



**Specifications
for
*Union Street and Cate Street
Parking Improvements*
(Bid #2008:19)
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
- VIII.GENERAL CONDITIONS
- X. SUPPLEMENTAL GENERAL CONDITIONS
- XI. SPECIAL CONDITIONS
- XII. TECHNICAL SPECIFICATIONS

I. ADVERTISEMENT FOR BIDS

Sealed bids addressed to the Ms. Tracey Cooper, Contract Coordinator, City of Jonesboro, will be received at P.O. Box 1845, 307 Vine Street, Jonesboro, AR 72403, until 2:00 P.M. (Local Time) on June 25, 2008 and then publicly opened and read for furnishing all labor, material, and equipment, and performing all work required to construct the Union Street and Cate Street Parking Improvements.

The projects consist of the construction of two parking lots. The Union Street Parking Improvements consists of a 43,240 sq. ft asphalt parking lot and the Cate Street Parking Improvements consists of a 5,500 sq. ft. asphalt parking lot. Both Parking Improvements entail the construction of perimeter sidewalks, as well as, security lighting.

Proposals shall be accompanied by a cashier's or certified check upon a national or state bank in an amount not less than five per cent (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 per cent (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 and at City of Jonesboro Engineering Department, 307 Vine Street, Jonesboro, Arkansas 72401 and may be secured at the cost of \$50 Dollars per set from the City of Jonesboro City Hall, 515 West Washington Ave., Jonesboro, Arkansas 72401. A receipt showing proof of purchase will be required by the Engineering Department prior to obtaining plans. No refunds will be made.

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 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. 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 Union and Cate Street Parking Improvements 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 48 hours 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, and when issued, will be on file in the office of the Engineer at least twenty-four (24) hours before bids are opened. In addition, all Addenda will be mailed to each person holding Contract Documents, but it shall be the Bidder's responsibility to make inquiry as to the Addenda issued. 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, upon request of the Owner, 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, to change the location or gradient, or the dimensions of any part of the work, provided that the contract time of the improvement is not increased or decreased in excess of twenty-five percent (25%) of the length as determined by the Contract, 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 twenty-five percent (25%) of the total as determined by the 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 or increases or decreases so incurred. Change in length or in money value, within the twenty-five percent (25%) limits set out, shall not be cause for adjustment of any lump sum or unit price. Changes in items of work covered by unit prices and/or lump sum prices, within the twenty-five percent (25%) limits set out, shall not be cause for adjustment of any other (non-involved) lump sum or unit price.

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 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 307 Vine St. Jonesboro, AR 72404
Date 6/25/08

Proposal of STONEBRIDGE CONSTRUCTION, LLC

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 Union Street and Cate Street Parking Improvements.

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 attached Unit Price Schedule consists of pages numbered UPS-1 through UPS-2.

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):

N/A Dated _____

N/A 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.

[Signature]
(Witness)

4104 STEPHANIE LN.
JONESBORO, AR 72401
(Address)

STONEBRIDGE CONSTRUCTION, LLC
(Name of Bidder)
BY [Signature]
BOB HESTER, PARTNER
(Print Name and Title)

SEAL (If Bidder is a corporation)

1000 LINDOYER RD. STE. B
JONESBORO, AR 72401
(Office Address of Bidder)

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

IV. UNION STREET PARKING IMPROVEMENTS UNIT PRICE SCHEDULE

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Amount</u>
1.04a	Site Preparation		L.S.	\$ 14,490 ⁰⁰	\$ 14,490 ⁰⁰
2.09a	Unclassified Excavation	1,070	C.Y.	\$ 12 ⁶⁵	\$ 13,535 ⁵⁰
3.06a	Aggregate Base Course	1,480	TON	\$ 20 ⁷⁰	\$ 30,636 ⁰⁰
4.04a	Asphalt Concrete Hot Mix Surface Mix	750	TON	\$ 92 ⁰⁰	\$ 69,000 ⁰⁰
5.09a	Concrete Curb & Gutter	2,595	L.F.	\$ 14 ³⁸	\$ 37,316 ¹⁰
6.06a	Concrete Sidewalk to include Disability Ramps & Signs	810	S.Y.	\$ 37 ⁹⁵	\$ 30,739 ⁵⁰
7.08b	Grate Inlet	2	EA	\$ 143 ⁷⁵	\$ 287 ⁵⁰
10.08c	12" Aluminized Steel Ultra Flow Pipe	20	L.F.	\$ 31 ⁰⁵	\$ 621 ⁰⁰
10.08d	8"x6"1/4" Steel Drain	68	L.F.	\$ 24 ¹⁵	\$ 1,642 ²⁰
11.07a	Solid Sodding	940	S.Y.	\$ 2 ⁸⁸	\$ 2,707 ²⁰
11.07b	Top Soil	156	C.Y.	\$ 16 ¹⁰	\$ 2,511 ⁶⁰
19.03a	Erosion Control		L.S.	\$ 3,680 ⁰⁰	\$ 3,680 ⁰⁰
20.05a	Excavation Trench Safety System		L.S.	\$ 575 ⁰⁰	\$ 575 ⁰⁰
22.03a	Non-Reflective Pavement Marking		L.S.	\$ 5,175 ⁰⁰	\$ 5,175 ⁰⁰
24.04a	Brick Pavers	87	S.Y.	\$ 115 ⁰⁰	\$ 10,005 ⁰⁰
25.04a	Trash Receptacle	2	EA	\$ 1,150 ⁰⁰	\$ 2,300 ⁰⁰
25.04b	Site Bench	1	EA	\$ 1,380 ⁰⁰	\$ 1,380 ⁰⁰
27.05a	Trees and Shrubs	49	EA	\$ 194 ³⁵	\$ 9,523 ¹⁵
30.14a	Landscape Irrigation		L.S.	\$ 11,155 ⁰⁰	\$ 11,155 ⁰⁰
	Light Pole Foundation and Conduit		L.S.	\$ 5,175 ⁰⁰	\$ 5,175 ⁰⁰
	Light Pole and Assemblies		L.S.	\$ 16,445 ⁰⁰	\$ 16,445 ⁰⁰
	Planter	2	EA	\$ 7,043 ⁷⁵	\$ 14,087 ⁵⁰
TOTAL					\$282,987²⁵

Written in Words: TWO HUNDRED EIGHTY-TWO THOUSAND NINE HUNDRED EIGHTY-
SEVEN DOLLARS & TWENTY-FIVE CENTS

IV. CATE STREET PARKING IMPROVEMENTS UNIT PRICE SCHEDULE

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Amount</u>
1.04a	Site Preparation	L.S.	<u>1</u>	<u>\$ 3,450⁰⁰</u>	<u>\$ 3,450⁰⁰</u>
2.09a	Unclassified Excavation	C.Y.	<u>375</u>	<u>\$ 12⁶⁵</u>	<u>\$ 4,743⁷⁵</u>
3.06a	Crushed Aggregate Base Course	Ton	<u>209</u>	<u>\$ 20⁷⁰</u>	<u>\$ 4,326³⁰</u>
4.04a	Asphalt Concrete Hot Mix Surface Course	Ton	<u>106</u>	<u>\$ 92⁰⁰</u>	<u>\$ 9,752⁰⁰</u>
5.09a	Concrete Curb and Gutter	L.F.	<u>218</u>	<u>\$ 14⁸⁸</u>	<u>\$ 3,134⁸⁴</u>
6.06a	Concrete Sidewalk to Include Disability Access Ramps and Signs	S.Y.	<u>145</u>	<u>\$ 37⁹⁵</u>	<u>\$ 5,502⁷⁵</u>
11.07a	Solid Sodding	S.Y.	<u>285</u>	<u>\$ 2⁸⁸</u>	<u>\$ 820⁸⁰</u>
11.07b	Top Soil	C.Y.	<u>50</u>	<u>\$ 16¹⁰</u>	<u>\$ 805⁰⁰</u>
19.03	Erosion Control	L.S.	<u>1</u>	<u>\$ 1,265⁰⁰</u>	<u>\$ 1,265⁰⁰</u>
29.05a	Paint Pavement Marking	L.S.	<u>1</u>	<u>\$ 1,150⁰⁰</u>	<u>\$ 1,150⁰⁰</u>
	Light Pole Foundation and Conduit	L.S.	<u>1</u>	<u>\$ 1,150⁰⁰</u>	<u>\$ 1,150⁰⁰</u>
	Light Pole and Assemblies	L.S.	<u>1</u>	<u>\$ 10,465⁰⁰</u>	<u>\$ 10,465⁰⁰</u>
TOTAL					<u>\$ 46,565⁴⁴</u>

Written in Words: Forty-Six Thousand Five Hundred Sixty-Five
DOLLARS & Forty-Four CENTS

V. BID BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT we the undersigned, _____, as PRINCIPAL, and
_____, as SURETY, are held and firmly bound unto the
City of Jonesboro, hereinafter called the OWNER in the penal sum of _____

(\$ _____), 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 _____, for the construction of the

UNION STREET AND CATE STREET PARKING IMPROVEMENTS

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 _____ day of _____, 20____, 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.

SEAL

(Principal)

By _____

(Witness)

(Title)

(Address)

SEAL

(Corporate Surety)

By _____

(Address)

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

U.S. Specialty Insurance Company

BID BOND

Bond No. 05012008

KNOW ALL MEN BY THESE PRESENTS, that we, Stonebridge Construction, LLC as Principal (hereinafter called the "Principal"), and U.S. Specialty Insurance Company (hereinafter called the "Surety"), are held and firmly bound unto City of Jonesboro, AR as Obligee, (hereinafter called the "Obligee"), in the sum of 5% MAB of the amount of the bid described below but not to exceed Five Percent of Maximum Amount Bid for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns firmly by these presents.

WHEREAS, the Principal has submitted a bid to Obligee for Construction of 2 Asphalt Parking Lots to include Sidewalks and Lighting, Jonesboro, Arkansas

NOW, THEREFORE, If the contract be timely awarded to the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid or, in the event of the failure of the Principal to enter into such a contract, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and the next low bid received by the Obligee for the work covered by Principal's bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

PROVIDED, HOWEVER, neither Principal nor Surety shall be bound hereunder unless Obligee prior to execution of the final contract shall furnish evidence in a manner and form acceptable to Principal and Surety that financing has been firmly committed to cover the entire cost of the project.

SIGNED, sealed and dated this 24th day of June 2008.

Stonebridge Construction, LLC

Principal

By

Title

Partner

U.S. Specialty Insurance Company

By

Gail A. Barraza
Attorney-in-Fact

POWER OF ATTORNEY

(To be used with bonds issued on behalf of U.S. SPECIALTY INSURANCE COMPANY)

Know All Men by These Presents That, U.S. SPECIALTY INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Mason T. Grashot, Gail A. Barraza or Ami L. Ashmore of Little Rock, Arkansas

its true and lawful Attorney(s)-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include riders, amendments, and consents of surety, providing the bond penalty does not exceed ***** One Million ***** Dollars (\$ 1,000,000.00) and to bind the Company thereby as fully and to the same extent as if such bonds were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the U. S. Specialty Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements of indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company and signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted by unanimous written consent in lieu of meeting on July 7, 2003.)

In Witness Whereof, U. S. SPECIALTY INSURANCE COMPANY has caused these presents to be signed by its Senior Vice President, and its corporate seal to be hereto affixed this 5th day of April, 2004.

Corporate Seal



U.S. SPECIALTY INSURANCE COMPANY

By

Robert F. Thomas

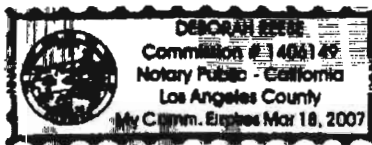
State of California

County of Los Angeles ss:

Robert F. Thomas, Senior Vice President

On this 5th day of April, 2004 before me personally came Robert F. Thomas, to me known, who, being by me duly sworn, did depose and say, that he resides in Los Angeles, California, that he is Senior Vice President of U.S. SPECIALTY INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of the Company; and that he signed his name thereto by like order.

Notary Seal



Deborah Reese Notary Public
My commission expires March 18, 2007

I, Jeannie Kim, Assistant Secretary of U. S. SPECIALTY INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seal of said Company at Los Angeles, California this 24 day of June, 2008

Corporate Seal



Jeannie Kim
Jeannie Kim, Assistant Secretary

Bond No. 05012008

Agency No. #0217

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. Permanent main office address.
3. When organized.
4. If a corporation, where incorporated.
5. How many years have been engaged in the contracting business under your present firm or trade name?
6. Contracts on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dates of completion).
7. General character of work performed by your company.
8. Have you ever failed to complete any work awarded to you?
9. Have you ever defaulted on a Contract?
If so, where and why?
10. Have you ever been fined or had your license suspended by a Contractor's Licensing Board?
If so, where and why?
11. List the more important projects recently completed by your company, stating the approximate cost for each, and the month and year completed.
12. List your major equipment available for this Contract.
13. Experience in construction work similar in importance to this project.
14. Background and experience of the principal members of your organization, including the officers.
15. Credit available: \$_____.
16. Give Bank reference: _____.

17. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the Owner?

18. 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 _____ this _____
day of _____, 20____.

(Name of Bidder)

By _____

Title _____

STATE OF _____)

) SS.

COUNTY OF _____)

_____ being duly sworn deposes and says that

he is _____ of _____

(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 _____ day of _____, 20____.

(Notary Public)

My Commission Expires:

VII. CONTRACT

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

between Stonebridge Construction, LLC

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

~~(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 construction of the Union Street and Cate Street Parking Improvements, in strict accordance with the Contract Documents, including all Addenda thereto

N/A dated _____

N/A dated _____

N/A 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 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)
- b. Addenda
- c. Advertisement for Bids
- d. Instructions to Bidders
- e. Proposal
- f. General Conditions
- g. Supplemental General Conditions
- h. Special Conditions
- i. Technical Specifications including Special Provisions
- 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:



JOHN FERRY, OWNER

STONEBRIDGE CONSTRUCTION, LLC
(Contractor)

By 

Title ROB HESTER, OWNER

1000 WINDYBARK RD. STE B.

(Street)

JONESBORO, AR 72401

(City)

City of Jonesboro
(Owner)

By _____

(Print the names underneath all signatures).

VIII. ARKANSAS PERFORMANCE-PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, StoneBridge Construction, LLC

as Principal, hereinafter called Principal, and US Specialty Insurance Company

of 13403 Northwest Freeway, Houston State of Texas

as Surety, hereinafter called the Surety, are held and firmly bound unto the City of Jonesboro as Obligee, hereinafter called Owner, in the amount

Three Hundred Twenty Nine Thousand Five Hundred Fifty Three Dollars (\$ 329,553.00)

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 construction of the Union Street and Cate Street Parking Improvements.

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

StoneBridge Construction, LLC

(Principal)

By 

Title OWNER

SEAL

US Specialty Insurance Company

(Surety)

By 

(Attorney-in-Fact) Gail A. Barraza

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.

POWER OF ATTORNEY

(To be used with bonds issued on behalf of U.S. SPECIALTY INSURANCE COMPANY)

Know All Men by These Presents That, U.S. SPECIALTY INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Mason T. Grashot, Gail A. Barraza or Ami L. Ashmore of Little Rock, Arkansas

its true and lawful Attorney(s)-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include riders, amendments, and consents of surety, providing the bond penalty does not exceed ***** One Million ***** Dollars (\$ *** 1,000,000.00 ***) and to bind the Company thereby as fully and to the same extent as if such bonds were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the U. S. Specialty Insurance Company:

Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted by unanimous written consent in lieu of meeting on July 7, 2003.)

In Witness Whereof, U. S. SPECIALTY INSURANCE COMPANY has caused these presents to be signed by its Senior Vice President, and its corporate seal to be hereto affixed this 5th day of April, 2004.

Corporate Seal



U.S. SPECIALTY INSURANCE COMPANY

By

Robert F. Thomas

State of California

County of Los Angeles ss:

Robert F. Thomas, Senior Vice President

On this 5th day of April, 2004 before me personally came Robert F. Thomas, to me known, who, being by me duly sworn, did depose and say, that he resides in Los Angeles, California, that he is Senior Vice President of U.S. SPECIALTY INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of the Company; and that he signed his name thereto by like order.

Notary Seal



Deborah Reese, Notary Public
My commission expires March 18, 2007

I, Jeannie Kim, Assistant Secretary of U. S. SPECIALTY INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

In Witness Whereof, I have hereunto set my hand and affixed the seal of said Company at Los Angeles, California this 18 day of July, 2008

Corporate Seal



Jeannie Kim

Jeannie Kim, Assistant Secretary

Bond No. 1000760440

Agency No. # 0217

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
7/18/2008

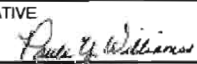
PRODUCER Clark Prop. Ins. Serv. LLC 1810 Executive Square Jonesboro, AR 72401 870-931-7100	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.												
INSURED StoneBridge Construction, LLC John Perry P.O. Box 16787 Jonesboro, AR 72403 870-268-9885	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:80%;">INSURERS AFFORDING COVERAGE</th> <th style="width:20%;">NAIC#</th> </tr> <tr> <td>INSURER A: CIU</td> <td></td> </tr> <tr> <td>INSURER B: Hanover</td> <td></td> </tr> <tr> <td>INSURER C: Commerce And Industry</td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> </table>	INSURERS AFFORDING COVERAGE	NAIC#	INSURER A: CIU		INSURER B: Hanover		INSURER C: Commerce And Industry		INSURER D:		INSURER E:	
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INSURER A: CIU													
INSURER B: Hanover													
INSURER C: Commerce And Industry													
INSURER D:													
INSURER E:													

COVERAGES
 THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A		GENERAL LIABILITY	3CV4490	12/7/07	12/7/08	EACH OCCURRENCE \$ 1,000,000
		<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000
		<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person) \$ 1,000
		GEN'L AGGREGATE LIMIT APPLIES PER				PERSONAL & ADV INJURY \$ 1,000,000
		<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC				GENERAL AGGREGATE \$ 2,000,000
B		AUTOMOBILE LIABILITY	ADT8223395 ADT8223395-01	2/24/08	2/24/09	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
		<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$
		<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
		<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident) \$
		<input checked="" type="checkbox"/> HIRED AUTOS				AUTO ONLY - EA ACCIDENT \$
		<input checked="" type="checkbox"/> NON-OWNED AUTOS				OTHER THAN AUTO ONLY EA ACC AGG \$
		GARAGE LIABILITY				
		<input type="checkbox"/> ANY AUTO				
A		EXCESS/UMBRELLA LIABILITY	EUB789523	12/07/07	12/07/08	EACH OCCURRENCE \$ 3,000,000
		<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE \$ 3,000,000
		DEDUCTIBLE				
		<input checked="" type="checkbox"/> RETENTION \$ 10,000				
C		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	WC 927-73-49	5/30/08	5/30/09	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?				E.L. EACH ACCIDENT \$ 100,000
		If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - EA EMPLOYEE \$ 100,000
		OTHER				E.L. DISEASE - POLICY LIMIT \$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Union Street & Cate Street Parking & Street Repair

CERTIFICATE HOLDER City of Jonesboro 515 W. Washington Jonesboro, Ar 72401	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL <u>30</u> DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE 
--	---

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 construction of the Union Street and Cate Street Parking Improvements.

