City of Jonesboro ARKANSAS

Specifications

For

Jonesboro Shooting Sports Complex Entrance Road Phase 1A

(Bid #2018:27)
Jonesboro, Arkansas

City of Jonesboro ▪ Engineering Department

P.O. Box 1845 ▪ 300 South Church Street ▪ Jonesboro, AR 72403 ▪ 870.932.2438

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I. ADVERTISEMENT FOR BIDS

Sealed bids for the Jonesboro Shooting Sports Complex Entrance Road – Phase 1A will be received at the Purchasing Department, Room 421, of the City of Jonesboro City Hall, 300 South Church, Jonesboro, Arkansas until 2:00 P.M. (Local Time) on May 29, 2018 and then publicly opened and read in the Third Floor Conference Room for furnishing all labor, material, and equipment, and performing all work required to construct the entrance road for the Jonesboro Shooting Sports Complex. All Submissions shall be annotated on the outside of the envelope with the bid number 2018:27.

The project consists of the construction of the approximately 3,500 L.F. of road with associated curb & gutter, base, asphalt, and storm drain system.

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

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

The attention of bidders is called to the fact that no contractor's license is required to submit a bid, but successful bidder must be licensed prior to entering into a contract with the City for the project.

Plans, specifications, proposal forms and other contract documents may be examined at City of Jonesboro Engineering Department, 300 South Church Street, Jonesboro, Arkansas 72401 and may be secured at the cost of $25.00 Dollars per set from the City of Jonesboro, 300 South Church Street, Jonesboro, Arkansas 72401. No refunds will be made. Any addendum to this bid will be posted no later than 5 days before bid opening by clicking on "Purchasing" at www.jonesboro.org.

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

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

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

II. INSTRUCTION TO BIDDERS

1. PREPARATION OF BID

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

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.

Exhibit A and the Anti-Collusion and Debarment Certification in Section XII (Technical Specifications) must be executed and submitted with the bids at the time proposals are submitted. The Anti-Collusion and Debarment Certification is part of Exhibit A and is labeled “Attachment 1”.

Each bid must be submitted in a sealed envelope clearly marked on the outside that it contains a bid for the Jonesboro Shooting Sports Complex Entrance Road – Phase 1A, Bid Number 2018:27 and with the hour and date of bid opening shown thereon. The name and address of the Bidder shall appear in the upper left hand corner of the envelope. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope properly addressed as noted in the NOTICE TO CONTRACTORS.

A bid which obviously is unbalanced may be rejected.

2. INTERPRETATIONS AND ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the City of Jonesboro Engineering Department. Any inquiry received up to seven (7) days prior to the opening of bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the contract Documents. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

3. INSPECTION OF SITE

Each Bidder shall visit the site of the proposed work and fully acquaint himself with the existing conditions there relating to construction and labor, and shall fully inform himself as to the facilities involved, and the difficulties and restrictions attending the performance of the Contract. The Bidder shall thoroughly examine and familiarize himself with the Plans, Technical Specifications, and other Contract Documents. The Contractor by the execution of the Contract shall not be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument or to visit the site and acquaint himself with the conditions there existing. The Owner will be justified in rejecting any claim based on facts regarding which the contractor should have been on notice as a result thereof.

4. BID GUARANTY

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

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

5. COLLUSION; SUBCONTRACTS

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

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

6. STATEMENT OF BIDDER'S QUALIFICATIONS

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

7. BALANCED BIDS; VARIATIONS IN QUANTITIES

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

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

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

8. TIME FOR RECEIVING BIDS

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

9. OPENING OF BIDS

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

10. WITHDRAWAL OF BIDS

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

11. AWARD OF CONTRACT; REJECTION OF BIDS

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

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

12. EXECUTION OF AGREEMENT; PERFORMANCE AND PAYMENT BOND

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

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

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

13. BONDS AND INSURANCE

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

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

14. LEGAL QUALIFICATIONS

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

15. MODIFICATION OF BID

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

III. PROPOSAL

Place JONESBORO, AR
Date MAY 29, 2018

Proposal of MEADOWS CONTRACTORS, 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 Jonesboro Shooting Sports Complex Entrance Road – Phase 1A.

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

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

Bidder acknowledges receipt of the following addendum (addenda):

No. 1 Dated May 14, 2018

No. 2 Dated May 24, 2018

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 of Bid Amount 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.

Cindi Sosa
(Witness)

P.O. Box 16504

Jonesboro, AR 72403
(Address)

Meadows Contractors, LLC
(Name of Bidder)

By Dale Wood

Dale Wood, Member
(Print Name and Title)

P.O. Box 16504

Jonesboro, AR 72403
(Office Address of Bidder)

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

IV. UNIT PRICE SCHEDULE

REVISED 05/24/2018 (Addendum No. 2)

Item No	Description	AHTD Ref	Unit	Quantity	Unit Price	Total Cost
1	Site Clearing & Grubbing	201	Acres	5.0	$ 2,200.00	$ 11,000.00
2	Removal & Disposal of 60" CMP	202	L.F.	30	$ 25.00	$ 750.00
3	Removing & Replacing Base Course & Asphalt Surfacing	209	C.Y.	10	$ 160.00	$ 1,600.00
4	Fences Removed and Reconstructed	208	L.F.	445	$ 7.00	$ 3,115.00
5	Gate Removed and Reconstructed	208	Each	1	$ 300.00	$ 300.00
6	Compacted Embankment	210	C.Y.	7,950	$ 8.00	$ 63,600.0
7	Aggregate Base Course (Class 7)	303	Tons	5,236	$ 21.00	$ 109,956.0
8	Asphalt Binder (PG 64-22) Course (3" Thickness)	406	Tons	1,726	$ 87.00	$ 150,162.0
9	Asphalt Surface (PG 64-22) Course (2" Thickness)	407	Tons	1,151	$ 90.00	$ 103,590.0
10	Mobilization	601	L.S.	1	$ 10,000.00	$ 10,000.00
11	18" Class III RCP	606	L.F.	126	$ 36.00	$ 4,536.00
12	24" Class III RCP	606	L.F.	92	$ 45.00	$ 4,140.00
13	30" Class III RCP	606	L.F.	130	$ 61.00	$ 7,930.00
14	14"x23" Class III Horizontal Ellipitical Concrete Pipe	606	L.F.	61	$ 51.00	$ 3,111.00
15	Twin 8'x4' Box Culvert	607	L.F.	52	$ 785.00	$ 40,820.0
16	Drop Inlet (Curb Inlet "A")	609	Each	6	$ 3,208.00	$ 19,248.0
17	Silt Fence	621	L.F.	3,620	$ 2.30	$ 8,326.00
18	Solid Sodding	622	S.Y.	9,290	$ 4.30	$ 39,947.00
19	Geotextile Fabric (Type 5)	625	S.Y.	140	$ 3.00	$ 420.00
20	Combination Curb & Gutter	634	L.F.	6,650	$ 14.00	$ 93,100.00

REVISED 05/24/2018 (Addendum No. 2)

21	Thermoplastic Pavement Marking Yellow (4")	719	L.F.	6,280	$ 1.10	$ 6,908.00
22	Standard Sign (R1-1 & R1-4)	726	Each	4	$ 225.00	$ 900.00
23	Standard Sign (W1-1L)	726	Each	1	$ 200.00	$ 200.00
24	Standard Sign (W1-1R)	726	Each	1	$ 200.00	$ 200.00
25	Construction Layout	SP	L.S.	1	$ 3,600.00	$ 3,600.00
26	Construction Testing	SP	L.S.	1	$ 1,500.00	$ 1,500.00
27	Stabilized Construction Access	SP	Each	1	$ 2,400.00	$ 2,400.00
25	Concrete Washout Area	SP	Each	1	$ 500.00	$ 500.00
29	Curb Inlet Sediment Barriers	SP	Each	6	$ 165.00	$ 990.00
30	Curb Opening & Concrete Flume	SP	Each	10	$ 600.00	$ 6,000.00
31	Type B Headwall (18")	SP	Each	3	$ 500.00	$ 1,500.00
32	Type B Headwall (30")	SP	Each	1	$ 636.00	$ 636.00
33	Type B Headwall (Special - 15" Vertical/24" Horizontal)	SP	Each	2	$ 490.00	$ 980.00
34	Type D Headwall (18")	SP	Each	1	$ 1,755.00	$ 1,755.00
35	Type D Headwall (24")	SP	Each	1	$ 2,414.00	$ 2,414.00
36	Type D Headwall (30")	SP	Each	2	$ 3,275.00	$ 6,550.00
37	Box Culvert Wingwalls	SP	Each	4	$ 3,000.00	$ 12,000.00
38	Rip-Rap	SP	Tons	550	$ 30.00	$ 16,500.00
39	Pegged Sod	SP	S.Y.	410	$ 6.00	$ 2,460.00

TOTAL BASE BID $ 743,644.00

WRITTEN IN WORDS:

SEVEN HUNDRED FORTY THREE THOUSAND SIX HUNDRED FORTY FOUR DOLLARS

REVISED 05/24/2018 (Addendum No. 2)

ALLOWANCE ITEMS

1	Undercut	16	C.Y.	1,900	$ 5.00	$ 9,500.00
2	Stone Backfill (For Undercut Replacement)	207	Tons	4,000	$ 24.00	$ 96,000.00
3	Geotextile Fabric (Type 8)	625	S.Y.	3,800	$ 1.75	$ 6,650.00

TOTAL ALLOWANCE BID $ 112,150.00

WRITTEN IN WORDS:

ONE HUNDRED TWELVE THOUSAND ONE HUNDRED FIFTY DOLLARS

AIA® Document A310™ – 2010

Bid Bond

CONTRACTOR:
(Name, legal status and address)
Meadows Contractors, LLC
3663 East Parker
Jonesboro, AR 72404

SURETY:
(Name, legal status and principal place of business)
Fidelity & Deposit Co. of Maryland
1299 Zurich Way
Schaumburg, IL 60196-1056

OWNER:
(Name, legal status and address)
City of Jonesboro, AR

BOND AMOUNT: $ Five Percent of the amount of the bid-----(5%)

PROJECT:
(Name, location or address, and Project number, if any)
Jonesboro Shooting Sports Complex Entrance Road, Phase 1A
Bid # 2018: 27

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 29th day of May, 2018

Meadows Contractors, LLC

(Witness)

(Principal) (Seal)

(Title) MEMBER

Fidelity & Deposit Co. of Maryland

(Witness)

(Surety) (Seal)

(Title) Justin Van Menard
Attorney-in-Fact

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **MICHAEL BOND, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **David A. MCDONNELL, Jeffrey S. HALL, Joe B. EVANS, Justin V. MENARD and Candance R. HOLLAND, all of Cordova, Tennessee, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 19th day of January, A.D. 2018.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: _____
Assistant Secretary
Joshua Lecker

_____
Vice President
Michael Bond

State of Maryland
County of Baltimore

On this 19th day of January, A.D. 2018, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **MICHAEL BOND, Vice President, and JOSHUA LECKER, Assistant Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

_____
Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2019

POA-F 164-0336A

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 24th day of May, 2018.

David McVicker, Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT ALL REQUIRED INFORMATION TO:

Zurich American Insurance Co.
Attn: Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056

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: _____.

Statement of Bidder's Qualifications Answers

1. Meadows Contractors, LLC.
2. P. O. Box 16540 – Jonesboro, AR 72403
3. 2005
4. Arkansas
5. 1 year
6.

Project	Contract amt	Date of Completion
AHTD Job #100654	$14,522,170	07-2018
Trumann Football Stadium	1,088,000	10-2018

7. Earthwork, Street & Road, & Commercial Concrete
8. No
9. No
10. No
11.

Project	Contract amt.	Date of Completion
Hwy Job #100567	4,008,133.00	08-2014
Hwy Job #100711	2,323,905.00	10-2014
Jonesboro Airport	621,870.00	05-2015
Trumann Baseball Complex	1,269,000.00	04-2015
Crowley's Ridge Trail	1,382,735.00	03-2015
Southwestern Power Admin	490,000.00	12-2017

12. Dozers, Excavators, Tri-axle trucks, Off road trucks, Compaction Equipment and Skid steer loaders.
13. 23 years
14. Rick Meadows – Member has 30 years experience
    Garry Meadows – Member has 48 years experience
    Bryan Meadoews – Member has 25 years experience
    Dale Wood – Member has 28 years experience
15. 500,000.00
16. First National Bank – Matt Rankin
17. Yes.

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 JONESBORO, AR this 29

day of MAY, 20 18.

MEADOWS CONTRACTORS, LLC
(Name of Bidder)

By Dale Wood

Title MEMBER

STATE OF ARKANSAS)

COUNTY OF CRAIGHEAD)

DALE WOOD being duly sworn deposes and says that

he is MEMBER of MEADOWS CONTRACTORS, LLC
(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 29 day of MAY, 20 18.

Carolyn S. Meadows
(Notary Public)

My Commission Expires:

7-17-18

CAROLYN S. MEADOWS NOTARY PUBLIC MY COMMISSION EXPIRES: 07-17-18 Craighead County, Arkansas

VII. CONTRACT

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

between Meadows Contractors, LLC.

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

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

W I T N E S S E T H:

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 Jonesboro Shooting Sports Complex Entrance Road – Phase 1A, in strict accordance with the Contract Documents, including all Addenda thereto

Addendum #1 dated May 14, 2018

Addendum #2 dated May 24, 2018

_____ dated _____

as prepared by the Engineer.

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

ARTICLE 3. Contract Time. The Contractor agrees to begin work within ten (10) calendar days after issuance by the Owner of a "Work Order" or "Notice to Proceed" and to complete the work within ninety (90) calendar days thereafter (except as modified in the GENERAL CONDITIONS of these Contract Documents). If the Contractor shall fail to complete the work within the time specified, he and his Surety shall be liable for payment to the Owner, as liquidated damages ascertained and agreed, and not in the nature of a penalty, the amount specified in the SPECIAL CONDITIONS of these Contract Documents for each day of delay. To the extent sufficient in amount, liquidated damages shall be deducted from the payments to be made under this Contract.

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

a. This Agreement (Contract)
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:

_____
(Contractor)

_____ By_____

_____ Title_____

_____
(Street)

_____
(City)

City of Jonesboro
(Owner)

_____ By_____

_____ _____

_____

VIII. ARKANSAS PERFORMANCE-PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, _____

as Principal, hereinafter called Principal, and _____

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

THE CONDITION OF THIS OBLIGATION IS SUCH THAT:

WHEREAS, The Principal entered into a Contract with the Owner by written Agreement dated the _____ day of _____, 20____, a copy of which is attached hereto and made a part hereof, hereinafter referred to as the Contract, for the Jonesboro Shooting Sports Complex Entrance Road – Phase 1A.

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____.

_____
(Principal)

By_____

Title_____

SEAL

_____
(Surety)

By_____
(Attorney-in-Fact)

NOTES:

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

IX. GENERAL CONDITIONS

TABLE OF CONTENTS

GC.1 DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

(11) The term "Local Public Agency" or "Owner" means the City of Jonesboro, which is

authorized to undertake this Contract.

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

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

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

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

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

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

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

GC.2 SUPERINTENDENCE BY CONTRACTORS

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

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

GC.3 CONTRACTOR'S EMPLOYEES

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

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

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

GC.4 SAFETY OF CONTRACTOR'S EMPLOYEES

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

GC.5 SUBCONTRACTS

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

GC.6 OTHER CONTRACTS

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

GC.7 CONTRACTOR'S INSURANCE

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

(1) Workmen’s Compensation	- Statutory Limit
(2) Employer's Liability for Hazardous Work	- If Needed

(3) Public Liability (Bodily Injury)	- $1,000,000/occurrence
and Property Damage	- $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 Owner requires the Contractor to name the City of Jonesboro and the Engineer as an additional insured on their Protective Liability insurance, which shall be in force for the entire project period. Limits of liability shall be the following:

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

GC.9 FITTING AND COORDINATION OF THE WORK

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

GC.10 MUTUAL RESPONSIBILITY OF CONTRACTORS

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

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

GC.11 PAYMENT TO CONTRACTOR

Payment may be made to the Contractor once a month in accordance with the Payment to Contractors Schedule provided at the end of this section. 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.

The amount of the payment due to the Contractor shall be determined by the total value of work completed to date, deducting five percent (5%) 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. 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.

PAYMENT TO CONTRACTORS 2018 SCHEDULE - CONTRACTED PROJECTS	
City of Jonesboro Payment Schedule	**Deadline for Invoice Submittal to Engineering**
Monday, January 08, 2018	Friday, December 29, 2017
Thursday, February 08, 2018	Monday, January 29, 2018
Thursday, March 08, 2018	Monday, February 26, 2018
Monday, April 09, 2018	Friday, March 30, 2018
Tuesday, May 08, 2018	Friday, April 27, 2018
Friday, June 08, 2018	Tuesday, May 29, 2018
Monday, July 09, 2018	Friday, June 29, 2018
Wednesday, August 08, 2018	Monday, July 30, 2018
Monday, September 10, 2018	Friday, August 31, 2018
Monday, October 08, 2018	Friday, September 28, 2018
Thursday, November 08, 2018	Monday, October 29, 2018
Monday, December 10, 2018	Friday, November 30, 2018
Tuesday, January 08, 2019	Friday, December 28, 2018

GC.12 USE OF COMPLETED PORTIONS

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

GC.13 CHANGES IN THE WORK

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

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

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

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

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

(1) If the Proposal is acceptable the Local Public Agency will prepare the Change Order in accordance therewith for acceptance by the Contractor and

(2) If the Proposal is not acceptable and prompt agreement between the two (2) parties cannot be reached, the Local Public Agency may order the Contractor to proceed with the work on a Force Account basis, under which the net cost shall be the sum of the actual costs that follow:

(A) Labor, including foremen;

(B) Materials entering permanently into the work;

(C) The ownership or rental cost of construction plant and equipment during the time of use on the extra work;

(D) Power and consumable supplies for the operation of power equipment;

(E) Insurance;

(F) Social Security and old age and unemployment contributions.

