shall fail to complete the work within the time specified, he and his Surety shall be liable for payment to the Owner, as liquidated damages ascertained and agreed, and not in the nature of a penalty, the amount specified in the SPECIAL CONDITIONS of these Contract Documents for each day of delay. To the extent sufficient in amount, liquidated damages shall be deducted from the payments to be made under this Contract.

ARTICLE 4. Contract. The executed Contract Documents shall consist of the following:

- | | |
|------------------------------|---|
| a. This Agreement (Contract) | f. General Conditions |
| b. Addenda | g. Supplemental General Conditions |
| c. Advertisement for Bids | h. Special Conditions |
| d. Instructions to Bidders | i. Technical Specifications including
Special Provisions |
| e. Proposal | j. Drawings (Plans) |
| | k. Performance-Payment Bond |

This Contract, together with other Documents enumerated in this Article 4, which said other Documents are as fully a part of the Contract as if hereto attached or herein repeated, form the Contract between the parties hereto. In the event that any provisions in any component part of this Contract conflicts with any provision of any other component part, the conflict shall be resolved by the Engineer whose decision shall be final.

ARTICLE 5. Surety. The Surety on the Performance-Payment Bond shall be a surety company of financial resources satisfactory to the Owner, authorized to do business in the State of Arkansas, and shall comply with applicable Arkansas laws.

IN WITNESS WHEREOF, the parties hereto have caused this CONTRACT to be executed in four (4) counterparts, each of which shall be considered an original on the day and year first above written.

ATTEST:

	(Contractor)
_____	By _____
_____	Title _____

	(Street)

	(City)

	City of Jonesboro
	(Owner)
_____	By _____
_____	_____

VIII. ARKANSAS PERFORMANCE-PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, _____

as Principal, hereinafter called Principal, and _____

of _____ State of _____,
as Surety, hereinafter called the Surety, are held and firmly bound unto the City of Jonesboro as Obligee, hereinafter called Owner, in the amount _____ Dollars (\$ _____) in lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly, severally, and firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, The Principal entered into a Contract with the Owner by written Agreement dated the _____ day of _____, 20____, a copy of which is attached hereto and made a part hereof, hereinafter referred to as the Contract, for the Turtle Creek Greenway Phase I Section V.

NOW THEREFORE, if the Principal shall well and truly perform and complete in good, sufficient, and workmanlike manner all of the work required by said Contract and within the time called for thereby to the satisfaction of the Owner, and shall pay all persons for labor, materials, equipment, and supplies furnished by said Principal in accordance with said Contract (failing which such persons shall have a direct right to action against the Principal and Surety under this obligation, but subject to the Owner's priority) and shall hold and save harmless the Owner from any and all claims, loss, and expense of every kind and nature arising because of or resulting from the Principal's operation under said Contract, except payments to the Principal rightly due the Principal for work under said Contract, then this obligation shall be null and void; otherwise to remain in full force and effect.

Any alterations which may be made in the terms of the Contract, or in the work to be done under it, or the giving by the Owner of an extension of time for the performance of the Contract, or any other forbearance on the part either of the Owner or Principal to the other shall not release in any way the Principal and Surety, or either of them, their heirs, personal representatives, successors, or assigns from their liability hereunder, notice to the Surety of any alteration, extension, or forbearance hereby being waived.

In no event shall the aggregate liability of the Surety exceed the sum set herein.

No suit, action, or proceeding shall be brought on this bond outside the State of Arkansas. No suit, action, or proceeding shall be brought on this bond, except by the Owner, after six (6) months from the date on which final payment to the Contractor falls due. No suit, action, or proceeding shall be brought by the Owner after two (2) years from the date on which final payment to the Contractor falls due.

This bond is executed pursuant to the terms of Arkansas Code Ann. §§ 18-44-501 et. seq.

Executed on this _____ day of _____, 20____.

SEAL

(Principal)

By _____

Title _____

SEAL

(Surety)

By _____
(Attorney-in-Fact)

NOTES:

1. This bond form is mandatory. No other forms will be acceptable.
2. The date of the Bond must not be prior to the date of the Contract.
3. Any surety executing this Bond must appear on the U.S. Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the State of Arkansas.
4. Attach Power of Attorney.

IX. GENERAL CONDITIONS
TABLE OF CONTENTS

GC.1	DEFINITIONS
GC.2	SUPERINTENDENCE BY CONTRACTORS
GC.3	CONTRACTOR'S EMPLOYEES
GC.4	SAFETY OF CONTRACTOR'S EMPLOYEES
GC.5	SUBCONTRACTS
GC.6	OTHER CONTRACTS
GC.7	CONTRACTORS INSURANCE
GC.8	OWNER'S AND ENGINEER'S PROTECTIVE LIABILITY INSURANCE
GC.9	FITTING AND COORDINATION OF THE WORK
GC.10	MUTUAL RESPONSIBILITY OF CONTRACTORS
GC.11	PAYMENT TO CONTRACTOR
GC.12	USE OF COMPLETED PORTIONS
GC.13	CHANGES IN THE WORK
GC.14	CLAIMS FOR EXTRA COST
GC.15	OWNER'S RIGHT TO TERMINATE CONTRACT
GC.16	SUSPENSION OF WORK
GC.17	DELAYS; EXTENSION OF TIME; LIQUIDATED DAMAGES
GC.18	DISPUTES
GC.19	ASSIGNMENT OR NOVATION
GC.20	TECHNICAL SPECIFICATIONS AND DRAWINGS
GC.21	SHOP DRAWINGS
GC.22	REQUESTS FOR SUPPLEMENTARY INFORMATION
GC.23	REFERENCE TO MANUFACTURER OR TRADE NAME-"OR EQUAL CLAUSE"
GC.24	SAMPLES, CERTIFICATES AND TESTS
GC.25	PERMITS AND CODES
GC.26	CARE OF THE WORK
GC.27	QUALITY OF WORK AND PROPERTY
GC.28	ACCIDENT PREVENTION
GC.29	SANITARY FACILITIES
GC.30	USE OF PREMISES
GC.31	REMOVAL OF DEBRIS, CLEANING, ETC.
GC.32	RETURN OF OWNER'S MATERIALS, EQUIPMENT OR PROPERTY
GC.33	OBSERVATION OF THE WORK
GC.34	REVIEW BY LOCAL PUBLIC AGENCY OR OWNER
GC.35	PROHIBITED INTERESTS
GC.36	FINAL INSPECTION
GC.37	PATENTS
GC.38	WARRANTY OF TITLE
GC.39	GENERAL GUARANTY

GC.1 DEFINITIONS

Wherever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:

(1) The term "Addendum" means any change, revision, or clarification of the Contract Documents which has been duly issued by the Local Public Agency, or the Engineer, to prospective Bidders prior to the time of receiving bids.

(2) The term "Award" means the acceptance by the owner of the successful bidder's proposal.

(3) The term "Bidder" means any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

(4) The term "Calendar Day" means every day shown on the calendar.

(5) The term "Change Order" means a written order to the contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the scope of work affected by the change. The work covered by the change order shall be within the scope of the contract.

(6) The term "Contract" means the Contract executed by the Local Public Agency and the Contractor of which these GENERAL CONDITIONS form a part.

(7) The term "Contract Documents" means and shall include the following: Executed Contract, Addenda (if any), Advertisement For Bids, Instructions to Bidders, Proposal, Performance-Payment Bond, General Conditions, Supplemental General Conditions, Special Conditions, Supplemental Special Conditions, Technical Specifications, and Drawings.

(8) The term "Contractor" means the person, firm, or corporation entering into the Contract with the Local Public Agency to construct and install the improvements embraced in this project.

(9) The term "Engineer" means the City of Jonesboro Engineering Department, serving the Local Public Agency with engineering services, its successor, or any other person or persons employed by said Local Public Agency to furnish engineering services in connection with the construction embraced in the Contract.

(10) The term "Local Government" means the City of Jonesboro, Arkansas, within which the Project is situated.

(11) The term "Local Public Agency" or "Owner" means the City of Jonesboro, which is authorized to undertake this Contract.

(12) The term "Plans" or "Drawings" means the official drawings or exact reproductions which show the location, character, and details of the work contemplated, and which are to be considered part of the contract, supplementary to the specifications.

(13) The term "Proposal" means the written offer of the Bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the Plans and Specifications.

(14) The term "Specifications" means a part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials, or testing, which are cited in the specifications by reference shall have the same force and effect as if included in the contract physically.

(15) The term "Subcontractors" shall mean the individual, partnership or corporation entering into an agreement with the Contractor to perform any portion of the work covered by the Plans and Specifications.

(16) The term "Surety" shall mean any person, firm, or corporation that has executed, as Surety, the Contractor's Performance Bond securing the performance of the Contract.

(17) The term "Technical Specifications" means that part of the Contract documents which describes, outlines and stipulates the quality of the materials to be furnished; the quality of workmanship required; and the controlling requirements to be met in carrying out the construction work to be performed under this Contract. This also includes Special Provisions.

(18) The term "Work" shall mean the furnishing of all necessary labor, tools, equipment, appliances, supplies, and material other than materials furnished by the Owner as specified to complete the construction covered by the Plans and Specifications.

GC.2 SUPERINTENDENCE BY CONTRACTORS

Except where the Contractor is an individual and gives his personal superintendence to the work, the Contractor shall provide a competent superintendent, satisfactory to the Local Public Agency and the Engineer, on the work at all times during working hours with full authority to supervise and direct the work and who shall be the Contractor's agent responsible for the faithful discharge of the Contractor's obligations under the Contract.

The Owner shall have the authority to require the Contractor to remove from the work any incompetent or insubordinate superintendent.

GC.3 CONTRACTOR'S EMPLOYEES

The Contractor shall employ only competent skillful workers and shall at all times enforce strict discipline and good order among the employees.

The Contractor shall neither permit nor suffer the introduction or use of alcoholic beverages or controlled substances upon or about the work embraced in this Contract.

The Owner may require the Contractor to dismiss from the work such employee or employees as the Owner or the Engineer may deem incompetent, or careless, or insubordinate.

GC.4 SAFETY OF CONTRACTOR'S EMPLOYEES

The Contractor shall be responsible for the safety of his employees during the progress of the work as well as the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance or operation.

GC.5 SUBCONTRACTS

The Contractor is responsible to the Owner for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by the subcontractors and is aware that nothing contained in the Contract Documents shall create any contractual relation between any subcontractor and the Owner.

GC.6 OTHER CONTRACTS

The Local Public Agency may award, or may have awarded other Contracts for additional work, and the Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other Contracts as may be directed by the Local Public Agency. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

GC.7 CONTRACTOR'S INSURANCE

Before any work is commenced, the Contractor shall furnish an approved certificate of insurance addressed to the Owner, showing that he carries the following insurance which shall be maintained throughout the term of the Contract.

(1) Workmen's Compensation

- Statutory Limit

- | | |
|---|---|
| (2) Employer's Liability for Hazardous Work | - If Needed |
| (3) Public Liability (Bodily Injury)
and Property Damage | - \$1,000,000/occurrence
- \$2,000,000/aggregate |
| (4) Builder's Risk | - Insurable Portion |

The Contractor shall carry or require that there be carried the insurance listed in (1) through (3) above for the protection of all his employees and those of his Subcontractors engaged in work under this Contract, and for the protection of the public.

If the work includes pipelines or other underground structures, the Property Damage Liability shall include explosion, collapse, and underground coverage.

The premiums for all insurance and the bond required herein shall be paid by the Contractor.

It shall be the obligation of the Contractor to complete and deliver to the Owner the structure required by these Contract Documents regardless of any loss, damage to, or destruction of the structure prior to delivery.

The City of Jonesboro shall be included on the policy as additional insured.

GC.8 OWNER'S AND ENGINEER'S PROTECTIVE LIABILITY INSURANCE

The Owner requires the Contractor to name the City of Jonesboro and the Engineer as an additional insured on their insurance policies referenced in GC.7.

GC.9 FITTING AND COORDINATION OF THE WORK

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, Subcontractors, or material men engaged upon this Contract. He shall be prepared to guarantee to each of his Subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

GC.10 MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts of neglect or through failure to comply with any applicable Government regulations by the Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Local Public Agency on account of any damage alleged to have been so

sustained, the Local Public Agency will notify this Contractor, who shall defend at his own expense any suit based upon such claim, and, if any judgments or claims against the Local Public Agency shall be allowed, the Contractor shall pay or satisfy such judgments or claim and pay all costs and expenses in connection therewith.

GC.11 PAYMENT TO CONTRACTOR

The Engineer will prepare (with the required assistance from the Contractor) the application for partial payment. If the bid contains lump sum prices, the Contractor shall furnish to the Engineer, upon request, a detailed cost breakdown of the several items of work involved in the lump sum prices. The Engineer will use this cost breakdown to determine the amount due the Contractor as progress payment. A cut-off time shall be established near the last day of the month such as to allow sufficient time for the application to be prepared, approved by the Contractor, and submitted by the Engineer to the Owner by the first day of the successive month. The amount of the payment due to the Contractor shall be determined by the total value of work completed to date, deducting ten percent (10%) for retainage, adding the value of submitted paid invoices covering construction materials, properly stored on the site, and deducting the amount of all previous payments. After the project is fifty percent (50%) complete, no additional retainage beyond ten percent (10%) of the first fifty percent (50%) of the project cost will be withheld provided that the Contractor is making satisfactory progress and there is no specific cause for greater withholding until completion of the project at which time the retainage will be released with the final payment. The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit and lump sum prices contained in the Proposal. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of paid invoices, covering construction materials for which material payments are made, shall be furnished to the Engineer before such material payments are made.

NOTE: It has been the policy of the Owner to make payments for properly stored materials/equipment based upon invoice price and allow the Contractor to submit paid invoices within 30 days (or the next partial payment period). If paid invoices are not provided within the time allowed, then the materials/equipment so paid for will be removed from the next partial payment.

Monthly or partial payments made by the Owner to the Contractor are monies advanced for the purpose of assisting the Contractor to expedite the work of construction. All material and complete work covered by such monthly or partial payments shall remain the property of the Contractor, and he shall be responsible for the care and protection of all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this Contract complete and satisfactory to the Owner in all details.

GC.11.1 Withholding Payments: The Local Public Agency may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the Local Public Agency and if it

so elects may also withhold any amounts due from the Contractor to any Subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Local Public Agency and will not require the Local Public Agency to determine or adjust any claims or disputes between the Contractor and his Subcontractors or material dealers, or to withhold any monies for their protection unless the Local Public Agency elects to do so. The failure or refusal of the Local Public Agency to withhold any monies from the Contractor shall not impair the obligations of any Surety or Sureties under any bond or bonds furnished under this Contract. Such withholding may also occur as a result of the Contractor's failure or refusal to prosecute the work with such diligence as will insure its completion within the time specified in these Contract Documents, or as modified as provided in these Contract Documents, or if the Contractor fails to comply with any applicable regulations promulgated by the U.S. Government or any other Government agencies.

GC.11.2 Final Payment: After final inspection and acceptance by the Local Public Agency of all work under the Contract, the application for final payment shall be prepared which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit and lump sum prices stipulated in the Unit Price Schedule. The total number of the final payment due the Contractor under this Contract shall be the amount computed as described above less all previous payments. All prior payments shall be subject to correction in the final payment. Final payment to the Contractor shall be made subject to his furnishing the Local Public Agency with a release in satisfactory form of all claims against the Local Public Agency arising under and by virtue of his Contract, other than such claims, if any, as may be specifically excepted by the Contractor from the operation and the release as provided under the section entitled DISPUTES under GENERAL CONDITIONS.

The Local Public Agency, before paying the final estimate, may require the Contractor to furnish releases or receipts from all Subcontractors having performed any work and all persons having supplied materials, equipment (installed on the Project), and services to the Contractor, if the Local Public Agency deems the same necessary in order to protect its interest. The Local Public Agency, however, may, if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall not impair the obligations of any Surety or Sureties furnished under this Contract.

Withholding of any amount due the Local Public Agency under the section entitled LIQUIDATED DAMAGES FOR DELAY under SPECIAL CONDITIONS, shall be deducted from the payments due the Contractor.

All equipment warranties and general guarantee and maintenance bond provisions shall become effective for one year upon date of final acceptance of the completed, project by the Local Public Agency.

GC.11.3 Payments Subject to Submission of Certificates: Each payment to the Contractor by the Local Public Agency shall be made subject to submission by the Contractor of all written certifications

required of him.

GC.12 USE OF COMPLETED PORTIONS

The Owner shall have the right to use any completed or partially completed portion of the work and such use shall not be considered as an acceptance of any work.

GC.13 CHANGES IN THE WORK

The Local Public Agency may make changes in the scope of the work required to be performed by the Contractor under the Contract or make additions thereto, or omit work therefrom without invalidating the Contract, and without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the Guaranty Bonds, and without relieving or releasing the Surety or Sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.

Except for the purpose of affording protection against any emergency endangering life or property, the Contractor shall make no change in the materials used or in the specified manner of constructing and/or installing the improvements, or supply additional labor, services or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Local Public Agency authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract price will be valid unless so ordered.

After the work is complete, a final change order may be prepared to be accepted by the Owner and Contractor to adjust final payment as required to cover the actual units of work acceptably completed.

If the applicable unit prices are contained in the Proposal (established as a result of either a unit price or a Supplemental Schedule of Unit Prices) the Local Public Agency may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the applicable unit and lump sum prices specified in the Contract; provided that in case of a unit price Contract the net value of all changes does not increase or decrease the original total amount shown in the Agreement by more than twenty-five (25) percent in accordance with the section entitled BALANCED BID; VARIATION IN QUANTITIES under INSTRUCTIONS TO BIDDERS.

If applicable unit prices are not contained in the Unit Price Schedule as described above or if the total net change increases or decreases the total Contract price more than twenty-five (25) percent, the Local Public Agency shall, before ordering the Contractor to proceed with a desired change, request an itemized Proposal from him covering the work involved in the change after which the procedure shall be as follows:

- (1) If the Proposal is acceptable the Local Public Agency will prepare the Change Order in accordance therewith for acceptance by the Contractor and
- (2) If the Proposal is not acceptable and prompt agreement between the two (2) parties cannot be reached, the Local Public Agency may order the Contractor to proceed with the work on a Force Account basis, under which the net cost shall be the sum of the actual costs that follow:
 - (A) Labor, including foremen;
 - (B) Materials entering permanently into the work;
 - (C) The ownership or rental cost of construction plant and equipment during the time of use on the extra work;
 - (D) Power and consumable supplies for the operation of power equipment;
 - (E) Insurance;
 - (F) Social Security and old age and unemployment contributions.

To the net cost shall be added a fixed fee agreed upon, but not to exceed fifteen (15) percent of the net cost, to cover supervision, overhead, bond, and any other general expense, and profit.

Each Change Order shall include in its final form:

- (1) A detailed description of the change in the work.
- (2) The Contractor's Proposal (if any) or a conformed copy thereof.
- (3) A definite statement as to the resulting change in the Contract price and/or time.
- (4) The statement that all work involved in the change shall be performed in accordance with Contract requirements except as modified by the Change Order.

GC.14 CLAIMS FOR EXTRA COST

If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, he shall, within ten (10) days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the Local Public Agency, stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.

Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, or bench marks, will not be recognized unless accompanied by certified survey data made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted or would result in handling more material, or performing more work, than would be reasonably estimated from the Drawings and maps issued.

Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall at once be reported to the Local Public Agency, and work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the Local Public Agency.

If, on the basis of the available evidence, the Local Public Agency determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall then be as provided in the Section entitled CHANGES IN THE WORK under GENERAL CONDITIONS.

GC.15 OWNER'S RIGHT TO TERMINATE CONTRACT

Termination for Cause

If the Contractor shall be adjudged as bankrupt or shall file a petition for an arrangement or reorganization under the Bankruptcy Act, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except under conditions where extension of time is approved, to supply adequate workmen, equipment and material, or disregard laws, ordinances, or the instructions of the Engineer, or otherwise be guilty of a violation of any provisions of the Contract; provided further that if the Contractor at any time fails to comply with any applicable Federal or State regulation which prevents either the Local Public Agency or the Contractor from fulfilling its obligations under these Contract Documents, then the Owner upon certification of the Engineer that sufficient cause exists to justify such action may, without prejudice to any other right or remedy, and after giving the Contractor ten (10) days' written notice, terminate the employment of the Contractor.

At the expiration of the said ten (10) days, the Owner may immediately serve notice upon the Surety to complete the work.

In the case the Surety fails to comply with the notice within thirty (30) days after service of such notice, the Owner may complete the work and charge the expense of the completion, including labor, materials, tools, implements, machinery, or apparatus, to said Contractor; and the expense so charged shall be deducted and paid by the Owner out of such monies as may be due, or that may thereafter at any time become due to the Contractor under and by virtue of this Contract. And in case such expense is less than the sum which would have been payable under this Contract if the same had been completed by the Contractor, then said Contractor shall be entitled to receive the difference. And in

case such expense is greater than the sum which would have been payable under this Contract if the same had been completed by said Contractor, then the Contractor and his Surety shall pay the amount of such excess to the Owner, on demand from said Owner or Engineer of the amount so due.

Termination for Convenience

The City of Jonesboro may, by written notice to the Contractor, terminate this contract without cause. The City must give notice of termination to the Contractor at least ten (10) days prior to the effective date of termination.

Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

- (1) cease operations as directed by the Owner in the notice;
- (2) take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- (3) except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Subcontracts and purchase orders and enter into no further Subcontracts and purchase orders.

In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and actual costs incurred directly as a result of such termination, and there will be no compensation for overhead and profit on work not executed.

GC.16 SUSPENSION OF WORK

Should contingencies arise to make such action necessary, the Owner shall have the right to suspend the whole or any part of the work for a period not to exceed sixty (60) days by giving the Contractor notice in writing three (3) days prior to the suspension.

The Contractor after written notice to resume work shall begin within ten (10) days from the date of such notice.

If the work or any part thereof shall be stopped by the Owner's notice and the Owner fails to notify the Contractor to resume work within sixty (60) days, the Contractor may abandon that portion of the work so suspended and the Contractor shall be paid for all work performed on the portion so suspended at unit prices quoted in the Unit Price Schedule for completed work involved, at agreed prices on any extra work involved, and at a fair and equitable price for partially completed work involved.

The Engineer may suspend work pending the settlement of any controversy. The Contractor shall not be entitled to any claim for loss or damage by reason of such delay, nor shall he be entitled to any

extension of time; but an extension may be granted by the Owner at his discretion.

GC.17 DELAYS - EXTENSION OF TIME - LIQUIDATED DAMAGES

If the Contractor is delayed at any time in the progress of the work by any act or neglect of the Owner, the Owner's Engineer or employees, or by any separate contractor employed by the Owner, or by changes ordered in the work, or by strikes, lock-outs, fire, unusual delay in transportation, unavoidable casualty, or any other cause beyond the Contractor's control, then the time of completion shall be extended for such reasonable time as the Owner may decide; provided, however, said time of completion shall be extended upon the following conditions and no other.

- 1) Requests for extension of time shall be in writing. No extension of time shall be granted automatically.
- 2) The Contractor claiming an extension of time because of any of the contingencies hereinabove mentioned, shall, within ten (10) days of the occurrence of the contingency which justifies the delay, notify the Owner in writing of his claim and the reasons therefore.
- 3) In event of a continuing cause of delay, only one claim is necessary.

GC.17.1 Excusable Delays: The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due:

- (1) To any acts of the Government, including controls or restrictions upon requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency;
- (2) To any acts of the Owner;
- (3) To causes not reasonable foreseeable by the parties of this Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other Contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones, and other extreme weather conditions.
- (4) To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs (1), (2), and (3) of this paragraph.

It is acknowledged between the parties to this Contract that the work to be performed by the Contractor will result in a benefit to the Owner and that a delay in completion of the work will be

detrimental to the Owner. It is further acknowledged that, while work is in progress, the Owner shall incur an indeterminable amount of expense as a result of necessary supervision of the work and other overhead and administrative expenses.

It is, therefore, agreed that if there is a delay in the completion of the work beyond the period elsewhere herein specified which has not been authorized by the Owner as set forth above, then the Owner may deduct from the Contract price the amount stated in the Special Conditions, bound herewith, as liquidated damages.

GC.18 DISPUTES

All disputes arising under this Contract or its interpretation, whether involving law or fact or both, or extra work, and all claims for alleged breach of Contract shall within ten (10) days of commencement of the dispute be presented by the Contractor to the Local Public Agency for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim, but shall state the facts surrounding the claim in sufficient detail to identify the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed. Any claim not presented within the time limit specified within this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the Local Public Agency of notice thereof.

The Contractor shall submit in detail his claim and his proof thereof. Each decision by the governing body of the Local Public Agency will be in writing and will be mailed to the Contractor by registered mail, with return of receipt requested.

If the Contractor does not agree with any decision of the Local Public Agency, he shall in no case allow the dispute to delay the work, but shall notify the Local Public Agency promptly that he is proceeding with the work under protest, and he may then except the matter in question from the final release.

GC.19 ASSIGNMENT OR NOVATION

The Contractor shall not assign or transfer, whether by an assignment or novation, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the local Public Agency; provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the Local Public Agency. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment, supplied for the performance of the work under this Contract in favor of all persons, firms, or corporations rendering such labor or services or supplying such materials, tools, or equipment.

GC.20 TECHNICAL SPECIFICATIONS AND DRAWINGS

The Drawings and this Specification are to be considered cooperative. All work necessary for the completion of the facility shown on the Drawings, but not described in this Specification, or described in this Specification but not shown on the Drawings, OR REASONABLY IMPLIED BY EITHER OR BOTH, shall be executed in the best manner, the same as if fully shown and specified. When no figures or memoranda are given, the Drawings shall be accurately followed, according to their scale, but in all cases of discrepancy in figures or details, the decision of the Engineer shall be obtained before proceeding with the Work. If the Contractor adjusts any such discrepancy without first having obtained the approval of the Engineer, it shall be at his own risk, and he shall bear any extra expense resulting therefrom.

GC.21 SHOP DRAWINGS

Shop Drawings shall be required for all equipment, materials, and as required by the Engineer. All Shop Drawings, Machinery Details, Layout Drawings, etc., shall be submitted to the Engineer in four (4) copies for review (unless otherwise specified) sufficiently in advance of requirements to afford ample time for checking, including time for correcting, resubmitting, and rechecking if necessary. The Contractor may proceed, only at his own risk, with manufacture or installation of any equipment or work covered by said Shop Drawings, etc. until they are reviewed, and approved; and no claim, by the Contractor, for extension of the Contract time will be granted by reason of his failure in this respect.

Any Drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any Drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of Contract price and/or time; otherwise, the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the Drawings have been reviewed.

The review of Shop Drawings by the Engineer shall be considered an accommodation to the Contractor to assist him in the execution of the Contract. The Engineer's review of such Drawings shall not relieve the Contractor of his responsibility to perform the work in strict accordance with the Plans and Specifications, and approved changes.

If the Shop Drawing is in accordance with the Contract or involves only a minor adjustment in the interest of the Local Public Agency not involving a change in Contract price or time, the Engineer shall so stamp the Drawing and shall contain in substance the following:

"Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is

responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner".

GC.22 REQUESTS FOR SUPPLEMENTARY INFORMATION

It shall be the responsibility of the Contractor to make timely requests of the Local Public Agency for any additional information not already in his possession which should be furnished by the Local Public Agency under the terms of this Contract, and which he will require in the planning and execution of the work. Such requests may be submitted from time to time as the need is approached, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Each request shall be in writing, and shall list the various items and the latest date by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after the Contract award and shall be as complete as possible at that time. The Contractor shall, if requested, furnish promptly any assistance and information the Engineer may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for any delay in his work or to others arising from his failure to comply fully with the provisions of this Section.

GC.23 REFERENCE TO MANUFACTURER OR TRADE NAME - "OR EQUAL CLAUSE"

If the Plans, Specifications, or Contract Documents, laws, ordinances or applicable rules and regulations permit the Contractor to furnish or use a substitute that is equal to any material or equipment specified, and if the Contractor wishes to furnish or use a proposed substitute, he shall make written application to the Engineer for approval of such a substitute certifying in writing that the proposed substitute will perform adequately the functions called for in the general design, be similar and of equal substance to that specified, and be suited to the same use and capable of performing the same functions as that specified; the use of such substitute will not require revisions of related work. No substitute shall be ordered or installed without the written approval of the Engineer who will be the judge of equality and may require the Contractor to furnish such other data regarding the proposed substitute as he considers pertinent. No substitute shall be ordered or installed without such performance guarantee and bonds as the Owner may require which shall be furnished at Contractor's expense.

Where such substitutions alter the design or space requirements indicated on the Contract Drawings, detailed drawings shall be prepared and submitted by the Contractor delineating any changes in, or additions to, the work shown on the Contract Drawings, and such drawings and changes or additions to the work shall be made by the Contractor at no additional expense to the City. In all cases, the burden of proof that the material or equipment offered for substitution is equal in construction, efficiency, and service to that named on the Contract Drawings and in these Contract Documents shall rest on the Contractor, and unless the proof is satisfactory to the Engineer, the substitution will not be approved.

GC.24 SAMPLES, CERTIFICATES, AND TESTS

The Contractor shall submit all material, product, or equipment samples, descriptions, certificates, affidavits, etc., as called for in the Contract Documents or required by the Engineer, promptly after award of the Contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the Contract time. Submit four (4) copies of data for Engineer's review.

Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with Contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer, and all specifications or other detailed information which will assist the Engineer in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

Approval of any materials shall be general only and shall not constitute a waiver of the Local Public Agency's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable, at the Contractor's expense.

Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:

- (1) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
- (2) The Contractor shall assume all costs of re-testing materials which fail to meet Contract requirements;
- (3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient; and
- (4) The Local Public Agency will pay all other expenses.

GC.25 PERMITS AND CODES

The Contractor shall give all notices required by and comply with all applicable laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers, the Contractor shall remove such work without cost to the Local Public Agency.

The Contractor shall at his own expense, secure and pay to the appropriate department of the Local Government the fees or charges for all permits for street pavements, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, building, electrical, plumbing, water, gas, and sewer permits required by the local regulatory body or any of its agencies.

The Contractor shall comply with applicable local laws and ordinances governing the disposal of surplus excavation, materials, debris, and rubbish on or off the site of the work, and commit no trespass on any public or private property in any operation due to or connected with the Improvements embraced in this Contract.

GC.26 CARE OF WORK

The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any injury, including death, to any person, and for any damage to property which may result from their failure, or from their improper construction, maintenance, or operation. He shall indemnify and save harmless the Local Public Agency and the Engineer and their employees and agents, against any judgment with costs, which may be obtained as a result of such injury or property damage, because of the alleged liability of the Local Public Agency or of the Engineer.

The Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Local Public Agency.

The Contractor shall provide sufficient competent watchmen, as required to protect the work both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.

In an emergency affecting the safety of life or property, including adjoining property, the Contractor, without special instructions or authorization from the Local Public Agency, is authorized to act at his discretion to prevent such threatened loss or injury, and he shall so act. He shall likewise act if instructed to do so by the Local Public Agency. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Local Public Agency as provided in the

Section entitled CHANGES IN THE WORK under GENERAL CONDITIONS.

The Contractor shall avoid damage, as a result of his operations, to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations, to the satisfaction of the Owner.

The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the Improvements embraced in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Local Public Agency, and the Engineer, from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which it may be claimed that the Local Public Agency, or the Engineer, is liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

GC.27 QUALITY OF WORK AND PROPERTY

All property, materials, and equipment shall be new and free of defects upon completion of the Contractor's performance and, unless different standards are specified elsewhere in the Contract Documents, shall be of the best type and quality available for the purpose. All of the Contractor's work shall be performed with the highest degree of skill and completed free of defects and in accordance with the Contract Documents. Any work, property, materials, or equipment not in conformance with these standards shall be considered defective. If any work, property, materials or equipment is discovered to have been defective or not in conformance with the Contract Documents, whether said discovery is made before or after completion of performance, the Contractor, at his expense, after written notice from the Owner or Engineer, shall promptly replace or correct the deficiency and pay any engineering costs and consequential expense or damage incurred by the Owner in connection therewith. If the Contractor fails to promptly correct all deficiencies, the Owner shall have the option of remedying the defects at the Contractor's cost. If the Contractor is required to furnish shop drawings or designs, the above provisions shall apply to such drawings or designs.

Neither the Owner's payment, acceptance, inspection or use of the work, property, materials, or equipment, nor any other provision of the Contract Documents shall constitute acceptance of work, property, materials, or equipment which are defective or not in accordance with the Contract Documents. If the Contractor breaches any provision of the Contract Documents with respect to the quality of the work, property, materials, equipment or performance, whether initial or corrective, his liability to the Owner shall continue until the statute of limitations with respect to such breach of contract has expired following discovery of the defect. All parts of this section are cumulative to any other provisions of the Contract Documents and not in derogation thereof. If it is customary for a

warranty to be issued for any of the property to be furnished hereunder, such warranty shall be furnished, but no limitations in any such warranty shall reduce the obligations imposed under the Contractor in the Contract Documents or by Arkansas Law; but if any greater obligations than imposed in this Contract are specified in any such warranty or by Arkansas Law, those greater obligations shall be deemed a part of this Contract and enforceable by the Owner.

GC.28 ACCIDENT PREVENTION

The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes, including applicable parts of the Arkansas Department of Labor Safety Code, shall be observed. The Contractor shall take or cause to be taken such safety and health measures, additional to those herein required, as he may deem necessary or desirable. Machinery, equipment, and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.

The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Local Public Agency with reports concerning these matters.

The Contractor shall indemnify and save harmless the Local Public Agency, and the Engineer, from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract.

GC.29 SANITARY FACILITIES

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and Local Government. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

GC.30 USE OF PREMISES

The Contractor shall confine his equipment, storage of materials, and construction operations to the Rights-of-Way to accommodate the permanent construction furnished by the Local Public Agency, or as may be directed otherwise by the Local Public Agency, and shall not unreasonably encumber the site of other public Rights-of-Way with his materials and construction equipment. In case such Rights-

of-Way furnished by the Local Public Agency are not sufficient to accommodate the Contractor's operations, he shall arrange with the Local Government, or with the owner or owners of private property for additional area or areas, and without involving the Local Public Agency in any manner whatsoever.

The Contractor shall comply with all reasonable instructions of the Local Public Agency and the ordinances and codes of the Local Government (including but not limited to those) regarding signs, advertising, traffic, fires, explosives, danger signals, and barricades.

GC.31 REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the project site and public Rights-of-Way reasonably clear. Upon completion of the work, he shall remove all temporary construction facilities, debris, and unused materials provided for the work, thoroughly clean all drainage pipes, structures, ditches, and other features, and put the whole site of the work and public Rights-of-Way in a neat and "broom" clean condition. Trash burning on the site of the work will be subject to prior approval of the Jonesboro Fire Department.

GC.32 RETURN OF OWNER'S MATERIALS, EQUIPMENT OR PROPERTY

Any materials, equipment or other property which belongs to the Owner, removed by the Contractor, shall be delivered to the Owner's designated warehouse unless its re-use is specified in the Plans and Specifications. If the Contractor fails to deliver the materials, equipment, or other property, the value, as determined by the Engineer, shall be deducted from amounts due the Contractor.

GC.33 OBSERVATION OF WORK

The Engineer, his authorized representative, and any Federal, State, County, or local authority representative having jurisdiction over any part of the work, or area through which the work is located, shall at all times have access to the work in progress.

The detailed manner and method of performing the work shall be under the direction and control of the Contractor, but all work performed shall at all times be subject to the observation of the Engineer or his authorized representative to ascertain its conformance with the Contract Documents. The Contractor shall furnish all reasonable aid and assistance required by the Engineer for the proper observation and examination of the work and all parts thereof.

The Engineer is not responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction, or safety precautions and programs incident thereto.

Observers may be appointed by the Engineer or Owner. Observers shall have no authority to permit

any deviation from the Plans and Specifications except on written order from the Engineer and the Contractor will be liable for any deviation except on such written order. Observers shall have authority, subject to the final decision of the Engineer, to condemn and reject any defective work and to suspend the work when it is not being performed properly.

The observer shall in no case act as superintendent or foreman or perform other duties for the Contractor, nor interfere with the management of the work by the latter. Any advice which the observer may give the Contractor shall in no way be construed as binding to the Engineer in any way or releasing the Contractor from fulfilling all of the terms of the Contract.

Any defective work may be rejected by the Engineer at any time before final acceptance of the work, even though the same may have been previously overlooked and estimated for payment and payment therefore made by the Owner.

The Contractor shall notify the Engineer sufficiently in advance of backfilling or concealing any facilities to permit proper observation. If the facilities are concealed without approval or consent of the Engineer, the Contractor shall uncover for observation and recover such facilities all at his own expense, when so requested by the Engineer.

Should it be considered necessary or advisable by the Engineer at any time before final acceptance of the entire work to make an examination of work already completed, by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or his Subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus fifteen (15) percent of such costs to cover superintendence, general expenses and profit, shall be allowed the Contractor and he shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.

Observation of materials and appurtenances to be incorporated in the Improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such observation and acceptance, unless otherwise stated in the Technical Specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the observation of materials as a whole or in part will be made at the project site.

All condemned or rejected work shall be promptly taken out and replaced by satisfactory work. Should the Contractor fail or refuse to comply with the instructions in this respect, the Owner may, upon certification by the Engineer, withhold payment, proceed to terminate the Contract, or perform work as provided herein.

GC.34 REVIEW BY LOCAL PUBLIC AGENCY OR OWNER

The Local Public Agency, its authorized representatives and agents, shall at all times during work hours have access to and be permitted to observe and review all work, materials, equipment, payrolls, and personnel records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Local Public Agency through its authorized representatives or agents. Representatives of Federal, State, and local government agencies also have the right of physical inspection of the work during work hours.

GC.35 PROHIBITED INTERESTS

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof. No officer, employee, architect, attorney, engineer, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any executive, supervisory, or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof.

GC.36 FINAL INSPECTION

When the Improvements embraced in this Contract are substantially completed, the Contractor shall notify the Local Public Agency in writing that the work will be ready for final inspection on a definite date which shall be stated in the notice. The notice will be given at least ten (10) days prior to the date stated for final inspection, and bear the signed concurrence of the representative of the Local Public Agency having charge of observation. If the Local Public Agency determines that the status of the Improvements is as represented, it will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as practicable. The inspection party will also include the representatives of each Department of the Local Government and any other involved government agencies when such improvements are later to be accepted by the Local Government and/or other government agencies.

GC.37 PATENTS

The Contractor shall hold and save harmless the Local Public Agency, its officers, employees, and the Engineer, from liability of any nature or kind, including costs and expenses, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the Local Public Agency, unless otherwise specifically

stipulated in the Technical Specifications.

GC.38 WARRANTY OF TITLE

No material, supplies, or equipment for the work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Local Public Agency free from any claims, liens, or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract, shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Local Public Agency. The provisions of this paragraph shall be inserted in all subcontracts and material Contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal Contract is entered into for such materials.

GC.39 GENERAL GUARANTY

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the Improvements embraced in this Contract by the Local Public Agency or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of twelve (12) months from the agreed upon day of final acceptance of the work. The Local Public Agency will give notice of defective materials and work with reasonable promptness.

X. SUPPLEMENTAL GENERAL CONDITIONS

TABLE OF CONTENTS

SGC.1	PROGRESS SCHEDULE
SGC.2	DRAWINGS
SGC.3	ADDITIONAL INSURANCE
SGC.4	RECORD DRAWINGS
SGC.5	TRENCH AND EXCAVATION SAFETY SYSTEMS
SGC.6	MINIMUM WAGES
SGC.7	ARKANSAS PREVAILING WAGE RATES

SGC.1 PROGRESS SCHEDULE

The Contractor shall submit a construction contract schedule of the bar graph (or other approved) type seven (7) calendar days prior to the preconstruction conference showing the following information as a minimum:

- (1) Actual date construction is scheduled to start if different from the date of notice to proceed.
- (2) Planned contract completion date.
- (3) Beginning and completion dates for each phase of work.
- (4) Respective dates for submission of shop drawings and the beginning of manufacture, the testing of, and the installation of materials, supplies, and equipment.
- (5) All construction milestone dates.
- (6) A separate graph showing work placement in dollars versus contract time. The schedule shall incorporate contract changes as they occur. The schedule shall be maintained in an up-to-date condition and shall be available for inspection at the construction site at all times.

The construction contract schedule shall be submitted in conjunction with and/or in addition to any other specification requirements concerning schedules.

SGC.2 DRAWINGS

One (1) set of Plans and Specifications shall be furnished to the Contractor, at no charge, for construction purposes. Additional copies may be obtained at cost of reproduction upon request.

The Contractor shall keep one (1) copy of all drawings and Contract Documents in good condition readily accessible at the site of the work available to the Engineer and his authorized representatives.

SGC.3 ADDITIONAL INSURANCE (i.e. Railroad Insurance)

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SGC.4 RECORD DRAWINGS

Before any work is started, the Contractor shall obtain at his own expense one set of Plans to be used for Record Drawings. The Engineer will supply the Plans at printing cost to the Contractor. Record Drawings will be kept on full-size plan sheets; no half-size sheets will be permitted. The Record Drawings shall be stored and maintained in good condition at all times by the Contractor and shall be

made available to the Engineer at the work site immediately at the Engineer's request. All writing, notes, comments, dimensions, etc. shall be legible. The Record Drawings shall be stored flat and shall not be rolled. The Record Drawings shall be submitted to the Engineer before the project can be accepted.

The Contractor shall accurately identify and document the locations of all underground and/or concealed work that he has performed and/or has been affected by his work. This shall include all equipment, conduits, pipe lines, valves, fittings and other appurtenances and underground structures that are part of the Contractor's work and their proximity to existing underground structures and utilities to the extent known. The Contractor will certify accuracy of the Record Drawings by endorsement.

The Contractor's work shall be documented on the Record Drawings in an on-going manner. Distances, offsets, depths, etc. shall be accurately measured from permanent fixed objects so that the Owner can expose any item of the work in the future with a minimum of effort. All such measurements shall be made before the items of work are covered or backfilled. The Contractor shall be required to expose and recover/backfill the work at his own expense if, in the Engineer's opinion, the measurements need to be verified.

SGC.5 TRENCH AND EXCAVATION SAFETY SYSTEM

This section covers trench and excavation safety system required for constructing improvements that necessitate open excavations on the project. All work under this item shall be in accordance with the current edition of the "Occupational Safety and Health Administration Standard for Excavation and Trenches Safety System, 29 CFR 1926, Subpart P.

The Contractor, prior to beginning any excavation, shall notify the State Department of Labor (Safety Division) that work is commencing on a project with excavations greater than five feet.

The Contractor shall notify all Utility Companies and Owners in accordance with OSHA Administration 29 CFR 1926.651(b) (2) for the purpose of locating utilities and underground installations.

Where the trench or excavation endangers the stability of a building, wall, street, highway, utilities, or other installation, the Contractor shall provide support systems such as shoring, bracing, or underpinning to ensure the stability of such structure or utility.

The Contractor may elect to remove and replace or relocate such structures or utilities with the written approval of the Owner of the structure or utility and the Project Owner.

The work required by this item will be paid for at the price bid for "Trench and Excavation Safety Systems". After award of the contract, the Contractor shall submit to the Engineer a breakdown of cost for work involved in the price bid for "Trench and Excavation Safety Systems" and shall, with each periodic payment request, submit a certification by the Contractor's "competent person" as defined in Subpart "P" 1926.650(b) that the Contractor has complied with the provisions of "Occupational Safety and Health Administration Standard for Excavation and Trenches Safety System", 29 CFR 1926 Subpart

P for work for which payment is requested.

SGC.6 MINIMUM WAGES

The Contractor shall comply with the provisions of the Arkansas Prevailing Wage Law, Arkansas Code Annotated §§ 22-9-301 to 22-9-313 (1987) and the administrative regulations promulgated thereunder, as they apply under this Contract.

It shall be the responsibility of each Bidder to determine the consequences of the applicable provisions of the Arkansas Prevailing Wage Law, and include in his bid any costs made necessary because of them. No additional payment will be made, and no extension of Contract time will be allowed because of the provisions of the Law.

The Contractor shall comply with all applicable provisions of the Arkansas Prevailing Wage Law including the following:

- (1) Pay wage rates not less than the prevailing hourly wage for each craft or type of workman needed to execute the Contract, as determined by the Arkansas Department of Labor, such determination covering rates for regular hours, and rates for holidays and overtime work (Arkansas Code Ann. §§ 22-9-308(b)(2) and §§ 22-9-308(c)).
- (2) Post on the site of the work, in a conspicuous and accessible place, a copy of the prevailing wage rates as determined (Arkansas Code Ann. §§ 22-9-309(a)).
- (3) Keep an accurate record of workman employed by him, and by each subcontractor, if any, including the wage payments made. Such record, or records, shall be available for inspection by the Arkansas Department of Labor, and the Owner, during reasonable hours.
- (4) The Contractor's bond shall guarantee the payment of wages as herein specified.

Wage rates as established by the Arkansas Department of Labor are minimum for wage payments under this Contract.

There is no assurance on the part of the Owner that mechanics and laborers can be obtained for the rates herein bound. Each Bidder shall determine for himself the availability of laborers and mechanics, and the rates he must pay to obtain employees. Such rates of pay may be greater than, but cannot be less than, the wage rates bound herein.

OPERATOR: Blade/Grader.....	\$ 13.21	0.00
OPERATOR: Broom.....	\$ 10.57	0.00
OPERATOR: Bulldozer.....	\$ 14.17	0.00
OPERATOR: Cherry Picker.....	\$ 11.32	0.00
OPERATOR: Concrete Batch Plant.....	\$ 15.40	0.00
OPERATOR: Concrete Finishing Machine.....	\$ 11.62	0.00
OPERATOR: Concrete Pump, Truck Mounted.....	\$ 11.00	0.00
OPERATOR: Crane.....	\$ 15.50	0.00
OPERATOR: Drill.....	\$ 19.09	0.00
OPERATOR: Mechanic.....	\$ 13.00	0.00
OPERATOR: Milling Machine.....	\$ 14.46	0.00
OPERATOR: Oil Distributor.....	\$ 11.95	0.76
OPERATOR: Oiler.....	\$ 12.00	0.00
OPERATOR: Roller (Dirt and Grade Compaction).....	\$ 9.93	0.00
OPERATOR: Scraper.....	\$ 11.06	0.00
OPERATOR: Screed.....	\$ 15.01	0.00
OPERATOR: Tractor.....	\$ 8.00	0.00
OPERATOR: Trencher.....	\$ 12.98	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 14.42	0.00
OPERATOR: Concrete Paver.....	\$ 15.24	0.00
OPERATOR: Front End Loader.....	\$ 13.08	0.00
OPERATOR: Highway/Parking Lot Striping Machine.....	\$ 12.44	0.00
PAINTER (Brush, Roller and Spray).....	\$ 19.10	0.00
TRUCK DRIVER.....	\$ 11.15	0.00

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 (29 CFR 5.5(a)(1)(ii)).

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In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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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.

END OF GENERAL DECISION

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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

I. GENERAL

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

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

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

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

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

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

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

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

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

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

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 604.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

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

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

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

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

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

EEO and who must be assigned adequate authority and responsibility to do so.

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

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

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

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

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

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

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

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

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is

expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

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

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

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

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

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

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

6. Training and Promotion:

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

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

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

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

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

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

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

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

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

event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

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

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

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

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

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

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

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

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

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

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

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

contract work. This information is to be reported on Form PR-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

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

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

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

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

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

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations (29 CFR 3) issued by

the Secretary of Labor under the Copeland Act (40 U.S.C. 276c) the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

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

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

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

2. Classification:

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

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

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

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

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

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

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

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

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the

additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

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

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

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

a. Apprentices:

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

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

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

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

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

b. Trainees:

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

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

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

associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

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

c. Helpers:

(1) A helper is a semi-skilled worker (rather than a skilled journeyman mechanic) who works under the direction of and assists a journeyman. Under the journeyman's direction and supervision, the helper performs a variety of duties to assist the journeyman such as preparing, carrying and furnishing materials, tools, equipment, and supplies and maintaining them in order; cleaning and preparing work areas; lifting, positioning, and holding materials or tools; and other related, semi-skilled tasks as directed by the journeyman. A helper may use tools of the trade at and under the direction and supervision of the journeyman. The particular duties performed by a helper vary according to area practice.

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

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

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

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

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

8. Violation:

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

9. Withholding for Unpaid Wages and Liquidated Damages:

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

damages as provided in the clause set forth in paragraph 8 above.

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

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

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

2. Payrolls and Payroll Records:

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

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

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

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

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

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

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

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

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

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

records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

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

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

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

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

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

VII. SUBLETTING OR ASSIGNING THE CONTRACT

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

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

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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

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

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

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

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of

Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

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

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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

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

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

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

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

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

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

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

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

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

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

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

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

1. Instructions for Certification - Primary Covered Transactions: (Applicable to all Federal-aid contracts - 49 CFR 29)

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

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

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

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

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

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

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

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible,

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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

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

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

* * * * *

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

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

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

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

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

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

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such

prospective participant shall attach an explanation to this proposal.

* * * * *

2. **Instructions for Certification - Lower Tier Covered Transactions:** (Applicable to all subcontracts, purchase orders & other lower tier transactions of \$25,000 or more-49 CFR 29)

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

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

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

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

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

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

g. A participation in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may

SPONSOR

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

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

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

* * * * *

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

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

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

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING (Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

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

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

modification of any Federal contract, grant, loan, or cooperative agreement.

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

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

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

REVISION TO FHWA-1273 CONCERNING PERSONAL INFORMATION ON PAYROLL SUBMISSIONS:

(1-18-2009)

Revise the *Standard Special Provision FHWA-1273 Required Contract Provisions Federal-aid Construction Contracts* as follows:

Page 7, Section V, Paragraph 2b, Sentence 1 is replaced with the following:

The payroll records shall contain the name, and the last four digits of the social security number of each such, employee, his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid.

SPONSOR

SPECIAL PROVISION

EQUAL EMPLOYMENT OPPORTUNITY – NOTICE TO CONTRACTORS

Elsewhere in this contract are three Supplemental Specifications on Equal Employment Opportunity designated as PR-1273 Supplements. They are (1) Specific Equal Employment Opportunity Responsibilities (23 U.S.C. 140), (2) Equal Employment Opportunity – Goals and Timetables, and (3) Equal Employment Opportunity – Federal Standards. This notice is to clarify the responsibilities for review of compliance and enforcement for these separate supplemental specification requirements.

The first of the Supplemental Specifications cited above covers the requirements for the equal employment opportunity program under Title 23 for which the sponsor is responsible. The sponsor performs the necessary compliance review and enforcement of this supplemental Specification which is applicable to all contractors holding Federal-aid highway contracts.

The latter two Supplemental Specifications are for the specific equal opportunity requirements for Executive Order 11246 which is the sole responsibility of the Office of Federal Contract Compliance Programs (OFCCP), Department of Labor. Review and enforcement under these Supplemental Specifications is performed by OFCCP.

OFCCP has, under Paragraph 8 of the EEO Federal Standards Supplemental Specification, recognized the Arkansas AGC Heavy Highway Affirmative Action Plan as meeting the provisions of that Supplemental Specification and Supplemental Specification (2) cited above. With this recognition, those contractors signatory to the AGC Plan have been waived from individual review by OFCCP. However, OFCCP retains the right to review any such contractors whenever circumstances warrant. Also, contractors non-signatory to the AGC Plan are subject to OFCCP review under EO 11246.

AHTD and OFCCP have agreed to work towards eliminating duplicative reviews on individual contractors; however, each agency may make reviews at any time notwithstanding the cited agreement.

SPONSOR**SPECIAL PROVISION****SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)**1. General.

a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form FHWA-1273 and Supplements) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions. The initial measure of the contractor's good faith efforts to comply with these Special Provisions shall be its efforts to meet the goals set forth in the 'Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)' for minority and female participation expressed in percentage terms for the contractor's work force in each trade on this project.

b. The contractor will work with the sponsor and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

c. The contractor and all his/her subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection I of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The contractor will include these requirements in every subcontract of \$10,000 or more with such modification of

language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy.

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

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

3. Equal Employment Opportunity Officer.

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

4. Dissemination of Policy.

a. All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above

SPONSOR**SPECIAL PROVISION****SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)**

agreement will be met, the following actions will be taken as a minimum:

(1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the contractor.

(3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the contractor's procedures for locating and hiring minority and female employees.

b. In order to make the contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the contractor will take the following actions:

(1) Notices and posters setting forth the contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment, and potential employees.

(2) The contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

a. When advertising for employees, the contractor will include in all advertisements for employees the notation: 'An Equal Opportunity Employer.' All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges, and minority group organizations. To meet this requirement, the contractor will, through his EEO Officer, identify sources of potential minority and female employees, and establish with such identified sources procedures whereby minority and female applicants may be referred to the contractor for employment consideration.

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

c. The contractor will encourage his present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority and female applicants will be discussed with employees.

SPONSOR**SPECIAL PROVISION****SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)****6. Personnel Actions.**

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

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

7. Training and Promotion.

- a. The contractor will assist in locating, qualifying, and increasing the skills of minority

group and women employees and applicants for employment.

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

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

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

8. Unions.

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

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

- b. The contractor will use best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer

SPONSOR**SPECIAL PROVISION****SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)**

applicants without regard to their race, color, religion, sex, age, disability, or national origin.

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

d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, age, disability, or national origin, making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the sponsor.

9. Subcontracting.

a. The contractor's attention is called to the Special Provision on Disadvantaged Business Enterprises in Federal-Aid Highway Construction.

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

10. Records and Reports.

a. The contractor will keep such records as are necessary to determine compliance with the contractor's equal employment opportunity obligations. The records kept by the contractor will be designed to indicate:

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

(2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force),

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

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

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

c. The contractors will submit an annual report to the sponsor each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. Ibis information is to be reported on Form PR 1391.

11. Corrective Action Plans.

The contractor understands that a designated representative of the sponsor will periodically review compliance by the contractor with all contractual provisions incorporated pursuant to

SPONSOR**SPECIAL PROVISION****SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)**

Executive Order 11246, as amended, and Federal Highway Administration Equal Employment Opportunity Special Provisions implementing the Federal-Aid Highway Act of 1968, where applicable.

In the event that the designated representative of the sponsor finds that the contractor has failed to comply with any of the aforementioned contractual provisions, he will notify the contractor of this finding in writing. A declaration of default will result in the suspension of all future payments. No declaration of default will be made if the sponsor and the contractor formally agree to enter into a corrective action plan setting out the specified steps and timetables the contractor will be contractually obligated to perform in order to re-establish his compliance. This collective action plan, in order to be accepted by the sponsor, shall include the following mandatory enforcement language:

'If, at any time in the future, the Office of Federal Contract Compliance Programs or the Federal Highway Administration or the sponsor or their successor(s) believe that (name of contractor) has violated any portion of this agreement, (name of contractor) shall be promptly notified of the fact in writing. This notification shall include a statement of the facts and circumstances relied upon in forming that belief. In addition, the notification shall provide (name of contractor) with 15 days to respond in writing to the notification except where the Office of Federal Contract Compliance Programs, the Federal Highway Administration or the sponsor alleges that such delay would result in irreparable injury. It is understood that enforcement proceedings for violation of this agreement may be initiated at any time after the 15-day period has elapsed (or sooner if irreparable injury is alleged) without issuance of a show cause notice.'

'It is recognized that where the Office of Federal Contract Compliance Programs and/or the Federal Highway Administration and/or the sponsor believes that (name of contractor) has breached this agreement, evidence regarding the entire scope of (name of contractor) alleged noncompliance from which this agreement resulted, in addition to evidence regarding (name of contractor) alleged

violation of this agreement, may be introduced at the enforcement proceeding.'

'Violation of this agreement may subject (name of contractor) to sanctions pursuant to the sponsor contract administration procedures. It is further recognized that liability for violation of this agreement may also subject (name of contractor) to sanctions set forth in Section 209 of Executive Order 11246, as amended, and/or appropriate relief.'

The contractor will submit quarterly reports to the sponsor as a result of any deficiencies cited during an equal employment opportunity compliance review. The reports will indicate the affirmative action steps taken to correct the deficiencies. Instructions for submission of the reports will be furnished by the Equal Employment Opportunity Section.

SPONSOR

SPECIAL PROVISION

**EQUAL EMPLOYMENT OPPORTUNITY – GOALS & TIMETABLES
NOTICE OF REQUIREMENT FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Bidder's attention is called to the 'Equal Opportunity Clause' and the 'Standard Federal Equal Employment Specifications' set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in covered area, are as follows:

MINORITIES
COUNTY

Arkansas	-16.4%		Lee	-26.5%
Ashley	-16.4%		Lincoln	-16.4%
Baxter	-3.3%		Little River	-19.7%
Benton	-3.3%		Logan	-6.6%
Boone	-3.3%		Lonoke	-16.4%
Bradley	-16.4%		Madison	-3.3%
Calhoun	-16.4%		Marion	-3.3%
Carroll	-3.3%		Miller	-19.7%
Chicot	-16.4%		Mississippi	-26.5%
Clark	-16.4%		Monroe	-16.4%
Clay	-26.5%		Montgomery	-16.4%
Cleburne	-16.4%		Nevada	-20.2%
Cleveland	-16.4%		Newton	-3.3%
Columbia	-20.2%		Ouachita	-16.4%
Conway	-16.4%		Perry	-16.4%
Craighead	-26.5%		Phillips	-26.5%
Crawford	-5.6%		Pike	-20.2%
Crittenden	-32.3%		Poinsett	-26.5%
Cross	-26.5%		Polk	-6.6%
Dallas	-16.4%		Pope.	-16.4%
Desha	-16.4%		Prairie	-16.4%
Drew	-16.4%		Pulaski	-15.7%
Faulkner	-16.4%		Randolph	-26.5%
Franklin	-6.6%		Saline	-15.7%
Fulton	-16.4%		Scott	-6.6%
Garland	-16.4%		Searcy	-3.3%
Grant	-16.4%		Sebastian	-5.6%
Greene	-26.5%		Sevier	-20.2%
Hempstead	-20.2%		Sharp	-16.4%
Hot Spring	-16.4%		Stone	-16.4%
Howard -	-20.2%		St. Francis	-26.5%
Independence	-16.4%		Union	-16.4%
Izard	-16.4%		Van Buren	-16.4%
Jackson	-16.4%		Washington	-3.3%
Jefferson	-31.2%		White	-16.4%
Johnson	-16.4%		Woodruff	-16.4%
Lafayette	-20.2%		Yell	-16.4%
Lawrence	-26.5%			
FEMALES Statewide – 6.9%				

SPONSOR

SPECIAL PROVISION

**EQUAL EMPLOYMENT OPPORTUNITY – GOALS & TIMETABLES
NOTICE OF REQUIREMENT FOR AFFIRMATIVE
ACTION TO ENSURE EQUAL EMPLOYMENT
OPPORTUNITY (EXECUTIVE ORDER 11246)**

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

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

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

4. As used in the Notice, and in the contract resulting from this solicitation, the 'covered area' is as described in the Proposal Form for this project.