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.

VIII. 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 sited 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.

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

The Contractor shall obtain Owner's and Engineer's Protective Liability insurance, which shall be in force for the entire project period, naming as the insured therein, the City of Jonesboro. Such insurance shall be provided as a separate policy from the Contractor's insurance as listed above. Limits of liability shall be the following:

Bodily Injury Liability (Including Death and Physical Damage Liability (Damage to or Destruction of Property)	- \$1,000,000/occurrence - \$2,000,000/aggregate
---	---

A copy of the insurance policy shall be delivered to the Owner and Engineer.

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 materialmen 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 judgement or claims against the Local Public Agency shall be allowed, the Contractor shall pay or satisfy such judgement 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

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.

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 therefor.
- 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 judgement 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 Local Public Agency and existing State and local regulations.

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 therefor 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

Three (3) sets 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

The Contractor shall provide additional insurance as listed below:

SGC.3.1 Railroad Protective Insurance: The Contractor shall provide Railroad Protective Insurance in a form suitable to the Carrier (Railroad Company) for work on the Carrier's rights-of-way. Copies of the insurance certificates shall be approved by the Carrier before any work is begun on railroad property. The Contractor shall submit the insurance certificates to the Engineer.

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.

MIKE BEEBE
GOVERNOR



STATE OF ARKANSAS
ARKANSAS DEPARTMENT OF LABOR
PREVAILING WAGE DIVISION

JAMES SALKELD
DIRECTOR

10421 WEST MARKHAM • LITTLE ROCK, AR 72205-2190
Phone: 501-682-4536 Fax: 501-682-4508 TRS: 800-285-1131

June 11, 2008

Michael Morris
City of Jonesboro
307 Vine St
Jonesboro, AR 72401

Re: UNION STREET AND CATE STREET PARKING
IMPROVEMENTS
JONESBORO, ARKANSAS
CRAIGHEAD COUNTY

Dear Mr. Morris:

In response to your request, enclosed is Arkansas Prevailing Wage Determination Number 07-539 establishing the minimum wage rates to be paid on the above-referenced project. These rates were established pursuant to the Arkansas Prevailing Wage Law, Ark. Code Ann. §§ 22-9-301 to 22-9-315 and the administrative regulations promulgated thereunder.

If the work is subject to the Arkansas Prevailing Wage Law, every specification shall include minimum prevailing wage rates for each craft or type of worker as determined by the Arkansas Department of Labor Ark. Code Ann. § 22-9-308 (b) (2). Also, the public body awarding the contract shall cause to be inserted in the contract a stipulation to the effect that not less than the prevailing hourly rate of wages shall be paid to all workers performing work under the contract. Ark. Code Ann. § 22-9-308 (c).

Additionally, the scale of wages shall be posted by the contractor in a prominent and easily accessible place at the work site. Ark. Code Ann. § 22-9-309 (a).

Also enclosed is a "**Statement of Intent to Pay Prevailing Wages**" form that should be put in your specifications along with the wage determination. The General/Prime Contractor is responsible for getting this form filled out and returned to this office within 30 days of the Notice to Proceed for this project.

When you issue the Notice to Proceed for this project, please email or fax a copy of the notice to my office.

If you have any questions, please call me at (501) 682-4536 or fax (501) 682-4508.

Sincerely,

A handwritten signature in cursive script that reads "Jill Stacy".

Jill Stacy
Prevailing Wage Division

Enclosures

**Arkansas Department of Labor
Prevailing Wage Determination
HEAVY RATES**

Determination #: 07-539
Expiration Date: 12/11/2008
Survey#: 707-AH11

Date: 6/11/2008

Project: Union Street and Cate Street Parking Improvements

Site:

City: Jonesboro, Arkansas

Project County: Craighead

CLASSIFICATION	Basic Hourly Rate	Fringe Benefits
Carpenter	\$13.55	
Concrete Finisher/Cement Mason	\$11.15	
Electrician/Alarm Installer	\$12.50	\$0.77
Ironworker (Including Reinforcing Work)	\$12.60	
Laborer	\$9.10	
Painter/Sheet Rock Finisher	\$15.60	
Pipelayer	\$9.10	
Truck Driver	\$12.55	
Asphalt Paving Machine	\$13.00	
Backhoe - Rubber Tired (1 yard or less)	\$15.05	
Bulldozer, finish	\$14.40	
Bulldozer, rough	\$13.10	
Crane, Derrick, Dragline, Shovel & Backhoe, 1.5 yards or less	\$10.00	
Crane, Derrick, Dragline, Shovel & Backhoe, over 1.5 yards	\$18.00	
Distributor	\$9.10	
Excavator	\$14.00	
Finishing Machine	\$11.95	
Front End Loader, finish	\$13.50	\$1.38
Mechanic	\$10.25	
Motor Patrol, finish	\$12.95	
Motor Patrol, rough	\$10.60	
Roller	\$10.80	
Trackhoe	\$12.85	
Tractor	\$11.40	

Welders-receive rate prescribed for craft performing operation to which welding is incidental.

Certified 7/2/2007

Classifications that are required, but not listed above, must be requested in writing from the Arkansas Department of Labor, Prevailing Wage Division. Please call (501) 682-4536 for a request form.

STATEMENT OF INTENT TO PAY PREVAILING WAGES

PROJECT: **UNION STREET AND CATE STREET PARKING IMPROVEMENTS
JONESBORO, ARKANSAS
CRAIGHEAD COUNTY**

This is to certify that we, the following listed contractors, are aware of the wage requirements of the Arkansas Prevailing Wage Law and by signature below indicate our intent to pay no less than the rates established by **Arkansas Prevailing Wage Determination Number 07-539** for work performed on the above noted public project. I understand that contractors who violate prevailing wage laws, i.e., incorrect classification/scope of work of workers, improper payments of prevailing wages, etc., are subject to fines and will be required to pay back wages due to workers.

Business Name	Address	Phone#	Signature and Title of Business Official
General/Prime Contractor			
Electrical Subcontractor			
Mechanical Subcontractor			
Plumbing Subcontractor			
Roofing/ Sheet Metal Subcontractor			

THE GENERAL/PRIME CONTRACTOR IS RESPONSIBLE FOR GETTING THIS FORM FILLED OUT AND RETURNING IT TO THE ARKANSAS DEPARTMENT OF LABOR ***WITHIN 30 DAYS OF THE NOTICE TO PROCEED*** FOR THIS PROJECT. RETURN COMPLETED FORM TO THE ARKANSAS DEPARTMENT OF LABOR, PREVAILING WAGE DIVISION, 10421 W. MARKHAM, LITTLE ROCK, ARKANSAS, 72205.

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	TEMPORARY FIELD OFFICE
SC.27	RELEASE AND CONTRACTOR'S AFFIDAVIT
SC.28	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 Cate Street parking lot is located at the northwest corner of the intersection of Cate Street and Church Street. The Union Street parking lot is located at the northwest corner of the intersection of Union Street and Monroe Ave. 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 two parking lots.

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, or upon the date the Contractor moves on the site to begin the work, whichever is the earliest date. 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 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", or the date work commences, whichever occurs first; 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 have 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, Memorial Day, July 4, Labor Day, Thanksgiving, 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 TEMPORARY FIELD OFFICE

Prior to beginning construction of the project, the Contractor shall erect a separate temporary building for the office of the Engineer at the job site, as approved by the Engineer.

This office shall have at least 100 square feet of floor space and shall be well lighted-and-ventilated and shall have means of safely maintaining a comfortable office temperature at all times. This office may be adjacent or connected to another office, but must be constructed so as to provide a separate and private office. The building shall be removed from the site upon completion of this project. Telephone services shall be installed in the Engineer's office and paid for by the Contractor. All costs resulting from the construction and maintenance of the building and utilities, with the exception of long distance telephone calls by the Engineer, shall be borne by the Contractor.

SC.27 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.28 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

Union Street and Cate Street Parking Improvements

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

Union Street and Cate Street Parking Improvements

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 Union Street and Cate Street Parking Improvements 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

XII. TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE</u>
SP-1 - Specifications, Ark. State Highway Commission	59
Section 1 - Site Preparation	60
Section 2 - Earthwork	62
Section 3 - Aggregate Base Course	66
Section 4 - Asphalt Surface, Binder, and Asphalt Stabilized Base Course	68
Section 5 - Concrete Curb and Gutter	70
Section 6 - Concrete Sidewalks and Steps	73
Section 7 - Inlets and Junction Boxes	75
Section 8 - Concrete and Reinforcing Steel	77
Section 9 - Unclassified Excavation for Structures	88
Section 10 - Pipe Culverts	91
Section 11 - Solid Sodding	94
Section 12 - Shrubbery Relocation and Hedge Relocation	97
Section 13 - Maintenance of Traffic	99
Section 14 - Pavement Repairs	100
Section 15 - Disability Access Ramps	102
Section 16 - Cleanup	103
Section 17 - Pipe Embedment	104
Section 18 - "B" Stone	106
Section 19 - Temporary Erosion Control	107
Section 20 - Trench or Excavation Safety Systems	108
Section 21 - Cold Milling Asphalt Pavement	109
Section 22 - Non-Reflectorized Paint Pavement Marking	110
Section 23 - Water for Dust Control	111
Section 24 - Brick Pavers	111
Section 25 - Site Benches and Trash Receptacles	113
Section 26 - Unit Masonry	114
Section 27 - Trees and Shrubs	117
Section 28 - Architectural Precast Concrete	121
Section 29 - Site Utilities	127
Section 30 - Irrigation System	128

SP-1 - SPECIFICATIONS, ARKANSAS STATE HIGHWAY COMMISSION

General

The standard specifications of the Arkansas State Highway and Transportation are bound in a book titled Standard Specifications for Highway Construction. These specifications are referred to herein as "Standard Specifications." The latest edition shall apply.

A copy of these "Standard Specifications" may be obtained from the Arkansas State Highway and Transportation Department, Little Rock, Arkansas, at their customary charge.

Incorporation and Modification

Certain parts of the Standard Specifications are appropriate for inclusion in these Technical Specifications. Such parts are incorporated herein by reference to the proper section or article number. The individual specification numbers noted herein may be different from those in the latest edition of the "Standard Specifications." The most current specification number shall apply. Each such referenced part shall be considered to be a part of these Contract Documents as though copied herein in full.

Certain referenced parts of the Standard Specifications are modified in the Specifications that follow. In case of conflict between the Standard Specifications and the Specifications that follow, the Specifications that follow shall govern.

Individual material test numbers change from time to time. Use the latest applicable test.

SECTION 1 - SITE PREPARATION

1.01 Description

- (a) Site preparation shall cover, but not be limited to the following areas:
 - (1) Area to be occupied by the improvements
 - (2) Necessary abutting work areas
 - (3) Any site for disposal of unsatisfactory excavated material
 - (4) Haul roads or streets, and
 - (5) Areas within the project that are used by the Contractor for storage areas.
- (b) In the areas described in Subparagraph (a) (1), the Contractor shall remove and dispose of all trees, roots, shrubs and other vegetation; all debris of whatever nature; all side drains or cross drains; all steps or walks; and all fences or other obstructions on the site of the project which interfere with the construction of improvements.
- (c) Removal and disposal of existing side drains or cross drains shall be in accordance with stipulations as follow:
 - (1) Removal shall be done in a manner as to minimize damage to the drainpipes.
 - (2) Salvageable materials shall be stacked neatly within the street right-of-way, or delivered to a central location, as directed by the Engineer.
 - (3) Material unsuitable for salvage shall be disposed of by the Contractor. When the Contractor and the Engineer agree that the material is unsuitable for salvage, Subparagraph (c) (1) shall not apply.
- (d) Any ornamental trees, shrubs, or flowers which are to be transplanted by the Owner will be completed ahead of the Contractor's operation. The Contractor's attention is directed to the fact that the alignment of the proposed streets was established in such a manner as to minimize the clearing of trees, shrubs, or other desirable plants. In general, trees known to interfere with the construction operations are shown on the plans. The Contractor shall determine for himself the extent of the work involved in Subparagraph 1.01 (b) and shall be prepared to remove all trees or other such obstructions as necessary for the construction operation.
- (e) The relocation of shrubs by the Contractor shall be in accordance with SECTION 12 - SHRUBBERY RELOCATION AND HEDGE RELOCATION.
- (f) It shall be the responsibility of each bidder to examine the site carefully in order to make his own determination, at the time of bid preparation, of the costs that will be incurred by reason of the requirements under Section 1 - Site Preparation. The Contractor will not be allowed compensation, additional to that herein provided, because of any claim concerning any stipulation of this paragraph.

1.02 Intermittent Cleanup

The Contractor shall, periodically and as directed by the Engineer during the progress of the work, put the entire work site in a neat and clean condition, including the removal, from the job site, all discarded material, rubbish, debris, and surplus material. See Section 16 - Cleanup.

1.03 Method of Measurement

Site preparation will be measured as a complete item.

1.04 Basis of Payment

- (a) Site preparation acceptably completed and measured as provided above will be paid for at the contract lump sum price bid for "SITE PREPARATION," which price shall be full compensation for mobilization within project work areas, removal and disposal items, providing and maintaining temporary field office, providing barricades, lights, and watchmen, and any other items required by this specification; furnishing all materials and for all equipment, tools, labor, and incidentals necessary to complete the work.

Periodic payments will be made under this item in proportion to the amount of work accomplished, as determined by the Engineer.

Payment will be made under:

Item 1.04a Site Preparation - per lump sum

SECTION 2 - EARTHWORK

2.01 Description

- (a) This section includes all earthwork necessary for the construction of streets, parking lots, sidewalks, curb and gutter, ditches and site work within the project area.
- (b) This section includes the excavation, embankment construction, filling, and compacting of material required for the construction outlined in 2.01(a) above and the disposal of material unsuitable for such construction.
- (c) This section does not include the excavation and backfill of structures. Excavation and backfill of structures is included under SECTION 9 - UNCLASSIFIED EXCAVATION FOR STRUCTURES of these specifications.

2.02 Standard Specifications

- (a) All work shall be in accordance with the lines and grades shown on the plans, or as directed by the Engineer, and with applicable portions of SECTION 210 - EXCAVATION AND EMBANKMENT, and SECTION 212 - SUBGRADE of the Standard Specifications, except as modified or augmented herein.
- (b) All excavation performed under this Section, regardless of the material encountered, shall be classified as unclassified excavation, except for ditch excavation described below.
- (c) The ditch excavation for channel changes or to bring ditches to minimum required section shall be in accordance with applicable portions of the Standard Specifications referred to under 2.02(a) above.
- (d) In areas of a ditch requiring no excavation, Subparagraph 1.01 shall apply to the extent that all trees, shrubs, heavy vegetation, or any other obstructions to water flow shall be removed as directed by the Engineer.
- (e) All ditch excavation shall be completed to the required grade shown on the Plans or as directed by the Engineer.

2.03 Over-Excavation

Where excavation is carried below or beyond that required, the space shall be filled to grade with suitable material and thoroughly compacted as directed by the Engineer. The Contractor will not be entitled to additional compensation for such over-excavation or the necessary refilling, unless the Owner or its agent is responsible for the error.

2.04 Use of Suitable Excavation

- (a) Suitable excavation shall be used for embankment construction, and where needed, for backfilling.
- (b) Embankment construction and backfills will not be measured for separate payment, but will be considered subsidiary work pertaining to the several items of the Contract.
- (c) Suitable excavation not needed for work described in 2.04(a) above shall be disposed of by the Contractor off site.
- (d) Excavation unsuitable for use shall be disposed of by the Contractor off site.
- (e) The Contractor is expected to construct embankment from suitable excavated material, and it may be necessary to stockpile a portion or all of this material for later use. The stockpiling and rehandling will not be paid for separately and the Contractor shall include this cost in "Unclassified Excavation." The Contractor will be required to replace with suitable borrow material, at no additional compensation, any suitable excavated material needed for the work which may be permanently wasted.

2.05 Compaction of Earthwork

- (a) Compaction shall be in accordance with applicable parts of PARAGRAPH 210.09 and SECTION 210 - EXCAVATION AND EMBANKMENT of the Standard Specification, except as herein modified.
- (b) All compaction shall be to a density not less than ninety-five percent (95%) of maximum density, at optimum moisture, obtained in the laboratory. Samples for laboratory tests and field determination will be taken by the Engineer and at the expense of the Owner, except that the Contractor shall assist the Engineer in the making of field determinations.
- (c) The moisture-density relationship of the material shall be determined in the laboratory in accordance with AASHTO Designation T 180, modified to use material passing a 3/4-inch sieve. The field determination of material in place shall be in accordance with AASHTO Designation T 191, or T 205, or T 238.
- (d) The Contractor will not be required to furnish a field laboratory.

2.06 Borrow Material

- (a) Borrow material, when required, shall be in accordance with SECTION 210 - EXCAVATION AND EMBANKMENT of the Standard Specifications.
- (b) The Contractor shall obtain the source, or sources, of borrow material and shall pay all royalty charges in connection therewith.

- (c) The Contractor shall obtain written permission from the Owner for the use of haul roads within the City. Both within and outside the City, he shall maintain the haul route free from spillage by his vehicles. He shall clean the haul route surface as often as necessary to avoid the creation of a public nuisance. He shall repair and restore the surface of all haul roads which have been damaged by his operations.