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

Each Change Order shall include in its final form:

(1) A detailed description of the change in the work.

(2) The Contractor's Proposal (if any) or a conformed copy thereof.

(3) A definite statement as to the resulting change in the Contract price and/or time.

(4) The statement that all work involved in the change shall be performed in accordance with Contract requirements except as modified by the Change Order.

GC.14 CLAIMS FOR EXTRA COST

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

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

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

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

GC.15 OWNER'S RIGHT TO TERMINATE CONTRACT

Termination for Cause

If the Contractor shall be adjudged as bankrupt or shall file a petition for an arrangement or reorganization under the Bankruptcy Act, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except under conditions where extension of time is approved, to supply adequate workmen, equipment and material, or disregard laws, ordinances, or the instructions of the Engineer, or otherwise be guilty of a violation of any provisions of the Contract;

provided further that if the Contractor at any time fails to comply with any applicable Federal or State regulation which prevents either the Local Public Agency or the Contractor from fulfilling its obligations under these Contract Documents, then the Owner upon certification of the Engineer that sufficient cause exists to justify such action may, without prejudice to any other right or remedy, and after giving the Contractor ten (10) days' written notice, terminate the employment of the Contractor.

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

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

Termination for Convenience

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

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

(1) cease operations as directed by the Owner in the notice;

(2) take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

(3) except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing Subcontracts and purchase orders and enter into no further Subcontracts and purchase orders.

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

GC.16 SUSPENSION OF WORK

Should contingencies arise to make such action necessary, the Owner shall have the right to suspend

the whole or any part of the work for a period not to exceed sixty (60) days by giving the Contractor notice in writing three (3) days prior to the suspension.

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

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

The Engineer may suspend work pending the settlement of any controversy. The Contractor shall not be entitled to any claim for loss or damage by reason of such delay, nor shall he be entitled to any extension of time; but an extension may be granted by the Owner at his discretion.

GC.17 DELAYS - EXTENSION OF TIME - LIQUIDATED DAMAGES

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

1) Requests for extension of time shall be in writing. No extension of time shall be granted automatically.

2) The Contractor claiming an extension of time because of any of the contingencies hereinabove mentioned, shall, within ten (10) days of the occurrence of the contingency which justifies the delay, notify the Owner in writing of his claim and the reasons therefore.

3) In event of a continuing cause of delay, only one claim is necessary.

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

(1) To any acts of the Government, including controls or restrictions upon requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency;

(2) To any acts of the Owner;

(3) To causes not reasonable foreseeable by the parties of this Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other Contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones, and other extreme weather conditions.

(4) To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs (1), (2), and (3) of this paragraph.

It is acknowledged between the parties to this Contract that the work to be performed by the Contractor will result in a benefit to the Owner and that a delay in completion of the work will be detrimental to the Owner. It is further acknowledged that, while work is in progress, the Owner shall incur an indeterminable amount of expense as a result of necessary supervision of the work and other overhead and administrative expenses.

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

GC.18 DISPUTES

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

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

If the Contractor does not agree with any decision of the Local Public Agency, he shall in no case allow the dispute to delay the work, but shall notify the Local Public Agency promptly that he is proceeding

with the work under protest, and he may then except the matter in question from the final release.

GC.19 ASSIGNMENT OR NOVATION

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

GC.20 TECHNICAL SPECIFICATIONS AND DRAWINGS

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

GC.21 SHOP DRAWINGS

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

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

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

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

> "Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner".

GC.22 REQUESTS FOR SUPPLEMENTARY INFORMATION

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

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

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

pertinent. No substitute shall be ordered or installed without such performance guarantee and bonds as the Owner may require which shall be furnished at Contractor's expense.

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

GC.24 SAMPLES, CERTIFICATES, AND TESTS

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

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

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

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

(1) The Contractor shall furnish without extra cost, including packing and delivery charges,

all samples required for testing purposes, except those samples taken on the project by the Engineer;

(2) The Contractor shall assume all costs of re-testing materials which fail to meet Contract requirements;

(3) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient; and

(4) All Construction materials shall be tested in accordance with AHTD Specifications and at the contractor's expense.

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 Jonesboro Fire Department.

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

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

GC.33 OBSERVATION OF WORK

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

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

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

Observers may be appointed by the Engineer or Owner. Observers shall have no authority to permit any deviation from the Plans and Specifications except on written order from the Engineer and the Contractor will be liable for any deviation except on such written order. Observers shall have authority, subject to the final decision of the Engineer, to condemn and reject any defective work and to suspend the work when it is not being performed properly.

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

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

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

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

Observation of materials and appurtenances to be incorporated in the Improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such observation and acceptance, unless otherwise stated in the Technical Specifications,

shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the observation of materials as a whole or in part will be made at the project site.

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

GC.34 REVIEW BY LOCAL PUBLIC AGENCY OR OWNER

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

GC.35 PROHIBITED INTERESTS

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

GC.36 FINAL INSPECTION

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

GC.37 PATENTS

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

GC.38 WARRANTY OF TITLE

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

GC.39 GENERAL GUARANTY

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

X. SUPPLEMENTAL GENERAL CONDITIONS

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SGC.1 PROGRESS SCHEDULE

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

(1) Actual date construction is scheduled to start if different from the date of notice to proceed.

(2) Planned contract completion date.

(3) Beginning and completion dates for each phase of work.

(4) Respective dates for submission of shop drawings and the beginning of manufacture, the testing of, and the installation of materials, supplies, and equipment.

(5) All construction milestone dates.

(6) A separate graph showing work placement in dollars versus contract time. The schedule shall incorporate contract changes as they occur. The schedule shall be maintained in an up-to-date condition and shall be available for inspection at the construction site at all times.

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

SGC.2 DRAWINGS

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

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

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

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SGC.4 RECORD DRAWINGS

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

comments, dimensions, etc. shall be legible. The Record Drawings shall be stored flat and shall not be rolled. The Record Drawings shall be submitted to the Engineer before the project can be accepted.

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

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

SGC.5 TRENCH AND EXCAVATION SAFETY SYSTEM

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

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

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

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

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

The work required by this item will not be measured for separate payment, but will be considered subsidiary to other items of the contract. If a Trench and Excavation Safety System is needed, the Contractor shall submit to the Engineer 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

Wildlife and Sport Fish Restoration Program is exempt from Davis-Bacon.

XI. SPECIAL CONDITIONS

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SC.1 GENERAL

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

SC.2 LOCATION OF PROJECT

The project is located on Moore Road, Jonesboro, Arkansas. A map showing the general location is included in the plan sets.

SC.3 SCOPE OF WORK

The work to be performed under this Contract consists of furnishing all materials, labor, supervision, tools and equipment necessary to construct the Jonesboro Shooting Sports Complex Entrance Road – Phase 1A.

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 within ten (10) days of the work order or notice to proceed. After award of the Contract is made and the Contract Documents are completed, the Engineer shall issue a Notice to Proceed, notifying the Contractor to proceed with the construction of the project, subject to the provisions of this paragraph.

SC.5 FORMS, PLANS AND SPECIFICATIONS

Forms of Proposal, Contract and Bonds, and Plans and Specifications may be examined at the City of Jonesboro Engineering Department, 300 South Church Street, Jonesboro, Arkansas 72403, and obtained upon payment of $25.00 each. No refunds will be made.

SC.6 LIQUIDATED DAMAGES FOR DELAY

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

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

2. Extensions of time for completion, under the condition of 2(a) next below, will be granted;

extensions may be granted under other stated conditions:

a. If the satisfactory execution and completion of the Contract shall require work or material in greater amounts or quantities than those set forth in the Contract, then the Contract time shall be increased in the same proportion as the additional work bears to the original work contracted for.

b. An average or usual number of inclement weather days, when work cannot proceed, is to be anticipated during the construction period and is not to be considered as warranting extension of time. If, however, it appears that the Contractor is delayed by conditions of weather, so unusual as not to be reasonably anticipated, extensions of time may be granted.

c. Should the work under the Contract be delayed by other causes which could not have been prevented or contemplated by the Contractor, and which are beyond the Contractor's power to prevent or remedy, an extension of time may be granted. Such causes of delay shall include but not necessarily be limited to the following:

(1) Acts of God, acts of the public enemy, acts of the Owner except as provided in these Specifications, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.

(2) Any delays of Subcontractors or suppliers occasioned by any of the causes specified above.

3. The Resident Project Representative or other authorized representative of the City shall keep a written record sufficient for determination as to the inclusion of that day in the computation of Contract time. This record shall be available for examination by the Contractor during normal hours of work as soon as feasible after the first of each construction month. In case of disagreement between the representative of the City and the Contractor, as to the classification of any day, the matter shall be referred to the City whose decision shall be final.

4. The amount of all extensions of time for whatever reason granted shall be determined by the Owner. In general, only actual and not hypothetical days of delay will be considered. The Owner shall have authority to grant additional extensions of time as the Owner may deem justifiable.

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

Amount of Contract	Liquidated Damages Per Day
Less than $25,000.00	$100.00
Not less than $ 25,000.00 but less than $ 50,000.00	$150.00
Not less than $ 50,000.00 but less than $ 100,000.00	$200.00
Not less than $100,000.00 but less than $ 500,000.00	$250.00
Not less than $500,000.00 but less than $1,000,000.00	$350.00
Over $1,000,000.00	$500.00

1. Time is an essential element of the Contract and it is important that the work be pressed vigorously to completion. Loss will accrue to the public due to delayed completion of the facility; and the cost to the Owner of the administration of the Contract, including engineering, inspection and supervision, will be increased as the time occupied in the work is lengthened.

2. Should the Contractor fail to complete the work as set forth in the Specifications and within the time stipulated in the Contract, there shall be deducted the amount shown in the schedule above, for each day of delay, from any monies due or which may thereafter become due him, not as a penalty, but as ascertained and liquidated damages.

3. Should the amount otherwise due the Contractor be less than the amount of such ascertained and liquidated damages, the Contractor and his Surety shall be liable to the Owner for such deficiency.

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

SC.7 KNOWLEDGE OF CONDITIONS

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

SC.8 PERMITS AND RIGHTS-OF-WAY

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

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

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

SC.9 REFERENCE SPECIFICATIONS

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

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

SC.10 PUBLIC UTILITIES AND OTHER PROPERTY TO BE CHANGED

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

SC.11 USED MATERIALS

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

SC.12 EXISTING STRUCTURES

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

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

SC.13 USE OF EXPLOSIVES

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

SC.14 BARRICADES, LIGHTS, AND WATCHMEN

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

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

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

SC.15 FENCES AND DRAINAGE CHANNELS

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

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

SC.16 WATER FOR CONSTRUCTION

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

SC.17 MATERIAL STORAGE

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

SC.18 EXISTING UTILITIES AND SERVICE LINES

The Contractor shall be responsible for the protection of all existing utilities or improvements crossed by or adjacent to his construction operations. Where existing utilities or service lines are cut, broken, or damaged, the Contractor shall replace or repair immediately the utilities or service lines with the

same type of original material and construction or better, at his own expense.

SC.19 TESTING, INSPECTION AND CONTROL

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

Testing and control of all materials used for this project shall be done in accordance with the Standard Specifications and The Arkansas State Highway and Transportation Department Field Sampling manual.

Only Technicians certified by the Center for Training Transportation Professionals, University of Arkansas Department of Civil Engineering, Fayetteville, Arkansas (CTTP) shall perform quality control and acceptance testing on this project. Testing Laboratories shall be CTTP certified also. The Contractor shall furnish, at his own expense, all necessary specimens for testing of the materials, as required by the Engineer.

Materials testing for this project will be at the Contractor's expense with the exception of verification testing by an independent, approved Testing Laboratory, furnished by the City of Jonesboro. The City of Jonesboro reserves the right to employ a certified lab to perform verification and acceptance testing normally performed by the Arkansas State Highway and Transportation Department. The Contractor shall cooperate fully with the testing firm so employed by the City of Jonesboro

SC.20 BOND

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

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

SC.21 LIGHT AND POWER

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

SC.22 LINES AND GRADES

The Contractor will be furnished baselines and benchmarks to control the work. The Contractor shall be responsible for the additional instrument control necessary to layout and construct the improvements. The Contractor's instrument control of the work shall not be measured for separate payment.

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

a. For the full length and width of all areas within the limits of paving, the finished grade of the concrete surface course shall be controlled by grade wires or forms set by the Contractor to control the final surface, in accordance with the plans.

b. For the full length and width of all areas within the limits of paving, the initial courses of bituminous pavement will be controlled by uniform thickness. The course under the final surface course shall be controlled by grade wire, and the final surface course shall be controlled by uniform thickness. The bituminous pavement shall be constructed with a lay down machine with automatic controls and a forty (40) foot ski.

c. For the full length and width of all areas within the limits of paving, the crushed aggregate base course and the sub base course will be controlled with intermediate and final surface stakes, "blue tops". Stakes shall be set as required or as directed by the Engineer to control the construction.

d. The Contractor shall set intermediate line and grade stakes and final grade stakes, "blue tops," as required to control the construction of shoulders.

SC.23 LEGAL HOLIDAYS

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

SC.24 SEQUENCE OF CONSTRUCTION

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

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

SC.25 TEST BORINGS

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

SC.26 TEMPORARY FIELD OFFICE

Not required for this project.

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

Jonesboro Shooting Sports Complex Entrance Road – Phase 1A

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

Jonesboro Shooting Sports Complex Entrance Road – Phase 1A

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 Jonesboro Shooting Sports Complex Entrance Road – Phase 1A 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.

_____
Principal

ATTEST:

_____ BY:_____

_____ _____

SEAL _____
Surety

ATTEST:

_____ BY:_____
Attorney in Fact

_____ _____

XII. TECHNICAL SPECIFICATIONS

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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 Modifications

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 numbers. The individual specification numbers are 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 apply. Each such reference part shall be considered to be a part of these Contract Documents as though copied herein in full.

Certain referenced part of the Standard Specifications are modified in the Specifications that follow. In care of conflict between the Standard Specifications and the Specifications that follow, the Specification that follow shall govern.

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

SP-2 – ADDITIONAL SPECIFICATIONS

SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete structures

B. Concrete Curbs

C. Concrete reinforcement.

D. Concrete curing.

1.02 RELATED REQUIREMENTS

A. Section 33 40 10 – Drainage Manholes, Inlets, and Pipe Endwalls

1.03 REFERENCE STANDARDS

A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2009).

B. ACI 301 - Specifications for Structural Concrete for Buildings; American Concrete Institute International; 2010.

C. ACI 302.1R - Guide for Concrete Floor and Slab Construction; American Concrete Institute International; 2004 (Errata 2007).

D. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; American Concrete Institute International; 2000.

E. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 2010.

F. ACI 306R - Cold Weather Concreting; American Concrete Institute International. 2010.

G. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001 (Reapproved 2008).

H. ACI 315 - Details and Detailing of Concrete Reinforcing.

I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2008.

J. ACI 347 - Guide to Formwork for Concrete; American Concrete Institute International; 2004.

K. ASTM A 185/A 185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2007.

L. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2009b.

M. ASTM C 33 - Standard Specification for Concrete Aggregates; 2008.

N. ASTM C 39/C 39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2009a.

O. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete; 2009a.

P. ASTM C 143/C 143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2009.

Q. ASTM C 150 - Standard Specification for Portland Cement; 2007.

R. ASTM C 171 - Standard Specification for Sheet Materials for Curing Concrete; 2007.

S. ASTM C 173/C 173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2009.

T. ASTM C 260 - Standard Specification for Air-Entraining Admixtures for Concrete; 2006.

U. ASTM C 330 - Standard Specification for Lightweight Aggregates for Structural Concrete; 2005.

V. ASTM C 618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2008a.

W. ASTM C 881/C 881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2002.

X. ASTM C 1059 - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 1999 (Reapproved 2008).

Y. ASTM C 1107/C 1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2008.

Z. ASTM D 1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2004 (Reapproved 2008).

1.04 SUBMITTALS

A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements.

B. Design Mixes: For each concrete mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
   1. Indicate amounts of mix water to be withheld for later addition at Project site.

C. Steel Reinforcement Shop Drawings: Details of fabrication, bending, and placement, prepared according to ACI 315, "Details and Detailing of Concrete Reinforcement." Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.

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1.05 QUALITY ASSURANCE

A. Perform work of this section in accordance with ACI 301 and ACI 318.

B. Acquire cement from same source and aggregate from same source for entire project.

C. Follow recommendations of ACI 305R when concreting during hot weather.

D. Follow recommendations of ACI 306R when concreting during cold weather.

E. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.
   1. Manufacturer must be certified according to the National Ready Mixed Concrete Association's Certification of Ready Mixed Concrete Production Facilities.

F. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, each aggregate from one source, and each admixture from the same manufacturer.

PART 2 PRODUCTS

2.01 FORMWORK

A. Formwork Design and Construction: Comply with guidelines of ACI 347 to provide formwork that will produce concrete complying with tolerances of ACI 117.

B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
   1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.
   2. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.

2.02 REINFORCEMENT

A. Reinforcing Steel: ASTM A 615/A 615M Grade 60 (420).
   1. Type: Deformed billet-steel bars.
   2. Finish: Unfinished.

B. Steel Welded Wire Reinforcement: ASTM A 185/A 185M, plain type.

1. Mesh Size: 6x6.
2. Wire Gage: As shown on the drawings.

C. Reinforcement Accessories:
1. Tie Wire: Annealed, minimum 16 gage.
2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

2.03 CONCRETE MATERIALS

A. Cement: ASTM C 150, Type I - Normal, Type 1A - Air Entraining; Portland type.

B. Fine and Coarse Aggregates: ASTM C 33.
1. Fine Aggregate: Clean, sharp, natural or manufactured sand, free from loam, clay, lumps, or other deleterious substances.
2. Coarse Aggregate: Clean, uncoated, processed, locally available aggregate, containing no clay, mud, loam or foreign matter; maximum size of 1-1/2” at foundations and 1” at slabs.