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

1. As used in these specifications:
 - (a) ‘Covered area’ means the geographical area described in the solicitation from which this contract resulted;
 - (b) ‘Director’ means Director, Office of Federal Contract Compliance Programs United States Department of Labor, or any person to whom the Director delegates authority;
 - (c) ‘Employer identification number’ means the Federal Social Security number used on the Employer’s Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - (d) ‘Minority’ includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations and on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall Good Faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor’s or Subcontractor’s failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

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

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in

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

any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees before the start of work and then not less often than once every six months; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site and then not less often than once every six months. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

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

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

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

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

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

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

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

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

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

- p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, national origin, age or disability.
11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Employment Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was

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

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

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

16. In addition to the reporting requirements set forth elsewhere in this contract, the contractor and the subcontractors holding subcontracts not including material suppliers, of \$10,000 or more, shall submit for every month of July during which work is performed employment data as contained under Form PR-1391 (Appendix C to 23 CFR, Part 230), and in accordance with the instructions included thereon.

SPONSOR
SPECIAL PROVISION
POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
1. Equal Employment Opportunity is the Law	U.S. Department of Labor (OFCCP)	A.H.T.D. Resident Engineer
2. Company EEO Policy (prepared by the Contractor on the Company's letterhead)	U. S. Department of Labor (OFCCP)	Contractor to Prepare: <ul style="list-style-type: none"> a. EEO policy statement. b. Notice encouraging employees to refer minority and female applicants for employment. c. Notice informing employees of an available training program and the entrance requirements. d. Complaint procedures e. Notice identifying company EEO officer by name, including address and telephone number where EEO officer can be located. f. Work environment statement. g. Certification of nonsegregated facilities *h. Notice to unions disseminating EEO commitments and responsibilities and requesting their cooperation.
	*Union Contractors Only	
3. Current Wage Rates (PR-1273 Supplement) or SS Revisions of PR-1273 for Off-System Projects	U. S. Department of Labor	Contained in contract. Extra copies may be obtained from Programs and Contracts Division - A.H.T.D.
4. Important Wage Rate Information FHWA Form 1495	U. S. Department of Transportation (FHWA)	A.H.T.D. Resident Engineer

SPONSOR
SPECIAL PROVISION
POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
5. Important Wage Rate Information FHWA Form 1495A	U. S. Department of Transportation (FHWA)	A.H.T.D. Resident Engineer
6. Minimum Wage Rate (WH 1088)	U. S. Department of Labor	A.H.T.D. Resident Engineer
7. "Notice to Employees" (WH 1321)	U. S. Department of Labor	A.H.T.D. Resident Engineer
8. "NOTICE" Federal Aid Projects (PR-1022)	U. S. Department of Transportation (FHWA)	A.H.T.D. Resident Engineer
9. Job Safety and Health Protection OSHA 3165	U. S. Department of Labor (OSHA)	A.H.T.D. Resident Engineer
10. Job Safety and Health Protection OSHA 3167	U. S. Department of Labor (OSHA)	A.H.T.D. Resident Engineer
11. Emergency Phone Numbers of Doctors, Hospital and Ambulance near Job Site for referring injured employees.	U. S. Department of Labor (OSHA)	A.H.T.D. Resident Engineer
12. WCC Form AR-P Workers Compensation Notice and Instructions to Employers and Employees	State of Arkansas	Insurance Carrier
Self-Insurer	State of Arkansas	Administrator - Self-Insured Group

SPONSOR
SPECIAL PROVISION
POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS

POSTER OR DOCUMENT REQUIRED	REQUIRED BY	WHERE TO OBTAIN
13. Log and Summary of Occupational Injuries and Illnesses (OSHA Form 300). The Summary portion must be posted from February 1 to April 30, of the year following the year covered by the form.	U. S. Department of Labor (OSHA) Public Law 91-596	A.H.T.D. Resident Engineer
14. Family and Medical Leave Act of 1993 (WH-1420) Employers who employ 50 or more employees for at least 20 workweeks in the current or preceding calendar year.	U. S. Department of Labor	A.H.T.D. Resident Engineer
15. Employee Polygraph Protection Act (WH-1462)	U. S. Department of Labor	A.H.T.D. Resident Engineer
16. Your Rights Under USERRA (The Uniformed Services Employment and Reemployment Rights Act)	U. S. Department of Labor	A.H.T.D. Resident Engineer
17. Arkansas Department of Labor Notice to Employer & Employee	Arkansas Department of Labor	A.H.T.D. Resident Engineer

SPONSOR
SPECIAL PROVISION
DISADVANTAGED BUSINESS ENTERPRISE IN HIGHWAY CONSTRUCTION

It is the policy of the sponsor that Disadvantaged Business Enterprises as defined in 49 CFR Part 23 shall have the maximum opportunity to participate in the performance of all State and Federal contracts. This must also be the Contractor's policy. And, even though there are no specific participation goals for this contract, the Contractor agrees to ensure that Disadvantaged Business Enterprises have the maximum opportunity to participate in the performance of this contract or subcontracts and shall take all necessary and reasonable steps to ensure that this policy is maintained. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract.

Failure of the Contractor or the Subcontractor to carry out the requirements set forth above shall constitute a breach of contract and, after notification by the sponsor, may result in termination of the contract by the sponsor or such action as the sponsor deems appropriate.

SPONSOR
SUPPLEMENT TO PROPOSAL
ANTI-COLLUSION AND DEBARMENT CERTIFICATION

**FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS BID
NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.**

As a condition precedent to the acceptance of the bidding document for this project, the bidder shall file this Affidavit executed by, or on behalf of the person, firm, association, or corporation submitting the bid. The original of this Affidavit shall be filed with the sponsor **at the time proposals are submitted.**

A F F I D A V I T

I hereby certify, under penalty of perjury under the laws of the United States and/or the State of Arkansas, that the bidder listed below has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the submitted bid for this project, is not presently barred from bidding in any other jurisdiction as a result of any collusion or any other action in restraint of free competition, and that the foregoing is true and correct.

Further, that except as noted below, the bidder, or any person associated therewith in the capacity of owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federal funds:

- a. is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- b. has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- c. does not have a proposed debarment pending; and
- d. has not been indicted, convicted, or had an adverse civil judgment rendered by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

SPONSOR
SUPPLEMENT TO PROPOSAL
ANTI-COLLUSION AND DEBARMENT CERTIFICATION

**FAILURE TO EXECUTE AND SUBMIT THIS CERTIFICATION SHALL RENDER THIS BID
NONRESPONSIVE AND NOT ELIGIBLE FOR AWARD CONSIDERATION.**

EXCEPTIONS:

Applied To	Initiating Agency	Dates of Action
NA	NA	NA

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

JOB NO. _____ Gillis Inc _____
(Name of Bidder)

F.A.P. NO. _____ Jim Gillis _____
(_____) (Signature)

_____ 5-25-11 _____
(Date Executed) (Title of Person Signing)

The following Notary Public certification is **OPTIONAL** and may or may not be completed at the Contractor's discretion.

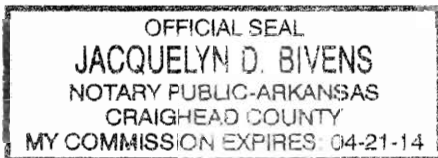
State of Arkansas)
County of Craighead) ss.
Jim Gillis _____, being duly sworn, deposes and says that he is
Pres _____ of Gillis Inc _____
(Title) (Name of Bidder)

and that the above statements are true and correct.

Subscribed and Sworn to before me this 25 day of May, 2011. My commission expires: 4-21-14

Jacquelyn D Bivens
(Notary Public)

(NOTARY SEAL)



SPONSOR**SUPPLEMENT TO PROPOSAL****CERTIFICATION FOR FEDERAL-AID CONTRACTS**

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

- (1) No Federal appropriated funds have been paid or will be paid, by or on his or her behalf, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or any employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal-Aid contract, the prospective contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities", in accordance with its instructions. (Available from Arkansas State Highway and Transportation Department, Programs and Contracts Division).

This Certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. This Certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code.

During the period of performance of this contract, the contractor and all lower tier subcontractors must file a Form-LLL at the end of each calendar year quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any previously filed disclosure form. Any person who fails to file the required Certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

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

SPONSOR

SUPPLEMENT TO PROPOSAL

CERTIFICATION FOR FEDERAL-AID CONTRACTS

THIS CERTIFICATION SHALL BE COMPLETED BY THE BIDDER AS PART OF THIS PROPOSAL

The bidder _____, I proposed subcontractor _____ hereby certifies that he has _____, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that he has _____, has not _____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

(Currently, Standard Form 100 [EEO-1] is the only report required by the Executive Orders or their implementing regulations.)

JOB NO. _____

_____ (Company)

F.A.P. NO. _____

By: _____

(Signature)

_____ (Date Executed)

_____ (Title of Person Signing)

NOTE: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7 (b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7 (b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U. S. Department of Labor.

SPONSOR

SPECIAL PROVISIONS LISTING

FHWA-1273 REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273 SUPPLEMENT – EQUAL EMPLOYMENT OPPORTUNITY – NOTICE TO CONTRACTORS
FHWA-1273 SUPPLEMENT – SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
(23 U.S.C. 140)
FHWA-1273 SUPPLEMENT – EQUAL EMPLOYMENT OPPORTUNITY – GOALS AND TIMETABLES
FHWA-1273 SUPPLEMENT – EQUAL EMPLOYMENT OPPORTUNITY – FEDERAL STANDARDS
FHWA-1273 SUPPLEMENT – POSTERS AND NOTICES FOR FEDERAL-AID PROJECTS
FHWA-1273 SUPPLEMENT – WAGE RATE DETERMINATION
SS 100-3 DISADVANTAGED BUSINESS ENTERPRISE IN HIGHWAY CONSTRUCTION

XI. SPECIAL CONDITIONS

TABLE OF CONTENTS

SC.1	GENERAL
SC.2	LOCATION OF PROJECT
SC.3	SCOPE OF WORK
SC.4	TIME ALLOTTED FOR COMPLETION
SC.5	FORMS, PLANS, AND SPECIFICATIONS
SC.6	LIQUIDATED DAMAGES FOR DELAY
SC.7	KNOWLEDGE OF CONDITIONS
SC.8	PERMITS AND RIGHTS-OF-WAY
SC.9	REFERENCE SPECIFICATIONS
SC.10	PUBLIC UTILITIES AND OTHER PROPERTY TO BE CHANGED
SC.11	USED MATERIALS
SC.12	EXISTING STRUCTURES
SC.13	USE OF EXPLOSIVES
SC.14	BARRICADES, LIGHTS, AND WATCHMEN
SC.15	FENCES AND DRAINAGE CHANNELS
SC.16	WATER FOR CONSTRUCTION
SC.17	MATERIAL STORAGE
SC.18	EXISTING UTILITIES AND SERVICE LINES
SC.19	TESTING, INSPECTION AND CONTROL
SC.20	BOND
SC.21	LIGHT AND POWER
SC.22	LINES AND GRADES
SC.23	LEGAL HOLIDAYS
SC.24	SEQUENCE OF CONSTRUCTION
SC.25	TEST BORINGS
SC.26	RELEASE AND CONTRACTOR'S AFFIDAVIT
SC.27	MAINTENANCE BOND

SC.1 GENERAL

The provisions of this section of the Specifications shall govern in the event of any conflict between them and the "General Conditions".

SC.2 LOCATION OF PROJECT

The project is located north of the Mall at Turtle Creek and east of Matthews Avenue South of Nettleton Avenue. A map showing the general location is included in the plan sets.

SC.3 SCOPE OF WORK

The work to be performed under this Contract consists of furnishing all materials, labor, supervision, tools and equipment necessary to construct the Turtle Creek Greenway Phase I Section V.

SC.4 TIME ALLOTTED FOR COMPLETION

The time allotted for completion of the work shall be Ninety (90) consecutive calendar days, which time shall begin with ten (10) days of the work order or notice to proceed. After award of the Contract is made and the Contract Documents are completed, the Engineer shall issue a Notice to Proceed, notifying the Contractor to proceed with the construction of the project, subject to the provisions of this paragraph.

SC.5 FORMS, PLANS AND SPECIFICATIONS

Forms of Proposal, Contract and Bonds, and Plans and Specifications may be examined at the City of Jonesboro Engineering Department, 307 Vine Street, Jonesboro, Arkansas 72403, and obtained from Civil Engineering Associates, 2114 East Matthews Avenue, Jonesboro Arkansas 72401 upon payment of \$50.00 each. No refunds will be made.

SC.6 LIQUIDATED DAMAGES FOR DELAY

The number of calendar days allowed for completion of the project is stipulated in the Proposal and in the Contract and shall be known as the Contract Time.

1. It is understood and agreed by and between the Owner and the Contractor that the time of completion herein set out is a reasonable time. The Contractor shall perform fully, entirely, and in an acceptable manner, the work contracted for within the contract time stated in the Contract. The contract time shall be counted from ten days after the effective date of the "Notice to Proceed"; and shall include all Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of any orders of the Engineer for suspension of the prosecution of the work, due to the fault of the Contractor, shall be counted as elapsed contract time, and shall not be considered for an extension of time.
2. Extensions of time for completion, under the condition of 2(a) next below, will be granted;

extensions may be granted under other stated conditions:

- a. If the satisfactory execution and completion of the Contract shall require work or material in greater amounts or quantities than those set forth in the Contract, then the Contract time shall be increased in the same proportion as the additional work bears to the original work contracted for.
 - b. An average or usual number of inclement weather days, when work cannot proceed, is to be anticipated during the construction period and is not to be considered as warranting extension of time. If, however, it appears that the Contractor is delayed by conditions of weather, so unusual as not to be reasonably anticipated, extensions of time may be granted.
 - c. Should the work under the Contract be delayed by other causes which could not have been prevented or contemplated by the Contractor, and which are beyond the Contractor's power to prevent or remedy, an extension of time may be granted. Such causes of delay shall include but not necessarily be limited to the following:
 - (1) Acts of God, acts of the public enemy, acts of the Owner except as provided in these Specifications, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.
 - (2) Any delays of Subcontractors or suppliers occasioned by any of the causes specified above.
3. The Resident Project Representative or other authorized representative of the City shall keep a written record sufficient for determination as to the inclusion of that day in the computation of Contract time. This record shall be available for examination by the Contractor during normal hours of work as soon as feasible after the first of each construction month. In case of disagreement between the representative of the City and the Contractor, as to the classification of any day, the matter shall be referred to the City whose decision shall be final.
 4. The amount of all extensions of time for whatever reason granted shall be determined by the Owner. In general, only actual and not hypothetical days of delay will be considered. The Owner shall have authority to grant additional extensions of time as the Owner may deem justifiable.

The amount of Liquidated Damages to be assessed shall be in accordance with the schedule that follows:

<u>Amount of Contract</u>	<u>Liquidated Damages</u> <u>Per Day</u>
Less than \$25,000.00	\$100.00
Not less than \$ 25,000.00 but less than \$ 50,000.00	\$150.00
Not less than \$ 50,000.00 but less than \$ 100,000.00	\$200.00
Not less than \$100,000.00 but less than \$ 500,000.00	\$250.00

Not less than \$500,000.00 but less than \$1,000,000.00	\$350.00
Over \$1,000,000.00	\$500.00

1. Time is an essential element of the Contract and it is important that the work be pressed vigorously to completion. Loss will accrue to the public due to delayed completion of the facility; and the cost to the Owner of the administration of the Contract, including engineering, inspection and supervision, will be increased as the time occupied in the work is lengthened.
2. Should the Contractor fail to complete the work as set forth in the Specifications and within the time stipulated in the Contract, there shall be deducted the amount shown in the schedule above, for each day of delay, from any monies due or which may thereafter become due him, not as a penalty, but as ascertained and liquidated damages.
3. Should the amount otherwise due the Contractor be less than the amount of such ascertained and liquidated damages, the Contractor and his Surety shall be liable to the Owner for such deficiency.

If the Contractor finds it impossible for reasons beyond his control to complete the work within the Contract time as specified, or as extended in accordance with the provisions of this subsection, he may, at any time prior to the expiration of the Contract time as extended, make a written request to the Engineer for an extension of time setting forth the reasons which he believes will justify the granting of his request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he may recommend to the Owner that the contract time be extended as conditions justify. If the Owner extends the contract, the extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

SC.7 KNOWLEDGE OF CONDITIONS

The Contractor states that he has examined all the available records and has made a field examination of the site and right-of-way and that he has informed himself about the character, quality, and quantity of surface and subsurface materials and other conditions to be encountered; the quantities in various sections of the work; the character of equipment and facilities needed for the prosecution of the work; the location and suitability of all construction materials; the local labor conditions; and all other matters in connection with the work and services to be performed under this contract.

SC.8 PERMITS AND RIGHTS-OF-WAY

The Owner will secure easements across public or private property permanently required for the pipelines at no cost to the Contractor.

The Contractor shall lease, buy, or otherwise make satisfactory provision, without obligating the Owner in any manner, for any land required outside the land provided by the Owner.

State Highway and Railroad Crossing Permits will be secured by the Owner. All other permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor.

SC.9 REFERENCE SPECIFICATIONS

Where reference is made in these Specifications to the Standard Specifications of the Arkansas State Highway and Transportation Department, such reference is made for expediency and standardization, and such specifications (latest edition thereof) referred to are hereby made a part of these Specifications.

More specifically, if any items or materials required for completion of the work required for this project are not specified in these Contract Documents, such items or materials and requirements for installation shall conform to the latest edition of the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction.

SC.10 PUBLIC UTILITIES AND OTHER PROPERTY TO BE CHANGED

In case it is necessary to change or move the property of any owner or of a public utility, such property shall not be moved or interfered with until ordered to do so by the Engineer. The right is reserved to the owner of public utilities to enter upon the limits of the project for the purpose of making such changes or repairs of their property that may be made necessary by performance of this Contract.

SC.11 USED MATERIALS

No material which has been used by the Contractor for any temporary purpose whatever is to be incorporated in the permanent structure without written consent of the Engineer.

SC.12 EXISTING STRUCTURES

The Plans show the locations of all known surface and subsurface structures. However, the Owner assumes no responsibility for failure to show any or all of these structures on the Plans, or to show them in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for extra work or for increasing the pay quantities in any manner whatsoever, unless the obstruction encountered is such as to necessitate changes in the lines or grades, or requires the building of special work, provisions for which are not made in the Plans and Proposal, in which case the provisions in these Specifications for Extra Work shall apply.

The Contractor shall be responsible for protection of all existing structures, and any damage caused by his operations shall be repaired immediately without cost to the Owner. It shall be the responsibility of the prospective Contractor to examine the site completely before submitting his bid.

SC.13 USE OF EXPLOSIVES

Any use of explosives or blasting shall be as outlined in these Specifications.

SC.14 BARRICADES, LIGHTS, AND WATCHMEN

Where the work is performed on or adjacent to any street, alley, or public place, the Contractor shall, at his own expense, furnish and erect such barricades, fences, lights, and danger signals, shall provide such watchmen, and shall provide such other precautionary measures for the protection of persons or property and of the work as are necessary.

Barricades shall be painted in a color that will be visible at night. From sunset to sunrise the Contractor shall furnish and maintain at least one light at each barricade and a sufficient number of barricades shall be erected to keep vehicles from being driven on or into any work under construction. The Contractor shall furnish watchmen in sufficient numbers to protect the work.

The Contractor will be held responsible for all damage to the work due to failure to provide barricades, signs, lights, and watchmen to protect it. Whenever evidence is found of such damage, the Engineer may order the damaged portion immediately removed and replaced by the Contractor at his expense. The Contractor's responsibility for the maintenance of barricades, signs, and lights, and for providing watchmen, shall not cease until the project shall has been accepted by the Owner.

SC.15 FENCES AND DRAINAGE CHANNELS

Boundary fences or other improvements removed to permit the installation of the work shall be replaced in the same location and left in a condition as good or better than that in which they were found except as indicated on the Drawings.

Where surface drainage channels are disturbed or blocked during construction, they shall be restored to their original condition of grade and cross section after the work of construction is completed.

SC.16 WATER FOR CONSTRUCTION

Water used for the mixing of concrete, testing, or any other purpose incidental to this project, shall be furnished by the Contractor. The Contractor shall make the necessary arrangements for securing and transporting such water and shall take such water in a manner and at such times that will not produce a harmful drain or decrease of pressure in the Owners' water system. No separate payment will be made for water used but the cost thereof shall be included in the Unit Price Schedule.

SC.17 MATERIAL STORAGE

Materials delivered to the site of the work in advance of their use shall be stored so as to cause the least inconvenience and in a manner satisfactory to the Engineer.

SC.18 EXISTING UTILITIES AND SERVICE LINES

The Contractor shall be responsible for the protection of all existing utilities or improvements crossed by or adjacent to his construction operations. Where existing utilities or service lines are cut, broken, or damaged, the Contractor shall replace or repair immediately the utilities or service lines with the same type of original material and construction or better, at his own expense.

SC.19 TESTING, INSPECTION AND CONTROL

Testing and control of all materials used in the work shall be done by an approved commercial laboratory employed and paid directly by the Owner, unless otherwise specified in the Technical Specifications. The Contractor shall furnish, at his own expense, all necessary specimens for testing of the materials, as required by the Engineer.

SC.20 BOND

Coincident with the execution of the Contract, the Contractor shall furnish a good and sufficient surety bond, in the full amount of the Contract sum, guaranteeing the faithful performance of all covenants, stipulations, and agreements of the Contract, the payment of all bills and obligations arising from the execution of the Contract, (which bills or obligations might or will in any manner become a claim against the Owner), and guaranteeing the work included in this Contract against faulty materials and/or poor workmanship for one (1) year after the date of completion of Contract.

All provisions of the bond shall be complete and in full accordance with Statutory requirements. The bond shall be executed with the proper sureties through a company licensed and qualified to operate in the state and approved by the Owner. The issuing agent's power of attorney shall be attached to the bond and the bond shall be signed by an agent resident in the state and date of bond shall be the date of execution of the Contract. If at any time during the continuance of the Contract the surety on the Contractor's bond becomes irresponsible, the Owner shall have the right to require additional and sufficient sureties which the Contractor shall furnish to the satisfaction of the Owner within ten (10) days after notice to do so. In default thereof, the Contract may be suspended and all payments or money due the Contractor withheld.

SC.21 LIGHT AND POWER

The Contractor shall provide, at his own expense, temporary lighting and facilities required for the proper prosecution and inspection of the work. At the time the Owner obtains beneficial occupancy of any of the facilities placed in satisfactory service, charges for power and light for regular operation of those involved facilities will become the responsibility of the Owner.

SC.22 LINES AND GRADES

The Contractor will be furnished baselines and benchmarks to control the work. The Contractor shall be responsible for the additional instrument control necessary to layout and construct the

improvements. The Contractor's instrument control of the work shall not be measured for separate payment.

As a minimum, the Contractor shall provide the following instrument control for the work:

- a. For the full length and width of all areas within the limits of paving, the finished grade of the concrete surface course shall be controlled by grade wires or forms set by the Contractor to control the final surface, in accordance with the plans.
- b. For the full length and width of all areas within the limits of paving, the initial courses of bituminous pavement will be controlled by uniform thickness. The course under the final surface course shall be controlled by grade wire, and the final surface course shall be controlled by uniform thickness. The bituminous pavement shall be constructed with a lay down machine with automatic controls and a forty (40) foot ski.
- c. For the full length and width of all areas within the limits of paving, the crushed aggregate base course and the sub base course will be controlled with intermediate and final surface stakes, "blue tops". Stakes shall be set as required or as directed by the Engineer to control the construction.
- d. The Contractor shall set intermediate line and grade stakes and final grade stakes, "blue tops," as required to control the construction of shoulders.

SC.23 LEGAL HOLIDAYS

January 1, Martin Luther King, Jr. Day, President's Day, Memorial Day, July 4, Labor Day, Veteran's Day, Thanksgiving, Day after Thanksgiving, December 24, and December 25 will be considered as being legal holidays; no other days will be so considered. Should any holiday fall on Sunday, the holiday shall be observed on the following Monday. No engineering observation will be furnished on legal holidays or Sundays, except in an emergency. The Contractor shall observe the legal holidays and Sundays, and no work shall be performed on these days except in an emergency. However, these days shall not be excluded from Contract time.

SC.24 SEQUENCE OF CONSTRUCTION

Sequence of all phases of work shall be such as to provide for the least possible inconvenience to the Owner. Scheduling of work which would interfere with normal traffic operation shall be coordinated with the Owner. Material and equipment received on the project prior to time of installation shall be stored at such locations designated by the Owner.

The Contractor shall furnish a proposed work schedule to the Engineer for review and approval as soon as possible after award of the Contract. This schedule shall show anticipated equipment delivery schedules and times of beginning and completing of the several work tasks.

SC.25 TEST BORINGS

The Contractor may rely upon the general accuracy of the test pit or soil boring data contained in reports or drawings, but such reports and drawings are not Contract Documents. The Contractor may not rely upon or make any claim against Owner, Engineer, or Engineer's Consultants with respect to (1) the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by the Contractor and safety precautions and programs incident thereto, (2) other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings, (3) any Contractor interpretation of or conclusion drawn from any data, interpretations, opinions, or information.

SC.26 RELEASE AND CONTRACTOR'S AFFIDAVIT

At the project's completion, the Contractor shall execute the attached Release and Lien Waiver to release all claims against the Owner arising under and by virtue of his Contract. The date of the Release shall be that agreed to for the final acceptance of the project with the Owner.

SC.27 MAINTENANCE BOND

The Contractor shall execute the attached Maintenance Bond guaranteeing the work included in the Contract against faulty materials and/or prior workmanship for one year after completion of the Contract. The date of the Maintenance Bond shall be that agreed to for the final acceptance of the project with the Owner. The Maintenance Bond shall be for 100% of the final contract amount.

At the end of the applicable maintenance period, the Owner and/or the Engineer, with the Contractor, shall make an inspection of the work. The Contractor immediately shall repair and correct any and all defects which have resulted from faulty workmanship, equipment, or materials, following which repair and correction the Local Public Agency will accept full maintenance of the work.

RELEASE

FROM: Contractor's Name _____

Address _____

TO: City of Jonesboro

DATE OF CONTRACT: _____

Upon receipt of the final payment and in consideration of that amount, the undersigned does hereby release the Owner and its agents from any and all claims arising under or by virtue of this Contract or modification thereof occurring from the undersigned's performance in connection with the construction of the

Turtle Creek Greenway Phase I Section V

project.

Contractor's Signature

Title

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public

My Commission Expires:

CONTRACTOR'S AFFIDAVIT

FROM: Contractor's Name _____
Address _____

TO: City of Jonesboro

DATE OF CONTRACT: _____

I hereby certify that all claims for material, labor, and supplies entered into contingent and incident to the construction or used in the course of the performance of the work on the construction of the

Turtle Creek Greenway Phase I Section V

have been fully satisfied.

Contractor's Signature

Title

Subscribed and sworn to before me this ____ day of _____, 20__.

Notary Public

My Commission Expires:

The Surety Company consents to the release of the retained percentage on this project with the understanding that should any unforeseen contingencies arise having a right of action on the bond that the Surety Company will not waive liability through the consent to the release of the retained percentage.

Dated _____

Surety Company

By _____
Resident Agent, State of Arkansas

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____,

as Principal, and _____,

as Surety, are held and firmly bound unto the City of Jonesboro, as Obligee, in the full and

just sum of _____

(\$ _____) DOLLARS, lawful money of the United States of America, to be paid to the said Obligee, its successors or assigns, for the payment of which, well and truly to be made, we and each of us, bind ourselves, our heirs, executors and assigns, themselves, and their successors and assigns, jointly and severally, firmly by these presents.

Dated this _____ day of _____, 20_____.

The conditions of this obligation are such, that whereas, said Principal, has by a certain contract with the City of Jonesboro dated the ____ day of _____, 20____, agreed to construct the Turtle Creek Greenway Phase I Section V and to maintain the said Improvement in good condition for a period of one (1) year from the date of acceptance of the improvements.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall indemnify and hold harmless the said Obligee from and against all loss, costs, damages, and expenses whatsoever which it may suffer or be compelled to pay by reason of failure of the said Principal to keep said work in repair for a one year period beginning _____ against any and all defects of faulty workmanship or inferior material, then this obligation shall be void; otherwise to remain in full force and effect.

It is further agreed that if the said Principal or Surety herein shall fail to maintain said improvements in good condition for the said period of 1 year, and at any time repairs shall be necessary, that the cost of making said repairs shall be determined by the Owner, or some person or persons designated by the Owner to ascertain the same, and if, upon thirty (30) days notice, the said amount ascertained shall not be paid by the Principal or Surety herein, or if the necessary repairs are not made, that said amount shall become due upon the expiration of thirty (30) days, and suit may be maintained to recover the amount so determined in any Court of competent jurisdiction; and that the amount so determined shall be conclusive upon the parties as to the amount due on this bond for the repair or repairs included therein; and that the cost of all repairs shall be so determined from time to time during the life of this bond, as the condition of the improvements may require.

Signed, sealed and delivered the day and year first above written.