2.07 Subgrade

- (a) Subgrade for concrete sidewalks and steps shall be in accordance with requirements specified in SECTION 6 - CONCRETE SIDEWALKS AND STEPS.
- (b) Preparation of subgrade will not be measured for separate payment, but shall be considered subsidiary work pertaining to the several items of the Contract.
- (c) When excavation to the finished grade section results in a subgrade or slopes of unsuitable soil, the Engineer may require the Contractor to remove the unsuitable materials and backfill to the finished graded section with "B" stone. Payment will be as per Section 18, "B" Stone. The Engineer may designate as unsuitable those soils that cannot be properly compacted.

2.08 Method of Measurement

- (a) Unclassified excavation for street construction and site grading as well as for curb and gutter, and ditch or channel excavation, which by necessity is included in the street excavation, has been computed from the original cross sections and the proposed typical section. This will be the quantity used for final payment with the exception that revisions will be made for adjustment in the profile or typical section during the construction of the project.
- (b) Unclassified excavation for sidewalks, steps, and storm drainage will not be measured for separate payment. Unclassified excavation of 4-inch topsoil for solid sod will not be measured for separate payment, but will be considered subsidiary to the item "SOLID SOD."
- (c) Borrow material will be measured by the cubic yard, truck measure, at the points of delivery to the site.
- (d) Compaction of earthwork will not be measured for separate payment but will be considered subsidiary to the several items of the Contract.

2.09 Basis of Payment

- (a) Unclassified Excavation, as specified in this paragraph, will be paid for at the contract unit price bid per cubic yard for "UNCLASSIFIED EXCAVATION" which price shall be full compensation for all excavation, except excavation for structures; for the formation of embankment; for disposal of unsuitable material; for compaction and preparation of

subgrade; and for all equipment, tools, labor and incidentals necessary to complete the work.

- (b) Borrow material will be paid for at the contract unit price per cubic yard for "BORROW MATERIAL," which price shall be full compensation for furnishing all materials; for all work necessary in procurement of the material; for loading and hauling; for forming embankment; compaction of embankment; and for all labor, equipment, tools and incidentals necessary to complete the work.
- (c) Payment for "UNCLASSIFIED EXCAVATION" and "BORROW MATERIAL" will be made in proportion to the amount of work complete to date, but in no event will the amount exceed the percentage shown in the following payment schedule:

PAYMENT SCHEDULE

		<u>Partial Estimates</u>
(1)	Design Section to Subgrade Elevation	80%
(2)	After Base Course Dumped and Spread	10%
(3)	After Erosion Control Items (Solid Sodding, Sod Mulch, Seeding, etc.) are Completed	10%
TOTAL		100% Of Bid Price

Payment will be made under:

2.09a Unclassified Excavation - per cubic yard

2.09b Borrow Material - per cubic yard

SECTION 3 - AGGREGATE BASE COURSE

3.01 Description

This section covers all work in connection with the construction of Aggregate Base Course of the class or classes specified in the plans.

3.02 Standard Specifications

Material and work for aggregate base course shall be in accordance with SECTION 303 - AGGREGATE BASE COURSE, of the Standard Specifications for the class or classes specified in the plans unless modified or augmented herein.

3.03 Tests

Material will be acceptable from quarries or crushing plants which currently are, or recently have been, supplying material meeting the Standard Specifications for Aggregate Base Course. In-place density shall be determined by AASHTO T 191, T 205, or T 238 of not less than 98% of max density determined in the laboratory by AASHTO T180.

3.04 Maintenance

The Contractor shall maintain the base course until and during the construction of the subsequent base or surface course. Defects that develop in the base course shall be repaired by the Contractor at the Contractor's own expense.

3.05 Method of Measurement

- (a) Aggregate Base Course will be measured by the ton of two thousand (2,000) pounds, as determined by weighing on accurate, approved scales as described in Article 109.01(f), Standard Specifications. Each truck shall bear a plainly legible identification number and, upon being weighed, shall be given two (2) copies of a delivery ticket which will have on it the number of the truck, time of departure, truck weight, combined weight, and project name. The Engineer shall receive a copy of each delivery ticket for the computation of pay quantities.

3.06 Basis of Payment

- (a) Aggregate Base Course, acceptably completed and measured as provided above, will be paid for at the contract unit price per ton for "AGGREGATE BASE COURSE CLASS 7," which price shall be full compensation for furnishing the material; for hauling, placing, spreading, and compacting; and for all equipment, tools, labor, and incidentals necessary to complete the work.

- (b) Payment for "AGGREGATE BASE COURSE" will be made in proportion to amount of work completed to date in accordance with the following payment schedule:

PAYMENT SCHEDULE

Partial Estimates

(1)	Aggregate Base Course Dumped and Spread	Tons of Base Course Dumped and Spread to date x 50%
(2)	Aggregate Base Course Compacted and Primed	Tons of Base Course Compacted and Primed to date x 50%

Payment will be made under:

3.06a Aggregate Base Course - per ton

SECTION 4 - ASPHALT SURFACE, BINDER, AND ASPHALT STABILIZED BASE COURSE

4.01 Description

- (a) This section covers the Asphalt Concrete Hot Mix Surface Course, Asphalt Concrete Hot Mix Binder Course, and Asphalt Concrete Hot Mix Stabilized Base Course.
- (b) Materials, equipment, and construction methods for Asphalt Concrete Hot Mix Stabilized Base Course shall be in accordance with SECTION 405 of the Standard Specifications, except as modified or augmented herein.
- (c) Materials, equipment, and construction methods for Asphalt Concrete Hot Mix Binder Course shall be in accordance with SECTIONS 406, 409, and 410 of the Standard Specifications, except as modified or augmented herein.
- (d) Materials, equipment, and construction methods for Asphalt Concrete Hot Mix Surface Course shall be in accordance with SECTIONS 407, 409, and 410 of the Standard Specifications, except as modified or augmented herein.
- (e) Materials, equipment and construction methods for Asphalt Concrete Hot Mix Binder and Surface Courses for Heavy Traffic shall be in accordance with SECTION 408 of the Standard Specifications, except as modified or augmented herein.
- (f) All work shall be in accordance with details shown on the Plans and with the Specifications.
- (g) The ambient (air) temperature shall be determined as follows: the thermometer placed in the shade, three feet above the ground.

4.02 Design and Quality Control of Asphalt Mixtures

The Design of Asphalt Mixtures and the Contractor's Quality Control sampling and testing of the asphalt mixtures shall be in accordance with SECTION 404 of the Standard Specification, except as modified herein.

4.03 Method of Measurement

Asphalt Concrete Hot Mix Surface and Binder Course and Asphalt Concrete Hot Mix Stabilized Base Courses will be measured by the ton (2,000 pounds) of each mixture used in the accepted work. Recorded batch weights or truck scale weights will be used to determine the basis for the tonnage. Measurements shall include only the actual amounts placed within the lines shown on the Plans, or as directed by the Engineer.

4.04 Basis of Payment

Asphalt Concrete Hot Mix Surface and Binder Course, and Asphalt Concrete Hot Mix Stabilized Base Course, acceptably completed, and measured as provided above, will be paid for at the contract unit prices per ton bid for "ASPHALT CONCRETE HOT MIX SURFACE COURSE", "ASPHALT CONCRETE HOT MIX BINDER COURSE", "ASPHALT CONCRETE HOT MIX STABILIZED BASE COURSE", "ASPHALT CONCRETE HOT MIX SURFACE COURSE FOR HEAVY TRAFFIC", and "ASPHALT CONCRETE HOT MIX BINDER COURSE FOR HEAVY TRAFFIC", which prices shall be full compensation for furnishing, placing and compacting all materials; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

- 4.04a Asphalt Concrete Hot Mix Surface Course - per ton
- 4.04b Asphalt Concrete Hot Mix Binder Course - per ton
- 4.04c Asphalt Concrete Hot Mix Stabilized Base Course - per ton
- 4.04d Asphalt Concrete Hot Mix Surface Course for Heavy Traffic - per ton
- 4.04e Asphalt Concrete Hot Mix Binder Course for Heavy Traffic - per ton

SECTION 5 - CONCRETE CURB AND GUTTER

5.01 Description

This section shall consist of the construction of Concrete Curb and Gutter at the locations shown on the Plans or as directed by the Engineer.

5.02 Standard Specifications

Materials and work for Concrete Curb and Gutter shall be in accordance with SECTION 634 - CURBING of the Standard Specifications, except as modified by SECTION 8 - CONCRETE AND REINFORCING STEEL of these Specifications, and except as modified or augmented in this section of the Specifications.

5.03 Tests

Tests shall be in accordance with Paragraph 7, INSPECTING AND TESTING OF MATERIALS, General Conditions, and SECTION 9 of these Specifications.

5.04 Forms

Article 634.03(b) of Standard Specifications shall be augmented as follows:

- (a) Form for curb and gutter on tangent shall be steel forms, taking into consideration standard lengths of such forms.
- (b) Forms in curved sections may be substantially built wood forms.
- (c) The Engineer shall approve all forms before they are used on the job and shall inspect them periodically. When forms appear to be unsatisfactory in any way, either before forms are used, during forming operations, or during the placing of concrete, the Engineer shall order the work stopped until the defects have been corrected or the defective forms are replaced by satisfactory ones.

5.05 Placing and Finishing

That part of Article 634.03(c)(1) of Standard Specifications which relates to placing and finishing shall be replaced by the following requirements:

- (a) Concrete shall be dry enough to permit early removal of face forms, if used, for the curb section; it shall not be so dry but what adequate tamping and spading will ensure adequate compaction and surfaces free from honeycomb. The subgrade shall be wetted before placing the concrete.
- (b) The surface shall be shaped to the required section, finished with a steel trowel, and lightly brushed to produce a uniform surface of slightly roughened texture. The

exposed edge of the gutter at the front form, and the exposed edge of the curb at the back form, shall be edged with an edging tool having a radius of approximately 1/8 inch.

- (c) At the Contractor's option, shaping may be done by a steel screen, shaped to exact curb and gutter section, riding upon the tops of front metal template. The Contractor shall be responsible for construction within the tolerances allowed by this section. The shaping operation shall be repeated as often as necessary to attain the required results.
- (d) If templates are used to control shape, they shall be of metal and securely fastened in position at intervals not exceeding ten (10) feet. Templates shall be normal to the grade of the gutter and to the centerline of roadway.

5.06 Joints

Article 634.03(d), Joints, Standard Specifications, for Concrete Curb and Concrete Curb and Gutter shall be deleted in its entirety, and substituted therefore shall be the following:

- (a) Premolded expansion joint material shall be placed between the curb and gutter and any concrete construction that otherwise would abut against it. Joint material shall be 1/2 inch thick. Premolded joint material shall be of the nonextruding type, and shall conform to AASHTO designation M 213.
- (b) Expansion joints shall be constructed at the ends of curb and gutter, at the points of curvature of returns to streets and driveways. Intermediate expansion joints shall be constructed so that the maximum distance between joints is sixty (60) feet. The joint material shall extend entirely through the curb and gutter section and, before the joint can be considered completed, must be trimmed to curb and gutter section.
- (c) Contraction joints shall be 1/8" to 3/8" x 1-1/2" and shall be placed at fifteen (15) foot intervals between expansion joints. Contraction joints shall be formed by sawing, unless otherwise specified, and sealed.
- (d) Joints shall be normal to the grade for gutter and the centerline of the roadway. Where curb and gutter is constructed adjacent to rigid pavement, the location and width of joints shall coincide with those in the pavement, where practicable. All joints shall be sealed with material meeting the requirements of SECTION 501 - PORTLAND CEMENT CONCRETE PAVEMENT, Article 501.03(h) of the Standard Specifications.

5.07 Placement

Concrete Curb and Concrete Curb and Gutter shall be one-course, monolithic, between expansion joints.

5.08 Method of Measurement

Work required by this Section shall be measured by the linear foot. Each continuous section of the Concrete Curb and Gutter of the type constructed, will be measured along the back edge of the curb; measurements shall include the space occupied by all joints. Measurements shall not include the distance across driveways or inlet structures. The quantity on the estimate will be the sum of the several measurements, to the nearest 0.1 linear foot.

5.09 Basis of Payment

Work acceptably completed and measured as provided above will be paid for at the contract unit price per linear foot bid for "CONCRETE CURB AND GUTTER," which price shall be full compensation for furnishing all materials, including joint material; for all reinforcing steel; for all excavating, fine grading, and backfilling; for placing, finishing and curing; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

5.09a Concrete Curb and Gutter - per linear foot

SECTION 6 - CONCRETE SIDEWALKS AND STEPS

6.01 Description

This item shall consist of the construction of concrete sidewalks and steps at locations shown on the plans or as directed by the Engineer. All materials and work shall be in accordance with details shown on the Plans and with these Specifications.

6.02 Standard Specifications

Materials and work shall be in accordance with SECTION 633 - CONCRETE WALKS AND STEPS of the Standard Specifications, except as modified by SECTION 8 - CONCRETE AND REINFORCING STEEL, and except as modified herein.

6.03 Finishing

Final finishing of the surface shall be by steel trowel finish followed by light brushing or brooming to attain a slightly roughened texture.

6.04 Joints

- (a) Expansion joints shall be constructed at locations where sidewalk abuts curb and other structures and shall be in accordance with applicable requirements of SECTION 5 - CONCRETE CURB AND GUTTER.
- (b) Transverse expansion joints shall be constructed at 60-foot intervals in sidewalks opposite expansion joints in curb and gutter and as otherwise directed by the Engineer.
- (c) Contraction joints shall be sawcut at intervals equal to sidewalk width, or as specified, to a depth of 0.2 multiplied by the thickness.

6.05 Method of Measurement

Concrete Sidewalks and Steps will be measured by the square yard. The measurement shall be composed of the horizontal width times the horizontal length.

6.06 Basis of Payment

Work acceptably completed and measured as provided above, will be paid for at the contract unit prices per square yard bid for "CONCRETE SIDEWALK" and "CONCRETE STEPS", which prices shall be full compensation for furnishing and placing all materials, including expansion joint materials; and for all equipment, tools, labor and incidentals necessary to complete the work.

Payment will be made under:

6.06a Concrete Sidewalk - per square yard

6.06b Concrete Steps - per square yard

SECTION 7 - INLETS AND JUNCTION BOXES

7.01 Description

This section covers all work in connection with the construction of various types and sizes of inlets and junction boxes included in this Contract, in accordance with details shown on the Plans and with these Specifications.

7.02 Standard Specifications

All work under this section shall be done in accordance with SECTION 609 - DROP INLETS AND JUNCTION BOXES of the Standard Specifications, except as modified or augmented herein.

7.03 Materials

Cement, aggregate, and water shall conform to the requirements for materials as provided in SECTION 8 - CONCRETE AND REINFORCING STEEL of these Specifications.

7.04 Construction Methods

- (a) Forms, concrete, and reinforcing steel shall be in accordance with applicable requirements of SECTION 8 - CONCRETE AND REINFORCING STEEL, and with additional stipulations as follows:

Inside wall forms shall be removed prior to the erection of forms for top slabs. The supports for the top slab forms shall be positioned in such a manner that will result in a minimum of interference with the free flow of water.

- (b) Joints, finish, and curing shall conform to the applicable portions of SECTION 8 - CONCRETE AND REINFORCING STEEL.

7.05 Cast-in-Place Inlets and Junction Boxes

- (a) Cement, aggregate, and water shall conform to the requirements for materials as provided in SECTION 8 - CONCRETE AND REINFORCING STEEL with the further provision that a maximum of two (2) percent calcium chloride may be added to the concrete to speed the set.
- (b) Dimensions of bases, inverts, barrel sections, throats, steps, and tops shall be in accordance with the details shown on the Plans.
- (c) The vertical forms, wall spacers, steps, and placing cone must be carefully positioned and firmly clamped in place before any placement is made. The first placement shall consist of the base concrete deposited evenly around the walls. When this lift is complete and before additional concrete is added, the concrete shall then be deposited in evenly distributed layers of eighteen (18) inches with each layer to be

sufficiently vibrated to ensure bonding to the previous layer.

7.06 Rebuild Inlets

- (a) Existing inlets shown on the Plans that are to have the top slab replaced to match the new curb and gutter or otherwise rebuilt shall be constructed in accordance with this Section.
- (b) The new portion of the inlet shall be adequately tied to the existing structure as determined by the Engineer.

7.07 Method of Measurement

Inlets and junction boxes, acceptably completed will be measured per each, for the type specified.

7.08 Basis of Payment

Inlets and junction boxes will be paid for, in accordance with the payment schedule below, at the contract unit price bid each for "CURB INLET", "GRATE INLET", "JUNCTION BOX," as the case may be, which prices shall be full compensation for constructing the inlets or junction boxes, for all excavation and backfill; and for all materials, equipment, tools, labor, and incidentals necessary to complete the work. The payment for inlets and junction boxes measured as provided in this section will be made according to the following schedule:

<u>PAYMENT SCHEDULE</u>		
<u>Description of Progress</u>	<u>% Complete</u>	<u>% Measurement</u>
1. Footing of Inlet	100%	25%
2. Footing and Vertical Walls of Inlet	100%	50%
3. Inlet Completed	100%	100%

Payment will be made under:

- 7.08a Curb Inlet - per each
- 7.08b Grate Inlet - per each
- 7.08c Junction Box - per each

SECTION 8 - CONCRETE AND REINFORCING STEEL

8.01 Description

- (a) This section covers concrete and reinforcing steel for the construction of headwalls, inlets, junction boxes, and other concrete drainage structures, curb and gutter and sidewalk, and other miscellaneous concrete structures shown on the Plans or called for in the Specifications.
- (b) Additional requirements are as specified in the section of the Specifications covering the several items involved with concrete and with reinforcing steel.
- (c) All work shall be in accordance with details shown on the Plans and with these Specifications.

8.02 Standard Specifications

Concrete and reinforcing steel shall be in accordance with the applicable portions of SECTION 802 - CONCRETE FOR STRUCTURES and SECTION 804 - REINFORCING STEEL FOR STRUCTURES of the Standard Specifications, except as modified or augmented herein.