C. Fly Ash: ASTM C 618, Class C.

D. Water: Clean and not detrimental to concrete.

2.04 CHEMICAL ADMIXTURES

A. Air Entrainment Admixture: ASTM C 260.

B. Other Admixtures: Do not use other admixtures unless approved by architect; added chlorides will not be accepted.

2.05 ACCESSORY MATERIALS

A. Bonding Agent: ASTM C 1059, Type II acrylic non-redispersable type.
1. Polyvinyl Acetate (Interior Only):
a. Euclid “Euco Weld”
b. L & M “Everweld”
c. Or approved equal.
2. Acrylic or Styrene Butadiene:
a. Euclid "SBR Latex"
b. L & M "Everbond"
c. Conspec "Strongbond"
d. Master Builders "Acryl-Set"
e. Sonneborn "Sonocrete"
f. Or approved equal

B. Epoxy Bonding System: ASTM C 881, type as required by project conditions.
1. Conspec "Spec-Bond 100"
2. Euclid "Euco Epoxy System #452 or "Dural Fast Set Epoxy System."
3. L & M "Epabond"
4. Master Builders "Concresive Standard Liquid"
5. Or approved equal

2.06 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

B. Concrete Strength: Establish required average strength for each type of concrete on the basis of trial mixtures, as specified in ACI 301.
1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs.

C. Normal Weight Concrete:
1. Compressive Strength, when tested in accordance with ASTM C 39/C 39M at 28 days: As scheduled.
2. Fly Ash Content: Maximum 20 percent of cementitious materials by weight.
3. Cement Content:

a. 3000 psi mix: 470 lbs/yd^3 without air
b. 4000 psi mix: 564 lbs/yd^3 without air
c. Water-Cement Ratio:
    1) 3000 psi mix: 0.53 without air
    2) 4000 psi mix: 0.44 without air
d. Total Air Content: 4 percent, determined in accordance with ASTM C 173/C 173M.
e. Maximum Slump: As scheduled.

2.07 MIXING

A. Transit Mixers: Comply with ASTM C 94/C 94M.
    1. Furnish batch ticket information.
    2. When air temperature is between 85 and 90 degrees F. reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 degrees F., reduce mixing and delivery time to 60 minutes.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.

B. Verify that forms are clean and free of rust before applying release agent.

C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.

D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

E. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.

3.03 INSTALLING REINFORCEMENT

A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

B. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.

C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.04 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

B. Ensure reinforcement, inserts, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.

C. Separate slabs on grade from vertical surfaces with joint filler.

D. Install joint devices in accordance with manufacturer's instructions.

E. Place concrete continuously between predetermined expansion, control, and construction joints.

F. Do not interrupt successive placement; do not permit cold joints to occur.

3.05 CONCRETE FINISHING

A. Repair surface defects, immediately after removing formwork.

1. Small area honeycombing less than 1 inch deep may be repaired as described below for exposed form finishes.
2. Honeycombing in large areas or honeycombing 1 inch deep or greater may not be repaired. Notify the architect immediately after removal of form work. Architect will determine if concrete is to be removed or the method of repair if repair is allowed by architect.

B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.

C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.
2. Grout mixtures will not be allowed.

3.06 CURING AND PROTECTION

A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
1. Normal concrete: Not less than 7 days.

C. Formed Surfaces: Cure by moist curing with forms in place for full curing period.

D. Surfaces Not in Contact with Forms:
1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding or saturated burlap.
2. Final Curing: Begin after initial curing but before surface is dry.
a. Moisture-Retaining Cover: Seal in place with waterproof tape or adhesive.

3.07 FIELD QUALITY CONTROL

A. Provide free access to concrete operations at project site and cooperate with appointed firm.

B. Submit proposed mix design of each class of concrete to testing firm for review prior to commencement of concrete operations.

C. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.

D. Compressive Strength Tests: ASTM C 39/C 39M. For each test, mold and cure four concrete test cylinders. Obtain test samples for every 75 cu yd or less of each class of concrete placed.

E. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

F. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C 143/C 143M.

3.08 DEFECTIVE CONCRETE

A. Test Results: The testing agency shall report test results in writing to Architect and the General Contractor within 24 hours of test.

B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

C. Repair or replacement of defective concrete will be determined by Architect. The cost of additional testing shall be borne by the General Contractor when defective concrete is identified.

D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect for each individual area.

3.09 SCHEDULE - CONCRETE TYPES AND FINISHES

A. Concrete Curbs:
   1. Compressive strength (28 days): 4000 psi
   2. Slump Range: 3 to 5 inches
   3. Air entrained

V. Drainage Structures
   1. Compressive strength (28 days): 3,000 psi
   2. Slump Range: 3 to 5 inches.

END OF SECTION

SECTION 31 23 00
TRENCHING, BACKFILLING AND COMPACTION

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included
   1. Excavation for piped utility material.
   2. Provide necessary sheeting, shoring and bracing.
   3. Prepare trench bottom with appropriate materials.
   4. Dewater excavation as required.
   5. Place and compact granular beds, as required, and backfill.

1.02 PRECAUTIONS

A. Notify utility companies when necessary to disturb existing facilities and abide by their requirements for repairing and replacing.
B. Protect all vegetation and other features to remain.
C. Protect all benchmarks and survey points.

PART 2 - PRODUCTS

2.01 BEDDING AND BACKFILL MATERIALS

A. Class I Material: Angular, 1/4 to 1 inch graded stone including a number of fill materials that have regional significance such as crushed stone, cinders, slag, and crushed shells.
B. Class II Material: Coarse sands and gravels with a maximum particle dimension of 1-1/2 inch including variously graded sands and gravels containing small percentages of fines, generally granular and non-cohesive, either wet or dry.
C. Class III Material: Fine sand and clayey gravels, including fine sands, sand-clay mixtures, and gravel-clay mixtures.
D. Class IV Material: Silt, silty clays, and clays, including inorganic clays and silts of medium to high plasticity and liquid limits.
E. Class V Material: Organic soils, as well as, soil containing frozen earth, debris, rocks larger than 1-1/2 inches and other foreign material. Whenever encountered in the trench Class V Material shall be removed and disposed of as excess excavation. Class V Material shall not be used for pipe bedding or backfill.
F. Class A Material: Continuous concrete cradle constructed in conformity with details shown on drawings, consisting of Class "B" concrete, 3000 psi minimum comprehensive strength at 28 days.
G. Class B Material: Sand or a natural sandy soil, all passing a 3/8" sieve with not more than 10% passing a No. 200 sieve; or stone, gravel, chert or slag.
H. Class C Material: Natural ground or compacted embankment at a depth of at least 10% of the outside vertical pipe diameter.

PART 3 - EXECUTION

3.01 PREPARATION

A. Install barriers and other devices to protect areas adjacent to construction.
B. Protect and maintain all benchmarks and other survey points.

3.02 EXCAVATION TRENCHES

A. Perform in such a manner as to form a suitable trench in which to place the pipe and so as to cause the least inconvenience to the public.
B. Maximum width at the crown of the pipe - 2'-0" plus the nominal outside diameter of the pipe.
C. Cut pavement along neat, straight lines with either a pavement breaker or pavement saw.
D. Trench depth: As shown on the plans.
E. Align trench as shown on the plans unless a change is necessary to miss an unforeseen

obstruction. If an unforeseen obstruction is encountered, do not proceed without the direction of the Architect.

F. When unstable soil is encountered at the trench bottom, remove it to a depth required to assure support of the pipeline or to a depth directed by Architect and backfill to the proper grade with Class I material.

G. Unless otherwise directed by Project Engineer, all areas requiring undercut shall be underlain by a heavy weight, non-woven geotextile filter fabric sufficient to encapsulate all bedding material as shown on the plans.

H. No more than 50 feet of trench will be excavated ahead of backfilling operations.

3.03 SHEETING SHORING, AND BRACING

A. When necessary or when required by local, State or Federal safety requirements, furnish, put in place, and maintain such sheeting, bracing, etc., as may be required to support the sides of the excavation and to prevent movement which can in any way damage adjacent pavement or other structures, damage or delay the work of construction or endanger life or health.

B. Take care to prevent voids outside the sheeting.

C. If voids are formed, immediately fill and ram to correct voids.

D. Devise plans for performing this work subject and submit to the Architect.

E. Unless adjacent facilities will be injured, remove all sheeting, shoring and bracing after backfill has been placed to within of 18 inches of the final surface grade.

F. If adjacent facilities will be injured by the removal of sheeting, cut shoring off at the top of the pipe and leave the lower section in the trench.

3.04 DISPOSAL OF EXCAVATED MATERIAL

A. Satisfactorily dispose of all excess excavated material that cannot be used or is not suitable for trench backfill.

3.05 UNAUTHORIZED EXCAVATION

A. All excavation outside or below the proposed lines and grades shown on the plans.

B. Backfill areas of unauthorized excavation with the type material necessary (earth, rock or concrete) to insure the stability of the utility or structure involved.

C. Unauthorized excavation or backfill to replace same shall be at Contractor's expense.

3.06 REMOVAL OF WATER

A. Keep excavated areas free of water while work is in progress.

B. Dewatering shall be performed as required by ground conditions at no additional cost to the Owner.

C. Take particular precautions to prevent the displacement of structures or pipelines as a result of accumulated water.

3.07 OBSTRUCTIONS

A. Obstructions shown on the plans are for information only and do not guarantee their exact locations nor that other obstructions are not present.

B. When utilities or obstructions are not shown on the plans but are present at the location of a proposed utility route, the Contractor may request to relocate the pipeline if necessary to avoid disturbing the utility or obstructions.

C. Exercise due care in excavating adjacent to existing obstructions and do not disturb same.

D. In the event obstructions are disturbed, repair or replace as quickly as possible to the condition existing prior to their disturbance.

E. If required by the Conditions of the Contract, pay for the repair or replacement work performed by the forces of the utility company or other appropriate party.

F. If replacement or repair of disturbed obstructions is not performed after a reasonable period of time, the Owner may have the necessary work done and deduct the cost of same from payments to the Contractor.

3.08 INITIAL BACKFILLING

A. Do not begin backfilling before the Soils Engineer has inspected the grade and alignment of the pipe, the bedding of the pipe, and the joints between the pipe. If backfill material is placed over the pipe before an inspection is made, reopen the trench in order for an inspection to be made.

A. The initial backfill shall be mechanically tamped in lifts not exceeding eight inches loose to a minimum of 90% Standard Proctor density, ASTM D698, to a point 18" above the top of the pipe. Compaction testing shall be conducted along the completed initial backfill at 50' maximum intervals, or more frequently as conditions may warrant.

3.09 FINAL BACKFILLING

A. After the backfill has reached a point 18" or more above the top of the pipe, perform final backfilling depending on the location of the work and danger from subsequent settlement.

B. Backfilling in Unimproved Areas:

1. Dispose of and replace all soft or yielding material which is unsuitable for trench backfill with suitable material.
2. Deposit backfill to the surface of the ground by dragline, bulldozer, or other suitable equipment in such a manner so as not to disturb the pipe.
3. Backfill shall be compacted to at least 90% Standard Proctor density, ASTM D698. Backfilling shall be performed in lifts not exceeding eighteen inches, loose. Compaction testing shall be conducted along every third lift at 50' maximum intervals, or more frequently as conditions may warrant.
4. Neatly round sufficient surplus excavated material over the trench to compensate for after settlement.
5. Dispose of all surplus excavated material.
6. Prior to final acceptance, remove all mounds to the elevation of the surrounding terrain.
7. Contractor shall maintain backfilled trench until warrantee period of project is expired.

B. Backfilling Beneath Driveways and Streets where Rigid and Non-Rigid Type Surfacing is to be Replaced:

1. Use Class II granular material. If detailed on the Plans as such, a low strength flowable concrete backfill shall be used. In this case, delete Items C-2, 3 and 4 below:
2. Carefully deposit in uniform layers, not to exceed 24" thick.
3. Compact each layer with tools suitable for that purpose in such a manner so as to not disturb the pipe.
4. Backfill shall be compacted to a minimum Relative Density of 70%, ASTM D4253 and D4254.

D. Backfilling of Shoulders Along Streets and Highways:

1. Backfilling methods and materials for shoulders along streets and highways shall be in accordance with the requirements of governing local, county, or state departments maintaining the particular roadway or highway.
2. Replace with similar materials, all shoulders which may be damaged or destroyed as a result of pipe trenching.
3. Backfill shall be compacted to at least 95% Standard Proctor, ASTM D 698. Fill shall be placed in loose lifts not exceeding 9". Compaction testing shall be conducted along each lift at 50' maximum intervals, or more frequently as conditions may warrant.

E. Crushed Stone for Pavement Maintenance and Shoulder Replacement:

1. Where possible, salvage and reuse all base material that is removed during

construction.

2. Wet and thoroughly compact crushed stone and blade to tie into the existing surface prior to final acceptance.

F. Backfilling Under Proposed Areas to be Paved:

1. Carefully deposit in-situ excavated material which meets the requirement of Classes I, II, III or IV materials specified in Part 2.01 of this Section in loose lifts not exceeding 12".
2. Compact each lift to at least 95% Standard Proctor, ASTM D698.
3. Compaction testing shall be required for every second lift at 50' maximum intervals, or more frequently, as conditions may warrant.

END OF SECTION 31 23 00

SECTION 31 37 13
RIP-RAP

PART 1 - GENERAL

1.01 WORK INCLUDED

A. Preparation of Foundation.

B. Placing of stone rip-rap.

PART 2 - PRODUCTS

2.01 STONE

A. Stone shall be sound, dense and durable, free from cracks, pyrite intrusions and other structural defects and have a density of not less that 150 pounds per solid cubic foot. When tested by the Los Angeles method, the percent of wear shall not exceed 60.

When the stone is subjected to five alternations of the sodium sulfate soundness test, the weighted percentage of loss shall be not more than 15.

Stone shall conform to one of the following graduations and shall be approximately rectangular in shape:

RIP-RAP GRADATIONS

GRADE B
1,200 pound maximum weight

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

GRADE C
400 pound maximum weight

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

GRADE D
125 pound maximum weight

Weight			Percent
90 lbs.	to	125 lbs.	25%
25 lbs.	to	89 lbs.	50%
10 lbs.	to	24 lbs.	15%
under 10 lbs.			10%

2.02 FILTER FABRIC AND FASTENERS

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

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

Unless noted differently above, the Filter Fabric shall meet or exceed the minimum requirements for Class A erosion control fabric as specified in AASHTO M288-92.

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

Pins may be any commercially available pin 6 inches in length capable of retaining a washer. Washers may be any commercially available washer 2 inches in diameter and compatible with the pin. The pins and washers shall be manufactured from corrosion resistant metal material.

PART 3 - EXECUTION

3.01 SUBGRADE PREPARATION

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

Surplus excavated material shall be removed from the site and disposed of as shown on the plans or as directed by the Owner's Representative. Spoil material shall not be disposed of in a watercourse or on the banks of a watercourse.

3.02 FILTER FABRIC

Unless otherwise specified, filter fabric shall be placed on the prepared and compacted subgrade within the limits shown on the Plans for stone and/or sacked sand cement rip-rap. The filter fabric shall be laid loosely without wrinkles or crease. When more than one width or length of filter fabric is necessary, the joints shall be overlapped a minimum of 24 inches. Securing pins with washers shall be inserted through both strips of overlapped material and into the material beneath, until the washer bears against the fabric and secures it firmly to the base material. These securing pins shall be inserted through the overlapped fabric at not greater than 2-foot intervals along a line through the midpoint of the overlap. If the fabric is torn or damaged, a patch overlapping the edges of the damaged area by 2 feet shall be sewn securely to the fabric with a continuous, monofilament, rot-proof material.

3.03 STONE RIP-RAP

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

END OF SECTION

SECTION 31 40 00
EXCAVATING, FILLING AND GRADING

PART 1 - GENERAL

1.01 SUMMARY

A. Each bidder will be furnished a copy of a site grading plan that is believed to accurately represent the existing grades. The Contractor shall inspect and reviewed the existing site grades and include in his bid proposal necessary unit price funding to bring the site to the grade level shown on Civil Drawings.
See unit price requests on the Bid Form.

B. Work Included
1. Grade and fill the site to the elevations shown on the Drawings, as specified herein, and as needed to meet the requirements of the Construction Documents.

C Related Work
1. Section 31 23 00: Trenching, Backfilling and Compaction

1.02 QUALITY ASSURANCE

A. Testing Laboratory and Soils Engineer:
1. Soils compaction testing of in-place soil, and filled and compacted areas will be performed by Testing Laboratory as approved by Project Engineer in accordance with those standards listed herein.

1.03 PROTECTION

A. Protect excavations and grounds from water ponding and water damage. Construct and maintain temporary drainage. Pump, if required to keep excavations free of water. Maintain site in well drained condition at all times.

B. Protect, maintain and restore bench marks, monuments, and other reference points affected by this work. If bench marks, monuments or other permanent reference points are displaced or destroyed, points shall be re-established and markers reset under supervision of a licensed surveyor who shall furnish Project Engineer with certification of his work.

C. Protect utilities and other construction designated to remain to place.

1.04 LINES AND GRADES

A. It is imperative that lines and grades established on drawings, except for allowance for installation of fill aggregate, concrete, and topsoil established below, be met when this work is completed.

1.05 SUBMITTALS

A. Submit one copy of permits and notices obtained from local jurisdiction before commencing work.

B. Obtain and submit certification of adequacy of site grading and filling from Testing Laboratory, signed and sealed by a qualified Soils Engineer, as approved by Project Engineer stating that work is in accordance with Contract Documents, and that soils are capable of supporting the structure to be constructed under the Contract.

C. If bench marks and other permanent reference points are displaced, obtain and submit certification, signed and sealed by a licensed surveyor, of proper re- establishment of bench marks and reference points.

PART 2 - PRODUCTS

2.01 GRANULAR FILL

A. Washed Natural gravel or crushed stone not more than 3/4 inch in its largest dimension and ranging down, but with less than 5 percent passing a No. 200 sieve.