SEAL

Principal

ATTEST:

BY: _____

SEAL

Surety

ATTEST:

BY: _____

Attorney in Fact

TECHNICAL SPECIFICATIONS

SECTION 01001

BASIC REQUIREMENTS

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. Summary of Work:
 - 1. Description of Work.
- B. Site Conditions:
 - 1. Existing Utilities.
- C. Contract Considerations:
 - 1. Application for Payment.
 - 2. Change Order Procedures.
- D. Coordination and Meetings:
 - 1. Cutting and Patching.
 - 2. Conferences.
- E. Submittals:
 - 1. Submittal Procedures.
 - 2. Construction Progress Schedule.
 - 3. Shop Drawings.
 - 4. Product Data.
 - 5. Manufacturer's Instructions and Certifications.
- F. Quality Control:
 - 1. Quality Assurance.
 - 2. References.
 - 3. Manufacturer's Field Services.
 - 4. Testing Laboratory Services.
- G. Construction Facilities and Temporary Controls:
 - 1. Temporary Electric Power and Lighting.
 - 2. Temporary Water.
 - 3. Sanitary Facilities.
 - 4. Water for Testing.
 - 5. Temporary Water Control.

6. Protection of Finished Work.
 7. Progress Cleaning.
 8. Removal of Utilities, Facilities, and Controls.
- H. Material and Equipment:
1. Products.
 2. Transportation, Handling, Storage, and Protection.
 3. Substitutions.
- I. Starting of System:
1. System Demonstration.
- J. Contract Closeout:
1. Contract Closeout Procedures.
 2. Final Cleaning.
 3. Project Record Documents.
 4. Operation and Maintenance Data.
 5. Warranties.
 6. Spare Parts and Maintenance Materials.

1.2 DESCRIPTION OF PROJECT

- A. Wherever in these Documents the word "Engineer" appears, it shall be understood to mean Civil Engineering Associates, acting either directly or indirectly as authorized agents of the Owner. In these Documents where the word "Owner" appears, it shall be understood to mean the City of Jonesboro.
- B. Construct asphalt walking/bike trail as shown on Drawings and specified.

1.3 EXISTING UTILITIES

- A. Approximate locations of major utilities and structures are shown on the Drawings, there may be some discrepancies and omissions in the locations and size of utilities and structures shown.
- B. Notify all utility offices that are affected by the construction operation at least 48 hours in advance.

1.4 APPLICATION FOR PAYMENT

- A. Submit three copies of each application on EJCDC Form 1910-8E or other format approved by Engineer.
- B. Contractor shall submit lien release for all previous progress payments for materials, labor, and equipment that has been billed to the Owner in the present pay request. Lien release shall be submitted to the Engineer with next Application for Payment. Application for Payment submitted without lien release from previous Application for Payment will not be approved for payment until

Engineer has received lien release. Submit lien release on the following form found at the end of this Section.

- C. Utilize Payment Schedule or Unit Prices for listing items in Application for Payment.
- D. Pay Periods: Calendar Month.

1.5 CHANGE ORDER PROCEDURES

- A. Submit on EJCDC Form 1910-8B.

1.6 CUTTING AND PATCHING

- A. Employ a skilled and experienced installer to perform cutting and patching new Work; restore Work with new products.
- B. Submit written request in advance of cutting or altering existing structures or utilities.
- C. Fit work tight to adjacent elements and maintain integrity of existing work.

1.7 CONFERENCES

- A. Engineer will schedule a preconstruction conference after Notice of Award for all affected parties.
- B. Where required in individual specification Section, convene a pre-installation conference at project site prior to commencing Work of the Section.

1.8 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, subcontractor or supplier, and pertinent Contract Document reference.
- B. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- C. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.
- D. Revise and resubmit as required, identify all changes made since previous submittal.

1.9 SHOP DRAWINGS

- A. Submit number of copies which the Contractor requires, plus four copies which will be retained by the Engineer.
- B. Include as a minimum dimensions, size, location of connections to other work, weight of equipment, and supporting calculations.

1.10 PRODUCT DATA

- A. Submit number of copies which the Contractor requires, plus four copies which will be retained by the Engineer.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this project.

1.11 MANUFACTURER'S INSTRUCTIONS AND CERTIFICATIONS

- A. Submit as noted in individual specification Sections.

1.12 QUALITY ASSURANCE

- A. Maintain quality control over suppliers, manufacturers, products, service, site conditions, and workmanship to produce work of specified quality.
- B. Comply fully with manufacturer's instructions.
- C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

1.13 REFERENCES

- A. Conform to reference standard by date of issue current as of date of Contract.
- B. Should specified reference standard conflict with Contract Documents, request clarification from Engineer before proceeding.

1.14 MANUFACTURER'S FIELD SERVICES

- A. Representative shall submit written report to Engineer listing observations and recommendations.

1.15 TESTING LABORATORY SERVICES

- A. Contractor will select a testing laboratory to perform inspections, tests, and other services required by individual Specification Sections.
- B. All costs for laboratory testing of earthwork and concrete shall be paid for by the Contractor. The Contractor shall bear the costs for all tests that are required to be repeated.
- C. Services will be performed in accordance with requirements of governing authorities and with specified standards.
- D. Contractor shall cooperate with Testing Laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify Engineer/Testing Laboratory 48 hours prior to expected time for operations requiring testing services.

2. Make arrangements with Testing Laboratory and pay for additional samples and tests for Contractor's convenience.
3. Furnish and deliver samples/cylinders to lab for testing.

1.16 TEMPORARY ELECTRIC POWER AND LIGHTING

- A. Provide and pay for power services required from source.
- B. Provide power outlets for construction operations, branch wiring, distribution boxes, and flexible power cords as required.

1.17 TEMPORARY WATER

- A. Provide water, as needed, for own use.
- B. Provide an adequate supply of potable drinking water for use by employees and Engineer's employees.

1.18 SANITARY FACILITIES

- A. Provide and maintain required sanitary facilities and enclosures.
- B. Maintain clean and sanitary condition.

1.19 WATER FOR TESTING

- A. The Owner shall provide the water for first time testing and shall determine the location where the Contractor can obtain the water. If test fails, the Contractor shall be responsible to paying Owner cost for additional water for testing until the system being tested passes.

1.20 TEMPORARY WATER CONTROL

- A. Maintain excavations and trenches free of water. Provide and operate pumping equipment of a capacity to control water flow.
- B. Provide dewatering system and pumping to maintain excavations dry and free of water inflow on a 24 hour basis.
- C. Provide piping to handle pumping outflow to discharge in a manner to avoid erosion or deposit of silt.

1.21 PROTECTION OF FINISHED WORK

- A. Protect installed work and provide special protection where specified in individual specification Sections.

1.22 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Where work is performed in residential and commercial areas, cleanup sufficient to permit normal access and use by property owners shall be performed daily.

Final cleanup shall be performed after each section of work has been completed. Failure to perform clean-up work as described above may result in retainage of an additional 10 percent of the cost of the work completed until the clean-up work has been completed or non-processing of additional pay requests.

1.23 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary erosion control construction, above grade or buried utilities, equipment, facilities, and materials, prior to Substantial Completion inspection.
- B. Remove and repair damage caused by installation or use of temporary work.

1.24 PRODUCTS

- A. Products: New material, machinery, components, equipment, and systems forming Work, but does not include machinery or equipment used for preparation, fabrication, or erection of Work.
- B. Use interchangeable components of the same manufacture for similar components.

1.25 TRANSPORTATION, HANDLING, STORAGE, AND PROTECTION

- A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.

1.26 SUBSTITUTIONS

- A. Possible substitutions shall be submitted no later than 10 days prior to bid date for Engineer to review and consider requests from Contractor for substitutions. Subsequently, substitutions will be considered only when a product becomes unavailable due to no fault of Contractor.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

1.27 SYSTEMS DEMONSTRATION

- A. Prior to final inspection demonstrate operation of each system to Engineer and Owner.
- B. Instruct Owner's personnel in operation, adjustment, and maintenance of equipment and systems, using the operation and maintenance data as the basis of instruction.

1.28 CONTRACT CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for Engineer's inspection.
- B. Submit final Application for Payment identifying total adjusted Contract Price, previous payments, and amount remaining due.

1.29 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Clean interior and exterior surfaces exposed to view.
- C. Clean debris, waste and surplus supplies, rubbish, and construction facilities from site.

1.30 PROJECT RECORD DOCUMENTS

- A. Maintain on site in the Office, one set of Contract Documents, Shop Drawings, and Product Submittals to be utilized for record documents.
- B. Record actual revisions to the Work concurrent with construction progress.
- C. Specification, Record Documents, and Shop Drawings: Legibly mark each item to record actual construction or product installed.
- D. Submit documents to Engineer with final Application for Payment.

1.31 OPERATION AND MAINTENANCE DATA

- A. Submit 2 sets prior to final inspection, bound in 8½ x 11-inch text pages with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE MANUAL", and title of project.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized, with tabs clearly printed under reinforced laminated plastic tabs.
- D. Contents:
 - 1. Directory listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Operation and maintenance instructions, arranged by system.
 - 3. Certificates.
 - 4. Shop Drawings.
 - 5. Product Data.
 - 6. Warranties.

1.32 WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
- C. Submit prior to final Application for Payment.

1.33 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to project site and place in locations as directed; obtain receipt prior to final payment.

PART 2. PRODUCTS

Not Used.

PART3. EXECUTION

Not Used.

END OF SECTION

SECTION 01100

SUMMARY OF WORK

PART 1. GENERAL

1.01 SCOPE

- A. The work to be performed under the provisions of these contract documents consists of furnishing all materials, equipment, labor, installation, finishing, and start-up service needed to construct and place in complete operation the proposed walking trail as shown on the Drawings and specified herein.

1.02 SCOPE, NATURE, AND INTENT OF SPECIFICATIONS AND PLANS

- A. The specifications and plans are intended to supplement, but not necessarily duplicate each other. Any work exhibited in the one, and not in the other, shall be executed as if it had been set forth in both.

Should anything necessary for a clear understanding of the work be omitted from the specifications and plans, or should the requirements appear to be in conflict, the Contractor shall secure written instructions from the Engineer before proceeding with the construction affected thereby.

Dimensions and elevations shown on the plans shall be accurately followed even though they differ from scaled measurements. No work shown on the plans, the dimensions of which are not indicated, shall be executed until necessary dimensions have been obtained from the Engineer.

The Contractor shall check all dimensions, elevations, and quantities shown on the plans and schedules given to him by the Engineer, and shall notify the Engineer of any discrepancy between the plans and the conditions on the ground, or any error or omission in the plans, or in the layout or instructions, which he may discover in the course of the work. The Contractor will not be allowed to knowingly and intentionally take advantage of any error or omission in the plans or contract documents that he could have reasonably provided notice to the Engineer about. Full instruction will be furnished by the Engineer should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

It is expected that prospective bidding contractors will completely review the Plans and Specifications prior to bidding and notify the Engineer prior to bid date of any perceived conflicts, errors, omissions, or clarifications anticipated.

These will be addressed by written Addendum to all Bidders. Prospective bidding Contractors are encouraged to visit the project location to assure their complete understanding of the project requirements.

1.03 MATERIALS

- A. These specifications are intended to be so written that only materials of the best quality and grade will be furnished. The fact that the specifications may fail to be sufficiently complete in some detail will not relieve the Contractor of full responsibility for providing materials of high quality and protecting them adequately until incorporation in the structure. The specifications for materials set out the minimum standard of quality which the Engineer believes is necessary to procure a satisfactory project. No substitutions will be permitted until the Contractor has received written permission of the Engineer to make a substitution for materials which have been specified.

1.04 WORKMANSHIP

- A. The specifications contain detailed instructions and descriptions covering the major items of construction and workmanship necessary for building and completing the various units or elements of the project. The specifications are intended to be so written that only first class workmanship and finish of the best grade and quality will result. The fact that these specifications may fail to be so complete as to cover all details will not relieve the Contractor of full responsibility for providing a completed project of high quality, first class finish and appearance, and satisfactory for operation.

1.05 LAND FOR CONSTRUCTION PURPOSES

- A. The Contractor will be permitted to use available space belonging to the Owner, on or near the site of work, for construction purposes and for the storage of materials and equipment. The location and extent of the areas so used shall be as designated and approved by the Owner.

The Contractor shall be solely responsible for obtaining and shall pay all costs in connection with any additional storage or work area sites which may be required for proper completion of the work.

1.06 PROTECTING EXISTING STRUCTURES AND UTILITIES

- A. Where excavation or demolition endangers adjacent structures and utilities, the Contractor shall at his own expense carefully support and protect all such structures and/or utilities so that there will be no failure or settlement. Where it is necessary to move services, poles, guy wires, pipelines, or other obstructions, the Contractor shall notify and cooperate

with the utility owner. In case damage to an existing structure or utility occurs, whether failure or settlement, the Contractor shall restore the structure or utility to its original conditions and position without compensation from the Owner.

Contractor shall repair or replace all damaged street surfaces, driveways, sidewalks, curb and gutter, fences, drainage structures, or other structures, to the satisfaction of the Engineer and the Owner. Structures shall be restored to a condition equal to or better than the original condition and of a similar material and design. The costs of such repair or replacement shall be borne by the Contractor and shall be included in the Proposal.

The Contractor shall verify the type, size, and location of all existing piping and valves in the construction area. All piping, valves, electrical conduit, etc., in the construction area shall be removed or relocated as necessary in a manner acceptable to the Engineer.

- B. Contractor shall maintain access to existing operating units affected by his construction activities and coordinate with the Utility regarding times of limited access. Contractor shall coordinate with Utility regarding time and extent of any plant shut downs. Contractor is advised that shut down periods may be limited to four (4) hours and 12:00 A.M. to 6:00 A.M. time frames.

1.07 HANDLING MATERIALS NOT APPROVED

- A. The Contractor shall remove from the site any materials found to be damaged, or not meeting the specifications. These materials shall be removed promptly, unless the Engineer will accept the materials after repairing. Inspection before installation shall not relieve the Contractor from any responsibility to furnish good quality materials. Review of shop drawings and submittals is for the Contractor's benefit. Any equipment that has been installed without approval by the Engineer prior to installation and found not to be in accordance with the specifications shall be removed and replaced with approved items at the Contractor's sole expense.

1.08 PUMPING AND DEWATERING OPERATIONS

- A. Work to be performed may require draining, pumping and dewatering, and certain cleaning operations necessary to complete the work as specified and as indicated on the drawings. It is the intent of these specifications that such draining, pumping and dewatering, and cleaning operations shall be the obligation of the Contractor.

1.09 SANITATION FACILITIES

- A. The Contractor shall provide portable toilet facilities in sufficient number for the Contractor's use throughout the course of the project and in accordance with OSHA requirements.

1.10 UNFAVORABLE CONSTRUCTION CONDITIONS

- A. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations to work which will not be adversely affected. No portion of the work shall be constructed under conditions which would adversely affect the quality, unless special means or precautions are taken by the Contractor to perform the work in a proper and satisfactory manner.

1.11 FINAL TESTING AND OPERATION

- A. Prior to presentation for final acceptance of the work under this contract, the Contractor shall have started and operated all units of the project for a sufficient duration of time to permit the Engineer to observe overall performance of the respective units and equipment. Such operation shall be properly coordinated with the Owner's operating personnel.

1.12 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly conditions.
- B. Where work is performed in residential and commercial areas, cleanup sufficient to permit normal access and use by property owners shall be performed daily. Final cleanup shall be performed once the extension has been installed. Failure to perform clean-up work as described above may result in retainage of an additional ten (10%) percent of the cost of the work completed until the cleanup work has been completed or non-processing of additional pay requests.

END OF SECTION

SECTION 01290

MEASUREMENT AND PAYMENT
UNIT PRICE

PART 1. GENERAL

1.01 SECTION INCLUDES

- A. Scope of Payment.
- B. Unit Price Items.

1.02 RELATED SECTIONS

- A. Bid.
- B. General Conditions.
- C. Section 01100 – Summary of Work.

1.03 SCOPE OF PAYMENT

- A. The Bid for each item of Work listed in the Unit Price Bid of the Bid, whether lump sum amount or unit price based on the approximate quantity listed, shall include all costs as specified in the BID.
- B. Reasonably implied parts of the Work shall be included in the Bid, as specified in Section 01100.
- C. Payments for lump sum items shall be made in proportion to the amount of Work accomplished as determined by the Engineer as of the period ending date of each Application for Payment.
- D. Measurement of unit price items will be made by Engineer of actual quantities installed as of the period ending date of each Application for Payment.

1.04 UNIT PRICE ITEMS

- A. Item No. 1 – Walking Trail.
 - 1. Unit of Measure: Linear Foot.
 - 2. This item shall compensate the Contractor for providing all of the labor, equipment, materials, and related appurtenances for the preparation of the subgrade, the installation of the gravel base, and the installation of the asphalt surfacing to construct the greenway trail as shown on the Drawings and specified herein.
- B. Item No. 2 – Retaining Wall
 - 1. Unit of Measure: Lump Sum.
 - 2. This item shall compensate the Contractor for providing all of the labor, equipment, materials, and related appurtenances for the preparation of the site and the installation of 145 L.F of retaining wall that is 5 feet tall as

shown on the Drawings and specified herein. Also, this item shall include the hand rails for the wall.

C. Item No. 3 – Concrete Drainage Box

1. Unit of Measure: Each.
2. This item shall compensate the Contractor for providing all of the labor, equipment, materials, and related appurtenances for the preparation of the site and the installation of the concrete drainage box as shown on the Drawings and specified herein.

D. Item No. 4 – 18" Reinforced Concrete Pipe

1. Unit of Measure: Linear Feet.
2. This item shall compensate the Contractor for providing all of the labor, equipment, materials, and related appurtenances for the preparation of the site and the installation of the 18" reinforced concrete pipe as shown on the Drawings and specified herein.

E. Item No. 6 – Stormwater Pollution Prevention Plan

1. Unit of Measure: Lump Sum.
2. This item shall compensate the Contractor for providing all of the labor, equipment, materials, and related appurtenances for the preparation of the site and the installation of the Stormwater Pollution Prevention Plan including installation of silt fence, concrete wash out, construction entrance, and establishment of final vegetation according to specification 02950 as shown on the Drawings and specified herein.

F. Item No. 7 – 90 Lb Rip-Rap and Non Woven Geotextile Fabric

1. Unit of Measure: Square Yard.
2. This item shall compensate the Contractor for providing all of the labor, equipment, materials, and related appurtenances for the installation of the 90 Lb Rip-Rap a foot and half thick and the 8 oz Non-woven geotextile fabric. This item shall include excavation of existing vegetation a 1.5 feet, installation of the geotextile fabric, and installation of the 90 Lb Rip-Rap as shown on the plans and specified herein.

G. Item No. 8 – Act 291 Trench and Excavation Safety System

1. Unit of Measure: Lump Sum.
2. This item shall compensate the Contractor for providing all of the labor, equipment, materials, and related appurtenances to meet the requirements set forth in Act 291 Trench and Excavation Safety System.

PART 2. PRODUCTS

Not Used.

PART 3. EXECUTION

Not Used.

END OF SECTION

SECTION 01310

GENERAL CONSTRUCTION REQUIREMENTS

PART 1. GENERAL

1.01 RELATIONSHIP WITH EXISTING FACILITIES

- A. The Contractor shall notify, in writing, the Engineer 14-days in advance of the time that is necessary to take out of service an existing facility.
- B. The Contractor shall repair or replace, without delay, any and all damage to existing structures, surfaces, equipment, controls, or systems resulting from his operations that are required to put the facility back in operation upon completion of the project.

1.02 BYPASSING

- A. Whenever existing facilities have to be temporarily dammed and dewatered, the work will be done by the Contractor in a manner acceptable to the Engineer. The Contractor shall notify the Engineer and the Owner prior to any such activities.
- B. The General Contractor shall also be responsible for removal of all temporary earthen, steel, or concrete structures required to accomplish this work and returning the sites of these structures to the same or an improved condition as when this project was initiated by the Contractor.
- C. The Contractor shall be responsible for all bypass pumping required to maintain flow during construction.

1.03 TEMPORARY FLOW STOPPAGE

- A. In cases where the construction requires connections to live conduits, or the plugging of pipelines, provisions for temporarily halting flow as required will be planned and coordinated with the Owner and conducted by the Contractor.

1.04 CLEAN UP

- A. The Contractor shall not allow the site of the work to become littered with trash and waste material, but shall maintain the site of the work in a neat and orderly condition throughout the construction period. On or before the completion of the work, the Contractor shall carefully clean out all pits, drain lines and drains, chambers or conduits and shall remove all temporary structure built by him and rubbish of all kinds from any of the grounds which he has occupied and leave them in first-class condition to the satisfaction of the Engineer.

1.05 AS-BUILT DRAWINGS

- A. Concurrent with performance of contract work, each Contractor shall prepare and maintain one neat and legible set of full-size contract drawings indicating "as-built", including but not limited to changes in type, location, length, or size for any item of work. "As-built" drawing mark-ups shall be prepared at the time the applicable item of work is constructed or installed. The preparation of "as-built" drawings shall be as required by the Engineer. Prior to the final acceptance of contract work, the Contractor shall submit to the Engineer one complete set of drawings showing all "as-built" work modifications.

1.06 TESTS AND INSPECTIONS

- A. All materials, equipment, installation, and workmanship included in this contract, if so required by the Engineer, shall be tested and inspected to prove compliance with the contract requirements.
- B. No tests specified herein shall be applied until the item to be tested has been inspected and approval given for the application of such test by an authorized representative of the manufacturer of the equipment.
- C. Acceptance Tests and Inspection
 - 1. The acceptance tests shall be at the Contractor's expense for any materials or equipment specified herein. This is to include test of items during the process of manufacture and on completion of manufacture, comprising material tests, hydraulic pressure tests, electric tests, performance and operating tests and inspections in accordance with the relevant standards of the industry, and more particularly as detailed in individual clauses of these specifications, or as may be required by the Engineer to satisfy himself that the items tested and inspected comply with the requirements of this contract.
 - 2. All items delivered at the site shall be inspected in order that the Engineer may be satisfied that such items are of the specified quality and workmanship and are in good order and condition at the time of delivery.
- D. Installed Tests and Inspection
 - 1. If under test, any portion of the work shall fail to fulfill the contract requirements and is altered, renewed, or replaced, tests on that portion when so altered, removed, or replaced, together with all other portions of the work as are affected thereby, shall if so required by the Engineer, be repeated within reasonable time and in accordance with the specified conditions, and the Contractor shall refund to the Owner all reasonable expenses incurred by the Owner as a result of the carrying out of such tests.
 - 2. Where, in the case of an otherwise satisfactory installed test, any doubt, dispute, or difference should arise between the Engineer and the Contractor regarding the test results or the methods or

equipment used in the carrying out by the Contractor such a test, then the Engineer may order the test to be repeated. If the repeat test using such modified methods or equipment as the Engineer may require substantially confirms the previous test, then all costs in connection with the repeat test will be paid by the Owner, otherwise the costs shall be borne by the Contractor. Where the results of any installed test fail to comply with the contract requirements for such test, then such repeat tests as may be necessary to achieve the contract requirements shall be made by the Contractor at his own expense.

END OF SECTION

SECTION 01330

SUBMITTAL REQUIREMENTS

PART 1. GENERAL

1.01 SUBMITTALS

A. Shop Drawings

The Contractor shall submit to the Engineer six (6) copies of all shop drawings, erection drawings, schedules, certified dimension prints, schematic or system diagrams, data sheets, catalog cuts, bulletins, and other descriptive material as is customary or as may be specifically required by the Engineer prior to purchase, fabrication, or shipment to the Project Site.

B. Format

The drawings and data shall have been reviewed and approved by the Contractor prior to submittal and each bound submittal submitted shall bear the Contractor's approval stamp and signature. Submittal data shall be in such form and so presented that the Engineer may readily review the data. This means that submittals must be bound in an 8½" by 11" format. Engineering drawings are to be reduced to an 11" by 17" format, folded and bound with the submittal. No 24" by 36" drawings will be accepted. Bound submittals shall be for individual specification sections and shall be complete by section.

C. Qualifications

The Contractor is directed to specific specification sections where specific requirements for submittals may be described in more detail. The drawings, or other required descriptive material, will be examined and approved, corrected, or rejected by the Engineer with reasonable promptness. All rejected material shall be revised and resubmitted until approval is obtained. Each submittal shall be accompanied by a letter of qualification stating that the proposed equipment meets the specifications; or, clearly itemizes and explains any proposed exceptions. Delays caused by such rejections will not be considered cause for extension of the contract time. Approval by Engineer indicates general compliance or acceptability; however, it does not relieve the Contractor of final responsibility for proper dimensions, character, quantity, quality, strength, or sufficiency of the items involved. Waivers, or exceptions, to the Plans and Specifications may be validated only in writing by the Engineer. Written validation will specifically identify the feature in question and no such waiver or exception shall be assumed as a result of omissions or oversights in examining and approving the above drawings or other materials.

Any equipment installed by the Contractor, not formally approved by the Engineer, shall be at the Contractor's risk if it is found that the installed equipment does not conform to the specifications.

1.02 OPERATIONS AND MAINTENANCE MANUALS

A. Operation and Maintenance Manuals

The Contractor shall provide six (6) copies of all required operation and maintenance instructions and manuals for individual equipment items. This information shall be completely up-to-date and reflect actual field installed equipment.

B. Format

The O&M information shall be furnished in bound sets as described for the Submittals.

C. Minimum Requirements

1. Name, address, and phone number of nearest competent service organization who can supply parts and service. If this is not the manufacturer's own service department, then furnish letters confirming that the named organization has been factory authorized to represent the manufacturer of the equipment furnished.
2. Complete descriptive literature and drawings of all material furnished. This is to include "as-built" wiring diagrams of all electrical equipment, "as-built" erection drawings providing up-to-date information on the actual construction of the equipment furnished and any field modifications made during installation, start-up, and testing.
3. Installation, operation, and maintenance brochures from the original manufacturers of all mechanical components such as gear reducers, drive couplings, etc., shall be incorporated into the completed installation.
4. Complete Electrical Motor information (name plate date).
5. Recommended spare parts list.
6. Guide to "troubleshooting".
7. All required assembly, installation, alignment, adjustment, and checking instructions.
8. All required operating instructions.
9. All required maintenance instructions including schedules of all required routine maintenance and lubrication checks.

D. Payment

The Owner and Engineer reserve the right to withhold final payment until acceptable O&M information is received for all equipment specified.

1.03 TESTS AND INSPECTIONS

- A. All materials, equipment, installation, and workmanship included in this contract, if so required by the Engineer, shall be tested and inspected to prove compliance with the contract requirements.
- B. No tests specified herein shall be applied until the item to be tested has been inspected and approval given for the application of such test by an authorized representative of the manufacturer of the equipment.
- C. General Requirements: Tests and inspection shall include:
 - 1. The delivery acceptance tests and inspections.
 - 2. The installed tests and inspections of items as installed.

Tests and inspections, unless otherwise specified or accepted, shall be in accordance with the recognized standards of the industry.

The form of evidence of satisfactory fulfillment of delivery acceptance test and of installed test and inspection requirements shall be, at the discretion of the Engineer, either by tests and inspections carried out in his presence or by certificates or reports of tests and inspections carried out by approved persons or organizations.

- D. Delivery Acceptance Tests and Inspections: The delivery acceptance tests and inspections shall be at the Contractor's expense for any materials or equipment specified herein and shall include the following:
 - 1. Test of items during the process of manufacture and/or on completion of manufacture, comprising material tests, hydraulic pressure tests, electric tests, performance and operating tests, and inspections in accordance with the relevant standards of the industry and more particularly as detailed in individual clauses of the specifications, or as may be required by the Engineer to satisfy himself that the items tested and inspected comply with the requirements of this contract.
 - 2. Inspection of all items delivered at the site in order that the Engineer may be satisfied that such items are of the specified quality and workmanship and are in good order and condition at the time of delivery.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENT

PART 1. GENERAL

1.01 SCOPE

A. General

Prepare and maintain record documents for the project to accurately reflect the construction as built. Documents must be submitted upon completion as a condition of final acceptance.

1.02 MAINTENANCE OF RECORD DOCUMENTS

A. Maintain at the job site during construction activities, one copy of:

1. Contract drawings. As-built drawings.
2. Specifications.
3. Addenda.
4. Reviewed Shop drawings.
5. Change Orders and Field Orders.
6. Other contract modifications.
7. Field test records.
8. Manufacturers' Certifications.
9. Correspondence.

B. Storage

Store record documents in an approved location apart from documents used for construction. Do not use record documents for construction purposes. Provide files and racks for orderly storage. Maintain documents in clean, dry, legible condition. Make documents and samples available at all times for inspection by the Engineer.

1.03 RECORDING

A. Drawing Requirements

Legibly mark contract drawings to record actual construction:

1. Depths of various elements of foundation in relation to the baseline and project benchmark.
2. Horizontal and vertical location of underground and under-slab utilities and appurtenances referenced to permanent surface improvements.
3. Location of internal utilities and appurtenances referenced to permanent surface improvements.

4. Field changes of dimension and detail.
5. Changes made by change order or field order.
6. Details not on original contract drawings.

B. Specifications

Legibly mark specifications and addenda to record:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by change order or field order.
3. Other matters not originally specified.

1.04 SUBMITTAL

- A. At project completion, deliver record documents to the Engineer. Place all letter-sized material in a 3-ring binder, neatly indexed. Bind contract drawings and shop drawings in rolls of convenient size for ease of handling.
- B. Accompany the submittal with a transmittal letter containing:
 1. Date.
 2. Project title and number.
 3. Contractor's name and address.
 4. Title and number of each record document.
 5. Certification that each document as submitted is complete and accurate.
 6. Signature of Contractor.
- C. Sufficient retainage will be withheld from final payment until acceptable Project Record Documents are submitted to the Engineer.