8.03 Material

- (a) Cement
 - (1) Cement shall be Portland Cement conforming to AASHTO Designation M 85, Type I. If approved by the Engineer, Type III, high-early strength Portland Cement may be used.
 - (2) If concrete is mixed on the site, cement shall be delivered in plainly marked paper sacks of not less than 94 pound net weight.
- (b) Fine Aggregate

Fine aggregate shall be clean sand, coarse grained, sharp and free from clay, loam, vegetable matter, or other foreign substances. It shall be washed and screened for reasonably uniform gradation within limits as follows:

<u>Size Square Opening Sieve</u>	<u>% By Weight Passing</u>
3/8"	100
No. 4	95 - 100
No. 8	70 - 95
No. 16	45 - 85
No. 30	20 - 60
No. 50	5 - 30
No. 100	0 - 5

(c) Coarse Aggregate

- (1) Coarse aggregate shall consist of crushed stone. It shall consist of clean, hard, tough durable particles free from shale, dirt lignite or other impurities. It shall be washed and screened for reasonably uniform gradation within limits as follows:

<u>Size Square Opening Sieve</u>	<u>% By Weight Passing</u>
1-1/4"	100
3/4"	35 - 75
3/8"	10 - 30
No. 4	0 - 5

- (2) When tested in accordance with AASHTO Designation T 96, coarse aggregate shall have a percentage of wear not more than 40.

(d) Water

Water used in mixing concrete and mortar shall be free from injurious amounts of acids, alkalies, oil, sewage and vegetable matter. It shall be fit for drinking.

(e) Reinforcing Steel

- (1) Bar reinforcement shall conform to ASTM Designation A 615 or A 617, Grade 60 unless otherwise noted on drawing, up to and including No. 18 sizes. All bars shall be of deformed type conforming to current specifications of AASHTO Designation M 137.
- (2) Mesh reinforcement for concrete shall be cold-drawn steel wire for concrete reinforcement conforming to ASTM Designation A 82.

(f) Joint Material

- (1) Premolded expansion joint filler strips shall be of the size and shape shown on the Plans or as required, and shall conform to the requirements of AASHTO Designation M 33 or 213.
- (2) Joint compound, pouring type, shall be delivered to the project in the manufacturer's sealed containers. It shall conform to the requirements of AASHTO Designation M 173.
- (3) Roofing felt shall conform to subparagraph 802.21(d) Roofing, SECTION 802 - CONCRETE FOR STRUCTURES, Standard Specifications.

8.04 Samples and Tests

- (a) Material will be accepted on the basis as follows:
 - (1) Cement will be accepted on the manufacturer's mill certificates of compliance with the specification requirements.
 - (2) Aggregate will be accepted from producers who currently are furnishing, or recently have furnished, aggregates acceptable for use in construction by the Arkansas State Highway Commission; subject to such sieve analyses and quality control testing as the Engineer may direct.
 - (3) Reinforcing steel will be accepted on the manufacturer's certificate that the bars conform to the specification requirements.

8.05 Storage of Materials

- (a) Cement shall be stored in a suitable weatherproof structure which will protect the cement from dampness. Space shall be ample so that deliveries may be stored separately, and to provide easy access for identification and inspection. Cement shall be used in the order in which it is received.
- (b) Aggregates shall be piled so that there will be good drainage, no segregation and no introduction of foreign matter. Fine and coarse aggregate shall be stored in separate stockpiles removed from each other a distance sufficient to prevent intermixing.
- (c) Reinforcing steel shall be placed upon timbers, or other supports, that will prevent its resting upon the ground surface.

8.06 Concrete Test Cylinders

- (a) The initial proportioning of cement, aggregates, and water, to meet the requirements of 11.08, COMPOSITION AND STRENGTH OF CONCRETE, shall be established by tests and made in advance of the beginning of concrete operations, using consistencies suitable for the work. Specimens shall be made and cured in accordance with AASHTO Designation T 23, and tested in accordance with AASHTO Designation T 22. Trial design batches and testing shall be the responsibility of the Contractor. The proportion selected for initial use shall be subject to the approval of the Engineer.
- (b) As the work progresses, continuing compliance with the strength requirements of Paragraph 11.08 will be determined through the breaking of standard concrete test cylinders.
 - (1) The making and curing of test cylinders and their testing will be done in accordance with the Standard Specifications listed in Subparagraph 11.06(a). Test cylinders shall be made in sets of three (3) cylinders. The Contractor will

make and cure the test cylinders; the Contractor shall furnish the material in the making, curing and protecting of test cylinders. Sets shall be made and tested as often as deemed necessary by the Engineer.

- (2) The Engineer may order such change in the proportion as necessary for compliance with all requirements of Paragraph 11.08, COMPOSITION AND STRENGTH OF CONCRETE.
- (3) Testing of progress specimens shall be at the expense of the Owner. All tests which fail to meet the specifications herein, when tested in accordance with the cited standard methods, will be at the expense of the Contractor.

8.07 Reinforcing Steel Bar Lists

Reinforcing steel bar lists shall be submitted in the manner specified in Paragraph 4, SHOP DRAWINGS, GENERAL CONDITIONS.

8.08 Composition and Strength of Concrete

- (a) Concrete shall be composed of Portland Cement, fine and coarse aggregates, and water proportioned in keeping with the following:
 - (1) Minimum sacks of cement per cubic yard - 6.5
 - (2) Consistency range in slump, inches - 2-4
- (b) Proportioning of concrete shall be by weight except that water may be measured by volume.
- (c) Concrete made with Portland Cement - Type 1 shall have a minimum compressive strength at 28 days of 3,500 pounds per square inch, or as specified on the plans; if made with Type III Portland Cement that strength shall be attained at the age of seven (7) days.

8.09 Mixing

- (a) On-Site Mixing
 - (1) Concrete shall be mixed thoroughly in a batch mixer of a type designed to ensure uniform and thorough distribution of the materials throughout the mix. Its size shall be such as to produce a volume of concrete consistent with demands of structural concrete placement. It shall be equipped with a water metering device for accurate measurement of water. Charges of cement shall be by full sacks of cement; the use of fractional sacks, or reclaimed cement will not be acceptable.

- (2) All concrete shall be mixed for a period of not less than one and one-half (1-1/2) minutes after all materials, including the mixing water, shall have been placed in the drum. The entire contents of each batch shall be discharged from the drum before any material for the succeeding batch is placed therein. When the mixing operation for each period is completed, the mixer drum shall be cleaned thoroughly. Concrete shall be deposited within thirty (30) minutes after it is mixed.
 - (3) If the Contractor elects to use a central mixing plant, he shall provide sufficient hauling equipment, properly designed to prevent segregation and loss of mortar, and to permit discharge without segregation. When the hauling and placing operations for each period are completed, the hauling equipment shall be cleaned thoroughly.
- (b) Ready-Mixed Concrete
- (1) Ready-mixed concrete may be used at the option of the Contractor if acceptable concrete is delivered. Ready-mixed concrete shall conform to AASHTO M 157 and to applicable portions of these specifications for on-site mixing. The concrete shall be delivered and placed within one (1) hour after all materials, including mixing water, shall have been placed in the mixing drum.
 - (2) The Contractor shall obtain from the supplier of the ready-mixed concrete the supplier's agreement to inspection by the Engineer to the full extent deemed necessary by the Engineer.
- (c) Critical Temperatures
- (1) Concrete shall not be mixed and placed when the descending temperature is less than 40 degrees F., or a rising temperature is less than 35 degrees F. Temperatures shall be taken in the forms or other points of concrete placement. Concrete shall not be placed when there is frost or ice on forms. In the mixing of concrete, particles of frozen aggregate shall not be used.
 - (2) If the Contractor desires to overcome the restrictions of Subparagraph (1) next above, with respect to the stated temperatures, he shall provide heating equipment adequate to maintain a temperature surrounding the concrete of not less than 40 degrees F. The Contractor shall be responsible for any defective work, and shall replace such work at his own expense.

8.10 Forms

- (a) Forms shall be constructed to the shape, form, lines, and grade required, and shall be maintained sufficiently rigid to prevent deformation or displacement under load.

- (b) Forms may be constructed of any material having sufficient strength which will permit a surface of satisfactory finish. They must be sufficiently tight to prevent the escape of mortar in appreciable quantity. Forms shall be clean, and oiled with form oil before concrete is placed. Care shall be exercised to avoid any coating of the reinforcing steel with form oil.
- (c) Forms shall be set true to the required grade and alignment, and shall be supported rigidly during the entire operation of placing and finishing of concrete. The alignment and grade of all forms set shall be approved before and immediately prior to the placing of any concrete against them.
- (d) Forms for the tops of inlets and junction boxes shall be placed after the inside wall forms are removed, or the wall form shall be cut so as to permit the flow of water while the top form is in place. The top form shall be supported in such manner so as not to impede the flow of water while forms are still in place.
- (e) All form material shall be accomplished in such manner as to avoid injury to the concrete. Except as otherwise specifically authorized by the Engineer, forms for the concrete items listed below shall not be removed prior to the expiration of periods of time as follows:

Sidewalks, curbs, curb and gutter, and headwalls	24 hrs.
Inside walls for inlets and junction boxes	24 hrs.
Outside walls for inlets and junction boxes	36 hrs.
Any load-bearing form	14 days

Days where temperature is below 40 degrees F. shall be excluded from the above stated time periods. Field operations may be controlled by cylinder test. For load bearing forms, the removal of forms, supports and housing, and the discontinuance of heating and curing may begin when the concrete is found to have a compressive strength of 3,500 pounds per square inch, or as specified on the plans, provided further that in no case shall supports be removed in less than seven days after placing the concrete.

The Contractor shall be responsible for damage caused by premature removal of forms.

8.11 Joints

- (a) Joints shall be formed in the positions, and according to the details shown on the plans. Concrete shall be monolithic from neat lines to joints and from joint to joint.
- (b) Construction joints not specifically shown on the plans are to be avoided, but if made shall be as approved by the Engineer, and shall be made and located so as to minimize impairment of the strength of the structure. Where any construction joint is to be made, the surface of the concrete in place shall be roughened and cleaned thoroughly and all laitance, loose aggregate, and foreign matter removed. Forms shall be tightened as needed. Joints shall be wetted thoroughly immediately before placing the

new concrete. Excess water shall be drained from the surface of the joint before the new concrete is placed.

8.12 Preparation for Placing Concrete

- (a) Excavations for foundations shall be prepared in accordance with the applicable portions of SECTION 9 - UNCLASSIFIED EXCAVATION FOR STRUCTURES. Water shall be removed from excavations before concrete is deposited, and all loose particles and debris removed therefrom. The bottom of excavations shall be moistened, but not made muddy, before the concrete is deposited.
- (b) The interior of forms shall be cleaned of all sawdust, chips, other construction debris and all foreign matter.
- (c) Steel reinforcement will be inspected and shall be approved prior to the placement of concrete. Runways for buggies or wheelbarrows shall not be supported on the reinforcement.

8.13 Reinforcing Steel

- (a) Steel reinforcement shall be free from rust, scale, and from mortar, dirt or other objectionable coatings. It shall be placed accurately in accordance with details shown on the plans and properly secured in position.
- (b) Bar reinforcement shall be bent cold.
 - (1) Where bars are used in concrete which will remain in contact with earth surfaces, the bar shall be supported in position by framing, and by wire as needed, in such manner that the supports shall not remain as protrusions through the surface of the concrete; wires shall be cut off and pushed down into the concrete before the concrete has had initial set.
 - (2) Where concrete is placed on horizontal forms, bars shall be supported by metal chairs with coated feet.
- (c) Splices

Bar reinforcement shall be spliced where shown on the Plans. Unless otherwise shown on the Plans, the lap at each splice shall be 32 times the bar diameter, but not less than the minimum lap specified by ACI Code.

8.14 Placing Concrete

(a) General

- (1) The Engineer shall inspect and approve the layout, alignment, grade, form work, etc., for all concrete work before placement of the concrete. Failure to have the preparatory work inspected by the Engineer could result in the removal and replacement of the work at the Contractor's expense. This inspection in no way relieves the Contractor from his responsibilities under the Contract. The Contractor shall schedule concrete work with the Engineer as much in advance as is feasible, but not less than twenty-four (24) hours ahead, and shall notify the Engineer at least twenty-four (24) hours before changing the schedule.
- (2) Concrete shall be placed only upon firm surfaces that are free from frost, ice, mud, and other detrimental substances.
- (3) Concrete shall be placed in such a manner as to avoid segregation, and to avoid displacement of reinforcement. Concrete shall be deposited as closely as feasible to its final position. Concrete shall not be dropped freely for distances greater than those specified as follows:

Sidewalks, curb, curb and gutter	2 ft
Retaining wall footings	3 ft
Retaining walls, and bottoms and walls of inlets and junction boxes	5 ft
Tops of inlets and junction boxes	5 ft
Headwalls	5 ft
- (4) Concrete shall be placed to the lines, grades, and sections shown on the Plans or as directed by the Engineer. Care shall be exercised in the placing of concrete that the forms are not displaced. Honeycomb shall be prevented by proper manipulation and compaction of the concrete.
- (5) The maximum time interval between placing batches of concrete, shall not exceed twenty (20) minutes.

(b) Curb and Gutter

- (1) Vibrating of the concrete will not be required if other methods of manipulation obtain acceptable results.
- (2) Curb and gutter shall be shaped without the use of mortar or additional cement. When the concrete has hardened sufficiently, the exposed edges of the curb and gutter shall be edged with an edging tool having a radius of approximately 1/8 inch.

- (c) Sidewalks
 - (1) Concrete shall be spaded carefully, particularly along the edges, to avoid the occurrence of honeycomb and in such manner as to avoid the introduction of dirt into the concrete. A vibrator shall not be used.
 - (2) Sidewalk shall be one course construction without mortar topping. The exposed edges of the sidewalks shall be edged with an edging tool having a radius of approximately 1/8 inch.
 - (3) The sidewalk shall be struck off with a screed or straight edge to true grade. All scum, debris, and excess water shall be worked off the surface.
- (d) Concrete, other than that described in Subparagraphs (b) and (c) next above, shall be placed in accordance with stipulations that follow:
 - (1) Concrete shall be placed to the thickness of the structural element being poured, but in no case in layers over eighteen (18) inches deep. Each layer shall be compacted by mechanical internal-vibrating equipment, supplemented by such hand spading, rodding, and tamping as the Engineer may direct. Vibrators shall not be used to transport concrete inside forms over distances so great as to cause segregation.
 - (2) The use of form vibrators is not acceptable. Internal vibrators shall be capable of transmitting vibration to the concrete at frequencies not less than 4,500 impulses per minute. Duration of vibration shall be limited to the time necessary to produce satisfactory consolidation without causing objectionable segregation. The vibrator shall not be inserted into lower courses previously vibrated. Vibrators shall be applied to a substantially vertical position, and at uniformly spaced points not further apart than the visible effectiveness of the vibrator.
 - (3) For the last lift of any structural element, the concrete shall be struck off with a screed or straight edge to true grade. All scum, debris, and excess water shall be worked off the surface and the surface shall be finished and cured in accordance with Paragraph 11.15 and 11.16 below.

8.15 Finishing

- (a) Curb and Gutter
 - (1) Gutters which will remain exposed in the completed work and the top and face of curbs shall be given a steel trowel finish, followed by a light brushing.
 - (2) If curb face form is used, the battered face of curbs shall be given a Carborundum stone finish as specified below for exposed surfaces. If a face

form is not used, finish shall be as specified in (1) above.

- (b) Sidewalks shall be given a steel trowel finish and shall be lightly groomed or brushed to produce a uniform surface of slightly roughened texture.
- (c) All other surfaces which will remain exposed in the completed work shall be wetted thoroughly and rubbed with a medium grit Carborundum stone, followed by a second rubbing with a fine grit Carborundum stone, to obtain an entire surface of smooth texture and uniformity in color. A cement wash or plaster coat shall not be used.
- (d) All concrete shall be finished in accordance with stipulations as follows:

- (1) General

Defective concrete, whether exposed or unexposed, shall be repaired or replaced as directed by the Engineer.

- (2) Formed Surfaces

All form tie rods shall be removed, and all tie wires shall be cut back 1/4 inch. The resulting holes and depressions shall be pointed with mortar.

- (3) Uniform Surfaces

Surfaces not to remain exposed in the completed work need no further finish if carefully struck off as required in Paragraph 8.14.

8.16 Curing

- (a) Immediately after placing or finishing, concrete surfaces shall be protected against moisture loss. Where formed surfaces are cured in the forms, the forms shall be kept wet. If the forms are removed before the end of the curing period, curing shall be continued for the remainder of the period using suitable means.
- (b) All concrete, other than retaining wall, headwall footings and bottom slabs of inlets and junction boxes shall be cured for a period of at least five (5) days.
- (c) Curing shall be accomplished by one of the methods, or combination of methods, described as follows:
 - (1) The surface shall be covered with burlap, cotton mats, or other suitable fabric kept in intimate contact with the surface, or with sand which shall be kept continuously wet.
 - (2) The entire surface shall be covered with a white pigmented curing compound, applied in a two (2) coat, continuous operation. Application shall be not less

than one (1) gallon for 150 square feet of surface for each coat. The compound shall conform to the requirements of AASHTO Designation M 148.

8.17 Method of Measurement

(a) Reinforced Concrete

- (1) Reinforced concrete shall be measured by the cubic yard. The amount the estimate will be to the nearest 0.01 cubic yard.
- (2) The volume to be paid for will be the actual volume within the neat lines of the structures, as shown on the Plans or as directed by the Engineer. Measurements of concrete placed against the sides of any excavation, where intervening forms have not been used, will be made only within the neat lines of the structures. No deduction will be made for round or beveled edges, or for space occupied by reinforcing steel and supports, expansion joint material, weep holes, and chamfers.
- (3) Measurement of reinforced concrete for separate payment will be made only when the concrete is used to construct headwalls, retaining walls, or other items as noted on the Plans. The furnishing and placing of concrete in other work shall be considered subsidiary work pertaining to the several items; the costs thereof shall be included in the respective unit prices bid.

(b) Miscellaneous Measurements

- (1) Concrete curb and gutter will be measured as stipulated in SECTION 5 - CONCRETE CURB AND GUTTER.
- (2) Concrete sidewalks and steps will be measured as specified in SECTION 6 - CONCRETE SIDEWALKS AND STEPS.
- (3) Concrete inlets and junction boxes will be measured as specified in SECTION 7 - INLETS AND JUNCTION BOXES.