2.02 EARTH FILL

A. Clean earth (free from organic material, cinders, ice and rocks over 2 inches in their longest dimension) consisting of either low plasticity clay having a plasticity index of less than 30, or a cohesionless soil with less than 15 percent passing a No. 200 sieve.

B. On-site earth removed during cutting operations may be used if it meets the above requirements.

PART 3 - EXECUTION

3.01 DISPOSITION OF ABANDONED UTILITIES

A. If abandoned underground utility lines and electric conduit are uncovered (verify with respective utility company) in the course of grading, then that part uncovered shall be removed and capped off at points of removal as well as at property lines.

3.02 REMOVAL AND STORAGE OF TOPSOIL

A. Remove sufficient topsoil from areas to be covered by construction, excavated, filled or graded to provide the amount required in topsoil replacement.

B. Remove topsoil to entire depth.

C. Mow grass, weeds and other annual-type growth, and brush close to ground.

D. Scrape or rake area to remove brush, roots, loose grass, weeds and rocks before stripping topsoil.

E. Topsoil to be stored for reuse shall meet requirements established above.

F. Store topsoil in area designated by Project Engineer. Store so as to prevent erosion and mixture with debris and other materials.

3.03 SITE EXCAVATION AND PROOF-ROLLING

A. Proof-roll these areas with a loaded rubber-tired dump truck having a single axle load of approximately 40,000 pounds. Operate the truck at a normal walking speed so that the Soils Engineer may observe the ground while walking beside the truck.

B. The Soils Engineer shall inspect the areas for soft spots.

3.04 REMEDIAL WORK

A. During the course of proof-rolling and inspection, as the Soils Engineer finds soft spots, he will direct cutting out of soft spots and backfilling with specified, compacted earth fill.

3.05 GENERAL SITEWORK

A. Fill and grade to attain elevations indicated +/- 0.1' less allowances for placement of aggregate, concrete, walks, drives and parking areas, and topsoil.

B. Where drives are indicated to join the building, allow for placement of base as shown on the Drawings.

3.06 GRADING

A. Grade to uniform levels and slopes, without abrupt changes. Make transitions from levels to slopes with roundings of large radius.

B. Finish areas to a reasonably true and even plane at required elevations, less allowances for items specified above.

C. Along the lines indicating the limits of work, taper finish grade to the existing grade at a slope matching the natural contour. Perform all of this work within the limit lines.

3.07 FILLING

A. When excavation is complete, place washed granular fill in areas to be paved. Roll and tamp granular fill to thoroughly compact it.

B. Outside of areas where no paving is shown, place specified earth fill in loose lifts of 12" and thoroughly compact.

3.08 COMPACTION DENSITIES

A. For all compaction, except those areas where there will be no construction or pavement:

1. Compact to a density of 95% Standard (ASTM D-698).

B. For areas where no construction will be placed, compact to a density of 90 percent at optimum moisture content (ASTM D 1557, Modified Proctor Method).

3.09 COMPACTION TESTING

A. While filling and compacting operations are in progress, Soils Engineer shall make density tests at random depths and at random locations to determine adequacy of compaction. If compaction tests do not meet specified densities, take action to compact to required densities and pay for retesting to prove compaction densities.

3.10 PLACING OF TOPSOIL

A. Place topsoil in areas disturbed by construction and not covered by paving and other hard-surfaced materials.

B. Scarify sub-grade to a depth of 3" and spread topsoil uniformly to bring finished grade to elevations indicated after topsoil has been lightly compacted with roller. Topsoil shall be 6" thick.

C. Level and slope topsoil as indicated so that finished grades are +/- 0.1' elevations indicated.

3.11 CLEANUP

A. After all other work of this section is complete, leave area clean and free of any debris.

END OF SECTION 31 40 00

SECTION 32 11 23
AGGREGATE BASE COURSES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Aggregate base course.

1.02 REFERENCE STANDARDS

A. AASHTO M 147 - Standard Specification for Materials for Aggregate and Soil-Aggregate Subbase, Base and Surface Courses; 1965 (2004).

B. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; 2015.

C. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.

D. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012.

E. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012.

F. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method; 2008.

G. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.

H. ASTM D2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth); 2005.

I. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth); 2005.

J. ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2010.

K. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2010.

L. Standard Specifications for Highway Construction, Arkansas State Highway and Transportation Department, Edition of 2003.

1.03 SUBMITTALS

A. Samples: 10 lb sample of each type of aggregate; submit in air-tight containers to testing laboratory.

B. Materials Sources: Submit name of imported materials source.

C. Aggregate Composition Test Reports: Results of laboratory tests on proposed and actual materials used.

D. Compaction Density Test Reports.

1.04 DELIVERY, STORAGE, AND HANDLING

A. When necessary, store materials on site in advance of need.

B. Aggregate Storage, General:
   1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
   2. Prevent contamination.
   3. Protect stockpiles from erosion and deterioration of materials.

C. Verify that survey bench marks and intended elevations for the Work are as indicated.

PART 2 PRODUCTS

2.01 MATERIALS

A. Coarse Aggregate Type AHTD Class 7: Angular crushed stone; free of shale, clay, friable material and debris.
   1. Graded in accordance with AASHTO T 11 and T 27, within the following limits:
      a. 1 1/2 inch sieve: 100 percent passing
      b. 3/4 inch sieve: 50 to 90 percent passing.
      c. No. 4 sieve: 25 to 55 percent passing.
      d. No. 40: 10 to 30 percent passing.
      e. No. 200: 3 to 10 percent passing.

B. Medium Aggregate Type C-Ballast: Natural stone; washed, free of clay, shale, organic matter. C-Ballast for French Drain only.
   1. Graded in accordance with ASTM C136/C136M, within the following limits:
      a. Minimum Size: 1/4 inch.

2.02 SOURCE QUALITY CONTROL

A. Where aggregate materials are specified using ASTM D2487 classification, test and analyze samples for compliance before delivery to site.

B. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

3.02 PREPARATION

A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.

B. Do not place aggregate on soft, muddy, or frozen surfaces.

3.03 INSTALLATION

A. Under Bituminous Concrete Paving:
   1. Place coarse aggregate to a total compacted thickness of (see Civil Details) inches
   2. Compact to 98 percent of maximum dry density based upon the modified proctor curve.

B. Under Portland Cement Concrete Paving:
   1. Place coarse aggregate to a total compacted thickness of (see Civil Details) inches.
   2. Compact to 98 percent of maximum dry density based upon the modified proctor curve.

C. Place aggregate in maximum 7 inch layers and roller compact to specified density.

D. Level and contour surfaces to elevations and gradients indicated.

E. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.

F. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.

G. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.04 TOLERANCES

A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.

3.05 FIELD QUALITY CONTROL

A. Compaction density testing will be performed on compacted aggregate base course in accordance with ASTM D1556, ASTM D2167, or ASTM D6938.

B. Results will be evaluated in relation to compaction curve determined by testing uncompacted material in accordance with AASHTO T 180, ASTM D698 ("standard Proctor"), or ASTM D1557 ("modified Proctor").

C. If tests indicate work does not meet specified requirements, remove work, replace and retest.

D. Frequency of Tests: 1 per 5,000 sq. ft. of surface.

E. Proof roll compacted aggregate at surfaces that will be under paving.

3.06 CLEANING

A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.

END OF SECTION

SECTION 32 12 16
ASPHALT PAVING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Double course bituminous concrete paving.

1.02 REFERENCE STANDARDS

A. ASTM C136/C136M - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 2014.

B. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction; 2009a.

C. Standard Specifications for Highway Construction, Arkansas State Highway and Transportation Department, Edition of 2014 (included with this specification).

1.03 PERFORMANCE REQUIREMENTS

A. Design paving and subbase at streets and drives for light duty commercial vehicle traffic.

1.04 QUALITY ASSURANCE

A. Perform Work in accordance with State of Arkansas Highways standard.

B. Mixing Plant: Conform to State of Arkansas Highways standard.

C. Obtain materials from same source throughout.

1.05 REGULATORY REQUIREMENTS

A. Conform to Arkansas Highway and Transportation Department code for paving work on this property.

1.06 FIELD CONDITIONS

A. Do not place asphalt when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.01 MATERIALS

A. Asphalt Cement: ASTM D 946 and AASHTO M 226.

B. Aggregate for Binder Course: In accordance with State of Arkansas Highways standards.

C. Aggregate for Surface Course : Angular crushed washed stone; free of shale, clay, friable material and debris.
   1. Graded in accordance with ASTM C136/C136M, within the following limits:
      a. 3/4 inch sieve: 100% percent passing.
      b. 1/2 inch sieve: 90 to 100 percent passing.
      c. 3/8 inch sieve: 90% percent max. passing.
      d. No. 8 sieve: 28 to 58 percent passing.
      e. No. 200 sieve: 2 to 10 percent passing

D. Mineral Filler: Finely ground particles of limestone, hydrated lime or other mineral dust, free of foreign matter.

E. Primer: In accordance with State of Arkansas Highways standards.

F. Tack Coat: Homogeneous, medium curing, liquid asphalt.

2.02 ASPHALT PAVING MIXES AND MIX DESIGN

A. Binder Course: State of Arkansas Highways standards.

B. Wearing Course: State of Arkansas Highways standards (1/2"[12.5mm] Mix).

C. Surface Course: Section 407, Standard Specifications for Highway Construction, Arkansas State Highway and Transportation Department, Edition of 2014 (1/2"[12.5mm] Mix).
   1. Fines to Asphalt Ratio: 0.60 to 1.6.
   2. Asphalt Content: Design Value
   3. Percent Air Voids: 4.0 (PG 76-22 mixes); 4.5 (PG 64-22 & PG 70-22 mixes)
   4. Percent VMA: 14.0-16.0
   5. Minimum Water Sensitivity Ratio: 80 percent

D. Submit proposed mix design of each class of mix for review prior to beginning of work.

2.03 SOURCE QUALITY CONTROL

A. Test mix design and samples in accordance with Arkansas Highway and Transportation Department Standard Specifications, 2014.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that compacted subgrade is dry and ready to support paving and imposed loads (proof roll with a fully loaded tri-axle dump truck).

B. Verify gradients and elevations of base are correct.

3.02 BASE COURSE

A. See Section 321123.

3.03 PREPARATION - PRIMER

A. Apply primer in accordance with manufacturer's instructions.

B. Apply primer on aggregate base or subbase at uniform rate of 0.3 to 0.10 gal/sq yd.

C. Apply primer to contact surfaces of curbs, gutters, and other concrete or aphalt joints.

3.04 PREPARATION - TACK COAT

A. Apply tack coat in accordance with manufacturer's instructions.

B. Apply tack coat on asphalt or concrete surfaces over subgrade surface at uniform rate of 0.03 to 0.10 gal/sq yd.

C. Apply tack coat to contact surfaces of curbs, gutters and concrete drainage structures.

D. Coat surfaces of manhole frames with oil to prevent bond with asphalt pavement. Do not tack coat these surfaces.

3.05 PLACING ASPHALT PAVEMENT - DOUBLE COURSE

3.06

A. Place asphalt binder course within 24 hours of applying primer or tack coat.

B. Apply tack coat to binder course prior to placing wearing asphalt surface course.

C. Place surface course within two hours of placing and compacting binder course.

D. Compact pavement by rolling to specified density. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.

E. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.

3.07 TOLERANCES

A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.

B. Compacted Thickness: Within 1/4 inch of specified or indicated thickness.

C. Variation from True Elevation: Within 1/2 inch.

3.08 FIELD QUALITY CONTROL

A. See Section 014000 - Quality Requirements, for general requirements for quality control.

B. Provide field inspection and testing. Take samples and perform tests in accordance with AASHTO T-164.

C. Provide Lab test results from hot mix samples pulled and tested at the production plant according to AHTD standard specifications.

3.09 PROTECTION

A. Immediately after placement, protect pavement from mechanical injury for 7 days or until surface temperature is less than 140 degrees F.

END OF SECTION

SECTION 33 40 00
SITE DRAINAGE

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included

The work in this section consists of furnishing all materials, accessories, equipment, tools, transportation, service and performance of all operations required to execute the construction of the complete system of site drainage as shown, and including all excavation, backfill structures and catch basins, grading, pipe and connections and all other items shown are required.

B. Related Work Described Elsewhere

1. Excavating Filling and Grading - Section 31 40 00.
2. Trenching, Backfilling, and Compaction - Section 31 23 00.

PART 2 - PRODUCTS

2.01 PIPE

A. All storm drainage pipe shall be reinforced concrete pipe, unless noted as otherwise on plans, and conforming to the following:

1. Reinforced Concrete Pipe: shall conform to ASTM C76 for the specified diameters and strength classes. Horizontal and vertical elliptical pipe shall conform to ASTM C507. Arch pipe shall conform to ASTM C506.
2. Precast reinforced concrete end sections shall conform to the cited specifications to the extent to which they apply.

B. Joints for concrete pipe shall be rubber gasket joints.

C. Rubber Gasket Joints - Rubber gaskets shall conform to ASTM Specifications C443, and shall be continuous rubber rings fitting snugly into the annular space between the parallel surfaces of the tongue and groove ends of the pipe to form a flexible and watertight seal under all conditions of service. Make rubber gasket joints as recommended by the gasket manufacturer and generally as follows: Prior to installing the pipe and when recommended by the gasket manufacturer, the gasket shall be cemented to the tongue end of the pipe with a special rubber cement furnished by the manufacturer of the gasket. When placing gasket, the pipe tongue surface shall be dry and clean. Affix gasket to the pipe not more than 24 hours prior to installation. Before installing pipe, the entire interior of the groove shall be cleaned and lubricated, as well as the gasket over which the groove is fitted. All pipe shall be aligned with the previously installed pipe and the joint pulled together tightly. If the gasket becomes loose or displaced, the pipe section shall be removed and the joint remade satisfactorily. All joints shall be inspected both inside and outside for gasket faulting or displacement.

D. The sizes of pipe shall be identified by the nominal inside diameter. The pipe shall be of the sizes stipulated in the contract, shown on the plans, or established by the Project Engineer.

2.02 INLETS

All inlets shall be constructed as indicated on drawings.

PART 3 - EXECUTION

3.01 EXCAVATION

A. Excavated trenches to the required lines and grades as indicated on drawings. Excavated materials not required or acceptable for backfilling shall be disposed of as directed by the Project Engineer. All excavation which is carried below the required depth shall be backfilled at the Contractor's expense with selected material compacted to the density of the

surrounding earth.

B. The minimum width of the trench at the top of the pipe shall be a width which will permit the proper construction of joints and compaction of backfill around the pipe, but shall be at least equal to the outside pipe diameter plus 12 inches. The trench shall be excavated accurately to the established line to provide at least a 6-inch space between the side of the trench and the side of the pipe. The trench sides shall be vertical, unless otherwise approved by the Engineer. The maximum allowable trench width shall not exceed the outside pipe diameter plus 24 inches unless otherwise approved by the Engineer.

C. Make shallow excavations under each joint as required for proper jointing. Otherwise, the bed for the storm drain pipe shall be shaped to keep the lower quarter of the pipe in continuous contact with the trench bottom.

D. Provide trench bracing, sheathing, or shorting necessary to perform and protect the excavation for the safety of personnel and adjacent structures, and to conform to governing laws. Unless otherwise directed all bracing, sheathing, or shoring shall be removed after the completion of backfill to at least 6 inches over the top of the pipes for storm drains.

E. Provide all pumping and other dewatering equipment required for the removal of water from the excavations. Do not install any pipe until the trenches are free of water and mud. Do not lay pipe on frozen ground.

3.02 PIPE LAYING

A. Provide the necessary mason's lines and supports to insure the installation of the pipe to proper line and grade, as indicated on the drawings. Provide approved facilities for lowering pipe into the trench without causing damage to pipe or trench.

B. Begin laying pipe in finished trench at the lowest point proceeding upgrade. Set pipe firmly and accurately to grade so that the invert will be smooth and uniform.

C. All pipe which is not true in alignment, or which shows any settlement after laying shall be taken up and replace without extra compensation.

3.03 PIPE FOUNDATIONS

A. Bedding

All drainage pipe bedding shall be constructed by bedding the drainage pipe on a natural earth subgrade or uniform blanket of loose material shaped by a template to fit the lower part of the pipe exterior for at least 10 percent of its overall height. After pipe installation select earth material shall then be rammed and tamped in layers not over 6 inches in loose thickness around the pipe to the springline. When bell and spigot pipe is to be placed, recesses shall be dug in the subgrade of sufficient width and depth to accommodate the bell with out its resting on the bottom of the recess. The width of the recess shall not exceed the width of the bell by more than 2 inches.

3.04 BACKFILL - STORM SEWERS

A. All trenches and excavations shall be backfilled in a reasonable time after the pipes are properly installed. The backfill material shall be selected material from excavation; and that which is placed within a nominal pipe diameter distance at the sides of the pipe and 1 foot over the top shall be material which can be readily compacted. It shall not contain stone which will be retained on a 3-inch ring, frozen lumps, chunks of highly plastic clay or any other material which is objectionable in the opinion of the Project Engineer.

B. The backfill shall be placed in loose layers not exceeding 6 inches in depth under and around the pipe, and not exceeding 8 inches over the pipe. Successive layers shall be added and thoroughly compacted by hand and power, pneumatic tampers until the trench is completely filled and brought to the elevation as directed. Backfilling shall be done in such a manner as to avoid injurious top or side pressures on the pipe.

END OF SECTION 33 40 00

SECTION 33 40 10
DRAINAGE MANHOLES, INLETS, AND PIPE ENDWALLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. This work shall consist of constructing manholes, inlets, and pipe endwalls at the locations shown on the Plans, and in reasonably close conformity to the lines, grades, and design dimensions shown on the Plans, or as directed by the Project Engineer, and in accordance with the provisions of these Specifications.

B. The work shall include the furnishing and installation of such incidental appurtenances and connections to pipe and other structures as may be required to complete the construction as shown on the Plans or as directed by the Project Engineer.