END OF SECTION

SECTION 01890

PROJECT CLOSE-OUT

PART 1. GENERAL

1.01 SCOPE

- A. Provide all labor, material, equipment, services, papers, documents, and incidentals necessary to effectively close-out the project.

PART 2. DETAIL REQUIREMENTS

2.01 DETAIL

- A. Cleaning-up – As the project draws to a close, a program of total clean-up will be initiated by the Contractor. All trades will effectively take care of their areas of responsibilities to insure a clean and ready to occupy work environment both inside and out. This will take place prior to the issuance of the Letter of Substantial Completion.
- B. Guarantees, Bonds, and Affidavits – Prior to project close-out, the Contractor shall submit to the Engineer, three (3) copies of all guarantees, bonds, affidavits, testing reports, color selections, etc., as appropriate to material, service or equipment installation affecting the project. List General Contractor and all major subs and suppliers as well as Project Engineer. List addresses and telephone numbers for each. Bind into three (3) loose-leaf binders and organize by Section.
- C. Project Record Drawings – The Contractor shall maintain and then furnish the Engineer with “as-built” reproducible mylar drawings upon completion of project, showing actual location, in line and elevations, of all exterior utility lines and of any relocation of piping or conduit within the limits of the site from that shown on the drawings. Any changes to the details, plans or elevations should also be recorded on these drawings. All copies of drawings and specifications, except the Contractor's executed contract sets, remain the property of the Engineer and shall be returned to him at the completion of the project.

If required, the drawings may be returned to the Contractor where more information is necessary prior to acceptance of the drawings.

- D. Final Inspection – At Final Inspection, prior to the issuance of the final Certificate for Payment and in compliance with the General Conditions, all previous punch-list items will be verified by the Contractor in writing that he has corrected said items to conform to the plans and specifications. Also, at this time, individual affidavits from ALL subcontractors stating that they have been paid in full for their services by the General Contractor shall be presented to the Engineer.

The Final Inspection will be made in company with a representative of the Owner, the Engineer, and the Contractor.

END OF SECTION

SECTION 02070

GEOTEXTILE FABRIC AND GEOGRID FOR RIP-RAP

PART 1. GENERAL

1.01 SUMMARY

- A. Provide synthetic geotextile fabric and geogrid for stabilizing soil as shown on Drawing and as specified herein.

1.02 RELATED SECTIONS

- A. Section 02200 – Site Preparation.

1.03 REFERENCES

- A. American Society of Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
 - 1. ASTM D-4632-86- Test Method for Breaking Load and Elongation of Geotextiles (Grab Method).
 - 2. ASTM D-4533-85- Test Method for Trapezoid Tearing Strength of Geotextiles.
 - 3. ASTM D-3786-87- Test Method for Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method.
 - 4. ASTM D-4833-88- Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.
 - 5. ASTM D-4751-87- Test Method for Determining the Apparent Opening Size of a Geotextile.
 - 6. ASTM D-4491-85- Test Method Water Permeability of Geotextiles by Permittivity.
 - 7. ASTM D-4355-84- Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus).
- B. Standard Specification for Highway Construction, Arkansas State Highway and Transportation Department, Edition of 2003.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. During shipment and storage fabric shall be wrapped in a heavy-duty protective covering to protect fabric from direct sunlight, mud, dust, dirt, and debris.
- B. Protect geogrid from damage.

PART 2. PRODUCTS

2.01 GEOTECTILE FABRICS

- A. Fabric: Type 8, non-woven polypropylene, composed of strong rot-proof synthetic fibers and be a pervious sheet of synthetic fibers oriented into a stable network so that fibers retain their relative position with respect to each other. Edges of fabric shall be finished to prevent outer yarn from pulling away from fabric. Fabric shall be free of defects or flaws which significantly affect its physical properties and meet the requirements of the Arkansas State Highway and Transportation Department, Standard Specifications for Highway Construction, Section 625, Edition of 2003.
- B. Fabric shall be a non-woven synthetic fiber fabric listed on Arkansas State Highway Transportation Department's Qualified Products List and comply with AASHTO M288
- C. Provide certificates from producer, supplier or an approved independent testing laboratory certifying that the fabric complies with the requirements of this Section.

PART 3. EXECUTION

3.01 PLACEMENT

- A. Engineer shall inspect the placement of geotextile fabric prior to coverage of granular base course materials.
- B. Subgrade shall be prepared as specified in Section 02300 – Earthwork, the material within isolated areas is of a nature that will not readily compact. In this case, subgrade within these isolated areas shall be graded to the lines, grades, and cross sections as shown on Drawings.
- C. Geotextile fabric shall be oriented such that the toll length runs parallel to the centerline. Adjacent rolls shall be overlapped a minimum of 3', and shall be tied together at 15' intervals using suitable plastic ties. Care shall be taken to ensure that the fabric sections do not separate during construction. Placement of fabric around corners may require cutting and diagonal lapping. Geotextile fabric and shall be pinned at the beginning of roll, but shall be left free elsewhere to relieve wrinkles or folds in the material during placement of base material.
- D. Rip-Rap shall be placed in such a manner that the fabric is not damaged during installation and installed at a depth of 1.5 feet below existing grade.
- E. Geotextile fabric that is damaged during construction shall be repaired or replaced at the Contractor's expense.

END OF SECTION

SECTION 02200

SITE PREPARATION

PART 1. GENERAL

1.01 SUMMARY

- A. Remove interfering or objectionable material from construction site.
- B. Preserve vegetation and existing objects designated to remain from injury or defacement.

1.02 DEFINITIONS

- A. Clearing:
 - 1. Cutting, removing, and disposing of trees, snags, stumps, shrubs, brush, limbs, and other vegetation growth.
 - 2. Removing evidence of their presence from the surface, inclusive of sticks and branches greater than 2" in diameter or thickness.
 - 3. Removing and disposing of trash piles, rubbish, and fencing.
- B. Grubbing:
 - 1. Removing and disposing of wood or root matter below the ground surface remaining after clearing.
 - 2. Includes stumps, trunks, roots, or root systems greater than 2" in diameter or thickness to a depth of 18" below the ground surface.

PART 2. MATERIALS

2.01 GENERAL

- A. Provide materials, suitable and in adequate quantity, required to accomplish Work of this Section.

PART 3. EXECUTION

3.01 PREPARATION

- A. Review with Engineer's representative the location, limits, and methods to be used prior to commencing Work under this Section.

3.02 CUTTING TIMBER

- A. Exercise care when clearing near the clearing limits to avoid damage to existing trees, vegetation, structures, or utilities which are outside of the clearing limits.
- B. Trees shall to be leveled into the area to be cleared.

- C. Flush cut stumps not designated for grubbing by cutting to within 2" of the ground surface.
- D. Timber is the property of the Contractor.
- E. Dispose of stumps, limbs, brush, snags, non-marketable timber, and other vegetative growth off-site.

3.03 PRESERVATION OF TREES, SHRUBS, AND OTHER VEGETATION

- A. Protect trees, shrubbery, and other vegetation from damage that is not designated for removal.
- B. Cut and remove tree branches only where, in the opinion of the Engineer, that cutting is necessary to effect construction operation.
- C. Remove branches other than those required to affect the Work to provide a balanced appearance of any tree, as approved prior to removal.
- D. Treat scars resulting from the removal of branches with an approved tree sealant.

3.04 CLEARING AND GRUBBING LIMITS

- A. Clear and grub areas within the limits of construction.
- B. Clear and grub in stages as the construction area is increased to avoid unnecessary clearing and grubbing.

3.05 DISPOSAL OF CLEARING AND GRUBBING DEBRIS

- A. Haul the material from the Work site and dispose of in accordance with state, federal, and local laws. Off-site disposal shall be at the Contractor's sole expense.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1. GENERAL

1.01 SUMMARY

- A. Perform earthwork.
- B. Meet requirements for excavation safety, or to facilitate construction due to wet conditions.
- C. Perform excavation regardless of type, nature, or condition of materials encountered.
- D. Contractor shall make his own estimate of the type and extent of the various materials to be excavated in order to accomplish the work.
- E. There will be no extra compensation for dewatering.

1.02 RELATED SECTIONS

- A. Section 01330 – Submittal
- B. Section 02200 – Site Preparation.
- C. Section 02950 – Site Restoration and Rehabilitation.

1.03 REFERENCES

- A. Arkansas State Highway and Transportation Department, Standard Specifications for Highway Construction, 2003.
 - 1. AHTD Section 303 – Aggregate Base Course.
- B. American Society for Testing and Materials, 1916 Race St. Philadelphia, PA 19103.
 - 1. ASTM D698 – Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb. (2.49-kg) Rammer and 12" (304.8-mm) Drop.
 - 2. ASTM D1556 – Test Method for Density of Soil Place by the Sand-Cone Method.
 - 3. ASTM D1557 – Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 10-lb. (4.54-kg) Rammer and 18" (457-mm) Drop.
 - 4. ASTM D2216 – Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures.
 - 5. ASTM D2922 – Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 6. ASTM D3017 – Test Method for Moisture Content of Soil and Soil Aggregate in Place of Nuclear Methods (Shallow Depth).

- C. Occupational Safety and Health Administration (OSHA) Standard for Excavation and Trenches Safety System, 29 CFR 1926, Subpart P = Excavations.
- D. Arkansas Statute 291 of 1993.

1.04 DEFINITIONS

- A. Relative Compaction:
 - 1. The ratio, in percent, of the as-compacted field dry density to the laboratory maximum dry density as determined by the Standard Proctor Test, ASTM D698, or as determined by the Modified Proctor Test, ASTM D1557, as applicable.
 - 2. Corrections for oversize material may be applied to either the as-compacted field dry density or the maximum dry density, as determined by the Engineer.
- B. Optimum Moisture Content:
 - 1. Moisture content of the material for which the maximum dry density is obtained as determined by ASTM D698 or D1557.
 - 2. Field moisture contents shall be determined on the basis of the fraction passing the $\frac{3}{4}$ " sieve.
- C. Completed Course: A course or layer that is ready for the next layer or the next phase of construction.

1.05 SUBMITTALS

- A. Submit in accordance with Section 01330.
- B. Provide the following:
 - 1. Samples of imported material.
 - 2. Samples of onsite material to be used as fill.
 - 3. Certification that imported materials conform to the Specification requirements along with copies of the test results from a qualified commercial testing laboratory.
 - 4. Proctor curves on fill material as prepared by approved laboratory.

1.06 PROJECT CONDITIONS

- A. Beginning work of this Section means acceptance of existing conditions.

PART 2. PRODUCTS

2.01 FILL

- A. Free from roots, organic matter, trash, and debris with maximum particle size of $1\frac{1}{2}$ ".

- B. It is intended that structural backfill material be obtained from on site to the maximum extent possible.

2.02 IMPORTED GRANULAR FILL

- A. Provide granular fill beneath structures as noted on Drawings.
- B. Imported granular fill to consist of a natural or artificial mixture of gravel and soil mortar, uniformly well graded from coarse to fine.
- C. Conform to the AHTD Section 303 classifications for Class 7 as designated on the Drawings.

2.03 TOPSOIL

- A. Selected topsoil at the site, properly stored and protected, free from roots, sticks, hard clay, and stones which will not pass through a 2" square opening.
- B. Provide imported topsoil of equal quality if required to accomplish the work.

2.04 COMPACTION EQUIPMENT

- A. Provide compaction equipment of suitable type and adequate to obtain the densities specified.
- B. Operate compaction equipment in strict accordance with the manufacturer's instructions and recommendations.
- C. Hand-operated equipment shall be capable of achieving the specified densities.

2.05 MOISTURE CONTROL EQUIPMENT

- A. Provide equipment for applying water of a type and quality adequate for the work; it shall not leak; and be equipped with a distributor bar or other approved device to assure uniform application.
- B. Provide equipment for mixing and drying out material consisting of blades, discs, or other approved equipment.

2.06 WATER REMOVAL EQUIPMENT

- A. Provide and operate equipment adequate to keep excavation and trenches free of water.

2.07 IMPORTED MATERIAL ACCEPTANCE

- A. Import only if insufficient material is available on-site.
- B. Locate and arrange use of a site near the construction area for obtaining borrow material.
- C. Additional tests required at the borrow area:
 - 1. Standard Proctor.
 - 2. Remolded permeability
 - 3. Atterberg limits.

- D. Upon completion of removal of borrow material, grade the site to drain, place topsoil on disturbed areas, and establish grass as outlined in Section 02950.
- E. Costs shall be the responsibility of the Contractor.

2.08 SELECTED MATERIAL ACCEPTANCE

- A. Provide samples for testing representative of the actual material to be installed in the work. Take samples from each 2,000 cubic yards of material stockpiled. Depending on the uniformity of the material, Engineer may request more frequent samples.
- B. Forward test results to the Engineer at least 10 days before the material is required for use. If tests indicate that the material does not meet Specification requirements, the material shall not be installed in the work.
- C. Material which is placed in the work but does not conform to the Specification requirements shall be removed and replaced at the Contractor's sole expense.

PART 3. EXECUTION

3.01 CLEARING AND GRUBBING

- A. Complete clearing and grubbing work as specified in Section 02200 prior to beginning work in this Section.

3.02 STRIPPING TOPSOIL

- A. Remove existing grass and overburden before excavating topsoil.
- B. Prior to beginning excavation or fill, strip the topsoil to a depth of at least 6" or to a depth sufficient to remove organic material and stockpile for future use.
- C. In general, remove topsoil where structures are to be built, trenches dug, and roads, parking lots, walks, and similar improvements constructed within the area presently covered with topsoil.
- D. Store topsoil clear of the construction area.
- E. Take reasonable care to prevent the topsoil from becoming mixed with subsoil or eroding.

3.03 STRUCTURAL EXCAVATION

- A. Contractor shall be solely responsible for trench and excavation safety systems in accordance with ACT 291 of 1993 and OSHA requirements.
- B. Identify required lines, levels, and grades.
- C. Identify known underground utilities. Contractor will be responsible for locating utilities.
- D. The method of excavation is optional; however, no equipment shall be operated in a manner that will endanger existing structures and their integrity.
- E. Use excavation support system such as sheet piling where ever necessary.
- F. Allow for forms, working space, granular base, and finish topsoil where shown on Drawings or required.

- G. Do not carry excavation for footings and slab deeper than the elevation shown on Drawings after allowing for base material.
- H. If undercutting occurs below the planned dirt grade, the same fill material as specified for backfill shall be placed and compacted to 95 Percent Standard Proctor Density as defined in this Section up to the planned dirt grade in 8" lifts. Do not attempt to over compact excessively wet soil. Allow to dry first by scarifying and aerating before remolding.

3.04 DEWATERING EXCAVATION

- A. Remove water during periods when concrete is being deposited, pipe is being laid, and placing of backfill unless water settling is required, and at other times as required for efficient and safe execution of the work.
- B. Accomplish removal of groundwater in a manner that will preserve the strength of the foundation soils, will not cause instability of the excavation slopes, and will not result in damage to existing structures.
- C. Where necessary to these purposes, lower the water level in advance of excavation, utilizing wells, well points, or similar methods.
- D. Maintain the water level in the gravel stratum as measured in piezometers, a minimum of 3' below the prevailing excavation level or as needed to prevent bottom heave of the excavation.
- E. Open pumping, sumps, and ditches: If these result in boils, loss of fines, softening of the ground or instability of slopes, areas shall not be accepted.
- F. Install wells and well points with suitable screens and filters so that continuous pumping of fines does not occur.
- G. Operate well points continuously to prevent boils and loss of consolidation.
- H. Arrange discharge to facilitate collection of samples by Engineer.
- I. Avoid settlement or damage to adjacent property.
- J. Dispose of water in a manner that will not damage adjacent property, as approved.

3.05 GRANULAR FILL MATERIAL UNDER FACILITIES

- A. Place fill granular material as specified in Article 2.2 within the influence area beneath slabs, walks, structures, roads, and parking areas, and as shown on the Drawings.
- B. Do not exceed loose lifts of 6".
- C. Compact each lift to not less than 95 percent Modified Proctor Density.
- D. Place and compact a 6" layer of granular fill to at least 95 percent Modified Proctor density immediately beneath spread footings, slabs on grade, or other concrete structures.
- E. Moisten material as required to aid compaction (\pm 2 percent optimum moisture).
- F. Place material in horizontal lifts and in a manner to avoid segregation.
- G. Correct and repair subsequent damage to slabs, piping, concrete structures, facilities, or other structures caused by settlement of fill material.

3.06 BACKFILL AND STRUCTURES

- A. Remove form materials and trash from excavation before placing backfill.
- B. Do not operate earth-moving equipment within 5' of walls of concrete structures for the purpose of depositing or compacting backfill material.
- C. Compact backfill adjacent to concrete walls with hand-operated tampers or similar equipment that will not damage the structure.
- D. Backfill water-holding basins only after satisfactory leakage tests have been conducted.
- E. Place earth fill in areas not designated to be structural fill or granular fill.
- F. Deposit material in maximum 6-inch loose lifts, and compact each lift to not less than 95 Percent Standard Proctor.

3.07 FILL NOT BENEATH STRUCTURES OR FACILITIES

- A. Place earthen fill to the lines and grades shown.
- B. Place fill material in maximum 6" loose lifts and compact each lift to not less than 95 Percent Standard Proctor.
- C. Make proper allowance for topsoil where required.

3.08 MOISTURE CONTROL

- A. During compacting operations, maintain optimum practicable moisture content required for compaction purposes in each lift of fill.
- B. Maintain moisture content uniform throughout the lift.
- C. Add water to the material at the site of excavation. Supplement, if required, by sprinkling the fill.
- D. At the time of compaction, maintain the water content of the material at optimum moisture content, plus or minus 2 percentage points, except as otherwise specified for embankments.
- E. Do not attempt to compact fill material that contains excessive moisture.
- F. Aerate material by blading, discing, harrowing, or other methods, to hasten the drying process.

3.09 FIELD DENSITY TESTS

- A. Test Methods: ASTM D2922, D1556, D2216, and D3017.
- B. Cooperate with testing work by leveling small test areas designated by the Engineer.
- C. Backfill test areas.
- D. Field density test shall be performed at every 150-foot station along the route of the trail.
- E. Engineer may order testing of lift of fill at any time, location, or elevation.

3.10 SITE GRADING

- A. Perform earthwork to lines and grades as shown on Drawings with proper allowance for topsoil where specified or shown on Drawings.

- B. Shape, trim, and finish slopes to conform with the lines, grades, and cross sections shown.
- C. Slopes shall be free of loose exposed roots and stones exceeding 3" diameter.
- D. Round tops of banks to circular curbs, in general, not less than a 6' radius.
- E. Neatly and smoothly trim rounded surfaces; over-excavating and backfilling to the proper grade are not acceptable.
- F. Finish site grading shall be reviewed by the Engineer.

3.11 DISPOSAL OF EXCESS EXCAVATION

- A. Dispose of excess excavated materials, not required or suitable for use as backfill or fill, outside of the area of work.
- B. Compact excess material as specified for fill, dress the completed disposal area to slopes no greater than 4:1 (horizontal:vertical), and slope to drain.

3.12 SETTLEMENT

- A. Settlement in backfill, fill, or in structures built over the backfill or fill, that may occur within the 1-year guarantee period in the General Conditions shall be considered to be caused by improper compaction methods.
- B. Restore structures damaged by settlement to original condition.

END OF SECTION

SECTION 02315

TRENCH EXCAVATION, BACKFILL, AND COMPACTING

PART 1. GENERAL

1.01 SUMMARY

- A. Work of this Section also includes:
 - 1. Replacing topsoil that contains regenerative material.
 - 2. Disposal of trees, stumps, brush, roots, limbs, and other waste materials from clearing operations.
 - 3. Imported topsoil.
 - 4. Crush rock backfill required by over-excavation.
 - 5. Imported pipe zone material.
 - 6. Trench settlement repair, including replacing roadway surfacing, sidewalk, or other structures.
 - 7. Replacing damaged culverts.
- B. Trench excavation is classified as common excavation and includes removal of material of whatever types encountered to depths shown or as directed by Engineer.
- C. Pipe zone includes full width of excavated trench from 4" below bottom of pipe to a point 6" above top outside surface of pipe barrel.
- D. Conform to federal, state, and local codes governing safe loading of trenches with excavated material.
- E. The right is reserved to modify the use, location, and quantities of the various types of backfill during construction as Engineer considers to be in the best interest of Owner.
- F. There shall be no additional payment for rock excavation.

1.02 RELATED SECTIONS

- A. Section 02532 – Polyvinyl Chloride (PVC) Sewer Pipe.

1.03 REFERENCES

- A. Arkansas Highway and Transportation Department, P.O. Box 2261, Little Rock, Arkansas 72203
 - 1. AHTD 303 – Aggregate Base Course.
- B. American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
 - 1. ASTM D448 – Classifications for Standard Sizes of Aggregate and Bridge Construction.

2. ASTM D698 – Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, using 5.5-lb. (2.49-kg.) Rammer and 12" (304.8-mm) Drop.
 3. ASTM D1557 – Test Methods for Moisture –Density Relations of Soils and Soil-Aggregate Mixtures, Using 10-lb. (4.54-kg.) Rammer and 18" (457-mm) Drop.
 4. ASTM D6938 – Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- C. Occupational Safety and Health Administration (OSHA) Standard for Excavation and Trenches Safety System, 29 CFR 1926, Subpart P = Excavations.
 - D. The Contractor shall be solely responsible for trench and excavation safety systems in accordance with Act 291 of 1993.

PART 2. PRODUCTS

2.01 FOUNDATION STABILIZATION

- A. Crushed gravel or crushed rock, free from dirt, clay balls, or organic material, well graded from coarse to fine, containing sufficient finer material for proper compactions, and meeting ASTM D448 Size No. 67 (Concrete Aggregate).

2.02 PIPE ZONE MATERIAL

- A. Select native material shall consist of fine loose earth or sand free from clods or rocks larger than $\frac{3}{4}$ " in dimension and of proper moisture content for maximum consolidation.
- B. Crushed granular material conforming to ASTM D448, Size No. 67.
- C. Washed stone bedding size $\frac{1}{4}$ " to $\frac{3}{4}$ ".

2.03 COMMON FILL MATERIALS

- A. Material shall not contain pieces larger than 3", and shall be free of roots, debris, or organic matter.

2.04 BEDDING MATERIAL

- A. Pea gravel, sand, or other locally available bedding material, as approved.
- B. Bedding material shall be a maximum of $\frac{3}{4}$ " angular rock and $1\frac{1}{2}$ " rounded rock.

2.05 TRENCH BACKFILL

- A. Granular Backfill:
 1. Natural or artificial mixture of gravel and soil mortar uniformly well graded from coarse to fine.
 2. AHTD Section 303 Class 3, Class 4, or Class 7 as specified in this Section.

2.06 PVC GRAVITY PIPE TRENCH

- A. Refer to Drawings for trench details.

2.07 COMPACTION EQUIPMENT

- A. Suitable type and adequate to obtain the amount of compaction specified.
- B. Operate in strict accordance with manufacturer's instructions and recommendations and maintain conditions so that it delivers manufacturer's rated compactive effort.

2.08 IMPORTED TOPSOIL

- A. Suitable sandy loam from an approved source.
- B. Possess friability and a high degree of fertility.
- C. Free of clods, roots, gravel, and other inert material.
- D. Free of quackgrass, horsetail, and other noxious vegetation and seed.

PART 3. EXECUTION

3.01 PREPARATION

- A. Where clearing or partial clearing of right-of-way is necessary, complete prior to start of trenching.
- B. Cut trees and brush as near to surface of ground as practicable, remove stumps, and pile for disposal.
- C. Do not permit excavated materials to cover brush or trees prior to disposal.

3.02 DISPOSAL OF CLEARED MATERIAL

- A. Dispose of cleared materials in a manner that meets or exceeds requirements of state, county, and local regulations regarding health, safety, and public welfare.
- B. Dispose of nonflammable and flammable material off the construction site in an approved location.
- C. Do not leave material on the Project site, shove onto abutting private properties, or bury in embankments or trenches.

3.03 REMOVAL OF OBSTRUCTIONS

- A. Remove obstructions within trench area or adjacent to trench area, such as tree roots, stumps, abandoned piling, logs, and debris.
- B. Engineer may, if requested, make changes in the trench alignment to avoid major obstructions, if such alignment changes can be made within the easement or right-of-way without adversely affecting the intended function of the facility.
- C. Dispose of obstructions in accordance with this Section.

3.04 REMOVAL AND REPLACEMENT OF TOPSOIL

- A. Where trenches cross lawns, garden areas, pasturelands, cultivated fields, or other areas on which reasonable topsoil conditions exist, remove topsoil for a depth of 6" for full width of trench to be excavated.
- B. Use equipment capable of removing a uniform depth of material, such as a scraper or motor grader; a backhoe shall not be considered suitable.
- C. Stockpile removed topsoil at regular intervals, and do not mix with other excavated material.
- D. Locate stockpiles so that material of one ownership is not transported and stockpiled on property of another ownership.
- E. Minimum Finished Depth of Topsoil over Trenches: 5".
- F. Imported topsoil may be substituted for stockpiling and replacing topsoil.
- G. Maintain finished grade of topsoil level with area adjacent to trench until final acceptance by Engineer.
- H. Repair damage to adjacent topsoil caused by work operations.
 - 1. Remove rock, gravel, clay, and other foreign materials from the surface.
 - 2. Regrade.
 - 3. Add topsoil as required.

3.05 TRENCH WIDTH

- A. Minimum width of unsheeted trenches where pipe is to be laid shall be 18" greater than the outside diameter of the pipe or as approved.
- B. Maximum width at top of trench shall not be limited, except where excess width of excavation would cause damage to adjacent structures or property or cause undue stresses on the pipe.
- C. Confine trench widths to dedicated rights-of-way or construction easements, unless special written agreements have been made with affected property owners.

3.06 EXCAVATION

- A. Material excavated is defined as unclassified excavation regardless of the material encountered.
- B. Excavate trench to lines and grades shown or as established by Engineer with proper allowance for pipe thickness and for pipe base or special bedding when required.
- C. If trench is excavated below required grade, correct with foundation stabilization material.
- D. Place material over full width of trench in compacted layers not exceeding 6" deep to established grade with allowance for pipe base or special bedding.

3.07 PREPARATION OF TRENCH – LINE AND GRADE

- A. Do not deviate more than ½" from line or ½" from grade. Measure for grade at the pipe invert, not at the top of the pipe, because of permissible variation in pipe wall thickness.
- B. Grade the bottom of the trench by hand to the line and grade where the pipe is to be laid, with proper allowance for pipe thickness and for pipe base when specified or indicated.
- C. Remove hard spots that would prevent a uniform thickness of bedding.
- D. Check the grade with a straightedge and correct irregularities found.
- E. The trench bottom shall form a continuous and uniform bearing and support for the pipe at every point between bell holes, except that the grade may be disturbed for the removal of lifting tackle.

3.08 SHORING, SHEETING, AND BRACING OF TRENCHES

- A. Sheet and brace trench when necessary to prevent caving during excavation in unstable material or to protect adjacent structures, property, workers, and the public.
- B. Increase trench widths accordingly by the thickness of the sheeting.
- C. Maintain sheeting in place until pipe has been placed and backfilled at pipe zone.
- D. Remove shoring and sheeting as backfilling is done in a manner that will not damage pipe or permit voids in backfill.
- E. Conform to safety requirements of federal, state, or local public agency having jurisdiction for sheeting, shoring, and bracing of trenches; the most stringent of these requirements shall apply.

3.09 LOCATION OF EXCAVATED MATERIALS

- A. Place excavated material only within construction easement, right-of-way, or approved working area.
- B. Do not obstruct private or public traveled roadways or streets.

3.10 REMOVAL OF WATER

- A. Provide and maintain ample means and devices to promptly remove and dispose of water entering trench during time trench is being prepared for pipe laying, during laying of pipe, and until backfill at pipe zone is completed.
 - 1. These provisions apply during the noon hour as well as overnight.
 - 2. Provide necessary means and devices, as approved, to positively prevent water from entering the construction area of another contractor.
- B. Dispose of water in a manner to prevent damage to adjacent property.
- C. Drainage of trench water through the pipeline under construction is prohibited.

3.11 FOUNDATION STABILIZATION

- A. When existing material in bottom of trench is unsuitable for supporting pipe, excavate unsuitable material.
- B. Backfill trench to subgrade of pipe base with foundation stabilization material specified.
- C. Place foundation stabilization material over the full width of trench and compact in layers not exceeding 6" deep to required grade by making passes with a vibratory compactor (or equivalent).
- D. Material shall be considered unsuitable when it contains more than 5 percent organic material by volumetric sampling or when it will not support a reading of 1.5 on a hand penetrometer.

3.12 ROCK IN PIPE TRENCH

- A. Where rock is encountered in bottom of trench, support pipe on bedding material.
- B. Minimum Bedding Thickness: 4" or one-eighth of the outside diameter of pipe, minimum.
- C. Extend bedding up pipe sides one-sixth of outside diameter of the pipe, minimum.
- D. Backfill over pipe according to pipe zone type.

3.13 PIPE ZONE BACKFILL

- A. Depth of the pipe zone above pipe barrel varies with pipe material.
- B. Particular attention shall be given to area of pipe zone from flow line to centerline of pipe to ensure firm support is obtained to prevent lateral movement of pipe during final backfilling of pipe zone.
- C. Backfill area of pipe zone from bottom of pipe to horizontal centerline of pipe by hand-placing material around pipe in 4" layers.
- D. Achieve continuous support beneath pipe haunches by "walking in" and slicing with shovel.
- E. Backfill area of pipe zone from horizontal centerline to top of pipe zone with pipe zone material as shown in trench details on Drawings.