8.18 Basis of Payment

Reinforced concrete will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 9 - UNCLASSIFIED EXCAVATION FOR STRUCTURES

9.01 Description

- (a) This section covers the removal of all materials of whatever nature necessary for the construction of pipes, culverts, storm drainage piping, headwalls, inlets and other concrete drainage structures, and retaining walls. EXCAVATION DESCRIBED HEREIN WILL NOT BE MEASURED FOR SEPARATE PAYMENT, BUT SHALL BE CONSIDERED SUBSIDIARY WORK PERTAINING TO THE INVOLVED ITEMS OF THE CONTRACT.
- (b) All work shall be in accordance with details shown on the Plans, or as directed by the Engineer and with these Specifications.

9.02 Standard Specifications

The work involved in Unclassified Excavation for Structures shall be in accordance with SECTION 801 - EXCAVATION AND BACKFILL, Standard Specifications, for the structures involved and except as modified or augmented herein.

9.03 Excavation for Pipe Culverts, Storm Drainage Piping, and Other Structures

- (a) Trench width at the horizontal centerline of a pipe shall not exceed outside diameter of the pipe plus two (2) feet.
- (b) Other requirements with respect to pipe culverts and storm drainage piping are specified in SECTION 10 - PIPE CULVERTS AND STORM DRAINAGE PIPING.
- (c) Areas of excavation for headwalls, inlets, junction boxes, retaining walls, shall be selected by the Contractor except that areas shall be large enough to permit proper construction of the structures, and except that they shall not extend more than eighteen (18) inches outside the structures unless authorized by the Engineer.

9.04 Disposal of Excavated Material

- (a) To the extent suitable and needed, excavated material shall be used in backfill or fills. Such material shall be free from frozen material, trash, lumber, broken pieces of concrete having a dimension greater than two (2) inches or broken concrete in nests regardless of dimensions, or other debris. Such material shall be susceptible to proper compaction. Any material used in backfills or fills under the pavement shall conform to the requirements of SECTION 2 - EARTHWORK, of these specifications.
- (b) Excavated material unsuitable for use, or in excess of needs, shall be disposed of by the Contractor off-site.

9.05 Backfill

- (a) Backfill shall be made from suitable structural excavation materials, and from suitable roadway excavation materials if and as needed. Such materials shall conform to the requirements of Subparagraph 9.04(a) above.
- (b) Backfill shall be compacted to a density of not less than ninety-five (95) percent of the maximum density, at optimum moisture, obtained in the laboratory in accordance with AASHTO Designation T 180. Samples for laboratory tests and field determinations will be taken by the Engineer at the expense of the Owner; the Contractor shall give assistance when requested.
- (c) Backfill shall not be placed against concrete structures until the expiration of the curing periods specified in SECTION 8 - CONCRETE AND REINFORCING STEEL.
- (d) Compacting shall be obtained by the use of pneumatic or mechanically actuated tampers. Gravity hand tampers will not be acceptable. Backfill material shall be sprinkled or aerated as necessary to assure the moisture content.
- (e) Backfill of all concrete structures shall be made with reasonable uniformity around and along the structure. It shall be placed in six (6) inch layers, loose measurement and each layer compacted.
- (f) Backfill of pipe culverts and storm drainage piping shall be in accordance with the following:
 - (1) Backfill material shall be deposited simultaneously on both sides of the pipe in layers not exceeding six (6) inches in thickness, loose measurement. It shall be compacted thoroughly under haunches of pipe on both sides for the full width of trench. This operation shall be continued to the elevation twelve (12) inches above the top of pipe.
 - (2) Backfilling shall proceed uniformly along the entire section of pipe being backfilled. The Contractor shall be responsible for any damage to or displacement of pipe.
 - (3) Backfill above the elevation twelve (12) inches higher than the top of pipe may be compacted by any method which will obtain the required density and which will cause no damage or displacement. Flooding of trenches will not be acceptable.
 - (4) Backfill of pipe shall be carried to the elevations of the adjoining subgrade, or as specified in Paragraph 10.02 of SECTION 10.
- (g) Backfill will not be measured for separate payment. Placing and compacting of backfill shall be considered subsidiary work pertaining to structural excavation.

9.06 Measurement and Payment

Structural excavation for all structures, including pipe culverts, storm drainage piping, inlets, junction boxes, and retaining walls will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 10 - PIPE CULVERTS

10.01 Description

- (a) This section covers reinforced concrete pipe and flared end sections at the locations shown on the Plans or as described by the Engineer.
- (b) All work shall be in accordance with details shown on the Plans, or as directed by the Engineer and with these Specifications.

10.02 Standard Specifications

Materials and work shall be in accordance with SECTION 606 - PIPE CULVERTS of the Standard Specifications, except as herein modified or augmented.

10.03 Materials

- (a) Concrete pipes shall be of the bell and spigot type and shall conform to the specifications of ASTM Designation C 76 and C 506, latest editions, for the sizes and classes of pipes shown on the Plans and listed in the Unit Price Schedule. The class of pipe and date of manufacture shall be marked on each joint of pipe. Pipe shall be at least ten (10) days old before it is delivered to the project.
- (b) Jointing material for reinforced concrete pipe shall be compression type rubber conforming to the following requirements:
 - (1) With pipe manufactured for such joints, an approved rubber compression-type joint may be used. In case of such use, backfilling may proceed immediately after the pipe is laid and inspected.
- (c) Metal pipe shall be Aluminized Steel Ultra Flo

10.04 Jointing of Pipe

- (a) The bell and spigot shall be cleaned and maintained clean. The joint shall be constructed as recommended by the manufacturer of the pipe.

10.05 Trenching and Backfill

- (a) Trenching and backfill shall be in accordance with applicable requirements of SECTION 9 - UNCLASSIFIED EXCAVATION FOR STRUCTURES, except as augmented herein.
- (b) Where unsuitable material is encountered, excavation shall continue until a firm material is reached and the over-excavation filled to grade with a special bedding material conforming to Aggregate Base Course, Class 7.

10.06 Installation of Pipe

- (a) Each section of pipe shall be examined carefully before being laid, and the defective or damaged sections shall not be used. Pipelines shall be laid to the grades and alignment indicated, or as directed by the Engineer. Pipe laying shall proceed upgrade. The bell ends of concrete pipe shall point upgrade.
- (b) Proper facilities shall be provided for lowering sections of pipe into trenches. Under no circumstances shall pipe be laid in water, and no pipe shall be laid when trench conditions or weather are unsuitable for such work. Full responsibility for the diversion of drainage and for dewatering of trenches during construction shall be borne by the Contractor.
- (c) All pipe in place shall have been approved before being backfilled. In all backfilling operations, the Contractor shall be responsible for preventing damage to or misalignment of the pipe.

10.07 Method of Measurement

- (a) Excavation and backfill will not be measured separately, but will be considered subsidiary to constructing the pipe.
- (b) Special bedding material, used at the direction of the Engineer, will be measured and paid for as specified in SECTION 17 - PIPE EMBEDMENT.
- (c) Completed and accepted pipe culverts will be measured by the linear foot in place. The linear feet upon which payment for Reinforced Concrete Pipe Culverts will be made shall be determined by multiplying the number of sections placed by the net length of each section. Separate measurements will be made by the sizes and classes shown on the Plans and listed in the Unit Price Schedule. Measurements will be taken to the nearest 0.1 linear foot.
- (d) Flared end sections for concrete pipe will be measured per each.

10.08 Basis of Payment

Storm sewer pipe acceptably completed and measured as provided above will be paid for at the contract unit price per linear foot bid respectively for "REINFORCED CONCRETE PIPE," of the sizes and classes shown on the Plans and listed in the Unit Price Schedule; which prices, in each case, shall be full compensation for furnishing all materials, except special bedding material; for all trenching, backfilling, and compacting; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Flared end sections for concrete pipe acceptably completed and measured as provided above will be paid for at the contract unit price per each bid respectively for "FLARED END SECTION," of the sizes shown on the Plans and listed in the Unit Price Schedule; which prices, in each case, shall be full

compensation for furnishing all materials, except special bedding material; for all trenching, backfilling, and compacting; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

- 10.08a ___" Reinforced Concrete Pipe, Class ___ - per linear foot
- 10.08b ___" Flared End Section - per each
- 10.08c ___" 12" Aluminized Steel Ultra Flo - per linear foot
- 10.08d ___" 8"x6"x1/4" Steel Drain - per linear foot

SECTION 11 - SOLID SODDING

11.01 Description

- (a) This section covers the furnishing and placing of and to form solid mats on areas shown on the Plans or as directed by the Engineer.
- (b) It covers the furnishing and applying of water for sod.
- (c) It covers the furnishing and placing of four (4) inches of topsoil on areas directed by the Engineer.
- (d) It covers the furnishing and placing of fertilizer.
- (e) All work shall be in accordance with details shown on the Plans and with these Specifications.

11.02 Standard Specifications

Materials and work shall be in accordance with SECTION 624 - SOLID SODDING of the Standard Specifications, except as herein modified or augmented.

11.03 Materials

- (a) Solid sod shall be cut from well-established viable Bermuda grass.
- (b) Topsoil shall be reasonably free from subsoil, clay, lumps, brush, objectionable weeds, and/or other litter and shall be free from roots and toxic substances or other material or substances that might be harmful to plant growth or be a hindrance to grading, planting, and maintenance operations. ALL TOPSOIL SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING.
- (c) Fertilizer shall be a standard commercial product complying with state and federal fertilizer laws and with the requirements issued by proper authorities.
 - (1) Fertilizer shall be delivered to the site in the manufacturer's original container, on which shall be plainly marked the manufacturer's name and the guaranteed chemical analysis.
 - (2) Except as noted in the following sentence, fertilizer shall contain not less than the percentages by weight of ingredients as follows:

Nitrogen	12 percent
Phosphorus, P205	12 percent
Potash K2	12 percent

Other 1:1:1 ratio fertilizers may be used, provided the available plant food remains the same as herein specified.

- (3) All fertilizer shall be solid and shall be in a condition which will permit proper distribution.

11.04 Construction Methods

- (a) In this Paragraph 11.04, "Solid Sod" is interchangeable with the word "sod."
- (b) Solid sod or topsoil shall not be placed until all other items of work are complete.
- (c) Areas to be sodded shall be shaped in such manner that they will, after placement of sod, conform to the typical sections.
- (d) Topsoil will not be used unless authorized by the Engineer, specifically in each case.
- (e) Prior to placing the topsoil in the areas designated, the ground surface shall be cleared of materials that might hinder proper grading, tillage, or subsequent maintenance operations such as stumps, stones, roots, cable, wire, grade stakes, etc., and brought to four (4) inches below the finished grade. The areas shall then be thoroughly tilled to a depth of at least two (2) inches by plowing, disking, harrowing or other acceptable means.
- (f) The Contractor shall then obtain an approved topsoil from any available source and place uniformly on the designated areas and spread evenly to a minimum thickness of four (4) inches. Irregularities in the surface shall be corrected so as to prevent formation of depressions where water will stand. TOPSOIL SHALL NOT BE PLACED when the subgrade is frozen, excessively wet or in a condition detrimental to the proposed planting and proper grading.
- (g) After the topsoil has been spread and graded, the surface shall be cleared of stones, stumps, or other objects that might hinder planting or maintenance operations. Paved areas over which hauling operations are conducted shall be kept clean.
- (h) Where any portion of the surface becomes eroded or otherwise damaged, the affected areas shall be repaired to the aforementioned condition.
- (i) Fertilizer shall be applied to the loosened layers (two (2) inches deep) at the rate of one and one-half (1-1/2) pounds per 100 square feet for all areas, regardless of whether topsoil has been added. Distribution shall be uniform.
- (j) Prior to placement of sod, areas shall be sprinkled with water sufficiently to make them moist, but not muddy. As determined by the Engineer, this initial application of water

may be omitted if the area is sufficiently moist from rainfall.

- (k) Immediately following the placing and tamping of sod, the covered area shall be wetted thoroughly. Subsequent applications of water shall be directed by the Engineer.
- (l) The sodding operations shall produce areas of solid, living grass.

11.05 Intermittent Cleanup

Immediately following the sodding operations, all gutters, sidewalks, driveways, street pavement, yards, or other areas shall be cleaned of all debris, excess sod, topsoil, or other objectionable matter. All such cleanup operations shall be completed before sodded areas are measured for payment as described below.

11.06 Method of Measurement

- (a) Areas covered by living sod will be measured by the square yard to the nearest whole square yard.
- (b) Fertilizer will not be measured for separate pay. Its furnishing and application shall be considered subsidiary work pertaining to solid sodding.
- (c) Topsoil will be measured by the cubic yard at the points of delivery to the site, truck measure.
- (d) Water for sod will not be measured separately, but will be subsidiary to the item of solid sodding.

11.07 Basis of Payment.

Solid sodding and topsoil acceptably completed and measured as provided above, will be paid for at the contract unit price per square yard bid for "SOLID SODDING" and at the contract unit price per cubic yard bid for "TOPSOIL," which prices shall be full compensation for furnishing all materials; for cleanup work; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

11.07a Solid Sodding - per square yard

11.07b Topsoil - per cubic yard

SECTION 12 - SHRUBBERY RELOCATION AND HEDGE RELOCATION

12.01 Description

This section covers the removal and relocation of shrubs and hedges designated by the Engineer. Such shrubs and hedges shall be moved to new locations as designated by the Engineer.

12.02 Materials

- (a) All shrubs and hedges relocated shall be existing hedge or new shrubs, purchased from a reputable nursery. New shrubs shall be essentially of the same size and of the same type as the shrubs removed. The relocation of existing shrubs or the planting of new shrubs shall be as approved by the Engineer.
- (b) Materials used in the relocation of shrubbery shall be as recommended by a reputable nursery.

12.03 Construction Methods

- (a) The removal and relocation of existing shrubbery shall be accomplished in such a manner that the root system is left intact. It shall be the Contractor's responsibility to provide adequate water, fertilizer, peat, or other plant food necessary for the work involved.
- (b) Any trees or shrubbery that are damaged due to the construction of tree walls, or the shrubbery relocation, and those that do not live because of the construction operations, shall be replaced with trees or shrubbery acceptable to the property owner involved.

12.04 Method of Measurement

Measurement for shrubbery relocation will be made by the whole unit, complete in place. Separate measurement will not be made for any excavation or removal of shrubs. Shrubs closer than four (4) feet center to center of bush will be considered as hedges and will be measured by the linear foot center to center of the roots at the ground line.

12.05 Basis of Payment

Shrubbery Relocation and Hedge Relocation will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 13 - MAINTENANCE OF TRAFFIC

13.01 Description

- (a) This item shall include the erection of signs and barricades, and the maintenance of, or noninterference with, traffic in accordance with details shown on the Plans and with these Specifications, or as directed by the Engineer.
- (b) This item shall also include the temporary relocation of traffic and street signs, the maintenance of the temporarily relocated signs through the construction of the project, and the permanent relocation of the signs after the construction is complete.
- (c) Certain requirements with respect to maintenance of traffic are specified in Special Conditions of these Specifications.

13.02 Standard Specifications

- (a) Maintenance of traffic as described above shall be accomplished in accordance with the applicable portions of Section 603, "Traffic Control Through Construction Zones" Standard Specifications, except as modified or augmented herein.

13.03 Barricade Plan

The Contractor shall prepare a maintenance of Traffic and Barricade Plan. This Plan shall be submitted to the City Engineer for approval. Upon approval by the City Engineer, the Contractor shall supply the Fire Chief and the Police Chief one (1) copy each for their files. Two (2) copies shall be supplied to the Engineer.

13.04 Driveways

- (a) Maintenance of driveways shall be as approved by the Engineer. It shall be the Contractor's responsibility to maintain adequate access to private and commercial property at all times, except as approved by the Engineer. During the construction of driveways or at any time that the Property Owner cannot use his driveway, the Contractor shall notify the Property Owner (one week in advance, minimum) when the driveway will be closed and the approximate length of time that it will be closed.
- (b) The intent of this section of the Specifications is to cause as little inconvenience as possible to private property owners.

13.05 Repetitions

For emphasis, protective actions are noted in other parts of these Contract Documents. These repetitions here are called to the attention of each bidder to the end that he shall avoid any duplication of costs in compiling his bid.

13.06 Relocation and Replacement of Traffic Signs

- (a) During the construction of the project, the temporary relocation of street signs and traffic control signs will be performed by the Contractor. The Contractor shall maintain the signs at highly visible locations as near as practicable to the original locations. The latest edition of the Manual of Uniform Traffic Control Devices published by the Federal Highway Administration shall be used as a guide to the placement of signs during construction.
- (b) Immediately after the construction of any part of the project reaches a stage of completion such that the relocation of the street signs and traffic control signs is no longer necessary, the Contractor shall permanently relocate the street signs and traffic control signs at a site marked by personnel of the City.
- (c) Street signs and traffic control signs shall be removed from such area of work as necessary to permit work on the project. Each sign shall be securely relocated by driving the sign into the ground with equipment approved by the Engineer.

13.07 Measurement and Payment

- (a) Maintenance of traffic will not be paid for separately but will be considered subsidiary to the various items of the Contract; except that the Engineer may direct the Contractor to use aggregate material in the maintenance of traffic over the streets and in driveways, in which case it will be paid for as provided in SECTION 3 - AGGREGATE BASE COURSE of these Specifications.

SECTION 14 - PAVEMENT REPAIRS

14.01 Description

- (a) This section covers the repairs of streets for storm drainage or other cuts where the street is not planned for reconstruction.
- (b) All work shall be in strict accordance with these specifications.

14.02 Standard Details

All work under this section of the Specifications shall be in accordance with the City of Jonesboro Pavement Trench Repair Detail. The Contractor shall obtain all permits required by the City.