1.02 MATERIALS

A. Materials used in this construction, in addition to meeting the general stipulations of these Specifications, shall meet the following requirements:

Structural Steel	ASTM A 36
Building Brick, Concrete	ASTM C 55
Sewer Brick	AASHTO M 91
Masonry Mortar	AASHTO M 150
Steel Bar Reinforcement	Sec. 03200
Gray Iron Castings	ASTM A 48
Manhole Steps	ASTM C 478
Manhole Tops	ASTM C 478

B. Portland cement concrete shall be Class A concrete, and shall be manufactured, placed and cured in accordance with the applicable requirements of Section 03300.

C. All bolts, anchors, frames, hangers, etc. for castings and plates shall be as approved by the Project Engineer.

1.03 EQUIPMENT

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

PART 2 - CONSTRUCTION REQUIREMENTS

2.01 RELATED WORK SPECIFIED ELSEWHERE

A. SECTION 31 40 00: EXCAVATION, FILLING AND GRADING

B. SECTION 03 30 00: SITEWORK CAST-IN-PLACE CONCRETE

2.02 STRUCTURE EXCAVATION, FOUNDATION PREPARATION AND BACKFILL

2.03 CONCRETE CONSTRUCTION

A. All concrete construction shall be accomplished in accordance with the requirements of Section 03 30 00.

2.04 INVERTS

A. Inverts shall be of Class A concrete and shall conform to the shapes indicated on the Plans. The inverts shall be so constructed as to cause the least possible resistance to flow. The shape of the inverts shall conform uniformly to inlet and outlet pipes. A smooth and uniform finish will be required.

2.05 INLET AND OUTLET PIPES

A. Inlet and outlet pipes shall extend through the walls of manholes and inlets for a sufficient distance beyond the outside surface to allow for connections, but shall be cut off flush with

the wall on the inside surface, unless otherwise directed.

B. The concrete or brick and mortar shall be so constructed around the pipes as to prevent leakage and form a neat connection.

2.06 CASTINGS AND FITTINGS

A. Castings and fittings shall be handled in a manner that will prevent damage. All damaged castings and fittings shall be rejected.

B. All castings and fittings shall be placed in the positions indicated on the Plans or as directed by the Project Engineer, and shall be set true to line and grade.
If castings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before concrete or mortar is placed. The casting shall not be disturbed until the mortar or concrete has set.

C. When castings are to be placed upon previously constructed masonry, the bearing surface of masonry shall be brought true to line and grade and present an even bearing surface in order that the entire face or back of the casting will come in contact with the masonry. Castings shall be set in mortar beds or anchored to the masonry as indicated on the Plans or as directed by the Project Engineer.

D. All castings shall be set firm and snug and shall not rattle. Unless otherwise specified, gray iron castings shall be cleaned and treated with two coats of bituminous paint.

END OF SECTION 33 40 10

SP-3 – ADEQ NOTICE OF INTENT (NOI)

Arkansas Department of Environmental Quality
Permits Branch, Office of Water Quality
5301 Northshore Drive
North Little Rock, AR 72118
(501) 682-0623

NOTICE OF INTENT
FOR DISCHARGERS OF STORMWATER RUNOFF
ASSOCIATED WITH LARGE CONSTRUCTION ACTIVITY
AUTHORIZED UNDER NPDES GENERAL PERMIT ARR150000

Application Type: **New** ☒ **Renewal** ☐ **(Permit Tracking Number ARR(_____)**

I. PERMITTEE/OPERATOR INFORMATION

Permittee (Legal Name): City of Jonesboro

Permittee Mailing Address: _____

Permittee City: Jonesboro

Permittee State: Arkansas Zip: _____

Permittee Telephone Number: _____

Permittee Fax Number _____

Permittee E-mail Address _____

Operator Type:

☐ STATE ☐ PARTNERSHIP

☐ FEDERAL ☐ CORPORATION*

☐ SOLE PROPRIETORSHIP

☒ PUBLIC ☐ OTHER

*State of Incorporation: ____

* The legal name of the Permittee must be identical to the name listed with the Arkansas Secretary of State.

II. INVOICE MAILING INFORMATION

Invoice Contact Person: _____ City: _____

Invoice Mailing Company: _____ State: _____ Zip: _____

Invoice Mailing Address: _____ Telephone: _____

III. FACILITY/PROJECT CONSTRUCTION SITE INFORMATION

1 acre = 43,560 square feet

Project Name: Jonesboro Shooting Complex

Contact Person: Craig Light

Project County: Craighead

Project Physical Address: At southeast terminus of Moore Road

Directions to the Project: From US Hwy 63 take Commerce Drive exit north, go to CW Post Road and turn right heading east; take CW Post Road to Moore Road; turn right; go south and east on Moore Road to dead end

Project City: Jonesboro Zip: _____

Telephone Number: _____

Project Estimated Start Date: _____

Total amount of soil to be disturbed (estimate to nearest 1/2 acre): _____

Project Estimated End Date: _____

Total Project Acreage (Estimate to nearest ½ acre): _____

Project Latitude: 35 degrees 47 minutes 43 seconds

Project Longitude: 90 degrees 36 minutes 27 seconds

Type of Project: Subdivision ☐ School ☒ Other: Shooting Complex - Phase 1 Road Package

Facility SIC Code(s): _____ NAICS Code (s): _____

Is the Project part of a larger common plan of development or sale? Yes ☒ No ☐

Linear Project Starting Coordinates (if applicable):

Latitude: 35 º 47 ' 27 " Longitude: 90 º 36 ' 27 "

Linear Project Ending Coordinates (if applicable):

Latitude: 35 º 47 ' 45 " Longitude: 90 º 36 ' 11 "

Arkansas Department of Environmental Quality
Permits Branch, Office of Water Quality
5301 Northshore Drive
North Little Rock, AR 72118
(501) 682-0623

IV. DISCHARGE INFORMATION

Name of Receiving Stream (i.e. an unnamed tributary of Mill Creek, thence into Mill Creek; thence into Arkansas River):

a farm ditch, thence into

Choose Your Ultimate Receiving Stream: Red River ☐ Ouachita River ☐ Arkansas River ☐
White River ☐ St. Francis River ☐ Mississippi River ☐

Name of Receiving Municipal Storm Sewer System (If applicable): Jonesboro

Will you be conducting any in-stream or wetted area activities (i.e. re-routing, trenching, stabilizing, sloping, etc.) ? __Yes X No

If yes, have you obtained an approval for a Short Term Activity Authorization (STAA) from the Department? __Yes __No

Is the stream or wetted area considered "Waters of the United States"? __Yes __No

If yes, have you obtained a 404 permit from the U.S. Army Corps of Engineers? __Yes __ No

For information regarding what constitutes " Waters of the United States" please contact the U.S. Army Corps of Engineers, Regulatory Division in the District in which the activity is to take place. Below is the contact information for the three U.S. Army Corps of Engineers Districts in the State:

Little Rock District Ph: (501) 324-5295, CESWL-Regulatory@usace.army.mil
Vicksburg District: Ph: (601) 631-7071, regulatory@usace.army.mil
Memphis District: Ph: (901) 544-3471, MemphisPAO@usace.army.mil

V. FACILITY/SITE PERMIT INFORMATION

NPDES Individual Permit Number (If Applicable): AR00

NPDES General Permit Number (If Applicable): ARG

NPDES General Industrial Stormwater Permit Number (If Applicable): ARR00

NPDES General Construction Stormwater Permit Number (If Applicable): ARR15

VI. OTHER INFORMATION:

Location of SWPPP on the Construction Site: _____

Consultant Company: _____

Consultant Contact Name: _____

Consultant Email Address: _____

Consultant Address: _____ City: _____ State: _____ Zip: _____

Consultant Phone Number: _____ Consultant Fax Number: _____

Arkansas Department of Environmental Quality
Permits Branch, Office of Water Quality
5301 Northshore Drive
North Little Rock, AR 72118
(501) 682-0623

VII. CERTIFICATION OF OPERATOR

"I certify that, if this facility is a corporation, it is registered with the Secretary of State of Arkansas. Please provide the full name of corporation if different than that listed in Section I above. "

"I certify that as a whole the stormwater discharge(s), and the construction and implementation of Best Management Practices (BMP's) to control stormwater runoff, are not likely to adversely affect species of critical habitat for a listed species."

"I certify that a stormwater pollution prevention plan has been prepared for this facility in accordance with Part II.A of this permit, which provides for, or will provide for, compliance with local sediment and erosion plans, local stormwater permits or stormwater management plans, in accordance with Part II.A.4.c of this permit."

"I certify that the cognizant official designated in Part VIII of this Notice of Intent is qualified to act as a duly authorized representative under the provisions of 40 CFR 122.22(b). If no cognizant official has been designated, I understand that the Department will accept reports signed by the applicant"

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Responsible Official Printed Name: _____ Title: _____

Responsible Official Signature: _____ Date: _____

VIII. COGNIZANT OFFICIAL

Cognizant Official Printed Name: _____ Title: _____

Cognizant Official Signature: _____ Telephone:

IX. PERMIT REQUIREMENT VERIFICATION

Please check the following to verify completion of permit requirements.

	Yes	No*
Submittal of Complete NOI?	☐	☐
Submittal of Required Permit Fee?	☐	☐
Check Number: _____		
Complete SWPPP?	☐	☐

*** If you answer No to any of the above questions, then a permit can not be issued!**

SP-4 – STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Stormwater Pollution Prevention Plan (SWPPP) for Construction Activity for Large Construction Sites

National Pollutant Discharge Elimination System (NPDES)
General Permit # ARR150000

Prepared for:

City of Jonesboro

Date:

April 2018

Prepared by:

Fisher Arnold

Revised date: 10/20/2016

Project Name and Location: Jonesboro Shooting Complex - Ph 1A Road Package

Property Parcel Number (*Optional*): _____

Operator Name and Address: _____

A. Site Description
   a. Project description, intended use after NOI is filed: Construction of access roads into proposed shooting complex
   b. Sequence of major activities which disturb soils: Clear & grub alignment, fill road and prepare subgrade, install base, asphalt and drainage
   c. Total Area[1]: Disturbed Area[2]:
   d. Soils Information:
      i. Runoff Coefficient Pre-Construction (See Appendix A) : _____
      ii. Runoff Coefficient Post-Construction (See Appendix A) : _____
      iii. Describe the soil or the quality of any discharge from the site: _____

B. Responsible Parties

Be sure to assign all SWPPP related activities to an individual or position; even if the specific individual is not yet known (i.e. contractor has not been chosen).

Individual/Company	Phone Number	Service Provided for SWPPP (i.e., Inspector, SWPPP revisions, Stabilization Activities, BMP Maintenance, etc.)
Fisher Arnold	901-748-1811	BMP
Contractor (TBD)	-	-

C. Receiving Waters
   a. The following waterbody (or waterbodies) receives stormwater from this construction site: Little Bay Ditch Tributary 7
   b. Is the project located within the jurisdiction of an MS4? [X] Yes [ ] No
      i. If yes, Name of MS4: Jonesboro
   c. Ultimate Receiving Water:

[ ] Red River	[ ] White River
[ ] Ouachita River	[ ] St. Francis River
[ ] Arkansas River	[X] Mississippi River

[1]Increases in total acreage require an additional acreage request, an updated SWPPP and a $200 modification fee to be submitted to ADEQ.

[2]Increases in only disturbed acreage require an additional acreage request and an updated SWPPP to be submitted to ADEQ.

D. Documentation of Permit Eligibility Related to the 303(d) list and Total Maximum Daily Loads (TMDL) (https://www.adeq.state.ar.us/water/planning/)
   a. Does the stormwater enter a waterbody on the 303(d) list or with an approved TMDL? ☐ Yes ☒ No
   b. If yes:
      i. Waterbody identified on 303(d) list:_____
      ii. Pollutant addressed on 303(d) list or TMDL: _____
      iii. This specific project ,or generally construction activity i.e. surface erosion, is identified on 303(d) list or associated assumptions and allocations identified in the TMDL for the discharge: ☐ Yes ☐ No
      iv. Additional controls implemented: _____
      _____

E. Attainment of Water Quality Standards After Authorization
   a. The permittee must select, install, implement, and maintain BMPs at the construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, except in situations explained below, the SWPPP developed, implemented, and updated to be considered as stringent as necessary to ensure that the discharges do not cause or contribute to an excursion above any applicable water quality standard.
   b. At any time after authorization, the Department may determine that the stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, the Department will require the permittee to:
      i. Develop a supplemental BMP action plan describing SWPPP modifications to address adequately the identified water quality concerns and submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
      ii. Cease discharges of pollutants from construction activity and submit an individual permit application.

   I understand and agree to follow the above text regarding the attainment of water quality standards after authorization. ☒ Yes ☐ No

F. Site Map Requirements (Attach Site Map):
   a. Pre-construction topographic view;

b. Direction of stormwater flow (i.e., use arrows to show which direction stormwater will flow) and approximate slopes anticipated after grading activities;
c. Delineate on the site map areas of soil disturbance and areas that will not be disturbed under the coverage of this permit;
d. Location of major structural and nonstructural controls identified in the plan;
e. Location of main construction entrance and exit;
f. Location where stabilization practices are expected to occur;
g. Locations of off-site materials, waste, borrow area, or equipment storage area;
h. Location of areas used for concrete wash-out;
i. Location of all surface water bodies (including wetlands) with associated natural buffer boundary lines. Identify floodplain and floodway boundaries, if available;
j. Locations where stormwater is discharged to a surface water and/or municipal separate storm sewer system if applicable,
k. Locations where stormwater is discharged off-site (should be continuously updated);
l. Areas where final stabilization has been accomplished and no further construction phase permit requirements apply;
m. A legend that identifies any erosion and sediment control measure symbols/labels used in the site map and/or detail sheet; and
n. Locations of any storm drain inlets on the site and in the immediate vicinity of the site.

G. Stormwater Controls
   a. Initial Site Stabilization, Erosion and Sediment Controls, and Best Management Practices:
      i. Initial Site Stabilization: Dedicated site entrance, and silt fence
      ii. Erosion and Sediment Controls: Inlet protection, silt fence, and maintained site entrance
      iii. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the operator will replace or modify the control for site situations: [X] Yes [ ] No
           If No, explain: _____

iv. Off-site accumulations of sediment will be removed at a frequency sufficient to minimize off-site impacts: [X] Yes [ ] No

If No, explain: _____

v. Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%: [X] Yes [ ] No

If No, explain: _____

vi. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges: [X] Yes [ ] No

If No, explain: _____

vii. Off-site material storage areas used solely by the permitted project are being covered by this SWPPP: [ ] Yes [X] No

If Yes, explain additional BMPs implemented at off-site material storage area: _____

b. Stabilization Practices

i. Description and Schedule: Stabilized site entrance. All disturbed areas to be either paved or stabilized.

ii. Are buffer areas required? [ ] Yes [X] No

If Yes, are buffer areas being used? [ ] Yes [ ] No

If Yes, describe natural buffer areas: _____

If No, explain why not: Not required

iii. A record of the dates when grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included with the plan. [ ] Yes [X] No

If No, explain: Contractor and Owner to set schedule.

iv. Deadlines for stabilization:
1. Stabilization procedures will be initiated 14 days after construction activity temporarily ceases on a portion of the site.
2. Stabilization procedures will be initiated immediately in portions of the site where construction activities have permanently ceased.

c. Structural Practices

i. Describe any structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site: Silt fence, and Inlet protections.

ii. Describe Velocity Dissipation Devices: _____

iii. Sediment Basins:

Are 10 or more acres draining to a common point? ☐ Yes ☒ No

Is a sediment basin included in the project? ☐ Yes ☒ No

If Yes, what is the designed capacity for the storage?

☐ 3600 cubic feet per acre = : _____

or

☐ 10 year, 24 hour storm = : _____

☐ Other criteria were used to design basin: _____

If No, explain why no sedimentation basin was included and describe required natural buffer areas and other controls implemented instead: _____

H. Other Controls

a. Solid materials, including building materials, shall be prevented from being discharged to Waters of the State: ☒ Yes ☐ No

b. Off-site vehicle tracking of sediments and the generation of dust shall be minimized through the use of:

☒ A stabilized construction entrance and exit

☐ Vehicle tire washing

☐ Other controls, describe: _____

c. Temporary Sanitary Facilities: Contractor to provide Temporary Sanitary Facilities

d. Concrete Waste Area Provided:

☒ Yes

☐ No. Concrete is used on the site, but no concrete washout is provided.

Explain why: _____

☐ N/A, no concrete will be used with this project

e. Fuel Storage Areas, Hazardous Waste Storage, and Truck Wash Areas: There shall be no fuel storage areas, hazardous waste storage, and truck wash area.

I. Non-Stormwater Discharges

a. The following allowable non-stormwater discharges comingled with stormwater are present or anticipated at the site:

☐ Fire-fighting activities;

☐ Fire hydrant flushings;

☐ Water used to wash vehicles (where detergents or other chemicals are not used) or control dust in accordance with Part II.A.4.H.2;

☐ Potable water sources including uncontaminated waterline flushings;

☐ Landscape Irrigation;

☐ Routine external building wash down which does not use detergents or other chemicals;

☐ Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents or other chemicals are not used;

☐ Uncontaminated air conditioning, compressor condensate (See Part I.B.13.C of the permit);

☐ Uncontaminated springs, excavation dewatering and groundwater (See Part I.B.13.C of the permit);

☐ Foundation or footing drains where flows are not contaminated with process materials such as solvents (See Part I.B.13.C of the permit);

b. Describe any controls associated with non-stormwater discharges present at the site: _____

J. Permanent Controls for Post-Construction Stormwater Management:

Describe measures installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed: Drainage inlets, Curb & Gutter, drainage flumes, and concrete washout area.

K. Applicable State or Local Programs: The SWPPP will be updated as necessary to reflect any revisions to applicable federal, state, or local requirements that affect the stormwater controls implemented at the site. ☒ Yes ☐ No

L. Inspections

a. Inspection frequency:

☐ Every 7 calendar days

or

☒ At least once every 14 calendar days and within 24 hours of the end of a storm even 0.25 inches or greater (a rain gauge must be maintained on-site)

b. Inspections:

Completed inspection forms will be kept with the SWPPP.