3.14 TRENCH BACKFILL ABOVE PIPE ZONE

- A. When backfill is placed mechanically, push backfill material onto slope of backfill previously placed and allow to slide down into trench.
- B. Do not push backfill into trench in a way to permit free fall of material until at least 2' of cover is provided over top of pipe.
- C. Under no circumstances allow sharp, heavy pieces of material to drop directly onto pipe or tamped material around pipe.
- D. Do not use backfill material of consolidated masses larger than ½ cubic foot.

3.15 EXCESS EXCAVATED MATERIAL

- A. Dispose of excess excavated material off project site in an approved area.

3.16 DRAINAGE CULVERTS

- A. Replace drainage culverts that are removed on near right angles to pipe centerline.
- B. If pipe cannot be reused or is damaged during removal, dispose of it and provide new pipe.
- C. Protect culverts from damage or restore to equivalent condition.
- D. Replace culverts to existing lines and grades.
- E. Do not replace culverts until proposed pipeline is installed and backfill of trench has been completed to subgrade of culvert.

3.17 PIPE COVER

- A. Place select material from excavation over pipe to provide minimum coverage, as shown on Drawings or as directed by Engineer.

3.18 DRAINAGE DITCH RESTORATION

- A. Undercrossings of minor drainage ditches not covered in another Specification Section shall be backfilled so that upper 1' of material in ditch between ditch banks is clay.
- B. Compact material for full ditch width by six (6) passes of vibratory compactor (or equivalent).
- C. Where indicated on Drawings, provide concrete arch, or rip rap on ditch banks.

3.19 SETTLEMENT

- A. Correct settlement noted in backfill, fill, or in structures built over backfill or fill within warranty period.

3.20 IMPORTED TOPSOIL

- A. Should regenerative material be present in soil, remove both surface and root that appears within 1-year following acceptance of Project in a manner satisfactory to Owner.

END OF SECTION

SECTION 02371

CELLULAR CONCRETE BLOCK

PART 1. GENERAL

1.01 SCOPE OF WORK

The contractor shall furnish all labor, materials, equipment, and incidentals required and perform all operations in connection with the installation of cellular concrete retaining wall blocks in accordance with the lines, grades, design and dimensions shown on the Contract Drawings and as specified herein.

PART 2. PRODUCTS

2.01 MATERIAL

- A. General. All interlocking pre-cast concrete blocks are substantially H-shaped, having a flat bottom and, in its middle, two vertical openings of rectangular cross section and shall be manufactured as individual units which shall be packaged in a manner suitable for transportation to the jobsite. The blocks shall be shaped in such a way that each block keys into four (4) adjacent blocks. Further, the blocks are capable of being connected at the jobsite so that each individual unit is physically interlocked with six (6) surrounding blocks to resist lateral movement and uplift. The gross area of each individual block in direct contact with the protected sub-grades shall be no less than one square foot.

The contractor shall place the interlocking blocks to the lines and grades shown on the Contract Drawings.

- B. Cellular Concrete Blocks

1. SCOPE

- a. This specification covers concrete blocks for erosion control used in revetments, storm channels, etc. and for soil stabilization.

Note 1 – Concrete units covered by this specification are made from lightweight or normal weight aggregates, or both.

Note 2 – The Values stated in U.S. customary units are to be regarded as the standard.

2. MATERIALS

- a. Cementitious Materials – Materials shall conform to the following applicable ASTM specifications:
 - 1. Portland Cements – Specification C 150, for Portland Cement.
 - 2. Blended Cements – Specification C 595, for Blended Hydraulic Cements.
 - 3. Hydrated Lime Types – Specification C 207, for Hydrated Lime Types.
 - 4. Pozzolans – Specification C 618, for Fly Ash and Raw or Calcined Natural Pozzolans for use in Portland Cement Concrete.
- b. Aggregates shall conform to the following ASTM specifications, except that grading requirements shall not necessarily apply:
 - 1. Normal Weight – Specifications C 33, for Concrete Aggregates.

3. PHYSICAL REQUIREMENTS

- a. At the time of delivery to the work site, the units shall conform to the physical requirements prescribed in Table 1 below.
- b. Durability. The manufacturer shall satisfy the purchaser by proven field performance that the concrete units have adequate durability even if they are to be subjected to a freeze-thaw environment.

TABLE 1. PHYSICAL REQUIREMENTS			
Compressive Strength Net Area Min. psi (MPa)		Water Absorption Max., LB/FT ³ (Kg/M3)	
Avg. of 3 units	Individual Unit	Avg. of 3 units	Individual Unit
4,000 (27.6)	3,500 (24.1)	10 (160)	12 (192)

4. VISUAL INSPECTION

- a. All units shall be sound and free of defects that would interfere with the proper placing of the unit or impair the strength or performance of the construction. Minor cracks incidental to the usual methods of

manufacture, or minor chipping resulting from customary methods of handling in shipment and delivery, shall not be deemed grounds for rejection.

5. SAMPLING AND TESTING

- a. The purchaser or the authorized representative shall be accorded proper facilities to inspect and sample the units at the place of manufacture from lots ready for delivery.
- b. Sample and test units in accordance with ASTM Methods C 140, Sampling and Testing Concrete Masonry Units.

6. MANUFACTURER

Cellular concrete blocks shall be ARMORLOC® Class 3510 as manufactured by Armortec, or approved equal.

They shall have the following nominal characteristics:

TABLE 2. STANDARD SIZES OF ARMORLOC® BLOCKS				
Nominal Grid Dimensions	Gross Area/Grid Square Ft	Weight/Grid Lbs.	Weight/Grid Lbs./Sq. Ft.	Open Area %
15.9"x11.9"x4.0"	1.0	30-35	30-35	25

C. FILTER FABRIC

Geotextile. The geotextile shall be a pervious sheet of woven monofilament/multifilament plastic yarns. The geotextile shall meet the physical requirements listed in Table No. 3 of the specifications.

The geotextile fiber shall consist of a long-chain synthetic polymer composed of at least 85% by weight of propylene, ethylene, ester, or amide, and shall contain stabilizers and/or inhibitors added to the base plastic, if necessary, to make the filaments resistant to deterioration due to ultraviolet and heat exposure. The edges of the geotextiles shall be finished to prevent the outer fiber from pulling away from the geotextiles.

The Contractor shall finish the Engineer, in duplicate, manufacturer's certified test results showing actual test values obtained when the physical properties are tested for compliance with the specifications.

During all periods of shipment and storage, the filter fabric shall be protected from direct sunlight, ultraviolet rays and temperatures greater than 140°

Fahrenheit. To the extent possible, the fabric shall be maintained wrapped in its protective covering.

TABLE 3. PHYSICAL REQUIREMENTS		
Physical Property	Test Procedure	Minimum Value
Grab Tensile Strength (Un-aged Geotextile)	ASTM D4632	Warp: 275 Lbs. Fill: 390 Lbs.
Breaking Elongation (Un-aged Geotextile)	ASTM D4632	10% in any principal direction
Burst Strength	ASTM D3786	525 psi
Puncture Strength	ASTM D4833	145 Lbs.
A.O.S., U.S. Std. Sieve	ASTM D4751	60
% Open Area	CWO-22125-86	10
Permittivity	ASTM D4491	.51 sec ⁻¹
Water Flow Rate	ASTM D4491	35 gpm/Sq. Ft.

At the time of installation, filter fabric shall be rejected if it has been removed from its protective cover for over 72 hours or has defects, tears, punctures, flow deterioration, or damage incurred during manufacture, transportation or storage. With the acceptance of the Engineer, a torn or punctured section of fabric shall be repaired by placing a filter fabric patch over the damaged area prior to placing the mats. The patch shall be large enough to overlap a minimum of three (3) feet in all directions.

In the event preassembled panels of fabric are required, the panels of filter fabric shall be sewn together at the manufacturer or another approved location to form sections.

PART 3. INSTALLATION

3.01 FOUNDATION PREPARATION

- A. Construction Methods. Areas on which filter fabric and interlocking concrete blocks are to be placed shall be constructed to the lines and grades shown on the Contract Drawings. Where such areas are below the allowable grades, they shall be brought to grade and compacted. The depth of layers and amount of compaction shall be as required by the Engineer. All obstructions, such as roots

and projecting stones, must be removed and all of the soft or low density pockets of material removed must be filled with selected material and compacted.

Excavation and preparation for anchor trenches, side trenches, and toe trenches or aprons shall be done in accordance with manufacturer's recommendations.

Immediately prior to placing the filter fabric and interlocking concrete blocks, the prepared area shall be inspected by the Engineer, and no fabric or blocks shall be placed thereon, until that area has been approved.

3.02 PLACEMENT OF FILTER FABRIC

- A. General. Filter fabric, as specified elsewhere, shall be placed within the limits shown on the Contract Drawings.
- B. Placement. Filter fabric shall be placed directly on the finished graded area. Longitudinal and transverse joints shall be overlapped at least three (3) feet. The fabric shall be placed so that the upstream strip of fabric will overlap the downstream strip.

3.03 PLACEMENT OF INTERLOCKING CELLULAR CONCRETE BLOCKS

- A. General. Cellular concrete blocks, as specified in Part 2.01 B of these Specifications, shall be placed within the limits on the Contract Drawings.
- B. Placement. The cellular concrete blocks shall be placed on the filter fabric in such a manner as to produce a level surface, and shall be constructed within the specified lines and grades shown on the Contract Drawings.
- C. Finishing. The cells or openings in the cellular concrete blocks shall be filled with suitable material.
- D. Consultation. The manufacturer of the cellular concrete mats shall provide design and construction advice during the design and installation phases of the project.

END OF SECTION

SECTION 02609
STORM DRAIN PIPE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Pipe, joints, and accessories.

- B. Bedding

1.2 REFERENCES

- A. AASHTO T180 - Moisture-Density Relations of Soils Using a 10-lb (4.54 kg) Rammer and an 18-in. (457 mm) Drop.

- B. ASTM A444/A444M - Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process for Storm Sewer and Drainage Pipe.

- C. ASTM C14 - Concrete Sewer, Storm Drain, and Culvert Pipe.

- D. ASTM C76 - Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.

- E. ASTM C443 - Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.

- F. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.

- G. ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb (4.54 Kg) Rammer and 18 inch (457 mm) Drop.

- H. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

- I. ASTM D3017 - Test Methods for Moisture Content of Soil and Soil-Aggregate Mixtures.

- J. Section 606 "Pipe Culverts", AHTD 1996 - Standard Specifications for Highway Construction.

1.3 SUBMITTALS FOR INFORMATION

- A. The Subcontractor shall provide a copy of test reports to the owner's representative verifying the reinforcing pipe scheduled for utilization was in compliance with Section 606 "Pipe Culverts", AHTD 1996 - Standard Specifications for Highway Construction prior to the incorporation of the pipe into the project.

PART 2 - PRODUCTS 2.1

CONCRETE PIPE

- A. The Subcontractor shall verify that the manufacturer is a qualified supplier for AHTD projects, and has the means to satisfy all requirements set forth by Section 606 of AHTD 1996 - Standard Specifications for Highway Construction.
- B. Reinforced Concrete Pipe shall conform to Subsection 606.02 (b), AASHTO M 170 - Class III with a minimum "B" wall thickness, of AHTD 1996 - Standard Specifications for Highway Construction.
- C. Reinforced Concrete Pipe Joint Device shall conform with Subsection 606.02 (b) (4) of AHTD 1996 - Standard Specifications for Highway Construction.
- D. Flared End Sections shall conform with Subsection 606.02 (e) of AHTD 1996 - Standard Specifications for Highway Construction.

2.2 ALUMINUM COATED CORRUGATED STEEL PIPE

- A. The manufacture and furnish shall be in accordance with AASHTO M 36 and M 274 and maintain a manning's n value not greater than 0.013, as manufactured by Contech or equal.
- B. Flared end section shall meet the same requirements as the parent pipe material.
- C. Coupling bands shall comply with requirements of AASHTO M 36 and M 196. Coupling devices manufactured at the factory will be allowed based on approval by the Engineer.

2.2 BEDDING AND COVER MATERIALS

- A. Bedding and cover material shall comply with that specified on the plans.
- B. Backfill for cover shall be constructed in accordance with Section 02220.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. The Subcontractor shall verify that the pipe for placement has marking in accordance with Subsection 606.02 of AHTD 1996 - Standard Specifications for Highway Construction.

3.2 PREPARATION

- A. The pipe bedding shall be constructed as detailed on the plans.
- B. Verify pipe location and flowline.

3.3 CONSTRUCTION REQUIREMENTS

- A. The concrete pipe culvert shall be constructed in accordance with Subsection 606.03 of AHTD 1996 - Standard Specifications for Highway Construction unless otherwise specified herein.
- B. Gaskets shall be provided at the pipe inverts located at the storm sewer curb inlets. Pipe inverts shall be grouted as indicated on the plans.

3.4 FIELD QUALITY CONTROL

- A. The quality of materials, the process of manufacturing, and the finished pipe shall be subject to inspection and approval by the owner's representative. In addition, the finished pipe shall be subject to further inspection by the owner's representative at the project site prior to during installation.
- B. Backfill will be tested in accordance with Section 02220.

3.5 PROTECTION

- A. Protect pipe and bedding from damage or displacement until backfilling operation is in progress.

END OF SECTION

SECTION 02730

GRAVEL SURFACING

PART 1. GENERAL

1.01 SECTION INCLUDES

- A. Gravel paving course, compacted.

1.02 RELATED SECTIONS

- A. Section 02200 – Site Preparation.

1.03 REFERENCES

- A. American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.

- 1. ASTM C136 – Method for Sieve Analysis of Fine and Coarse Aggregates.

- B. Arkansas Highway and Transportation Department, P.O. Box 2262, Little Rock, Arkansas 72203.

- 1. AHTD 303 – Aggregate Base Coarse.

1.04 TESTS

- A. Graduation of stone materials will be performed in accordance with ASTM C136.

PART 2. PRODUCTS

2.01 MATERIALS

- A. Natural and artificial mixture of gravel and soil mortar.

- B. Gravel:

- 1. Crushed or uncrushed stone.
 - 2. Free from objectionable, deleterious, or other injurious matter.
 - 3. Graded to AHTD designations Class 3 or Class 4.
 - 4. Class 7 may be used for non-levee roads.

PART 3. EXECUTION

3.01 INSPECTION

- A. Verify compacted subgrade is dry and ready to receive Work of this Section.
- B. Verify gradients and elevations of subgrade are correct.

C. Beginning of installation means acceptance of existing conditions.

3.02 PLACING GRAVEL PAVING

- A. Spread gravel material over prepared base to a total compacted thickness of 6", minimum.
- B. Level surfaces to elevations and gradients indicated.
- C. Compact placed gravel materials to achieve 95 percent Modified Proctor density in accordance with ASTM D1557 and Section 02315.
- D. Moisture Content:
 - 1. Add water, if necessary, to assist compaction.
 - 2. With an excess water condition, rework topping and aerate to reduce moisture content.
- E. Perform hand tamping in areas inaccessible to compaction equipment.

END OF SECTION

SECTION 02740

ASPHALTIC CONCRETE PAVING

PART 1. GENERAL

1.01 SUMMARY

- A. Prepare asphaltic concrete pavement in accordance with this Section and where indicated on the Drawings.
- B. Contractor will pay cost of testing.
- C. Construct Work of this Section that is adjacent to or connected to city streets in accordance with requirements of the City for city streets.
- D. Secure permits and inspections, post necessary bonds, and pay necessary fees.

1.02 REFERENCES

- A. American Association of State Highway and Transportation Officials, 444 North Capitol Street, North West, Suite 225, Washington, DC 20001.
 - 1. AASHTO M14 – Anionic Emulsified Asphalt.
 - 2. AASHTO M81 – Cut-Back Asphalt Concrete (Rapid-Curing Type).
 - 3. AASHTO M82 – Cut-Back Asphalt Concrete (Medium-Curing Type).
 - 4. AASHTO M208 – Cationic Emulsified Asphalt.
- B. American Society of Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
 - 1. ASTM C207 – Specification for Hydrated Lime for Masonry Purposes.
 - 2. ASTM D698 – Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5-lb. (2.49-kg) Rammer and 12" (304.8-mm) Drop.
 - 3. ASTM D946 – Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction.
 - 4. ASTM D977 – Specification for Emulsified Asphalt.
- C. Arkansas State Highway and Transportation Department, P.O. Box 2262, Little Rock, Arkansas 72203.
 - 1. AHTD – Standard Specifications for Highway Construction, Latest Edition.
 - 2. AHTD – Division 300 – Bases and Granular Surfaces.
 - 3. AHTD – Division 303 – Aggregate Base Course.
 - 4. AHTD – Division 304 – Aggregate Surface Course.
 - 5. AHTD – Division 305 – Asphaltic Concrete Hot Mix Stabilized Base Course.
 - 6. AHTD – Division 400 – Asphalt Pavements.

PART 2. PRODUCTS

2.01 ASPHALTIC PAVING MATERIALS

- A. Base Course: Crushed stone conforming to AHTD Standard Specifications for Highway Construction Section 303, Class 7.
- B. Prime Coat: Medium curing cut-back asphalt; MC-30 or MC070; AASHTO M82; heated and applied within the temperature range 80°F – 150°F.
- C. Tack Coat:
 - 1. Rapid curing cut-back asphalt:
 - a. AASHTO M81.
 - b. RC70
 - c. Application temperature 80°F – 115°F.
 - d. Rapid curing emulsified asphalt to match aggregate type.
 - e. Anionic: RS-1; AASHTO M14.
 - f. Cationic: CRS-1; AASHTO M208.
 - g. Application temperature 125°F – 185°F.
- D. Hot-mix binder materials shall meet the requirements:
 - 1. Asphaltic Cement: Type II in accordance with the Standard Specifications for Highway Construction, Arkansas State Highway and Transportation Department, Latest Edition, Section 406, Asphalt Concrete Hot Mix Binder Course.
 - 2. Materials shall comply with Section 409 and Section 406 of the Standard Specifications for Highway Construction, Arkansas State Highway and Transportation Department, Latest Edition.
 - 3. Testing: Tests of asphalt mixtures and materials will be made by commercial testing laboratory approved by Owner. Submit test reports to Engineer.
- E. Hot-mix surfacing material shall meet the following requirements:
 - 1. Asphaltic Cement: ASTM D946 for penetration grade applicable to season when used, coarse aggregate (crushed stone), fine aggregate (sand or stone screening), mineral filler (limestone dust or other approved material dust passing No. 200 sieve).
 - a. Total mineral aggregate shall consist of a blend of well-graded coarse aggregate, fine aggregate, and mineral filler which shall conform to the following gradation requirements:

<u>Sieve</u>	<u>Percent Passing</u>
½-inch	100
No. 4	60 to 80
No. 10	45 to 60
No. 40	15 to 35
No. 200	4 to 8

- b. Asphaltic concrete paving mixture shall consist of 91 to 94 percent total mineral aggregate of 6 to 9 percent bitumen.
2. Testing: Tests of asphalt mixtures and materials will be made by commercial testing laboratory approved by Owner. Submit test reports to Engineer.

PART 3. EXECUTION

3.01 SUBGRADE PREPARATION

- A. Subgrade for asphalt paving improvements shall have organic silty and clayey topsoils and other unsuitable material removed and replaced with approved material.
- B. Fill and tamp traces of utility trenches.
- C. Scarify and re-compact subgrade; proof roll with dump truck.
- D. Replace soft spots as needed.

3.02 BASE COURSE FOR ASPHALTIC PAVING

- A. Place material on prepared subgrade in 2 courses for a total compacted thickness of 6-inches.
 1. Spread 1 coarse 3" thick (compacted) the same day the material is hauled. It shall be thoroughly mixed, either by repeated handling with a blade grader or by harrowing sufficiently to secure a uniform mixture of coarse and fine particles.
 2. Compact base course by systematically rolling and watering as required to obtain a firm, uniform, smooth surface as specified in Division 300 of AHTD Standard Specifications for Highway Construction.
 3. Set blue tops prior to final finishing of base course.
- B. Minimum density shall be 95 Percent Modified Proctor.
- C. Prime coat shall not be put down until base course is compacted.

3.03 PRIME COAT

- A. After acceptance of completed base course, a prime coat shall be uniformly distributed over the prepared base at the rate of 0.3-gallon per square yard.
- B. Remove surplus asphalt material.
- C. Construct and maintain barricades to keep traffic off the primed surface until it is thoroughly cured and ready for asphalt pavement (3-days minimum).

3.04 TACK COAT

- A. Apply tack coat when asphalt course is to be laid on an asphalt or concrete surface.
- B. Clean surface to be treated with prime or tack.

1. Sweep with mechanical broom immediately preceding the application of prime or tack.
2. Remove patches of asphalt, dirt or other material, which does not form an integral part of the surface.
3. When directed, sprinkle the surface with water and give an additional sweeping.

3.05 HOT-MIX BINDER COURSE FOR ASPHALTIC PAVING

- A. Plant Mixing and Transporting: Mixing, transportation, and temperature limitations for hot-mix binder course materials shall be in accordance with the requirements of Division 400, Asphalt Pavements of the AHTD Standard Specifications for Highway Construction, Latest Edition.
- B. Placing, compacting, and acceptance shall be in accordance with Division 400, Asphalt Pavements of the AHTD Standard Specifications for Highway Construction, Latest Edition.

3.06 HOT-MIX SURFACING FOR ASPHALTIC PAVING

- A. Plant Mixing and Transporting: Mixing, transportation, and temperature limitations for hot-mix surface coarse materials shall be in accordance with the requirements of Division 400, Asphalt Pavements of the AHTD Standard Specifications for Highway Construction, Latest Edition.
- B. Placing:
 1. Surface course material shall be delivered to the job hot in vehicles commonly used for that purpose.
 2. Material shall be laid on an approved base and only when weather conditions are suitable.
 3. After spreading to a uniform thickness to obtain a minimum of 1½" after compaction for light duty pavement, the paving material shall be rolled with an approved self-propelled roller until thoroughly compacted and no roller marks appear.
 4. Finished surface shall be smooth and true to established grade and crown.
 5. Depressions or defective places shall immediately be corrected.
 6. Finish tolerance shall be $\pm 0.05'$ at any point from line and grade shown on Drawings.

END OF SECTION

SECTION 02950

SITE RESTORATION AND REHABILITATION

PART 1. GENERAL

1.01 SUMMARY

- A. Provide finish grading and grass establishment.
- B. The intention of this Specification is that the Contractor establishes turf on pipelines and areas damaged as a result of construction.

PART 2. MATERIALS

2.01 TOPSOIL

- A. Existing topsoil shall be reused where practical.
- B. Imported Topsoil:
 - 1. Furnish at sole expense of Contractor.
 - 2. Friable loam free from subsoil, roots, grass, excessive amounts of weeds, stone, and foreign matter; acidity range (pH) of 5.5 to 7.5; and containing a minimum of 4 percent and a maximum of 50 percent organic matter.

2.02 SEED

- A. Certified, blue tag, clean, delivered in original, unopened packages and bearing an analysis of the contents, guaranteed 95 percent pure and to have a minimum germination rate of 85 percent, within 1-year of test.

2.03 SEED MIX

- A. Mix for areas: Common Bermuda grass. Follow the recommendations of the local Agricultural Extension Agent for requirements on coverage, fertilization, and seasons.

PART 3. EXECUTION

3.01 SITE GRADING

- A. Shape, trim, and finish slopes to conform with lines, grades, and cross sections shown.
- B. Make slopes free of loose exposed roots and stones exceeding 3" diameter.
- C. Ensure that site drains properly and there are no areas where water may pond.
- D. Finished site grading will be reviewed by Engineer.

3.02 GRADING OF TOPSOIL

- A. Shape the topsoil over the area to the desired shape and contour.
- B. Apply commercial fertilizer at the Agricultural Extension Agent's recommended rate, distributing it uniformly with a mechanical spreader.

3.03 FINISH GRADING

- A. Thoroughly mix the topsoil and fertilizer.
- B. Rake the area to a uniform grade so that areas drain in the same manner as at the start of the Project.
- C. Lightly compact before planting grass.
- D. Remove trash and stones exceeding 2" in diameter from area to a depth of 2" prior to preparation and planting grass.

3.04 TIME OF SEEDING

- A. Conduct seeding under favorable weather conditions during seasons, which are normal for work, as determined by accepted practice in locality of Project.

3.05 MECHANICAL SEEDING

- A. Sow grassed areas evenly with a mechanical spreader at rate of 100 pounds per acre, minimum, or as otherwise recommended by the Agricultural Extension Agent. Roll with cultipacker to cover seed, and water with fine spray. Method of seeding may be varied at discretion of Contractor on his own responsibility to establish a smooth, uniformly grassed area.

3.06 HYDROSEEDING

- A. Seed may be applied by hydroseeding method. Seeding shall be done within 10 days following soil preparation. Hydroseed areas at rate of 100 pounds seed and 500 pounds ammonium phosphate per acre, minimum, or as otherwise recommended by the Agricultural Extension Agent.
- B. Proceed with seeding operation on moist soil, but only after free surface water has drained away.
- C. Exercise care to prevent drift and displacement of mixture into other areas.

3.07 WINTER PROTECTIVE SEEDING

- A. Winter barley or annual rye grass applied at a rate of 120 pounds/acre shall be used after September 15 or as recommended by the Agricultural Extension Agent.
- B. Areas receiving temporary winter protective seeding shall be re-seeded when weather conditions become favorable.

3.08 MAINTENANCE

- A. Begin maintenance immediately after each portion of grass is planted and continue until a reasonable stand of grass has been obtained. Water to keep surface soil moist. Repair washed out areas by filling with topsoil, fertilizing, and seeding.

3.09 GUARANTEE

- A. If, at the end of a 180-day period, a satisfactory stand of grass has not been produced, the Contractor shall renovate and reseed the grass or unsatisfactory portions thereof immediately, or, if after the usual planting season, during the next planting season. If a satisfactory stand of grass develops by July 1 of the following year, it will be accepted. If it is not accepted, a complete replanting will be required during the planting season.
- B. A satisfactory stand is defined as grass or section of grass that has:
 - 1. No bare spots larger than 1 square foot.
 - 2. Not more than 10 percent of total area with bare spots larger than 1 square foot.
 - 3. Not more than 15 percent of total area with bare spots larger than 6 inches square.

END OF SECTION

SECTION 03210

REINFORCING STEEL

PART 1. GENERAL

1.1 SUMMARY

- A. Provide reinforcing steel and welded wire fabric.
- B. Conform to "Placing Reinforcing Bars", Recommended Practices, Joint Effort of CRSI-WCRSI, prepared under the direction of the CRSI Committee on Engineering Practice.
- C. Notify Engineer when reinforcing is ready for inspection and allow sufficient time for this inspection prior to casting concrete.

1.2 RELATED SECTIONS

- A. Section 01001 – General Requirements.
- B. Section 03300 – Cast-in-place Concrete.

1.3 REFERENCES

- A. American Concrete Institute, 22400 West Seven Mile Road, Detroit, Michigan 48219.
 - 1. ACI-318-83 – Building Code Requirements for Reinforcing Concrete.
- B. American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
 - 1. ASTM A185 – Specification for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement.
 - 2. ASTM A497 – Specification for Welded Deformed Steel Wire Fabric for Concrete Reinforcement.
 - 3. ASTM A615 – Specification for Deformed and Plain Billet-Steel for Concrete Reinforcement.
- C. American Welding Society, 550 North West LeJeune Road, Miami, Florida 33126.
 - 1. AWS S1.4-79 – Structural Welding Code; Reinforcing Steel.
- D. Concrete Reinforcing Steel Institute, 933 North Plum Grove Road, Schamburg, Illinois 60195.
 - 1. CRSI-MSP-1-86 – Manual of Standard Practice.

1.4 SUBMITTALS

A. Submit the following in accordance with Section 01001:

1. Bending lists.
2. Placing drawings.
3. Shop drawings.

B. Shop Drawings:

1. Bars for footings, including dowels, may be fabricated and shipped without prior review of Shop Drawings by the Engineer, provided that Drawings are followed without deviation.
2. Otherwise, Shop and Placing Drawings shall include reinforcing placing plans and details indicating size, location, arrangement, placing sequence, etc., and shall conform to ACI 315.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Steel:

1. Deliver with suitable hauling and handling equipment.
2. Tag for easy identification.
3. Store to prevent contact with the ground.

B. Unloading, storing, and handling of bars shall conform to CRSI publication "Placing Reinforcing Bars".

PART 2. PRODUCTS

2.1 DEFORMED REINFORCING BARS

A. Deformed billet-steel bars conforming to ASTM A615, Grade 60.

2.2 WELDED WIRE FABRIC

A. Conform to ASTM A185 or A497.

2.3 ACCESSORIES:

- A. Tie wire: 16-gage, black, soft-annealed wire.
- B. Bar supports: proper type for intended use.
- C. Bar supports in beams, columns, walls, and slabs exposed to view after stripping: Small rectangular concrete blocks of same color and strength of concrete that is being placed around them.
- D. Concrete supports: for reinforcing concrete placed on grade.
- E. Conform to requirements of "Placing Reinforcing Bars" published by CRSI.