Restoration of Street Cut

- (a) The permit holder is required to restore the excavation, or cut, immediately upon completion of the work which required the cut. The permit holder shall notify the City Engineer when the restoration is completed.
- (b) Excavations shall be smoothly cut or sawed and shall have a neat appearance.
- (c) Materials removed from the excavation or cut shall not be used as backfill material. This includes pieces of broken concrete or asphalt concrete.
- (d) Backfill material which shall be used at the discretion of the permit holder is limited to:
 - (1) Crushed rock and natural fines uniformly mixed and so proportioned to meet the specifications for Class 7 Crushed Aggregate as reflected in the most current Arkansas State Highway Commission Standard Specifications.
 - (2) Crushed run rock or other selected material, when approved by the City Engineer, free of debris and excess moisture, when compacted to a minimum of 90 percent density as determined by the Modified Proctor Compaction Test.
 - (3) Compacted river sand or lean mix concrete may be used when prior approval has been granted by the City Engineer.
- (e) The top 6 inches of the backfill shall be compacted to 95 percent of maximum density as determined by the Modified Proctor Compaction Test.
- (f) The surface course will consist of 8-inches of concrete, with a 28-day compressive strength of 3,500 psi. For gravel streets and alleys, the surface course will be 6 inches of select material that meets the Standard Specifications for Class 7 Aggregate Base

Course, compacted to conform to the surrounding surface.

14.03 Method of Measurement

- (a) Pavement repairs will be measured by the square yard of pavement repair acceptably completed, less any overcut as determined by the Engineer.
- (b) Repair of the street to cover areas damaged due to the Contractor's negligence in equipment movement or improper equipment operation within the street surface will not be measured for payment.
- (c) Pavement cutting will not be measured for separate payment, but shall be considered subsidiary to the installation of the involved item.
- (d) Temporary Surface Over Trench: Actual quantities used as directed by the Engineer as measured by plant tickets for ACHM material and/or crushed aggregate base course, will be paid for at the unit prices as previously provided herein.
- (e) Restoration of private drives and parking surfaces, where directed by the Engineer, will be included in the measurement and payment of the unit prices indicated in (d) above.

14.04 Basis of Payment

Pavement Trench Repair will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 15 - DISABILITY ACCESS RAMPS

15.01 Description

This item covers the construction of access ramps to the lines and grades shown on the Plans or as directed by the Engineer.

15.02 Materials

Materials for the access ramps shall be Portland Cement concrete complying with SECTION 8 - CONCRETE AND REINFORCING STEEL.

15.03 Construction Methods

The construction of the access ramps shall be in accordance with applicable Sections of these Specifications and the attached drawings. Applicable sections include SECTION 2 - EARTHWORK, SECTION 6 - CONCRETE SIDEWALKS AND STEPS, and SECTION 501 - PORTLAND CEMENT CONCRETE PAVEMENT of the Standard Specifications.

15.04 Method of Measurement

Access ramps will be measured by the square foot.

15.05 Basis of Payment

Work completed and provided above will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 16 - CLEANUP

16.01 Description

This section covers the cleanup of the project and includes, but is not necessarily limited to, the following items:

(a) Site Preparation

Removal of trees, fences, or any obstructions which would interfere with the normal course of construction of this Contract.

(b) Pipe Construction

Cleaning surface debris, backfill of storm sewer boxes, sanitary sewer manholes, or any other structures related to the construction of storm, sanitary and water lines, removal of excess material caused by the construction of storm, sanitary, and water lines.

(c) Concrete Construction

Removal and cleaning of excessive amounts of prime, splashed concrete, dirt, and other debris from sidewalks, curbs, and pavements on the project.

(d) Final Cleanup

Removal and satisfactory disposal of silt and sediment in storm drainage and inlets, in gutters, in streets and sidewalks, and in drainage ditches. Repair of damage to previously completed work by natural or other forces. Correction of deficiencies found during the final inspection.

16.02 Time for Completion

The nature of the work involved in this item requires that this work be performed during the course of construction or as directed by the Engineer. The Contractor shall, periodically or as directed during the progress of the work, put the entire site of work in a neat and clean condition.

16.03 Method of Measurement

Payment for "CLEANUP" will be made at the discretion of the Engineer in proportion to the amount of work completed to date. This item shall represent final cleanup of the Project.

16.04 Basis of Payment

Cleanup will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 17 - PIPE EMBEDMENT

17.01 Description

- (a) This section covers the furnishing of all labor, equipment and materials necessary for placing pipe foundations as required on the Plans or as deemed necessary by the Engineer.
- (b) All work shall be in accordance with details shown on the Plans or as directed by the Engineer and in accordance with these Specifications.

17.02 Materials

Materials for pipe foundations shall be as follows:

Class "B" bedding shall be crushed stone, commonly referred to as Class "C" Ballast Stone and shall conform to the following gradation:

<u>Sieve</u> <u>(Square Opening)</u>	<u>Percent Passing</u>
1-1/2 inch	100
1 inch	70 - 80
3/4 inch	40 - 60
1/2 inch	20 - 30
3/8 inch	0 - 10
No. 4	0 - 5

- (1) Deleterious substances shall not be present in the prepared crushed stone in excess of the following amounts:

Soft and friable pieces - 5%
Material finer than No. 200 - 1%
Clay lumps - 0.5%

- (2) The percentage of wear of the crushed stone, tested in the Los Angeles Abrasion Tests, shall not be greater than 45 percent.
- (3) Crushed stone shall be stockpiled and placed in such a manner that foreign material will not be included in the complete embedment section.

17.03 Use

- (a) Pipe embedment will be required for the sanitary sewer line as shown on the Plans.
- (b) Pipe embedment will be required for the storm drainage pipe in areas deemed

necessary by the Engineer. The minimum bedding under storm drainage pipe will be a 6-inch thickness of bedding material in the trench bottom. The width of the pipe embedment shall not extend more than one and one-half feet beyond the outside of the pipe.

17.04 Excavation

- (a) Excavation for pipe embedment shall be carried to a specified depth below the pipe flow line to allow adequate bedding materials to be placed in accordance with details shown on the Plans and as required by the Engineer.
- (b) Additional excavation will be required in soft, mucky areas where the specified bedding will not adequately support the pipe. Where such areas as determined by the Engineer are excavated, the additional depth of trench shall be backfilled with the material specified for Class "B" bedding. It shall be the responsibility of the Contractor to explore the project and subsurface materials to determine the extent of this additional excavation.

17.05 Method of Measurement

- (a) "PIPE EMBEDMENT" will be measured by the ton of 2,000 pounds as determined by weighing on accurate, approved scales as described in Paragraph 109.01 (f) of the Standard Specifications. Each truck shall bear a plainly legible identification number and, upon being weighed, shall be given two copies of a delivery ticket which shall have on it the number of the truck, time of departure, truck weight, combined weight, and project name. The Engineer shall receive a copy of each delivery ticket for the computation of pay quantities.
- (b) Excavation for embedment will not be measured for separate payment.

17.06 Basis of Payment

Pipe Embedment will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 18 - "B" STONE

18.01 Description

This item consists of the furnishing, spreading, and rolling of "B" Stone. This item also includes excavation of unsuitable material, or undercutting, as directed by the Engineer.

18.02 Materials

"B" Stone shall be hard durable upgraded Crushed Stone Aggregate ranging in size from 2" minimum to 5" maximum.

18.03 Construction Methods

In areas where undercutting is directed by the Engineer, the area shall be excavated to the dimensions required by the Engineer. "B" stone shall be placed as backfill in the undercut areas and spread and rolled to the line and grade determined in the field or as directed by the Engineer.

18.04 Method of Measurement

Work performed under this item will be measured by the ton.

18.05 Basis of Payment

B-Stone will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 19 - TEMPORARY EROSION CONTROL

19.01 Description

This section covers the application of Temporary Erosion Control items at locations shown on the plans or as directed.

19.02 Standard Specifications

Items and materials for this section shall be in accordance with SECTION 621 - TEMPORARY EROSION CONTROL ITEMS AND DEVICES of the Standard Specifications.

19.03 Measurement and Payment

Temporary Erosion Control items will be measured and paid for in accordance with SECTION 621 - TEMPORARY EROSION CONTROL ITEMS AND DEVICES.

Payment will be made under:

19.03a Erosion Control - per lump sum

SECTION 20 - TRENCH OR EXCAVATION SAFETY SYSTEMS

20.01 Description

This item covers the compliance with Act 291 of 1993 which requires the inclusion, in the bid, of a separate pay item for "Trench or Excavation Safety Systems".

20.02 Standard Specifications

Standard specifications shall conform to the current edition of Occupational Safety and Health Administration Standard for Excavation and Trenches Safety System, 29CFR, Subpart P.

"Competent Person" as defined in the Standard Specification shall be the General Contractor's General Superintendent.

20.03 Construction Methods

Construction methods shall in accordance with the current edition of Occupational Safety and Health Administration Standard for Excavation and Trenches Safety System, 29CFR 1926, Subpart P.

20.04 Method of Measurement

- (a) Trench or excavation safety systems shall be measured as a complete unit.

20.05 Basis of Payment

- (a) Trench or excavation safety systems shall be paid for at the lump sum price bid for "TRENCH OR EXCAVATION SAFETY SYSTEMS", which price shall be full compensation for benching, sloping, sheeting, shoring, shielding, or any other protective system that provides the necessary protection to comply with Act 291 of 1993.

Payment will be made under:

20.05a Trench or Excavation Safety Systems - per lump sum

SECTION 21 - COLD MILLING ASPHALT PAVEMENT

21.01 Description

This item covers the cold milling of asphalt pavement.

21.02 Standard Specifications

Equipment, construction requirements, and surface tests shall be in accordance with SECTION 412 - COLD MILLING ASPHALT PAVEMENT of the Standard Specifications, except as modified or augmented herein.

21.03 Method of Measurement

Cold milled asphalt pavement will be measured by the square yard of pavement milled to the depth specified.

21.04 Basis of Payment

Cold Milling Asphalt Pavement will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 22 – NON-REFLECTORIZED PAINT PAVEMENT MARKING

22.01 Description

This item shall consist of furnishing and placing non-reflectORIZED paint pavement markings including words, arrows and emblems, of the color and type specified, and the removal of pavement markings in accordance with these specifications and in conformity with the dimensions and at the locations shown on the plans or as directed.

The markings are to be placed under existing traffic conditions. The work shall meet the requirements of the MUTCD except as modified by these specifications.

22.02 Method of Measurement

- (a) Sand or water blasting in surface preparation will not be measured and paid for directly but will be considered a part of the item Non-ReflectORIZED Paint Pavement Marking.
- (b) Pavement marking removal will not be measured for separate payment but will be considered subsidiary to the pavement marking items.

22.03 Basis of Payment

Work completed and accepted and measured as provided above will be paid lump sum for "NON-REFLECTORIZED PAINT PAVEMENT MARKING", which price shall be full compensation for all work performed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

22.03a Non-ReflectORIZED Paint Pavement Marking – lump sum

SECTION 23 - WATER FOR DUST CONTROL

23.01 Description

This item shall consist of the furnishing and placing of water for the purpose of dust control during periods of dry weather.

23.02 Equipment/Execution

Control of dust is of extreme importance to the health and welfare of the project residents and it is the intent of this Specification that the Contractor will, upon 24-hour notice by the Engineer, furnish a water truck and adequate personnel to control dust on the project as directed by the Engineer and to maintain the availability of the equipment on the job during periods of dry weather.

23.03 Method of Measurement

Water will be measured by the gallon in the truck and will be computed by cross sectional area times the length of the tank.

23.04 Basis of Payment

Water for dust Control will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 24 – BRICK PAVERS

24.01 Description

This item shall consist of the furnishing and placing of brick pavers at sidewalks as shown and detailed on construction drawings.

24.02 Materials

All brick pavers are to be equal to English Edge Heavy Duty Lugged Pavers as Manufactured by Pine Hall Brick Company, Inc. Madison, N.C. Pavers to be used at sidewalks are to be limited to pedestrian traffic only and are to measure 8" x 4" x 2 1/4" complying with ASTM C1272, Type R.

Bedding Sand shall conform to ASTM-33; exclude all stone screenings that may pass the C-33 sieve analysis.

24.03 Construction Requirements

- (a) Provide smooth uniform sand bed for paver placement. Bed to be compacted as per manufacturer instructions.
- (b) Provide dry mix stabilizers to all sand beds.
- (c) Pavers to be installed to provide smooth uniform surface with no irregularities.

24.04 Basis of Payment

Work completed and accepted and measured as provided above will be paid for at the unit price bid per square yard for "BRICK PAVERS", which price shall be full compensation for all work performed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

24.04a Brick Pavers - per square yard

SECTION 25 – SITE BENCHES AND TRASH RECEPTACLES

25.01 Description

This item shall consist of the furnishing and installation of site benches and trash receptacles.

25.02 Materials

Equipment to be equal to DuMor, Inc. Site Furnishings, Mifflintown, PA.
(Note: Provide 2 trash receptacles and 1 site bench per plans)

(a) Benches: 58 x 6'-0" long

- (1) Seating Surface: $\frac{1}{4}$ x 1 $\frac{1}{2}$ " steel bar and 2 $\frac{3}{8}$ " O.D. Steel Pipe
- (2) Supports: Cast Iron
- (3) Bracing: 1 $\frac{1}{16}$ " O.D. Steel Pipe
- (4) Fasteners: Stainless Steel
- (5) Color: Hunter Green

(b) Trash Receptacles: Receptacle 102-0032 Gal. capacity

- (1) Top and Bottom Bands: $\frac{3}{8}$ " x 2 $\frac{1}{2}$ " H.R. Steel
- (2) Door Top and Bottom Band: $\frac{3}{8}$ " x 2" H.R. Steel
- (3) Rosettes: 4 $\frac{1}{4}$ " O.D. x $\frac{3}{4}$ " Thick Cast Iron
- (4) Cover: $\frac{3}{8}$ " Thick Steel Plate with 10" diameter opening
- (5) Liner: 32 gallon All Steel
- (6) Color: Hunter Green

25.03 Construction Requirements

Install all benches and trash receptacles as recommended by manufacturer and anchor to concrete with stainless steel bolts.

25.04 Basis of Payment

Work completed and accepted and measured as provided above will be paid for at the unit price bid per each for "SITE BENCHES" AND "TRASH RECEPTACLES", which price shall be full compensation for all work performed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

25.04a Site Benches- per each

25.04b Trash Receptacles- per each

SECTION 26 – UNIT MASONRY

26.01 Description

This item shall consist of the furnishing of all labor, tools, and materials to complete all brick work and concrete masonry work as shown on and called for by the drawings and as hereinafter specified, including installation of the following items or materials furnished under the other divisions.

- (a) Reinforce and fill cells with concrete as shown and detailed on the drawings
- (b) Samples: Submit samples of face brick and concrete masonry units, wall ties, and reinforcing materials for approval prior to ordering or delivering any material to site. Approval of samples shall be general only and does not preclude rejection of materials not matching approved samples or meeting contract requirements.
- (c) Handling and Storage: Handling masonry units during delivery, hauling and on the job is such a manner as to prevent soiling, chipping, or breaking. Store masonry units on platforms raised above grade. Protect from weather and staining by dirt, mud, or grease by covering with "Visqueen" or similar water repellent material.
- (d) Concealed Work: All plumbing work shall be concealed. Prepare openings for passage of ducts, pipes, etc.

26.02 Materials

- (a) Lightweight Concrete masonry Units: Shall be manufactured of expanded shale or clay aggregate conforming to ASTM C 90-91, grade N, Type I, hollow load bearing masonry units. All units shall be uniform in size and in surface texture. Provide all shaped units as required by drawing and details.
- (b) Face Brick: Shall be grade SW, Type FBS, complying with ASTM C 216-latest year. This brick is to be used for brick face work. Provide no brick with factory applied silicon.
- (c) Brick Pavers: See Section 24

26.03 Construction Requirements

- (a) Patterns and Bonds: All walls shall be built plumb, true and level, to the thickness shown on the plans. Face brick pattern to be running bond and brick rowlock, soldier and header courses as shown on drawings. Concrete masonry units to be running bond. Work masonry to an 8" module vertically. Layout walls where possible so that no block less than one-half size occurs.

- (b) Special Units and Details:
1. The masonry contractor shall provide and place any special units required or as shown on plans.
 2. Fit masonry tight against and around sleeves, pipe, and conduit, etc. where required by drawings.
- (c) Cutting and Patching: Consult other trades in advance and provide for installation of such related work to avoid cutting and patching whenever possible. Supervise the subsequent cutting of masonry performed by other trades and perform any necessary patching in connection therewith. Cut masonry units in exposed masonry walls with masonry saws which shall be kept on the job during masonry work.
- (d) Laying Up the Units:
1. All face and end joints shall be fully filled with mortar and joints shall be squeezed tight. Slushing of mortar into joints shall not be permitted. Work joints and/or concrete masonry wall to be nominal 3/8" thickness to work to modular masonry dimension.
 2. Tooled Joints: Cut joints flush as mortar takes initial set, tool with 5/8" diameter round jointing tool. Compact mortar tightly against masonry on both sides of joints.
 3. All masonry work to receive tooled joints.
 4. Unless approved precautions are taken to prevent freezing, do not lay masonry when temperatures are below 32°F on rising temperatures or below 40°F on falling temperatures.
 5. Minor deviations in location to make work course out will be at the contractor's discretion; major changes must have approval of the architect.
- (e) Protect masonry against freezing at least 48 hours after laying. Protect tops and top 2' of each side of masonry walls with waterproof membrane securely anchored except when work is in progress or permanent protection is provided.
- (f) Cleaning and Pointing: Keep masonry as clean as possible as work progresses. Remove mortar droppings in connecting or adjacent work before its final set. On completion, point up all exposed masonry, fill all holes and joints, remove loose mortar, cut out defective joints, and repoint where necessary. After the mortar has thoroughly set, clean down all surfaces using stiff brushes, approved masonry cleaning detergents and water. Avoid staining or damaging masonry during the cleaning operations.

26.04 Basis of Payment

Work completed and provided above will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 27 – TREES AND SHRUBS

27.01 Description

Furnish all labor, materials, equipment, and services necessary for completion of landscape planting as shown on landscaping plan in the drawings.