☒ ADEQ's inspection form will be used (See Appendix B)

or

☐ A form other than ADEQ's inspection form will be used and is attached (See inspection form requirements Part II.A.4.L.2)

c. Inspection records will be retained as part of the SWPPP for at least 3 years from the date of termination.

d. It is understood that the following sections describe waivers of site inspection requirements. All applicable documentation requirements will be followed in accordance with the referenced sections.

i. Winter Conditions (Part II.A.4.L.4)

ii. Adverse Weather Conditions (Part II.A.4.L.5)

M. Maintenance:

The following procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good, effective operating condition will be followed: Control offsite vehicle movement, and maintain all EPSC measures

Any necessary repairs will be completed, when practicable, before the next storm event, but not to exceed a period of 3 business days of discovery, or as otherwise directed by state or local officials.

N. Employee Training:

The following is a description of the training plan for personnel (including contractors and subcontractors) on this project: The permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.

**Note, Formal training classes given by Universities or other third-party organizations are not required, but recommended for qualified trainers; the permittee is responsible for the content of the training being adequate for personnel to implement the requirements of the permit.

Certification

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: Michael Rogers

Title: Engineer Date: 04/18/2018

Computation Sheet for Determining Runoff Coefficients

Appendix A

Total Site Area =	4.68	Acres	[A]

Existing Site Conditions

Impervious Site Area [1] =	0	Acres	[B]
Impervious Site Area Runoff Coefficient [2, 4] =	n/a		[C]
Pervious Site Area [3] =	4.68	Acres	[D]
Pervious Site Area Runoff Coefficient [4] =	0.30		[E]

Pre-Construction Runoff Coefficient

$$0.30 \quad \frac{[B \times C] + [D \times E]}{[A]}$$ = This is your pre-construction runoff coefficient.

Proposed Site Conditions (after construction)

Impervious Site Area [1] =	2.10	Acres	[F]
Impervious Site Area Runoff Coefficient [2, 4] =	0.95		[G]
Pervious Site Area [3] =	2.58	Acres	[H]
Pervious Site Area Runoff Coefficient [4] =	0.30		[I]

Post-Construction Runoff Coefficient

$$0.60 \quad \frac{[F \times G] + [H \times I]}{[A]}$$ = This is your post-construction runoff coefficient.

1. Includes paved areas, areas covered by buildings, and other impervious surfaces.
2. Use 0.95 unless lower or higher runoff coefficient can be verified.
3. Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4. Refer to local Hydrology Manual for typical C values.

Note: The impervious and pervious surfaces should equal the total area.

ARR150000 Inspection Form

Appendix B

Inspector Name: _____ Date of Inspection: _____

Inspector Title: _____

Date of Rainfall: _____ Duration of Rainfall: _____

Days Since Last Rain Event: _____ days Rainfall Since Last Rain Event: _____ inches

Description of any Discharges During Inspection: _____

Location of Discharges of Sediment/Other Pollutant (specify pollutant & location): _____

_____

Locations in Need of Additional BMPs: _____

Information on Location of Construction Activities

Location	Activity Begin Date	Activity Occuring Now (y/n)?	Activity Ceased Date	Stabilization Initiated Date	Stabilization Complete Date

Information on BMPs in Need of Maintenance

Location	In Working Order?	Maintenance Scheduled Date	Maintenance Completed Date	Maintenance to be Performed By

Changes required to the SWPPP: _____ Reasons for changes: _____

_____ _____

_____ _____

SWPPP changes completed (date): _____

"I certify under penalty of law that this document and all attachments such as Inspection Form were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Responsible or Cognizant Official: _____ Date: _____

Title: _____

BMP Consideration Checklist

Appendix C

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP should be checked as "Not Used" with a brief statement describing why it is not being used.

Note: Appendix C and D do not have to be submitted with the SWPPP. These attachments are for use during the development of the SWPPP.

EROSION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
EC-1 Scheduling	☐	☒	☐	
EC-2 Preservation of Existing Vegetation	☐	☒	☐	
EC-3 Hydraulic Mulch	☐	☒	☐	
EC-4 Hydroseeding	☐	☒	☐	
EC-5 Soil Binders	☐	☐	☒	NOT NEEDED
EC-6 Straw Mulch	☐	☒	☐	
EC-7 Geotextiles & Mats	☐	☒	☐	
EC-8 Wood Mulching	☐	☒	☐	
EC-9 Earth Dikes & Drainage Swales	☐	☐	☒	NOT NEEDED
EC-10 Velocity Dissipation Devices	☐	☒	☐	
EC-11 Slope Drains	☐	☐	☒	NOT NEEDED
EC-12 Stream bank Stabilization	☐	☒	☐	
SEDIMENT CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
SE-1 Silt Fence	☐	☒	☐	
SE-2 Sediment Basin	☐	☐	☒	NOT NEEDED
SE-3 Sediment Trap	☐	☐	☒	NOT NEEDED
SE-4 Check Dam	☐	☐	☒	NOT NEEDED
SE-5 Fiber Rolls	☐	☐	☒	NOT NEEDED
SE-6 Gravel Bag Berm	☐	☐	☒	NOT NEEDED
SE-7 Street Sweeping and Vacuuming	☐	☐	☒	NOT NEEDED
SE-8 Sand Bag Barrier	☐	☐	☒	NOT NEEDED
SE-9 Straw Bale Barrier	☐	☐	☒	NOT NEEDED
SE-10 Storm Drain Inlet Protection	☐	☒	☐	
SE-11 Chemical Treatment	☐	☐	☒	NOT NEEDED
WIND EROSION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
WE-1 Wind Erosion Control	☐	☐	☒	NOT NEEDED

BMP Consideration Checklist

Appendix C

TRACKING CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
TR-1 Stabilized Construction Entrance/Exit	☐	☒	☐	
TR-2 Stabilized Construction Roadway	☐	☐	☒	NOT NEEDED
TR-3 Entrance/Outlet Tire Wash	☐	☐	☒	NOT NEEDED
NON-STORM WATER MANAGEMENT BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
NS-1 Water Conservation Practices	☐	☒	☐	
NS-2 Dewatering Operations	☐	☒	☐	
NS-3 Paving and Grinding Operations	☐	☒	☐	
NS-4 Temporary Stream Crossing	☐	☒	☐	
NS-5 Clear Water Diversion	☐	☐	☒	NOT NEEDED
NS-6 Illicit Connection/ Discharge	☐	☐	☒	NOT NEEDED
NS-7 Potable Water/Irrigation	☐	☐	☒	NOT NEEDED
NS-8 Vehicle and Equipment Cleaning	☐	☐	☒	NOT NEEDED
NS-9 Vehicle and Equipment Fueling	☐	☐	☒	NOT NEEDED
NS-10 Vehicle and Equipment Maintenance	☐	☐	☒	NOT NEEDED
NS-11 Pile Driving Operations	☐	☐	☒	NOT NEEDED
NS-12 Concrete Curing	☐	☒	☐	
NS-13 Concrete Finishing	☐	☒	☐	
NS-14 Material and Equipment Use Over Water	☐	☐	☒	NOT NEEDED
NS-15 Demolition Adjacent to Water	☐	☐	☒	NOT NEEDED
NS-16 Temporary Batch Plants	☐	☐	☒	NOT NEEDED
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs				
BMP	**BMP Considered for project**	**BMP Used**	**BMP Not Used**	**If not used, state reason**
WM-1 Material Delivery and Storage	☐	☒	☐	
WM-2 Material Use	☐	☒	☐	
WM-3 Stockpile Management	☐	☒	☐	
WM-4 Spill Prevention and Control	☐	☐	☒	NOT NEEDED
WM-5 Solid Waste Management	☐	☐	☒	NOT NEEDED
WM-6 Hazardous Waste Management	☐	☐	☒	NOT NEEDED
WM-7 Contaminated Soil Management	☐	☐	☒	NOT NEEDED
WM-8 Concrete Waste Management	☐	☒	☐	
WM-9 Sanitary/Septic Waste Management	☐	☐	☒	NOT NEEDED
WM-10 Liquid Waste Management	☐	☒	☐	

SWPPP Completion Checklist

Appendix D

Yes = Complete
No = Incomplete/Deficient
N/A = Not applicable to project

Yes	No	N/A		
			A. A site description, including:	**Permit Section Citation**
			1. Project description, intended use after NOT	Part II.A.4.A.1
			2. Sequence of major activities	Part II.A.4.A.2
			3. Total & disturbed acreage	Part II.A.4.A.3
			4. Pre- and post-construction runoff coefficient OR soil/discharge data	Part II.A.4.A.4
			B. Responsible Parties: All parties dealing with the SWPPP and the areas they are responsible for on-site.	Part II.A.4.B
			C. Receiving Water.	Part II.A.4.C
			-MS4 Name	Part II.A.4.C
			-Ultimate Receiving Water	Part II.A.4.C
			D. Documentation of permit eligibility related to Impaired Water Bodies and Total Maximum Daily Loads (TMDLs	
			1. Identify pollutant on 303(d) list or TMDL	Part II.A.4.D.1
			2. Is construction activity or the specific site listed as cause?	Part II.A.4.D.2
			3. Measures taken to reduce pollutants from the site.	Part II.A.4.D.3
			E. Attainment of Water Quality Standards After Authorization.	Part II.A.4.E
			F. Site Map --- See End of Evaluation Form	Part II.A.4.F
			G. Description of Controls:	
			1. Erosion and sediment controls, including:	
			a. Initial site stabilization	Part II.A.4.G.1.a
			b. Erosion and sediment controls	Part II.A.4.G.1.b
			c. Replacement of inadequate controls	Part II.A.4.G.1.c
			d. Removal of off-site accumulations	Part II.A.4.G.1.d
			e. Maintenance of sediment traps/basins @ 50% capacity	Part II.A.4.G.1.e
			f. Litter, construction debris and chemicals properly handled	Part II.A.4.G.1.f
			g. Off-site storage areas and controls	Part II.A.4.G.1.g
			2. Stabilization practices:	
			a. Description and schedule for stabilization	Part II.A.4.G.2.a
			b. Description of buffer areas	Part II.A.4.G.2.b
			c. Records of stabilization	Part II.A.4.G.2.c
			d. Deadlines for stabilization	Part II.A.4.G.2.d
			3. Structural Practices:	
			-Describe structural practices to divert flows, store flows, or otherwise limit runoff	Part II.A.4.G.3
			a. Sediment basins	Part II.A.4.G.3.a.1
			-Are more than 10 acres draining to a common point? If so, are sediment basins included?	Part II.A.4.G.3.a.1
			-Sediment basin dimensions and capacity description and calculations	Part II.A.4.G.3.a.1
			-If a basin wasn't practicable, are other controls sufficient?	Part II.A.4.G.3.a.1
			b. Velocity dissipation devices concentrated flow from 2 or more acres	Part II.A.4.G.3.b
			H. Other controls including:	
			1. Solid waste control measures	Part II.A.4.H.1
			2. Vehicle off-site tracking controls	Part II.A.4.H.2
			3. Compliance with sanitary waste disposal	Part II.A.4.H.4
			4. Does the site have a concrete washout area controls?	Part II.A.4.H.5
			5. Does the site have fuel storage areas, hazardous waste storage and/or truck wash areas controls?	Part II.A.4.H.6

SWPPP Completion Checklist

Appendix D

Yes	No	N/A		Permit Section Citation
			I. Identification of allowable non-storm water discharges	Part II.A.4.I
			-Appropriate controls for dewatering, if present	Part I.B.12.C
			J. Post construction stormwater management.	Part II.A.4.J
			K. State or local requirements incorporated into the plan.	Part II.A.4.K
			L. Inspections	
			1. Inspection frequency listed?	Part II.A.4.L.1
			2. Inspection form	Part II.A.4.L.2
			Ours.	
			If not ours, does it contain the following items:	
			a. Inspector name and title	Part II.A.4.L.2.a
			b. Date of inspection.	Part II.A.4.L.2.b
			c. Amount of rainfall and days since last rain event (14 day only)	Part II.A.4.L.2.c
			d. Approx beginning and duration of storm event	Part II.A.4.L.2.d
			e. Description of any discharges during inspection	Part II.A.4.L.2.e
			f. Locations of discharges of sediment/other pollutants	Part II.A.4.L.2.f
			g. BMPs in need of maintenance	Part II.A.4.L.2.g
			h. BMPs in working order, if maintenance needed (scheduled and completed)	Part II.A.4.L.2.h
			i. Locations that are in need of additional controls	Part II.A.4.L.2.i
			j. Location and dates when major construction activities begin, occur or cease	Part II.A.4.L.2.j
			k. Signature of responsible/cognizant official	Part II.A.4.L.2.k
			3. Inspection Records	Part II.A.4.L.3
			4. Winter Conditions	Part II.A.4.L.4
			5. Adverse Weather Conditions	Part II.A.4.L.5
			M. Maintenance Procedures	Part II.A.4.M
			N. Employee Training	Part II.A.4.N
			Signed Plan Certification	Part II.A.5. and Part II.B.10
			F. Site Map showing:	
			1. Pre-construction topographic view	Part II.A.4.F.1
			2. Drainage flow	Part II.A.4.F.2
			3. Approximate slopes after grading activities	Part II.A.4.F.2
			4. Areas of soil disturbance and areas not disturbed	Part II.A.4.F.3
			5. Location of major structural and non-structural controls.	Part II.A.4.F.4
			6. Location of main construction entrance and exit.	Part II.A.4.F.5
			7. Areas where stabilization practices are expected to occur.	Part II.A.4.F.6
			8. Locations of off-site materials, waste, borrow area or storage area.	Part II.A.4.F.7
			9. Locations of areas used for concrete wash-out.	Part II.A.4.F.8
			10. Locations of surface waters on site.	Part II.A.4.F.9
			11. Locations where water is discharged to a surface water or MS4.	Part II.A.4.F.10
			12. Storm water discharge locations.	Part II.A.4.F.11
			13. Areas where final stabilization has been accomplished.	Part II.A.4.F.12
			14. Legend for symbols/labels used	Part II.A.4.F.13
			15. Location of storm drain inlets on site or in immediate vicinity	Part II.A.4.F.14

SP-5 – GEOTECHNICAL INVESTIGATION REPORT

428 Highway 5 North
Benton, Arkansas 72019
Office: (501) 794-3500
www.gtsconsulting.net

ACKLEY ENGINEERING
A DIVISION OF GTS, INC

May 9, 2018

Brackett-Krennerich Architects
100 East Huntington Avenue, Suite D
Jonesboro, AR 72401

Attn: Mr. Kyle Cook

Re: **Geotechnical Investigation**
Jonesboro Shooting Sports Complex
Jonesboro, Arkansas
Project No. 18-134

Presented here is our report of the geotechnical investigation conducted for the proposed site of the new Jonesboro Shooting Sports Complex. This study was authorized on April 18, 2018.

This report presents geotechnical engineering recommendations for design of foundations and floor slabs. Also included are discussions regarding site grading, pavement design, seismic design, and construction considerations.

We have appreciated the opportunity to be of service to you on this project. If we can be of additional assistance, please contact us.

Sincerely,

ACKLEY ENGINEERING, INC.

Richard E. Ackley, P.E.

Shaun P. Baker, P.E.

Copies submitted: Brackett-Krennerich Architects (2)
Attn: Kyle Cook

TABLE OF CONTENTS

ILLUSTRATIONS

1.0 INTRODUCTION

1.1 Project Description

The new Jonesboro Shooting Sports Complex is planned for a site located near Interstate 555 in Jonesboro, Arkansas. We understand that this project will consist of a series of single-story pre-engineered metal buildings with paved areas and soil berms. Foundation loadings are anticipated to be relatively light.

1.2 Site Description

The proposed site is located north of Interstate 555 and Moore Road. The site is undeveloped, and most of the property has previously been under cultivation. Wooded areas are also present on the property. Topographically, the terrain is gently sloping to flat-lying. A large drainage ditch is located along the southern edge of the planned development.

2.0 FIELD EXPLORATION

Subsurface conditions at the site were explored by Test Pits A through O. The test pits within the planned building areas were excavated to depths of about 10 ft, and the other test pits were excavated to depths of about 3.5 ft. The approximate test pit locations are shown on Plate 1. The stratigraphy and results of field and laboratory tests are summarized on the test pit logs, Plates 2 through 16.

The test pits were excavated using a small track-mounted excavator. Samples of the soil were collected at selected intervals, were visually classified by the field engineer, and were sealed in containers for transfer to the laboratory.

Undrained shear strengths of the cohesive soils were estimated in the field using a calibrated hand penetrometer. The estimated shear strength values are plotted on the chart located in the right-hand column on the test pit logs.

Groundwater level observations were made during and following excavation of the test pits. The recorded groundwater levels are noted on the lower-right portion of the log forms.

3.0 LABORATORY TESTING

Laboratory testing consisted of the following:

TYPE OF TEST	NUMBER	PROCEDURE
Water contents	36	ASTM D 2216
Plastic and liquid limits	7	ASTM D 4318
Sieve analyses	5	ASTM D 422 & D 1140

The laboratory test results are tabulated on the test pit logs and on Plates 17 and 18.

4.0 SITE GEOLOGY

The project site is underlain by Quaternary terrace deposits. These terrace deposits are alluvial in origin and are generally fine-grained (silt and clay) near the surface and grade to coarse-grained (sand with gravel) at depth.

5.0 SUBSURFACE CONDITIONS

5.1 Soil Conditions

The stratigraphy encountered within the proposed building areas (Test Pits H through M) may be summarized as follows:

Stratum I: Dark brown and gray clayey silt (ML) with some organic matter was encountered at the ground surface to depths of about 0.5 to 0.75 ft. This stratum represents the topsoil;

Stratum II: Stiff to very stiff gray with reddish brown silty clay (CL) to clay (CH) with ferrous stains and some clayey silt was encountered beneath the topsoil to depths of about 3.5 to 6 ft. Cohesion values were found to range from about 1.0 to 3.0 kips per sq ft, and Plasticity Index values were found to range from 29 to 33;

Stratum III: Stiff to very stiff light gray and gray with reddish brown clayey silt (ML) with ferrous stains was encountered beneath Stratum II to depths of about 7 to 10 ft. Cohesion values were found to range from about 1.4 to 3.0 kips per sq ft; and

Stratum IV: The basal stratum was found to consist of gray and reddish brown silty sand (SM).