PART 3. EXECUTION

3.1 REINFORCING STEEL

- A. Clean metal reinforcement of loose mill scale, oil, earth and other contaminants.
- B. Straightening and rebending reinforcing steel:
 - 1. Do not straighten or rebend metal reinforcement.
 - 2. Where construction access through reinforcing is a problem, use bundle or space bars instead of bending.
 - 3. Submit details and obtain Engineer's review prior to placing.
- C. Protection, spacing, and positioning of reinforcing steel: Conform to the current edition of the ACI Standard Building Code Requirements for Reinforced Concrete (ACI 318), reviewed placing drawings and design drawings.
- D. Location Tolerance: Conform to the current edition of "Placing Reinforcing Bars" published by Concrete Reinforcing Steel Institute and to the Details and Notes on the Drawings.
- E. Splicing:
 - 1. Conform to Drawings and current edition of ACI Code 318.
 - 2. Stagger splices in adjacent bars.
- F. Tying deformed reinforcing bars: Conform to current edition of "Placing Reinforcing Bars" published by Concrete Reinforcing Steel Institute and to details and notes on Drawings.
- G. Field Bending:
 - 1. Field bending of reinforcing steel bars is not permitted when rebending will later be required to straighten bars.
 - 2. Consult with Engineer prior to pouring if there is a need to work out a solution to prevent field bending.

3.2 REINFORCEMENT AROUND OPENINGS

- A. Place an equivalent area of steel around pipe or opening and extend on each side sufficiently to develop bond in each bar.
- B. See Drawings for bar extension length each side of opening.
- C. Where welded wire fabric is used, provide extra reinforcement using fabric or deformed bars.

3.3 WELDING REINFORCEMENT

- A. Welding shall not be permitted unless Contractor submits detailed Shop Drawings, qualifications, and radiographic nondestructive testing procedures for review by Engineer.
 - 1. Obtain results of this review prior to proceeding.

2. Basis for submittals: Structural Welding Code, Reinforcing Steel, AWS D1.4-79, published by American Welding Society, and applicable portions of ACI 318, current edition.
3. Test 10 percent of welds using radiographic, nondestructive testing procedures referenced codes.

3.4 PLACING WELDED WIRE FABRIC

- A. Conform to ACI 318-77 and to current Manual of Standard Practice, Welded Wire Fabric, by Wire Reinforcement Institute regarding placement, bends, laps, and other requirements.
- B. Placing:
 1. Extend fabric to within 2-inches of edges of slab.
 2. Lap splices at least 1½ courses of fabric and a minimum of 6-inches.
 3. Tie laps and splices securely at ends and at least every 24-inches with 16-gage black annealed steel wire.
 4. Place welded wire fabric at the proper distance above bottom of slab.

END OF SECTION

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1. GENERAL

1.1 WORK INCLUDED

- A. Cast-in-place concrete, including formwork.

1.2 RELATED WORK

- A. Section 01001 – Basic Requirements
- B. Section 03210 – Reinforcing Steel.

1.3 REFERENCES

- A. American Concrete Institute, Box 19150, Redford Station, Detroit, Michigan 48219 (latest revision).
 - 1. ACI 211.1: Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
 - 2. ACI 211.2: Standard Practice for Selecting Proportions for Structural Lightweight Concrete.
 - 3. ACI 211.3 Standard Practice for Selecting Proportions for No-Slump Concrete.
 - 4. ACI 304R: Guide for Measuring, Mixing, Transporting, and Placing Concrete.
 - 5. ACI 304.2R: Placing Concrete by Pumping Method.
 - 6. ACI 304.3R: High Density Concrete: Measuring, Mixing, Transporting, and Placing.
 - 7. ACI 304.4R: Placing Concrete with Belt Conveyors.
 - 8. ACI 305 R: Hot Weather Concreting.
 - 9. ACI 306 R: Cold Weather Concreting.
 - 10. ACI 309: Standard Practice for Consolidating of Concrete.
 - 11. ACI 309.1R: Behavior of Fresh Concrete During Vibration.
 - 12. ACI 309.2R: Identification and Control of Consolidation-Related Surface Defects in Formed Concrete.
 - 13. ACI 347: Recommended Practice for Concrete Formwork.
- B. American Society of Testing for Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103 (latest revision).
 - 1. ASTM C33: Specification for Concrete Aggregates.
 - 2. ASTM C150: Specification for Portland Cement.
 - 3. ASTM C260: Specification for Air-Entraining Admixtures for Concrete.
 - 4. ASTM C309: Specification for Liquid Membrane-Forming Compounds for Curing Concrete.

5. ASTM C494: Specification for Chemical Admixtures for Concrete.
6. ASTM E329: Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.

1.4 SUBMITTALS

- A. Provide the following in accordance with Section 01001.
 1. Admixture certification; chloride ion content must be included.
 2. Concrete mix design.
 3. Certification for aggregate quality.
 4. Mill tests for cement.
 5. Method of adding admixtures.
 6. Materials and methods for curing.
 7. Testing agency to perform services required in ACI 301, Section 167.
 8. Laboratory test on concrete.

1.5 QUALITY ASSURANCE

- A. Inspection: Engineer shall have access and rights to inspect batch plants, cement mills, and facilities of suppliers, manufacturers, and subcontractors providing products specified.
- B. Batch Plant:
 1. Certification: Current certification that weighing scales have been tested and are within tolerances as set forth in National Bureau of Standards Handbook No. 44.
 2. Equipment: Semi-automatic or fully automatic.
- C. Perform work in accordance with ACI 301.
- D. Obtain materials from same source throughout the work.

PART 2. PRODUCTS

2.1 CEMENT

- A. Portland cements Type I and Type II conforming to ASTM C150.

2.2 WATER

- A. Clean and free from oil, acid, alkali, organic matter, or other deleterious substances.
- B. Potable.

2.3 CONCRETE AGGREGATES

A. General:

1. Natural aggregates, well graded, free from deleterious coatings and organic materials conforming to ASTM C33 (latest revision).
2. Import non-reactive aggregates if local aggregates are reactive. (Appendix XI-ASTM C33).
3. Wash aggregates uniformly before use.
4. Other aggregate gradations can be approved by Engineer.

B. Fine Aggregates:

1. Clean, sharp, natural sand conforming to ASTM C33.
2. Less than 2 percent passing the No. 200 sieve.

C. Coarse Aggregates:

1. Natural gravel, crushed gravel, crushed stone, or combination of these materials.
2. Less than 15 percent float or elongated particles (long dimension > 5 times short dimension).
3. Less than 0.5 percent passing the No. 200 sieve.

D. Grading Requirements for Course Aggregates:

Sieve Size Or Size <u>In Inches</u>	<u>1 - ½" Aggregate</u>	<u>1" Aggregate</u>	<u>¾" Aggregate</u>
1- ½"	95-100	-----	-----
1"	-----	90-100	-----
¾"	35-70	40-85	90-100
½"	-----	10-40	20-55
⅜"	10-30	0-15	0-15
No. 4	0-5	0-5	0-5

E. Grading Requirements for Fine Aggregates:

<u>Sieve Size</u>	<u>Minimum</u>	<u>Maximum</u>
⅜"	100	-----
No. 4	95	100
No. 8	80	100
No. 16	50	85
No. 30	25	60
No. 50	10	30
No. 100	2	10

2.4 CONCRETE AIR-ENTRAINING ADMIXTURES

- A. Manufacturer:
 - 1. Air-Mix or Perma-Air by the Euclid Chemical Co.
 - 2. Sealtight Air Entraining Admixture by W.R. Meadows of Texas.
- B. ASTM C260; nontoxic after 30 days.
- C. Use only the specified non-corrosive non-chloride accelerator. Calcium chloride, thiocyanates or admixtures containing more than 0.05 percent ions are not permitted.
- D. Provide for concrete exposed to freezing and thawing or required being watertight. Air Content: 5 to 6 percent.

2.5 ADMIXTURES

- A. Water-Reducing Admixture: Conforming to ASTM C494, Type A and not contain more than 0.05 percent chloride ions than are present in municipal drinking water.
 - 1. Eucom WR-75 by the Euclid Chemical Company.
 - 2. Pozzolith 200 N by Master Builder.
 - 3. Plastocrete 160 by Sika Chemical Corporation.
- B. Water-Reducing Retarding Admixture: Conforming to ASTM C494, Type D and not contain more chloride ions than are present in municipal drinking water.
 - 1. Eucom Retarder – 75 by the Euclid Chemical Company.
 - 2. Pozzolith 100 XR by Master Builder.
 - 3. Plastiment by Sika Chemical Company.
- C. High-Range Water-Reducing Admixture (Superplasticizer): Conforming to ASTM C494, Type F or G, and not contain more chloride ions than are present in municipal drinking water.
 - 1. Eucom 37 by Euclid Chemical Company.
 - 2. Rheobuild 1000 by Master Builders.
 - 3. Sikament by Sika Chemical Company.
- D. Non-Corrosive Non-Chloride Accelerator Admixture: Conforming to ASTM C494 Type C or E, and not contain more chloride ions than are present in municipal drinking water.
 - 1. Accelguard 80 by Euclid Chemical Company.
 - 2. Or approved equal.
 - 3. Manufacturer must have long term non-corrosive test data from an independent testing laboratory (of at least 1 year's duration) using an

acceptable accelerated corrosion test method using electrical potential measures.

- E. Prohibited Admixtures: Calcium chloride, thiocyanates or admixtures containing more than 0.05 percent chloride ions.
- F. Certification: Submit written conformance to the requirements and chloride ion content of the admixture to Engineer prior to mix design review.

2.6 FORMS

- A. Materials: Plywood, hard plastic finished plywood, overlaid waterproof particleboard, or steel.
- B. Surfaces: New and undamaged condition.
- C. Joints: Use tape, gaskets, plugs, or approved caulking to keep joints water tight and to allow them to withstand placing pressures without bulging outward or creating surface patterns.

2.7 FORM TIES

- A. Factory-made and constructed so that tie remains embedded in wall, except for removable portion at each end.
- B. Inserts:
 - 1. Conical or spherical.
 - 2. Fixed to remain in contact with forming material.
 - 3. Constructed so no metal is within 1-inch of concrete surface when forms, inserts, and tie ends are removed.
- C. Flat bar ties for panel forms: Plastic or rubber inserts with a minimum depth of 1-inch and sufficient dimensions to permit proper patching of tie hole.

2.8 BONDING AGENT

- A. Manufacturer: Sonnebond by Sonneborn; or approved equal.
- B. Submit product specifications and manufacturer's specific instructions for application on this Project for Engineer's approval.
- C. Product must meet Project requirements with regard to surface, pot life, set time, vertical or horizontal application, forming restrictions, or other stated requirements.

2.9 BOND BREAKER

- A. Manufacturers:
 - 1. Williams Tilt-Up Compound, Williams Distributors Inc., Seattle, Washington.
 - 2. Silcoseal 77, Superior concrete Accessories, Franklin Park, Illinois.
 - 3. Or Equal.

- B. Non-staining type.
- C. Provide positive bond prevention.
- D. Submit for review copies of manufacturer's data, recommendations, and instructions for specific use on this Project.

2.10 CURING COMPOUND

- A. Curing and Sealing Compound.
 - 1. Clear styrene acrylate type, minimum 30 percent solids content.
 - 2. Test data from an independent testing laboratory indicating a maximum moisture loss of 0.030 grams per sq. cm when applied at a coverage rate of 300 sq. ft. per gallon.
 - 3. Submit manufacturer's certification.
 - 4. Sodium silicate compounds are not permitted.
 - 5. Manufacturer:
 - a. Super Rez Seal or Super Pliocure by the Euclid Chemical Co.
 - b. Masterkure 30 by Master Builders.
- B. Exposed Concrete Surfaces:
 - 1. Manufacturer:
 - a. Kurez DR by Euclid Chemical Company.
 - b. Or approved equal.
 - 2. Dissipating resin type compound.
 - 3. ASTM C309.
 - 4. Film must chemically break down in 6 to 8 week period.

2.11 BONDING AND REPAIR MATERIALS

- A. Rewettable Bonding Compounds:
 - 1. Polyvinyl acetate type.
 - 2. Manufacturer:
 - a. Euco Weld by the Euclid Chemical Company.
 - b. Weldcrete by the Larson Co.
 - 3. Use only in areas not subject to moisture.
- B. Non-Rewettable Bonding Compounds:
 - 1. Polymer modified type.
 - 2. Manufacturer:

- a. Euco-Bond by the Euclid Chemical Company.
 - b. Or approved equal.
- C. Bonding Admixture:
 - 1. Latex, non-rewettable type.
 - 2. Manufacturer:
 - a. SBR Latex or Flex-Con by the Euclid Chemical Co.
 - b. Daraweld C by W.R. Grace.
- D. Epoxy adhesives:
 - 1. Two component, 100 percent solids, 100 percent reactive compound.
 - 2. Suitable for use on dry or damp surfaces.
 - 3. Manufacturer:
 - a. Euco Epoxy No. 452MV or No. 620 by the Euclid Chemical Co.
 - b. Sikadure Hi-Mod by the Sika Chemical Corp.
- E. Patching Mortar:
 - 1. Free flowing or gel consistency.
 - 2. Polymer modified cementitious mortar.
 - 3. Manufacturer:
 - a. Euco Thin Coat or Concrete Coat by the Euclid Chemical Co. for horizontal repairs.
 - b. Verticoat by the Euclid Chemical Company for vertical or overhead repairs.
 - c. Sikatop 121 or 122 by the Sika Chemical Co. for horizontal repairs.
 - d. Sikatop 123 by the Sika Chemical Co. for vertical or overhead repairs.
- F. Underlayment Compound:
 - 1. Flo-Top by the Euclid Chemical Co.
 - 2. Manufacturer:
 - a. Flo-Top by the Euclid Chemical Co.
 - b. Or approved Equal.
- G. Repair Topping:
 - 1. Self-leveling, polymer modified high strength topping.
 - 2. Manufacturer: Thin Top SL by the Euclid Chemical Company.

PART 3. EXECUTION

3.1 DESIGN OF CONCRETE MIX

- A. Submit mix design on each class of concrete for review, include standard deviation analysis or trial mixture test data.
- B. Proportion mix design in accordance with ACI 318-89, Section 5.3, "Proportioning on the Basis of Field Experience and/or Trial Mixtures".
- C. If trial batches are used:
 - 1. Prepare mix design by independent testing laboratory.
 - 2. Achieve an average compressive strength 1200 psi higher than the specified strength, or 1400 psi for specified concrete strengths over 5000 psi.
 - 3. Certified copies of laboratory trial mix reports and cylinder tests shall be submitted to Engineer by the testing laboratory for approval.
- D. Do not place concrete prior to receipt of Engineer's written approval of mixes and cylinder test results.
- E. Design mix and perform tests to meet the requirements as specified.

Location	Minimum 28-Day Compressive Strength (psi)	Maximum Water- Cement Ratio	Air Content	Slump Range (in.)
Footings, Piers, Grade-beams, And other grade Foundations.	3500	-----	Optional	2 – 4

- F. Minimum Cement Content (based on aggregate size):

<u>Minimum Cement Content</u>	<u>Maximum Aggregate Size</u>
517 lb/cy	1-inch
540 lb/cy	1-inch
564 lb/cy	¾-inch

- G. Combined Aggregate Gradings:
 - 1. Aggregates for concrete shall be combined in proportions that will provide a mixture within the grading limits in accordance with this Section, unless otherwise approved in writing by Engineer.
 - 2. Maximum aggregate size depends on rebar clearances.
 - 3. Recommended Admixture Usage:

Location or Condition	Recommended Admixture	Additional Requirements
Air entrained concrete	Air-entraining admixture	Non-toxic; non-corrosive
Pumped concrete admixture	High-range, water-reducing (Superplasticizer)	Initial slump: 2-3 in. slump with Superplasticizer: 8 inches max.
Concrete with a water-cement ratio below 0.50	High-range, water-reducing admixture (Superplasticizer)	Initial slump: 2-3 in. slump with Superplasticizer: 8 inches max.

H. Admixtures:

1. Concrete shall contain the specified water-reducing admixture or the specified high-range water-reducing admixture (superplasticizer).
2. Concrete required to be air entrained shall contain an approved air entraining admixture.
3. Pumped concrete, concrete for industrial slabs, architectural concrete, concrete required to be watertight, or concrete with a water/cement ratio below 0.50 shall contain the specified high-range water-reducing admixture (superplasticizer).

3.2 MEASUREMENT OF MATERIALS AND MIXING

- A. Conform to ACI 304 current edition; specified requirements for mix design, testing, and quality control; and to other requirements of these Specifications.

3.3 RETEMPERING

- A. Retempering of concrete or mortar in which the cement has partially hydrated will not be permitted. Redosage with the specified high-range water-reducing admixture (superplasticizer) may be done with the prior approval of the Engineer regarding dosage and time periods.

3.4 FORMS – MAXIMUM SIZE OF CONCRETE PLACEMENTS

- A. Coordinate with other trades whose work may be located within or below concrete.
- B. Notify Engineer 1 full working day prior to erection of forms for inspection.
- C. Thoroughly clean forms and adjacent surfaces to receive concrete; remove chips, wood, sawdust, dirt or other debris before concrete is placed.
- D. Design:
 1. Design, erect, support, brace, and maintain formwork in accordance with:

- a. Building Codes Requirements for Reinforced Concrete (ACI 318).
 - b. Recommended Practice for Concrete Formwork (ACI 347).
 - c. Construction Industry Standards (OSHA 2207).
2. Design formwork to be readily removable without impact, shock, or damage to concrete surfaces and adjacent materials.
- E. Reuse of Forms: Do not reuse forms unless they are in new and undamaged condition.
- F. Beveled Edges (Chamfer):
- 1. Form $\frac{3}{4}$ -inch bevels at concrete edges.
 - 2. Where beveled edges on existing adjacent structures are diverse more than $\frac{3}{4}$ -inch, obtain Engineer's approval of size prior to placement of bevel form strip.
- G. Form Tolerances: Construct forms to sizes, shapes, lines, and dimensions shown, work in finished structures.

Tolerances	Concrete Canal Lining (in)	Drainage Structure (in)
Alignment – Tangents	1	
-- Curves		
Grades	1	
Plumb: In any 10-foot of length	-----	$\frac{1}{2}$
Footings:		
a. Variation in dimensions in drawing	-----	- $\frac{1}{2}$ + 2
b. Misplacement or eccentricity	-----	2 Percent
c. Reduction in thickness	-----	5 Percent

- H. Removal of Forms:
- 1. Do not disturb forms until concrete is sufficiently strong to withstand possible injury.
 - 2. Do not remove shoring until member has acquired sufficient strength to support its weight and the load upon it.

3.5 FORM TIES

- A. Place in uniform patterns on exposed surfaces.
- B. Number and placement sufficient to withstand pressures and limit deflection of forms to acceptable limits.

3.6 PLACING CONCRETE - GENERAL

- A. Do not place concrete without Engineer being present.
- B. Allow other trades reasonable time to complete portions of work which must be completed before concrete is placed.
- C. Notify Engineer at least 1 full working day in advance before starting to place concrete to permit inspection of forms, reinforcing, sleeved, conduits, boxes, inserts, or other work required to be installed in concrete.
- D. Review curing methods with Engineer and verify curing materials and equipment are at Project site.
- E. Placement shall conform to requirements and recommendations of ACI 304 and ACI 318, except as modified in these Specifications.
- F. Place concrete as soon as possible after leaving mixer in layers not over 1.5 feet deep:
 - 1. Without segregation or loss of ingredients.
 - 2. Without splashing forms or steel above.
- G. Vertical Free Fall Drop to Final Placement:
 - 1. Concrete shall not be dropped freely where reinforcing will cause segregation.
 - 2. Not to exceed 10-feet for concrete containing high-range water-reducing admixture (superplasticizer).
 - 3. Not to exceed 5-feet for other concrete.
- H. Do not use concrete truck chutes, pipes, finishing tools, etc., constructed of aluminum.
- I. Before depositing concrete:
 - 1. Remove debris from space to be occupied by concrete.
 - 2. Dampen:
 - a. Gravel fill beneath slabs on ground.
 - b. Sand where vapor barrier is specified.
 - c. Wood forms.
 - 3. Verify reinforcement is secured in position.

3.7 ADDITION OF WATER AT PROJECT SITE

- A. Do not add water to concrete at Project site if slump is within specified range.
- B. With the Engineer's approval, add water to concrete arriving at Project site with a slump less than the specified range, provided it can be demonstrated that the specified water-cement ration will not be exceeded.
- C. Water/Cement Ratio:

1. Concrete subject to freezing and thawing: Maximum water/cement ratio of 0.50, 4000 psi at 28 days or more.
 2. Concrete subject to deicers or required to be watertight: Maximum cement/water ratio of 0.45, 4500 psi at 28 days or more.
 3. Reinforced concrete subjected to brackish water, salt spray, or deicers; Maximum water/cement ratio or 0.40, 5000 psi at 28 days or more.
- D. The following tests will be required from each truck to which water has been added at Project site: 3 cylinders, 1 slump, and 1 air test. Costs for these tests shall be the full responsibility of the Contractor and shall be withheld from the monthly payment estimate.

3.8 CONVEYING

- A. Concrete shall be conveyed from the mixer to the place of final deposit by methods which will prevent the separation or loss of materials.
- B. Conveying equipment shall be capable of providing a supply of concrete at the site of placement without interruptions sufficient to permit loss of plasticity between successive increments.

3.9 CONSOLIDATION AND VISUAL OBSERVATION

- A. Concrete shall be consolidated with internal vibrators having a frequency of at least 800 vpm, with amplitude required to consolidate concrete in the section being placed.
- B. At least one standby vibrator in operable condition shall be at the placement site prior to and during placing concrete.
- C. Consolidation equipment and methods shall conform to ACI 309 "Recommended Practice for Consolidation of Concrete".
- D. The forms shall contain sufficient windows or be limited in height to allow visual observation of the concrete.
- E. Vibrator operator is required to see the concrete being consolidated to ensure good quality workmanship; or Contractor shall have a person actually observe the vibration of the concrete and will advise the vibrator operator of changes needed to assure complete consolidation.
- F. Do not use vibrators to transport concrete in forms.

3.10 PLACING CONCRETE IN HOT WEATHER

- A. Follow the recommendations in Hot Weather Concreting, ACI 305.
- B. Do not place concrete at times when temperature is forecast to exceed 100 degrees F. within 12 hours after the concrete is placed.
- C. Verify preparations are complete before ordering concrete so that concrete may be placed upon arrival.
- D. Fog spray forms, reinforcing steel, and subgrade just before placing concrete.
- E. Minimize size of concrete placements and thickness of layers of concrete.
- F. Make every effort to maintain concrete temperature:

1. Below 90 degrees F. at time of placement, cool the ingredients before mixing by use of chilled water.
2. Uniform:
 - a. Minimize the time of placement.
 - b. Begin each operation in concrete finishing promptly when the concrete is ready for it.
- G. Place concrete promptly upon arrival at Project and vibrate immediately after placement.
- H. Do not add water to retemper.
- I. Consider placing concrete in late afternoon as opposed to early morning.
- J. Provide windbreaks, shading, and fog spraying on days when temperature is forecast to exceed 90 degrees F.
- K. Saw-Cut Joints:
 1. Maximum Joint Spacing: 36 times slab thickness, unless otherwise noted on Drawings.
 2. Soff-Cut Saw: Cut to a depth of 1¼-inch immediately after final finishing.
 3. Conventional saw shall be used as soon as possible without dislodging aggregate to a depth of ¼ slab thickness.
- L. Protect and cure exposed surfaces by one of the following:
 1. Continuous water curing.
 2. Moisture – cover curing.

3.11 PLACING CONCRETE IN COLD WEATHER (ACI 306R-78)

- A. Preparation:
 1. Follow recommendations in Cold Weather Concreting, ACI 306.
 2. Additives for the sole purpose of providing freeze protection shall not be used.
 3. Arrangements for covering, insulating, housing, or steam heating newly-placed concrete shall be made in advance of placement and shall be adequate to maintain temperature and moisture conditions recommended.
 4. Temperatures of concrete mix shall be as shown as follows for various stages of mixing and placing of concrete mix.

Section Size, Minimum Dimension

Air

Temperature	12 in.	36 in.	72 in.	72 in.
-------------	--------	--------	--------	--------

Minimum concrete temperature as mixed for indicated weather:

Above 30°F	60°F	55°F	50°F	45°F
------------	------	------	------	------

0°F to 30°F	65°F	60°F	55°F	50°F
-------------	------	------	------	------

Below 0°F	70°F	65°F	60°F	55°F
-----------	------	------	------	------

Maximum allowable gradual temperature drop in first 24 hours after end of protection:

50°F	40°F	30°F	20°F
------	------	------	------

B. Placement:

1. Surfaces to be in contact with concrete shall be free of snow, ice, and frost and shall be above 40 degrees F.
2. Do not place concrete on frozen subgrade.
3. Placement of insulating material, tarpaulins, or other moveable coverings shall follow closely the placing of concrete so that only a few feet of concrete are exposed to outside air at anytime.

c. Curing and Protection:

1. Keep concrete continuously moist and maintain concrete temperature at a minimum of 50 degrees F. for 7 days; temperature shall be uniform throughout concrete. If high early strength concrete is used, this temperature requirement may be reduced to 3 days.
2. It is recommended to leave forms in place for the entire period of protection; use insulated blankets or other approved method on slab surfaces.
3. Limit rapid temperature changes at end of protection period to avoid thermal cracking.

3.12 BONDING TO CONCRETE SURFACES

A. New Concrete Surfaces:

1. New concrete is defined as less than 60 days old.
2. Roughen surface to hardened concrete.
3. Thoroughly clean and saturate with water.
4. Immediately place concrete.
5. Horizontal surfaces:
 - a. Cover surface with 2-inches of grout.
 - b. Limit first lift on top of grout to 12-inches.
 - c. Thoroughly vibrate to mix and consolidate grout and concrete.

- B. Old Concrete Surfaces:
 - 1. Use bonding agent.
 - 2. Prepare surface in strict accordance with manufacturers printed instructions and recommendations for specific application for this Project.
 - 3. Follow manufacturer's recommendations.

3.13 EVALUATION AND ACCEPTANCE OF CONCRETE

- A. Conform to ACI Standard Building Code requirements for reinforced concrete (ACI 318-83), Section 4.7, "Evaluation and Acceptance of Concrete", and to the following specifications:
- B. Testing Responsibilities:
 - 1. Contractor:
 - a. Collect, label, and handle test specimens at Project site.
 - b. Provide adequate facilities for safe storage, curing, and protection for first 24 hours and for additional time as may be required before transporting to test lab.
 - c. Deliver test specimens to laboratory.
 - d. Pay for initial testing.
 - e. Pay for failed tests and additional testing resulting from failed tests or Contractor preference.
- C. Number of test cylinders.
 - 1. Set of cylinders: Three (3).
 - 2. Sample frequency:
 - a. 1 set/class of concrete/50 cubic yards.
 - b. 1 set/class of concrete/3000 square feet of wall or slab surface.
 - c. 1 set/class of concrete/day.
 - d. Whichever is greater.
- D. Laboratory shall test 3 cylinders for the 28-day strength test. The test results should be the average strength of the 3 cylinders, except that if 1 cylinder shows obvious evidence of improper sampling, molding or testing, it should be discarded and the strengths of the other 2 cylinders averaged. If more than 1 cylinder shows defects, the test should be abandoned.

3.14 PATCHING - GENERAL

- A. Prior to starting patching work, except as specified, obtain Engineer's approval of proposed patching techniques and mixes.

3.15 REPAIR OF DEFECTIVE AREAS

- A. Definition: Concrete in place that does not conform to specified design strength, shapes, alignments, and elevations as shown on Drawings and contains surface defects.
- B. Evaluation and acceptance of concrete shall conform to ACI 318.
- C. With prior approval of Engineer, as to method and procedure, repair defective areas in conformance with ACI 301, Chapter 9, except that the specified bonding compound shall be used.
- D. The specified patching mortar may be used in lieu of the above-mentioned method when color match of adjacent concrete is not required. Prior approval of Engineer is required.
- E. Surface Repairs:
 - 1. Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Owner.
 - 2. Honey-combed areas and rock pockets:
 - a. Repair immediately after removal of forms.
 - b. Prepare no-slump concrete mortar and test so that, when dry, patching mortar will match surrounding color and strength.
 - c. Cut out to solid concrete or minimum of 1-inch depth.
 - d. Make edges for cuts perpendicular to the concrete surface.
 - e. Thoroughly clean and dampen with water.
 - f. Apply bonding compound.
 - g. Compact no-slump concrete into patch, and finish to blend with adjacent finished concrete.
 - h. Cure in same manner as adjacent concrete.
 - 3. High Areas: Grind after concrete has cured at least 14 days.
 - 4. Low Areas:
 - a. Repair during or immediately after completion of surface finishing operations.
 - b. Cut out low areas and replace with fresh concrete of same type and class as original concrete.
 - c. Finish repaired areas to blend into adjacent concrete.
 - 5. Defective Areas:
 - a. Cut out and replace with fresh concrete of same type and class as original concrete.
 - b. Finish repaired areas to blend into adjacent concrete.
 - 6. Make structural repairs with prior approval of Engineer, as to method and procedure, using the specified epoxy adhesive or epoxy mortar. Where epoxy injection procedures must be used, use an approved low viscosity epoxy made by the manufacturers previously specified.

7. Level floors for subsequent finishes by use of specified underlayment material.
8. Where required, level exposed floors by use of the specified self-leveling repair topping.
9. Repair methods not specified above may be used, subject to approval of Engineer.

3.16 BLOCKOUTS AT PIPES OR OTHER PENETRATIONS

- A. Submit proposed blockouts for review in accordance with Section 01001.