27.02 Materials

- (a) **Planting:** To be of type and name as called for on the planting schedule on the drawings.
- (b) **Quality and Size:** Plants to be nursery grown and have a habit of growth that is normal for the species and be sound, healthy, vigorous, and free from the insect pests, their eggs or larvae, plant diseases, and injuries. All plants shall equal or exceed the measurements specified in the plant list, which are minimum acceptable sizes. They shall be measured before pruning, with branches in normal positions. Any necessary pruning shall be done only at time of planting. Requirements for the measurement, branching, grading, quality, balling, and burlapping of the plants in the plant list generally follow the code of standards currently recommended by the American Association of Nurserymen, Inc. in the American Standards for Nursery Stock. No heel-in plants or plants from cold storage will be accepted without written approval.
- (c) **Commercial Fertilizer:** To be complete fertilizer, uniform in composition, and suitable for plants as listed on the planting plan.
- (d) **Peat:** To be domestic product consisting of partially decomposed vegetable matter of the natural occurrence. It shall be brown, clean, low in content of mineral and woody materials, mildly acid, and granulated or shredded.
- (e) **Water:** Used in this work shall be furnished by the contractor and will be suitable for irrigation and free from ingredients harmful to plant life. Hose and other watering equipment required for the work shall be furnished by the contractor.
- (f) **Root Protection:** Balled and burlapped plants. Plants designated in the plant list shall be balled and burlapped. Dug with firm, natural balls of earth of diameter specified and sufficient depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Balls firmly wrapped with burlap of similar material and bound with twine cord or wire mesh where necessary to prevent breaking or cracking of the ball during the process of planting, the ball may be secured to a platform. Balls cracked or broken during or before planting will not be accepted.

27.03 Construction Requirements

- (a) Notify the architect in writing of the sources of the materials required.
- (b) Plants: The contractor shall be responsible for all certificated of inspection of plant materials that may be required by Federal, State, or other authorities to accompany shipments of plants. Inspection of plants to be balled and burlapped will be made at the place of growth. All plants must be inspected and approved before they are planted. Inspection and approval by the architect of plants at the place of growth or upon delivery shall be for quality, size, and variety only and shall not in any way impair the right of rejection for or failure to meet other requirements during the progress of the work.
- (c) Planting: Is not to begin in any area where the sitework and the work of the general contractor have not been completed. After completion of sitework, planting operations are to be conducted under favorable weather conditions during the next season or seasons which are normal for such work as determined by accepted practice.
- (d) Planting Pits: To be dug and soil for planting ready before plants are delivered. Circular pits with vertical sides excavated for all plants except for hedge and plants specifically designated on the plans to be planted in beds. Diameter of pits for "B & B" shrubs be at least two feet greater than the diameter of the ball or spread of roots. The depth of pits for shrubs enough to accommodate the ball or roots when the plant is set to finished grade at the same depth it was planted in the nursery, allowing for 6" of compacted topsoil in the bottom of the pit.
- (e) Setting Plants: Unless otherwise specified, all plants to be in pits, centered, and set on 6" of compacted soil (topsoil) to such depth that the finished grade level at the plant after settlement will be the same as that at which the plant was grown. Plant upright and faced to give the best appearance or relationship to adjacent structures. No burlap pulled out from under balls. Platform, wire, and surplus binding from top and sides of the balls to be removed. Roots spread in their normal position. All broken or frayed roots to be cut off cleanly. Topsoil placed and compacted carefully to avoid injury to roots and to fill all voids. When the hole is nearly filled, add water as necessary and allow it to soak away. Fill the hole to finished grade and form a shallow saucer around each plant by placing a ridge of topsoil around the edge of each pit. After the ground settles, additional soil to be filled in to the level of the finished grade.
- (f) Mulching: All plants to be mulched with a 3" layer of cypress mulch within two days after planting. This mulch shall entirely cover the area of the planting pit, bed, or saucer around each plant.
- (g) Commercial Fertilizer: To be placed around each plant in accordance with standard practices applicable to the various plants.

- (h) Pruning and Repair: Upon completion of the work under this contract, all shrubs shall have been pruned and any injuries repaired. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs or branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as not to change the natural habit or shape of the plant. All cuts shall be made flush, leaving no stubs. On cuts over one-half in diameter and bruises or scars on the bark, the injured cambium shall be traced back to living tissue and removed. Wounds shall be smoothed and shaped so as not to retain water, and the treated area shall be coated with an approved tree paint.
- (i) Clean Up: Any soil, peat, or similar material which has been brought onto paved areas by hauling operations or otherwise shall be removed promptly, keeping these areas clean at all times. Upon completion of the planting, all excess soil, stones, and debris which has not previously been cleaned up shall be removed from the site or disposed of. All planting areas shall be prepared for final inspection.

27.04 Plant Guarantee and Replacement

- (a) Guaranty: Plants shall be guaranteed for a maximum of one year the duration of one full growing season, beginning the first day of April and ending the last day of October, after planting, and shall be alive and in satisfactory growth at the end of the guaranty period.
- (b) Replacement: At the end of the guaranty period, any plant required under this contract that is dead or not in satisfactory growth, as determined by the architect, shall be removed from the site; these and any plants missing due to the contractor's negligence shall be replaced as soon as conditions permit, but during the normal planting season. In case of any questions regarding the conditions and satisfactory establishment of a rejected plant, the contractor may elect to allow such plant to remain through another complete growing season at which time the rejected plant, if found dead, in an unhealthy or badly-impaired condition, shall be replaced, at the landscape contractor's expense.
- (c) Repairs or replacements of plants necessary during the maintenance period due to removal, loss of, or damage resulting from occupancy of the building, vandalism, or acts of neglect on the part of others may be made on order of the owner and will be the owner's expense.

27.05 Basis of Payment

Work completed and accepted and measured as provided above will be paid for at the unit price bid per each for "TREES AND SHRUBS", which price shall be full compensation for all work performed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

27.05a Trees and Shrubs - lump each

SECTION 28 – ARCHITECTURAL PRECAST CONCRETE

28.01 Description

- (a) Furnish all labor and material to install cast stone (Architectural Precast Concrete) for planter caps as shown and detailed on the drawings.
- (b) Furnish all labor and material to install precast concrete paving trim at street crosswalks as shown and detailed on the drawings.
- (c) Furnish all anchors and accessories necessary to make a complete precast system.

28.02 Materials-General

- (a) Panels shall be designed by the precast manufacturer in accordance with ACI Standard 318.
- (b) Reinforcement and anchorage detailing for precast panels shall be designed by and furnished by the manufacturer.
- (c) Precast concrete units are to be equal to those as manufactured by the following manufacturers.
 - 1. Quality Precast Corporation, Jonesboro, Arkansas
 - 2. Custom Architectural Precast, Olive Branch, Mississippi
 - 3. Arkansas Pre-Cast Corporation, Jacksonville, Arkansas
- (d) Finish: Limestone texture or sand texture (sugar cube appearance).
- (e) Colors: White
- (f) All units to be back primed with “Thoroseal” as manufactured by Thoro Systems Products, Centerville, Indiana.

28.02 Materials-Specific

- (a) Concrete:
 - 1. Portland cement, ASTM C 150; as required to match specified samples. For exposed surfaces use same brand, type, and source of supply throughout.

2. Water reducing, retarding, accelerating, high range water reducing admixtures: ASTM C 494.
3. Coloring Agent:
 - a. Synthetic mineral oxide
 - b. Harmless to concrete set and strength
 - c. Stable at high temperature
 - d. Sunlight and alkali-fast
4. Aggregates:
 - a. Provide fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for entire job. They shall be clean, hard, strong, durable, and inert, free of staining or deleterious material.
 - b. ASTM C 33 or C 330
 - c. Material and Color: As required to match approved samples
 - d. Maximum Size and Gradation: As required to match approved samples
5. Water: Free from deleterious matter that may interfere with the color, setting or strength of the concrete.

(b) Reinforcing Steel:

1. Bars: Reinforce shall be galvanized when less than 1" cover; deformed steel – ASTM A 615, grade 60.
2. Wire Fabric:
 - a. Welded Steel: ASTM A 185
 - b. Welded Deformed Steel: ASTM A 184

(c) Grout:

1. Cement Grout: Portland cement, sand, and water sufficient for placement and hydration.
2. Non-Shrink Grout: Premixed, packaged ferrous and non-ferrous aggregate shrink resistant grout.

(d) Bearing Pads:

Chloroprene (Neoprene): Conform to Division 2, Section 25 of AASHTO Standard Specifications for Highway Bridges.

28.03 Contractor Qualifications

(a) Manufacturer Qualifications:

1. Only a firm which has had a minimum of five (5) years successful experience in the fabrication of architectural precast concrete units, similar to the units required for this project, will be acceptable. Fabricator must have sufficient production capacity to produce, transport, and deliver the required units without causing delay in the work.
2. Produce architectural precast concrete units at a fabricating plant engaged primarily in the manufacturing of similar units.
3. Be certified by the Prestressed Concrete Institute, Plant Certification Program.

(b) Erector Qualifications: Only a firm which has had a minimum of three years successful experience in the erection of architectural precast concrete units, similar to the units required for this project will be acceptable.

28.04 Concrete Mixes

(a) Concrete Properties:

1. Water-Cement Ratio: Maximum 40 pounds of water to 100 pounds of cement.
2. Air Entrainment: Amount produced by adding dosage of air entraining agent that will provide 19% +- 3% of entrained air in standard 1:4 sand mortar as tested according to ASTM C 185; or minimum 3%; maximum 6%.
3. Cooling Agent: Not more than 10% of cement weight.
4. 28-day Compressive Strength: Minimum of 5,000 psi

(b) Facing Mix:

1. Minimum thickness of face mix after consolidation shall be at least 1" or a minimum of 1-1/2 times the maximum size of the aggregates used; whichever is larger.
2. Water-cement and cement aggregate ratios of the face and back-up mixes shall be similar.

28.05 Fabrication

- (a) Manufacturing procedures shall be in general compliance with PCI MNL – 117.
- (b) Finishes: Exposed face to match specified samples.
- (c) Cover:
 - 1. Provide at least one inch cover for reinforcing steel.
 - 2. Do not use metal chairs, with or without coating, in the finished face.
 - 3. Provide embedded anchors, inserts, plates, angles and other cast-in items with sufficient anchorage and embedment for design requirements.
- (d) Curing: Cure precast units until 2,000 psi minimum compressive strength has developed before removing the units from the form, unless greater strength is required for stripping.
- (e) Panel Identification: Mark each precast panel to correspond to identification mark on shop drawings for panel location.
- (f) Acceptance: Architectural precise units which do not meet the color and texture range or the dimensional tolerances may be rejected at the option of the architect, if they cannot be satisfactorily corrected.

28.06 Construction Requirements

- (a) Delivery and handling:
 - 1. Handle and transport units in a position consistent with their shape and design in order to avoid stresses which would cause cracking and damage.
 - 2. Lift or support units only at the points shown on the shop drawings.
 - 3. Place nonstaining resilient spacers of even thickness between each unit.
 - 4. Support units during shipment on nonstaining shock-absorbing material/
 - 5. Do not place units directly on ground.
- (b) Storage at Job Site:
 - 1. Store and protect units to prevent contact with soil, staining, and physical damage.
 - 2. Store units, unless otherwise specified, with nonstaining, resilient supports located in same positions as when transported.
 - 3. Store units on firm, level, and smooth surfaces.
 - 4. Place stored units so that identification marks are discernible, and so that product can be inspected.

(c) Installation

1. Set precast units level, plumb, square and true within the allowable tolerances. General contractor shall be responsible for providing lines, center and grades in sufficient detail to allow installation.
2. Set units dry without mortar, attaining specified joint dimension with lead, plastic or cement spacing shims.

(d) Patching

1. Mix and place patching mixture to match color and texture or surrounding concrete and to minimize shrinkage.
2. Adhere large patch to hardened concrete with bonding agent.

(e) Cleaning

1. After installation clean soiled precast concrete surfaces with detergent and water, using fiber brush and sponge, and rinse thoroughly with clean water.
2. Use acid solution only to clean particularly stubborn stains after more conservative methods have been tried unsuccessfully.
3. Use extreme care to prevent damage to precast concrete surfaces and to adjacent materials.
4. Rinse thoroughly with clean water immediately after using cleaner.

- (f) Protection: The erector shall be responsible for any chipping, spalling, cracking or other damage to the units after delivery to the job site unless damage is caused in site storage by others. After installation is completed, any further damage shall be the responsibility of the general contractor.

28.07 Samples

(a) Standard Samples:

1. Submit samples representative of finished exposed face showing typical range of color and texture prior to commencement of manufacture.
2. Sample Size: Approximately 12" x 12" and of appropriate thickness, representative of the proposed finished product.

28.08 Submittals

(a) Shop Drawings:

1. Content:
 - a. Unit shapes (elevations and sections), and dimensions
 - b. Finishes

- c. Reinforcing, joint, and connection details
 - d. Lifting and erection inserts
 - e. Location and details of hardware attached to structure
 - f. Other items cast into panels
 - g. Handling procedures and sequence of erection for special conditions
 - h. Relationship to adjacent material
2. Show location of unit by same identification mark placed on panel.
 3. Shop drawings are to be prepared by a registered engineer licensed in the State of Arkansas.

28.09 Warranty

Precast concrete work shall be warranted against all defects in workmanship and material for two (2) years from the date of substantial completion.

28.10 Basis of Payment

Work completed and provided above will not be measured for separate payment, but will be considered subsidiary work pertaining to the construction of the items.

SECTION 29 – SITE UTILITIES

29.01 Description

Site utilities shall be maintained, furnished, and installed as described on the drawings and in the specifications.

29.02 Codes

- (a) The State of Arkansas
- (b) The City of Jonesboro, Arkansas
- (c) Local Utility Companies

SECTION 30 – LANDSCAPE IRRIGATION SYSTEMS

30.01 Description

The purpose of this is document to establish standards for the design and installation of safe, cost effective, reliable irrigation systems for turf and landscape areas.

30.02 Definitions – Irrigation System

Turf and landscape irrigation systems apply water by means of permanent above-ground or subsurface sprinkler under pressure.

30.03 Pre-Construction Submittals

(a) Plans or Drawings

Provide design drawings for installation prior to start of construction. Design drawings shall be clearly readable, to a reasonable scale, and shall but not limited to: date, scale, revisions, legend, water source, design operating pressure and flow rate per zone, average application rate per zone, (listed in inches per hour), water schedule, location of pipe, controllers, valves, sprinklers, backflow prevention devices, elevation, electrical supply, roadways, sidewalks, structures and other relevant site conditions.

Irrigation design drawings shall consider existing and/or proposed landscaping plant materials in the design layout.

The owner or their representatives should supply the following site information, including but not limited to; high voltage electrical wires, water lines, telephone, cable and other utility lines, septic tanks, drain fields, well fields and easements.

(b) List of Materials

The Contractor shall provide manufacture's product description sheets for all major components with specific models and/or item numbers highlighted.

30.04 Post Construction Documentation

Provide the manufactures' recommended operating instructions for all major components incorporated into the irrigation system.

Provide system operation manuals, maintenance schedules, recommended schedule of operation including average application rates, with seasonal adjustments for each zone.

30.05 Record Drawings

Provide drawings and plans showing all changes in the design to indicate the actual installation and location of all equipment and materials with the application for final payment.

30.06 Design Criteria

(a) Design Defined

Within the scope of this document, irrigation design is defined as the science and art of properly selecting and applying all components within the system utilizing them to comply with proper pipe hydraulics and to match precipitation rates to site conditions and other necessary design criteria.

(b) Application Rate

Application rate is the rate at which water is applied to the irrigated area, normally measured in inches per hour or millimeters per hour.

Use application rates that would avoid runoff and permit uniform water infiltration into the soil. Land slope, soil hydraulic properties, vegetative ground cover, and prevailing winds will be considered when application rates are specified.

30.07 Irrigation Uniformity

Irrigation uniformity describes how evenly water is distributed within an irrigation zone. Irrigation system uniformity is the uniformity of the zone with the lowest uniformity coefficient.

(a) Sprinkler System

- (1) Within any given zone, the maximum variation in sprinkler flow rates should be less than 5% and must be less than 20% of the average rate for all sprinklers with the same areas of coverage.
- (2) It is recommended within any given zone that the maximum pressure variation be 10% or less to limit flow rate variations to approximately 5%.
- (3) Spacing should not exceed 50 % of sprinkler diameters of coverage for wind speeds of 2 to 10 mph, and 45 % of prevailing wind speeds greater than 10 mph.
- (4) When using triangular spacing the above overlap percentages can be increased by 5%.

(5) System Zoning

The irrigation system should be divided into zones based on considering the following:

- (a) Available flow rate/pressure
- (b) Economic factors
- (c) Type of vegetation irrigated i.e., turf, shrubs, native plants, etc.
- (d) Full coverage of all sodded and planters areas.
- (e) Soil characteristics
- (f) Exposure
- (g) Topography

(6) Sprinkler Spacing and Selection

Sprinkler spacing will be determined considering the irrigation requirements, hydraulic characteristics of the soil, and water quality with its effect on plant growth, sidewalks, buildings, and public access areas.

30.08 Control Valves

- (a) Control valves size shall be based on the flow rate through the valve. Friction loss through the valve should not exceed 10% of the operating pressure upstream of the valve except where the valve includes a factory pressure regulator device.
- (b) Size electrical control wire in accordance with the valve manufacturer's specifications, based on the solenoid in-rush amperage and the circuit length, considering the number of solenoids operating on the circuit.
- (c) Electrical control wire to be direct-buried call be UL approved for direct burial. If electrical control wire is not UL approved for direct burial, it must be installed in watertight, conduit and must be UL listen TWN or THHN as described in the National Electrical Code.
- (d) Locate manually operated control valves so they can be operated without wetting the operator.

30.09 Backflow Prevention

Provide a backflow prevention assemblies at all cross connections with water supplies in accordance with county, municipal or other applicable codes. Determine acceptable backflow prevention assembly types and installation procedures for each application. At a minimum, provide a pressure vacuum breaker. Atmospheric vacuum breakers or dual check valves alone are not acceptable. In the event of conflicting regulation provide the assembly type that gives the highest degree of protection.

30.10 Materials

(a) PVC Pipe

- (1) PVC Pipe should comply with one of the following standards: ASTM D-1785-99, ASTM D-2241-00, AWWA c-900-97, or AWWA C-905-97. SDR-PR pipe shall have a minimum wall thickness as required by SDR-26.
- (2) All solvent-weld PVC shall meet the requirement of Schedule 40 as set forth in ASTM D-2464-99. PVC gasketed fitting shall conform to ASTM D-3139-98. Gaskets shall conform to ASTM F-477-99.
- (3) PVC flexible pipe should be pressure rated with standard outside diameters compatible with PVC IPS solvent-weld fittings.
- (4) PVC cement should meet ASTM D-2564-96a. PVC cleaner should meet ASTM F-656-96a.