5.2 Groundwater Conditions

Excavation of the test pits enabled an evaluation of shallow groundwater conditions at the project site. As shown on the log forms, free groundwater was not encountered within the 10-ft exploration depths (May 2018). We anticipate that groundwater is present at depth within the alluvial aquifer.

6.0 FOUNDATION DESIGN

We anticipate that some fill will be required to establish finished subgrade level for each of the buildings at the site. The clay (CH) soils of Stratum II possess a slight to moderate shrink-swell potential. Some seasonal differential soil movements could occur. In view of these factors, we recommend the use of stiffened shallow foundation systems. The stiffened foundations should consist of conventional spread footings with stiffened turned-down slabs poured over the spread footings.

Our foundation design recommendations for the **stiffened shallow foundations** are as follows:

• Maximum allowable bearing pressures:	2000 lbs per sq ft (continuous) 2500 lbs per sq ft (individual)
• Recommended bearing strata:	Compacted, select fill and/or stiff natural strata
• Minimum footing width:	24 inches
• Minimum slab edge width:	15 inches
• Minimum foundation depth:	1.5 ft below finished exterior grade
• Factor of safety:	Greater than 2.0
• Estimated movement:	1 inch total & 0.75 inch differential

Proper performance of the fill-supported foundations is contingent upon close adherence to the site grading recommendations presented in this report. Both top and bottom reinforcing should be used within the slab/footing edges. The use of masonry construction is not recommended. If used, some undercutting of the clay (CH) soils may be required to reduce the potential for movement. We recommend a minimum undercut depth of 2 ft below the planned bottom-of-footing elevation. Also, relatively frequent control joints should be used within any masonry or other movement-sensitive walls.

All footing excavations should be specifically evaluated by the Design Geotechnical Engineer. Some deepening of foundations could be required. Deepened footing excavations can be backfilled up to the plan bottom-of-footing elevation with lean concrete or "flowable" fill.

7.0 SEISMIC DESIGN

We recommend that the foundations be designed using International Building Code Site Classification D - "Stiff soil profile".

8.0 FLOOR SLABS

Slab-on-grade or slab-on-fill type construction is considered appropriate for use at this site. We suggest the use of a 4-inch thick layer of clean crushed stone or gravel beneath the slab to provide for a capillary break. We further suggest the use of a polyethylene membrane beneath the slab. A modulus of subgrade reaction of 125 lbs per cubic inch is considered appropriate for the prepared subgrade. We recommend that the floor slabs be underlain by at least 10 to 12 inches of select granular fill.

9.0 SUBGRADE PREPARATION

The on-site silt and silty clay soils are susceptible to strength loss with increased moisture contents. Also, the high plasticity clay (CH) soils are prone to volume changes with variations in moisture content. We recommend constructing a minimum 2-ft layer of select fill beneath the floor slabs. Construction of this layer could require over-excavating the native soils. The select fill should meet the requirements noted in Section 10.0.

Prior to placing fill or constructing slabs, all excessively soft, loose, and/or organic-containing soils should be removed. The location and extent of weak subgrade may be established by proof-rolling the subgrade using a loaded dump truck or similar equipment. Zones exhibiting excessive rutting or "pumping" should be undercut and backfilled with select granular fill.

We anticipate a required stripping depth of about 0.5 to 0.75 ft across most of the site. Under **existing** conditions, the combined stripping/undercut depths are anticipated to be no greater than 1 to 1.5 ft.

The subgrade should be specifically evaluated by the Design Geotechnical Engineer prior to fill placement.

10.0 FILL PLACEMENT

Fill to be used within the building and pavement areas should consist of one of the following fill types:

- Clayey sand (SC) or silty sand (SM)
- Sandy clay (CL)
- Clayey gravel (GC)

Additionally, the fill should meet the following:

- Liquid limit no greater than 40
- Plasticity Index less than 20
- No greater than 70 percent passing No. 200 sieve
- Maximum particle size of 6 inches

The on-site soils are not considered acceptable for use as select fill. Select fill within and at least 10 ft beyond the building areas should be compacted in maximum 8-inch thick lifts to at least 95 percent of maximum Modified Proctor dry density (ASTM D 1557). Within pavement and berm areas, the compaction criteria may be relaxed to 90 percent. In-place moisture and density tests should be conducted to confirm compaction.

We suggest that the shooting range soil berms be constructed with side-slopes no steeper than 1-vertical on 2-horizontal. This should aid in slope maintenance.

11.0 PAVEMENT DESIGN

Our pavement design recommendations are based on the following design assumptions:

- Traffic: Light – automobiles; Moderate – occasional heavy trucks
- Maximum axle load: 18 kips
- CBR of subgrade: 3
- Modulus of subgrade reaction: 150 pci
- Concrete modulus of rupture: 600 psi
- Design life: 20 years

Using Asphalt Institute and Portland Cement Association design procedures, we developed the following pavement thickness designs:

TRAFFIC	PAVEMENT COMPONENT	THICKNESS, INCHES
Light	Asphaltic concrete surface	2.0
	Crushed stone base (Class 7)	7.0
Light	Portland cement concrete	5.0
	Crushed stone base (Class 7)	4.0
Moderate	Asphaltic concrete surface	3.0
	Crushed stone base (Class 7)	8.0
Moderate	Portland cement concrete	6.0
	Crushed stone base (Class 7)	4.0

We recommend that the pavements be underlain by at least 10 to 12 inches of select granular fill.

The crushed stone base should comply with AHTD Class 7 material requirements and should be compacted to at least 95 percent of maximum Modified Proctor dry density (ASTM D 1557). Concrete pavement (7.0 inches over 4.0 inches of crushed stone base) is recommended for the trash dumpster pad. Concrete pavement should be properly doweled to provide load transfer across construction joints. The subgrade should be properly graded to avoid accumulation of water within the base course. We also suggest that the base course be vented to the surface or storm drainage system.

12.0 CONSTRUCTION CONSIDERATIONS

The on-site soils are silty and are subject to substantial shear strength reduction during wetter seasons. In view of this, we recommend that site grading be conducted during drier seasons to limit construction difficulties, to reduce the undercut requirements, and to limit the potential for encountering groundwater.

A potential exists for encountering shallow "perched" groundwater at the site during wetter seasons, particularly within low-lying portions of the site. If encountered, the quantity of seepage is anticipated to be fairly minor and controllable with pumping and/or ditching.

The base of the foundation excavations should be cleaned of all loose soils and should be observed by the Geotechnical Engineer to confirm adequacy of the bearing stratum. Concrete should be placed as soon as possible to avoid any changes in conditions. Any soils softened by exposure or inundation should be undercut to unaltered strata.

Subsurface conditions at variance with those encountered in the test pits should be brought to the attention of the Geotechnical Engineer and work delayed pending evaluation.

ACKLEY ENGINEERING, INC.

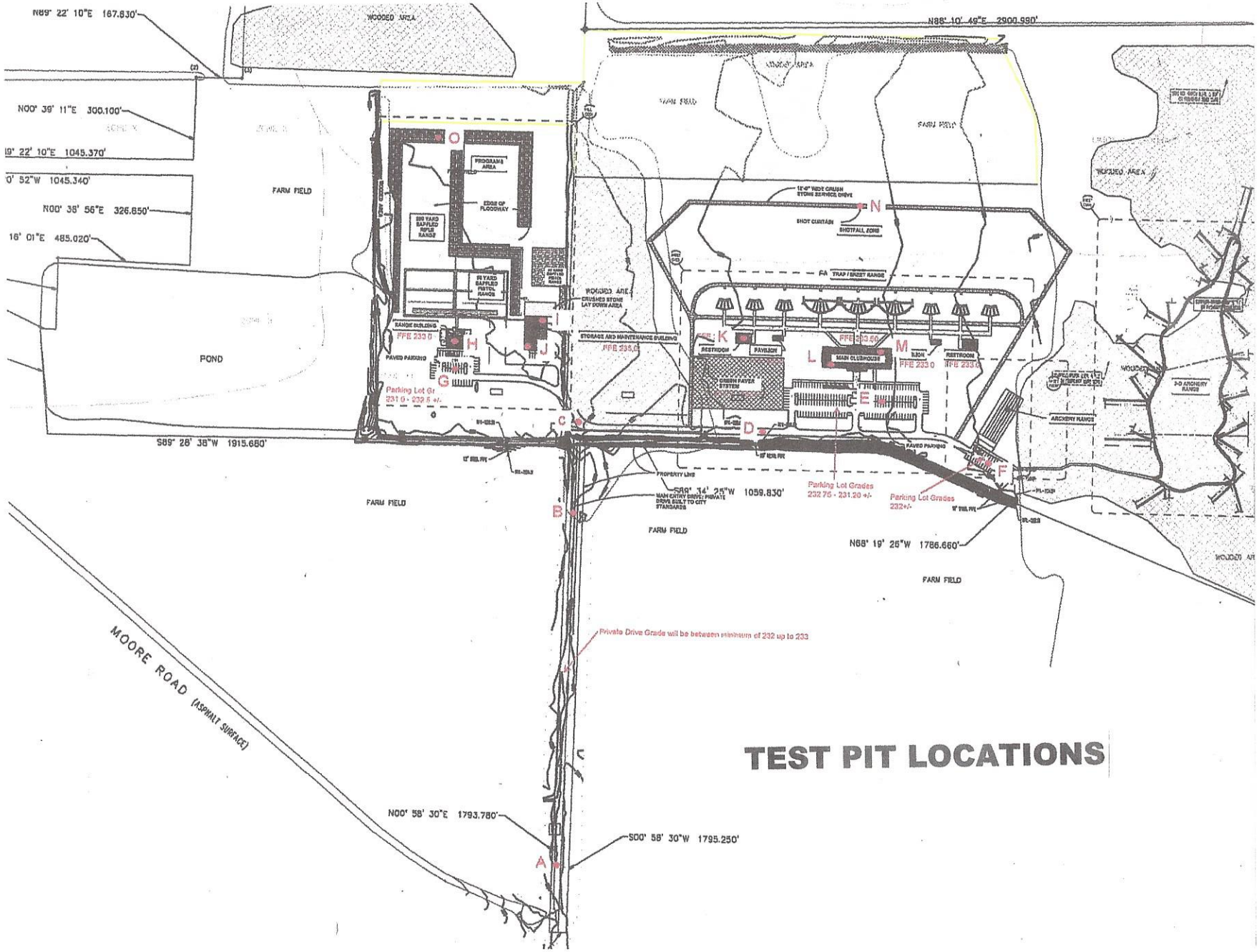
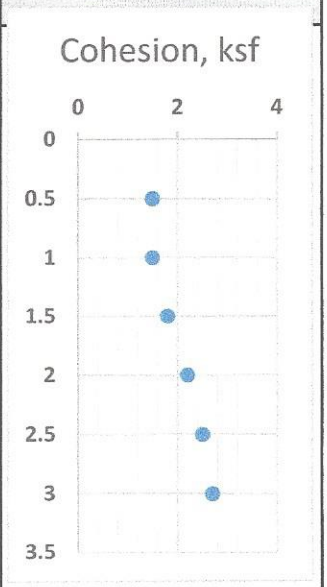


PLATE 1

LOG OF TEST PIT A

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Brown clayey SILT with some organic matter							
Stiff to very stiff gray with reddish brown silty CLAY to CLAY with ferrous stains		1 2 3 4 5 6 7 8 9 10		22.1	20	52	
		FEET					



COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

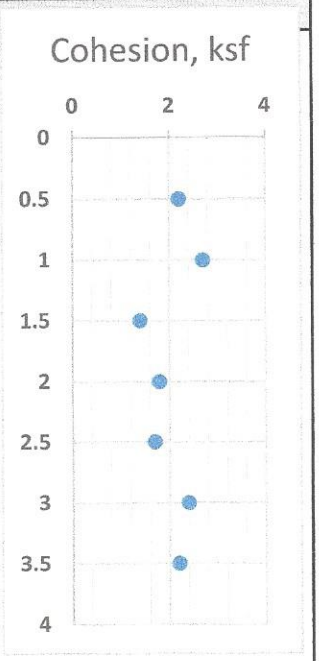
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT B

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Reddish brown clayey SILT with some organic matter and sand				18.9			94
Very stiff to stiff gray with reddish brown silty CLAY with ferrous stains		1 2 3 4 5 6 7 8 9 10		26.2			
		FEET					



COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

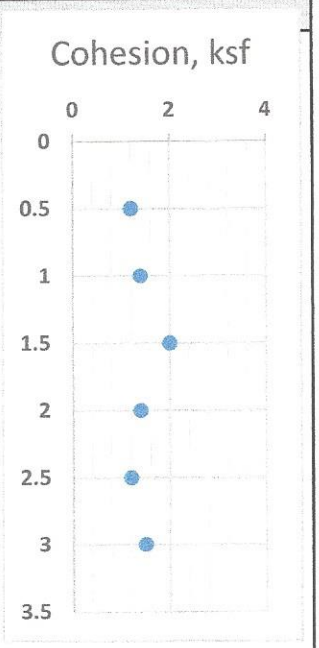
SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT C

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:

TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Dark brown clayey SILT with some organic matter							
Stiff gray with reddish brown silty CLAY to CLAY with ferrous stains		1		23.3	17	46	
		2					
		3					
		4					
		5					
		6					
		7					
		8					
		9					
		10					
		FEET					



COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

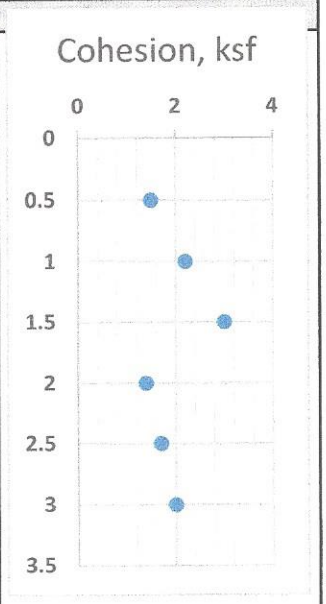
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT D

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Dark brown clayey SILT with some organic matter							
Very stiff gray and reddish brown clayey SILT with ferrous stains		1		20.9			95
Stiff to very stiff gray and reddish brown silty CLAY to CLAY with ferrous stains		2 3 4 5 6 7 8 9 10		29.5			
		FEET					



COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

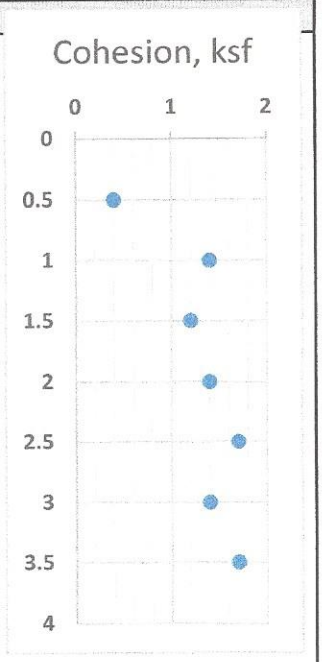
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT E

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Light brown clayey SILT with some organic matter							
Stiff reddish brown silty CLAY with ferrous stains		1		24.6			
..more clayey with light gray below 1.5 ft		2					
		3		28.5			
		4					
		5					
		6					
		7					
		8					
		9					
		10					
		FEET					



COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

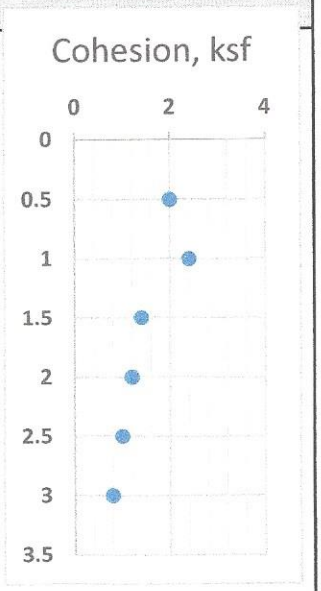
SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT F

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:

TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Light brown clayey SILT with some organic matter				21.9			96
Stiff reddish brown and gray silty CLAY with ferrous stains				29.7			



FEET

COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

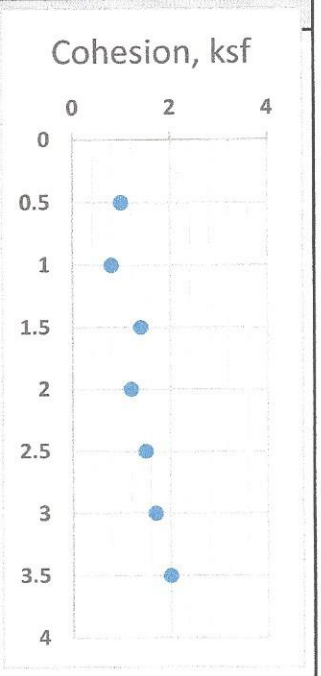
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT G

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Gray clayey SILT with some organic matter							
Firm to stiff gray with reddish brown silty CLAY with ferrous stains		1		25.3			
		2					
..with more reddish brown below 2.5 ft		3		28.3			
		4					
		5					
		6					
		7					
		8					
		9					
		10					
		FEET					



COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

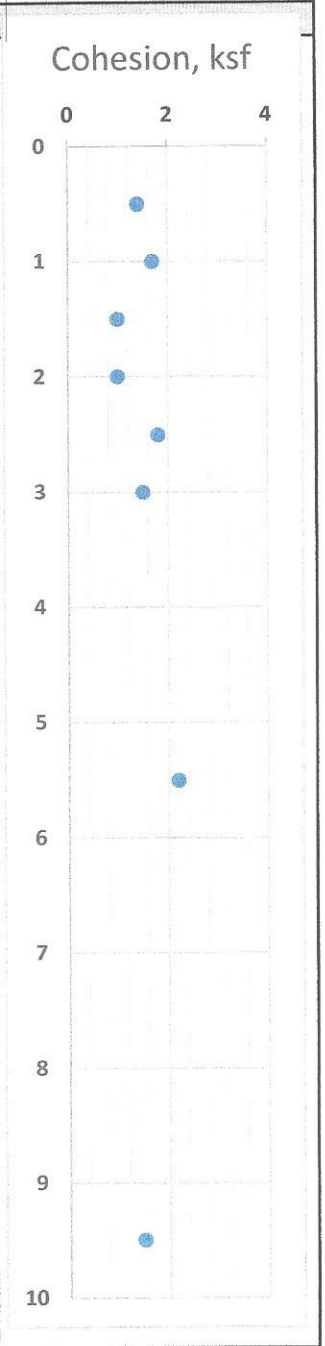
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT H

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Gray clayey SILT with organic matter							
Stiff gray with reddish brown silty CLAY with ferrous stains		1		23.8			
		2					
		3					
		4					
Very stiff to stiff gray with reddish brown very silty CLAY to clayey SILT with ferrous stains		5		27.7	24	41	
		6					
		7					
		8					
		9		30.5			
		10					
		FEET					



COMPLETION DEPTH: 10 ft
DEPTH TO WATER: Dry

N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

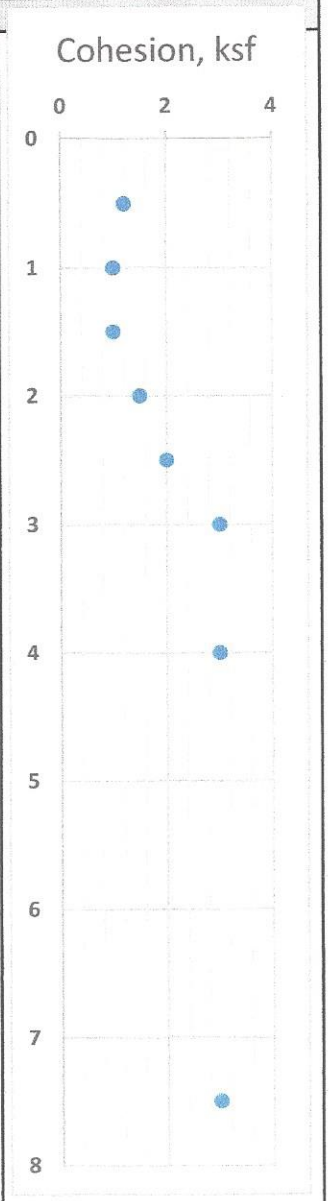
SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT I

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:

TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Brown clayey SILT with some organic matter							
Stiff to very stiff gray with reddish brown silty CLAY with ferrous stains		1		25.6			
		2					
		3					
Very stiff gray with reddish brown clayey SILT with ferrous stains		4		16.8	28	43	
		5					
		6					
		7		21.5			
		8					
		9					
		10					
		FEET					



COMPLETION DEPTH: 10 ft
DEPTH TO WATER: Dry

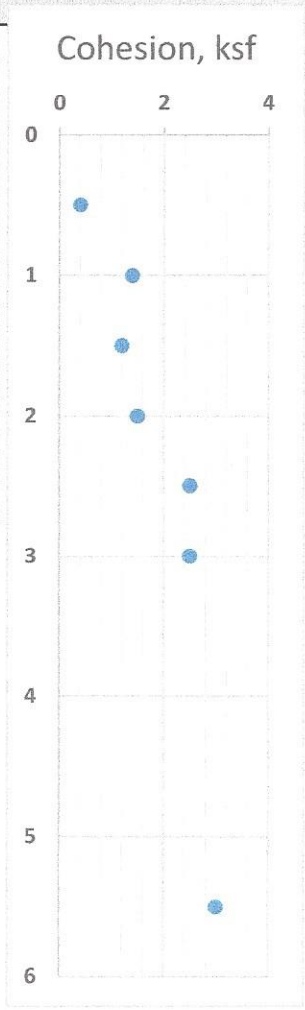
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT J

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Brown clayey SILT with some organic matter							
Stiff to very stiff gray with reddish brown silty CLAY with ferrous stains				25			
Very stiff gray with reddish brown clayey SILT with ferrous stains				16.8	28	43	
				21.5			



FEET

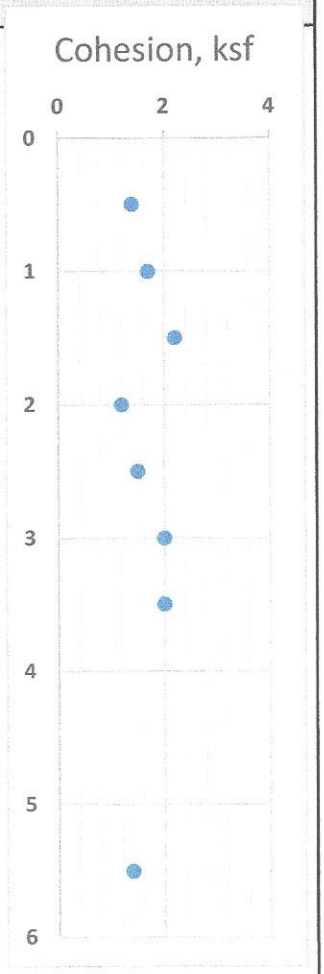
COMPLETION DEPTH: 10 ft
DEPTH TO WATER: Dry

N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE
SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT K

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Brown clayey SILT with some organic matter							
Stiff to very stiff gray with reddish brown clayey SILT with ferrous stains		1		18.3			
Stiff to very stiff gray and reddish brown silty CLAY to CLAY with ferrous stains		2 3 4 5		25.9	22	51	
Stiff to very stiff light gray clayey SILT with ferrous stains		6		22.3			
Gray and reddish brown silty SAND		7 8 9 10		8.6			
		FEET					



COMPLETION DEPTH: 10 ft
DEPTH TO WATER: Dry

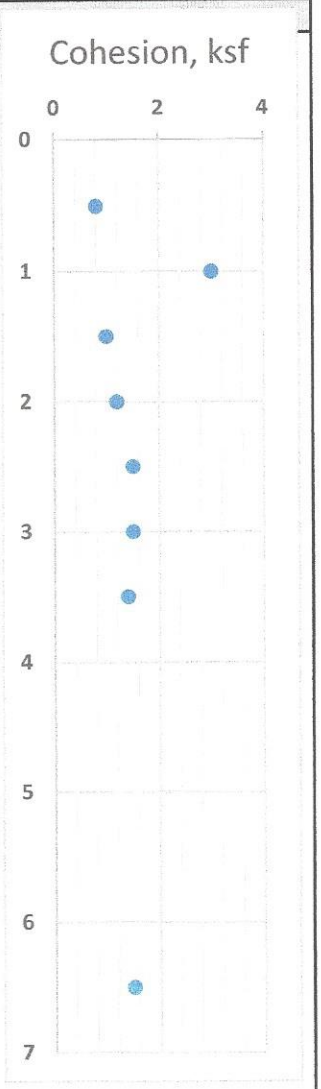
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT L

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Dark brown clayey SILT with organic matter							
Very stiff to stiff reddish brown and gray very silty CLAY with ferrous stains		1		26.6			
		2					
Stiff light gray and reddish brown silty CLAY with ferrous stains				28.7			99
		3					
		4					
		5					
		6					
Stiff light gray with reddish brown clayey SILT with ferrous stains				27.5			
		7					
		8					
Gray and brown silty SAND							
		9					
				6.8			
		10					
		FEET					



COMPLETION DEPTH: 10 ft
DEPTH TO WATER: Dry

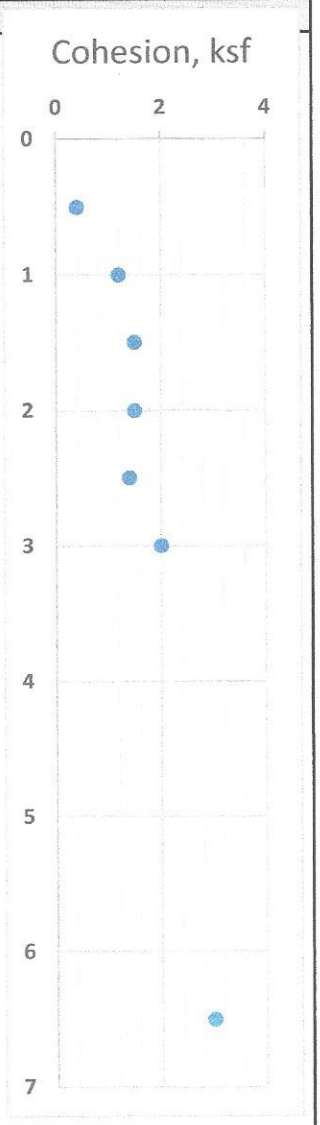
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT M

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Dark brown clayey SILT with some organic matter							
Stiff reddish brown and gray very silty CLAY with ferrous stains		1		24.7			
Stiff to very stiff light gray and reddish brown silty CLAY to CLAY with ferrous stains		2		24.6	20	53	
		3					
		4					
		5					
Very stiff light gray clayey SILT with ferrous stains		6		23.6			
		7					
		8					
Gray and brown silty SAND		9		11			
		10					
		FEET					



COMPLETION DEPTH: 10 ft
DEPTH TO WATER: Dry

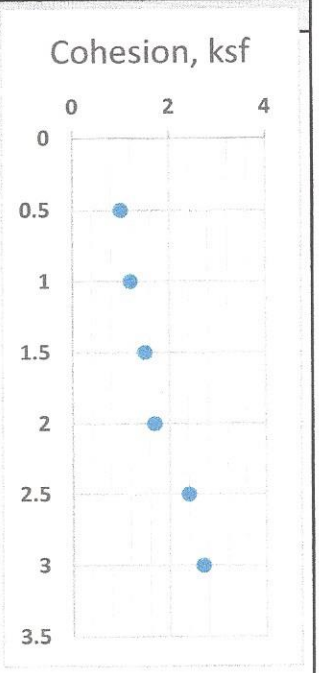
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT N

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Dark brown clayey SILT with some organic matter							
Stiff light gray clayey SILT							
Stiff to very stiff light gray and reddish brown silty CLAY with ferrous stains				23.9			97



FEET

COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

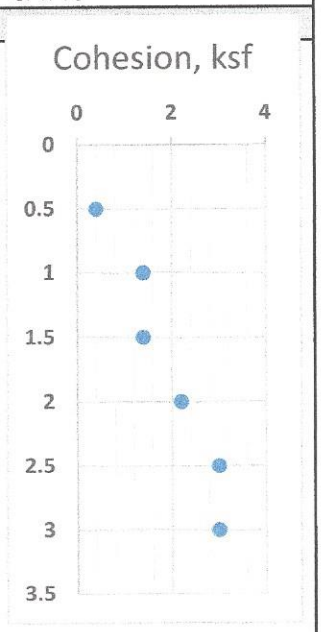
N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

LOG OF TEST PIT O

PROJECT NAME: Jonesboro Shooting Sports Complex
LOCATION: Jonesboro, Arkansas
JOB NO.: 18-134
SURFACE ELEV.:
TYPE: Trackhoe
LOCATION: See Plate 1
DATE: 5/1/18

DESCRIPTION	SYM	DEPTH	N	M%	PL	LL	#200
Dark brown clayey SILT with organic matter							
Stiff light gray with reddish brown clayey SILT with ferrous stains		1		22.3			
Very stiff gray and reddish brown silty CLAY with ferrous stains		2		20.8			
		3					
		4					
		5					
		6					
		7					
		8					
		9					
		10					
		FEET					



COMPLETION DEPTH: 3.5 ft
DEPTH TO WATER: Dry

N: STANDARD PENETRATION RESISTANCE IN BLOWS PER FT
M%: MOISTURE CONTENT
PL: PLASTIC LIMIT
LL: LIQUID LIMIT
#200: % PASSING NO. 200 SIEVE

SYM: SYMBOL
sand
clay
silt
gravel

SP-6 – EXHIBIT A – STATEMENT OF ASSURANCE AND COMPLIANCES

Attachment 1

Exhibit A

Statement of Assurance and Compliances

The designated representative of the CONTRACTOR (CONTRACTOR's Agent) certifies that:

1. The CONTRACTOR and its principals in this bid are not presently debarred, suspended, proposed for debarment, declared ineligible, sentenced to denial of Federal benefits by a State or Federal court, or voluntarily excluded from covered transactions by any Federal department or agency. The attached Suspension and Debarment Form must be executed prior to the bid opening) See Attachment 1

2. The CONTRACTOR and its principals have not been convicted or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

3. The CONTRACTOR and its principals are not presently indicted for or otherwise criminally or civil charged by a governmental entity (Federal, State, or Local) with commission of any of the offenses enumerated in Paragraph 2 of this certification.

4. The CONTRACTOR and its principals have not had one or more public transactions (Federal, State, or Local) terminated for cause or default.

5. The CONTRACTOR shall comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity" as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of $10,000 by grantees and their contractors or subgrantees.)

6. The CONTRACTOR shall comply with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3). (All contracts and subgrants for construction or repair.)

7. The CONTRACTOR is not guilty of collusion with the vendor possibly interested in this bid or in determining prices to be submitted.

8. The CONTRACTOR shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5). (Construction Contracts awarded by grantees and subgrantees in excess of $2,000, and in excess of $2,500 for other contracts which involve the employment of mechanics and laborers.)

9. The CONTRACTOR shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR pat 15) (Contracts, subcontracts, and subgrants of amounts in excess of $100,000)

10. The CONTRACTOR shall comply with all applicable mandatory standards and policies relating to energy efficiency contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L 94-163, 89 Stat. 871).

11. The CONTRACTOR shall provide access by the COMMISSION, the Federal grantor agency and Comptroller General of the United States (if Federal grant funds are used for this Contract), or any of their duly authorized

representatives to any books, documents, papers, and records of the CONTRACTOR which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

12. The CONTRACTOR shall retain all records for three years after the CITY made final payment and all other pending matters are closed.

13. If this Contract indicated that the CITY is using Federal grant funds to pay CONTRACTOR, the CONTRACTOR shall comply with all uniform grant administration requirements required by State and Federal statutes, rules and regulations, including, but not limited tom the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended. Title 44 of the Code of Federal Regulations, applicable OMB Circulars, and policy guidance issued by the Federal Emergency Management Agency (FEMA). The CONTRACTOR shall also comply with all applicable FEMA requirements, including but not limited to, FEMA 325, P.A. Debris Management Guide, FEMA 321, P.A. Policy Digest and FEMA 322, P.A. Guide.

14. The CONTRACTOR shall include language in all contracts that binds the CONTRACTOR, subcontractor or consultant to the terms and conditions of this Contract with the CITY. Contractual arrangements with contractors, subcontractors, or consultants shall in no way relieve the CONTRACTOR of its responsibilities to ensure that all funds provided through this Contract are administered in accordance with all federal and state requirements.

15. The CONTRACTOR shall comply with all applicable requirements of all other Federal, State, County, and City laws, executive orders, regulations, ordinances, and policies.

The undersigned hereby certifies agreement with the above statements.

Dated at JONESBORO, AR this 29

day of MAY, 20 18.

MEADOWS CONTRACTORS, LLC
(Name of Bidder)

By Dale Wood

Title DALE WOOD, MEMBER

STATE OF ARKANSAS)

COUNTY OF CRAIGHEAD)

DALE WOOD being duly sworn deposes and says that

he is MEMBER of MEADOWS CONTRACTORS, LLC
(Name of Organization)

SUBSCRIBED AND SWORN TO BEFORE ME this 29 day of MAY, 20 18.

My Commission Expires:

7-17-18

Carolyn S. Meadows
(Notary Public)

CAROLYN S. MEADOWS NOTARY PUBLIC Craighead County, Arkansas MY COMMISSION EXPIRES 07-17-18

Attachment 1

Suspension and Debarment

This contract with the **City of Jonesboro** is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945.

The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

> The certification in this clause is a material representation of fact relied upon by **the City of Jonesboro**. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to **the City of Jonesboro**, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

MEADOWS CONTRACTORS, LLC
(Name of Bidder/Proposer)

DALE WOOD
(Printed Name of Bidder's Agent)

Dale Wood
(Signature of Bidder's Agent)

MEMBER
(Printed Title of Bidder's Agent)

MAY 29, 2018
(Date Executed)

SP-7 – EXHIBIT B – ADDITIONAL STATEMENT OF ASSURANCE AND COMPLIANCES

Exhibit B

Additional Statement of Assurance and Compliances

The designated representative of the CONTRACTOR (CONTRACTOR's Agent) certifies that:

LEGAL COMPLIANCE

The CONTRACTOR shall at all time observe and full comply with any and all Federal, State, and local laws, statutes, orders, ordinances, and regulations.

NATIONAL HISTORIC PRESERVATION ACT COMPLIANCE

If the CONTRACTOR encounters the following while performing under this Contract, it shall immediately stop all work in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds: archeological deposits, including but not limited to pottery or ceramics, stone tools, projectile points, dugout canoes, metal implements, historical building material, that could be associated with Native American, early European, or American settlements; historic resources (as defined by Section 301 of the National Historic Preservation Act ("NHPA"), "any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion on the National Register, including artifacts, records, and material remains related to such a property or resource".; or bones or human remains. The CONTRACTOR shall immediately notify the CITY and shall not resume work in any areas identified until (a) appropriate measures have been taken to ensure that the project is in compliance with the NHPA and (b) the CITY authorizes the resumption of work. Additional conditions may apply. The CONTRACTOR shall insert this paragraph in all subcontracts related to this Contract.

EQUAL EMPLOYMENT OPPORTUNITY

The CONTRACTOR agrees not to discriminate in its employment practices or subcontracts with regard to race, color, sex, age, religion, national origin, or disability.