3.17 CURING OF CONCRETE

- A. Follow recommendations in Standard Practice for Curing Concrete (ACI 308).
- B. Begin curing as soon as free water has disappeared from concrete surface after placing and finishing.
- C. Continue curing for at least 7 days without interruption.
- D. Curing Methods:
 1. Water Curing:
 - a. Cover surface with burlap or sand (1-inch deep) as soon as possible without marring surface.
 - b. Keep continuously wet for 7 days; do not allow surface to become alternately wet and dry.
 - c. Use water not more than 2 degrees F. cooler than concrete.
 - d. Allow surface to dry slowly before removing sod.
 2. Moisture-Cover Curing:
 - a. Cover surface with plastic film (4 mil minimum) as soon as possible without marring the surface. Cover entire surface without wrinkles or holes.
 - b. Cover plastic film with 1-inch of sand and weight edges.
 - c. Keep covered for a minimum of 7 days.
 3. Curing Compounds:
 - a. Verify compatibility with required finishes such as hardeners, paint, stain, tile, or other specified work.
 - b. Exposed concrete receiving mastic applied adhesive, or metallic or mineral aggregate hardeners shall be cured with the specified curing and sealing compounds.
- E. Cold-Weather Curing:
 1. Use moisture-cover curing or liquid membrane-forming compound as approved.

2. Protect concrete from temperature changes in accordance with ACI 306.
- F. Hot-Weather Curing: Use water curing or moisture-cover curing as approved.

END OF SECTION

**STORM WATER POLLUTION
PREVENTION PLAN**

**Storm Water Pollution Prevention Plan
General Permit # ARR150000**

General Information:

This Storm Water Pollution Prevention Plan (SWPPP) has been prepared for the City of Jonesboro - Turtle Creek Greenway Phase I Section V project, to meet the requirement set forth by the Arkansas General Permit for owners or operators of facilities discharging storm water associated with construction activities located in the State of Arkansas (Permit No. ARR 150000). The Contractor shall adhere strictly to this plan and to the general permit requirements provided as Exhibit 1.

Project Name and Location:

Turtle Creek Greenway Phase I Section V, Jonesboro Ar

Operator Name and Address:

City of Jonesboro
The Honorable Harold Perrin, Mayor
515 W. Washington Avenue
Jonesboro, AR 72401

A. Site Description

- 1) Pre-construction Topographic view:
Insert map.

- 2) Project Description and Intended Use after NOT is filed:
A 10 foot wide walking trail will be constructed. Once finished the trail will be used to connect an existing trail to an extension that will better serve the City of Jonesboro.

- 3) Sequence of Activities:

Notice-of-Intent, installation of perimeter control measures, construction entrances, and site posting, clearing and grubbing, installation of erosion control measures, excavation of trail, installation of trail surface, final site grading, landscaping and soil stabilization, final cleanup and removal of temporary structural controls, and Notice-of-Termination.

- 4) Total Acres Available/Total Disturbed Area:
1.0/1.0

- 5) Existing Site Information:

a. Runoff Coefficient Based on attachment C:

Before construction starts, the site has a runoff coefficient of 0.3.

After construction is completed, the sit will have a runoff coefficient of 0.4.

b. Soil Information

See Exhibit 2.

B. Responsible Parties-General Contractors, Inspectors, etc:

SWPPP will be updated with responsible parties once contracts are awarded.

C. Receiving Waters: (pg 19 of Part II)

1) Location of Surface Water on Construction Site

The following surface waters are located on the construction site:

None

2) The following bodies of water receive runoff from the construction site:

Storm water from the construction site discharges to Turtle Creek. The ultimate receiving stream is the St. Francis River.

D. TMDL and 303(d) list: (http://www.adeq.state.ar.us/water/branch_planning/default.htm)

The St. Francis River is not on the list of impaired water bodies (i.e., 303(d) list) for siltation/turbidity. Since this water body is not impaired, a TMDL is not applicable to this construction project.

E. Attainment of Water Quality Standards after Authorization: (pg 20 of Part II)

The permittee must select, install, implement, and maintain BMPs at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, the SWPPP developed, implemented, and updated to be considered as stringent as necessary to ensure that the discharges do not cause or contribute to an excursion above any applicable water quality standard.

F. Endangered Species: Insert US Fish & Wildlife checklist.

G. Site Map: See Attachment A for items to be included.

H. Stormwater Controls

1. Initial Site Stabilization, Erosion, & Sediment Controls: (pg 21 of Part II)

Proir to construction a construction entrance will be implemented. Upon removal of topsoil the installation of perimeter control silt fencing will occur.

2. Stabilization Practices: (pg 21 of Part II)

Stabilization practices may include temporary seeding, permanent seeding, mulching, sod stabilization, hydro-mulching, liquid copolymers soil stabilization, concrete revetment mat, and geotextiles. Stabilization measures shall be initiated as soon as practicable in portions of the site where work has temporarily or permanently ceased, but in no case more than 14 days after the work has ceased, unless work is to resume within 21 days. Short-term stabilization methods to be employed shall be selected and installed by the Contractor on a case-by-case basis. Long-term methods shall be installed by the Contractor in accordance with the approved construction plans and specifications.

3. Structural Practices: (pg 22 of Part II)

Structural controls shall be installed in the approximate locations shown on the site map provided (Exhibit 4) according to the timeframe listed under General Information – Part “C” of the plan. Structural control measures include silt fence, hay bales, rock check dams, sedimentation basins, and gravel entrance drives. These measures shall be installed in accordance with the details provided (Exhibit 6) and shall be maintained in-place until final site stabilization is complete.

I. Other Controls: In addition to erosion control and storm water management, our plan will include

measures to properly manage solid wastes, hazardous wastes, dust generation, and all other activities that will generate wastes during the construction phase. (pg 23 of Part II)
1) Solid material control, debris and wastes:
No solid materials, including building materials, shall be discharged to waters of the United States, except as authorized by a permit issued under Section 404 of the CWA. The Contractor or his designated representatives shall police that site each workday to ensure that paper products, building materials, and food items are placed in waste disposal containers.
2) Offsite vehicle tracking:
The Contractor shall ensure that construction entrances are used and maintained, and that water or other appropriate dust suppression means are used to minimize the generation of dust from the site.
3) Temporary sanitary facilities:
The Contractor shall provide sanitary facilities, maintained in accordance with current health codes, at the project site for use by site personnel during construction of project.
4) Concrete waste area:
Refer to the site plan located in Attachment A.
5) Fuel storage, hazardous materials and truck washing areas:
All diesel tanks and other oil products stored at the site are to be located in earthen or other secondary containment areas that are sufficiently sized to hold the entire content of the storage container.
J. Non-stormwater Discharges: (pg 10 of Part I)
List of Anticipated Allowable Non-Stormwater Discharges: There is no non-storm water component not permitted by ADEQ at this site.
K. Post-Construction Stormwater Management: (pg 24 of Part II)
There is no post-construction stormwater management required.
L. State or Local Plans: (pg 24 of Part II)

The municipality in which the construction activity occurs will be contacted to determine if there are erosion control and/or storm water runoff requirements in the city code, city ordinances or city permits. All applicable requirements will be met. Documentation of compliance will be attached to this SWPPP.

M. Inspections: (pg 24 of Part II)

Inspections will be conducted by a qualified inspector at one of the following frequencies:

Every 7 days or

Every 14 Days and within 24 hours after a 1/2 inch or greater rainfall event.

A report of the inspection will summarize the scope of the inspection, the name of the inspector, the date of inspection and any damages observed and repairs made to any control measure. Completed inspection forms will be kept with the SWPPP.

The following are the minimum inspection, maintenance and reporting practices that will be used to maintain erosion and sediment controls at our construction site:

1. Inspection form (Attachment B)
2. All controls will be inspected to ensure that they meet the manufacture’s specifications.
3. Sediment basins and sediment traps will be cleaned out when they reach 50% of the original capacity.
4. All site entrances and exits will be checked to ensure no off-site tracking.
5. All inspection reports will be maintained for a minimum of 3 years after permit termination.
6. In addition to inspection, records will be kept of the following:
 - a. Dates when major grading activities occur
 - b. Dates when construction activities cease in an area, temporarily or permanently.
 - c. Dates when an area is stabilized, temporarily or permanently.

N. Maintenance:All erosion and sediment control measure will be maintained in good working order. If a repair is necessary, it will be initiated **within three (3) business days of discovery.**(pg 25 of Part II)

Contractors: (pg 25 of Part II)

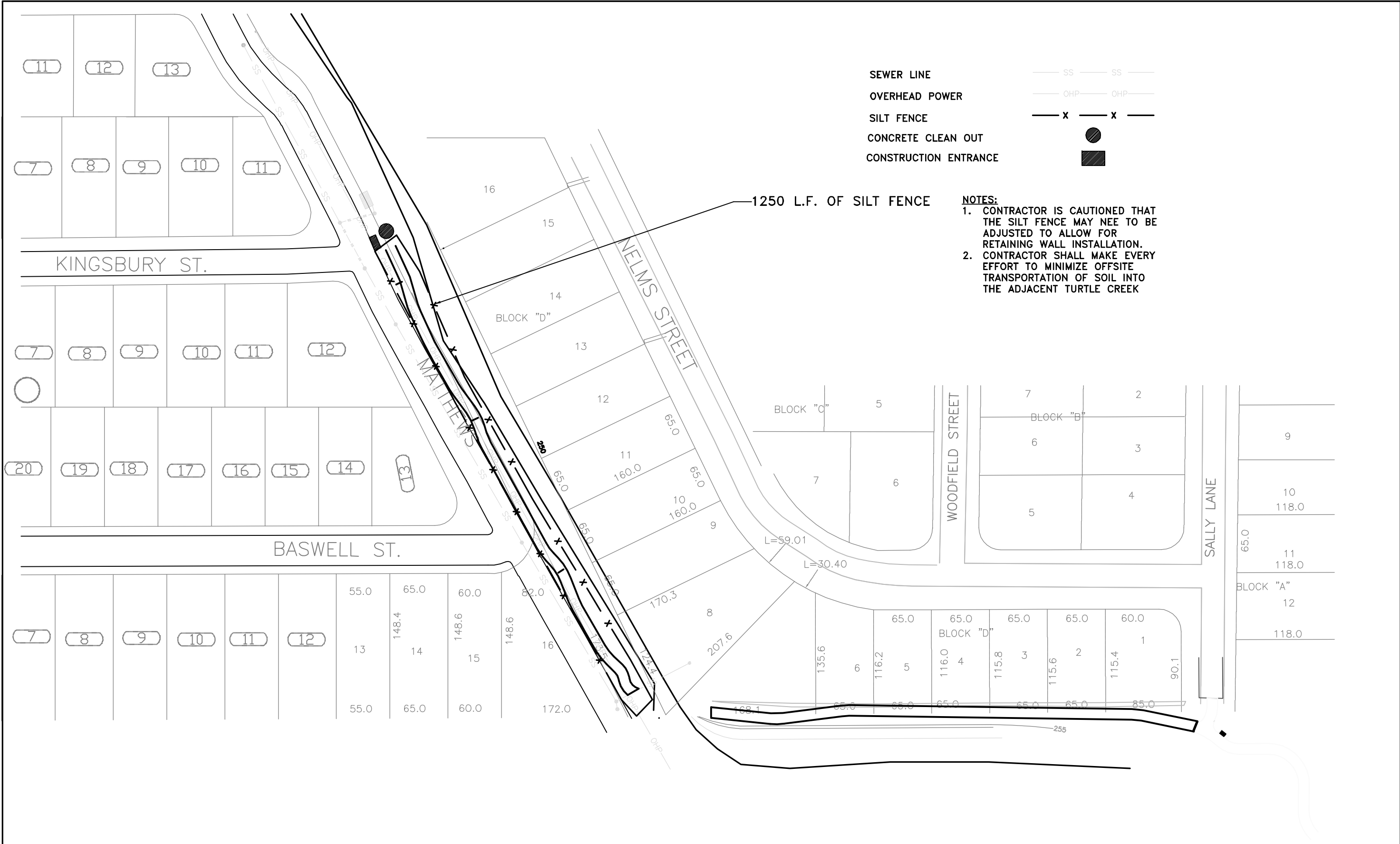
All contractors should be identified in the plan.

Contractor Printed Name:		Contractor Signature:	
Contractor Contact Number:			
Contractor Printed Name:		Contractor Signature:	
Contractor Contact Number:			
Contractor Printed Name:		Contractor Signature:	
Contractor Contact Number:			
Contractor Printed Name:		Contractor Signature:	
Contractor Contact Number:			

Inspectors: (pg 25 of Part II)

Site inspectors should be identified in the plan.			
Inspector Printed Name:		Inspector Signature:	
Inspector Contact Number:			
Inspector Printed Name:		Inspector Signature:	
Inspector Contact Number:			
Plan Certification: (pg 26 of Part II)			
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted 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 for knowing violations."			
Printed Name:			
Printed Title:			
Signature:			
Date:			

Please note that Attachments C-E do not have to be submitted with the SWPPP.



CEA
CIVIL ENGINEERING ASSOCIATES, LLC
 JONESBORO • HOT SPRINGS • POPLAR BLUFF

2114 EAST MATTHEWS AVENUE
 JONESBORO, ARKANSAS 72401
 (870) 972-5316
 FAX (870) 932-0432

**CITY OF JONESBORO
 TURTLE CREEK GREENWAY
 SECTION V**

SWPPP PLAN

Scale	Job
N.T.S.	JB-08-01
Date	Sheet
FEB. 2011	1

Attachment B
Site Inspection Form

Attachment B

**STORMWATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM**

INSPECTOR: _____ DATE: _____

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL _____

AREA	DATE SINCE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED (YES/NO)	STAB. WITH	CONDITIO N

STABILIZATION REQUIRED:

SILT FENCE

IS THE BOTTOM OF THE FABRIC STILL BURIED? _____

IS THE FABRIC TORN OR SAGGING? _____

ARE THE POSTS TIPPED OVER? _____

HOW DEEP IS THE SEDIMENT? _____

MAINTENANCE REQUIRED FOR SILT FENCE:

SEDIMENT BASIN

DEPTH OF SEDIMENT IN BASIN? _____

CONDITION OF BASIN SIDE SLOPES? _____

ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT? _____

CONDITION OF OUTFALL FROM SEDIMENT BASIN? _____

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

CONSTRUCTION EXIT

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD? _____

IS THE GRAVEL CLEAN OR FILLED WITH SEDIMENT? _____

DOES ALL TRAFFIC USE THE STABILIZED EXIT TO LEAVE THE JOB SITE? _____

IS THE CULVERT BENEATH THE EXIT WORKING? _____

MAINTENANCE REQUIRED FOR CONSTRUCTION EXIT:

CHANGES TO BE PERFORMED BY: _____ ON OR BEFORE: _____

CHANGES REQUIRED TO THE STORMWATER POLLUTION PREVENTION PLAN:

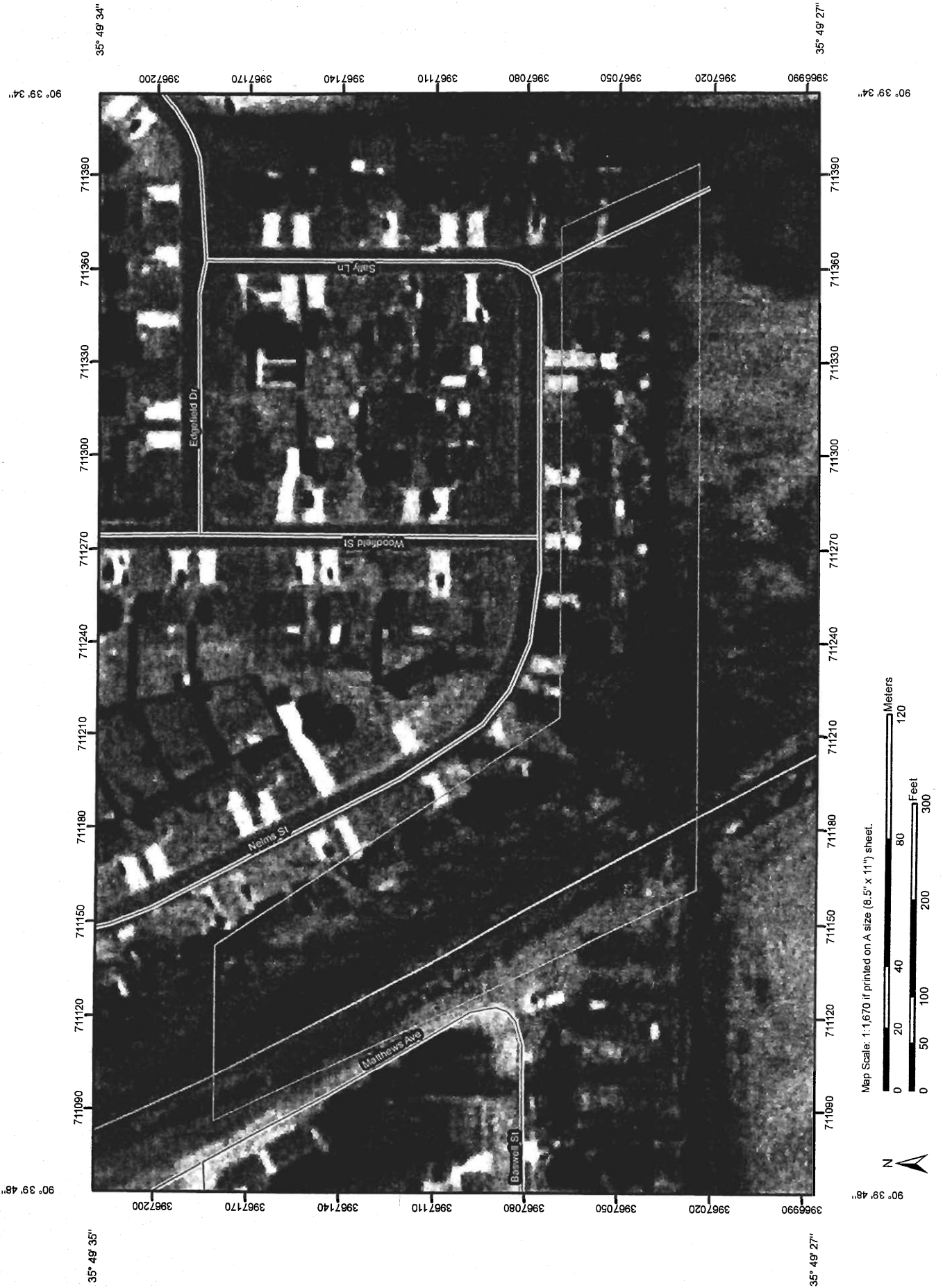
REASONS FOR CHANGES:

"I certify under penalty of law that this document was prepared under my direction or supervision. The information submitted 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 for knowing violations."

Signature

Date

For additional information, please use a separate page.



MAP LEGEND

	Area of Interest (AOI)		Very Stony Spot
	Soils		Wet Spot
	Soil Map Units		Other
Special Point Features			
	Blowout		Gully
	Borrow Pit		Short Steep Slope
	Clay Spot		Other
	Closed Depression	Political Features	
	Gravel Pit		Cities
	Gravelly Spot	Water Features	
	Landfill		Oceans
	Lava Flow		Streams and Canals
	Marsh or swamp	Transportation	
	Mine or Quarry		Rails
	Miscellaneous Water		Interstate Highways
	Perennial Water		US Routes
	Rock Outcrop		Major Roads
	Saline Spot		Local Roads
	Sandy Spot	Other Features	
	Severely Eroded Spot		Sinkhole
	Slide or Slip		Sodic Spot
	Spoil Area		Stony Spot

MAP INFORMATION

Map Scale: 1:1,670 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:20,000.
 Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 15N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Craighead County, Arkansas
 Survey Area Data: Version 9, Nov 17, 2008

Date(s) aerial images were photographed: 1994

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Craighead County, Arkansas (AR031)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
21	Falaya silt loam, occasionally flooded	4.4	100.0%
Totals for Area of Interest		4.4	100.0%

**DEPARTMENT OF THE ARMY
SECTION 404 PERMIT DETERMINATION**



DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT, CORPS OF ENGINEERS
167 NORTH MAIN STREET B-202
MEMPHIS, TENNESSEE 38103-1894

May 21, 2010

Operations Division
Regulatory Branch



Jason MacDonald
Civil Engineering Associates, LLC
2114 East Matthews Avenue
Jonesboro, Arkansas 72401

Dear Mr. MacDonald:

This is in reference to your request for a proposed walking trail on Turtle Creek, that will include some bank restoration, located in the City of Jonesboro, Craighead County, Arkansas, as shown on the attached map. Based on a preliminary jurisdictional determination (PJD) a Section 404 permit would be required for the bank restoration work. However, your proposal meets the criteria of Nationwide Permit 3 for Maintenance, pursuant to Federal Register, Volume 72, Number 47, dated March 12, 2007. No permit is required for the walking trail since it is going to be located on the top bank of Turtle Creek.

A PJD cannot be appealed. If you object to this PJD, please contact us for information about receiving an approved jurisdictional determination and information on the administrative appeals process. The PJD is included for your concurrence. If you agree with this PJD please sign the form and return it to the address listed above. If the PJD is not returned within 30 days of the date of this letter we will assume your concurrence.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2012. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit.

No impacts to Federally listed threatened or endangered species are expected to occur. The attached general and state conditions must be met. Note specifically General Conditions 12, 17 and 18 concerning soil erosion and sediment control, endangered species and historic properties. If all conditions cannot be met, an individual permit may be required.

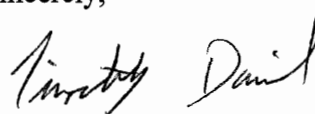
This permit conveys no property rights, either in real estate or material, or any exclusive privileges. Furthermore, no injury to property or invasion of rights or any infringement of Federal, state, or local laws or regulations is authorized.

The decision regarding these actions is based on information found in the administrative record, which documents the District's decision-making process, the basis for the decision, and the final decision. The attached certification form must be signed and returned to the Corps within 30 days after project completion.

The Memphis District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete and return the enclosed business reply postcard or go to our Customer Service Survey found on our web site at <http://per2.nwp.usace.army.mil/survey.html>.

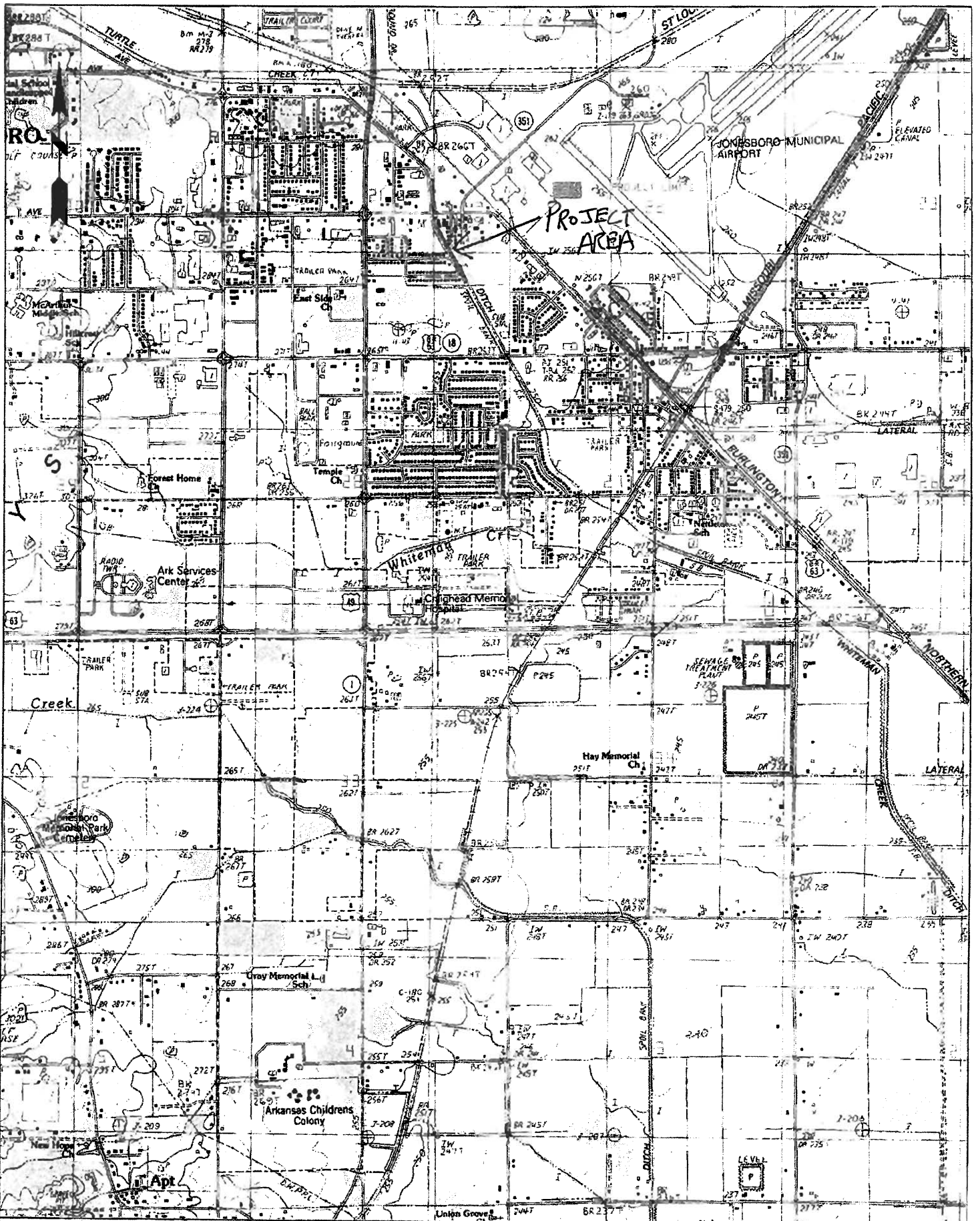
Your cooperation with the regulatory program is appreciated. If you have questions, please contact Josh Bright at (901) 544-0926, and refer to File No. MVM-2010-217-jkb.

Sincerely,



Timothy L. Davis
Western Section Chief
Regulatory Branch

Enclosures



CIVIL ENGINEERING ASSOCIATES, LLC

2114 EAST MATTHEWS AVENUE
 JONESBORO, ARKANSAS 72401
 (870) 872-5318
 FAX (870) 832-0432

JONESBORO • HOT SPRINGS • TEXARKANA • POPLAR BLUFF

PROJECT SITE MAP

Scale	Job No.
N.T.S.	J8-08-01
Date	Sheet
JANUARY 2010	1 OF 1

CERTIFICATE OF COMPLIANCE

Permit / File No.: MVM-2010-217-JKB

Name of Permittee: Jason MacDonald
Civil Engineering Associates, LLC

Date of Issuance: May 21, 2010

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

**Regulatory Branch
Corps of Engineers Memphis District
167 N Main Street Room B202
Memphis, TN 38103-1894**

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation (if needed) was completed in accordance with the permit conditions.

Signature of Permittee

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office Memphis District File/ORM # MVM-2010-217 PJD Date: May 19, 2010
State AR City/County Craighead County Person Requesting PJD Jason MacDonald

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
1	35.8252	-90.6628	Riverine	~1200 linear ft	
			n/a		
			n/a		
			n/a		

Notes:

Empty box for notes.

3. Maintenance. (a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris in the vicinity of and within existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the district engineer under separate authorization. The placement of riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the district engineer.

(c) This NWP also authorizes temporary structures, fills, and work necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation or beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27). Where maintenance dredging is proposed, the pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Sections 10 and 404)

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

ADEQ

ARKANSAS
Department of Environmental Quality

March 13, 2007

Colonel Wally Z. Walters, District Engineer
Little Rock District Corps of Engineers
P. O. Box 867
Little Rock, Arkansas 72203-0867

RE: Public Notice: Re-issuance of Nationwide Permits

Dear Colonel Walters:

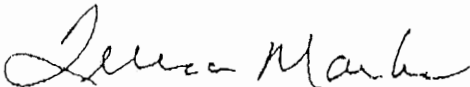
The Arkansas Department of Environmental Quality ("ADEQ") has completed its review of the above referenced public notice for re-issuance of the U.S. Army Corps of Engineers Nationwide Permits for the State of Arkansas.

ADEQ has determined there is a reasonable assurance that activities covered under these Nationwide Permits will be conducted in a manner which, according to the Arkansas Pollution Control and Ecology Commission's Regulation No.2, will not physically alter a significant segment of the waterbody and will not violate the water quality criteria.

Therefore, pursuant to §401(a)(1) of the Clean Water Act, the ADEQ hereby issues water quality certification for the **Re-issuance of Nationwide Permits** as it applies to the waters within the state of Arkansas contingent upon the following conditions:

- 1) Individual Water Quality Certification requests must be submitted to ADEQ for any activity impacting Extraordinary Resource Waters, Ecologically Sensitive Waters, and Natural and Scenic Waters as identified in Regulation # 2..
- 2) Applicant shall contact ADEQ for a Short Term Activity Authorization needs determination for activities that have the potential to violate water quality criteria.
- 3) Applicant shall comply with NPDES Stormwater Program requirements.

Sincerely,



Teresa Marks
Director

cc: Wanda Boyd, Region VI, Environmental Protection Agency
Bradley Myers, Project Manager, Little Rock District COE

C. Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.
12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species. (a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

18. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to

cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWP's 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWP's only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWP's. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWP's.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of

compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;
- (b) A statement that any required mitigation was completed in accordance with the permit conditions; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN

review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity:

(1) Until notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) If 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);

(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur.

The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

D. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

E. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Discharge: The term "discharge" means any discharge of dredged or fill material and any activity that causes or results in such a discharge.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects waterbodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 20.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete project: The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete project must have independent utility (see definition). For linear projects, a "single and complete project" is all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWP, a waterbody is a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent--meaning bordering, contiguous, or neighboring--to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.