(b) Sprinklers

- (1) Select units and nozzles in accordance with size of the area and type of plant material being irrigated.
- (2) Support riser-mounted sprinklers to minimize movement of the riser resulting from the action of the sprinkler.

(c) Valves

- (1) Valves must have a maximum working pressure rating equal to or greater than the maximum pressure of the system, but not less than 125 psi. The requirement may be waived for low mainline pressure systems (30 psi or less).
- (2) Use valves that are constructed of materials designed for use with water and soil conditions of the installation.

(d) Valve Boxes

- (1) Use valve boxes that are constructed to withstand traffic loads common to the area in which they are installed. At a minimum valve boxes should be sized to allow manual operation of the enclosed valves without excavation. Where possible, valves boxes should be sized to allow routine maintenance without excavation.
- (2) Each valve box should be permanently labeled to identify its contents.

(e) Low Voltage Wiring

- (1) All low voltage wire, which is directly buried, must be labeled for direct burial. Wire not labeled for direct burial must be installed in watertight conduits, and be UL listed TWN or THHN type wire as described in the NEC.
- (3) Connections are to be made using UL approved devices specifically designed for direct burial.

(f) Back flow Prevention Methods

- (1) Air gap separation: this method consists of a physical separation between the water supply and the irrigation system, so that there is no possibility of the discharged water flowing back to the water supply. The air gap separation must be a minimum of twice the diameter of the discharge pipe of 1-inch, whichever is larger. Refer to the local plumbing codes for standard air gap installations.
- (2) Backflow Prevention Assemblies:
 - (a) A pressure vacuum breaker consists of an air inlet port, one positive seating check valve and an internally force loaded disc float assembly downstream of the check valve, installed as a unit between two resilient seated shutoff valves and fitted with properly located test cocks.

30.11 Installation

- (a) Flag the location of all sprinklers, valves, controllers, source of water and electrical components in the field prior to installation.
- (b) Conduct all necessary excavation for the proper installation of pipelines and accessories. Dewater, shore, and brace as needed to completely install the pipe.
- (c) Pipe shall be installed at sufficient depth below ground to protect it from freeze hazards such as vehicular traffic. Landscape vehicular traffic areas are those landscaped areas subject to vehicular use such as traffic crossings, parking areas, etc. Depths of cover shall be a minimum of 12".
- (d) The trench bottom must be uniform, free of debris, and sufficient width to properly place pipe and support it over its entire length. Blocking and mounding shall not be used to bring the pipe to final grade.
- (e) After installation, flushing, and inspection or testing, backfill and compact the excavated soil to minimize post construction settlement in the pipe trench.

- (1) Native excavated material may be used to backfill the pipe trench. However, the initial backfill material shall be free from rocks or stones larger than 1-inch in diameter. At the time of placement, the moisture content of the material shall be such that the required degree of compaction can be obtained with the backfill method to be used.
 - (2) The initial backfill material shall be placed so that the pipe will not be displaced, excessively deformed, or damaged. The initial fill shall be compacted firmly around and above the pipe to the density specified to provide adequate lateral support to the pipe.
- (f) Pipe sleeves must be used to protect pipe or wires installed under pavement or roadways. Use pipe sleeves that are at least two pipe sizes larger than the carrier pipe or twice the diameter of the wire bundle.

30.12 Valve Installation

- (a) Valve installation shall allow enough clearance for proper operation and maintenance. Where valves are installed underground, they shall be provided with a valve box with cover extending from grade to the body of the valve. The top of the valve body should have a minimum of 6 inches of cover in non-traffic and non-cultivated areas and 18 inches of cover in traffic areas.
- (b) All valves installed underground shall be installed with a valve box. If an automatic valve is installed under each sprinkler, then the valve box may be omitted. Valves must be installed with enough clearance for operation and maintenance.
- (c) Install valve boxes so that they do not rest on the pipe, the box cover does not conflict with the valve stem or interfere with valve operation and so that the valve box lides are flush with the ground surface.

30.12 Sprinkler Installation

- (a) On flat landscaped areas, install sprinklers plumb. In areas where they are installed on slopes, sprinklers may be tilted as required to prevent erosion.
- (b) Sprinklers should be adjusted to avoid unnecessary discharge on pavements and structures.
- (c) Provide a minimum separation of 4 inches between sprinklers and pavement. Provide a minimum separation of 12 inches between sprinklers and buildings and other vertical structures.

30.13 Low Voltage Wire Installation

- (a) Install low voltage wire with minimum depth of cover of 12 inches.
- (b) Where wire is to be installed below grade, use UL listed direct burial wire. In all other cases install wire in a water tight conduit.
- (c) Use wire connectors that are approved for direct burial. A valve box shall be used for all underground wire splices.
- (d) Provide a sufficient length of wire at each connection to allow for thermal expansion/shrinkage. As a minimum, provide a 12 inch diameter loop at all splices and connections. Terminations at valves will have 24 inches minimum free wire.
- (e) Provide common wires with a different color than the power wires.

30.14 Basis of Payment

Work completed and accepted and measured as provided above will be paid for at the unit price bid per lump sum for "LANDSCAPE IRRIGATION", which price shall be full compensation for all work performed, and for all labor, tools, equipment and incidentals necessary to complete the work.

Payment will be made under:

30.14a LANDSCAPE IRRIGATION – lump sum

Appendix A

SMALL (LESS THAN 5 ACRES) CONSTRUCTION SITE NOTICE

FOR THE
Arkansas Department of Environmental Quality (ADEQ)
Storm Water Program
NPDES GENERAL PERMIT NO. ARR150000

The following information is posted in compliance with **Part I.B.7.a.iv** of the ADEQ General Permit Number **ARR150000** for discharges of storm water runoff from small construction sites. Additional information regarding the ADEQ storm water program may be found on the internet at:

www.adeq.state.ar.us/water/branch_npdes/stormwater

Permit Number	ARR150000
Contact Name	[REDACTED]
Phone Number	[REDACTED]
Project Description (Name, Location, etc.)	[REDACTED]
Start Date	[REDACTED]
End Date	[REDACTED]
Total Acres	[REDACTED]
Location of Storm Water Pollution Prevention Plan:	[REDACTED]

For Construction Sites Authorized under **Part I.B.6.c** (Small Construction Sites Authorization) the following certification must be completed:

I _____ (Typed or Printed Name of Person Completing this Certification) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part I.B.2.a.iii of the ADEQ General Permit Number ARR150000. A storm water pollution prevention plan has been developed and implemented according to the requirements contained in the permit. A copy of this signed notice is supplied to the operator of the MS4 if discharges enter a regulated small, medium, or large MS4 system as defined in Part II.C of the ADEQ General Permit Number ARR150000. I am aware there are significant penalties for providing false information or for conducted unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

Signature and Title

Date

Storm Water Pollution Prevention Plan (SWPPP) for Small Construction Sites

1. **PROJECT NAME:** Union Street Parking Improvements
2. **PROJECT SITE LOCATION:** Jonesboro, Arkansas
3. **ADDRESS of SITE:** West side of Union Street between Monroe Ave. and Huntington Avenue
4. **OWNER NAME and ADDRESS:** City of Jonesboro, 515 W. Washington Jonesboro, AR 72401
5. **OWNER TELEPHONE NUMBER:** (870)-932-1052
6. **SITE AREA:** Approximately 1.4 acres. Construction is to be limited to parking lot improvements.
7. **PROJECT DESCRIPTION:** The projects consist of the construction of a 43,240 sq. ft asphalt parking lot. Improvements entail the construction of perimeter sidewalks, as well as, security lighting.
8. **RUNOFF COEFFICIENT:** 0.90
9. **SEQUENCE OF ACTIVITIES:**
Removal of existing pavement and utilities, compaction of earthwork, construction of sidewalks, ramps, and curb and gutter, installation of pavement and lighting.
10. **NAME OF RECEIVING STREAM:**
Christian Creek drains into Lost Creek which drains into Big Creek Ditch to Bayou Devieu to the Cache River and eventually discharges into the White River.
11. **EXISTING SOIL INFORMATION:** Hydraulic Soil Group C.
12. **ENDANGERED SPECIES:**
This project does not have any known endangered species.
13. **EROSION AND SEDIMENT CONTROLS:**
Silt fence, hay bales, and hay bale inlet traps will be used to control sediment leaving the construction site. Additional erosion controls shall be added as necessary due to field conditions. Any additions are to be depicted on the site map.
14. **TIMING OF CONTROLS/MEASURES:**
Silt fence shall be installed as soon as practical and in conjunction with site demolition. This project is scheduled to begin on July 7, 2008 and should take 2 to 3 months to complete.

15. WASTE MATERIALS:

No solid waste will be generated from this project. Trees and brush from clearing shall be hauled off-site. Debris, if any, shall be hauled off-site.

16. SANITARY WASTE:

No sanitary waste will be generated from this project.

17. CONTROLS INSPECTION, MAINTENANCE PRACTICES AND RECORD KEEPING:

Erosion controls shall be inspected weekly and within 24 hours after any storm event of 0.5 inches or greater to make sure the controls are in effect and do not require any maintenance. Inspections shall be performed by the site supervisor or his designated representative that has been adequately trained to perform stormwater inspections. Logs of all inspections shall be made using the attached form and kept with this plan.

All erosion controls shall be maintained in good working order. Any repair or replacement will be done as soon as possible but no later than 5 days after the inspection.

All construction equipment shall be inspected daily for leaks, etc. as standard protocol. A daily log of construction activities shall also be kept. This log shall be kept by the site supervisor and show construction status, location of work, description of work completed, and employees working.

18. NON-STORMWATER DISCHARGES: None

19. MATERIAL MANAGEMENT PRACTICES:

B-stone and other Aggregates may be periodically stored on-site during construction operations. Site supervisor will limit the quantities of materials stored on the site to only that which will be used within 48 hours.

20. COMPLETION OF JOB:

After completion of the site improvements, the site will be graded and ready for sodding. All temporary erosion controls are to be removed after final stabilization of the soil. Upon completion, this plan along with all records, field logs, and inspection reports are to be bound and delivered to the Public Works Director. The Public Works Director or his designated representative shall make a final inspection of the job site and keep the project documents on file for a period of no less than 3 years.

21. 404 Permit:

A 404 permit is not required for proposed clearing work.

22. 303(d) list, TMDL, others:

Storm water from the construction site discharges to Lost Creek which flows into Big Creek which then flows into the Cache River, the ultimate receiving stream. None of these water bodies are on the list of impaired water bodies (i.e., 303(d) list) for siltation/turbidity. As such a TMDL is not applicable to this construction project.

23. CERTIFICATION:

I certify under penalty of law that this document and all the attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 fines and imprisonment for knowing violations.

Signed (Public Works Director): _____

Construction Certification

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signed (Superintendent): _____

Signed (Site Supervisor): _____

Signed (Inspector): _____

Small Construction Inspection Form

Name of Company:

Site Location:

Date	Location	Silt Fence OK?	Hay Bales OK?	Initial Stabilization OK?	Amount of Rain (inches)	Time	Inspector's Initials	Correction

SITE INSPECTOR CERTIFICATION

I certify under penalty of law that I am knowledgeable in the principals of erosion and sediment control, possess the skills to evaluate conditions at the above construction site that could impact stormwater quality, and am knowledgeable in the correct installation of erosion and sediment controls. I am able to assess the effectiveness of any sediment and erosion control measures selected in the SWPPP to control the quality of stormwater discharges from the above construction site. Additionally, I certify that I have reviewed the Arkansas Stormwater Construction General Permit ARR150000 and SWPPP which was prepared for this of this site and understand the conditions there of.

Printed Name of Title of Person Construction Activities

Signature and Date

SMALL (LESS THAN 5 ACRES) CONSTRUCTION SITE NOTICE

FOR THE
Arkansas Department of Environmental Quality (ADEQ)
Storm Water Program
NPDES GENERAL PERMIT NO. ARR150000

The following information is posted in compliance with **Part I.B.7.a.iv** of the ADEQ General Permit Number **ARR150000** for discharges of storm water runoff from small construction sites. Additional information regarding the ADEQ storm water program may be found on the internet at:

www.aeq.state.ar.us/water/branch_npdes/stormwater

Permit Number	ARR150000
Contact Name	[REDACTED]
Phone Number	[REDACTED]
Project Description (Name, Location, etc.)	[REDACTED]
Start Date	[REDACTED]
End Date	[REDACTED]
Total Acres	[REDACTED]
Location of Storm Water Pollution Prevention Plan:	[REDACTED]

For Construction Sites Authorized under **Part I.B.6.c** (Small Construction Sites Authorization) the following certification must be completed:

I _____ (Typed or Printed Name of Person Completing this Certification) certify under penalty of law that I have read and understand the eligibility requirements for claiming an authorization under Part I.B.2.a.iii of the ADEQ General Permit Number ARR150000. A storm water pollution prevention plan has been developed and implemented according to the requirements contained in the permit. A copy of this signed notice is supplied to the operator of the MS4 if discharges enter a regulated small, medium, or large MS4 system as defined in Part II.C of the ADEQ General Permit Number ARR150000. I am aware there are significant penalties for providing false information or for conducted unauthorized discharges, including the possibility of fine and imprisonment for knowing violations.

Signature and Title

Date

Storm Water Pollution Prevention Plan (SWPPP) for Small Construction Sites

1. **PROJECT NAME:** Cate Street Parking Improvements
2. **PROJECT SITE LOCATION:** Jonesboro, Arkansas
3. **ADDRESS of SITE:** Between Main Street and Church Street on the north side of Cate Street.
4. **OWNER NAME and ADDRESS:** City of Jonesboro, 515 W. Washington Jonesboro, AR 72401
5. **OWNER TELEPHONE NUMBER:** (870)-932-1052
6. **SITE AREA:** Approximately 0.22 acres. Construction is to be limited to parking lot improvements.
7. **PROJECT DESCRIPTION:** The projects consist of the construction of a 5,500 sq. ft asphalt parking lot. Improvements entail the construction of perimeter sidewalks, as well as, security lighting.
8. **RUNOFF COEFFICIENT:** 0.90
9. **SEQUENCE OF ACTIVITIES:**
Removal of existing pavement and utilities, compaction of earthwork, construction of sidewalks, ramps, and curb and gutter, installation of pavement and lighting.
10. **NAME OF RECEIVING STREAM:**
Christian Creek drains into Lost Creek which drains into Big Creek Ditch to Bayou Deview to the Cache River and eventually discharges into the White River.
11. **EXISTING SOIL INFORMATION:** Hydraulic Soil Group C.
12. **ENDANGERED SPECIES:**
This project does not have any known endangered species.
13. **EROSION AND SEDIMENT CONTROLS:**
Silt fence and hay bales will be used to control sediment leaving the construction site. Additional erosion controls shall be added as necessary due to field conditions. Any additions are to be depicted on the site map.
14. **TIMING OF CONTROLS/MEASURES:**
Silt fence shall be installed as soon as practical and in conjunction with site demolition. This project is scheduled to begin on July 7, 2008 and should take 2 to 3 months to complete.

15. WASTE MATERIALS:

No solid waste will be generated from this project. Trees and brush from clearing shall be hauled off-site. Debris, if any, shall be hauled off-site.

16. SANITARY WASTE:

No sanitary waste will be generated from this project.

17. CONTROLS INSPECTION, MAINTENANCE PRACTICES AND RECORD KEEPING:

Erosion controls shall be inspected weekly and within 24 hours after any storm event of 0.5 inches or greater to make sure the controls are in effect and do not require any maintenance. Inspections shall be performed by the site supervisor or his designated representative that has been adequately trained to perform stormwater inspections. Logs of all inspections shall be made using the attached form and kept with this plan.

All erosion controls shall be maintained in good working order. Any repair or replacement will be done as soon as possible but no later than 5 days after the inspection.

All construction equipment shall be inspected daily for leaks, etc. as standard protocol. A daily log of construction activities shall also be kept. This log shall be kept by the site supervisor and show construction status, location of work, description of work completed, and employees working.

18. NON-STORMWATER DISCHARGES: None

19. MATERIAL MANAGEMENT PRACTICES:

B-stone and other Aggregates may be periodically stored on-site during construction operations. Site supervisor will limit the quantities of materials stored on the site to only that which will be used within 48 hours.

20. COMPLETION OF JOB:

After completion of the site improvements, the site will be graded and ready for sodding. All temporary erosion controls are to be removed after final stabilization of the soil. Upon completion, this plan along with all records, field logs, and inspection reports are to be bound and delivered to the Public Works Director. The Public Works Director or his designated representative shall make a final inspection of the job site and keep the project documents on file for a period of no less than 3 years.

21. 404 Permit:

A 404 permit is not required for proposed clearing work.

22. 303(d) list, TMDL, others:

Storm water from the construction site discharges to Lost Creek which flows into Big Creek which then flows into the Cache River, the ultimate receiving stream. None of these water bodies are on the list of impaired water bodies (i.e., 303(d) list) for siltation/turbidity. As such a TMDL is not applicable to this construction project.

23. CERTIFICATION:

I certify under penalty of law that this document and all the attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 fines and imprisonment for knowing violations.

Signed (Public Works Director): _____

Construction Certification

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signed (Superintendent): _____

Signed (Site Supervisor): _____

Signed (Inspector): _____

Small Construction Inspection Form

Name of Company:

Site Location:

Date	Location	Silt Fence OK?	Hay Bales OK?	Initial Stabilization OK?	Amount of Rain (inches)	Time	Inspector's Initials	Correction

SITE INSPECTOR CERTIFICATION

I certify under penalty of law that I am knowledgeable in the principals of erosion and sediment control, possess the skills to evaluate conditions at the above construction site that could impact stormwater quality, and am knowledgeable in the correct installation of erosion and sediment controls. I am able to assess the effectiveness of any sediment and erosion control measures selected in the SWPPP to control the quality of stormwater discharges from the above construction site. Additionally, I certify that I have reviewed the Arkansas Stormwater Construction General Permit ARR150000 and SWPPP which was prepared for this of this site and understand the conditions there of.

Printed Name of Title of Person Construction Activities

Signature and Date